

DWLBC REPORT 2004/52



# Chowilla floodplain groundwater observation network upgrade and expansion

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**Knowledge and Information Division Department of Water, Land and Biodiversity Conservation** 



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## **FOREWORD**

South Australia's natural resources are fundamental to the economic and social well-being of the State. One of the State's most precious natural resources, water is a basic requirement of all living organisms and is one of the essential elements ensuring biological diversity of life at all levels. In pristine or undeveloped situations, the condition of water resources reflects the equilibrium between, rainfall, vegetation and other physical parameters. Development of these resources changes the natural balance and may cause degradation. If degradation is small, and the resource retains its utility, the community may assess these changes as being acceptable. However, significant stress will impact on the ability of the resource to continue to meet the needs of users and the environment. Understanding the cause and effect relationship between the various stresses imposed on the natural resources is paramount to developing effective management strategies. Reports of investigations into the availability and quality of water supplies throughout the State aim to build upon the existing knowledge base enabling the community to make informed decisions concerning the future management of the natural resources thus ensuring conservation of biological diversity.

#### **Ben Bruce**

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# **EXECUTIVE SUMMARY**

The Chowilla floodplain is located adjacent to the River Murray in the northwest region of the Murray Basin. The floodplain is located primarily in South Australia, but extends over the border into New South Wales (Fig. 1). The floodplain is an important region for native fauna and flora and is listed as a *Riverland Wetland of International Importance* in 1987 under the UNESCO Ramsar Convention.

In March 2003, DWLBC Groundwater Assessment Branch was provided with a project brief from DWLBC River Murray Division requesting a review of the current status and condition of the existing groundwater monitoring network on the Chowilla floodplain. In August 2003, Marsden and Howles (2003) identified gaps in the existing monitoring network and provided recommendations for the upgrade and expansion of the current groundwater monitoring network, and additional hydrogeological investigations.

The groundwater network expansion began in early 2004, with a total of 52 new wells installed in the Chowilla region. Forty-five wells were completed in the semi-confined Monoman Formation with water levels ranging from 1–9 m below surface. An additional three wells were completed in the Pliocene Sands aquifer in the floodplain with water levels approximately 5 m below surface. Another two wells in the highland region also monitor the Pliocene Sands aquifer with potentiometric levels 24–35 m below surface. Two wells monitor the Murray Group Limestone aquifer; one in the floodplain and the other in the highland region; with water levels 7 m above ground (artesian) and 27 m below ground respectively. All wells were installed at strategic locations to provide enhanced groundwater head and salinity data.

This report provides details of the upgrade and expansion of the Chowilla groundwater network, and forms Stage II of the Chowilla Floodplain Groundwater Monitoring and Investigation Program.

### Recommendations and Future Work

- Further attempts should be made to access the southeastern side of the Chowilla floodplain to install more monitoring wells as originally planned.
- Highland wells that monitor the Murray Group Limestone Aquifer within 1.5 km of the Chowilla floodplain should be located and incorporated into the Chowilla monitoring network.
- Install four wells south of the River Murray in the Murtho highland region to enable preparation of a more accurate potentiometric surface plan of the Monoman Formation/Pliocene Sands aguifer.
- 4. Install data loggers in selected creek wells to gain continuous groundwater level readings to improve the understanding of surface water and groundwater interaction.
- 5. Resurvey all wells in the monitoring network to eliminate any anomalies in elevation data.

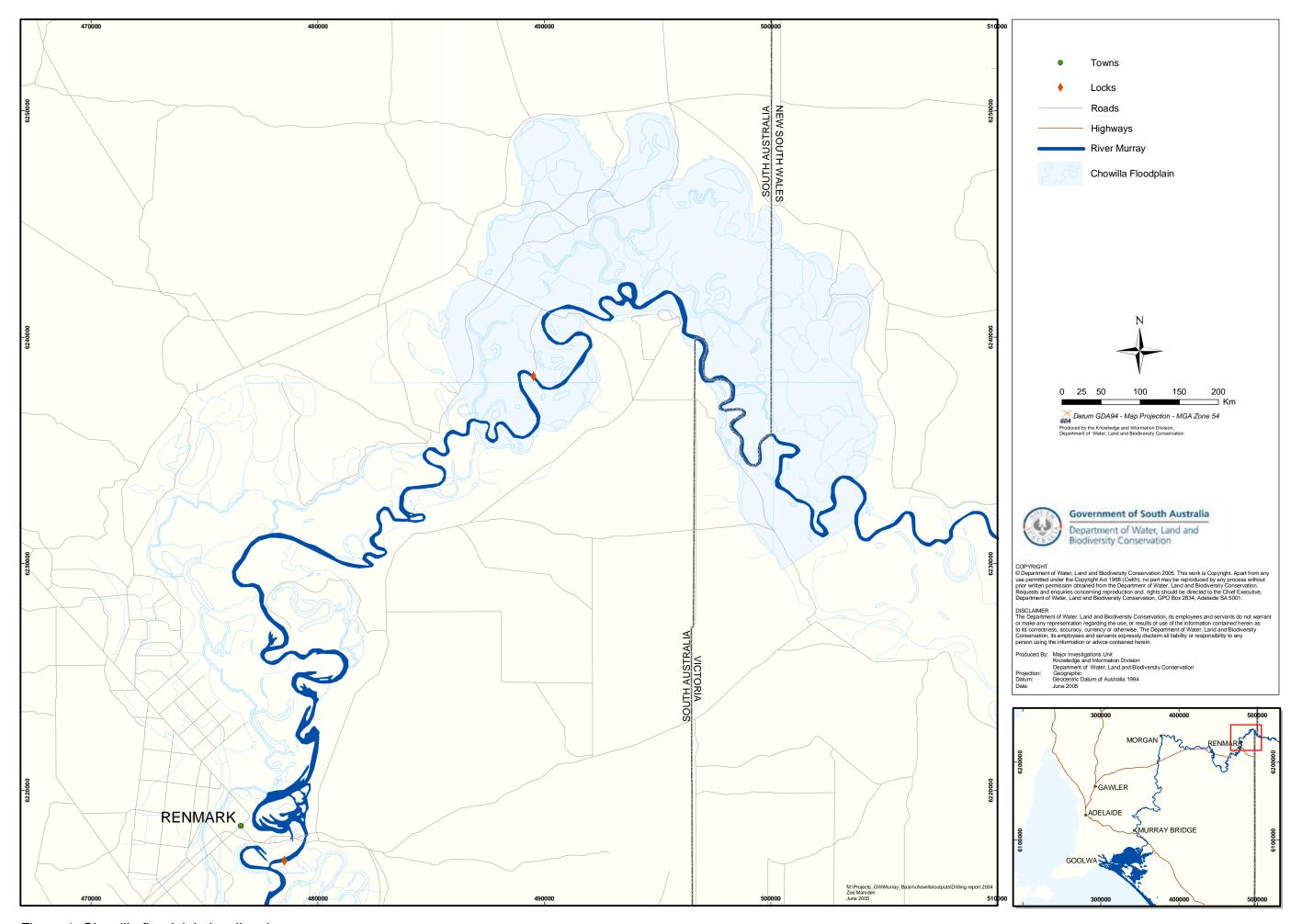


Figure 1: Chowilla floodplain locality plan

## 1.1 Background

Groundwater levels are currently being monitored across the Chowilla floodplain by several organisations in an uncoordinated manner. On behalf of the Minister for Environment and Conservation, the Department of Water, Land and Biodiversity Conservation (DWLBC) has a commitment to provide accurate and current information on State groundwater resources. This information is used by Government and industry for resource assessment, availability, development, management, strategic planning, and policy. Monitoring is considered to be a core activity of the agency.

In March 2003, DWLBC Groundwater Assessment Branch was provided with a project brief from DWLBC River Murray Division requesting a review of the current status and condition of the existing groundwater monitoring network on the Chowilla floodplain. The review also encompassed identification of gaps in the existing monitoring network and recommendations for the development of a comprehensive on-going groundwater monitoring program aimed at addressing groundwater responses to flood events and uncertainties surrounding groundwater and surface water interaction along the creek lines.

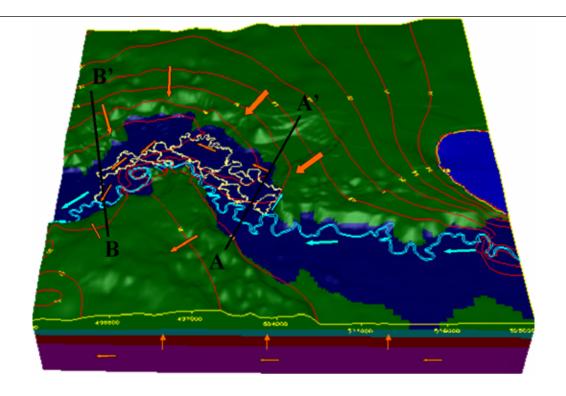
The collection and interpretation of groundwater data is essential for developing a clear understanding of the hydraulic behaviour of the aquifer system, the salinity regime and temporal responses to recharge or major flooding events. Ongoing monitoring will play an essential role in adaptive environmental management on the Chowilla floodplain to reduce the flux of saline groundwater to the River Murray. Monitoring data will be made available to all stakeholders with an interest in environmental issues in the region. DWLBC will be responsible for the management of the groundwater monitoring data and storage within the appropriate corporate database. Monitoring data will also assist with the calibration of numerical models.

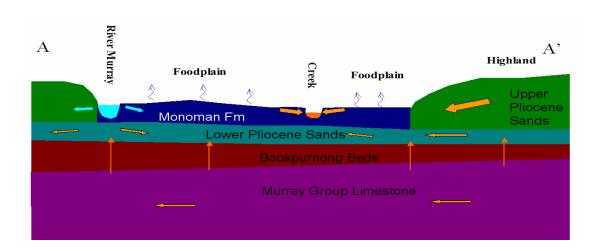
In August 2003, Marsden and Howles (2003) provided recommendations for the upgrade of the current groundwater monitoring network, expansion of the groundwater monitoring network and additional hydrogeological investigations. This report provides details of the upgrade and expansion of the Chowilla groundwater network, which will form a component of Stage II of the Chowilla Floodplain Groundwater Monitoring and Investigation Program.

## 1.2 Regional Hydrogeology

A conceptual hydrogeological model of the 200 km<sup>2</sup> Chowilla floodplain is given in Figure 2 and indicates the hydrogeological units, surface water features, and the flow directions within the floodplain. The cross-section A-A' shows a conceptual cross-section upstream of the anabranch creek system on the eastern site of the floodplain. This cross-section indicates groundwater flow in the aquifer system including lateral flow from the highland area, vertical leakage from Murray Group Limestone, discharge to the anabranch creeks, discharge by evapotranspiration from the extensive areas where a shallow groundwater table exists,

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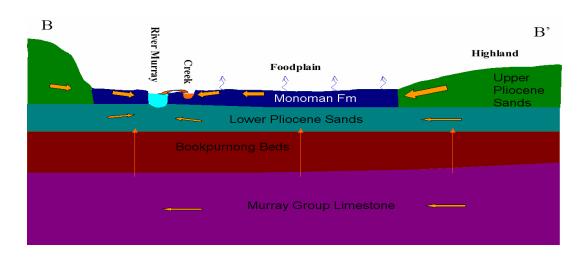


Figure 2: Hydrogeological cross-section of the Chowilla region



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and lateral flow from the River Murray to the aquifer system. The cross-section B-B' is located downstream of the anabranch creek system on the western side the floodplain. This cross-section indicates lateral flow from the highland area, vertical leakage from the Murray Group Limestone and direct discharge from the anabranch creeks into the river downstream of Lock-6. The anabranch creeks can be either losing or gaining.

Sharley and Goggan (1995) and Jolly and Walker (1995) determined on average, 130 tonnes/day of salt enters the Chowilla floodplain with groundwater inflow. After extended dry periods and low flows in the River Murray, the salt load entering the anabranch creeks from the aquifer system (and thus the river) is 40–60 tonnes/day. The maximum peak of 1800 tonnes/day was recorded after the 1974 flood.

## 1.3 Objectives

The objectives of the completed drilling program were to:

- Upgrade and expand the current monitoring network.
- Construct accurate potentiometric surface plans for the (upper) Monoman Formation and the Murray Group Limestone aquifers.
- Improve the current understanding of the floodplain hydrogeologic regime operating across the floodplain.
- Provide enhanced salinity data.
- Gain greater knowledge of the spatial distribution and thickness of aquifers and aquitards on the floodplain.
- Determine the hydraulic relationship between creeks and adjacent aquifers.
- Provide greater confidence in understanding temporal variations to groundwater levels and hydraulic response of aquifers to recharge and major flood events. Such information will be crucial to the design of any groundwater management schemes.

# 2. DRILLING PROGRAM

The drilling program was undertaken between March and October 2004. Completion details of all installed monitoring are given in Table 1. The well configuration is given on Figure 3. A copy of the Drilling Report for each well is given in Appendix 1 whilst lithological logs are given in Appendix 2. Geophysical logs of all surveyed wells are given in Appendix 3.

All wells installed for this program were GPS surveyed by SA Water.

## 2.1 Well Configuration

Seven transect lines perpendicular to the River Murray, spanning across the entire floodplain, were used to site well locations. It was important the lines spanned across the entire floodplain to gain a complete hydrogeological coverage of the floodplain. Furthermore, very little or no data was available from the eastern side of the floodplain and therefore, there was a considerable desire to complete a number of observation wells in this area.

There were two specific classes of wells drilled in the floodplains - creek sites and Monoman Formation sites. The purpose of the creek sites was to ascertain groundwater and surface water interaction along creek lines (5–10 m deep into the upper Monoman aquifer), while the intention of the Monoman Formation sites was to monitor both the upper (2–10 m) and the lower (15–25 m) Monoman Formation.

There was an additional lack of information in the highlands to the northwest of the floodplain and as such, one well screening the Pliocene Sands Aquifer and another screening the Murray Group Limestone Aquifer were constructed.

#### 2.2 Well Construction

The following construction design was used for observation wells completed in the upper Monoman Formation at creek sites:

- Holes drilled 5–10 m into the sands;
- 80 mm ID Class 9 PVC casing;
- 0.5 mm slots over the 2 m PVC screen length;
- 1.6–3.2 mm size gravel pack extending a metre above the screened section;
- 0.5 m bentonite seal above the gravel pack; and
- Annulus cemented back to surface from the bottom of the clays.

The following construction was proposed for observation wells completed in the upper Monoman Formation at Monoman Formation sites:

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- Total depth 5–10 m into the sands;
- 80 mm ID Class 9 PVC casing;
- 0.5 mm slots over the 3 m PVC screen length;

Table 1 New well completion details

|            |                  |                |                        |                    |                     |  |                                  |                   |                     | Casing               |                        |    |          |                      |                           | Production                  | Zone                 |                            |                             |
|------------|------------------|----------------|------------------------|--------------------|---------------------|--|----------------------------------|-------------------|---------------------|----------------------|------------------------|----|----------|----------------------|---------------------------|-----------------------------|----------------------|----------------------------|-----------------------------|
| Zone       | Permit<br>Number | Unit<br>Number | Obs<br>Wells<br>Number | Easting<br>(GDA94) | Northing<br>(GDA94) | Elevation<br>natural<br>surface<br>(m AHD) | Reference<br>Elevation<br>(mAHD) | Target Aquifer    | Completed depth (m) | Casing specification | Casing<br>depth<br>(m) |    | Grouting | Screen specification | In-line /<br>Open<br>hole | Screened<br>Interval<br>(m) | Screen<br>ID<br>(mm) | Screen<br>aperture<br>(mm) | Gravel<br>pack size<br>(mm) |
| Floodplain | 64252            | 703000657      | CHW71                  | 491299.5           | 6243673.6           | 19.8                                       | 20.7                             | Monoman Formation | 7.8                 | Class 9 PVC          | 5.8                    | 80 | Gravity  | Slotted casing       | Inline                    | 5.8-7.8                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64237            | 703000658      | CHW66                  | 490025.8           | 6247526.5           | 25.5                                       | 26.4                             | Monoman Formation | 10.1                | Class 9 PVC          | 7.1                    | 80 | Gravity  | Slotted casing       | Inline                    | 7.1-10.1                    | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64238            | 703000659      | CHW67                  | 490021.6           | 6247529.8           | 25.5                                       | 26.5                             | Monoman Formation | 19.0                | Class 9 PVC          | 16.0                   | 80 | Gravity  | Slotted casing       | Inline                    | 16-19                       | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64262            | 703000660      | CHW80                  | 494288.8           | 6244661.2           | 18.2                                       | 19.0                             | Monoman Formation | 7.8                 | Class 9 PVC          | 5.8                    | 80 | Gravity  | Slotted casing       | Inline                    | 5.8-7.8                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64261            | 703000661      | CHW79                  | 494276.9           | 6244644.3           | 17.2                                       | 18.2                             | Monoman Formation | 7.6                 | Class 9 PVC          | 5.6                    | 80 | Gravity  | Slotted casing       | Inline                    | 5.6-7.6                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64259            | 703000662      | CHW77                  | 494060.0           | 6249379.8           | 18.8                                       | 19.8                             | Monoman Formation | 5.5                 | Class 9 PVC          | 2.5                    | 80 | Gravity  | Slotted casing       | Inline                    | 2.5-5.5                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64260            | 703000663      | CHW78                  | 494065.8           | 6249383.0           | 18.8                                       | 19.7                             | Monoman Formation | 19.1                | Class 9 PVC          | 16.1                   | 80 | Gravity  | Slotted casing       | Inline                    | 16.1-19.1                   | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64264            | 703000664      | CHW82                  | 494248.1           | 6244557.9           | 19.9                                       | 20.6                             | Monoman Formation | 9.1                 | Class 9 PVC          | 7.1                    | 80 | Gravity  | Slotted casing       | Inline                    | 7.1-9.1                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64263            | 703000665      | CHW81                  | 494256.1           | 6244587.9           | 19.8                                       | 20.7                             | Monoman Formation | 8.7                 | Class 9 PVC          | 6.7                    | 80 | Gravity  | Slotted casing       | Inline                    | 6.7-8.7                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64270            | 703000666      | CHW83                  | 496879.6           | 6244760.2           | 20.4                                       | 21.2                             | Monoman Formation | 6.1                 | Class 9 PVC          | 3.1                    | 80 | Gravity  | Slotted casing       | Inline                    | 3.1-6.1                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64271            | 703000667      | CHW84                  | 496886.4           | 6244760.8           | 20.4                                       | 21.2                             | Monoman Formation | 17.7                | Class 9 PVC          | 14.7                   | 80 | Gravity  | Slotted casing       | Inline                    | 14.7-17.7                   | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64278            | 703000668      | CHW90                  | 498334.0           | 6240725.0           | 19.5                                       | 20.2                             | Monoman Formation | 7.7                 | Class 9 PVC          | 5.7                    | 80 | Gravity  | Slotted casing       | Inline                    | 5.7-7.7                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64277            | 703000669      | CHW89                  | 498320.6           | 6240708.5           | 19.4                                       | 20.0                             | Monoman Formation | 7.4                 | Class 9 PVC          | 5.4                    | 80 | Gravity  | Slotted casing       | Inline                    | 5.4-7.4                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64275            | 703000670      | CHW87                  | 499251.3           | 6241544.5           | 21.1                                       | 21.8                             | Monoman Formation | 10.3                | Class 9 PVC          | 7.3                    | 80 | Gravity  | Slotted casing       | Inline                    | 7.3-10.3                    | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64276            | 703000671      | CHW88                  | 499250.8           | 6241549.8           | 21.0                                       | 21.7                             | Monoman Formation | 18.1                | Class 9 PVC          | 15.1                   | 80 | Gravity  | Slotted casing       | Inline                    | 15.1-18.1                   | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64209            | 703000695      | CHW49                  | 483756.2           | 6239123.1           | 19.6                                       | 20.6                             | Monoman Formation | 8.8                 | Class 9 PVC          | 5.8                    | 80 | Gravity  | Slotted casing       | Inline                    | 5.8-8.8                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64210            | 703000696      | CHW50                  | 483755.4           | 6239118.3           | 19.6                                       | 20.6                             | Monoman Formation | 20.6                | Class 9 PVC          | 17.6                   | 80 | Gravity  | Slotted casing       | Inline                    | 17.6-20.6                   | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64212            | 703000698      | CHW51                  | 486747.7           | 6238891.1           | 19.8                                       | 20.7                             | Monoman Formation | 7.8                 | Class 9 PVC          | 4.8                    | 80 | Gravity  | Slotted casing       | Inline                    | 4.8-7.8                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64213            | 703000699      | CHW52                  | 486746.1           | 6238886.5           | 19.8                                       | 20.7                             | Monoman Formation | 18.2                | Class 9 PVC          | 15.2                   | 80 | Gravity  | Slotted casing       | Inline                    | 15.2-17.2                   | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64214            | 703000700      | CHW53                  | 487326.8           | 6238931.4           | 19.8                                       | 20.6                             | Monoman Formation | 10.6                | Class 9 PVC          | 8.6                    | 80 | Gravity  | Slotted casing       | Inline                    | 8.6-10.6                    | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64215            | 703000701      | CHW54                  | 487306.5           | 6238931.1           | 18.7                                       | 19.6                             | Monoman Formation | 9.4                 | Class 9 PVC          | 7.4                    | 80 | Gravity  | Slotted casing       | Inline                    | 7.4-9.4                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64216            | 703000702      | CHW55                  | 487453.4           | 6238973.2           | 18.9                                       | 19.6                             | Monoman Formation | 10.2                | Class 9 PVC          | 8.2                    | 80 | Gravity  | Slotted casing       | Inline                    | 8.2-10.2                    | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64217            | 703000703      | CHW56                  | 487479.4           | 6238973.0           | 17.3                                       | 18.2                             | Monoman Formation | 6.8                 | Class 9 PVC          | 4.8                    | 80 | Gravity  | Slotted casing       | Inline                    | 4.8-6.8                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64218            | 703000704      | CHW57                  | 488155.9           | 6238925.9           | 19.9                                       | 20.5                             | Monoman Formation | 7.8                 | Class 9 PVC          | 4.8                    | 80 | Gravity  | Slotted casing       | Inline                    | 4.8-7.8                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64219            | 703000705      | CHW58                  | 488160.8           | 6238926.6           | 19.9                                       | 20.8                             | Monoman Formation | 15.6                | Class 9 PVC          | 12.6                   | 80 | Gravity  | Slotted casing       | Inline                    | 12.6-15.6                   | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64225            | 703000711      | CHW59                  | 487258.0           | 6242552.0           | 20.1                                       | 21.0                             | Monoman Formation | 7.7                 | Class 9 PVC          | 5.7                    | 80 | Gravity  | Slotted casing       | Inline                    | 5.7-7.7                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64226            | 703000712      | CHW60                  | 487260.0           | 6242555.0           | 20.1                                       | 20.9                             | Monoman Formation | 17.1                | Class 9 PVC          | 15.1                   | 80 | Gravity  | Slotted casing       | Inline                    | 15.1-17.1                   | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64232            | 703000718      | CHW61                  | 487263.0           | 6242557.0           | 20.1                                       | 21.0                             | Pliocene Sands    | 40.0                | Class 9 PVC          | 38.0                   | 80 | Tremmie  | Slotted casing       | Inline                    | 38-40                       | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64233            | 703000719      | CHW62                  | 488294.6           | 6242035.3           | 19.5                                       | 20.5                             | Monoman Formation | 8.0                 | Class 9 PVC          | 6.0                    | 80 | Gravity  | Slotted casing       | Inline                    | 6-8                         | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64234            | 703000720      | CHW63                  | 488280.1           | 6242050.1           | 19.6                                       | 20.3                             | Monoman Formation | 6.9                 | Class 9 PVC          | 4.9                    | 80 | Gravity  | Slotted casing       | Inline                    | 4.9-6.9                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64235            | 703000721      | CHW64                  | 488382.8           | 6241991.4           | 19.7                                       | 20.5                             | Monoman Formation | 10.0                | Class 9 PVC          | 8.0                    | 80 | Gravity  | Slotted casing       | Inline                    | 8-10                        | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64236            | 703000722      | CHW65                  | 488401.5           | 6241979.7           | 18.9                                       | 19.9                             | Monoman Formation | 9.8                 | Class 9 PVC          | 7.8                    | 80 | Gravity  | Slotted casing       | Inline                    | 7.8-9.8                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64244            | 703000728      | CHW68                  | 490949.0           | 6244537.0           | 20.3                                       | 21.2                             | Monoman Formation | 7.4                 | Class 9 PVC          | 5.4                    | 80 | Gravity  | Slotted casing       | Inline                    | 5.4-7.4                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64245            | 703000729      | CHW69                  | 490948.0           | 6244539.0           | 20.3                                       | 21.2                             | Monoman Formation | 24.0                | Class 9 PVC          | 22.0                   | 80 | Gravity  | Slotted casing       | Inline                    | 22-24                       | 80                   | 0.5                        | 1.6-3.2                     |

|            |                  |                |                        |                    |                     |  |                                  |                        |                           |                         | Casin                  | g   |          | Production Zone      |                           |                             |                      |                            |                             |
|------------|------------------|----------------|------------------------|--------------------|---------------------|--|----------------------------------|------------------------|---------------------------|-------------------------|------------------------|-----|----------|----------------------|---------------------------|-----------------------------|----------------------|----------------------------|-----------------------------|
| Zone       | Permit<br>Number | Unit<br>Number | Obs<br>Wells<br>Number | Easting<br>(GDA94) | Northing<br>(GDA94) | Elevation<br>natural<br>surface<br>(m AHD) | Reference<br>Elevation<br>(mAHD) | Target Aquifer         | Completed<br>depth<br>(m) | Casing<br>specification | Casing<br>depth<br>(m) |     | Grouting | Screen specification | In-line /<br>Open<br>hole | Screened<br>Interval<br>(m) | Screen<br>ID<br>(mm) | Screen<br>aperture<br>(mm) | Gravel<br>pack size<br>(mm) |
| Floodplain | 64251            | 703000734      | CHW70                  | 490949.0           | 6244535.0           | 20.4                                       | 21.2                             | Pliocene Sands         | 35.0                      | Class 9 PVC             | 33.0                   | 80  | Tremmie  | Slotted casing       | Inline                    | 33-35                       | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64253            | 703000735      | CHW72                  | 491279.9           | 6243678.0           | 20.3                                       | 21.2                             | Monoman Formation      | 7.6                       | Class 9 PVC             | 5.6                    | 80  | Gravity  | Slotted casing       | Inline                    | 5.6-7.6                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64254            | 703000736      | CHW73                  | 491405.1           | 6243646.2           | 20.4                                       | 21.3                             | Monoman Formation      | 8.5                       | Class 9 PVC             | 6.5                    | 80  | Gravity  | Slotted casing       | Inline                    | 6.5-8.5                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64255            | 703000737      | CHW74                  | 491424.6           | 6243639.5           | 20.0                                       | 20.9                             | Monoman Formation      | 10.0                      | Class 9 PVC             | 8.0                    | 80  | Gravity  | Slotted casing       | Inline                    | 8-10                        | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64257            | 703000739      | CHW75                  | 491876.1           | 6241960.7           | 20.2                                       | 21.0                             | Monoman Formation      | 9.8                       | Class 9 PVC             | 6.8                    | 80  | Gravity  | Slotted casing       | Inline                    | 6.8-9.8                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64258            | 703000740      | CHW76                  | 491880.7           | 6241962.5           | 20.2                                       | 21.0                             | Monoman Formation      | 19.7                      | Class 9 PVC             | 16.7                   | 80  | Gravity  | Slotted casing       | Inline                    | 16.7-19.7                   | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64273            | 703000742      | CHW85                  | 496447.2           | 6243232.6           | 20.3                                       | 21.0                             | Monoman Formation      | 10.1                      | Class 9 PVC             | 7.1                    | 80  | Gravity  | Slotted casing       | Inline                    | 7.1-10.1                    | 80                   | 0.5                        | 1.6-3.2                     |
| Highland   | 64285            | 703000743      | CHW92                  | 483893.0           | 6247418.0           | 51.8                                       | 52.7                             | Pliocene Sands         | 50.0                      | Class 9 PVC             | 47.0                   | 80  | Gravity  | Slotted casing       | Inline                    | 47-50                       | 80                   | 0.5                        | 0.8-1.6                     |
| Highland   | 64284            | 703000744      | CHW91                  | 483886.0           | 6247437.0           | 51.7                                       | 52.1                             | Murray Group Limestone | 145.0                     | Class 12 PVC            | 125.0                  | 157 | Pressure | -                    | Open hole                 | 125-145                     | -                    | -                          | -                           |
| Floodplain | 100277           | 703000762      | CHW94                  | 487961.1           | 6245576.6           | 40.2                                       | 41.1                             | Pliocene Sands         | 25.0                      | Class 9 PVC             | 22.0                   | 80  | Tremmie  | Slotted casing       | Inline                    | 22-25                       | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 100290           | 703000773      | CHW95                  | 499684.5           | 6244389.8           | 22.8                                       | 23.8                             | Pliocene Sands         | 15.0                      | Class 9 PVC             | 12.0                   | 80  | Tremmie  | Slotted casing       | Inline                    | 12-15                       | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 64274            | 703000775      | CHW86                  | 496442.4           | 6243234.4           | 20.3                                       | 21.0                             | Monoman Formation      | 17.9                      | Class 9 PVC             | 14.9                   | 80  | Gravity  | Slotted casing       | Inline                    | 14.9-17.9                   | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 65654            | 703000776      | CHW93                  | 497789.0           | 6247292.0           | 19.1                                       | 19.7                             | Murray Group Limestone | 180.0                     | Class 12 PVC            | 85.0                   | 157 | Pressure | -                    | Open hole                 | 85-180                      | -                    | -                          | -                           |
| Floodplain | 60BL216329       | 713000052      | CHW96                  | 502692.0           | 6239443.0           | 21.3                                       | 22.1                             | Monoman Formation      | 7.6                       | Class 9 PVC             | 5.6                    | 80  | Gravity  | Slotted casing       | Inline                    | 5.6-7.6                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 60BL216329       | 713000053      | CHW97                  | 502646.0           | 6239439.0           | 21.2                                       | 22.0                             | Monoman Formation      | 7.5                       | Class 9 PVC             | 5.5                    | 80  | Gravity  | Slotted casing       | Inline                    | 5.5-7.5                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 60BL216331       | 713000054      | CHW98                  | 501560.0           | 6238719.0           | 20.9                                       | 21.9                             | Monoman Formation      | 7.3                       | Class 9 PVC             | 4.3                    | 80  | Gravity  | Slotted casing       | Inline                    | 4.3-7.3                     | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 60BL216331       | 713000055      | CHW99                  | 501556.0           | 6238716.0           | 20.9                                       | 21.7                             | Monoman Formation      | 19.6                      | Class 9 PVC             | 16.6                   | 80  | Gravity  | Slotted casing       | Inline                    | 16.6-19.6                   | 80                   | 0.5                        | 1.6-3.2                     |
| Floodplain | 60BL216364       | 713000056      | CHW100                 | 503043.0           | 6239424.0           | 21.2                                       | 22.1                             | Monoman Formation      | 6.1                       | Class 9 PVC             | 3.1                    | 80  | Gravity  | Slotted casing       | Inline                    | 3.1-6.1                     | 80                   | 0.5                        | 1.6-3.2                     |

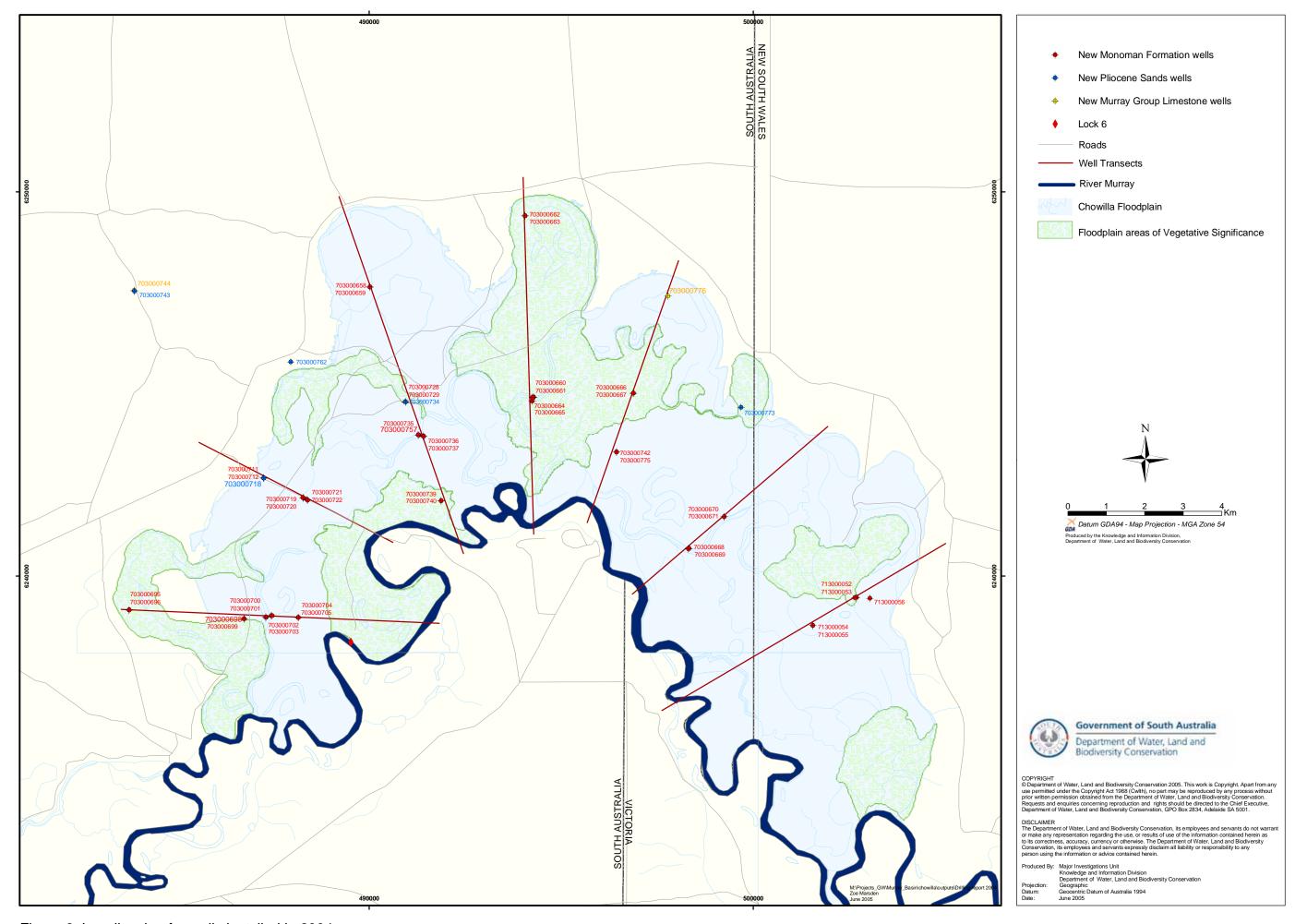


Figure 3: Locality plan for wells installed in 2004

- 1.6–3.2 mm size gravel pack extending a metre above the screened section;
- 0.5 m bentonite seal above the gravel pack; and
- Annulus cemented back to surface from bottom of the clays.

The following construction was proposed for observation wells completed in the lower Monoman Formation at Monoman Formation sites:

- Holes drilled 15–20 m at the end of the Monoman Formation sequence;
- 80 mm ID Class 9 PVC casing;
- 0.5 mm slots over the 3 m PVC screen length;
- 1.6–3.2 mm size gravel pack extending a metre above the screened section;
- 0.5 m bentonite seal above the gravel pack; and
- Annulus cemented back to surface from bottom of the clays.

The following construction was proposed for the Pliocene Sands aquifer observation wells:

- Holes drilled 15–50 m;
- 80 mm ID Class 12 PVC casing;
- 0.5 mm slots over the 2 or 3 m PVC screen length;
- 0.8–1.6 mm or 1.6–3.2 mm size gravel pack extending a metre above the screened section:
- 0.5 m bentonite seal above the gravel pack; and
- Annulus cemented back to surface from the top of the bentonite seal.

The following construction was proposed for the Murray Group Limestone Aquifer observation wells:

- Holes drilled 145–180 m;
- 157 mm ID Class 12 PVC casing;
- Open hole throughout the limestone sequence; and
- Annulus cemented back to surface from above the limestone (end of casing).

## 2.3 Hydrostratigraphy

The drilling program has shown that the geology of the floodplain is highly variable, even on a localised scale of tens of metres. Such variation is a consequence of the numerous floodplain, lake and river channel sequences that have been incised and deposited through the ancestral river channel over thousands of years. The floodplain aquifers and aquitards are thus likely to be hetergenous and anisotropic.

Table 2 summarises the hydrostratigraphic units within the Chowilla floodplain. The Coonambidgal Formation is a clayey surficial sequence 2–6 m thick that acts as a semiconfining layer. The clays are dark brown grading to fawn in colour, stiff, and slightly silty and loamy in parts. Underlying this unit is the semi-confined Monoman Formation (15–30 m thick). This unit consists of mainly grey and orange/brown medium-coarse grained quartz sand. Clay bands 0.5–3 m thick were intercepted in some areas at 8–12 m depth,

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which appear to form localised aquitards. Pump test investigations conducted at Gum Flat in 2002 indicate that this clay layer influences the lower part of the Monoman Formation, such that when a well completed at a lower depth is pumped, it exhibits the response of a semi-confined aquifer (Howles and Marsden, 2002). Therefore, for the purpose of this drilling program, the Monoman Formation has been characterised as two sub-aquifers: upper Monoman (10–15 m thick) and lower Monoman aquifers (5–10 m thick), separated by the clay layer.

Beneath this lies the Pliocene Sands Aquifer. It consists of dark brown/grey silty fine-medium grained quartz sand and is slightly clayey in parts, becoming increasingly so towards the base of the sequence. This aquifer can be 15–40 m thick beneath the floodplain and up to 55 m in the highlands.

Table 2 Hydrostratigraphic units within the Chowilla floodplain

| Age          | Stratigraphic unit        | Symbol | Lithology   | Thickness<br>(m) |
|--------------|---------------------------|--------|---|------------------|
| Quaternary   | Coonambidgal<br>Clay      | Qhac   | Light grey moderate density clay. Moderate plasticity, rollable.  | 2–6              |
| Quaternary   | Upper Monoman<br>Sands    | Qam    | Yellow/brown and grey fine/medium quartz sand. Moderately well to well sorted. Gravelly in part. Micaceous. | 10–15            |
| Quaternary   | Lower Monoman<br>Sands    | Qam    | Grey coarse quartz sand/fine quartz gravel interbeds. Clayey in part. Micaceous.                            | 5–15             |
| Pliocene     | Loxton Parilla<br>Sands   | Трр    | Dark brown/grey silty fine sand. Clayey in part. Traces fine quartz gravel. Micaceous.                      | 15–55            |
| Mio-Pliocene | Bookpurnong<br>Beds       | Tmpb   | Grey/green fossiliferous silts and clay.<br>Glauconitic.  | 5–20             |
| Miocene      | Murray Group<br>Limestone | Ту     | Grey to off-white fossiliferous limestone.  | 120              |

# 3. OBSERVATION NETWORK

#### 3.1 Finalised Observation Network

Selected locatable wells (including the majority of those that are currently monitored) completed within the Monoman or Coonambidgal Formations that have been incorporated into the revised and expanded groundwater monitoring network are shown on Figure 4. Reference to Figures 4 and 5 clearly illustrates that the:

- Coonambidgal Formation network is extremely limited;
- Monoman Formation (upper and lower) network is sparse;
- Pliocene Sands Aquifer network is extremely limited across the floodplain (although more wells exist in highland areas);
- Murray Group Limestone Aquifer is monitored by only two wells (although more wells exist in highland areas);
- Region is lacking nested sets of wells at strategic sites capable of monitoring vertical head gradients between the relevant aquifers;
- Existing groundwater monitoring network has been developed over a long period of time without integrated planning.

The locations of all selected wells selected to be part of the monitoring network and recently installed observation wells are provided on Figure 5. This figure shows:

- An additional eight creek sites involving observation well pairs completed in the upper Monoman Formation on opposite sides of the creeks (another two sites were completed adjacent to creeks, but these did not have another pair completed on the other side of the creek due to accessibility).
- An additional 12 Monoman Formation sites involving observation well pairs completed in the upper and lower Monoman Formations. Two of these sites were further drilled to become aquifer test sites.
  - Note: there was also a well completed in the upper Monoman Formation at the Tareena Bong site.
- An additional five observation wells completed in the Pliocene Sands Aquifer, four on the floodplains and one on the highland. Two of these sites were further drilled to become aquifer test sites.
- A single additional observation well completed in the Murray Group Limestone Aquifer in the highland region to the northwest of the floodplain.

The expanded groundwater monitoring network incorporated the entire floodplain, not just the areas that have been identified as being of interest from the perspective of remnant native vegetation, as a complete regional knowledge is required for the planning of any groundwater management schemes.

The upgraded groundwater monitoring network may indicate the need to install additional wells as data is acquired and interpreted over time.

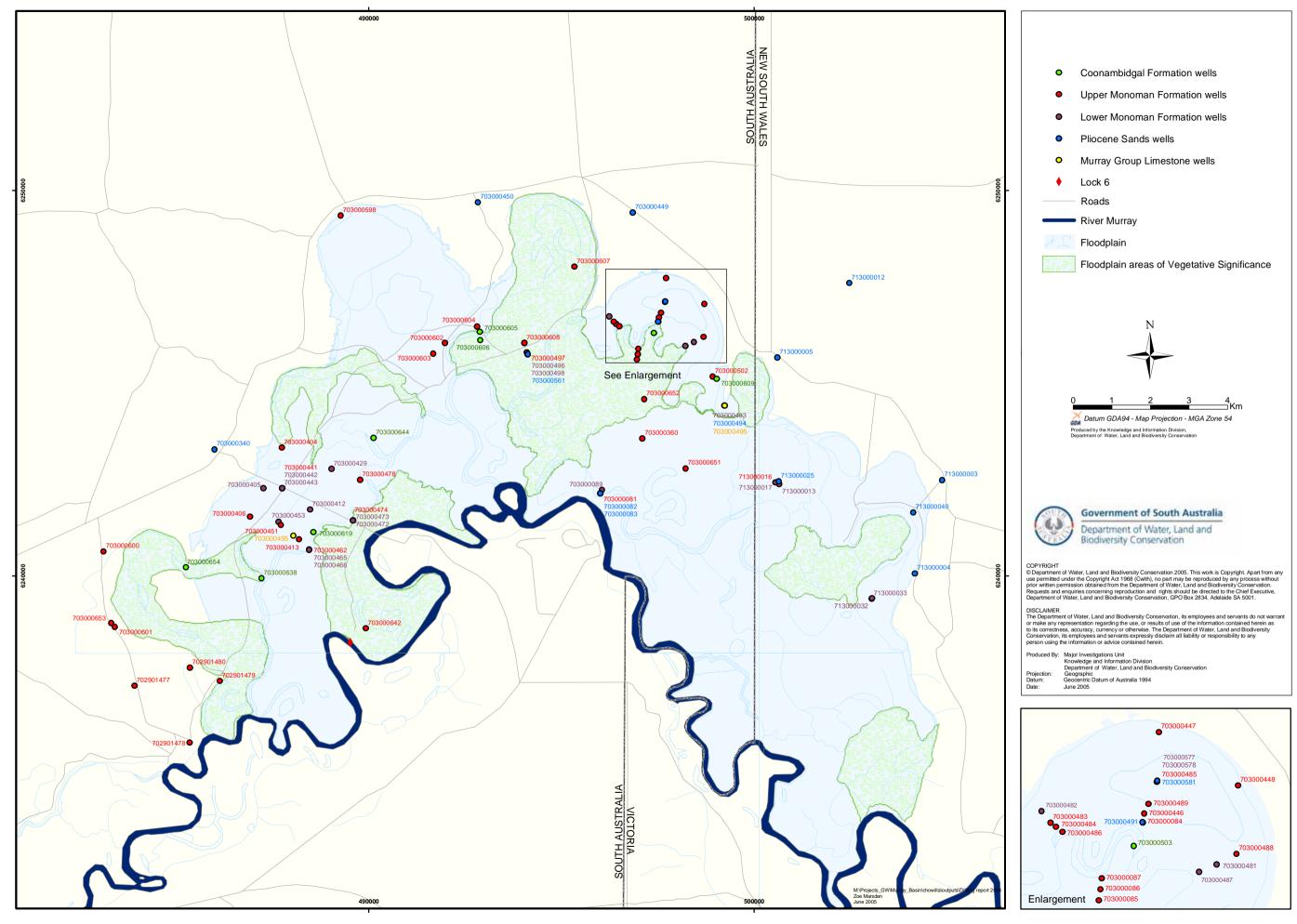


Figure 4: Plan showing selected existing wells (including those completed within the two Monoman sub-aquifer Formations) to be incorporated into the new monitoring network

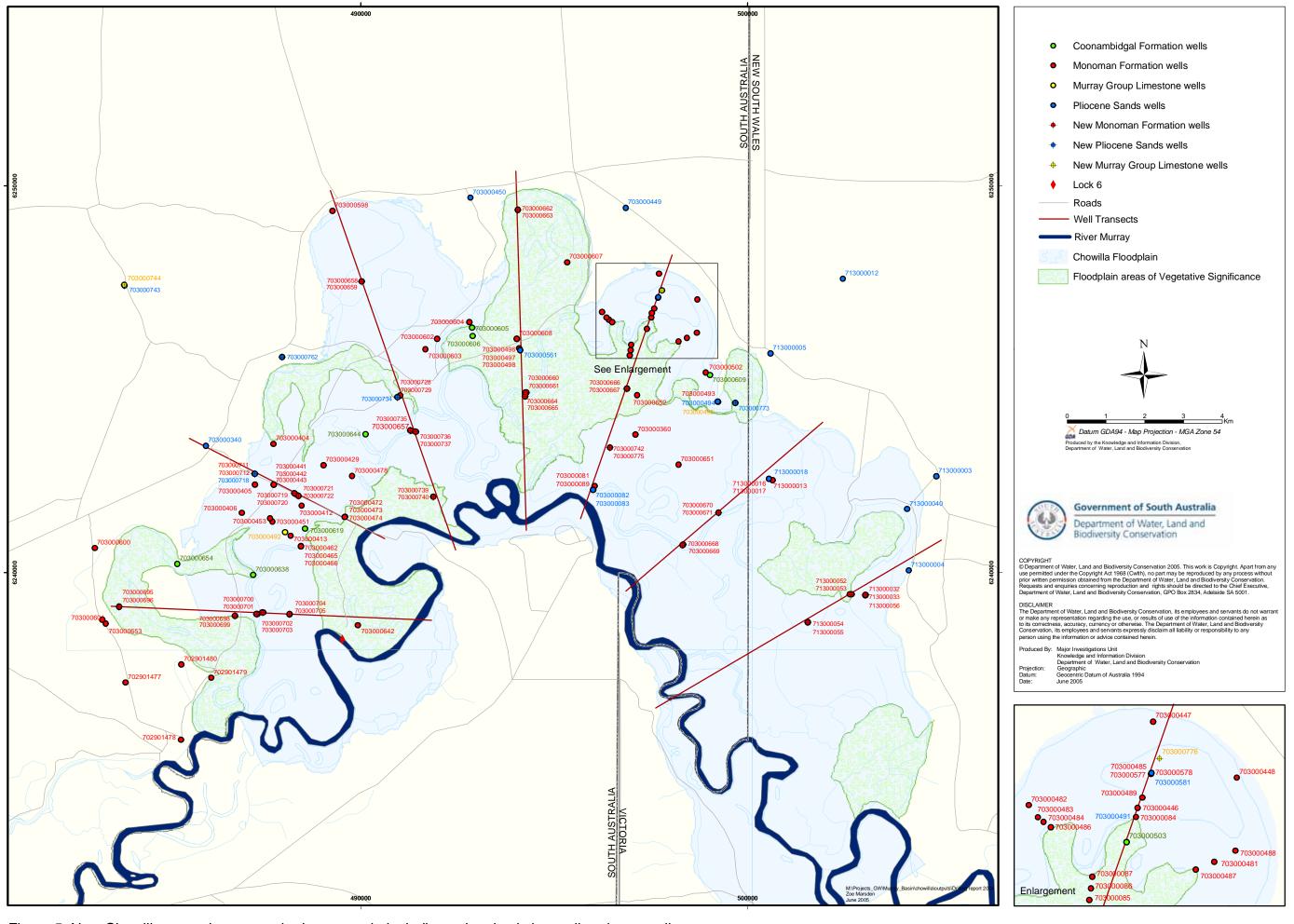


Figure 5: New Chowilla groundwater monitoring network, including selcted existing well and new wells

## 3.2 Monitoring Strategy

Now that the groundwater monitoring network has expanded across the Chowilla floodplain, it is recommended that the monitoring schedule presented in Table 3 be adopted.

Key aspects of the monitoring strategy include:

- For the initial 12 months, monitoring of all wells be undertaken every two months to establish the annual fluctuations. Following evaluation of the data, some of the preexisting scattered Monoman Sands Formation wells are likely to become redundant and will not require further monitoring.
- Following the initial 12 months of monitoring, the monitoring frequency should be reduced to three monthly. Monthly monitoring may be recommenced prior to, and post flooding.
- A selected set of the wells at creek monitoring sites should be fitted with continuously recording data loggers during flood events that will provide information on the response of the aquifer system.
- Baseline water quality (TDS only) monitoring from all wells will be required periodically from the majority of wells but possibly more frequently in those wells adjacent to the creeks.
- Wells adjacent to the creeks will require once off monitoring using a downhole SONDE and then more frequently after a flood event to better characterise the surface/groundwater interactions.

Table 3 Chowilla network groundwater levels and water quality data

| Aquifer Monitored      | Unit Number | Obs Well<br>Number | Easting<br>(GDA94) | Northing<br>(GDA94) | Latest<br>Depth (m) | Latest SWL<br>Date | Latest<br>SWL (m) | Latest<br>RSWL<br>(mAHD) | Latest TDS<br>Date | Latest<br>TDS<br>(mg/L) | Sample<br>Number |
|------------------------|-------------|--------------------|--------------------|---------------------|---------------------|--------------------|-------------------|--------------------------|--------------------|-------------------------|------------------|
| Coonambidgal Formation | 702901477   | CHW101             | 483922.1           | 6237154.7           | 4.66                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Coonambidgal Formation | 702901478   | CHW102             | 485353.2           | 6235680.0           | 4.43                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Monoman Formation      | 702901479   | CHW103             | 486140.0           | 6237278.0           | 5.95                | 11/04/2005         | 5.07              | 15.9                     | 15/11/2002         | 23888                   | 624114           |
| Monoman Formation      | 702901480   | CHW104             | 485362.5           | 6237626.9           | 4.19                | 11/04/2005         | Dry               | NA                       | 13/11/2002         | 19381                   | 624113           |
| Monoman Formation      | 703000081   | CHW105             | 496008.5           | 6242139.5           | 9.45                | 21/02/2005         | 2.72              | 17.65                    | -                  | -                       | -                |
| Pliocene Sand          | 703000082   | CHW106             | 496007.6           | 6242139.1           | 32                  | 21/02/2005         | 2.35              | 17.96                    | 18/04/1989         | 42000                   | 586083           |
| Pliocene Sand          | 703000083   | CHW107             | 496008.3           | 6242138.9           | 58                  | 21/02/2005         | 2.45              | 17.9                     | -                  | -                       | -                |
| Monoman Formation      | 703000084   | CHW108             | 497509.9           | 6246595.7           | 7.2                 | 11/04/2005         | 2.32              | 17.54                    | 1/04/1997          | 49770                   | 612629           |
| Monoman Formation      | 703000085   | CHW109             | 496957.3           | 6245615.8           | 6                   | 21/02/2005         | 2.26              | 17.61                    | -                  | -                       | -                |
| Monoman Formation      | 703000086   | CHW110             | 496978.0           | 6245754.0           | 6                   | 21/02/2005         | 2.71              | 17.22                    | -                  | -                       | -                |
| Monoman Formation      | 703000087   | CHW111             | 496993.1           | 6245890.7           | 7.5                 | 21/02/2005         | 3.4               | 17.3                     | -                  | -                       | -                |
| Monoman Formation      | 703000089   | CHW112             | 496050.3           | 6242234.8           | 7.46                | 21/02/2005         | 3.78              | 17.5                     | 17/05/1989         | 9323                    | 586082           |
| Pliocene Sand          | 703000340   | CHW113             | 485998.0           | 6243281.1           | 47.36               | 11/04/2005         | 39.6              | 16.76                    | 5/06/1967          | 15000                   | 288818           |
| Monoman Formation      | 703000360   | CHW115             | 497098.5           | 6243571.8           | 9.2                 | 21/02/2005         | 4.44              | 17.21                    | 18/05/1989         | 42000                   | 586084           |
| Monoman Formation      | 703000404   | CHW116             | 487744.9           | 6243327.9           | 4.75                | 11/04/2005         | 2.78              | 16.52                    | -                  | -                       | -                |
| Monoman Formation      | 703000405   | CHW117             | 487264.1           | 6242279.6           | 11.89               | 11/04/2005         | 3.2               | 16.39                    | -                  | -                       | -                |
| Monoman Formation      | 703000406   | CHW118             | 486922.1           | 6241540.5           | 7.47                | 11/04/2005         | 3.28              | 16.19                    | -                  | -                       | -                |
| Monoman Formation      | 703000412   | CHW119             | 488476.8           | 6241726.9           | 10.3                | 11/04/2005         | 3.96              | 16.35                    | -                  | -                       | -                |
| Monoman Formation      | 703000413   | CHW120             | 488189.9           | 6240950.8           | 9.14                | 11/04/2005         | 3.88              | 16.15                    | -                  | -                       | -                |
| Monoman Formation      | 703000429   | CHW121             | 489034.9           | 6242778.6           | 10.67               | 11/04/2005         | 3.81              | 16.36                    | -                  | -                       | -                |
| Monoman Formation      | 703000441   | CHW36              | 487750.8           | 6242277.4           | 5.13                | 11/04/2005         | 3                 | 16.39                    | 5/03/1983          | 1832                    | 288835           |
| Monoman Formation      | 703000442   | CHW37              | 487750.7           | 6242277.3           | 11.87               | 11/04/2005         | 3.04              | 16.35                    | 5/03/1983          | 33360                   | 288836           |
| Monoman Formation      | 703000443   | CHW38              | 487750.7           | 6242277.4           | 19.88               | 11/04/2005         | 3.06              | 16.33                    | 16/04/2004         | 50260                   | 642607           |
| Monoman Formation      | 703000446   | CHW122             | 497527.3           | 6246705.7           | 6.36                | 11/04/2005         | 1.9               | 17.56                    | 14/04/2004         | 48720                   | 642609           |
| Monoman Formation      | 703000447   | CHW123             | 497713.2           | 6247727.2           | 6.7                 | 11/04/2005         | 1.78              | 17.83                    | 17/04/2004         | 52920                   | 642610           |

| Aquifer Monitored      | Unit Number | Obs Well<br>Number | Easting<br>(GDA94) | Northing<br>(GDA94) | Latest<br>Depth (m) | Latest SWL<br>Date | Latest<br>SWL (m) | Latest<br>RSWL<br>(mAHD) | Latest TDS<br>Date | Latest<br>TDS<br>(mg/L) | Sample<br>Number |
|------------------------|-------------|--------------------|--------------------|---------------------|---------------------|--------------------|-------------------|--------------------------|--------------------|-------------------------|------------------|
| Monoman Formation      | 703000448   | CHW124             | 498705.3           | 6247060.5           | 5.97                | 11/04/2005         | 1.44              | 18.02                    | 16/04/2004         | 67440                   | 642611           |
| Pliocene Sand          | 703000449   | CHW40              | 496851.0           | 6249431.8           | 13.24               | 11/04/2005         | 9.06              | 18.14                    | -                  | -                       | -                |
| Pliocene Sand          | 703000450   | CHW45              | 492834.7           | 6249690.9           | 14.53               | 11/04/2005         | 10.36             | 17.79                    | 16/04/2004         | 35234                   | 642612           |
| Monoman Formation      | 703000451   | CHW125             | 487723.0           | 6241320.6           | 3.98                | 11/04/2005         | 2.22              | 16.2                     | -                  | -                       | -                |
| Monoman Formation      | 703000453   | CHW126             | 487658.8           | 6241403.5           | 12.15               | 11/04/2005         | 3.86              | 16.27                    | -                  | -                       | -                |
| Monoman Formation      | 703000462   | CHW127             | 488458.1           | 6240685.5           | 3.72                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Monoman Formation      | 703000465   | CHW128             | 488455.3           | 6240684.0           | 12.37               | 11/04/2005         | 3.8               | 16.34                    | -                  | -                       | -                |
| Monoman Formation      | 703000466   | CHW129             | 488452.2           | 6240682.1           | 24.95               | 11/04/2005         | 4.07              | 16.07                    | -                  | -                       | -                |
| Monoman Formation      | 703000472   | CHW130             | 489586.5           | 6241437.5           | 24.25               | 11/04/2005         | 3.09              | 16.19                    | -                  | -                       | -                |
| Monoman Formation      | 703000473   | CHW131             | 489587.5           | 6241440.0           | 12.16               | 11/04/2005         | 2.67              | 16.62                    | -                  | -                       | -                |
| Monoman Formation      | 703000474   | CHW132             | 489588.8           | 6241442.9           | 6.27                | 11/04/2005         | 2.79              | 16.49                    | -                  | -                       | -                |
| Monoman Formation      | 703000478   | CHW133             | 489774.0           | 6242498.7           | 4.46                | 11/04/2005         | 4                 | 15.93                    | -                  | -                       | -                |
| Monoman Formation      | 703000481   | CHW134             | 498437.3           | 6246067.4           | 10.51               | 11/04/2005         | 1.67              | 17.98                    | 31/05/1990         | 49000                   | 586088           |
| Monoman Formation      | 703000482   | CHW135             | 496241.0           | 6246736.6           | 12                  | 11/04/2005         | 4.2               | 17.22                    | 6/06/1990          | 31892                   | 586089           |
| Monoman Formation      | 703000483   | CHW136             | 496349.8           | 6246592.4           | 9.05                | 11/04/2005         | 2.46              | 17.18                    | 5/06/1990          | 34155                   | 586090           |
| Monoman Formation      | 703000484   | CHW137             | 496417.9           | 6246539.5           | 8.6                 | 11/04/2005         | 1.9               | 17.19                    | 5/06/1990          | 38500                   | 586091           |
| Monoman Formation      | 703000485   | CHW138             | 497692.8           | 6247117.5           | 7.27                | 11/04/2005         | 1.45              | 17.65                    | 17/04/2004         | 55020                   | 642613           |
| Monoman Formation      | 703000486   | CHW139             | 496502.1           | 6246477.0           | 8.65                | 11/04/2005         | 2.78              | 17.22                    | 5/06/1990          | 32643                   | 586093           |
| Monoman Formation      | 703000487   | CHW140             | 498217.7           | 6245973.6           | 10.35               | 11/04/2005         | 2.12              | 18.06                    | 15/04/2004         | 65680                   | 642614           |
| Monoman Formation      | 703000488   | CHW141             | 498686.7           | 6246198.7           | 9.16                | 11/04/2005         | 1.6               | 18.09                    | 31/05/1990         | 49000                   | 586095           |
| Monoman Formation      | 703000489   | CHW142             | 497583.3           | 6246825.9           | 9.25                | 11/04/2005         | 1.68              | 17.62                    | 29/05/1990         | 43400                   | 586096           |
| Pliocene Sand          | 703000491   | CHW144             | 497507.2           | 6246597.8           | 36.48               | 11/04/2005         | 2.25              | 17.54                    | 1/04/1997          | 72000                   | 612628           |
| Murray Group Limestone | 703000492   | CHW39              | 488046.5           | 6241044.7           | 96                  | 11/04/2005         | -0.14             | 20.02                    | 9/03/1991          | 23454                   | 288840           |
| Monoman Formation      | 703000493   | CHW46              | 499228.0           | 6244418.9           | 12.28               | 11/04/2005         | 5.39              | 17.79                    | 1/04/1997          | 45500                   | 612626           |
| Pliocene Sand          | 703000494   | CHW47              | 499230.0           | 6244416.9           | 45.81               | 11/04/2005         | 5.27              | 17.95                    | 1/04/1997          | 65360                   | 612627           |
| Murray Group Limestone | 703000495   | CHW48              | 499232.7           | 6244414.5           | 93.05               | 21/02/2005         | -2.33             | 25.58                    | 28/09/1990         | 26000                   | 111394           |
| Monoman Formation      | 703000496   | CHW145             | 494097.8           | 6245802.5           | 11.2                | 11/04/2005         | 4.56              | 16.68                    | 5/03/1992          | 49000                   | 586100           |

| Aquifer Monitored | Unit Number | Obs Well<br>Number | Easting<br>(GDA94) | Northing<br>(GDA94) | Latest<br>Depth (m) | Latest SWL<br>Date | Latest<br>SWL (m) | Latest<br>RSWL<br>(mAHD) | Latest TDS<br>Date | Latest<br>TDS<br>(mg/L) | Sample<br>Number |
|-------------------|-------------|--------------------|--------------------|---------------------|---------------------|--------------------|-------------------|--------------------------|--------------------|-------------------------|------------------|
| Monoman Formation | 703000497   | CHW146             | 494123.7           | 6245750.9           | 4.6                 | 11/04/2005         | Dry               | NA                       | 16/04/2004         | 41440                   | 642615           |
| Monoman Formation | 703000498   | CHW147             | 494126.0           | 6245751.4           | 20.11               | 11/04/2005         | 3.98              | 16.81                    | -                  | -                       | -                |
| Monoman Formation | 703000500   |                    | 494034.0           | 6246045.0           | 6                   | 11/04/2005         | Dry               | NA                       | 7/04/1992          | 25308                   | 586102           |
| Monoman Formation | 703000502   | CHW148             | 498922.2           | 6245178.2           | 6                   | 11/04/2005         | 3.7               | 17.7                     | 7/04/1992          | 49000                   | 586104           |
| Coonambidgal      | 703000503   | CHW149             | 497399.6           | 6246299.8           | 3                   | 21/02/2005         | Dry               | NA                       | 19/06/1987         | 38500                   | 300009           |
| Pliocene Sand     | 703000561   | CHW150             | 494128.3           | 6245752.1           | 53                  | 11/04/2005         | 3.84              | 17.01                    | 18/02/1992         | 35802                   | 622121           |
| Monoman Formation | 703000577   | CHW151             | 497686.0           | 6247105.0           | 14.34               | 11/04/2005         | 1.47              | 17.62                    | 5/04/2005          | 66240                   | 682512           |
| Monoman Formation | 703000578   | CHW152             | 497689.0           | 6247109.0           | 29.3                | 16/03/2005         | 1.33              | 17.75                    | 18/12/2002         | 41580                   | 613107           |
| Pliocene Sand     | 703000581   | CHW153             | 497693.5           | 6247117.2           | 41                  | 11/04/2005         | 0.21              | 18.86                    | -                  | -                       | -                |
| Monoman Formation | 703000598   | CHW154             | 489271.3           | 6249351.3           | 6.25                | 11/04/2005         | 2.61              | 17.5                     | -                  | -                       | -                |
| Monoman Formation | 703000600   | CHW155             | 483121.5           | 6240635.3           | 4.64                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Monoman Formation | 703000601   | CHW156             | 483412.8           | 6238682.7           | 6.14                | 11/04/2005         | 5.3               | 16                       | -                  | -                       | -                |
| Monoman Formation | 703000602   | CHW157             | 491975.6           | 6246043.6           | 4.25                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Monoman Formation | 703000603   | CHW158             | 491673.9           | 6245772.8           | 4.79                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Monoman Formation | 703000604   | CHW159             | 492805.9           | 6246474.5           | 5.02                | 11/04/2005         | 4.69              | 16.48                    | -                  | -                       | -                |
| Coonambidgal      | 703000605   | CHW160             | 492878.0           | 6246332.9           | 1.03                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Coonambidgal      | 703000606   | CHW161             | 492893.2           | 6246112.8           | 2.71                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Monoman Formation | 703000607   | CHW162             | 495337.1           | 6248021.9           | 5                   | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Monoman Formation | 703000608   | CHW163             | 494033.9           | 6246045.2           | 3.84                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Coonambidgal      | 703000609   | CHW164             | 499028.4           | 6245109.2           | 2.93                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Coonambidgal      | 703000619   | CHW165             | 488563.2           | 6241135.0           | 3.55                | 11/04/2005         | 3.19              | 17.09                    | -                  | -                       | -                |
| Coonambidgal      | 703000638   | CHW166             | 487221.0           | 6239938.0           | 4.19                | 11/04/2005         | 2.76              | 15.92                    | 15/11/2002         | 18980                   | 624035           |
| Monoman Formation | 703000642   | CHW167             | 489921.5           | 6238639.3           | 2.65                | 11/04/2005         | Dry               | NA                       | -                  | -                       | -                |
| Coonambidgal      | 703000644   | CHW168             | 490124.7           | 6243582.1           | 4                   | 11/04/2005         | Dry               | NA                       | 12/11/2002         | 6418                    | 624030           |
| Monoman Formation | 703000651   | CHW169             | 498219.4           | 6242791.0           | 5.22                | 21/02/2005         | Dry               | NA                       | 6/11/2002          | 52220                   | 624032           |
| Monoman Formation | 703000652   | CHW170             | 497145.7           | 6244591.0           | 4.3                 | 21/02/2005         | 3.5               | 17.12                    | 6/11/2002          | 34653                   | 624027           |
| Monoman Formation | 703000653   | CHW171             | 483320.9           | 6238780.8           | 5.63                | 11/04/2005         | 5.16              | 16.03                    | 13/11/2002         | 38430                   | 624036           |

| Aquifer Monitored | Unit Number | Obs Well<br>Number | Easting<br>(GDA94) | Northing<br>(GDA94) | Latest<br>Depth (m) | Latest SWL<br>Date | Latest<br>SWL (m) | Latest<br>RSWL<br>(mAHD) | Latest TDS<br>Date | Latest<br>TDS<br>(mg/L) | Sample<br>Number |
|-------------------|-------------|--------------------|--------------------|---------------------|---------------------|--------------------|-------------------|--------------------------|--------------------|-------------------------|------------------|
| Coonambidgal      | 703000654   | CHW172             | 485262.2           | 6240223.0           | 5.23                | 21/02/2005         | 4.5               | 15.17                    | 13/11/2002         | 30273                   | 624034           |
| Monoman Formation | 703000657   | CHW71              | 491299.0           | 6243674.0           | 7.78                | 11/04/2005         | 3.4               | 16.43                    | 24/03/2004         | 17509                   | 641548           |
| Monoman Formation | 703000658   | CHW66              | 490026.0           | 6247527.0           | 10.08               | 11/04/2005         | 8.62              | 16.91                    | 18/03/2004         | 17357                   | 642582           |
| Monoman Formation | 703000659   | CHW67              | 490022.0           | 6247530.0           | 19.02               | 11/04/2005         | 8.71              | 16.82                    | 18/03/2004         | 44310                   | 642583           |
| Monoman Formation | 703000660   | CHW80              | 494289.0           | 6244661.0           | 7.77                | 11/04/2005         | 1.52              | 16.68                    | 19/03/2004         | 40810                   | 641553           |
| Monoman Formation | 703000661   | CHW79              | 494277.0           | 6244644.0           | 7.58                | 11/04/2005         | 0.57              | 16.68                    | 24/03/2004         | 43960                   | 641552           |
| Monoman Formation | 703000662   | CHW77              | 494060.0           | 6249380.0           | 5.53                | 11/04/2005         | 1.1               | 17.67                    | 19/03/2004         | 32888                   | 641550           |
| Monoman Formation | 703000663   | CHW78              | 494066.0           | 6249383.0           | 19.14               | 11/04/2005         | 1.16              | 17.6                     | 19/03/2004         | 46550                   | 641551           |
| Monoman Formation | 703000664   | CHW82              | 494248.0           | 6244558.0           | 9.06                | 21/02/2005         | 3.26              | 16.64                    | 16/03/2004         | 43820                   | 641555           |
| Monoman Formation | 703000665   | CHW81              | 494256.0           | 6244658.0           | 8.74                | 21/02/2005         | 3.17              | 16.66                    | 19/03/2004         | 46340                   | 641554           |
| Monoman Formation | 703000666   | CHW83              | 496880.0           | 6244760.0           | 6.07                | 21/02/2005         | 3.32              | 17.09                    | 17/03/2004         | 38780                   | 642602           |
| Monoman Formation | 703000667   | CHW84              | 496886.0           | 6244761.0           | 17.71               | 21/02/2005         | 3.42              | 17.01                    | 19/03/2004         | 70560                   | 642603           |
| Monoman Formation | 703000668   | CHW90              | 498334.0           | 6240725.0           | 7.73                | 21/02/2005         | 1.99              | 17.48                    | 19/03/2004         | 48720                   | 641561           |
| Monoman Formation | 703000669   | CHW89              | 498321.0           | 6240708.0           | 7.4                 | 21/02/2005         | 1.88              | 17.49                    | 19/03/2004         | 48650                   | 641560           |
| Monoman Formation | 703000670   | CHW87              | 499251.0           | 6241545.0           | 10.29               | 21/02/2005         | 3.6               | 17.48                    | 19/03/2004         | 51030                   | 641558           |
| Monoman Formation | 703000671   | CHW88              | 499251.0           | 6241550.0           | 18.09               | 21/02/2005         | 3.54              | 17.46                    | 19/03/2004         | 52080                   | 641559           |
| Monoman Formation | 703000695   | CHW49              | 483756.0           | 6239123.0           | 8.76                | 11/04/2005         | 3.56              | 16.06                    | 25/03/2004         | 34089                   | 641542           |
| Monoman Formation | 703000696   | CHW50              | 483755.0           | 6239118.0           | 20.62               | 11/04/2005         | 3.57              | 16.05                    | 25/03/2004         | 42280                   | 641543           |
| Monoman Formation | 703000698   | CHW51              | 486748.0           | 6238891.0           | 7.75                | 11/04/2005         | 3.94              | 15.91                    | 24/03/2004         | 34536                   | 641544           |
| Monoman Formation | 703000699   | CHW52              | 486746.0           | 6238887.0           | 18.2                | 11/04/2005         | 3.93              | 15.92                    | 24/03/2004         | 44590                   | 641545           |
| Monoman Formation | 703000700   | CHW53              | 487327.0           | 6238931.0           | 10.61               | 11/04/2005         | 3.89              | 15.95                    | 23/03/2004         | 28561                   | 641546           |
| Monoman Formation | 703000701   | CHW54              | 487306.0           | 6238931.0           | 9.36                | 11/04/2005         | 2.77              | 15.91                    | 23/03/2004         | 42210                   | 641547           |
| Monoman Formation | 703000702   | CHW55              | 487453.0           | 6238973.0           | 10.15               | 11/04/2005         | 2.91              | 15.97                    | 22/03/2004         | 33135                   | 642565           |
| Monoman Formation | 703000703   | CHW56              | 487479.0           | 6238973.0           | 6.8                 | 11/04/2005         | 1.27              | 16                       | 22/03/2004         | 25055                   | 642566           |
| Monoman Formation | 703000704   | CHW57              | 488156.0           | 6238926.0           | 6.79                | 11/04/2005         | 3.82              | 16.07                    | 21/03/2004         | 38990                   | 642567           |
| Monoman Formation | 703000705   | CHW58              | 488161.0           | 6238927.0           | 15.59               | 11/04/2005         | 3.85              | 16.04                    | 21/03/2004         | 39830                   | 642568           |
| Monoman Formation | 703000711   | CHW59              | 487258.0           | 6242552.0           | 7.7                 | 11/04/2005         | 3.53              | 16.52                    | 5/07/2004          | 30337                   | 662020           |

| Aquifer Monitored      | Unit Number | Obs Well<br>Number | Easting<br>(GDA94) | Northing<br>(GDA94) | Latest<br>Depth (m) | Latest SWL<br>Date | Latest<br>SWL (m) | Latest<br>RSWL<br>(mAHD) | Latest TDS<br>Date | Latest<br>TDS<br>(mg/L) | Sample<br>Number |
|------------------------|-------------|--------------------|--------------------|---------------------|---------------------|--------------------|-------------------|--------------------------|--------------------|-------------------------|------------------|
| Monoman Formation      | 703000712   | CHW60              | 487260.0           | 6242555.0           | 17.07               | 11/04/2005         | 3.55              | 16.51                    | 5/07/2004          | 35036                   | 662021           |
| Pliocene Sand          | 703000718   | CHW61              | 487263.0           | 6242557.0           | 40                  | 11/04/2005         | 3.79              | 16.29                    | 5/07/2004          | 50260                   | 662027           |
| Monoman Formation      | 703000719   | CHW62              | 488295.0           | 6242035.0           | 7.99                | 11/04/2005         | 3.15              | 16.43                    | 14/04/2004         | 29534                   | 652578           |
| Monoman Formation      | 703000720   | CHW63              | 488280.0           | 6242050.0           | 6.85                | 11/04/2005         | 3.4               | 16.11                    | 14/04/2004         | 26978                   | 652579           |
| Monoman Formation      | 703000721   | CHW64              | 488383.0           | 6241991.0           | 10.04               | 11/04/2005         | 3.44              | 16.22                    | 20/03/2004         | 41510                   | 652580           |
| Monoman Formation      | 703000722   | CHW65              | 488401.0           | 6241980.0           | 9.84                | 11/04/2005         | 3.7               | 15.24                    | 20/03/2004         | 39620                   | 652581           |
| Monoman Formation      | 703000728   | CHW68              | 490949.0           | 6244537.0           | 7.4                 | 11/04/2005         | 3.98              | 16.36                    | 2/06/2004          | 49770                   | 661912           |
| Monoman Formation      | 703000729   | CHW69              | 490948.0           | 6244539.0           | 24                  | 11/04/2005         | 3.99              | 16.35                    | 2/07/2004          | 64720                   | 661913           |
| Pliocene Sand          | 703000734   | CHW70              | 490949.0           | 6244535.0           | 35                  | 11/04/2005         | 3.81              | 16.54                    | 2/07/2004          | 64240                   | 662016           |
| Monoman Formation      | 703000735   | CHW72              | 491280.0           | 6243678.0           | 7.6                 | 11/04/2005         | 3.89              | 16.39                    | 24/03/2004         | 16177                   | 641549           |
| Monoman Formation      | 703000736   | CHW73              | 491405.0           | 6243646.0           | 8.5                 | 11/04/2005         | 3.97              | 16.42                    | 11/06/2004         | 28734                   | 644374           |
| Monoman Formation      | 703000737   | CHW74              | 491425.0           | 6243640.0           | 10                  | 6/09/2004          | 3.56              | 16.49                    | 11/06/2004         | 33266                   | 644375           |
| Monoman Formation      | 703000739   | CHW75              | 491876.0           | 6241961.0           | 9.8                 | 11/04/2005         | 3.1               | 17.09                    | 20/03/2004         | 25118                   | 642599           |
| Monoman Formation      | 703000740   | CHW76              | 491881.0           | 6241963.0           | 19.7                | 11/04/2005         | 3.12              | 17.07                    | 20/03/2004         | 14151                   | 642601           |
| Monoman Formation      | 703000742   | CHW85              | 496447.0           | 6243233.0           | 10.1                | 21/02/2005         | 3.25              | 17.06                    | 19/03/2004         | 52570                   | 641556           |
| Pliocene Sand          | 703000743   | CHW92              | 483894.0           | 6247420.0           | 50                  | 11/04/2005         | 34.33             | 17.47                    | -                  | -                       | -                |
| Murray Group Limestone | 703000744   | CHW91              | 483884.0           | 6247440.0           | 145                 | 11/04/2005         | 26.97             | 24.7                     | 30/11/2004         | 19779                   | 683742           |
| Pliocene Sand          | 703000762   | CHW94              | 487961.0           | 6245577.0           | 25                  | 11/04/2005         | 23.1              | 17.05                    | 1/10/2004          | 4665                    | 662754           |
| Pliocene Sand          | 703000773   | CHW95              | 499685.0           | 6244390.0           | 15                  | 11/04/2005         | 5.01              | 17.75                    | 1/10/2004          | 72880                   | 662756           |
| Monoman Formation      | 703000775   | CHW86              | 496442.0           | 6243234.0           | 17.9                | 21/02/2005         | 3.26              | 17.05                    | 19/03/2004         | 50400                   | 641557           |
| Murray Group Limestone | 703000776   | CHW93              | 497790.0           | 6247291.0           | 182                 | 12/04/2005         | -7.11             | 26.19                    | 17/09/2004         | 23120                   | 657571           |
| Pliocene Sand          | 713000003   | ANB7               | 504877.5           | 6242490.7           | 13.71               | 11/04/2005         | 12.36             | 19.46                    | 1/09/1984          | 49000                   | 586105           |
| Pliocene Sand          | 713000004   | ANB8               | 504166.7           | 6240059.6           | 8.85                | 11/04/2005         | 4.07              | 19.07                    | 1/04/1997          | 18364                   | 612631           |
| Pliocene Sand          | 713000005   | ANB6               | 500597.0           | 6245671.6           | 14.7                | 11/04/2005         | 11.22             | 18.33                    | 1/09/1984          | 10565                   | 586107           |
| Pliocene Sand          | 713000012   | ANB5               | 502468.0           | 6247597.5           | 43.2                | 11/04/2005         | 39.28             | 19.61                    | 1/04/1997          | 76080                   | 612630           |
| Monoman Formation      | 713000013   | CHW173             | 500649.9           | 6242390.8           | 11.59               | 11/04/2005         | 2.91              | 18.1                     | 4/04/1992          | 49000                   | 586110           |
| Monoman Formation      | 713000016   | CHW174             | 500556.2           | 6242426.7           | 5.27                | 11/04/2005         | 3.28              | 17.77                    | 1/04/1997          | 50400                   | 612633           |

| Aquifer Monitored | Unit Number | Obs Well<br>Number | Easting<br>(GDA94) | Northing<br>(GDA94) | Latest<br>Depth (m) | Latest SWL<br>Date | Latest<br>SWL (m) | Latest<br>RSWL<br>(mAHD) | Latest TDS<br>Date | Latest<br>TDS<br>(mg/L) | Sample<br>Number |
|-------------------|-------------|--------------------|--------------------|---------------------|---------------------|--------------------|-------------------|--------------------------|--------------------|-------------------------|------------------|
| Monoman Formation | 713000017   | CHW175             | 500556.6           | 6242424.4           | 19.33               | 11/04/2005         | 2.86              | 18.21                    | 1/04/1997          | 70320                   | 612635           |
| Pliocene Sand     | 713000018   | CHW176             | 500556.5           | 6242421.6           | 31.52               | 11/04/2005         | 3.04              | 18.01                    | 1/04/1997          | 67440                   | 612636           |
| Pliocene Sand     | 713000025   |                    | 500637.9           | 6242453.3           | 58.93               | 11/04/2005         | 2.52              | 18.53                    | -                  | -                       | -                |
| Monoman Formation | 713000032   | CHW177             | 503054.2           | 6239421.5           | 24                  | 11/04/2005         | 2.04              | 19.15                    | -                  | -                       | -                |
| Monoman Formation | 713000033   | CHW178             | 503045.6           | 6239412.7           | 18                  | 11/04/2005         | 2.66              | 18.59                    | 6/06/2003          | 56700                   | 630018           |
| Pliocene Sand     | 713000040   | CHW179             | 504127.3           | 6241644.5           | 4.05                | 11/04/2005         | 2.99              | 19                       | -                  | -                       | -                |
| Monoman Formation | 713000052   | CHW96              | 502692.0           | 6239443.0           | 7.6                 | 11/04/2005         | 2.93              | 18.38                    | 16/06/2004         | 41580                   | 663087           |
| Monoman Formation | 713000053   | CHW97              | 502646.0           | 6239439.0           | 7.5                 | 21/02/2005         | 2.86              | 18.37                    | 16/06/2004         | 42630                   | 663088           |
| Monoman Formation | 713000054   | CHW98              | 501560.0           | 6238719.0           | 7.3                 | 11/04/2005         | 2.91              | 18.03                    | 16/06/2004         | 23472                   | 663089           |
| Monoman Formation | 713000055   | CHW99              | 501556.0           | 6238716.0           | 19.6                | 11/04/2005         | 2.84              | 18.02                    | 16/06/2004         | 48790                   | 663090           |
| Monoman Formation | 713000056   | CHW100             | 503043.0           | 6239424.0           | 6.1                 | 11/04/2005         | 2.73              | 18.51                    | 16/06/2004         | 42350                   | 663091           |

# 4. MONITORING RESULTS

#### 4.1 Watertable and Potentiometric Surfaces

Reduced groundwater level data has been used from subsets of the existing locatable wells and recently drilled wells to construct elevation plans of the watertable within the upper Monoman Formation and potentiometric surfaces of the Pliocene Sands and Murray Group Limestone Aquifers.

#### 4.1.1 MONOMAN FORMATION ELEVATION OF WATERTABLE

It is likely the true watertable (or parts there of) occurs in overlying Coonambidgal Formation within silts and limited sand lenses. The Monoman Formation forms a continuous semi-confined aquifer, and it is this aquifer that will be important from the perspective of a groundwater management scheme.

A watertable contour plan (Fig. 6) has been constructed for the Monoman Formation using September 2004 data from selected wells completed in the upper Monoman Formation. The use of these wells minimises differences in groundwater levels that may result from the use of wells completed at a greater depth. The watertable occurs within the Pliocene Sands aquifer outside of the floodplain. Therefore, data from Pliocene Sands wells to the north, east and south of the floodplain have been used to construct the Monoman Formation watertable contour plan.

The watertable contours indicate a general groundwater flow direction from east to west. The pool level above Lock-6 is elevated above the watertable of the surrounding Monoman Formation, which would cause discharge from the River Murray into the aquifer. A trough in the watertable occurs in the west of the floodplain through which groundwater discharges from the Monoman Formation (watertable elevation of 16.5 m AHD) into the anabranch creek system (watertable elevation of 16.3 m AHD) and consequently, the River Murray (west of Lock-6). Areas with a watertable lower than that of the River Murray have also been identified in the southwestern region of Chowilla. These areas only occur at a local scale and are attributed to higher evapotranspiration rates associated with lower ground elevations.

# 4.1.2 MURRAY GROUP LIMESTONE POTENTIOMETRIC SURFACE PLAN

A regional potentiometric surface contour plan (Fig. 7) has been constructed for the Murray Group Limestone Aquifer using recent data. The plan indicates a general groundwater flow direction from the east to the west. Groundwater levels are several metres higher than the floodplain surface, which creates artesian conditions in wells completed on the floodplain.

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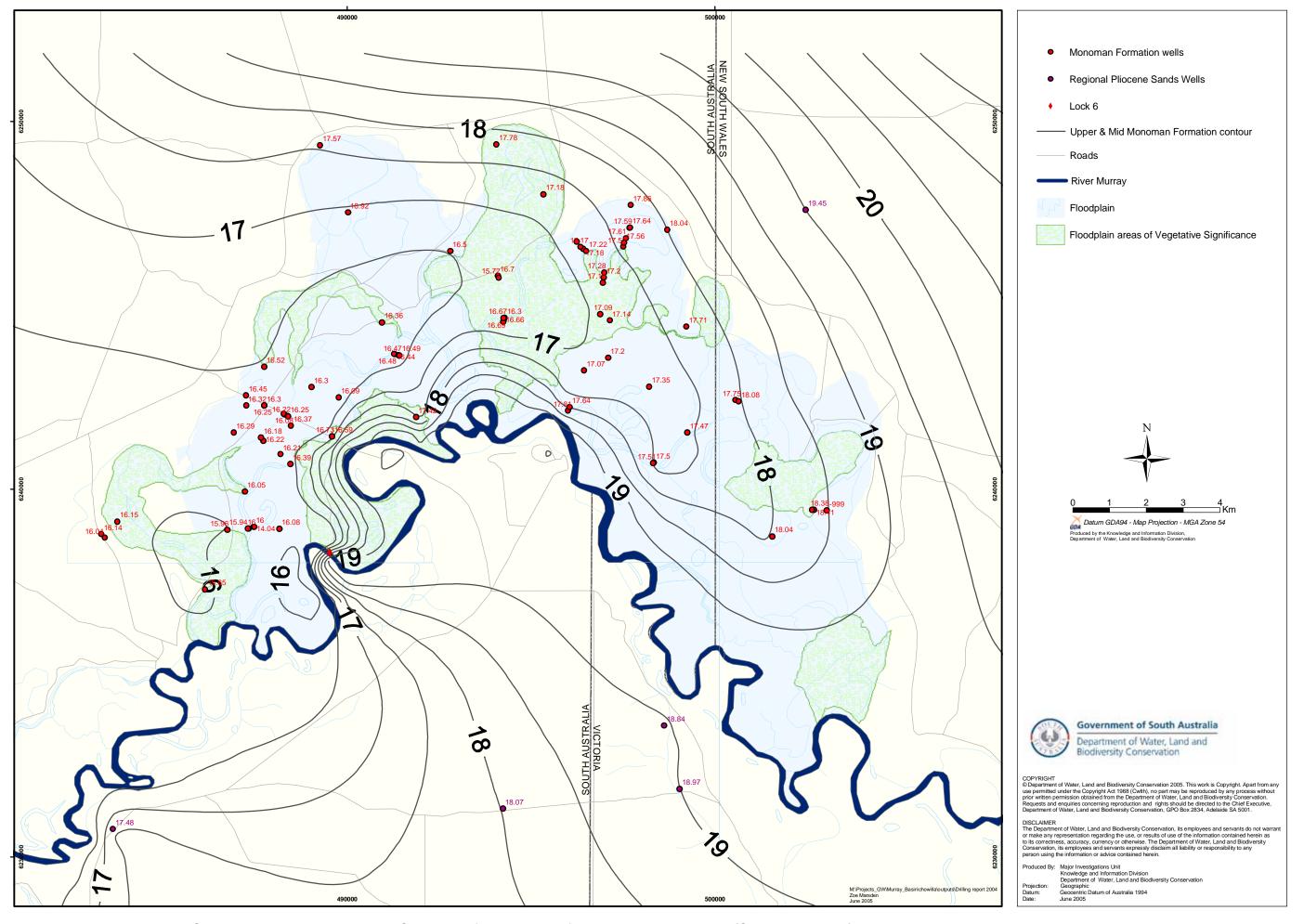


Figure 6: Upper Monoman Sands Formation and Pliocene Sands aquifer elevation of watertable contour plan (September 2004)

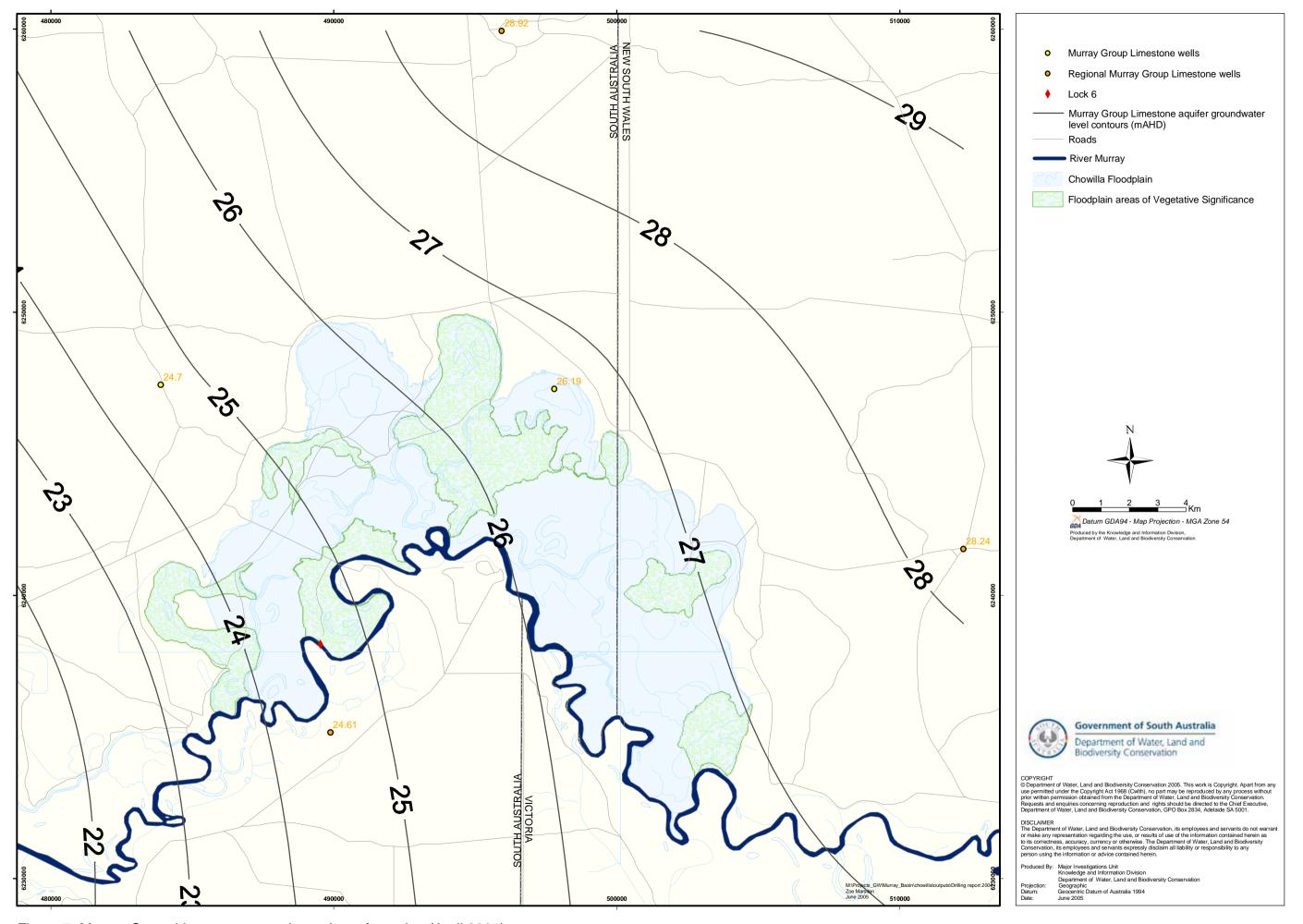


Figure 7: Murray Group Limestone potentiometric surface plan (April 2005)

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## 4.2 Head differences Between Aquifers and Groundwater/ Surface Water Interaction

Groundwater levels for individual wells are given in Table 3.

Groundwater levels measured in the Monoman Formation in September 2004 indicate small head differences of 0.02–0.72 m between the lower and the upper Monoman Formation (density corrected). The higher groundwater elevations in the lower Monoman Formation provides the potential for upward vertical flow from the base of this aquifer.

Groundwater and surface water interaction along creek lines is spatially and temporally variable. Recent groundwater levels from creek sites indicate little difference between adjacent wells and therefore, it cannot be deduced whether groundwater is flowing towards the creek or away from it. These wells may be of more value if they had data loggers installed to obtain continuous level readings. Furthermore, water levels in adjacent creeks (at the closest monitoring stations) should be monitored in conjunction with groundwater levels. This will enable determination of losing and gaining reaches of various creeks.

The potentiometric head of the Murray Group Limestone aquifer is elevated several metres above that of the overlying aquifers, providing the potential for upward leakage. However, the confining effects of the Bookpurnong restrict such vertical fluxes.

## 4.3 Salinity

Table 4 gives salinities for wells drilled in 2004. Figure 8 gives a salinity distribution map of the Chowilla region (where data is available). Groundwater salinities vary across the floodplain from 4000–70 000 mg/L, generally being higher on the eastern side of the floodplain.

The deeper wells (completed in the lower Monoman Formation sub-aquifer) at the Monoman Formation sites are typically higher in salinity than those wells completed in the upper part of the aquifer. This salinity difference varies from 1000–32 000 mg/L. Salinity in the wells screened in the Pliocene Sands aquifer also have a variable salinity range from 4000–76 000 mg/L. Such a large variation in both aquifers highlights the complexity of groundwater systems and groundwater-surface water interactions.

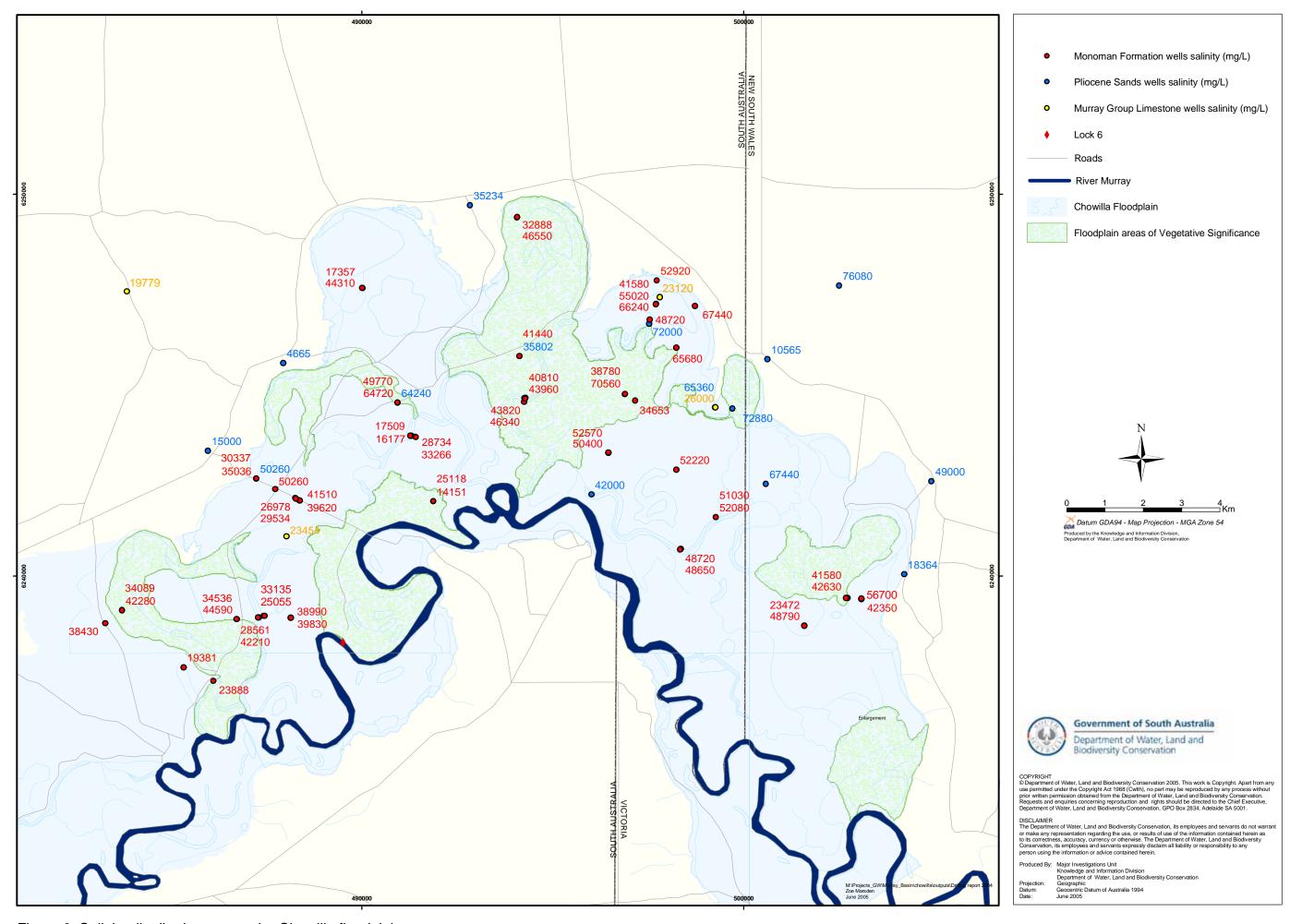


Figure 8: Salinity distribution across the Chowilla floodplain

# 5. CONCLUSIONS AND RECOMMENDATIONS

This report provides a detailed assessment of the monitoring network upgrade and expansion across the Chowilla floodplain in South Australia and New South Wales.

## 5.1 Outcomes Against Objectives

The objectives and outcomes of the investigation are discussed below.

Objective: Upgrade and expand current monitoring network.

**Outcome:** Thirty-seven new wells have been drilled on the Chowilla floodplain in the Monoman Formation. Two wells were also completed in the highland region, one screened in the Pliocene Sands Aquifer and the other in the Murray Group Limestone Aquifer. Fourteen pre-existing wells were also rehabilitated to remove silts and fine sands that had entered the wells and blocked the screens.

• Objective: Provide accurate potentiometric surface plans of the upper Monoman Formation, Pliocene Sands Aquifer and the Murray Group Limestone Aquifer.

**Outcome:** Groundwater head data was collected from new wells to create a more extensive potentiometric surface plan of the floodplain in the Monoman, Pliocene Sands and Murray Group Limestone aquifers. A number of these wells were completed in areas once lacking in data. The data collected from these wells has enabled a more accurate generation of potentiometric surface plans.

• Objective: Improve the current understanding of the hydrogeologic regime operating across the floodplain.

**Outcome:** New wells have been completed at strategic locations to address groundwater responses to flood events. Several wells have also been completed in areas where hydrogeological information was lacking. Groundwater head and salinity data collected from these new sites have already contributed to a more detailed hydrogeological assessment of the Chowilla floodplain.

• Objective: Provide enhanced salinity data.

**Outcome:** Groundwater samples collected from all completed sites were tested for salinity. This helped in highlighting the areas of higher salinity and hence, possible spots that may be targeted for further SIS investigations. Salinity data was also used in density corrections to provide a more accurate understanding of the groundwater head differences between aquifers.

• Objective: Gain greater knowledge of the spatial distribution and thickness of aquifers and aquitards on the floodplain.

**Outcome:** Lithological logs were prepared during the drilling of new wells. This data has been incorporated with logs from pre-existing wells to provide a greater understanding of the thickness of semi-confining layers, aquifers and the geological distribution of any aquitards.

• Objective: Determine the hydraulic relationship between creeks and adjacent aquifers.

**Outcome:** Several wells have been installed along creeks to ascertain groundwater/surface water interactions. However, at present there is insufficient data from these new sites to conclusively understand groundwater/surface water interactions. However, it is hoped that regular monitoring of these sites will provide insight into the hydraulic relationship between the two.

• Objective: Provide greater confidence in understanding temporal variations to levels and hydraulic response of aquifers to recharge and major flood events.

**Outcome:** A new comprehensive and well-ordered monitoring network has been constructed in strategic locations to monitor groundwater levels in the floodplain. The monitoring of these wells will initially be conducted on a monthly basis to allow study of hydraulic response of the aquifers to seasonal fluctuations. It is recommended that selected wells be monitored using data loggers during flood events will which provide valuable information crucial to the design of any groundwater management schemes.

#### 5.2 Recommendations

- Further attempts should be made to access the southeastern side of the Chowilla floodplain to install more monitoring wells as originally planned. There is an evident lack of both water level and salinity data from that area which would aid in the generation of more accurate potentiometric surface plans.
- 2. Highland wells that monitor the Murray Group Limestone Aquifer within 1.5 km of the Chowilla floodplain should be located and incorporated into the Chowilla monitoring network. Current data shows that some of these wells have not had groundwater levels measured for ten years. Therefore, there is a need to gain more up-to-date data for the Murray Group Limestone aquifer potentiometric surface plan. Such wells would only need annual monitoring.
- 3. Install four wells south of the River Murray in the Murtho highland region to enable preparation of a more accurate potentiometric surface plan of the Monoman Formation/Pliocene Sands aquifer. Wells should be placed in strategic locations and be evenly spaced along the river.
- 4. Install data loggers in selected creek wells to gain continuous groundwater level readings to improve the understanding of surface water and groundwater interaction. Manual groundwater readings should be maintained on a monthly basis to validate the logger data. Creek water levels should also be monitored in conjunction with manual groundwater level measurements at specified gauging stations to determine the extent of groundwater/surface water interactions.
- 5. Resurvey all wells (both ground elevation and top of casing) in the monitoring network to eliminate any anomalies in elevation data.

# **APPENDIXES**

# A. Drilling Reports

Report DWLBC 2004/52

29

**Unit No:** 7030 657

Obs Well No: CHW 71

**DH No**: 199058

1. PERMIT NO: ....

64757

SCHEDULE EIGHT --- FORM FOUR GOVERNMENT OF SOUTH AUSTRALIA Water Resources Act, 1997

2. WELL UNIT NO:.... DRILLERS WELL CONSTRUCTION REPORT 3 WELL NAME:... 4. LOCATION OF WELL Hundred or Pastoral Lease No: ...... As the person responsible for the work carried out on this well I advise that it has been completed as described below: Section...... Lot No....... Site No ....... Permit holder or land occupier. Postal Address . 5. SUMMARY 19-3-04 19-3-04 Date work Commenced Date work Completed ... Work carried out: New Well ☐ Existing Well ☐ , deepen ☐ , enlarge ☐ , rehabilitate ☐ , backfill ☐ (tick appropriate boxes) Replacement Well: Yes 🔲 / No 🔲 Replaced Well No:..... Maximum Depth Drilled......(m) Final Depth..... (m) Final Standing Water Level ..... (m) Final Standing Water Level ..... (m) Was Well Abandoned Yes ☐ / No ☐ If Yes, state method....... 6. DRILLING DETAILS If not a drilled well please complete sections 6.2, 9, 10, 11, 12 and 13 as necessary 6.2 Water Cut Details (measurements from natural surface to nearest 0.1 m) 6.1 Construction Details Drilling Method Standing Hole Cable Tool, Rotary Auger, Down Hole Salinity (mg/L) or Taste Fluid Used Water Level (m) (Air, Water, Mud Type) Yield (L/Sec) (mm) (m) Hammer, etg. Rol Blade (m) (m) Mu  $\mathbf{o}$ 7. CASING LEFT IN WELL 7.1 Dimensions 7.3 Casing Cemented Swell Joint, Welded Collar, Steel, FRP, PVC, etc. 0 8 5 8. CONSTRUCTION AT PRODUCTION LEVEL 8.1 Method 8.2 Screen or Casing (\*If variable aperture screen used give limits) ☐ Open Hole To (m) Aperture\* (mm) Inner Diam Outer Diam. Material Туре (mm) Slotted Casing PUC 90 8 ☐ Screen(s) Other, give details: 8.3 Liner Seal (Packer) 13. FORMATION LOG 8.4 Gravel Packing Method of Placement Gravel Passing Mesh Size To (m) Material Description of Material (m) 8 491300 6943676 9. IF NOT A DRILLED WELL

Method Depth Length (m) (m) 10. DEVELOPMENT (State methods and time taken) Minutes 11. PUMPING TEST (measur Interval Tested From (m) To (m) 12. SAMPLES Date 19,04 Driller to forward-this Copy within 14 days of completion to: Primary Industries and Resources SA

**Core Library Complex** 

7030 657

23 Conyngham Street

**GLENSIDE SA 5065** 

BY

DATE

Obs Well No: CHW 66

**DH No:** 199059

1. PERMIT NO:

SCHEDULE EIGHT --- FORM FOUR GOVERNMENT OF SOUTH AUSTRALIA Water Resources Act, 1997

2. WELL UNIT NO:... DRILLERS WELL CONSTRUCTION REPORT 3 WELL NAME:.. 4. LOCATION OF WELL As the person responsible for the work carried out on this well Hundred or Pastoral Lease No: .... I advise that it has been completed as described below: Section...... Lot No...... Site No ...... Name of Property..... Name of Driller Coning Sheil Permit holder or land occupier. Postal Address .... Name of plant operator if under supervision ..... ... Post Code .... 5. SUMMARY 18.3-04 18.3-04 Date work Commenced Date work Completed Work carried out: New Well ☐, Existing Well ☐, deepen ☐, enlarge ☐, rehabilitate ☐, backfill ☐ (tick appropriate boxes) 6. DRILLING DETAILS If not a drilled well please complete sections 6.2, 9, 10, 11, 12 and 13 as necessary 6.1 Construction Details 6.2 Water Cut Details (measurements from natural surface to nearest 0.1 m) Drilling Method Cable Tool, Salinity (mg/L) or Taste Fluid Used Rotary Auger, Down Hole (Air, Water, Mud Type) Yield (L/Sec) O 70 7. CASING LEFT IN WELL 7.1 Dimensions 7.3 Casing Cemented To (m) Swell Joint, Welded Collar, Steel, FRP, PVC, etc. To (m) (mm) **(M**) 10 PUC 0 8 0 Remiè 8. CONSTRUCTION AT PRODUCTION LEVEL 8.2 Screen or Casing (\*If variable aperture screen used give limits) 8.1 Method Open Hole To Aperture\* Inner Diam (mm) (mm) Outer Diam. Material Trade Name 80 Slotted Casing Malua 10 ☐ Screen(s) Other, give details: 13. FORMATION LOG 8.3 Liner Seal (Packer) 8.4 Gravel Packing Gravel Passing Mesh Size Method of Material Description of Material 10 489887 6247330 9. IF NOT A DRILLED WELL 10. DEVELOPMENT (State methods and time taken) 11. PUMPING TEST (measurements from natural surface to nearest 0.1 m) Interval Tested Discharge Rate (L/sec) Method of Measuring Discharge 12. SAMPLES

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Core Library Complex

Y

Core Library Complex 23 Conyngham Street GLENSIDE SA 5065

Obs Well No: CHW 67

**DH No**: 199060

2. WELL UNIT NO:...

## SCHEDULE EIGHT --- FORM FOUR GOVERNMENT OF SOUTH AUSTRALIA Water Resources Act, 1997

# DRILLERS WELL CONSTRUCTION REPORT

3 WELL NAME:... 4. LOCATION OF WELL As the person responsible for the work carried out on this well I advise that it has been completed as described below: Hundred or Pastoral Lease No: .... Section..... Lot No...... Site No ..... Name of Property.... Permit holder or land occupier... Name of plant operator if under supervision Postal Address ... Post Code ... 5. SUMMARY 18-3-0F 18-3-04 Date work Completed . Date work Commenced . Work carried out: New Well , Existing Well □, deepen □, enlarge □, rehabilitate □, backfill □ (tick appropriate boxes) .....(L/sec) 6. DRILLING DETAILS If not a drilled well please complete sections 6.2, 9, 10, 11, 12 and 13 as necessary 6.2 Water Cut Details (measurements from natural surface to nearest 0.1 m) 6.1 Construction Details Salinity (mg/L) or Taste Depth at Test (m) Diam Rotary Auger, Down Hole (Air, Water, Yield (m) 0 18 7. CASING LEFT IN WELL 7.1 Dimensions 7.2 Type 7.3 Casing Cemented Swell Joint, Welded Collar, Steel, FRP, PVC, etc. (mm) 0 18 PUC 80 15 0 8. CONSTRUCTION AT PRODUCTION LEVEL 8.1 Method 8.2 Screen or Casing (\*If variable aperture screen used give limits) To (m) Outer Diam. Open Hole Aperture\* (mm) Slotted Casing 80 20 90 ☐ Screen(s) Other, give details:. 8.3 Liner Seal (Packer) 8.4 Gravel Packing 13. FORMATION LOG Method of Gravel Passing Material Description of Material 489887 **२**0 6247330 9. IF NOT A DRILLED WELL

Method Depth Length (m) (m) 10. DEVELOPMENT (State methods and time taken) Minutes Hours 11. PUMPING TEST (measurements from natural surface to nearest 0.1 m) Interval Tested Discharge Rate (L/sec) Date (813104 Driller to forward this oppy within 14 days of completion to: Primary Industries and Resources SA Core Library Complex **Core Library Complex** 

23 Conyngham Street

**GLENSIDE SA 5065** 

DATE

Obs Well No: CHW 79

**DH No:** 199062

2. WELL UNIT NO:..

SCHEDULE EIGHT --- FORM FOUR GOVERNMENT OF SOUTH AUSTRALIA

# Water Resources Act, 1997

DRILLERS WELL CONSTRUCTION REPORT 3 WELL NAME:... 4. LOCATION OF WELL Hundred or Pastoral Lease No: ..... As the person responsible for the work carried out on this well I advise that it has been completed as described below: Section..... Lot No...... Site No ...... Name of Property ..... Permit holder or land occupier.. Postal Address Name of plant operator if under supervision Post Code ... 5. SUMMARY Date work Completed 17-3-64 17.3-04 Date work Commenced Work carried out: New Well ♠ Existing Well □, deepen □, enlarge □, rehabilitate □, backfill □ (tick appropriate boxes) .....(m) Final Yield.....(L/sec) 6. DRILLING DETAILS If not a drilled well please complete sections 6.2, 9, 10, 11, 12 and 13 as necessary 6.1 Construction Details 6.2 Water Cut Details (measurements from natural surface to nearest 0.1 m) Salimity (mg/L) or Taste Cable Tool, Fluid Used Casing at Diam Rotary Auger, Down Hole 0 7. CASING LEFT IN WELL 7.1 Dimensions 7.2 Type 7.3 Casing Cemented Swell Joint, Welded Collar, Steel, FRP, PVC, etc. Yes No Puc <u>O</u> 8 80 0 Tremie 8. CONSTRUCTION AT PRODUCTION LEVEL 8.2 Screen or Casing (\*If variable aperture screen used give limits) 8.1 Method Outer Diam. 8<sup>To</sup> Inner Diam ☐ Open Hole Slotted Casing 80 90 Nalural ☐ Screen(s) Other, give details: 8.3 Liner Seal (Packer) 3.4 Gravel Packing 13. FORMATION LOG Gravel Passing Mesh Size Method of Material Description of Material 494300 Bucket 9. IF NOT A DRILLED WELL
Depth Length (m) (m) 6244646 Width (m) 10. DEVELOPMENT (State methods and time taken) Hours Minutes 11. PUMPING TEST (measurements from natural surface to nearest 0.1 m) Discharge Rate (L/sec) Pump Depth (m) 12. SAMPLES Date DO 104 Driller to forward this Copy, within 14 days of completion to:

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7030 661

Core Library Complex 23 Conyngham Street GLENSIDE SA 5065

Obs Well No: CHW 77

**DH No**: 199063

1. PERMIT NO: ....

SCHEDULE EIGHT --- FORM FOUR GOVERNMENT OF SOUTH AUSTRALIA

# Water Resources Act, 1997

2. WELL UNIT NO:... DRILLERS WELL CONSTRUCTION REPORT 3 WELL NAME:.. 4. LOCATION OF WELL As the person responsible for the work carried out on this well Hundred or Pastoral Lease No: ..... I advise that it has been completed as described below: Section...... Lot No...... Site No ...... Name of Property..... ..... Licence No: 3425 Permit holder or land occupier... Postal Address .... Name of plant operator if under supervision . 5. SUMMARY 6. DRILLING DETAILS If not a drilled well please complete sections 6.2, 9, 10, 11, 12 and 13 as necessary 6.1 Construction Details 6.2 Water Cut Details (measurements from natural surface to nearest 0.1 m) Standing Hole Fluid Used Salinity (mg/L) or Taste Cable Tool. Diam (Air, Water, Mud Type) (m) RoTOlade Biolic Ō 7. CASING LEFT IN WELL 7.1 Dimensions 7.3 Casing Cemented Swell Joint, Welded Collar, Steel, FRP, PVC, etc. To (m) Yes No Comments (m) 80 0 S PUC 0 8. CONSTRUCTION AT PRODUCTION LEVEL 8.2 Screen or Casing (\*If variable aperture screen used give limits) 8.1 Method Aperture\* Inner Diam (mm) 80 Outer Diam. (mm) Open Hole To (m) Trade Name Slotted Casing VC ☐ Screen(s) Other, give details: 13. FORMATION LOG 8.3 Liner Seal (Packer) 8.4 Gravel Packing Method of Description of Material (m) 494227 6249303 9. IF NOT A DRILLED WELL 10. DEVELOPMENT (State methods and time taken) Hours Minutes 11. PUMPING TEST (measurements from natural surface to nearest 0.1 m) Interval Tested Water Level (m) Pump Depth (m) Discharge Rate (L/sec) Method of Measuring Discharge Hours Pumped Test Method From (m) To (m) 12. SAMPLES Date 1713 04

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Core Library Complex

DATE

23 Conyngham Street **GLENSIDE SA 5065** 

Obs Well No: CHW 78

**DH No:** 199064

Unit No: 7030 663 Ob

SCHEDULE EIGHT --- FORM FOUR

GOVERNMENT OF SOUTH AUSTRALIA Water Resources Act, 1997

## DRILLERS WELL CONSTRUCTION REPORT

5. SUMMARY

| SCHEDULE EIGHT FORM FOUR GOVERNMENT OF SOUTH AUSTRALI Water Resources Act, 1997                                       | I. FERWIT NO.   |
|---|---|
| DRILLERS WELL CONSTRUCTION R  | EPORT  2. WELL UNIT NO:  3 WELL NAME:   |
| As the person responsible for the work carried out on this well advise that it has been completed as described below: | 4. LOCATION OF WELL  Hundred or Pastoral Lease No:                                      |
| Name of Driller Coding Section Licence No. 3425   | Permit holder or land occupier  |
| Name of plant operator it under supervision   | Post Code   |
| 5. SUMMARY Date work Commenced  | bilitate  , backfil  (tick appropriate boxes)   dding Water Level(M) Final Yield(L/sec) |
| o. Dividibility DETAILS II not a timed wen please complete sections 6.2, 9, 10, 11, 12 and                            | 15 as necessary   |

| Maxim  | um Depth         |                 |   | □/No □ Replace Final Depth24  es, state method |                   |              |                     |                   |                 | (m)            |           | d      | (L/sec)               |
|--------|------------------|-----------------|---|--|-------------------|--------------|---------------------|-------------------|-----------------|----------------|-----------|--------|-----------------------|
| 6. DRI | LLING I          | ETAILS          |   | es, state method                               | ons 6.2, 9, 10, 1 | 1, 12 and 13 | as necessar         | у                 |                 |                |           |        |                       |
| 6.1 Co | nstruction<br>To | Details<br>Diam | Drilling Method<br>Cable Tool,<br>Rotary Auger, | Fluid Used<br>(Air, Water,                     | 6.2 Water Cu      | T            | (measuren<br>er Cut | Standing<br>Water | Estimated Yield | Hole<br>Depth  | Casing at | Test   | Salinity<br>(mg/L) or |
| (m)    | (m)              | (mm)            | Down Hole<br>Hammer, etc.                       | Mud Type)                                      |                   | From (m)     | To<br>(m)           | Level<br>(m)      | (L/Sec)         | at Test<br>(m) | (m)       | Method | Taste                 |
| 0      | 20               |                 | Rot Bleede                                      | B10-650  | 17-3              | 17           | 20                  |                   |                 |                |           |        |                       |
|        |                  |                 |   |  |                   |              |                     | -                 |                 |                |           |        |                       |
|        |                  |                 |   |  |                   |              |                     |                   |                 |                |           |        |                       |
| 7. CAS | ING LEE          | T IN WE         | ELT.  |  |                   |              |                     |                   |                 |                |           |        |                       |

7.1 Dimensions 7.2 Type 7.3 Casing Cemented Swell Joint, Welded Collar, Steel, FRP, PVC, etc. Cementing Method Used Cement (bags) Water (litres) Other Additives Yes No Diam 80 DUC 15 0 

| 8. CONSTRUCTION   | AT PROI | DUCTION LEVEL      |                |             |                   | •                  | •                   |          | <u> </u>   |                    |  |  |  |  |
|-------------------|---------|--------------------|----------------|-------------|-------------------|--------------------|---------------------|----------|------------|--------------------|--|--|--|--|
| 8.1 Method        | 8.2     | Screen or Casing ( | *If variable a | perture scr | een used giv      | ve limits)         |                     |          |            |                    |  |  |  |  |
| Open Hole         |         | Туре               | From (m)       | To<br>(m)   | Aperture*<br>(mm) | Inner Diam<br>(mm) | Outer Diam.<br>(mm) | Material | Trade Name | Completion of Base |  |  |  |  |
| Slotted Casing    |         | JUL                | 17             | 20          |                   | S                  | 90                  |          |            | Notura             |  |  |  |  |
| ☐ Screen(s)       |         |                    |                |             |                   |                    |                     |          |            |                    |  |  |  |  |
| Other, give detai | ls:     |                    |                |             |                   |                    |                     |          |            |                    |  |  |  |  |

| 8.3 Lines | Seal (Pa  | cker)   |                             | 8.4 Gra      | vel Packir                                       | ıg                          |             |             | 13. FORM | ATION LO  | G                       |
|-----------|-----------|---|-----------------------------|--------------|--|-----------------------------|-------------|-------------|----------|-----------|-------------------------|
| Mai       | erial     | Depth<br>(m)                                  | Internal<br>Diam.<br>(mm)   |              | od of  | Gravel Passing<br>Mesh Size | From (m)    | To<br>(m)   | From (m) | To<br>(m) | Description of Material |
|           |           |   |                             | Buc          | ul   |                             | 16          | 20          |          |           | 494227                  |
| O IE NO   | T A DDD   | LLED WI                                       | 71.1                        | <u> </u>     |  |                             |             |             |          |           | 6249303                 |
| Met       |           | Depth<br>(m)                                  | Length (m)                  | Width<br>(m) | Diam<br>(m)                                      | Lining<br>Material          | From (m)    | To (m)      |          |           |                         |
|           |           |   |                             |              |  |                             |             |             | - 1      |           |                         |
| 10. DEV   | ELOPME    | ENT (State                                    | methods and                 | l time take  | n)   |                             |             |             |          |           |                         |
|           | 4:        | ~   Me  | thod                        |              |  | Hours                       | Mi          | nutes       |          | ,         |                         |
|           | 7-4       | <u>, , , , , , , , , , , , , , , , , , , </u> |                             |              |  |                             |             |             |          |           |                         |
| II DIDM   | DING TE   | ет (  | rements fror                |              |  |                             |             |             |          |           |                         |
| •         | Tested    | Water   | Test                        | Pump         | Discharg   | ge Method of                |             | Draw        |          |           |                         |
| From (m)  | To<br>(m) | Level<br>(m)                                  | Method                      | Depth<br>(m) | Rate<br>(L/sec)                                  | Measuring<br>Discharge      | Dumnad      | Down<br>(m) |          |           |                         |
|           |           |   |                             |              | -  | -                           | <u> </u>    | 1 1         |          |           | ·                       |
|           |           |   |                             |              | <del>                                     </del> |                             |             | +           |          |           |                         |
| 12. SAN   |           |   |                             |              |  |                             |             |             |          |           |                         |
|           |           |   | ources Act ares have not be |              |  | require that strat<br>ions: | a and water | samples     |          |           |                         |
|           |           |   |                             | _            |  |                             |             |             |          |           |                         |

Date 7 17104

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Primary Industries and Resources SA

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23 Conyngham Street

**GLENSIDE SA 5065** 

Obs Well No: CHW 82

**DH No**: 199065

1. PERMIT NO:

SCHEDULE EIGHT --- FORM FOUR
GOVERNMENT OF SOUTH AUSTRALIA
Water Resources Act, 1997

## 2. WELL UNIT NO:. DRILLERS WELL CONSTRUCTION REPORT 3 WELL NAME:... 4. LOCATION OF WELL Hundred or Pastoral Lease No: ... As the person responsible for the work carried out on this well I advise that it has been completed as described below: ...... Lot No...... Site No .. Name of Property. Permit holder or land occupier Name of Driller ... Postal Address Name of plant operator if under supervision 5. SUMMARY 16.3-04 16-3-04 Date work Completed Date work Commenced New Well ☑, Existing Well ☐, deepen ☐, enlarge ☐, rehabilitate ☐, backfill ☐ (tick appropriate boxes) 6. DRILLING DETAILS If not a drilled well please complete sections 6.2, 9, 10, 11, 12 and 13 as necessary 6.2 Water Cut Details (measurements from natural surface to nearest 0.1 m) 6.1 Construction Details Drilling Method Cable Tool, Rotary Auger, Down Hole Standing Water Hole Depth at Test Fluid Used (Air, Water, Mud Type) Salinity (mg/L) or Water Cut Estimated Yield (L/Sec) (m) (m) (m) Hammer etc/ Bio/650 (m) $\sigma$ 7. CASING LEFT IN WELL 7.1 Dimensions .2 Type 7.3 Casing Cemented Swell Joint, Welded Collar Steel, FRP, PVC, etc. Diam. 80 4 <u>O</u> PUC 0 8. CONSTRUCTION AT PRODUCTION LEVEL 8.2 Screen or Casing (\*If variable aperture screen used give limits) 8.1 Method To (m) Inner Dian Outer Diam. (mm) ☐ Open Hole Aperture\* Completion of Base Туре (m) Slotted Casing PUC 90 ☐ Screen(s) Other, give details: 8.3 Liner Seal (Packer) 13. FORMATION LOG 8.4 Gravel Packing Gravel Passing Mesh Size Method of Description of Material Material 494224 9 6244603 9. IF NOT A DRILLED WELL Method Depth Length (m) (m) 10. DEVELOPMENT (State methods and time taken) Hours Minutes 11. PUMPING TEST (measurements from natural surface to nearest 0.1 m) Interval Tested Water Level (m) Pump Depth (m) Discharge Rate (L/sec) Method of Measuring Discharge Draw Down (m) Test Method To (m) (m) 12. SAMPLES Driller, to forward this copy, within 14 days of completion to: Primary Industries and Resources SA Core Library Complex 23 Conyngham Street 7030 664

**GLENSIDE SA 5065** 

Obs Well No: CHW 81

**DH No:** 199066

2. WELL UNIT NO:...

## SCHEDULE EIGHT --- FORM FOUR

GOVERNMENT OF SOUTH AUSTRALIA

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# Water Resources Act, 1997

**DRILLERS WELL CONSTRUCTION REPORT** 3 WELL NAME:... 4. LOCATION OF WELL As the person responsible for the work carried out on this well I advise that it has been completed as described below: Hundred or Pastoral Lease No: .... Section..... Lot No...... Site No ..... Name of Property.... Permit holder or land occupier. Name of plant operator if under supervision Post Code . 5. SUMMARY 12-3-04 12-3-04 Date work Commenced . Date work Completed . New Well ☐, Existing Well ☐, deepen ☐, enlarge ☐, rehabilitate ☐, backfill ☐ (tick appropriate boxes) .....(m) Final Yield.....(L/sec) 6. DRILLING DETAILS If not a drilled well please complete sections 6.2, 9, 10, 11, 12 and 13 as necessary 6.2 Water Cut Details (measurements from natural surface to nearest 0.1 m) 6.1 Construction Details Hole Standing Cable Tool, Fluid Used Salinity (mg/L) or Taste Casing at Diam Depth at Test (m) Yield (L/Sec) Rotary Auger, Down Hole (Air, Water, (m) To (m) 4 9 7. CASING LEFT IN WELL 7.1 Dimensions 7.2 Type 7.3 Casing Cemented Swell Joint, Welded Collar, Steel, FRP, PVC. etc Yes No 80 9 PUL 0 0 8. CONSTRUCTION AT PRODUCTION LEVEL 8.1 Method 8.2 Screen or Casing (\*If variable aperture screen used give limits) Aperture\* (mm) ☐ 9pen Hole To (m) Inner Diam Trade Name Slotted Casing PVC 80 9 Nalua ☐ Screen(s) Other, give details: 8.3 Liner Seal (Packer) 13. FORMATION LOG 8.4 Gravel Packing Method of Placement Gravel Passing Mesh Size Material 9 494224 6244603 9. IF NOT A DRILLED WELL To (m) 10. DEVELOPMENT (State methods and time taken) Hours Minutes 11. PUMPING TEST (measurements from natural surface to nearest 0.1 m) Interval Tested Discharge Rate (L/sec) Method of Measuring Discharge Hours Pumped 12. SAMPLES Date 127,04

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Obs Well No: CHW 83

**DH No:** 199067

64270

7030 666

SCHEDULE EIGHT --- FORM FOUR GOVERNMENT OF SOUTH AUSTRALIA Water Resources Act, 1997

## 1. PERMIT NO: ... DRILLERS WELL CONSTRUCTION REPORT 3 WELL NAME:.. 4. LOCATION OF WELL As the person responsible for the work carried out on this well Hundred or Pastoral Lease No: .... I advise that it has been completed as described below: Section..... Lot No...... Site No ...... Name of Property... Permit holder or land occupier. Name of Driller .. Name of plant operator if under supervision Postal Address . 5. SUMMARY 12-3-04 Date work Commenced .....(m) Final Yield.....(L/sec) Was Well Abandoned Yes □ / No ☑ If Yes, state method..... 6. DRILLING DETAILS If not a drilled well please complete sections 6.2, 9, 10, 11, 12 and 13 as necessary 6.1 Construction Details 6.2 Water Cut Details (measurements from natural surface to nearest 0.1 m) Fluid Used Hole Salinity (mg/L) or Taste Cable Tool, Diam Water (Air, Water, Mud Type) Yield (L/Sec) Rotary Auger, Down Hole (m) Rolling Bio Vig 0 7. CASING LEFT IN WELL 7.1 Dimensions 7.2 Type 7.3 Casing Cemented Swell Joint, Welded Collar, Yes No Diam. Steel, FRP, PVC, etc. (m) 80 O 8. CONSTRUCTION AT PRODUCTION LEVEL 8.1 Method 8.2 Screen or Casing (\*If variable aperture screen used give limits) Open Hole Completion of Base Material Slotted Casing ☐ Screen(s) Other, give details:.. 13. FORMATION LOG 8.3 Liner Seal (Packer) 8.4 Gravel Packing Method of To (m) Gravel Passing Mesh Size To (m) From Material Description of Material Placement (m) ठ 496881 6244755 9. IF NOT A DRILLED WELL Depth Length (m) Diam (m) Width 10. DEVELOPMENT (State methods and time taken) Hours Minutes 11. PUMPING TEST (measurements from natural surface to nearest 0.1 m) Interval Tested Water Level (m) Pump Depth (m) Discharge Rate (L/sec) Method of Measuring Discharge Test Method Hours Pumped To (m) (m) 12. SAMPLES The provision of the Date 12/3/04 Driller to forward this Copy, within 14 days of completion to: Primary Industries and Resources SA

**Core Library Complex** 23 Conyngham Street GLENSIDE SA 5065

**Obs Well No:** CHW 84 **DH No:** 199068

1. PERMIT NO: 6427 / 2. WELL UNIT NO:.....

Unit No: 7030 667 Ob SCHEDULE EIGHT --- FORM FOUR GOVERNMENT OF SOUTH AUSTRALIA Water Resources Act, 1997

|  | DE   | RILLE  | RS V   | VELL   | COL  | VCTI                         | RIICT  | 'ION                             | RE                                   | POR'   | r  | ۷.                | WELL            | ONII NO                   |                |             | ••••••••           |
|--|--|--|--|--|--|------------------------------|--|----------------------------------|--------------------------------------|--|--|-------------------|-----------------|---------------------------|----------------|-------------|--------------------|
|  | Di   | · ILLI   | 71 <b>C</b> 5 V  | 1 13131  |  | 1011                         | KCC1   | 1011                             | IXI.                                 | IOK  | 1  | 3                 | WELL N          | NAME:                     |                |             |                    |
|  |  |  |  |  |  |                              |  |                                  |                                      |  |  | 4.                | LOCAT           | ION OF V                  | WELL           |             |                    |
|  |  | Α  |  |  | sible for                                  |                              |  |                                  |                                      |  |  |                   | Hundre          | d or Pasto                | ral Lease No   | :           |                    |
|  |  |  | I advise   | that it ha   | as been co                                 | mpleted                      | as describ   | ed below                         | :                                    |  |  |                   | Section         |                           | . Lot No       | Site        | No                 |
|  |  |  |  | -/ -   |  |                              |  |                                  |                                      |  |  |                   | Name o          | f Property                | <u>/</u>       |             |                    |
| ame of   | f Drille   | . <u>C</u>   | ais "  | رياح   | <u> </u>                                   | Lice                         | ence No  | 342.5                            | P                                    | ermit hol  | der or la  | ind occup         | ier             |                           |                | •••••       |                    |
|  |  | operator if  |  |  |  |                              |  |                                  |                                      | ostal Add  | ress   |                   |                 |                           |                |             |                    |
|  |  |  |  |  |  |                              |  |                                  |                                      |  |  |                   |                 |                           |                | Post Code   | •                  |
| SHM  | MARY   |  |  |  |  |                              |  |                                  |                                      |  |  |                   |                 |                           | •              |             |                    |
| ate wo   | rk Con   | nmenced .  | 15   | - 3-0  | $\mathcal{M}$                              |                              |  |                                  |                                      | Date wor   | k Comp   | leted             |                 | <i>I-</i> J-              | O4             |             |                    |
| ork ca   | rried ou   |  |  |  | well 🗆                                     | •                            |  |                                  |                                      |  |  |                   | (tick app       | propriate b               | ooxes)         |             |                    |
|  | ъ.   | Rep  | lacement '   | Well: Yes  | □/ No [                                    | ☐ Repl                       | ced Well   | No:                              |                                      |  |  |                   |                 |                           |                |             |                    |
|  |  | th Drilled<br>doned Yes  |  | _  | rinai Depi<br>Tes, state r                 |                              |  |                                  |                                      |  |  |                   |                 |                           |                | <b>d</b>    | (L/sec             |
| as we  | II Aban  | dolled res   | □/NOE  | , 11 1   | es, state i                                | netnod                       | ***************************************  |                                  |                                      |  |  |                   | •••••           |                           | *******        |             |                    |
| DRIL   | LING   | DETAILS  | If not a   | drilled wel  | ll please co                               | mplete sec                   | ctions 6.2, 9  | , 10, 11, 12                     | 2 and 13                             | as necessa                                       | ry   |                   |                 |                           |                |             |                    |
| 1 Cons   | struction  | n Details  | Dettin   | - Markad   |  |                              | 6.2 Wa   | ter Cut D                        | etails (                             | (measure   | nents fr   | om natura         | l surface       | to neares                 | t 0.1 m)       |             | 1                  |
| rom  | То   | Diam   | Cable  | g Method<br>e Tool,  |  | l Used                       | İ  |                                  | Wate                                 | er Cut   | Stand<br>Wat                                     |                   | timated         | Hole<br>Depth             | Casing at      | Test        | Salinity           |
| (m)  | (m)  | (mm)   |  | y Auger,<br>n Hole   |  | Water,<br>Type)              | Da   |                                  | From                                 | То   | Lev  | el a              | Yield<br>L/Sec) | at Test                   | Test<br>(m)    | Method      | (mg/L) or<br>Taste |
| <del>-</del>   | 18   | <del> </del>   |  | ner, etc.  | 10.11                                      |                              | 1110   | 6//                              | (m)                                  | (m)  | (m   | <u>'</u>          | /               | (m)                       | \              |             |                    |
| -  | שו   | +  | No/ L  | radl_  | Ulov                                       | 9/650                        | 44.7   | -04                              | <u> </u>                             | 18   | <del>                                     </del> |                   |                 |                           | -              |             |                    |
| $\dashv$   |  |  | † · · · ·  |  |  | •                            | +  |                                  |                                      | <del>                                     </del> | <del>                                     </del> |                   |                 |                           |                |             |                    |
|  |  |  |  |  |  |                              |  |                                  |                                      |  |  |                   |                 |                           |                |             |                    |
| <u></u> _  |  | <br>   |  |  |  |                              |  | T                                |                                      |  |  |                   |                 |                           |                |             |                    |
|  | NG LE  | FT IN W  |  | Tues   |  | Т                            | 72 01  | - Co                             | ad .                                 |  |  |                   |                 | -                         |                |             |                    |
|  | 1  | Inte   | mal  | Туре   |  |                              | 7.3 Casing   | T                                |                                      |  |  | l                 | T :             |                           | Cementing      | .           |                    |
| rom<br>(m)   | To<br>(m)  | Dia  | m   3  |  | , Welded Co<br>RP, PVC, et                 |                              | Yes No   | From (m)                         | - 1                                  |  | ement<br>bags)                                   | Water<br>(litres) |                 | ther<br>litives           | Method<br>Used |             | Comments           |
| 0  | 18   | 80   | "/   | PU   | C  | • • •                        |  | 10                               | 16                                   | 3  |  |                   |                 |                           | - Oscu         | <del></del> |                    |
|  |  |  |  |  |  |                              |  |                                  |                                      |  |  |                   |                 |                           |                |             | •                  |
|  |  | -  |  |  |  |                              |  |                                  | 1                                    |  |  |                   |                 |                           |                |             |                    |
| CONS   | TPLIC  | TION AT  | PRODUC   | TION I E   | WEI  |                              |  |                                  |                                      |  | <del></del>                                      |                   |                 |                           |                |             |                    |
| 1 Meth   |  | HON AL   |  |  | sing (*If v                                | ariable a                    | aperture so  | reen used                        | l give l                             | limits)  |  |                   |                 |                           |                |             |                    |
| ] Oper   |  |  |  | Туре   | 1  | From                         | Tó   | Apertu                           | re* In                               | nner Diam  | Outer  |                   | Mate            | rial                      | Trade Na       | me          | Completion         |
| Slott  | ed Casi  | ing  | R  | <del>ر ```</del>   |  | (m)<br>  <b>S</b>            | 18   | (mm                              | <del>'</del> —                       | (mm)   | (m   |                   | Pu              |                           |                | N/          | of Base            |
| ] Scree  | en(s)  |  |  |  |  |                              |  |                                  |                                      |  | Ť  |                   | , .             | _                         |                |             | - 14F - M          |
| Othe   | r, give  | details:   |  |  | · ···· · · · · · · · · · · · · · · · ·     |                              |  |                                  |                                      |  |  |                   |                 |                           |                |             |                    |
| Liner S  | eal (Pa  | cker)  |  | 8.4 Gra  | vel Packu                                  |                              |  |                                  |                                      | 13. FC   | RMAT   | ION LOC           | j               |                           |                |             |                    |
| Materi   | اما  | Depth  |  | Meth   | hod of                                     | Gravel Pa                    | onina E  |                                  |                                      | ,  |  |                   |                 |                           |                |             |                    |
|  | ıaı  |  | Internal<br>Diam.  |  | ement _                                    | Mech S                       |  | rom                              | To (m)                               | Fro  | n  | To<br>(m)         |                 |                           | Description of | f Material  |                    |
|  | 141  | (m)  |  |  | ement                                      | Mesh S                       | ize (  | m)                               | (m)                                  | ı  | n  | To<br>(m)         | 49/             | . 881                     |                | f Material  |                    |
|  | <u>.</u>   |  | Diam.  |  | ement                                      | Mesh S                       |  | m)                               |                                      | Fro  | n  | 1                 | 496             | 6881<br>1475              |                | f Material  |                    |
| NOT  |  | (m)  | Diam.<br>(mm)  |  | ement                                      | Mesh S                       | ize (  | m)                               | (m)                                  | Fro  | n  | 1                 | 496<br>624      | 881<br>475                |                | f Material  |                    |
| NOT Method   | A DRII   | (m)  LLED WE  Depth  | Diam.<br>(mm)  | Place  | Diam                                       | Lini                         | Size (   | rom                              | (m)<br>(B)                           | Fro  | n  | 1                 | 496<br>624      | 5881<br>1475              |                | f Material  |                    |
|  | A DRII   | (m)<br>LLED WE   | Diam.<br>(mm)  | Place  | kil  |                              | Size (   | (m)<br>                          | (m)                                  | Fro  | n  | 1                 | 496             | 5881<br>475               |                | f Material  |                    |
|  | A DRII   | (m)  LLED WE  Depth  | Diam.<br>(mm)  | Place  | Diam                                       | Lini                         | Size (   | rom                              | (m)<br>(B)                           | Fro  | n  | 1                 | 496<br>624      | 688/<br>1475.             |                | f Material  |                    |
|  | A DRII   | (m)  LLED WE  Depth  | Diam.<br>(mm)  | Place  | Diam                                       | Lini                         | Size (   | rom                              | (m)<br>(B)                           | Fro  | n  | 1                 | 496<br>624      | 6881<br>1475.             |                | f Material  |                    |
| Method   | A DRII   | (m)  LLED WE  Depth  | Diam. (mm)   | Place<br>Suck<br>Width<br>(m)                                  | Diam<br>(m)                                | Lini<br>Mate                 | ng F   | (m)                              | To (m)                               | Fro  | n  | 1                 | 496<br>624      | 588/<br>1475.             |                | f Material  |                    |
| Method   | A DRII   | LLED WE Depth (m)  | Diam. (mm)  LL  Length (m)   | Place<br>Suck<br>Width<br>(m)                                  | Diam<br>(m)                                | Lini<br>Mate                 | Size (   | rom                              | To (m)                               | Fro  | n  | 1                 | 496             | 588/<br>1 <del>4</del> 75 | 5              | f Material  | -                  |
| Method   | A DRII   | (m)  LLED WE Depth (m)  ENT (State   | Diam. (mm)  LL  Length (m)   | Place<br>Suck<br>Width<br>(m)                                  | Diam<br>(m)                                | Lini<br>Mate                 | ng F   | (m)                              | To (m)                               | Fro  | n  | 1                 | 496             | 588/<br>1475              | 5              | f Material  | -                  |
| Method   | A DRII   | (m)  LLED WE Depth (m)  ENT (State   | Diam. (mm)  LL  Length (m)   | Place<br>Suck<br>Width<br>(m)                                  | Diam<br>(m)                                | Lini<br>Mate                 | ng F   | (m)                              | To (m)                               | Fro  | n  | 1                 | 496             | 688/<br>1475              | 5              | f Material  |                    |
| Method   | A DRII   | (m)  LLED WE Depth (m)  ENT (State   | Diam. (mm)  LL  Length (m)  methods and  | Width (m)  | Diam (m)                                   | Lini<br>Mate:                | ng F   | (m)                              | To (m)                               | Fro  | n  | 1                 | 496             | 688/<br>1475              | 5              | f Material  |                    |
| DEVEL UMPI erval T   | A DRII   | (m)  LLED WE Depth (m)  ENT (State   | Diam. (mm)  LL  Length (m)  methods and  | Width (m)  d time take   | Diam (m)                                   | Lini Mater                   | mg F F F F F F F F F F F F F F F F F F F   | From (m) Minut                   | To (m)                               | Fro  | n  | 1                 | 496             | 688/<br>1475.             | 5              | f Material  | 2                  |
| EVEI UMPI erval T  | A DRII   | LLED WE Depth (m)  | Diam. (mm)  LLL  Length (m)  methods and had   | Width (m)  | Diam (m)                                   | Linii Mate:                  | ng F nat F nat may be sure in the state of t | From (m) Minut                   | To (m)                               | Fro  | n  | 1                 | 496             | 588/<br>1475              | 5              | f Material  |                    |
| EVEL UMPI erval Tr   | A DRIII d LOPME ACI                              | LLED WE Depth (m)  ENT (State of the state o | Diam. (mm)  LL  Length (m)  methods and had  | Width (m)  Width (m)   | Diam (m)  urface to ne Dischar Rate        | Linii Mate:                  | ours thod of assuring  | From (m) Minus                   | To (m)  Draw Down                    | Fro  | n  | 1                 | 496             | 588/<br>1475              | 5              | f Material  | -                  |
| DEVEL DEVEL TUMPI  | A DRIII d LOPME ACI                              | LLED WE Depth (m)  ENT (State of the state o | Diam. (mm)  LL  Length (m)  methods and had  | Width (m)  Width (m)   | Diam (m)  urface to ne Dischar Rate        | Linii Mate:                  | ours thod of assuring  | From (m) Minus                   | To (m)  Draw Down                    | Fro  | n  | 1                 | 496             | 588/<br>1475              | 5              | f Material  |                    |
| DEVEL PUMPI Terror III   | A DRII   | LLED WE Depth (m)  ENT (State of the state o | Diam. (mm)  LL  Length (m)  methods and had  | Width (m)  Width (m)   | Diam (m)  urface to ne Dischar Rate        | Linii Mate:                  | ours thod of assuring  | From (m) Minus                   | To (m)  Draw Down                    | Fro  | n  | 1                 | 496             | 688/                      | 5              | f Material  |                    |
| DEVEL  PUMPI m n)  | A DRIII  | LLED WE Depth (m)  ENT (State of the state o | Diam. (mm)  LL  Length (m)  methods and bad  rements from Test Method                          | Width (m)  Width (m)  d time take                              | Diam (m)  nn)  pischer (L/sec              | Linin Mater                  | ours  m)  thod of assuring charge  | Minut                            | To (m)  Down (m)                     | Fro  | n  | 1                 | 496             | 688/                      | 5              | f Material  |                    |
| DEVEL  UMPI  m )  SAMP  orovisic   | A DRIII  LOPME  NG TE  ested  To  (m)            | LLED WE Depth (m)  ENT (State of the state o | Diam. (mm)  LL  Length (m)  methods and had  rements from  Test Method                         | Width (m)  d time take   | Diam (m)  urface to ne Dischar Rate (L/sec | Linim Mater                  | ours  m)  thod of assuring charge  | Minut                            | To (m)  Down (m)                     | Fro  | n  | 1                 | 496             | 688/                      | 5              | f Material  |                    |
| DEVEL  UMPI  m )  SAMP  orovisic   | A DRIII  LOPME  NG TE  ested  To  (m)            | LLED WE Depth (m)  ENT (State ENT (State Level (m)  Water Level  | Diam. (mm)  LL  Length (m)  methods and had  rements from  Test Method                         | Width (m)  d time take   | Diam (m)  urface to ne Dischar Rate (L/sec | Linim Mater                  | ours  m)  thod of assuring charge  | Minut                            | To (m)  Down (m)                     | Fro  | n  | 1                 | 496             | 688/                      | 5              | f Material  |                    |
| EVEI  UMPI  n  SAMP  orovisici   | A DRII   | CST (measure Level (m)   | Diam. (mm)  LL  Length (m)  methods and had  rements from  Test Method                         | Width (m)  Width (m)  d time take  m natural s  Pump Depth (m) | Diam (m)  Dischar Rate (L/Sec              | Linim Mater                  | mg F F F F F F F F F F F F F F F F F F F   | Minus  Hours Pumped  d water sar | To (m) Draw Down (m) nples           | From   | n  | 1                 | 496             | 588/<br>1475              | 5              | f Material  |                    |
| Wethoo   | A DRIII d d COPME AU ING TE To (m) LES on of the | CNT (State  Water Level (m)  Water Reso any samples  | Diam. (mm)  LL  Length (m)  methods and had  rements from Test Method  urces Act at have not b | Width (m)  Width (m)  d time take                              | Diam (m)  Dischar Rate (L/sec.             | Homewarest 0.1  ge Me Me Dis | mg F F F F F F F F F F F F F F F F F F F   | Minute Hours Aumped              | To (m)  Draw Down (m)  mples         | From   | n  | (m)               |                 | 588/<br>1475              | 5              | f Material  |                    |
| Wethoo  EVEL  UMPI  n  SAMP  ture of other attered of the same att | A DRIII d COPME ING TE To (m) LLES on of the     | CST (measure Level (m)   | Diam. (mm)  LL  Length (m)  methods and bad  Test Method                                       | Width (m)  Width (m)  d time take                              | Diam (m)  Dischar Rate (L/sec.             | Homewarest 0.1  ge Me Me Dis | mg F F F F F F F F F F F F F F F F F F F   | Minus Hours Aumped  d water sar  | To (m)  To (m)  Draw Down (m)  mples | From   | n n  | (m)               |                 | 588/<br>1475              | 5              | f Material  |                    |

**Obs Well No:** CHW 90 **DH No:** 199069

1. PERMIT NO: .....

# SCHEDULE EIGHT --- FORM FOUR GOVERNMENT OF SOUTH AUSTRALIA Water Resources Act, 1997

|                       | DF                  | RILLE                   | ERS             |                          |          |                    | es Aci,<br>STR  |                  |  | N R              | EP         | OJ             | RT     |                |                                       |  |                  | ·                    |             |        |                       |
|-----------------------|---------------------|-------------------------|-----------------|--------------------------|----------|--------------------|-----------------|------------------|--|------------------|------------|----------------|--------|----------------|---------------------------------------|--|------------------|----------------------|-------------|--------|-----------------------|
|                       |                     |                         |                 |                          |          |                    |                 |                  |  |                  |            |                |        |                |                                       |  | ION OF V         | MET I                |             |        |                       |
|                       |                     |                         | c the no        | erson resp               | oneih!   | e for the          | e warb          | carried          | l out on   | thic wa          | 11         |                |        |                | 4                                     |  |                  | VELL<br>ral Lease No | ):          |        |                       |
|                       |                     | А                       |                 | ise that it              |          |                    |                 |                  |  |                  | П          |                |        |                |                                       |  |                  | . Lot No             |             |        |                       |
|                       |                     |                         |                 |                          |          |                    |                 |                  |  |                  |            |                |        |                |                                       |  |                  | . <u>Lot No</u>      |             |        |                       |
| Nama                  | f Daille            | r Ca                    | 4.6             | 56                       | ./       |                    | Lion            | noo Nic          | 34   | 20               | Per        | mit h          | older  | or lar         | nd occur                              |  |                  |                      |             |        |                       |
|                       |                     |                         |                 |                          |          |                    |                 |                  |  |                  | 1          |                |        |                |                                       |  |                  |                      |             |        |                       |
| Name o                | f plant             | operator if             | under           | supervisio               | on       | •••                |                 | ••               |  | •••••            |            |                |        |                |                                       |  |                  |                      |             |        |                       |
| e cross               | MADS                |                         |                 |                          |          |                    |                 |                  |  |                  |            |                |        |                |                                       |  |                  |                      |             |        |                       |
| Date wo               | rk Con              | nmenced                 |                 | 11-3                     | s- 0     | 4                  |                 |                  |  |                  | D          | ate v          | vork C | ompl           | eted                                  |  | (-3-0)           | 4                    |             |        |                       |
| Work ca               |                     | ut: New                 | well b          | D, Exist                 | ing Wel  | n 🗆 ,              | deepen          | □ , e            | nlarge [   | ☐, reha          | bilita     | ate 🗆          | ], bac | kfill          |                                       |  | propriate l      |                      |             |        |                       |
|                       |                     | Repi<br>th Drilled      | 8               |                          | Final    | Depth.             | ۶               | 3                | (m) F  | inal Sta         | nding      | g Wat          | er Lev | el             |                                       |  |                  | Final Yiel           | d           | •••••  | (L/sec)               |
|                       |                     | DETAILS                 |                 | t a drilled              |          |                    |                 |                  |  |                  |            |                |        |                |                                       |  |                  |                      |             |        |                       |
|                       |                     | n Details               |                 |                          |          |                    |                 | T                |  |                  |            |                | •      | ts fro         | m natui                               | al surfac  | e to neares      | st 0.1 m)            |             |        |                       |
| 1 3011                |                     | ~ viuito                |                 | ling Metho               | d        | F                  | Y               | 1                |  | T                | Water      |                |        | Standi         | ng ·                                  |  | Hole             |                      |             | Ţ      | e-r- **               |
| From (m)              | To<br>(m)           | Diam<br>(mm)            | Ro              | able Tool,<br>tary Auger | .        | Fluid U<br>(Air, W | /ater,          |                  | Date   |                  |            |                | _      | Water          | ֓֟֟֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓ | stimated<br>Yield                                | Depth<br>at Test | Casing at<br>Test    | Tes<br>Meth |        | Salinity<br>(mg/L) or |
| (111)                 | (III)               | (unm)                   | D               | own Hole<br>mmer, etc.   |          | Mud T              |                 | 1                |  | Fro<br>(m        |            | To<br>(m)      |        | (m)            |                                       | (L/Sec)  | (m)              | (m)                  | INTERN      | ~      | Taste                 |
| 0                     | 8                   |                         | Ro              | Bud                      | 2 1      | Bio C              | 15              | 11:              | 3.04   | 6                |            | 8              |        |                |                                       |  |                  |                      |             |        |                       |
|                       |                     |                         | <u> </u>        |                          | 工        |                    |                 | $\perp$          |  |                  |            |                | Ţ      |                |                                       |  |                  |                      |             | $\Box$ |                       |
| <b></b> ∤             |                     |                         | _               |                          |          |                    |                 | +-               |  | -                | $\dashv$   |                | +      |                |                                       |  |                  |                      |             |        |                       |
|                       |                     | +                       | +               |                          | +        |                    | -               | +                |  | +                | $\dashv$   |                | +      |                |                                       |  | ļ                |                      |             | -      |                       |
| . CASI                | NG LI               | EFT IN W                | ELL             |                          |          |                    |                 |                  |  |                  |            |                |        |                |                                       |  |                  |                      | 1           |        |                       |
| 7.1 Dim               | ensions             |                         |                 | 7.2 Type                 |          |                    |                 | 7.3 Cas          | ing Cer  | nented           |            |                |        |                |                                       |  |                  |                      |             |        |                       |
| From                  | То                  |                         |                 |                          |          | Ided Coll          |                 | Yes N            |  | rom              | То         |                | Ceme   |                | Water                                 |  | Other            | Cementin<br>Method   |             | C      | omments               |
| (m)                   | (m                  | ) (m                    | m)              |                          |          | VC, etc.           | -               |                  |  | (m)              | (m)        |                | (bag   | ;)             | (litres)                              | Ad   | ditives          | Used                 |             |        |                       |
| 0                     | 8                   | 8c                      | <del>-  </del>  | F                        | VC       |                    |                 |                  |  | 2                | 4          | +              |        |                |                                       | <del> </del>                                     |                  | Trenis               | -           |        |                       |
|                       | +                   |                         |                 |                          |          |                    | +               |                  |  | +                |            | $\dashv$       |        |                |                                       | +  |                  |                      | -           |        |                       |
|                       | t                   |                         |                 |                          |          |                    | $\dashv$        |                  |  |                  | -          | $\dashv$       |        | $\neg \dagger$ |                                       | +  |                  |                      |             |        |                       |
| . CON                 | STRUC               | TION AT                 |                 |                          |          |                    |                 |                  |  |                  |            |                |        |                |                                       | ·  |                  |                      |             |        |                       |
| 3.1 Metl              |                     |                         | 8.2 S           | creen or                 | Casing   |                    |                 | <del>-</del>     |  |                  | _          | _              |        |                |                                       |  |                  |                      |             |        |                       |
| ☐ Ope                 |                     |                         |                 | Туре                     | :        |                    | From<br>(m)     | To<br>(m         |  | perture*<br>(mm) |            | er Dia<br>(mm) | am (   | uter I<br>(mn  |                                       | Mat  | erial            | Trade Na             | ıme         |        | of Base               |
| Slot                  |                     | sing                    | <u></u>         | PVC                      |          |                    | 6_              | 8                |  |                  | عٰل        | <b>b</b> _     | _      | 90             | 2                                     |  |                  |                      |             | Na     | Iwal                  |
| ☐ Scre                |                     | date:le:                |                 |                          |          | <u> </u>           |                 | <u> </u>         |  |                  | 1          |                |        |                |                                       |  |                  |                      |             |        |                       |
|                       |                     | details:                |                 |                          |          |                    |                 |                  |  |                  |            | _              |        |                | ON LO                                 |  |                  |                      |             |        |                       |
| Liner S               |                     |                         | Interr          | nal N                    |          | Packing            | g<br>Gravel Pas | ecina T          | From   | To               |            | $\vdash$       | From   | וואיי          | To                                    | <del></del>                                      |                  |                      |             |        |                       |
| Mater                 | ial                 | (m)                     | Dian<br>(mm     | n. N                     | lacemen  |                    | Mesh Si         |                  | (m)  | (m               |            |                | (m)    | 1              | (m)                                   | <u>L</u> _                                       |                  | Description of       | of Materia  | d<br>— |                       |
|                       |                     |                         |                 | LB.                      | z kél    |                    |                 |                  | 5  | 8                |            |                |        | L              |                                       | 498  | 3/2              |                      |             |        |                       |
|                       |                     |                         |                 |                          |          |                    |                 |                  |  |                  |            |                |        |                |                                       | 624  | 70715            | •                    |             |        |                       |
| F NOT                 | A DRĮ               | LLED WE                 |                 | 1                        |          |                    |                 | ,                |  |                  |            | <u> </u>       |        | _              |                                       |  |                  |                      |             |        |                       |
| Metho                 | d                   | Depth<br>(m)            | Length<br>(m)   | Width<br>(m)             |          | tam<br>m)          | Linin<br>Mater  | ig<br>ral        | From (m)   | To<br>(m         |            | L              |        |                |                                       |  |                  |                      |             |        |                       |
|                       |                     |                         |                 |                          | <b>↓</b> | $\bot$             |                 |                  |  |                  |            | L.             |        | $\perp$        |                                       |  |                  |                      |             |        |                       |
|                       |                     |                         |                 | -                        |          |                    |                 |                  |  | -                | _          | $\vdash$       |        | 1              |                                       | <u> </u>   |                  |                      |             |        |                       |
| DEVE                  | COPYC               | ENT -C                  |                 |                          |          |                    |                 |                  |  |                  |            | $\vdash$       |        | +              |                                       | +  | <u> </u>         |                      |             |        |                       |
| DEVE                  | LUPM                | ENT (State<br>Me        | methods<br>thod | and time t               | aken)    |                    | Ho              | urs              | ] ;  | Minutes          | $\neg$     |                |        | +-             |                                       | <del> </del>                                     |                  |                      |             |        |                       |
|                       | Δ                   | in life                 | 7               |                          |          |                    |                 |                  | +  |                  | $\dashv$   |                |        | 1              |                                       |  |                  |                      |             | -      |                       |
|                       |                     |                         |                 |                          |          |                    |                 |                  |  |                  |            |                |        | L              |                                       |  |                  |                      |             |        |                       |
|                       |                     |                         |                 |                          |          |                    |                 |                  |  |                  |            |                |        |                |                                       |  |                  |                      |             |        |                       |
|                       |                     | EST (measu              | rements         |                          |          |                    |                 |                  | Γ  |                  |            | <u></u>        |        | -              |                                       | <del>                                     </del> |                  |                      |             |        |                       |
| Interval 7            | To To               | Water<br>Level          | Test<br>Metho   | vi Dep                   | tĥ       | Discharge<br>Rate  | Mea             | hod of<br>suring | Hour.<br>Pumpe                                   | *4   D0          | wn         |                |        | +              |                                       | -  |                  |                      |             |        |                       |
| (m)                   | (m)                 | (m)                     | Menio           | m (m                     | ,        | (L/sec)            | Disc            | charge           | - unipe  | ru (n            | 1)         | $\vdash$       |        | -              |                                       | -  |                  |                      |             |        |                       |
| $\perp$               |                     |                         | <u> </u>        | _                        | $\perp$  |                    |                 |                  | <del>                                     </del> |                  | $\dashv$   | <u> </u>       |        | 1              |                                       | <u> </u>   |                  |                      |             |        |                       |
| $\dashv$              |                     | ļ                       | ļ               | +                        | +        |                    | -               |                  | -  | +                | $\dashv$   | $\vdash$       |        | <u> </u>       |                                       | <u> </u>   |                  |                      |             |        |                       |
| . SAMI                | oi Ec               | <u> </u>                | L               |                          | L        |                    | Ш               |                  | <u> </u>   |                  |            | $\vdash$       |        | +              |                                       | <del>                                     </del> |                  |                      |             |        |                       |
| e provisi             | on of the           | e Water Reso            |                 |                          |          |                    |                 | nat strata       | a and wat  | er sampl         | es         | -              |        | +              |                                       |  |                  |                      |             | -      |                       |
|                       |                     | f any sample            |                 |                          |          |                    |                 | /                | 7  | •                |            |                |        | +              |                                       |  |                  |                      |             |        |                       |
|                       |                     |                         |                 | _                        |          | //                 | ///             |                  | •  | ****             | •          | $\vdash$       |        | +              |                                       | <del> </del>                                     |                  |                      |             |        |                       |
|                       |                     |                         |                 |                          |          |                    |                 |                  | <sub>Date</sub> l(                               | 7.               | 1/         |                |        | T              |                                       |  |                  |                      |             | ••     |                       |
| nature o<br>riller: t | i Licensi<br>O forv | ed Driller<br>vard:this | ·Eony           | within                   | 14 da    | vs of c            | comple          | <br>etion 1      | vate (   | ン/ て<br>rimar    | ゲ<br>/ Ind | Lustr          | ries a | ıd R           | esour                                 | es SA  |                  |                      |             |        |                       |
|                       | N                   | vard this               | San San         |                          |          | .,. •• •           | P1              |                  |  |                  |            |                |        |                | J                                     |  |                  | 1                    |             |        |                       |
| DATE                  |                     | BY                      |                 |                          |          |                    |                 |                  |  | 3 Cony           | _          |                |        |                |                                       |  |                  |                      | 7           | 030    | 668                   |
|                       |                     |                         |                 |                          |          |                    |                 |                  | G  | LENS             | ЮE         | SA             | 5065   |                |                                       |  |                  | - 1                  |             | -      |                       |

Obs Well No: CHW 89

**DH No**: 199070

64277

SCHEDULE EIGHT --- FORM FOUR GOVERNMENT OF SOUTH AUSTRALIA Water Resources Act, 1997

2. WELL UNIT NO: DRILLERS WELL CONSTRUCTION REPORT 3 WELL NAME:. 4. LOCATION OF WELL As the person responsible for the work carried out on this well I advise that it has been completed as described below: Hundred or Pastoral Lease No: ..... ...... Lot No...... Site No ... Name of Property. Permit holder or land occupier. 5. SUMMARY Date work Completed .... 11.3.04 Work carried out: New Well ☐, Existing Well ☐, deepen ☐, enlarge ☐, rehabilitate ☐, backfill ☐ (tick appropriate boxes) 6. DRILLING DETAILS If not a drilled well please complete sections 6.2, 9, 10, 11, 12 and 13 as necessary 6.2 Water Cut Details (measurements from natural surface to nearest 0.1 m) 6.1 Construction Details Drilling Method Cable Tool, Rotary Auger, Down Hole Fluid Used (Air, Water, Mud Type) Water Cut Salinity (mg/L) or Taste Depth Yield Level at Test From ROTOLANDE Bious (m) 0 8 11.304 7. CASING LEFT IN WELL 7.1 Dimensions 7.2 Type 7.3 Casing Cemented Swell Joint, Welded Collar, Steel, FRP, PVC, etc. Cementin Method Used Water Other Additives Yes No Diam. Comments (m) (bags) 0 PUC 0 8 Tremos 8. CONSTRUCTION AT PRODUCTION LEVEL 8.2 Screen or Casing (\*If variable aperture screen used give limits) 8.1 Method ☐ Open Hole To Inner Diam Outer Diam. Material Trade Name Slotted Casing Screen(s) ☐ Other, give details: 8.3 Liner Seal (Packer) 13. FORMATION LOG 3.4 Gravel Packing Method of Placement Gravel Passing Mesh Size Description of Material (m) (m) 498312 6240715 9. IF NOT A DRILLED WELL Width (m) Diam (m) From (m) 10. DEVELOPMENT (State methods and time taken) Hours Minutes 11. PUMPING TEST (measurements from natural surface to nearest 0.1 m) Interval Tested Pump Depth (m) Discharge Rate (L/sec) From (m) 12. SAMPLES Date 11 10 10 4

Driller to forward this copy, within 14 days of completion to: Primary Industries and Resources SA **Core Library Complex** 

23 Conyngham Street **GLENSIDE SA 5065** 

**Obs Well No:** CHW 87 **DH No:** 199071

2. WELL UNIT NO:....

Unit No: 7030 670 Obs No: SCHEDULE EIGHT --- FORM FOUR
GOVERNMENT OF SOUTH AUSTRALIA
Water Resources Act, 1997

## DRILLERS WELL CONSTRUCTION REPORT

| KILL                                     | eks (   | W ELI  | LCO  | 11911                           | NUC  | 1101  | 1 KL   | PUK.   | L                              |   | 3 WELL N   | NAME:   | ••••••••••   |   |  |
|--|---|--|--|---------------------------------|--|---|--|--|--------------------------------|---|--|---|--|---|--|
|  |   |  |  |                                 |  |   |  |  |                                |   | 4. LOCAT   | ION OF V  | VELL   |   |  |
|  |   |  |  |                                 |  |   |  |  |                                |   |  |   |  |   |  |
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|  | - C   | 11   |  |                                 |  | 7/12  | . 1.   | James ! . *  | las 1                          |   |  |   |  |   |  |
|  |   |  |  |                                 |  |   | 1_   |  |                                |   | -  |   |  |   |  |
| t operator i                             | f under su  | pervision  |  |                                 |  |   | "  |  |                                |   |  |   |  |   |  |
|  | ···· ········   |  | ••••   | · · · · · · · · ·               |  |   | ]  |  |                                |   |  |   |  | Post Cod  | e  |
| mmenced                                  | (   | 0-3-   | 04   |                                 |  |   |  | Date work  | k Compl                        | leted   | 10-3   | -04   |  |   |  |
| out: Ne                                  | w Well 🗷  | , Existin  | g Well   | ] , deeper                      | ı 🗖 , enl  | large 🗆   | , rehabil  | itate □,   | backfill                       |   |  |   |  |   |  |
| Re                                       | lacement  | Well: Yes  | □/No   | ☐ Repl                          | ced Wel  | l No  | ··· ··· ····   |  |                                |   |  |   |  |   |  |
|  |   |  |  |                                 |  |   |  |  |                                |   |  |   |  | 1   | (L/sec)  |
|  |   |  |  |                                 |  |   |  |  |                                |   |  |   |  |   |  |
|  | S If not a  | a drilled we   | ll please co   | omplete sec                     | 1  |   |  |  |                                |   |  |   |  |   |  |
| on Details                               | Drillin   | ng Method  | 1  |                                 | 6.2 W  | ater Cut  |  |  |                                | -   | ıral surface   |   | t 0.1 m)   |   | 1  |
|  | Rotar   |  |  |                                 |  | ate   | Wat  | er Cut   | Wate                           | r   |  | Depth   | Casing at<br>Test  | Test  | Salinity<br>(mg/L) or  |
| (mm)                                     | Dov   |  | Mu   | d Type)                         |  |   | From<br>(m)  | To<br>(m)  |                                |   | (L/Sec)  | at Test<br>(m)  | (m)  | Method  | Taste  |
| )  |   |  | Bic  | UC                              | 10:  | 3   | 7  | (0)  |                                |   |  |   |  |   |  |
|  |   |  |  |                                 | +  |   | •  |  |                                |   |  |   |  |   |  |
| +  | -   |  |  |                                 |  |   |  |  |                                | $\dashv$  |  |   |  |   |  |
|  |   |  |  |                                 |  |   |  | l  |                                |   |  |   |  |   |  |
|  |   | 2 Tyne   |  | I                               | 73 Caci  | ng Cema   | nted   |  |                                |   |  |   |  |   |  |
| n Int                                    | ernal   |  | t, Welded (  |                                 |  | Error   |  | ro C   | ement                          | Water   |  | ther  | Cementing  | g   |  |
| n) (n                                    |   | Steel, F   |  |                                 |  |   |  |  |                                |   |  |   | Method<br>Used   |   | Comments   |
| >-                                       |   | _pυ  | <u>C</u>   |                                 |  | <del>  C</del>  |  | 5  |                                |   | Berlon   | 7c  | Jenie  | <u>:                                    </u>  |  |
|  |   |  |  |                                 |  | <del></del>   |  |  |                                |   | -  |   |  |   |  |
|  |   |  |  |                                 |  |   |  |  |                                |   |  |   |  |   |  |
| CTION AT                                 |   |  |  | variable                        | nerture  | creen us  | ad giva  | limite)  |                                |   |  |   |  |   |  |
| <b>:</b>                                 | 0.2 001   | Туре   | onig ( ii  | From                            | То   | Aper  | ture* L  | nner Diam  |                                |   | Mate   | erial   | Trade Na   | me  | Completion   |
| sing                                     | F   | VC   |  | 7                               | (m)  | (m  | m)   | (mm)   | (mn                            | n)  |  |   |  | 1   | of Base  |
|  |   |  |  |                                 |  |   |  |  |                                |   |  |   |  |   |  |
|  |   | <del></del>  |  |                                 |  |   | · t · · · · · · · · · ·  |  |                                |   |  |   |  |   |  |
| T -                                      | Internal  |  | •  |                                 | esina  | Erom  | То.  | ז ├── <u></u>  |                                |   | )G   |   |  |   |  |
| (m)                                      | Diam.<br>(mm)   | Plac   | ement  |                                 |  |   | (m)  |  |                                | (m)   |  |   | Description of   | Material  |  |
|  |   | Bu   | ke/  |                                 |  | 6   | 10   | <b> </b>   | _                              |   | 490  | 7/24  |  |   |  |
|  | <u> </u>  |  |  |                                 |  | L   |  | ┚┢──   | -                              |   | 629  | 1/36  | <u> </u>   |   |  |
| Depth                                    | Length  | Width  | Diam   |                                 |  |   | To   | 1  | +-                             |   |  |   |  |   |  |
| (m)                                      | (m)   | (m)  | (m)  | Mate                            | naı  | (m)   | (m)  | 1  |                                |   | +  |   |  |   |  |
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|  | I   |  |  |                                 |  |   |  | ]  | _I_                            |   | 1  |   |  |   |  |
|  | methods ar  | nd time take   | en)  | Н                               | urs  | Mir   | utes   | 1 <del> </del>   |                                |   | +  |   |  |   |  |
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| ~ \ill                                   |   |  |  |                                 |  |   |  |  |                                |   |  |   |  |   |  |
| <u> </u>                                 |   |  |  |                                 |  | <u> </u>  |  | J  | -                              |   |  |   |  |   |  |
| r li                                     |   |  |  | earest 0.1                      | m)   |   | Draw   | 1 📙  | +                              |   | +  |   |  |   |  |
| EST (measurement)                        |   | Pump   | Discha   |                                 | hod of   | Ц   | Diaw   |  |                                |   |  |   |  |   |  |
| EST (measi                               | Test<br>Method  |  |  | rge Me<br>Me                    | curing   | Hours<br>Pumped   | Down<br>(m)  |  |                                |   |  |   |  |   |  |
| EST (measurement)                        | Test  | Pump<br>Depth  | Discha<br>Rate   | rge Me<br>Me                    | asuring  |   | Down   |  |                                |   |  |   |  |   |  |
| EST (measurement)                        | Test  | Pump<br>Depth  | Discha<br>Rate   | rge Me<br>Me                    | asuring  |   | Down   |  |                                |   |  |   |  |   |  |
| EST (measurement)                        | Test  | Pump<br>Depth  | Discha<br>Rate   | rge Me<br>Me                    | asuring  |   | Down   |  |                                |   |  |   |  |   |  |
| EST (measurement water Level (m)         | Test<br>Method  | Pump<br>Depth<br>(m)   | Discha Rate (L/sec   | rge Me Me: Dis                  | asuring<br>charge                                | Pumped  | Down<br>(m)  |  |                                |   |  |   |  |   |  |
| EST (measurement was the level (m)       | Test<br>Method  | Pump<br>Depth<br>(m)   | Discha Rate (L/sec   | rge Me Me: Dis                  | asuring<br>charge                                | Pumped  | Down<br>(m)  |  |                                | ,   |  |   |  |   |  |
| EST (measure Level (m))  Water Level (m) | Test<br>Method  | Pump Depth (m)   | Discha Rate (L/sec   | o require the                   | asuring charge                                   | nd water s  | Down<br>(m)  |  |                                |   |  |   |  |   |  |
| EST (measure Level (m))  Water Level (m) | Test<br>Method  | Pump Depth (m)   | Discha Rate (L/sec   | o require the                   | asuring charge                                   | nd water s  | Down<br>(m)  |  |                                |   |  |   |  |   |  |
| EST (measurement water Level (m)         | Test Method   | Pump Depth (m)   | Discha Rate (L/se  | o require the second            | asuring charge has strata a                      | nd water s  | amples   | dustries<br>ary Com  |                                | esour   | cces SA  |   |  |   |  |
|  | t operator i  y mmenced out: Nee Rep pth Drilled ndoned Ye:  G DETAIL on Details  Diam (mm)  CTION AT  carries   r out: New Well Replacement pth Drilled Cab non Details  Diam (mm)  Diam (mm)  Diam (mm)  Diam (mm)  CTION AT PRODUCT Saint Sa | I advise that it here it is the control of the cont | r operator if under supervision | Tadvise that it has been completed    Comparison | I advise that it has been completed as descreer.  Licence No:  toperator if under supervision | I advise that it has been completed as described below.  The properties of under supervision and the properties of the p | Common   C | Licence No: 3425   Permit hold | Licence No: 3425.  Permit holder or la Postal Address | As the person responsible for the work carried out on this well I advise that it has been completed as described below:    Comparison   Comparison | As the person responsible for the work carried out on this well I advise that it has been completed as described below:    Comparison | As the person responsible for the work carried out on this well I advise that it has been completed as described below:    A | Licence No. 1   Licence No. | As the person responsible for the work carried out on this well I advise that it has been completed as described below.    Comparison   Comparison |

**Obs Well No:** CHW 88 **DH No:** 199072

1. PERMIT NO: 64276

SCHEDULE EIGHT --- FORM FOUR GOVERNMENT OF SOUTH AUSTRALIA Water Resources Act, 1997

|                   | DЪ        | TT T           | DDG           | S WATE                 | T T         | L <b>CO</b>                  | NCT                 | DII        | CTI         | ONI       | DE             | DO       | רסו      | r            |          | 2. WELL          | UNIT NO  | ):             |              | ••••••   |   |
|-------------------|-----------|----------------|---------------|------------------------|-------------|------------------------------|---------------------|------------|-------------|-----------|----------------|----------|----------|--------------|----------|------------------|--|----------------|--------------|----------|---|
|                   | DN        | ш              |               | ) 44 T                 |             | LCO                          | 1101                | KU         |             | UN        | NL.            | FU       | N        | L            |          | 3 WELL I         | NAME:  |                |              |          |   |
|                   |           |                |               |                        |             |                              |                     |            |             |           |                |          |          |              |          | 4. LOCAT         | TON OF   | WELL           |              |          |   |
|                   |           |                | As the        | person re              | espo        | nsible for                   | the wor             | k carrie   | ed out      | on this w | vell           |          |          |              |          | Hundre           | ed or Pasto                                      | oral Lease No  | ):           |          |   |
|                   |           |                |               |                        |             | as been c                    |                     |            |             |           |                |          |          |              |          | 1                |  | Lot No         |              |          |   |
|                   |           |                |               |                        |             |                              |                     |            |             |           |                |          |          |              |          |                  |  |                |              |          | *************************************** |
|                   |           |                | 610           | d                      | $\Box$      |                              |                     |            | . 7         | Lisc      | T <sub>D</sub> |          | hald     |              |          |                  |  |                |              |          |   |
| Name o            | i Driller |                |               | عاسده                  |             | •••••                        | L10                 | ence N     | NO:         | - TZ-2.   |                |          |          |              |          |                  |  | ••••••         |              |          |   |
| Name o            | f plant o | perator        | if unde       | r supervi              | ision       |                              | •••••               |            |             |           | P              | ostal    | Addr     | ess          |          | ••••••           | ······   |                | •••••        |          |   |
|                   |           |                |               |                        | •••••       |                              | <u>.</u>            |            | •••••       |           |                |          |          |              |          | •••••            |  |                | Post         | Code     |   |
| 5. SUM            | MARY      |                |               | <i>G</i> 2             | _           |                              |                     |            |             |           |                |          |          | -            |          | 10               | 79   |                |              |          |   |
|                   |           | nenced         |               | <u>U.5</u>             | <u>. C</u>  | )4                           |                     |            |             |           |                | Date     | work     | Comp         | oleted   | /0               | 1.0.0  | 24             |              |          |   |
| Work ca           | arried ou |                |               |                        |             | g Well                       |                     |            |             |           |                |          |          |              |          |                  | propriate l                                      | ooxes)         |              |          |   |
|                   |           |                |               |                        |             | □ / No                       |                     |            |             |           |                |          |          |              |          |                  |  |                |              |          |   |
|                   |           |                |               |                        |             |                              |                     |            |             |           |                |          |          |              |          |                  |  |                | d            |          | (L/sec)                                 |
| Was We            | ll Aband  | oned Ye        | s□/N          | io 🖳                   | If Y        | Yes, state                   | method.             |            |             |           |                |          |          |              |          |                  |  |                |              |          |   |
| 5. DRII           | LING I    | DETAIL         | S If          | not a drille           | ed we       | ii please co                 | mplete se           | ections f  | 2 9 10      | ) 11 12:  | and 13         | as ne    | ressar   | v            |          |                  |  |                |              |          |   |
|                   | struction |                |               |                        |             | prouse co                    | inpiece s           |            |             |           |                |          |          |              |          | 1£               |  |                |              |          |   |
| 7.1 COII          | saucuon   | Details        |               | rilling Met            | thod        | 1                            |                     | 10.4       | water       | Cut De    |                |          | urem     |              |          | tural surface    | ľ  | 1 (0.1 m)      |              | - 1      |   |
| From              | To        | Dian           |               | Cable Too              |             |                              | d Used<br>Water,    | - 1        | Data        |           | Wate           | r Cut    | ĺ        | Stand<br>Wat |          | Estimated        | Hole<br>Depth                                    | Casing at      | Tes          | ,        | Salinity                                |
| (m)               | (m)       | (mm            | '             | lotary Aug<br>Down Hol | le          |                              | , water,<br>i Type) |            | Date        |           | rom            |          | ò ·      | Lev          | el       | Yield<br>(L/Sec) | at Test  | Test<br>(m)    | Meth         |          | (mg/L) or<br>Taste                      |
|                   | 10        | -              |               | lammen e               |             |                              |                     | -          | <del></del> |           | m)             | (n       |          | (m           | ,        |                  | (m)  |                | <u> </u>     |          |   |
| $\alpha$          | (8        |                | - -[          | slade                  | <u>-</u> _  | Bio.                         | VI)                 | 110        | 3.30        | 14 1.     | <u> </u>       | (6       | 2        |              |          |                  |  |                | <u> </u>     |          |   |
|                   |           | +              | +             |                        |             | <del> </del>                 |                     | +          |             |           |                |          | $\dashv$ |              |          |                  | <del>                                     </del> | ļ              | <del> </del> | -        |   |
|                   |           | 1              | +-            |                        |             |                              |                     | +          |             | +         |                | $\vdash$ | $\dashv$ |              |          |                  |  |                | <b>—</b>     | $\dashv$ |   |
|                   |           |                | $\top$        |                        |             |                              |                     | _          |             | _         |                |          | -        |              |          |                  |  |                | $\vdash$     | $\dashv$ |   |
| . CASI            | NG LEI    | T IN V         | VELL          |                        | _           |                              |                     |            |             |           |                |          |          |              |          |                  | <u> </u>   |                |              |          |   |
| 7.1 Dim           | ensions   |                |               | 7.2 Typ                | e           |                              |                     | 7.3 Ca     | asing C     | emented   | i              |          |          |              |          |                  |  |                |              |          |   |
| From              | To        |                | ernal<br>iam. | Swell                  | Joint       | t, Welded C                  | Collar,             |            |             | From      | Т              | o o      | Ce       | ment         | Was      | ter C            | Other  | Cementin       | g            |          |   |
| (m)               | (m)       |                | nm)           | -                      |             | RP, PVC, e                   | tc.                 | Yes        | No          | (m)       | (1             |          | (b       | ags)         | (litr    | es) Ad           | ditives  | Method<br>Used |              | <u> </u> | omments                                 |
| <u>O</u>          | 18        |                |               | μ                      | <u>/C</u>   |                              |                     | <u>u</u>   |             | 0         | 14             | -        |          |              |          | Ben              | mile.  | Toema          |              |          |   |
| _                 | <u> </u>  |                |               | <u> </u>               |             |                              |                     |            |             |           | <u> </u>       |          |          |              | <u> </u> |                  |  |                |              |          |   |
|                   |           | -              |               |                        |             |                              |                     |            |             |           |                |          |          |              | <u> </u> |                  |  |                | $\perp$      |          |   |
| COM               | TDIICT    | ION AT         | DDOD          | UCTIO                  | NI I E      | 21.7127                      |                     |            |             |           |                |          |          |              |          |                  |  |                |              |          |   |
| 3.1 Meth          |           | ION AI         |               |                        |             | sing (*If                    | variable            | anertu     | re scre     | en used e | aive I         | imite    | `        |              |          |                  |  |                |              |          |   |
| ∵ Ope             |           |                | 0.2           | T.                     | no.         | Sing ( II                    | From                | Т          |             | Aperture  |                | ner D    |          | Outer        | Diam.    | 14-4             | erial  | Trade Na       |              |          | Completion                              |
| - >               | ted Casir | 10             | -             | PO                     | ρc          |                              | (m)<br>15           | (n         |             | (mm)      | +              | (mm      | ) .      | (m           | m)       | A                |  | Trade Na       | me           | -11      | of Base                                 |
| _ Scre            |           | .6             | <b>—</b>      | 100                    | _           |                              | <u> </u>            | 19         | <b>&gt;</b> |           | +              |          | +        |              | -        | + 10             | <u></u>  |                |              | NC       | UNDAI.                                  |
|                   |           | etails:        | Ь             |                        |             |                              |                     | ٠          |             |           |                |          |          |              |          |                  |  |                |              |          |   |
|                   | Seal (Pac |                |               |                        |             |                              |                     |            | •           |           |                | _        |          | RMAT         |          |                  |  |                |              |          |   |
|                   |           | Depth          | Inte          |                        |             | avel Pack                    | Gravel F            | occina .   | From        | . 1 7     | ĵo .           | ıË       | From     | $\neg 	au$   | То       | 1                |  |                |              |          |   |
| Mater             | ial       | (m)            | Dia<br>(m     | am.<br>m)              |             | ement                        |                     |            | (m)         |           | n)             |          | (m)      | ' [          | (m)      | -                |  | Description o  | f Materia    | 1        |   |
|                   |           |                |               |                        | 7           | 1                            | 8/16                |            | 14          | 18        |                |          |          |              |          | 49               | 9124   |                |              |          |   |
|                   |           |                | 1             |                        |             |                              | <del></del>         |            |             | 1         |                |          |          |              |          | 62               | 9124<br>4136                                     | 4              |              |          |   |
| F NOT             | A DRIL    | LED W          | ELL           |                        |             |                              |                     |            |             |           |                |          |          | -            |          |                  | -سر  | -              |              |          | -                                       |
| Metho             |           | Depth          | Lengt         |                        |             | Diam                         | Lin                 |            | From        |           | Го             |          |          |              |          |                  |  |                |              |          |   |
|                   |           | (m)            | (m)           | (m                     | ·/          | (m)                          | Mat                 | vi iai     | (m)         |           | m)             | -        |          | +            |          |                  |  |                |              |          |   |
|                   |           |                |               |                        |             |                              | t                   |            |             | $\top$    |                |          |          | $\dashv$     |          | +                |  |                |              |          |   |
|                   |           |                |               |                        |             |                              |                     |            |             |           |                |          |          | $\top$       |          | 1                |  |                |              |          | •                                       |
| DEVE              | LOPME     | VT (State      | method        | ls and time            | e take      | en)                          | •                   |            |             |           |                |          |          |              |          | 1                |  |                |              |          |   |
|                   | ^         |                | thod          |                        |             |                              | н                   | ours       |             | Minutes   |                |          | -        |              |          |                  |  |                |              |          |   |
|                   | A         | 11             | W             |                        |             |                              |                     |            |             |           |                |          |          |              |          |                  |  |                |              |          |   |
|                   |           |                |               |                        |             |                              |                     |            |             |           |                |          |          |              |          |                  |  |                |              |          |   |
|                   |           |                |               |                        |             |                              |                     |            |             |           |                |          |          | $\bot$       |          |                  |  |                |              |          |   |
|                   |           | T (meas        | rement:       | s from nat             | ural s      | surface to n                 | earest 0.1          | m)         | _           |           |                | L        |          |              |          |                  |  |                |              |          |   |
| nterval T         |           | Water<br>Level | Tes           | " In₄                  | ump<br>epth | Dischar<br>Rate              |                     | ethod of   | l Ho        | urs   n.  | raw<br>own     | $\perp$  |          |              |          |                  |  |                |              |          |   |
| m)                | To<br>(m) | (m)            | Meth          |                        | m)          | (L/sec                       |                     | scharge    | Pum         |           | m)             | L        |          |              |          |                  |  |                |              |          |   |
|                   |           |                |               |                        |             |                              |                     |            |             |           |                |          |          |              |          |                  |  |                |              |          |   |
|                   |           |                |               |                        |             |                              |                     |            | L           |           |                |          |          |              |          |                  |  |                |              |          |   |
|                   |           |                |               |                        |             |                              |                     |            |             |           |                |          |          |              |          |                  |  |                |              |          |   |
| SAME              |           |                |               |                        |             |                              |                     |            |             |           |                |          |          |              |          |                  |  |                |              |          |   |
|                   |           |                |               |                        |             | ions thereto<br>ed state rea |                     | inat strai | a and w     | ater samp | oles           |          |          |              |          |                  |  |                |              |          |   |
|                   |           |                |               |                        |             |                              |                     | <u> </u>   |             |           |                |          |          |              |          |                  |  |                |              |          |   |
|                   |           |                |               |                        |             |                              |                     |            |             |           |                |          |          |              |          |                  |  |                |              |          |   |
| nature of         | Licensed  | Drille         |               |                        | 4           |                              |                     |            | Date        | , ,       |                | Ĺ        |          |              |          |                  |  |                |              |          |   |
| iller t           | forwa     | ed this        | Copy          | within                 | n 14        | days of                      | comp                | etion      | to:         | Primar    | y In           | dust     | ries     | and R        | esou     | rces SA          |  |                |              |          |   |
| American American | अ ।       |                | er it         |                        |             | -                            | -                   |            |             |           |                | -        | <b>F</b> |              |          |                  |  |                |              |          |   |
| ATE               |           | BY             |               | i                      |             |                              |                     |            |             | 23 Con    |                |          |          |              |          |                  |  |                | 7            | 7030     | 671                                     |

| DR                         |  | ERNMI<br>RS W  | ELI             | CO                      | NST           |                 | TION                |                      |                | T                 | -            |  | 1. P        | ERM          | 1IT N       | o: 6                                   | 4 2              | 09   | s s         | te                                      |
|----------------------------|--|----------------|-----------------|-------------------------|---------------|-----------------|---------------------|----------------------|----------------|-------------------|--------------|--|-------------|--------------|-------------|--|------------------|--|-------------|---|
| NAME                       | OF DR                                  | ILLER          | <i>C</i>        | .5/                     | hei/          |                 | Li                  | cence N              | No:3.          | 425               | . Р          | ERM                                    | IT I        | łOL          | DER o       | or land oc                             | cupier           | DWLBO<br>34, A                                   | C           |   |
| Contact I                  | hone/M                                 | obile No       | .:              |                         |               |                 |                     |                      | **********     |                   |              |  |             |              |             |  |                  |  |             |   |
| Name of                    |  |                |                 |                         | isio <b>n</b> |                 |                     |                      |                |                   | .            |  |             |              |             |  |                  |  |             | 2001                                    |
| 2. LOC                     |  |                |                 |                         |               |                 | ~ 1                 |                      | ٠              |                   | ,            | nce                                    | ٠,          |              | 3           | . WELL                                 | NAME             | 6420   | <b>?</b>    |   |
| Date of                    |  |                |                 | •••••                   | Sur           | veyed           | by <b>-አ</b> ረፖ.    | tv.Q7.               | <u>e/</u>      | Method            | i <i>9.</i>  |  | ) <u>.</u>  |              |             |  |                  | FICATION   | _           | •                                       |
| GPS CO                     |  | NATES<br>VGS84 |                 | 1                       | 183           | 756             |                     |                      |                |                   |              |  |             | E 54<br>E 53 |             |  |                  | •  |             |   |
|                            | GD 66/8                                |                | ,               |                         |               |                 |                     |                      |                |                   |              | ֡֞֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓ |             |              |             |  |                  |  |             | •••••                                   |
| •                          |  |                |                 |                         |               | 9/23            | •                   |                      |                |                   | ]            |  |             | ·            | N           | lame of F                              | roperty          | Chow   | 1/19        |   |
| 5. SUMN                    |  |                | ick ap          | propri                  | iate bo       | xes and         | d comp              | lete al              | l relev        | ant de            | ails)        |  | •           |              |             | ~~                                     | 12/0             | ,  |             |   |
| Date wor<br>Work car       |  |                | Well            |                         | /07           |                 | Deeper              |                      |                |                   | nlarge       | Date v                                 | vork (      | Comp         | leted       | Dahahilia                              | / <i>S/U.</i> F  | ·  | Dookfill    |   |
|                            |  |                |                 | _                       | ves ple       | ease quo        |                     | _                    | li numi        |                   |              |  |             |              |             |  |                  |  |             |   |
|                            | -                                      |                |                 |                         |               | _               |                     |                      |                |                   |              |  |             |              |             |  |                  |  |             |   |
|                            |  |                |                 |                         |               |                 |                     |                      |                |                   |              |  |             |              |             |  |                  |  |             |   |
| Maximur                    | n Depth                                | Drilled        | 8::             | 7. <i>6.</i> .(m        | 1)            | . Fi            | nal Dep             | th <b>8</b> .        | .76            | (m).              |              | Final S                                | Stand       | ing W        | ater Le     | vel                                    | (m)              | Final Yi   | eld         | (L/sec)                                 |
| 6. DRIL                    |  |                |                 | lf not a                | drilled       | well, pl        | ease coi            |                      |                |                   |              |  |             |              |             |  |                  |  |             |   |
| 6.1 Cons                   | truction I                             | Details<br>I   | l Dr            | illıng Me               | ethod         |                 |                     | 6.7                  | 2 Water        | Cut De            |              |  | remei       |              |             | ral surface                            | to nearest       | 0.1 m)<br>1                                      |             | 1                                       |
| From                       | То :                                   | Diam           | 1 1             | Cable To                | юŧ,           |                 | d Used<br>Water,    |                      | Date           |                   | Wate         | er Cut                                 |             | Stan<br>Wa   |             | Estimated<br>Yield                     | Hole<br>Depth    | Casing at<br>Test                                | Test        | Salinity<br>(mg/L) or                   |
| (m)                        | (m)                                    | (mm)           |                 | otary Au<br>Down Ho     | ole           | (Au             | , water,<br>i Type) |                      | Date           |                   | From         | To                                     |             | Le<br>(n     |             | (L/sec)                                | at Test<br>(m)   | (m)  | Method      | Taste                                   |
| 0                          | 8.76                                   | 135            |                 | lammer,<br>B <i>tow</i> | $\overline{}$ | Mu              | <i>d</i>            | - -                  |                | <del></del>       | (m)          | (m                                     | "           |              | ·           |  | <del>  ```</del> | -  |             |   |
|                            | <u>0'/0</u>                            | ~3-3           |                 | ryge                    |               | Rio             |                     | - -                  |                |                   |              | †                                      | $\dashv$    |              | 1           |  | +                | <del>                                     </del> |             | 1                                       |
|                            |  |                | $\perp$         |                         |               |                 |                     |                      |                |                   |              |  |             |              |             |  |                  |  |             | ļ <u>.</u>                              |
|                            |  |                |                 |                         |               |                 |                     |                      |                |                   |              |  | $\Box$      |              | $\Box$      |  |                  |  |             |   |
| 7. CASI                    |  | r in we        | LL              |                         |               |                 |                     |                      |                |                   |              |  |             |              |             |  |                  |  |             |   |
| 7.1 Dime<br>From           | nsions<br>To                           | Inte           | mal             | 7.2 Typ                 |               | Welded C        | aller               |                      | -T             | emented<br>From   | 1<br>  T     | , [                                    | Сеп         |              | Wate        |  | Other            | Cementing  | g           |   |
| (m)                        | . (w)                                  | Dia<br>(m:     |                 |                         |               | P, PVC, e       |                     | Yes                  | No             | (m)               | (11          |  | (ba         |              | (litre      |  | ditives          | Method<br>Used                                   |             | Comments                                |
| .0                         | 5.70                                   |                |                 |                         | PVC           |                 |                     |                      |                | 0                 | 4            |  |             |              |             |  |                  |  |             |   |
|                            | ļ                                      |                |                 |                         |               |                 |                     |                      |                |                   | Ļ            |  |             |              |             | _                                      |                  |  |             |   |
|                            | ļ                                      | +              |                 |                         |               | •               |                     |                      | <del>-</del> - |                   | ├            | _                                      |             |              |             |  |                  |  | -           | ······································  |
| e cons                     | TOLICT                                 | TON AT         | DDO             | DUCTI                   | ONL           | C3/121          |                     |                      |                |                   |              |  |             |              |             |  |                  |  |             |   |
| 8. CONS<br>8.1 Metho       |  | <u>IUN AI</u>  | $\overline{}$   |                         |               | ng (*lf v       | variable            | apertur              | e scree        | n used s          | rive lir     | nits) '                                |             |              |             |  | •                |  |             |   |
| Ope                        |  |                |                 |                         | Гуре          |                 | From<br>(m)         | 1                    | ro<br>m)       | Apertun<br>(mm)   |              | ner Dia                                | ım          |              | Diam<br>m)  | Mat                                    | erial            | Trade Na   | me          | Completion of Base                      |
| Slot                       | ed Casin                               | g              |                 |                         |               |                 | 5.76                |                      | 76             | 0.5               |              | 80                                     |             |              |             | PVC                                    | ·                | Pipema   | roter 5     |   |
| Scre                       |  |                |                 |                         |               |                 | L                   | Ш,                   |                |                   |              |  |             |              |             |  |                  |  | <u> </u>    | -7                                      |
| Oth                        | r, give d                              | etails:        |                 |                         |               | •               |                     |                      |                |                   |              | ·····                                  |             |              |             | ······································ |                  |  |             | <u>.</u>                                |
| 8.3 Liner                  |  | cker)          |                 |                         | 8.4 Gra       | vel Pacl        | cing                |                      | 1              |                   |              | ¬                                      |             |              | TION        | LOG                                    | -                |  |             |   |
| Mate                       | rial                                   | Depth<br>(m)   | D               | am<br>m)                | Meth<br>Place |                 |                     | Passing<br>Size      | From (m)       |                   | To<br>(m)    |  | From<br>(m) |              | To<br>(m)   |  |                  | Description of                                   | of Material |   |
|                            |  |                | <del>  '"</del> |                         | Gran          | iitu            | 8:                  | 16                   | 47             | 6 8               | ·76          | 11                                     |             | 十            |             |  | _                |  |             |   |
|                            |  |                |                 |                         |               | 7               |                     |                      |                |                   |              | ] [                                    |             |              |             |  | ·                |  |             |   |
| 9. IF NO                   |  |                |                 |                         | /idth         | Diam            | , T                 | nica                 | Fro            | <del></del>       | To           | <b>،</b>                               |             | 4            |             | · ·                                    |                  |  |             |   |
| Metho                      | d                                      | Depth<br>(m)   | Lengt<br>(m)    |                         | (m)           | (m)             |                     | ning<br>terial       | I Pro          |                   | (m)          | 4                                      |             |              |             |  |                  |  |             |   |
|                            |  |                |                 | +                       | -+            |                 | -                   |                      | -              | $\dashv$          |              | $+$ $\vdash$                           |             |              | •           | _                                      |                  |  |             |   |
| 10. DEV                    | EI OPA                                 | ENT 48         | te -            | hods - '                | 1 ti 1        | ker)            |                     |                      | 1              | <del></del>       |              | ┙┝                                     |             | +            |             |  |                  |  |             |   |
| 10, DE, V                  | U.OF IV                                |                | thod            | nous and                | ume ta        | KCII)           |                     | Hours                |                | Minut             | cs.          | 1   <u> </u>                           |             | $\dashv$     |             |  | ,                |  |             |   |
|                            | Ai                                     | rli£           | <del>/e</del>   | c/                      |               |                 |                     |                      |                | 20                |              |  |             |              |             |  |                  |  |             |   |
|                            |  |                |                 | -                       |               |                 | <u> </u>            |                      |                |                   |              | JĽ                                     |             | $\perp$      |             |  |                  |  |             |   |
| 11. PUM                    |  |                | asurem          |                         |               | 1               |                     |                      |                |                   | Descri       | ٦ŀ                                     |             | +            |             | -                                      |                  |  |             |   |
| From From                  | To                                     | Water<br>Level |                 |                         | Pump<br>Depth | Discha<br>Rat   | e   1               | Method o<br>Measurin | ıg   ₽,,       | lours<br>mped     | Draw<br>Down | 1                                      |             | ٠,           |             |  |                  |  | <del></del> | • |
| (m)                        | (m)                                    | (m)            | $\vdash$        |                         | (m)           | (L/se           | <del>(C)</del>      | Discharg             | ;e             |                   | (m),         | ┨ ├─                                   |             | ┥            |             |  |                  |  |             |   |
|                            |  |                | <del> </del>    |                         |               | <del> </del>    |                     |                      | _              |                   |              | +                                      |             | +            | <del></del> |  |                  |  | -           |   |
|                            |  |                | <del> </del>    | +                       |               |                 |                     |                      | +              | -                 |              | $\dagger \vdash$                       |             | +            |             | +                                      |                  |  |             |   |
| 12. SAM                    |  |                |                 |                         |               |                 |                     |                      | <b></b> _L     |                   |              | <b>'</b>                               |             | 十            |             |  |                  | <del></del>                                      |             |   |
| The provis                 | ion of the                             |                |                 |                         |               |                 |                     |                      | nat strata     | a and wat         | er           | Ė                                      |             |              |             |  |                  | •  |             |   |
|                            |  |                |                 |                         |               |                 |                     |                      |                |                   |              |  |             |              |             |  |                  |  |             |   |
| A - 25 -                   | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                |                 |                         |               |                 |                     |                      |                |                   |              |  |             |              |             |  |                  |  |             |   |
| As the pers<br>as describe |  | store for th   | e work          | carned (                | out on th     | us well I       | navise th           | at it has            | ocen cor       | mpieted           |              | $\vdash$                               |             | +            |             |  |                  |  | ·           |   |
|                            |  |                |                 |                         |               | ٠,              |                     |                      |                |                   |              | -                                      |             | +            |             | +                                      |                  |  |             |   |
| Signature o                | _                                      |                |                 |                         |               | *************** |                     | **********           | . Dati         |                   |              |  |             |              |             |  |                  |  |             | <del></del>                             |
| Diller                     | ibrois.                                |                |                 |                         |               | th<br>on plai   |                     |                      |                | stries a<br>Compl |              | esour                                  | ces S       | SA           |             |  |                  | i  | 7020 0      | nc.                                     |
| Affin I                    | 4 days                                 | or com         |                 |                         |               | F               | CU                  |                      |                | n Stree           |              |  |             |              |             | FIRITE !                               | NIIMP            | 'D   | 7030 6      | 30                                      |
| -                          |  | -              |                 | بہد                     | •             |                 | GI                  | ENŜI                 | DE S           | A 5065            | i            |  |             |              |             | UNIT                                   | NUMBE            | .R   |             |   |
|                            |  |                |                 | _                       |               |                 |                     |                      |                |                   |              |  |             |              |             |  |                  |  |             | •                                       |

|   |  |                  |                     |   | Unit No  | : 703  | 0 696                | 3  | C             | )bs \      | We          | II No      | : Cl     | -IW            | 50   | ı           | DH No:  | 201119             |                  |             |                   |
|---|--|------------------|---------------------|---|--|--|----------------------|--|---------------|------------|-------------|------------|----------|----------------|--|-------------|---|--------------------|------------------|-------------|-------------------|
| DR                                      |  | RS W             | ELL                 | OF SO<br>CONST                          | ruc'i  | CION   |                      |  |               |            | •           | 1. P       | ERM      | MIT N          | 10:  | 6           | 4 2   | . 10               |                  | Site        |                   |
|   |  |                  |                     | Shei/                                   |  |  |                      |  |               |            |             | міт і      | iol.     | DER            | or lai   | nd occ      |   | DWLL<br>34, A      |                  |             |                   |
|   |  |                  |                     |   |  |  |                      |  |               | 1          |             |            |          |                |  |             |   |                    |                  |             |                   |
|   |  | OF W             |                     | upervision.                             |  |  |                      |  |               | 1          | •••••       |            |          |                |  |             |   | (40)               |                  |             |                   |
|   |  |                  |                     | St                                      | sevenod 1  | CA   | Hvor                 | to- 14   | athad         |            | P           | $c \alpha$ | _        |                |  |             |   | 642/               |                  |             |                   |
|   | -  |                  |                     |   |  |  |                      | . IVI  | einoa .       |            |             | ZON        |          |                |  |             |   | FICATION Lease No: |                  |             |                   |
| ©e G                                    | DA 94/\  | WGS84            |                     |   | 837.   |  |                      | •  |               |            | ב           | ZON        | E 53     | }              |  |             |   | ID                 |                  |             |                   |
| C) A                                    | GD 66/8  |                  |                     | 6                                       | 2391   | 18!  |                      |  |               |            | į           | ZON        | E 52     | •              | Name   | of Pr       | onerty  | Chom               | illa             |             | ****************  |
| 5. SUM                                  |  |                  | ck apį              |   | •  |  |                      | l relevan  | ıt deta       | ils)       |             |            |          |                |  | - • -       |   |                    | ,                |             | :                 |
| Date wor                                | k Comm   | enced            | 31/ <sub>4</sub> 11 | 24                                      | /3/04  |  |                      |  |               | I.         | Date        | work       | Comp     | oleted.        | 25   | 1/3/        | 04  |                    | Dackfil          |             |                   |
| ls this a l                             | ried oui:<br>Replacem                            | new<br>ent well? | YES/                | LMV<br>NOifyesp                         | olease quo                                       | te repla   | n ∟<br>aced wel      | ll number  | E.II.         | arge       | _<br>::     | <br>J.     |          |                |  |             | F 🗀   |                    | Dackin           | · 🗀         |                   |
|   |  |                  |                     |   |  |  |                      |  |               |            |             |            |          |                |  |             |   |                    |                  |             |                   |
|   |  |                  | _                   |   |  |  |                      |  |               |            |             |            |          |                |  |             |   |                    |                  |             |                   |
| Maximum<br>6, DRIL                      | •  |                  |                     | not a drille                            | Fired well, pl                                   |  |                      |  |               |            |             |            |          |                |  |             | (m)   | Final Yi           |                  | (1          | /sec)             |
| 6.1 Cons                                |  |                  |                     |   | u wen, pr  |  |                      | 2 Water C  |               |            |             |            |          |                |  | rface t     | o nearest   | 0.1 m)             |                  |             |                   |
| From                                    | To   | Diam             | c                   | lling Method<br>Table Tool,             |  | d Used   |                      |  |               | Water      | r Cut       | ı.         |          | nding<br>ater  |  | nated       | Hole<br>Depth                                     | Casing at          | Test             |             | Salinity          |
| (m)                                     | (m)  | (mm)             | D                   | otary Auger,<br>Down Hole               |  | Water,<br>Type)                                  |                      | Date   |               | om         |             | То         | L        | evel<br>m)     |  | eld<br>sec) | at Test<br>(m)                                    | Test<br>(m)        | Metho            | d   '       | mg/L) or<br>Taste |
| 0                                       | 20.62  | 175              |                     | ammer, etc.                             | 14   | nd/  | +                    |  |               | m)         |             | (m)        |          |                |  |             |   |                    |                  | <del></del> |                   |
|   |  |                  |                     | ige                                     | (Bio-  | -VXS)  |                      |  |               |            |             |            |          |                | ٠.   |             |   |                    |                  |             |                   |
|   |  | -                | <u> </u>            |   | <del>[                                    </del> |  |                      |  |               |            | <u> </u>    |            |          |                | -  | <u>-</u>    |   |                    |                  | +           |                   |
| 7. CASI                                 | NG LEF   | r in we          | LL                  | 1                                       |  |  |                      |  |               |            |             | L          |          |                |  |             |   |                    |                  |             |                   |
| 7.1 Dime                                | nsions   | Inter            |                     | 7.2 Type                                |  |  | 7.3 Ca               | sing Cen   | $\neg$        |            |             |            |          | 1              |  |             |   | Cementing          |                  |             | ·                 |
| From<br>(m)                             | To<br>(m)  | Dia:             | m.                  | Swell Joint<br>Steel, F.                | i, Welded C<br>RP, PVC, e                        |  | Yes 1                |  | rom<br>(m)    | To<br>(m)  |             | Cen<br>(ba |          | Was<br>(litte  |  |             | her<br>itives                                     | Method<br>Used     | ·                | Comn        | nents             |
| 0                                       | 17-6   |                  |                     | PV                                      | C  |  | Ø                    |  | 7             | 16         |             |            |          |                |  |             |   |                    |                  |             |                   |
|   |  | -                | — <del> </del>      |   |  |  |                      |  |               |            |             |            |          | 1              | -  |             |   |                    | +                |             |                   |
|   | <del>                                     </del> | +                | _                   |   |  |  |                      | <del>                                     </del> |               |            |             |            |          |                | $\dashv$   |             |   |                    | <del>-   .</del> |             |                   |
| 8. CONS                                 | TRUCT  | ION AT           |                     | OUCTION I                               |  |  |                      |  |               |            |             |            |          |                |  |             |   |                    |                  |             |                   |
| 8.1 Meth                                |  |                  | 8.2 S               | creen or Ca<br>Type                     | sing (*If v                                      | ariable<br>From                                  |                      |  | used giv      |            |             | Diam       | Oute     | r Diam         | 1  | Mater       | rial  | Trade Na           | 700              | Com         | pletion           |
|   | ted Casin  | ng               | Sc                  | 1700                                    |  | (m)<br>17-6                                      |                      |  | (mm)<br>2 • C | _          | (mm         |            | (n       | nm)            | P  | /C.         |   | Pipema             |                  |             | Con Con           |
|   | een(s)   |                  |                     |   |  |  |                      |  |               |            |             |            |          |                |  |             |   |                    | -                |             |                   |
|   |  |                  |                     | 10.40                                   |  |  |                      |  |               |            |             |            |          |                |  |             |   |                    |                  |             |                   |
| 8.3 Liner                               |  | Depth            | Inter               | mal Me                                  | ravel Pack<br>thod of                            |  | Passing              | From   | Т             | ·o         | ۱ ۲         | 3. FO      | KMA      | T <sub>0</sub> | 106  |             |   | D                  | <del></del>      |             |                   |
| Mate                                    | TIAI   | (m)              | Dıa<br>(mı          | m) Pla                                  | cernent<br>-£                                    |  | h Size               | (m)  | (n            |            | ┞           | (m)        | -        | (m)            | _  |             |   | Description o      | , material       |             |                   |
| -                                       |  |                  |                     | 4/0                                     | vity   | 8:   | /6                   | 16.5   | 20            | 6۷         | -           |            | -        |                | +  |             |   |                    | •                | -           |                   |
| 9. IF NO                                | T A DRI  | LLED W           |                     |   | , , , , , , , , , , , , , , , , , , ,            | · · ·  |                      | ·  | ·             |            |             |            |          | 0.00           |  |             |   |                    | •                |             |                   |
| Meth                                    | od   | Depth<br>(m)     | Length<br>(m)       | width (m)                               | Diam<br>(m)                                      |  | ining<br>aterial     | From (m)   |               | n)         |             |            |          |                | <u> </u>   |             |   |                    |                  |             |                   |
|   |  |                  |                     |   | ļ  |  |                      | <del> </del>                                     |               |            | $  \cdot  $ |            | +        |                | <del>'                                    </del> |             | •   |                    |                  |             |                   |
| 10. DEV                                 | ELOPM  | ENT (Sta         | te meth             | ods and time                            | taken)   |  |                      |  | •             |            | <u>'</u>    |            |          | ··-            |  |             |   |                    |                  |             |                   |
| - 0.                                    | 1./1   |                  | thod                |   |  | <u> </u>   | Hours                |  | Minutes       | ·          | -           |            | _        |                | -  |             |   |                    |                  |             |                   |
| Hir                                     | /i <del>/ /</del>                                | ecy              |                     |   | -  | <del>                                     </del> |                      |  | 20            |            | l H         |            | $^{+}$   |                | $\dashv$   |             |   |                    |                  |             |                   |
|   | 1  | EST (mea         | sureme              | nts from natu                           | ral surface                                      | o neares   | t 0.1m)              |  |               |            | , [         |            |          |                |  |             |   |                    |                  |             |                   |
| Interval<br>From                        | Tested<br>To                                     | Water<br>Level   | Tes<br>Meth         | <sub>rod</sub>   Deptn                  | Rat  | c i  | Method o<br>Measurin | g Pump   | rs D          | raw<br>own | -           |            | $\dashv$ |                |  |             | •   |                    |                  |             |                   |
| (m)                                     | (m)  | (m)              |                     | (m)                                     | (L/se  | (c)  | Discharg             | e i i i  | -             | (m)        | ┞           |            | +        |                | $\dashv$   |             |   |                    |                  |             |                   |
| ·                                       |  |                  |                     |   | 1  |  | •                    | +  | +             |            | ┟├          |            | ╁        |                | $\dashv$   |             |   |                    |                  |             |                   |
|   |  |                  |                     | 1                                       |  |  |                      |  |               |            |             |            | 1        |                |  |             |   |                    |                  |             | •                 |
|   | tion of the                                      |                  |                     | Act 1997 and I                          |  |  |                      | nat strata ar                                    | nd water      |            | F           |            | +        |                | +  |             |   | •                  |                  | <u> </u>    |                   |
|   |  |                  |                     | les have not be                         |  |  |                      |  |               |            | $\vdash$    |            | +        |                | +  |             | -   | •                  |                  |             |                   |
| *************************************** |  |                  | <b></b>             |   |  |  |                      |  |               |            |             |            | $\bot$   |                |  |             |   |                    |                  |             |                   |
| As the per-<br>as describe              |  | sible for the    |                     | carried out on                          | this well I                                      | advise th  | at it has i          | oeen compl                                       | icted         |            | $\vdash$    |            | -        |                |  |             |   |                    |                  |             |                   |
| Signature                               | of Licenses                                      | i Daller         |                     | *************************************** |  |  |                      | . Date   | , ,           | , .        | . ㅏ         |            | +        |                |  |             |   | •                  |                  |             |                   |
| Driller                                 | remember   | 三田               |                     | logether v                              | vith   | Pr   |                      | . Date<br>Industr                                |               |            | ∟<br>esou   | irces !    | SA       |                |  | _           | <del>                                      </del> |                    |                  |             |                   |
| Within                                  | ampies<br>14 davs                                | of com           | d and               | i wei loca<br>n to:                     | tion pla   | n Co   | re Lib               | rary Co  | omple         | х          |             |            |          |                | L  |             |   | !                  | 7030             | 696         |                   |
| -                                       | ********   |                  |                     |   |  |  |                      | ngnam s<br>DE SA :                               |               |            |             |            |          |                | UN   | IIT N       | UMBE  | R                  |                  |             |                   |

Unit No: 7030 698 Obs Well No: CHW 51 DH No: 201121

| DE                    |                       |                                       |                    | OF SO                    |                 |                 |                      |                       | т                 |              |                 |                |                |               | ٠,       |             | <u>.</u>                | T -       | 1             | 1         | 7   |                     | T            |
|-----------------------|-----------------------|---------------------------------------|--------------------|--------------------------|-----------------|-----------------|----------------------|-----------------------|-------------------|--------------|-----------------|----------------|----------------|---------------|----------|-------------|-------------------------|-----------|---------------|-----------|-----|---------------------|--------------|
|                       | (ILLE                 |                                       |                    | sources                  |                 |                 | 1 KISI               | OK                    | . 1               |              |                 | 1. P           | ERM            | HT N          | ю: [     | 6           | 4 2                     | 2 /       | 1             |           | Sic | e                   | <u> </u>     |
|                       |                       |                                       | -                  | hei/                     |                 |                 |                      |                       |                   |              | ERM             | IIT F          | 10LI           | DER           | or la    | nd occ      | upier<br>28             | Dh<br>24  | 12.15         | ?C        |     | / <u>o</u>          |              |
|                       |                       |                                       |                    |                          |                 |                 |                      |                       |                   |              |                 |                |                | •             |          |             |                         |           |               |           |     |                     |              |
|                       | f plant op<br>CATIO!  |                                       |                    | ervision                 |                 |                 |                      |                       |                   | ·            |                 |                |                |               |          |             | NAME .                  |           |               |           |     |                     |              |
|                       |                       |                                       |                    | Su                       | ırveyed l       | <b>کرک</b>      | Wat                  | e                     | Method            | i <i>C.,</i> | AS.             | SZ.            |                |               |          |             | NAME .<br>DENTI         |           |               |           |     | *********           | ********     |
| GPS/C                 | OORDI                 | NATES                                 |                    |                          |                 |                 |                      |                       |                   | 1 (          |                 | ZON            | E 54           |               |          |             | Pastora                 |           |               |           |     |                     |              |
|                       | DA 94/<br>GD 66/      |                                       | -                  |                          | 2674            |                 |                      |                       |                   | ן נ          |                 | ZON<br>ZON     |                |               |          |             | n /Parce                |           |               |           |     |                     |              |
|                       |                       |                                       |                    |                          | 388             |                 |                      |                       |                   | <u> </u>     |                 |                |                |               | Name     | of Pr       | operty                  | <i>Ci</i> | h.O.K         | xill.     | 9   |                     |              |
|                       |                       |                                       |                    | priate b<br><b>194</b>   |                 |                 |                      |                       |                   | tails)       | Date v          | work :         | Comn           | leted         | 2        | 3/3/        | 104                     |           |               |           |     |                     |              |
| Work ca               | rried out:            | New                                   | Well 🚺             |                          |                 | Deepe           | n 🔲                  |                       | E                 |              |                 |                |                |               |          |             | <i>04</i><br>□          |           |               |           |     |                     |              |
|                       |                       |                                       |                    | Difyesp<br>fyesplea      |                 |                 |                      |                       |                   |              |                 |                |                |               |          |             |                         |           |               |           |     |                     |              |
|                       |                       |                                       |                    | yes pleas                | e state me      | thod            |                      | ·····                 |                   |              |                 |                |                |               |          |             |                         |           |               |           |     |                     |              |
|                       | m Depth               |                                       |                    |                          | Fin             |                 | ·                    |                       |                   |              |                 |                |                |               |          |             | (m)                     | Fir       | al Yie        | ld        |     | (L/se               | 2)           |
|                       | LING D                |                                       | If n               | o <u>t a drille</u>      | d well, pl      | ease co         |                      |                       |                   |              |                 |                |                |               |          | rface t     | o nearest               | 0.1 m)    |               |           |     |                     |              |
|                       |                       |                                       |                    | g Method<br>le Tool,     | Flux            | d Used          | •                    |                       |                   |              | r Cut           |                | Stand          | ling          |          | nated       | Hole                    | Casır     | g at          |           |     | Sati                | inity        |
| From<br>(m)           | To<br>(m)             | Diam<br>(mm)                          | Rotar              | y Auger,<br>n Hole       |                 | Water,<br>Type) | •                    | Date                  |                   | From         | Т               | <del>,  </del> | Wa<br>Lev      | rel           |          | eld<br>sec) | Depth<br>at Test<br>(m) | Te<br>(m  | sī ļ          | Te<br>Met |     | (mg/                | L) or<br>ste |
| 0                     | 7,70                  | 135                                   | _                  | ner, etc.                | Mu              | ~               |                      |                       | -                 | (m)          | (0              | n) ·           | (n             | 1)            |          |             | (m)                     | 1         | -             |           |     |                     |              |
|                       | 7.7.3                 | 12.2                                  | -                  | ger                      | (BIO            |                 | 2                    |                       |                   |              |                 |                |                |               |          |             |                         |           |               |           |     |                     |              |
| -                     |                       | -                                     | +                  |                          |                 |                 | 4                    |                       | <del>-  -</del>   | -            |                 | $\dashv$       |                | -             |          |             |                         | -         |               |           |     |                     |              |
| 7. CASI               | NG LEF                | T IN WE                               | LL                 |                          |                 |                 |                      |                       |                   | •            |                 |                |                |               |          |             |                         | •         | '             |           |     |                     |              |
| 7.1 Dime              |                       | Inter                                 | 10                 | Туре                     |                 | -               | 7.3 Ca               | asing C               | emented           |              |                 |                |                |               |          |             |                         | Cem       | enting        |           |     | •                   |              |
| From<br>(m)           | To<br>(m)             | Diau<br>(mur                          | n.                 | Swell Joint<br>Steel, Fi | , Welded C      |                 | Yes 1                | No                    | From<br>(m)       | To<br>(m     |                 | Cen<br>(ba     |                | Wat<br>(litre |          |             | her<br>itiv <b>e</b> s  | Me        | thod<br>ised  |           | C   | omment              | ,            |
| 0                     | 475                   | 80                                    | <u> </u>           | PVC                      | •               |                 | <u> </u>             |                       | 0                 | 3            | _               |                |                |               | 1        | ,           |                         |           |               | _         |     |                     |              |
|                       | +                     | +`-                                   | $\dashv$           |                          |                 |                 |                      | -                     |                   |              | -+              |                |                |               | $\dashv$ |             |                         |           | -             | -         |     |                     |              |
|                       | }                     | ١.                                    |                    |                          |                 |                 |                      |                       |                   |              |                 |                |                |               |          |             |                         |           |               |           |     |                     |              |
| 8. CON:               |                       | ION AT                                |                    | en or Cas                |                 | ariable         | anertur              | r scree               | en used s         | zive lin     | nits)           |                |                |               |          |             |                         |           |               |           |     |                     |              |
| □ Оре                 |                       |                                       | 0.2 5010           | Туре                     | MAG XX          | Fron<br>(m)     | n   7                | To m)                 | Aperture<br>(mm)  | • In         | ner Dia<br>(mm) |                | Outer<br>(m    |               | Τ        | Mate        | rıal                    | Tra       | de Nan        | ne        | -(  | Complete<br>of Base |              |
|                       | tted Casir            | g                                     | SC                 | · ·                      |                 |                 | ZS 2-                |                       | 2.0               |              | 80              |                |                |               | P        | VC.         |                         | Pipe      | 710           | de        | 8   | 20/0                |              |
| Scn                   | een(s)<br>ier, give d | ataile:                               | l                  |                          |                 |                 | [                    | <u>_</u>              |                   |              |                 |                |                |               | Т.       |             | <del></del>             |           |               |           |     |                     | <del>-</del> |
| _                     | r Seal (Pa            |                                       |                    |                          | avel Pack       | ing             |                      | ••••                  |                   |              | 13              | . FO           | RMA'           | ΓΙΟΝ          | LOG      |             |                         |           | ***********   |           |     |                     |              |
| Mate                  | erial                 | Depth<br>(m)                          | Internal<br>Diam   | Mei                      | hod of<br>ement |                 | Passing              | From (m)              |                   | To<br>(m)    |                 | From<br>(m)    |                | To<br>(m)     | .        |             |                         | Descrip   | otion of      | Materi    | дl  |                     |              |
|                       |                       | - '                                   | (mm)               | Gra                      | vita            | 8:              | 16_                  | 3-7                   |                   | 75           | lE              |                |                |               |          |             |                         |           |               |           |     |                     |              |
|                       |                       |                                       |                    |                          |                 |                 |                      |                       |                   |              | ] [_            |                | $\perp$        |               | 4        |             |                         | •         |               |           |     |                     |              |
| 9. 1F NC              | OT A DRI              | Depth                                 | Length             | Width                    | Diam            |                 | ining                |                       | om                | То           | 1  -            |                | -              |               | +        |             |                         |           |               |           |     |                     |              |
|                       |                       | (m)                                   | (m)                | (m)                      | (m)             | N               | laterial             | (n                    | n)                | (m)          |                 | •              | 士              |               |          |             |                         |           |               |           |     |                     |              |
|                       |                       |                                       |                    |                          |                 | <u>L</u> .      |                      |                       |                   |              |                 |                | 4              |               | _        |             |                         |           |               |           |     |                     |              |
| 10, DEV               | ELOPM                 |                                       | te methods<br>ihod | and time t               | aken)           | Γ               | Hours                |                       | Minut             | es           | 1               |                | +-             |               | _        |             |                         |           |               |           |     |                     |              |
| A                     | ir lit                | red                                   |                    |                          |                 |                 |                      |                       | 75                |              |                 |                | $\blacksquare$ |               | $\Box$   |             |                         |           |               |           |     |                     | 7            |
| 11. PHA               | IPING T               | EST (mea                              | Surements          | from natur               | al surface t    | 0 pears         | st ().1m)            | I                     |                   |              | <b>ا</b> ا      | •              | +              |               | -+       |             | <del></del>             |           |               |           |     |                     |              |
| Interval              | Tested                | Water<br>Level                        | Test               | Pump                     | Discha<br>Rati  | rge             | Method o             | I H                   | 10Ers             | Draw<br>Down |                 |                |                |               |          |             | •                       | ,         |               |           |     | ·                   |              |
| From<br>(m)           | To<br>(m)             | · (m)                                 | Method             | Depth<br>(m)             | ·(L/se          |                 | Measurin<br>Discharg | lg   p <sub>i</sub> , | ımped             | (m)          |                 |                | _ _            |               |          |             |                         |           |               |           |     |                     |              |
|                       |                       |                                       |                    | -                        | -               |                 |                      | +                     | •                 |              | -               |                | -              |               | -        | -           |                         |           | <del></del> - |           |     |                     |              |
| +                     |                       | · · · · · · · · · · · · · · · · · · · |                    | <del> </del>             | +               |                 |                      | +                     | +                 |              | -               |                | -              |               | +        | -           |                         |           |               |           |     |                     |              |
| 12. SAM               |                       | Water Pac                             | umer A             | 1997 and R               | equistics.      | there           | pequie- ch           | 191 -1                |                   | <b>-</b>     |                 |                | $\top$         |               | $\perp$  |             |                         | •         |               |           |     |                     |              |
| samples n             | nust be obta          | ined. If an                           | y samples l        | have not be              | en obtained     | state n         | casons:              |                       |                   |              | $\vdash$        |                | +              |               | +        |             |                         |           |               |           |     |                     |              |
|                       |                       |                                       |                    |                          |                 |                 |                      |                       |                   |              | -               |                | _ -            |               | _        |             |                         |           |               |           |     |                     |              |
|                       | son respon            |                                       |                    | ied out on               |                 |                 |                      |                       |                   |              |                 |                | $\perp$        |               | $\perp$  |             |                         |           |               |           |     |                     |              |
|                       |                       |                                       |                    | •                        |                 |                 |                      |                       |                   |              | $\vdash$        |                | +              |               | +        |             |                         |           |               |           |     |                     |              |
| Signature<br>Dr 10-15 | of Licensed           |                                       |                    | gether w                 |                 |                 |                      |                       |                   |              |                 |                |                |               |          |             |                         |           |               |           |     |                     |              |
| Wile.                 | in les                | villeoto                              | d-enit-u           | <b>∞P</b> locat          | ion plat        | 1 C             | ore Lib              | гагу                  | ștries a<br>Compl | ex           | esour           | rces !         | A.             |               |          |             |                         |           |               | 703       | 0 6 | 98                  |              |
| within                | 14 days               | π com                                 | netion (           |                          |                 |                 |                      |                       | n Stree<br>A 5065 |              |                 |                |                |               | UN       | IT N        | ÚMBI                    | R L       |               |           |     |                     |              |
|                       |                       |                                       |                    |                          |                 | J.              |                      |                       |                   |              |                 |                |                |               | ٠        |             |                         |           |               |           |     |                     |              |

| Unit No: 7030 699 | Obs Well No: CHW 52 | DH No: 201122 |  |
|-------------------|---------------------|---------------|--|

| DF                              | Material   Diam (mm)   Sicel, FRP, PVC, etc.   Yes No (m) (m) (bags) (litres)   Additives   Used   Comments   Used   Us |   |                  |   |               |  |                      |               |                  |             |                 |            |            |          |          |          |             |         |         |         |  |         |             |
|---------------------------------|--|---|------------------|---|---------------|--|----------------------|---------------|------------------|-------------|-----------------|------------|------------|----------|----------|----------|-------------|---------|---------|---------|--|---------|-------------|
|                                 |  |   |                  |   |               |  |                      |               | -                | - 1         |                 |            |            |          |          |          |             |         |         |         | -10  |         |             |
| Contact                         | Phone/Mo   | obile No.                                 | :                | *************************************** | •             | ······································ |                      | ·····         |                  |             |                 |            |            |          |          |          |             |         |         |         |  | _       |             |
|                                 |  |   |                  | pervision                               |               |  |                      | ······        |                  | .           |                 | ********** | ********** | -        |          |          |             |         |         |         |  |         |             |
|                                 |  |   |                  | ۷ ,                                     |               | CA                                     | 1100                 | <b>6.</b> .   | 5 et .1          |             | . DC            | \C\        | •          | - 1      |          |          |             |         |         |         | ····   |         |             |
|                                 | _  |   |                  | <del></del>                             |               |  | M.M.C                |               | Meino            |             |                 |            |            |          |          |          |             |         |         | _       |  |         |             |
| <b>M</b> 6                      | DA 94/\  | WGS84                                     |                  |   |               |  |                      |               |                  |             |                 | ZON        | IE 53      | Fi       | ile/Sect | ion /Pa  | rcel I      | D       |         |         |  |         |             |
|                                 | •  | •   | <u> </u>         |   |               |  |                      |               |                  |             | _               |            |            | N        | ame of   | Prope    | ty          | ch      | aw      | i. !q   | <b>!</b>                                       | ******  |             |
| Date wo<br>Work ca<br>Is this a | rk Comm<br>rried out:<br>Replacem  | enced<br>New<br>lent well?                | 23/3,<br>Well [  | 104<br>NO if yes p                      | lease quo     | Deepen<br>te repla                     | ced we               | ell num       | 1<br>iber        | <br>Enlarge | Date            | ]<br>      |            | 1        | Rehabil  | tate [   |             |         |         | Backfi  | 11· [  | ]<br>   |             |
|                                 |  |   |                  |   |               |  |                      |               |                  |             |                 |            |            |          |          |          |             |         |         |         |  |         |             |
|                                 |  |   |                  |   |               |  |                      |               |                  |             |                 |            |            |          |          |          |             |         |         |         |  |         |             |
|                                 |  |   |                  |   |               |  |                      |               |                  |             |                 |            |            |          |          | (Г       | n)          | rın     | ai rie  | ıa      | *******  | (L/sec  | ;)          |
|                                 |  |   |                  |   |               |  |                      |               |                  |             |                 |            |            |          |          | e to ne  | arest 0     | .1 m)   |         |         |  |         |             |
| From<br>(m)                     |  |   | Ca<br>Rota<br>Do | ible Tool,<br>ary Auger,<br>own Hole    | (Aır,         | Water,                                 |                      | Date          |                  | From        | Τ               | То         | Wat<br>Lev | er<br>el | Yield    | De at    | pth<br>Fest | Tes     | it ,    |         |  | (mg/    | L) or       |
| 0                               | 18.2   | 135                                       | <del></del>      |   | ML            | /d                                     | 土                    |               |                  | +           |                 |            |            |          | ,        |          |             |         |         |         |  | ,       |             |
| -                               |  |   | Au               | igër_                                   | (Bio          | -Vis                                   | 廾                    |               | -                |             | +-              | •          | <u>.</u>   | +        |          | +        |             |         |         |         |  |         |             |
|                                 |  |   |                  |   |               |  | 士                    |               |                  |             |                 |            |            |          |          |          |             |         |         |         |  |         |             |
| -                               |  | T IN WE                                   |                  |   |               |  |                      |               |                  |             |                 |            |            |          |          |          |             |         |         |         |  |         |             |
| 7.1 Dim                         | 1  |   | nal              |   | Wetded C      | oiler                                  |                      |               |                  |             |                 | Car        | ner,       | Water    | . ]      | Other    | 1           |         |         | . T     |  |         |             |
| (m)                             |  | (mr                                       | n)               |   |               |  |                      |               |                  | (1          | m)              |            |            |          |          |          | .           |         |         |         | Co   | mments  | i           |
| 0_                              | 15:2   | 2 89                                      | 2 +              | PV                                      | C             |  |                      |               | 0                | 1/3         | <u>· 7</u>      |            |            |          | + •      |          | $\dashv$    |         |         |         |  |         |             |
|                                 | -  |   | $\dashv$         | • •                                     | -             |  |                      |               |                  | +           |                 |            |            |          | +-       |          | +           |         |         |         |  |         |             |
|                                 |  |   |                  |   |               |  |                      |               |                  |             |                 |            |            |          |          |          |             | ,       |         |         |  |         |             |
|                                 |  | ION AT                                    |                  |   |               |  |                      |               | 4                |             | · ' \           |            |            |          |          |          |             |         | '       | •       |  |         |             |
| 8.1 Meth                        |  |   | 8.2 30           |   | ing (*II v    | From                                   | 7                    | To            | Apertu           | ire* I      | lnner E         |            |            |          | N        | lateriał | Ť           | Trac    | le Nam  | ne      | C  |         |             |
| Si <sub>0</sub>                 | tted Casin   | ıg  | - 3              |   |               |  |                      |               |                  |             |                 |            | (m)        | n)       | PV       | c        |             | عرزه    | ma      | ste     | 75   |         |             |
| ☐ Scr                           |  |   |                  |   |               |  |                      |               |                  |             |                 |            |            |          |          |          |             | 7       |         |         |  | •       |             |
|                                 |  |   |                  |   | I DI          |  |                      |               |                  |             | Ι,              |            |            |          |          |          |             | •       |         |         |  | ******* |             |
|                                 |  |   |                  | ıal Met                                 |               |  | Passing              | Fre           | om.              | То          | ٦٢              |            |            |          | <u> </u> |          |             |         |         |         |  |         |             |
| Mat                             | eriaļ  | (m)                                       |                  | n. Plac                                 | ement         | Mesh                                   | Size                 | (п            | 1)               | (m)         | ┨┝              |            |            | (m)      |          |          | •           | Descrip | tion of | Materia |  | · · ·   |             |
|                                 |  |   |                  |   | $\cup$        |  |                      | L             |                  |             | ] [             |            |            |          |          |          |             | ,       | 1       | •       |  |         |             |
|                                 |  |   |                  | Width                                   | • Diam        | Li                                     | ining                | Ft            | om               | То          | ٦ŀ              |            | +          |          | +        |          |             | -       |         |         | <u>.                                      </u> |         |             |
| Meth                            | .ou  |   |                  |   | , (w)         |  |                      |               |                  | (m)         | $\dashv \vdash$ |            |            |          | +        | -        |             |         | •       |         |  |         |             |
|                                 |  |   |                  |   |               |  |                      | <del></del>   |                  |             | <u> </u>        |            |            |          |          |          |             |         |         |         |  |         |             |
| 10. DEV                         | ELOPM  |   |                  | ds and time t                           | aken)         |  |                      |               |                  |             | <u> </u>        |            |            |          |          |          |             |         |         |         |  |         | _,          |
| A                               | rlift  |   | thod             |   |               |  | Hours                | _             | Min              | utes        | <del> </del>    |            | $\perp$    |          |          |          |             |         |         |         |  |         | •           |
|                                 | /  |   |                  |   | ,             |  |                      |               |                  |             | ] [             | •          |            |          | -        |          |             |         |         |         |  |         |             |
| 11. PUN<br>Interval             |  | EST (mea                                  |                  | ts from natur                           | al surface t  |  | t 0.1m)<br>Method    | of            | 1                | Draw        | ¬ ⊦             |            | +          |          | +        |          |             |         | -       |         |  |         |             |
| From (m)                        | To (m)   | Level<br>(m)                              | Test<br>Metho    | Denth                                   | Rati<br>(L/se | e N                                    | Measurii<br>Discharg | ng D          | Hours<br>umped   | Down<br>(m) |                 |            |            |          |          |          |             |         |         | •       |  |         |             |
|                                 |  |   |                  |   |               |  |                      |               |                  |             | <u></u>         |            |            |          | +        |          |             |         |         |         |  | •       |             |
|                                 |  |   | <u> </u>         | <u>-</u>                                |               |  |                      | ـَــٰلِــ     | I                |             | ┙┝              |            | +          |          | +        |          |             |         |         |         |  |         |             |
| samples n                       | sion of the<br>tust be obta  | ined. If an                               | y sample         | et 1997 and R<br>is have not be         | en obtained   | d state rea                            | asons:               | •             |                  |             | -               |            |            | •        |          |          |             | -       |         |         |  |         | -           |
| •                               |  |   |                  |   |               |  | 1 .                  |               |                  | ** ** **    |                 |            |            |          |          |          |             |         |         |         | •  |         |             |
| As the per<br>as describ        | son respon:  |   |                  | arried out on                           |               |  |                      | been co       | mpleted          |             |                 |            |            | •        |          |          |             |         |         |         |  |         |             |
| Signature                       | of Licensea  | l Driller                                 |                  |   |               |  |                      | <i>D</i> a    | te /             | ,           | ,               |            |            |          |          |          |             |         |         |         |  |         |             |
|                                 | क्ष भूगा   | de la |                  | ogether w                               | ith '         | Pri<br>¹ Co                            | imary<br>re Lit      | Indu<br>brary | stries<br>Comp   | olex        | Resou           | ırces      | SA         | ,        |          |          |             |         |         | 7030    | ) 69   | )9      |             |
| within                          | 14 days  | or com                                    | pietion          | 105                                     |               |  |                      |               | m Stre<br>SA 506 |             |                 |            | •          |          | UNIT     | NUN      | 1BE         | R L     | -       | '       |  |         | <del></del> |

Unit No: 7030 700 **Obs Well No:** CHW 53 **DH No:** 201123

| DF   | GOVE<br>RILLE   | RS W                         | ELL C                                  | OF SO<br>CONST<br>Sources | RUC'                                | TION I                     |                               | RT                          |                        |                   | 1. 1             | PERM           | UT NO     | 6                  | 4 2                                   | 1 4                        | Si             | te                 |
|--|---|------------------------------|--|---------------------------|-------------------------------------|----------------------------|-------------------------------|-----------------------------|------------------------|-------------------|------------------|----------------|-----------|--------------------|---------------------------------------|----------------------------|----------------|--------------------|
|  | OF DR   |                              |  | -                         |                                     |                            |                               |                             |                        | Post              | al Addr          | ess <b>.</b>   | PO        | Box                | 283                                   | DWLB<br>34, AO             | lelaic         |                    |
|  | f plant ope   |                              |  | ervision                  |                                     |                            |                               | ************                |                        | ******            | •••••••          |                |           |                    |                                       |                            |                |                    |
|  | CATION<br>Survey.                                     |                              |  | Su                        | rveved l                            | n SAV                      | vođe.                         | - Metl                      | hod /                  | c.P.              | <br>  X27        |                | - 1       |                    |                                       | <i>ூ. ∯.⊰.</i><br>FICATION |                |                    |
| GP\$ C   | OORDI   | NATES                        |  |                           |                                     |                            | K.79.7.5©7.                   | IVICU                       |                        | ` <b>'</b>        | ZOI              | NE 54          |           |                    |                                       |                            |                |                    |
| _  | DA 94/\<br>GD 66/8                                    |                              | -                                      |                           | 8732                                |                            |                               |                             | $\dashv$               | Ö                 |                  | NE 53<br>NE 52 |           |                    |                                       |                            |                |                    |
|  | •   |                              |  |                           | 389                                 |                            | -                             | <del></del>                 |                        |                   |                  |                | · N       | ame of P           | roperty                               | Charle                     | 1/9            |                    |
| Date wo<br>Work ca<br>Is this a<br>Is this ar<br>Was wel | Existing<br>l Abandon                                 | New<br>ent well?<br>well? We | Well [☑<br>YES/NO <u>if</u><br>S/NO if | if yes pleas<br>yes pleas | lease quo<br>se quote<br>e state me | Deepen te replace well num | ber or n                      | umber                       | Enlar                  | Da<br>ge<br>on ma | □.<br>• <u>•</u> |                |           | Rehabilita         | e 🗆                                   |                            | Backfill       |                    |
| Maximu   | m Depth I   | Orilled,                     |  |                           |                                     |                            |                               |                             |                        |                   |                  |                |           | /el                | (m)                                   | Final Yio                  | eld            | (L/sec) _          |
|  | LING DE   |                              | If n                                   | ot a drille               | d well, pl                          | ease com                   |                               |                             |                        |                   |                  |                |           | al surface         | to nearest                            | (m 1 0                     |                |                    |
| )  |   |                              |  | g Method<br>le Tool,      | Flui                                | d Used                     | 10.2 11                       | ater Cut                    |                        | Vater (           |                  | Stano          | ding      | Estimated          | Hole                                  | Casing at                  | _              | Salinity           |
| From<br>(m)  | To<br>(m)   | Diam<br>(mm)                 | Rotar                                  | y Auger,<br>'n Hole       |                                     | Water,<br>l Type)          | D                             | ate                         | From                   |                   | То               | Lev<br>(m      | el .      | . Yield<br>(L/sec) | Depth<br>at Test<br>(m)               | Test<br>(m)                | Test<br>Method | (mg/L) or<br>Taste |
| 0  | 10.61   | 135                          | †                                      | ner, etc.                 | M                                   | ıd                         |                               |                             | (m)                    |                   | (m)              | ("             | ·/        |                    | (413)                                 | _                          |                | }                  |
|  |   |                              | Ay                                     | $\overline{\mathcal{J}}$  | (Bio                                | -wis)                      | ļ <u>.</u>                    |                             |                        | #                 |                  |                |           | •                  |                                       |                            |                |                    |
|  | ····  |                              |  |                           |                                     |                            | <u> </u>                      |                             |                        |                   |                  |                |           | ,                  |                                       |                            |                |                    |
| _  | NG LEFT   | IN WE                        |  |                           |                                     |                            |                               |                             |                        | ,                 | •                |                |           |                    |                                       | •                          |                |                    |
| 7.1 Dim  | To  | Inter                        | nal ,                                  | ? Type<br>Swell Joint,    | Welded C                            | ollar                      | 7.3 Casin<br>Yes No           | g Cemer<br>Fro              |                        | То                | Ce               | ment           | Water     |                    | ther                                  | Cementing<br>Method        |                | Comments           |
| (m)  | 8·6/  | (mn                          | 1)                                     |                           | RP, PVC, e                          | tc.                        | <b>V</b>                      | (m                          | )   -                  | (m)               | (b               | ags)           | (litres   | ) Ada              | litives                               | Used                       |                | ·                  |
|  | 0.61  | 80                           |  | PVC                       |                                     |                            |                               |                             |                        |                   |                  | <b></b>        |           |                    |                                       |                            | •              | ,                  |
|  |   | -                            |  |                           |                                     |                            |                               | _                           |                        |                   |                  |                | -         |                    |                                       |                            | -              |                    |
| 8. CON   | STRUCT  | ION AT                       |  |                           |                                     |                            |                               | ٠.                          |                        |                   |                  |                |           |                    |                                       |                            | <br>·,         |                    |
| · 8.1 Meth   | od<br>en Hole   | •                            | 8.2 Scre                               | en or Cas                 | ing (*If v                          | ariable ap                 | erture so                     | reen use                    | ed give                | limit<br>Inne     | s)<br>r Diam     | Outer          | Dıam      | Mate               | ,<br>urial                            | Trade Nar                  | ,<br>,         | Completion         |
|  | tted Casin  | g                            | ٠ رو                                   | Type<br>C                 |                                     | (m)<br>8-6/                | (m)                           | -                           | m)                     | 8°                | nm)              | (m             | m)<br>    | PVC                |                                       | Pipema                     |                | of Base            |
| □ Ser  |   |                              |  |                           |                                     | ,                          |                               |                             |                        | •                 |                  |                |           | •                  | •                                     |                            |                |                    |
|  | er, give der<br>r Seal (Pac                           |                              |  | 8.4 Gr                    | avel Pack                           | ing                        |                               |                             |                        |                   | 13. FC           | DRMA'          | FION I    | .og                |                                       |                            |                |                    |
| Mat  |   | Depth<br>(m)                 | Internal<br>Diam                       | Met                       | hod of                              | Gravel Pa<br>Mesh S        |                               | From<br>(m)                 | To .                   |                   | From (m)         | n              | To<br>(m) |                    |                                       | Description o              | of Material    |                    |
|  | •   | (111)                        | (mm)                                   |                           | vitu                                | 8:/                        | <del></del>                   | 26/                         | 8-6                    | $\overline{}$     |                  |                |           |                    | · · · · · · · · · · · · · · · · · · · |                            |                |                    |
|  |   |                              |  |                           |                                     |                            |                               | 1                           |                        |                   |                  |                |           |                    |                                       |                            |                |                    |
| 9. IF NO   | od DRI  | Depth<br>(m)                 | Length<br>(m)                          | Width<br>(m)              | Diam<br>(m)                         | Lini<br>Mate               |                               | From (m)                    | To<br>(m)              |                   |                  |                |           |                    |                                       | •                          |                |                    |
|  |   | (III)                        | (111)                                  | (10)                      | (10)                                | Mate                       |                               | (11)                        | ,                      |                   |                  |                |           |                    |                                       |                            | *              |                    |
| 10 DEV   | ELOPM   | FNT (Sto                     | te methodi                             | and time t                | aken)                               | <u> </u>                   |                               |                             | <u> </u>               |                   |                  | +              |           |                    |                                       |                            |                |                    |
|  |   | Me                           | hod                                    |                           |                                     | Но                         | ours                          | <del></del>                 | inutes                 |                   |                  |                |           |                    |                                       | •                          |                |                    |
| <b>/</b>   | 4īr/it  | red                          |  |                           |                                     | +                          |                               | 13                          |                        | $\dashv$          |                  | +              |           |                    |                                       | ·                          |                |                    |
|  | 1PING T   |                              | surements                              |                           |                                     |                            |                               | •                           | · .                    |                   |                  |                |           | -                  |                                       |                            |                | '                  |
| Interval<br>From   | To  | Water<br>Level<br>(m)        | Test<br>Method                         | Pump<br>Depth<br>(m)      | Discha<br>Rat<br>(L/se              | e Me                       | thod of<br>asuring<br>scharge | Hours<br>Pumped             | Drav<br>Dow<br>(m)     | n a               | ·                | +              |           | +                  |                                       |                            |                |                    |
| (m)  | (m)   | (m) .                        |  | (111)                     | (Dsc                                | · DI:                      | scharge                       |                             | (11)                   | +                 |                  | +              |           |                    | -                                     |                            |                |                    |
|  |   |                              |  |                           |                                     |                            |                               |                             |                        |                   |                  |                |           |                    |                                       |                            |                |                    |
|  | IPLES<br>sion of the '                                |                              |  |                           |                                     |                            |                               | trata and                   | water                  | ]                 |                  |                |           |                    |                                       |                            | • .            | ,                  |
|  |   |                              |  |                           |                                     |                            |                               |                             |                        |                   |                  | +              |           |                    |                                       |                            |                |                    |
|  | son respons   |                              |  |                           |                                     |                            |                               |                             |                        |                   |                  |                |           |                    |                                       |                            |                |                    |
| Drille   | of Licensed<br>to deliverantes<br>analytes<br>14 days | 4-0) (S                      | (a)                                    | gether w                  | rith<br>tion pla                    | Prin<br>Core<br>23 C       | hary In<br>Libra<br>Conyngh   | dustrie<br>ry Con<br>nam St | s and<br>aplex<br>reet | Res               | ources           | SA,            | :         | TINITES >          | HIMA                                  |                            | 7030 7         | <u>'</u> 00        |
| -  |   | <del></del>                  | · · · ·                                | <b></b>                   |                                     |                            | ENŠIĎI                        |                             |                        |                   |                  |                |           | UNIT N             | MINIBL                                | JK                         | •              |                    |

| DF                                      |                      | RS W                 | ELL (          | OF SO<br>CONST<br>esources        | RUC'                     | ΓΙΟΝ                          |                                  |                 | RT             |  |          | 1. I         | ERM            | иIT N           | ю:             | в                      | 4 2              | 2 /                                     | 5       | s              | ite                                   |                              |
|---|----------------------|----------------------|----------------|-----------------------------------|--------------------------|-------------------------------|----------------------------------|-----------------|----------------|--|----------|--------------|----------------|-----------------|----------------|------------------------|------------------|---|---------|----------------|---------------------------------------|------------------------------|
| NAME                                    | OF DR                | ILLEI                | <u> </u>       | Shei/                             |                          | Lie                           | cence N                          | Vo:3            | 425            | <u>.                                    </u> | PER      | MIT          | HOL            | DER             | or la          | nd occ                 | upier            | DWL                                     | BÇ,     |                | · · · · · · · · · · · · · · · · · · · |                              |
| Contact                                 | Phone/M              | obile No             | .:             |                                   |                          |                               |                                  | •••••           |                | Б  | Posta    | l Addre      | :ss            | GPC             | 22             | BOX.                   | 28               | 34,                                     | Ac      | 10191          | de                                    |                              |
|   |                      |                      |                | ervision                          |                          | ,                             |                                  |                 |                |  |          |              |                |                 |                |                        | •                |   |         |                |                                       |                              |
|   | CATION               |                      |                | Su                                |                          | G                             | AWM                              | <del>1</del> 0~ |                | . d (  |          | 32           |                | - 1             |                |                        |                  | 6                                       |         | ./.5           |                                       |                              |
|   | OORDI                |                      | 3              |                                   |                          |                               | (K.W.Set)                        |                 | Metn           |  |          | ZON          |                |                 |                |                        |                  | FICATION IL Lease N                     |         | _              |                                       |                              |
|   | DA 94/<br>GD 66/     |                      | ·              |                                   | 8730                     | 06                            |                                  |                 |                | -  | 0        | ZON          | IE 53<br>IE 52 | ;   ,           |                |                        |                  | ID                                      |         |                |                                       |                              |
|   | OD 00/               | J* <del>4</del>      |                | 6                                 | 238                      | 93/                           |                                  |                 |                |  | _        | 2.01         | (E 32          |                 | Nam            | e of Pi                | operty           | Cho                                     | ui/l    | 9              |                                       |                              |
|   | •                    |                      | • •            | opriate b                         |                          | -                             |                                  | •               | •              |  |          |              |                |                 |                |                        |                  |   |         |                |                                       |                              |
| Work ca                                 | rried out:           | Nev                  | v Well 🔲       |                                   |                          | Deepen                        |                                  |                 |                | Enlarge                                      | e        |              |                |                 | Reh            | abilitat               | e □              | *************************************** |         | Backfill       |                                       |                              |
|   |                      |                      |                |                                   |                          |                               |                                  |                 |                |  |          |              |                |                 |                |                        |                  |   |         |                |                                       |                              |
|   | -                    |                      | -              |                                   |                          |                               |                                  |                 |                |  |          | _            |                |                 |                |                        |                  |   |         |                |                                       |                              |
| Maximu                                  | m Depth              | Drilled              | 9:36           | (m)                               | Fi                       | nal Dep                       | th <b>9</b> :                    | 36              | (m)            |  |          | al Stanc     |                |                 |                |                        |                  |   |         | <b>J</b>       |                                       |                              |
|   | LING D               |                      | . If n         | ot a drille                       | i well, pl               | ease cor                      |                                  |                 |                |  |          |              |                |                 |                |                        |                  | 0.1 )                                   |         |                |                                       |                              |
| 6.1 Con                                 | struction            | Details_             |                | g Method                          |                          |                               | 6.2                              | Wate            | er Cut         |  | (mea     |              |                | om nat<br>iding |                |                        | o nearest        |   |         |                | 1.                                    | -11-1                        |
| From<br>(m)                             | To<br>(m)            | Diam<br>(mm)         | Rotar          | le Tool,<br>y Auger,<br>'n Hole . | (Air.                    | d Used<br>, Water,<br>i Type) | 1                                | Date            | e ,            | From   | <u></u>  | To           | . W            | ater<br>evel    | Y              | mated<br>ield<br>/sec) | Depth<br>at Test | Casing a<br>Test<br>(m)                 | at      | Test<br>Method | (m                                    | alinity<br>ig/L) or<br>Taste |
|   | 9.36                 | 12 -                 | Ham            | mer, etc.                         |                          |                               | - -                              |                 |                | (m)  | +        | (m)          | (              | m)              | <u> </u>       |                        | (m)              | ,,                                      | +       |                | -                                     |                              |
| 0.                                      | 7:30                 | 122                  |                | ger_                              | IRio-                    | Vis                           |                                  |                 |                |  |          |              |                |                 |                | -                      |                  |   |         |                |                                       |                              |
|   |                      |                      | 77-6           | ,                                 |                          | _ <del></del>                 | $\bot$                           |                 |                |  | 1        |              |                |                 |                |                        |                  |   | -       | -              | 1                                     | ٠                            |
| 7. CASI                                 | NG LEF               | T IN WI              | ELL            |                                   | <u></u>                  |                               |                                  |                 | - 1            |  |          |              |                |                 |                |                        | ,                | <u> </u>                                | I.      |                |                                       |                              |
| 7,1 Dim                                 | ensions              |                      | 7,2            | 2 Type                            |                          |                               | 7.3 Ca                           | sing            | Cemen          |  |          |              |                | ī               | . <sub>T</sub> |                        |                  | Cemen                                   | nting   |                |                                       |                              |
| From<br>(m)                             | To<br>(m)            | Dia                  |                | Swelt Joint,<br>Steel, FF         | . Welded C<br>RP, PVC, e |                               | Yes                              | No.             | From<br>(m)    |  | To<br>m) |              | nent<br>igs)   | Wat<br>(litre   |                |                        | her<br>itives    | Meth                                    | od      |                | Comme                                 | nts                          |
| 0                                       | 7.30                 |                      |                | P                                 | /C                       |                               | 3                                |                 | 0              | 6  | _        |              |                |                 |                |                        |                  |   |         |                |                                       |                              |
|   | +                    | -                    |                |                                   |                          |                               |                                  |                 |                |  |          | <del> </del> |                | ├-              |                |                        |                  |   |         |                |                                       |                              |
|   |                      |                      |                |                                   |                          |                               |                                  | <u> </u>        |                |  |          |              |                |                 |                |                        |                  |   |         |                |                                       |                              |
| 8. CON<br>8.1 Meth                      |                      | ION AT               |                | en or Cas                         |                          | variable                      | apertur                          |                 | een use        | d give li                                    | imits    | .)           |                |                 |                |                        |                  |   |         |                |                                       |                              |
|   | en Hole              |                      |                | Туре                              |                          | From (m)                      | 1 7                              | To<br>m)        | Apert<br>(m)   | ure* 1                                       |          | Diam         |                | r Diam<br>nm)   |                | Mate                   | rıal             | Trade                                   | Name    | :              | Comple<br>of Ba                       |                              |
|   | tted Casir<br>een(s) | ng '                 |                | <u>ა</u> с                        |                          | _7.3                          | <u> </u>                         | 36              | 0.             | 5  | _8       | 0            |                |                 |                | OVC                    |                  | Pipe.                                   | ma      | 57 <b>6</b>    | 500                                   | (00)                         |
|   |                      | etails:              |                |                                   |                          |                               |                                  | ,               |                |  |          | 1            |                |                 |                |                        |                  | <u> </u>                                |         |                |                                       |                              |
|   | r Seal (Pa           | cker)                | Interna        | 8.4 Gr                            | avel Paci                | cing                          |                                  | _               |                |  | ٦,       | 13. FC       | -r             |                 | roc            | ;                      |                  |   |         |                |                                       |                              |
| Mat                                     | enal                 | Depth<br>(m)         | Diam<br>(mm)   | Met                               | hod of<br>ement          | Gravel :<br>Mesh              |                                  |                 | om<br>n)       | To<br>(m)                                    |          | Fron<br>(m)  | `              | To<br>(m)       |                | ٠                      |                  | Description                             | on of I | Material       |                                       |                              |
|   |                      |                      | Į              | Cra                               | vity                     | 8:                            | /6                               | 65              | 36             | 9-36   | ] [      |              | _              |                 | _              |                        |                  |   |         |                |                                       |                              |
| 9. IF NO                                | OT A DRI             | LLED                 | VELL           | J                                 |                          | 1                             |                                  |                 |                |  | ╛╏       |              | $\dashv$       |                 | ╅              |                        |                  |   |         |                |                                       |                              |
| Meth                                    |                      | Depth<br>(m)         | Length<br>(m)  | Width<br>(m)                      | Diam<br>(m)              |                               | ning ·<br>terial                 |                 | rom<br>(m)     | To<br>(m)                                    | ][       |              |                |                 |                |                        |                  |   |         |                |                                       |                              |
|   |                      |                      |                | ,                                 |                          | -                             |                                  | -               |                |  |          |              |                |                 |                |                        |                  |   |         |                |                                       |                              |
| 10. DEV                                 | /ELOPM               | ENT (S               | ate method     | s and time t                      | aken)                    | <u> </u>                      |                                  | _               |                |  | <u> </u> |              |                |                 |                |                        |                  | ·                                       |         |                |                                       | -                            |
| A .                                     |                      | м<br><del>Ис</del> с | ethod          |                                   |                          | I                             | lours                            | -               | Min            | nutes  | 4 [      |              | $-\Gamma$      |                 | $\dashv$       |                        |                  |   |         |                |                                       |                              |
| _A;                                     | <i>r</i> //          | 7 <b>.</b> C         |                |                                   |                          |                               |                                  | $\perp$         | ~              |  | <u> </u> |              |                |                 |                |                        |                  | ,                                       |         |                |                                       |                              |
| 11. PUN                                 |                      | EST (me<br>Water     | asurements     | from natur                        | al surface :             |                               | (0.1m)<br>dethod (               | of              |                | Draw   | ٦ þ      |              |                |                 |                |                        |                  |   |         |                |                                       |                              |
| From                                    | To (m)               | Level<br>(m)         | Test<br>Method | Denth                             | Rat<br>(L/se             | e, N                          | neunou e<br>Aeasurin<br>Discharg | g p             | Hours<br>umped | Down<br>(m)                                  |          |              | +              | <u>.</u>        |                |                        |                  |   |         | <del></del> -  |                                       |                              |
| (m)                                     | (m)                  |                      |                | ,,                                |                          |                               |                                  |                 |                |  | <u> </u> |              |                |                 |                |                        |                  |   |         |                |                                       |                              |
|   |                      |                      | <del> </del>   | <del> </del>                      | -                        | -                             |                                  | +               |                | <u> </u>                                     | 4        |              | +              |                 | $\dashv$       |                        |                  |   |         |                |                                       |                              |
| 12. SAN                                 |                      |                      | 1              |                                   |                          |                               |                                  |                 | •              | 1  | ┙┝       |              | _              |                 | $\dashv$       |                        |                  |   |         |                |                                       |                              |
|   |                      |                      |                | 1997 and R<br>have not be         |                          |                               |                                  | uat stra        | ata and w      | vater  |          |              |                |                 | $\dashv$       |                        |                  |   |         |                |                                       |                              |
| *************************************** | ······               | *************        |                | ••••••                            |                          |                               | ·····                            |                 | ···            | ,  | - }      |              | +              |                 | $\dashv$       |                        | •                |   |         |                |                                       | <del></del> .                |
|   |                      |                      |                | ned out on                        |                          |                               |                                  |                 |                |  |          |              |                |                 |                |                        |                  |   |         |                |                                       |                              |
|   |                      |                      |                |                                   |                          |                               |                                  |                 |                |  | F        |              | +              |                 | +              |                        |                  |   |         |                |                                       |                              |
| Signature<br>Drilles                    | of Licensed          | Driller<br>en i Hi   |                | ge her w                          |                          |                               |                                  |                 |                | /<br>s and F                                 | ]        | MIFOCC       | SA.            |                 |                | ,                      | ,—··             |   |         |                |                                       |                              |
| 面面                                      | amples               | THE                  | ed and v       | et locat                          | ion pla                  | n Co                          | re Lib                           | rary            | / Com          | plex   | ves0     | rarces       | JА             |                 |                |                        |                  | ]                                       |         | 7030           | 701                                   |                              |
| wum                                     | 14 days              | or com               | pletion        |                                   |                          |                               |                                  |                 | m Str<br>SA 50 |  |          |              |                |                 | U              | NIT N                  | ŲMBI             | ER                                      |         |                |                                       |                              |
|   |                      |                      |                |                                   |                          |                               |                                  |                 |                |  | -        |              |                |                 |                |                        |                  |   |         |                | ٠ _                                   | _ ·                          |

| Unit No: 7030 702 | Obs Well No: CHW 5 | 5 <b>DH No</b> : 201125 |
|-------------------|--------------------|-------------------------|
|                   |                    |                         |

|   |   |  |  |  |  | Licen  | -  |   | Po   | stal Add              | ess              | GPO            | Box                           | 283                             | DWLB<br>14, AC           | de/qi            | de     |
|---|---|--|--|--|--|--|--|---|--|-----------------------|------------------|----------------|-------------------------------|---------------------------------|--------------------------|------------------|--------|
|   |   |  |  | rvision  |  |  |  |   |  |                       |                  |                |                               | *****                           |                          | Post Cod         | e      |
|   | CATION  |  |  |  |  |  | 110  |   |  |                       |                  | 3.             | WELL 1                        | NAME.                           | 642                      | 16               |        |
|   |   |  |  |  |  | y <b>SA</b>  | 1976/  | . Meth  | 10d  | <i>E.G.</i> 7.        | <u></u>          |                |                               |                                 | FICATION                 |                  |        |
|   | OORDI<br>DA 94/   |  | '  | 4  | 874  | 53   |  | •   | 0  | zo<br>Z0              | NE 54<br>NE 53   |                |                               |                                 | l Lease No               |                  |        |
|   | GD 66/  |  |  |  | 220  | 53<br>973  |  |   | 7  |                       | NE 52            | Fil            | e/Sectio                      | n /Parce                        | IID                      | .://^            | ••••   |
| 5 STIME   | MADV (  | Plense ti  |  |  |  | i complet  | e ali rei  | lovant  | details)                                     |                       |                  | Na             | me of P                       | roperty                         | Cha                      | V.1.//           |        |
| Date work<br>Work can<br>Is this a l  | rk Comm<br>rried out:<br>Replacem   | enced<br>New<br>ent well?  | 22/3/<br>Well [2]<br>YES/NO  | if yes p   | ease quo   | Deepen [<br>te replaced  | i well nu  | mber:   | I<br>Enlarge                                 |                       |                  | F              | Lehabilitat                   | e 🗆                             |                          | Backfill         | ]      |
|   |   |  |  |  |  |  |  |   |  |                       |                  |                |                               |                                 |                          |                  |        |
|   |   |  | 10:15  |  |  | nal Depth  |  |   |  |                       |                  |                | :<br>:::                      |                                 |                          | ield             |        |
| 6. DRIL   |   |  |  |  |  | ease comp  |  |   |  |                       |                  |                |                               | · `.´                           |                          |                  |        |
| 6.1 Cons  | truction  | Details<br>I   | Deltier  | Method   | <u> </u>   |  | 6.2 Wa   | ter Cut                                       | Details (m                                   | easurem               | $\Gamma$         |                | l surface                     |                                 | 0.1 m)                   | 1                | 7      |
| From<br>. (m)   | To<br>(m)   | Diam<br>(mm)   | Cable<br>Rotary<br>Down  | Tool,<br>Auger,<br>Hole  | (Air,  | i Used<br>Water,<br>Type)  | • Da   | ite   | From (m)                                     | To (m)                | Stan<br>Wa<br>Le | iter<br>vel    | Estimated<br>Yield<br>(L/sec) | Hole<br>Depth<br>at Test<br>(m) | Casing at<br>Test<br>(m) | Test<br>Method   |        |
| 0   | 10.15   | 135  | Rot  | ary  | Hu<br>(Bìo   | - (m)  |  |   |  |                       |                  |                |                               |                                 |                          |                  | =      |
| •   |   | <u> </u>   |  |  |  |  |  |   |  |                       |                  |                |                               |                                 |                          | Ì.,,             | $\Box$ |
| 7. CASI   |   | I IN WE  |  | Ture   |  | <del>- 1-</del>  | 3 Carl-  | Commo   | utad.  | _                     |                  |                |                               |                                 |                          |                  |        |
| 7.1 Dime  | To  | Inter  | nal s  | Type<br>well Joint,  | Welded Co  | allan  | 3 Casing   | Cemen   | 1  | C                     | ment             | Water          | 0                             | ther                            | Cementing                | g                | _      |
| (m)   | (m)   | Diau<br>(mr  | n.<br>n)   | Steel, FR  | P, PVC, et   | c., 1  | es No  | (m)   | ) (m)  | (1                    | ags)             | (litres)       |                               | litives                         | Method<br>Used           | ,                | Cc     |
| _0_   | 8.13  | -81  | <u> </u>   | PVC  | <u> </u>   |  |  | -0  | 6.5  | <u>-   -</u>          |                  | <del> </del> - | <del> </del>                  |                                 | Gravit                   | <del>y   _</del> | _      |
|   |   |  |  |  |  |  |  |   |  |                       |                  |                |                               |                                 |                          |                  |        |
| 8.1 Meth  | od  | ION AT   | PRODUC<br>8.2 Scree  | en or Cas  |  |  | erture scr   | Aper  | ture* Inc                                    | its)<br>er Diam       |                  | Diam           | Most                          | , erial                         | Trade Na                 |                  | ·      |
| 8.1 Meth  | od<br>en Hole<br>tted Casir   |  |  | n or Cas   | ing (*If v   | ariable apo  | To (m)   | Aper<br>(m                                    | ture* Inc<br>m)                              |                       |                  | Diam (m)       | Mate                          |                                 | Trade Na                 |                  | _      |
| 8.1 Meth  Ope Slot  Scre  | od<br>en Hole<br>tted Casir   | 8  | 8.2 Scree  | n or Cas   | ing (*If v   | ariable apo  | To (m)   | Aper<br>(m                                    | ture* Inc<br>m)                              | er Diam<br>(mm)       |                  |                |                               |                                 |                          |                  | _      |
| 8.1 Meth Ope Slot Scre  | od<br>en Hole<br>ited Casir<br>een(s)   | g<br>etails:<br>cker)  | 8.2 Scree  | Type   | ing (*If v   | ariable apor   | To (m)   | Aper<br>(m                                    | ture* Inr                                    | er Dtam<br>(mm)<br>20 | ORMA             | TION L         | PVC                           |                                 |                          |                  | _      |
| 8.1 Meth Ope Slot Scre  | od en Hole tted Casir een(s) er, give d r Seal (Pa  | g<br>etails:   | 8.2 Scree  | Type  8.4 Gr Met   | ing (*If v   | ariable aper From (m)  | erture sci To (m) /O-/S  | Aper (m                                       | To (m)                                       | er Diam<br>(mm)       | ORMA             | um)            | PVC                           |                                 |                          | ste E            | _      |
| 8.1 Meth  Ope Slot Scre Oth 8.3 Liner   | od en Hole tted Casir een(s) er, give d r Seal (Pa  | etails:<br>cker)<br>Depth  | 8.2 Scree  | Type  8.4 Gr Met   | avel Pack  | ariable aper From (m)  8-15  ing  Gravel Pas   | erture sci To (m) /O-/S  | Aper (m                                       | ture* Inr                                    | er Dtam<br>(mm)<br>20 | ORMA             | TION L         | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Slot Scre Oth 8.3 Liner Mate   | od en Hole tted Casir een(s) er, give d r Seal (Pa  | etails:<br>cker)<br>Depth<br>(m)   | Internal Diam (min)  | Type  8.4 Gr  Meti Plac  | avel Pack  | ariable aper From (m)  | erture sci To (m) /O-/S  | Aper (m                                       | To (m)                                       | er Dtam<br>(mm)<br>20 | ORMA             | TION L         | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth  Ope Slot Scre Oth 8.3 Liner   | od en Hole tted Casir een(s) er, give d r Seal (Pa  | etails:  Depth (m)  LLED W   | Internal Dram (mm)   | 8.4 Gr<br>Meti<br>Plac   | avel Pack  | ariable appropriate from (m)  Gravel Pass Mesh Size  | erture sci   | Aper (m)                                      | To (m)                                       | er Dtam<br>(mm)<br>20 | ORMA             | TION L         | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Sort Oth 8.3 Liner Mate  | od en Hole tted Casir een(s) er, give d r Seal (Pa  | etails:<br>cker)<br>Depth<br>(m)   | Internal Diam (mm)   | 8.4 Gr   | avel Pack  | ariable apper From (m)  R- NS  ing  Gravel Pass Mesh Si  | erture sci   | Aper (m                                       | To (m)                                       | er Dtam<br>(mm)<br>20 | ORMA             | TION L         | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Sort Oth 8.3 Liner Mate  | od en Hole tted Casir een(s) er, give d r Seal (Pa  | etaily:<br>Depth<br>(m)  LLLED V<br>Depth<br>(m)                                 | Internal Diam (mm)   | 8.4 Gr Meti Plac  Width (m)  | avel Pack<br>bernent<br>Diam<br>(m)  | ariable appropriate from (m)  Gravel Pass Mesh Size  | erture sci   | Aper (m)                                      | To (m)                                       | er Dtam<br>(mm)<br>20 | ORMA             | TION L         | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Sort Oth 8.3 Liner Mate  | od en Hole tted Casir een(s) er, give d r Seal (Pa  | etails:  Depth (m)  LLED W Depth (m)  ENT (Sta                                   | Internal Dram (mm)   | 8.4 Gr Meti Plac  Width (m)  | avel Pack<br>bernent<br>Diam<br>(m)  | ariable appropriate from (m)  Gravel Pass Mesh Size  | reture sci   | Aper (m)                                      | To (m)                                       | er Dtam<br>(mm)<br>20 | ORMA             | TION L To (m)  | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Sort Oth 8.3 Liner Mate  | od en Hole tted Casir een(s) er, give d r Seal (Pa ertal  | etails:  Depth (m)  LLED W Depth (m)  ENT (Sta                                   | Internal Diam (mm)  VELL Length (m)  | 8.4 Gr Meti Plac  Width (m)  | avel Pack<br>bernent<br>Diam<br>(m)  | ariable aper From (m)  Gravel Pass Mesh Sir  | reture sci   | Aper (m)                                      | To (m)  To (m)  To (m)                       | er Dtam<br>(mm)<br>20 | ORMA             | TION L         | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Store Oth 8.3 Liner Mate   | od en Hole tted Casir een(s) er, give d r Seal (Pa erial  | etails:  Depth (m)  LLLED W Depth (m)  ENT (Sta Me                               | Internal Diam (mm)  VELL Length (m)  te methods thou   | 8.4 Gr Meti-Plac  Width (m)  | avel Pack and of ement (m)   | ariable aper From (m)  Gravel Pas Mesh Sii  Linin Materi   | g all  | Aper (m O · O · O · O · O · O · O · O · O · O | To (m)  To (m)  To (m)                       | er Dtam<br>(mm)<br>20 | ORMA             | TION L To (m)  | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Sy Slot Slot Oth 8.3 Liner Mate  9. IF NO Meth  10. DEV  | od en Hole tted Casir een(s) er, give d r Seal (Pa er, al   | etails:  Depth (m)  LLLED W Depth (m)  ENT (Sta Me                               | Internal Diam (mm)  VELL Length (m)  the methods thod  | 8.4 Gr Meti Plac  Width (m)  and time to   | Diam (m)   | ariable aper From (m)  Gravel Pas Mesh Sin Materi  | erture sci To (m) /O-//\$  | Apere (m                                      | To (m)  To (m)  To (m)                       | er Dtam<br>(mm)<br>20 | ORMA             | TION L To (m)  | PVC                           |                                 | Pipema                   | ste E            |        |
| 8.1 Meth Ope Store Oth 8.3 Liner Mate   | od en Hole tted Casir een(s) er, give d r Seal (Pa er, al   | etails:  Depth (m)  LLLED W Depth (m)  ENT (Sta Me                               | Internal Diam (mm)  VELL Length (m)  te methods thou   | 8.4 Gr Meti-Plac  Width (m)  | avel Pack and of ement (m)   | ariable appropriate appropriat | g all  | Aper (m O · O · O · O · O · O · O · O · O · O | To (m)  To (m)  To (m)                       | er Dtam<br>(mm)<br>20 | ORMA             | TION L To (m)  | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Stort Oth 8.3 Liner Mate 9. IF NO Meth 10. DEV   | od en Hole tted Casir een(s) er, give der Seal (Pa ertal  OTA DRI od  HPING T Tested To   | etails: Depth (m)  LLED W Depth (m)  ENT (Sta Me  Julian Me Water Level          | Internal Dam (mm)  VELL Length (m)  the methods thou   | 8.4 Gr Metal Midth (m)  Width (m)  Pump Depth  | Diam (m)  District the surface to Dischart Rate  | ariable appropriate appropriat | grident science of the science of th | Aperrom (m)  From (m)  Mi  Hours              | To (m)  To (m)  To (m)  To mutes  Draw Down  | er Dtam<br>(mm)<br>20 | ORMA             | TION L To (m)  | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Stort Oth 8.3 Liner Mate 9. IF NO Meth 10. DEV   | en Hole tted Casir een(s) er, give d r Seal (Pa ertal | etails:  cker)  Depth (m)  LLED W Depth (m)  ENT (Sta Me  Water Level (m)        | Internal Diam (min)  WELL Length (m)  the methods the diameter methods the diameter methods where methods the diameter method is unconsistent methods.   | 8.4 Gr  Metter Place  Width (m)  and time to the properties of the | Diam (m)  Diam (c)  Discha Rate (L/see   | ariable app From (m)  Gravel Pass Mesh Si  Linin Materi  Hou  o nearest 0.  Disc  thereto requ   | g g lal  | Aper (m (m)                                   | To (m)  To (m)  To (m)  To (m)  To (m)       | er Dtam<br>(mm)<br>20 | ORMA'            | TION L To (m)  | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Stort Oth 8.3 Liner Mate 9. IF NO Meth 10. DEV   | en Hole tted Casir een(s) er, give d r Seal (Pa ertal | etails:  cker)  Depth (m)  LLED W Depth (m)  ENT (Sta Me  Water Level (m)        | Internal Diam (min)  WELL Length (m)  the methods the diameter methods the diameter methods where methods the diameter method is unconsistent methods.   | 8.4 Gr  Metter Place  Width (m)  and time to the properties of the | Diam (m)  Diam (c)  Discha Rate (L/see   | ariable apper From (m)  Gravel Pass Mesh Si:  Linin Materi  Hou  o nearest 0. Disc   | g g lal  | Aper (m (m)                                   | To (m)  To (m)  To (m)  To (m)  To (m)       | er Dtam<br>(mm)<br>20 | ORMA'            | TION L To (m)  | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Stort Stort Oth 8.3 Liner Mate  9. IF NO Metho  10. DEV  | en Hole tted Casir een(s) er, give d r Seal (Pa ertal  PTA DRI od  FELOPM  APING T Tested To (m)  PPLES sion of the sust be obtoned.  | etails:  Depth (m)  LLED W Depth (m)  ENT (Sta  Me  Water Resc  ined, If an      | Internal Diam (mm)  VELL Length (m)  Surrements the description of the column of the c | Width (m)  Pump Depth (m)  997 and R ave not bed   | Dram (m)  Dram (m)  Dram (c)   ariable app From (m)  Gravel Pass Mesh Si  Linin Materi  Hou  o nearest 0.  Disc  thereto requ   | g g lal lars lars lars lars lars lars lars   | Aper (m (m)                                   | To (m)  To (m)  To (m)  To (m)  Water        | er Dtam<br>(mm)<br>20 | ORMA'            | TION L To (m)  | PVC                           |                                 | Pipema                   | ste E            | _      |
| 8.1 Meth Ope Sorr Oth 8.3 Liner Mate 9. IF NO Meth  10. DEV  11. PUM Interval From (m)  12. SAM The provissamples many describe | en Hole tted Casir een(s) er, give d r Seal (Pa ertal  ELOPM  FELOPM  Tested To (m)  Son respon ed above:   | etails:  cker)  Depth (m)  LLED W Depth (m)  ENT (Sta Me  Water Resc ined. If an | Internal Diam (mm)  WELL Length (m)  the methods the diameter methods the diameter methods which methods the diameter methods which methods assurements in the diameter method in the diameter methods which method is a surement of the diameter methods assurements in the diameter methods assurements in the diameter method  | 8.4 Gr  Metal Place  Gram  Width (m)  and time to room nature  room nature  Pump Depth (m)  997 and R ave not be avenot be ave | Diam (m)  Diam (m)  Discha Rate (L/see   | ariable apper From (m)   | g al lim) hod of suring charge charge has been   | Aper (m (m) (m) (m) (m) (m) (m) (m) (m) (m)   | To (m)  To (m)  To (m)  Draw Down (m)  water | er Dtam<br>(mm)<br>20 | ORMA'            | TION L To (m)  | PVC                           |                                 | Pipema                   | ste E            | _      |

|                 |                                       |   |  |                             |                          |                     |                    |            |  |              |           |                |                |  |                  | _          |                          |                             |             |               |   |
|-----------------|---------------------------------------|---|--|-----------------------------|--------------------------|---------------------|--------------------|------------|--|--------------|-----------|----------------|----------------|--|------------------|------------|--------------------------|-----------------------------|-------------|---------------|---|
|                 | GOV                                   | ERNMI                                   | ENT  | OF SO                       | UTH                      | AUST                | ΓRAI               | LIA        |  |              |           | -              | د              |  | ٠,               |            | •                        |                             |             |               |   |
| D               |                                       | RS W                                    | ELL  | CONST                       | RUC                      | TIO                 |                    |            | RT   |              |           | . 1.           | PERM           | MIT N  | NO: 6            |            | 42                       | 1 7                         | <b>'</b>    | Sic           | e                                       |
| NAM             | E OE DI                               | HIER                                    | · C.   | Sheir                       | ,                        | 1                   | icance             | No. 1      | 242  | 5            | PE        | RMIT           | HOL            | DER  | or land          | loco       | upier                    | DWLB                        | <u></u>     |               |   |
| Contac          | t Phone/M                             | lobile No.                              |  |                             | •••••••                  |                     | •••••              |            | ••••••   |              | Pos       | stal Add       | ress           | QP.  | ७ ८१             | X          | 283                      | 4, Aa                       | 6/6         | rick.         | •                                       |
|                 | of plant of<br>CATIO                  |   |  | pervision                   |                          | <u></u>             |                    | •••••      |  |              |           |                |                |  |                  |            |                          | 612                         | Pos         | 7             |   |
| Date of         | of Survey                             | 1/9                                     | 104  | Su                          | rveyed                   | by 🗘                | , W.C              | zter.      | . Metl   | hodı         | G1.       | PSS2           | <u>_</u>       | .  |                  |            |                          | FICATION                    |             |               | *************************************** |
| GP\$4           | COORD<br>GDA 94/                      | INATES                                  | · [  |                             | 10-                      | 7/7                 | a ·                |            | <del>.</del>                                     |              | ¥         | <b>/</b> zo    | NE 54          | ١  |                  |            |                          |                             |             | <del>-</del>  |   |
| _               | GDA 94/<br>AGD 66/                    |   | -  |                             | <u> </u>                 | (T-/                | 7                  |            |  | -            |           |                | NE 53<br>NE 52 | ,  | File/Se          | ctio       | n /Parce                 | 1 ID                        |             | //~           |   |
| . E SIIN        | MADV /                                | Please ti                               | ck ann   | ropriate b                  | 623                      | ~                   |                    | all val    | avant  | dotails      | 1         |                |                |  | Name o           | of Pi      | operty                   | Cho                         | <b>~</b> // | 19            |   |
| Date w          | ork Comm                              | enced                                   | 22   | 13/04                       |                          |                     |                    | rei        | •••••  |              | D         | ate wor        | k Com          | pleted.  | 23               | 2/3        | 3/04                     |                             |             |               |   |
| Work o          | arried out:<br>Replacen               | New<br>nent well?                       | Well [   | ☑<br>IO ifves n             | lease au                 | Deepe<br>ote repl   | n □<br>aced w      | ell nu     | mber   | Enlarg       | ge<br>    |                |                |  | Rehab            | ilitat     | e 🗆                      |                             | Bac         | kfill         | <u> </u>                                |
|                 |                                       |   |  |                             |                          |                     |                    |            |  |              |           |                |                |  |                  |            |                          | ,                           |             |               |   |
|                 | il Abando<br>um Depth                 |   |  |                             |                          |                     |                    | _          |  |              |           |                |                |  | evel             |            |                          | F:135                       |             |               |   |
|                 | um Depui<br>LLING D                   |   |  | (m)<br>not a drilled        |                          |                     |                    |            |  |              |           |                |                |  |                  |            | (m)                      | rinai Yi                    | еіа         |               | (L/sec)                                 |
| 6.1 Co          | nstruction                            | Details                                 | Drill  | ng Method                   | Į.                       |                     | 6                  | .2 Wa      | ter Cut  | Details      | (m        | easurem        |                |  | tural surf       | ace        | to nearest               | 0.1 m)                      |             |               |   |
| From (m)        | To (m)                                | Diam<br>(mm)                            | Ca   | ble Tool,<br>ary Auger,     |                          | id Used<br>, Water, | -                  | Da         | te   |              |           | Cut            | _ w            | nding<br>ater ·<br>evel                          | Estima<br>Yield  |            | Hole<br>Depth<br>at Test | Casing at<br>Test           |             | Test          | Salinity<br>(mg/L) or                   |
| (11)            |                                       |   |  | wn Hole<br>nmer, etc.       | Mu                       | d Type)             |                    |            |  | From<br>(m)  |           | To<br>(m)      |                | m)   | (L/sec           | :)         | (m)                      | (m)                         | M           | ethod .       | Taste                                   |
| 0               | 6.8                                   | 135                                     | R  | otary                       | 100                      | od<br>So Vi         | <del>5  </del> -   |            |  |              | 4         |                | -              |  |                  |            | <u> </u>                 |                             | _           |               |   |
|                 | ļ                                     |   | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\           | 95                          | -(8/                     |                     |                    |            |  |              | #         |                |                |  | <u> </u>         | _          |                          |                             |             |               |   |
| 7. CAS          | ING LEF                               | T IN WE                                 | I.I.   |                             |                          |                     | L                  |            |  |              |           | •              |                |  | <u> </u>         |            | -                        | <u> </u>                    |             |               |   |
| 7.1 Din         | nensions                              | Inter                                   | 7  | .2 Type                     | •                        |                     | 7.3 (              | Casing     | Cemer  | ited         |           |                |                |  |                  | •          |                          |                             |             |               |   |
| From<br>(m)     | To<br>(m)                             | Dia:                                    | m.   | Swell Joint,<br>Steel, FR   | Welded C<br>RP, PVC, e   |                     | Yes                | No         | Fro<br>(m  |              | To<br>(m) |                | ement<br>bags) | War<br>(litr                                     |                  |            | her<br>stives            | Cementing<br>Method<br>Used | ·           | c             | omments                                 |
| 0               | 4.8                                   |   |  | PV                          | 2                        |                     |                    |            | 0  |              | ?         |                |                |  |                  |            |                          | Gravit                      | 3           |               |   |
|                 |                                       | +-                                      |  |                             |                          |                     | 믐                  |            | <del>                                     </del> | -            |           | $\dashv$       |                | <del>                                     </del> |                  |            |                          |                             |             |               |   |
| 2.000           |                                       |   |  |                             |                          |                     |                    |            |  |              |           |                |                |  |                  |            |                          |                             |             |               |   |
| 8.1 Met         |                                       | TON AT                                  |  | JCTION L<br>reen or Cas     |                          | variable            | aperti             | are scr    | een use  | d give l     | imi       | ts)            |                |  |                  | _          | ·——                      |                             |             |               |   |
|                 | en Hole                               |   |  | Туре                        |                          | Fron<br>(m)         |                    | To<br>(m)  |  | ım)          | (         | er Diam<br>mm) |                | Dıamı<br>nm)                                     |                  | Mate:      | rial                     | Trade Na                    |             |               | ompletion<br>of Base                    |
|                 | otted Casin<br>reen(s)                | ıg                                      | <del>                                     </del> | SC                          |                          | 48                  | 6                  | .8         | 0.   | ٦.           | 8         | Ö              |                |  | <u> </u>         | <u>v</u> C |                          | Pipema                      | ΩĆ          | * B           | nd Cap                                  |
| □ Ot            | her, give d                           | etails:                                 |  |                             |                          |                     |                    |            |  |              |           |                |                |  |                  |            |                          |                             |             |               |   |
|                 | er Seal (Pa                           | cker)<br>Depth                          | Intern   | al Met                      | avel Paci                |                     | Passing            | , Fr       | rom  | To           | ٦         | 13. Fo         | ORMA           | TION<br>To                                       | LOG              |            |                          |                             |             | -:-           |   |
| Ma              | tenal                                 | (m)                                     | Dian<br>(mm                                      | Place                       | cment                    | Mes                 | h Size             | (          | m)   | (m)          | 4         | (m             |                | (m)  |                  |            |                          | Description (               | f Mate      | rial          |   |
|                 |                                       |   |  | Urai                        | uty                      | 8:                  | /6_                | 3.         | 8  | 6.8          | $\dashv$  |                |                |  |                  |            | •                        |                             |             |               |   |
| 9. IF N         | OT A DRI                              | LLED W                                  | ELL<br>Length                                    | Width                       | Diam                     |                     | ining              |            | rom  | To           | _<br>_    |                |                |  |                  |            |                          |                             |             |               |   |
| Met             | noxi                                  | (m)                                     | (m)  | (m)                         | (m)                      |                     | aterial            |            | (m)  | (m)          | +         | -              | +              |  |                  |            |                          |                             |             |               | ······································  |
|                 |                                       |   |  |                             |                          |                     |                    |            |  |              | 1         |                |                |  |                  |            |                          |                             |             |               |   |
| 10. DE          | <u>VELOPM</u>                         |   | te method  | is and time ta              | iken)                    | T.                  | Hours              | 1          | Mi   | nutes        | ٦         | -              | +              |  | +-               |            | -                        |                             |             |               |   |
|                 | Ai                                    | rlift                                   | ed_  | -                           |                          |                     |                    |            | ۷.   | <u> </u>     | 7         |                | #              |  |                  |            |                          |                             |             |               |   |
| 11. PU!         | MPING T                               | EST (mea                                | surement   | s from natura               | l surface                | lo neares           | t 0.1m)            |            |  |              | L.        |                | $\dashv$       |  | -                |            |                          |                             |             |               | - <del>-</del>                          |
| Interva<br>From | l Tested                              | Water<br>Level                          | Test<br>Method                                   | Pump<br>Depth               | Disch:<br>Rat            |                     | Method<br>Measuri  | ina l      | Hours  | Draw<br>Down |           |                | $\Box$         |  |                  |            |                          |                             |             |               |   |
| (m)             | (m)                                   | (m)                                     | Memo   | (m)                         | (L/se                    |                     | Dischar            |            | Pumped   | (m)          | -         | -              | -              |  |                  |            |                          | ·                           | •           |               |   |
|                 |                                       |   |  | 1.                          |                          | _                   |                    | _          |  |              | -         |                |                |  |                  | _          |                          |                             |             |               |   |
| 12.54           | ADI DE                                |   |  |                             |                          |                     |                    |            |  |              |           |                | _              |  |                  |            |                          |                             |             |               |   |
| The prov        | MPLES<br>ision of the<br>must be obta | Water Resouned, If any                  | urces Ac<br>samples                              | 1997 and Re<br>have not bee | egulations<br>on obtaine | thereto :           | equire :<br>asons: | that str   | ata and v  | water        |           | _              | $\perp$        |  |                  |            |                          | ···                         |             | •             |   |
|                 | ,<br>                                 | *************************************** |  |                             |                          |                     |                    |            |  |              |           |                |                |  |                  |            |                          |                             | -           |               |   |
|                 | rson respon<br>bed above:             | sible for the                           | work ca  | rried out on ti             | nis well I               | advise th           | at it has          | been c     | omplete  | ed .         |           |                | -              |  | $\dashv$         |            |                          | ·                           |             |               |   |
| Signature       | of Licensed                           | I Driller                               | •  | • H++11++++++++             |                          |                     |                    | <i>D</i> a | 21e /  | •            |           |                | $\dashv$       |  |                  |            |                          |                             | _           |               |   |
| Dr              |                                       |   |  | gether w                    | ith                      | Pr                  | imarı              | e Indi     | net <b>ri</b> o                                  | s and I      | Res       | ources         | SA             |  |                  | _          |                          | <u> </u>                    |             | 00 -          |   |
| Within          | 14 days                               | Comp                                    | letion   | locati                      | on piäi                  | 23                  | Cony               | ngha       | m Str  | reet         |           | ,              | •              |  | LINIT            | Г »¹       | UMBE                     | . D                         | 70          | 30 7          | J3                                      |
|                 |                                       |   |  |                             |                          | GI                  | LENS               | IDE :      | SA 50  | 65           |           |                | ·              | ~  | , O1 <b>N1</b> . | - 1N       | ~                        | ·*. i                       |             | <del></del> - |   |

| Di                 |                      | ERS W                | ELI                 | OF S<br>CONS<br>Resource                                  | TRUC                | TIO                              |                      |                                      |                    |              | 1. 1            | PERM   | IT NO     | . 6  | 4 2                      | 2/8               | ·<br>*         | Site                                    |
|--------------------|----------------------|----------------------|---------------------|---|---------------------|----------------------------------|----------------------|--------------------------------------|--------------------|--------------|-----------------|--|-----------|--|--------------------------|-------------------|----------------|---|
|                    |                      |                      |                     |   |                     |                                  |                      | No 342                               | 5                  | PEI<br>Posta | RMIT<br>al Addr | HOLI   | ER or     | land occ   | cupier<br>28             | DW2.b<br>34, 11   | RC<br>Idela    | ide                                     |
|                    |                      |                      |                     |   |                     |                                  |                      |                                      |                    |              |                 |  |           |  |                          |                   | Post Cod       | ,500/                                   |
| 2. LO              | CATIC                | N OF V               | VELL                |   |                     |                                  |                      | ,                                    |                    |              |                 |  | - 1       | WELL I   |                          | <b>//2/</b>       | 8              |   |
| Date o             | f Surve              | y!/                  | 9/0                 | <b>4</b>  | Surveyed            | ل. by                            | SAW                  | a.kMet                               | ار<br>hod <b>.</b> | R            | አያረ             |  | - 1       |  |                          | FICATION          | . <del></del>  |   |
| GP\$ C             | COORE                | DINATE               | SГ                  |   | _                   |                                  | _                    |                                      | 7                  | <b>(3</b> /  |                 | NE 54  | 1 ***     |  |                          |                   | _              |   |
|                    | 3DA 94<br>AGD 66     | /WGS84               | ·  _                |   | 488                 | 1/3                              | 6                    |                                      | ┦.                 | 0            |                 | NE 53  |           |  |                          |                   |                |   |
| <b>-</b>           | 10D 00               | 704                  |                     |   | 623                 | 892                              | 26                   |                                      | -                  |              | ZUI             | NE 52  |           |  |                          |                   |                | *****************                       |
| 5. SUM             | MARY                 | (Please 1            | ick ap              | propriate   | boxes a             | nd con                           | inlete a             | ll relevant                          | details)           | )            |                 |  | 1116      | inc or r   | roperty                  |                   |                | *************************************** |
| Is this a          | Replace              | ment well            | ? <del>- YE</del> S | /NO if yes  | please qu           | ote rep                          | laced we             | ell number                           |                    | e<br>        |                 |  | F         | Rehabilita                                       | te 🗌                     |                   | Backfill       | <del>_</del>                            |
|                    |                      |                      |                     |   |                     |                                  |                      |                                      |                    |              |                 |  |           |  |                          |                   |                | ······································  |
| Was we             | li Aband             | oned? 🛂<br>h Drilled | ES/NO               | if yes ple  | ase state n         | nethod                           |                      | 70                                   |                    | •••••        |                 | •  |           |  | ••••••                   | •••••••••••       |                |   |
|                    |                      | Drilled<br>DETAILS   |                     |   |                     |                                  |                      | .7.9(m)<br>Sections: 6.              |                    |              |                 |  |           |  | (m)                      | Final Yi          | eld            | (L/sec)                                 |
|                    | struction            |                      |                     | ii not a drii   | iea wen, j          | nease c                          |                      | 2 Water Cut                          |                    |              |                 |  |           |  | to nearest               | () ( m)           |                |   |
| From (m)           | To<br>(m)            | Diam (mm)            | R                   | elling Method<br>Cable Tool,<br>otary Auger,<br>Down Hole | Fit<br>(A           | iid Used<br>ir, Water<br>id Type |                      | Date                                 |                    | iter C       |                 | Stand<br>Wate<br>Leve                            | ing<br>er | Stimated Yield (L/sec)                           | Hole<br>Depth<br>at Test | Casing at<br>Test | Test<br>Method | Salinity<br>(mg/L) or<br>Taste          |
| 0                  | 6.7                  | 9 /3.5               |                     | ammer, etc.   |                     | id<br>i-Vi                       | 5)                   |                                      | (m)                | +            | (m)             | (m)  |           |  | (m)                      |                   |                |   |
|                    |                      | ļ                    | Ţ <u></u>           | - <del></del>   | 1.00                |                                  |                      |                                      |                    | 1            |                 |  | 士         |  |                          |                   |                |   |
|                    | <u> </u>             |                      |                     |   | 1                   |                                  |                      |                                      |                    |              |                 |  |           |  |                          |                   | 1              |   |
| 7. CASI<br>7.1 Dim |                      | <u>FT IN WI</u>      | ELL<br>I            | 7.2 Type  | _                   | •                                | 730                  | asing Cemer                          | ated               |              |                 |  |           |  |                          |                   |                |   |
| From               | To                   | Inte                 |                     |   | nt, Welded          | Collar.                          | Yes                  | Fieo                                 | 1                  | То           | Cer             | ment   | Water     | 0  | ther                     | Cementing         | :              |   |
| (m)                | (m)                  | (m                   | m)                  | Steel.  | FRP, PVC,           |                                  |                      | (m                                   |                    | m)           |                 | igs)   | (litres)  |  | litives                  | Method<br>Used    |                | Comments                                |
| 0_                 | <u>3.7</u>           | 9 80                 | 2                   | <i>P</i>  | VC                  |                                  |                      | <u> </u>                             |                    | <u> </u>     |                 | $\rightarrow$                                    |           | -  |                          | Grani             | <i>y</i>       |   |
| _                  | 1.                   |                      |                     |   |                     |                                  |                      |                                      | Z                  | 2            | +               |  |           | <del> </del>                                     |                          | <del> </del>      | -              |   |
|                    |                      |                      |                     |   |                     |                                  |                      |                                      |                    |              |                 |  |           | ļ  |                          |                   |                |   |
|                    |                      | TION AT              |                     | DUCTION   |                     |                                  |                      |                                      |                    |              |                 |  |           |  |                          |                   |                |   |
| 8.1 Meth           |                      |                      | 8.2 5               |   | asing (*If          | variabl<br>Fro                   |                      | re screen use                        |                    |              | S)<br>Diam      | Outer I  | Diam [    |  |                          |                   |                | Completion                              |
|                    | en Hole<br>tted Casi |                      | Ŀ                   | Туре  |                     | (m                               | ) (                  | m) (m                                | ım)                | (m           | un)             | (ma  |           | Mate   | rial                     | Trade Nar         |                | of Base                                 |
| ☐ Scr              |                      | ing                  | -                   | <u>30</u>   |                     | 3.                               | <u> </u>             | 5.79 O.                              | _ک                 | 8            | 0.              |  | +         | PVC  |                          | <i>Pigen</i> a    | 250            | ad (gs                                  |
|                    |                      | details:             |                     |   |                     |                                  | <del>-</del> ;       | <u> </u>                             |                    | _            | i               |  |           |  |                          |                   |                |   |
| 8.3 Line           |                      |                      | •                   | 8.4 (   | iravel Pac          | king                             |                      |                                      |                    |              | 13. FO          | RMAT   | ION L     | )G   |                          |                   | ,              |   |
| . Mat              | rial                 | Depth<br>(m)         | Inte                | ım M  | ethod of<br>acement |                                  | l Passing<br>sh Size | From (m)                             | To                 | $\  \ $      | From            |  | To        |  |                          | Description o     | f Material     |   |
|                    |                      | - (1.17)             | (m:                 | m)  | zity                | <del> </del>                     | 2/6_                 |                                      | (m)<br><b>6-79</b> | ┪┟           | (m)             |  | (m)       | -  |                          |                   |                |   |
|                    |                      | ILLED V              |                     | - West  | B:                  |                                  |                      | 1                                    |                    | _ [          |                 |  |           |  |                          |                   |                |   |
| Meth               | od                   | Depth<br>(m)         | Lengti<br>(m)       | width (m)   | Diam<br>(m)         |                                  | Lining<br>Material   | From<br>(m)                          | To<br>(m)          | ] [          |                 |  |           |  |                          |                   |                |   |
|                    |                      |                      |                     |   |                     |                                  |                      | <u> </u>                             |                    | ]            |                 |  |           |  |                          |                   |                |   |
| 10 DE1             | FLOD                 | AENT (S)             |                     | ods and time  | delic=1             |                                  | <del>.</del>         |                                      |                    | ┙┝           |                 | -  |           | ļ  |                          |                   |                |   |
| .v. DEV            | VFN                  |                      | thod                | ous and time  | MAKCH)              | $\top$                           | Hours                | Mi                                   | nutes              | 7            |                 | +  |           | <del>                                     </del> |                          |                   |                |   |
|                    | Airl                 | 1fte                 | 1                   |   |                     |                                  | ·                    | 15                                   |                    | ][           |                 |  |           |  | ·                        | •                 |                |   |
| 11 8577            | inisis =             | rpem -               |                     |   |                     | <u> </u>                         |                      |                                      |                    | ┛┞           |                 | -  |           |  |                          |                   |                |   |
| Interval           |                      | Water                | I                   | nts from nati   |                     |                                  | st 0.1m)<br>Method o | of .                                 | Draw               | ┑┝           |                 | <del>                                     </del> |           |  |                          | <del></del>       |                |   |
| From<br>(m)        | To<br>(m)            | Level<br>(m)         | Tes<br>Meth         | L Dent  |                     | te                               | Measurin<br>Discharg | lg Pumped                            | Down<br>(m)        |              |                 |  |           |  |                          |                   | <del></del>    |   |
|                    |                      |                      |                     |   |                     |                                  |                      |                                      | Ľ                  | ][           |                 |  |           |  |                          |                   |                |   |
|                    |                      | L                    |                     |   | l                   |                                  |                      |                                      |                    | ] [          |                 |  |           |  |                          |                   |                |   |
|                    | ion of the           |                      |                     | act 1997 and<br>es have not b                             |                     |                                  |                      | nai strata and v                     | vater              |              |                 |  | •         |  |                          | <u> </u>          |                |   |
|                    |                      |                      |                     |   |                     |                                  |                      | been complete                        | d                  | -            |                 | +  |           | <u>'</u>   |                          |                   |                |   |
| as describe        | M TOONE;             |                      |                     |   |                     |                                  |                      |                                      |                    |              |                 |  |           |  |                          | <del></del>       |                |   |
|                    |                      | d Driller            |                     |   |                     |                                  |                      | . Date /                             | /                  |              |                 |  |           | L_   |                          |                   |                |   |
| Averter s          | ample                |                      | d and               | together<br>well loca<br>n to:                            |                     | n C<br>23                        | ore Lib<br>S Conyı   | Industries<br>crary Com<br>ngham Str | plex<br>eet        | leso         | urces           | SA   |           | JNIT N   | LIMPE                    |                   | 7030           | 704                                     |
|                    |                      |                      |                     | _   |                     | G                                | LENSI                | DE SA 50                             | 65                 |              |                 |  |           | /1 1 1 P   | · ·                      | ·*                | •              |   |

| DI                                 |  | ERS W                      | ELL                    | CONST                            | RUC'                      | ΓΙΟΝ Ι                      |               |                    |             |                  | 1. I          | PERM     | IT N | 10: 6         | 4 2                 | 19               | s             | ite     |       |
|------------------------------------|--|----------------------------|------------------------|----------------------------------|---------------------------|-----------------------------|---------------|--------------------|-------------|------------------|---------------|----------|------|---------------|---------------------|------------------|---------------|---------|-------|
| NAME                               | Soft Driller   Comments   Comme |                            |                        |                                  |                           |                             |               |                    |             |                  |               |          |      |               |                     |                  |               |         |       |
| Contact                            | Phone/N  | iobile No                  |                        |                                  |                           |                             |               |                    |             | Post             | al Addre      | ss9      | PC   | Bo            | ł2                  | 834, .           | Acte la       |         |       |
|                                    |  |                            |                        | pervision                        | <u></u>                   |                             |               |                    |             |                  | •             |          |      |               |                     |                  |               | ير.     | 29/   |
|                                    |  |                            |                        |                                  | •                         |                             |               |                    | •           |                  |               | ,        |      | 3. WELL       | NAME.               | 642              | 19            |         |       |
|                                    |  |                            |                        | Su                               | irveyed l                 | by . <b>&amp;.1</b> .1      | Wat           | Meth               | od          | GF.              | _             |          |      |               |                     |                  | _             |         |       |
|                                    |  |                            |                        |                                  | 488                       | 161                         |               |                    |             | <u> </u>         |               |          |      | •             |                     |                  |               |         |       |
|                                    |  |                            |                        |                                  | 6238                      | 927                         |               |                    |             | _                | ZON           | NE 52    |      |               |                     |                  |               |         |       |
| 5. SUM                             | MARY (   | Please t                   | ick app<br><b>217</b>  | ropriate b<br>210 <b>4</b>       | oxes and                  | i comple                    | te all r      | relevant d         | letails)    | )                |               | Camuni   |      | 21/8          | 104                 |                  |               |         |       |
|                                    |  |                            |                        |                                  |                           |                             |               |                    |             |                  |               | Compi    | eteu |               |                     | **************** | Backfill      |         |       |
| _                                  | •  |                            |                        |                                  | -                         | -                           |               |                    |             |                  |               |          |      |               |                     |                  |               |         |       |
|                                    |  |                            |                        |                                  |                           |                             |               |                    |             |                  |               |          |      |               |                     |                  |               |         | ••••• |
|                                    |  |                            |                        |                                  |                           |                             |               |                    |             |                  |               |          |      |               |                     |                  |               | (L/se   | c)    |
|                                    |  |                            |                        |                                  |                           |                             |               |                    |             |                  |               |          |      |               |                     |                  |               |         |       |
| 6,1 Con                            | struction  | Details                    | Drill                  | ling Method                      |                           |                             | 6.2 V         | Vater Cut I        |             |                  |               |          |      | ural surface  | 1                   | 0.1 m)           |               |         |       |
| From                               |  |                            | Ca                     | able Tool,                       |                           |                             | Ι.            | Date L             | Wa          | ater (           | Cut           | Wat      | er   |               | Depth               |                  |               |         |       |
| (m)                                | (m)  | (mm)                       | Do                     | own Hole                         |                           |                             | [             |                    |             |                  |               |          |      |               |                     |                  | Method        |         |       |
| 0                                  | \Z-S   | 7/35                       | -1 -                   |                                  | 14                        | 49                          | 1             |                    | (112)       |                  | (119          |          | -    |               | <u> </u>            |                  | ļ             | 1       |       |
|                                    |  |                            |                        |                                  | (Lio                      | -VIS)                       |               |                    |             | Ţ                |               |          |      |               | ļ                   |                  | ļ .           |         |       |
|                                    | -  | -                          | +                      |                                  | l .—                      | •                           | $\vdash$      |                    |             | +                |               |          |      |               |                     |                  | -             | +       |       |
| 7. CASI                            | NG LEF   | T IN WE                    | LL                     |                                  |                           |                             |               |                    |             |                  |               |          |      |               | ·                   |                  |               |         |       |
| 7.1 Dim                            | T  | Inter                      |                        |                                  |                           |                             | .3 Casi       |                    |             |                  | ,             |          |      |               |                     | Comestin         |               |         |       |
| From<br>(m)                        |  | Dia                        | m.                     |                                  |                           |                             | res No        |                    |             |                  |               |          |      |               |                     | Method           |               | Comment | s     |
| 0                                  | 12.5   |                            |                        | PVC                              |                           |                             | <u> </u>      | 0                  | 1           | $\mathbb{Z}$     |               |          |      |               | -                   | Cravit           | z             |         |       |
|                                    | 1  | <u> </u>                   |                        |                                  | ·                         |                             |               |                    | _ _         |                  | _             |          |      |               |                     | ,                |               |         |       |
|                                    | <del> </del>   |                            |                        |                                  |                           |                             |               | <del> </del>       | -           |                  |               |          |      |               |                     |                  |               |         |       |
| 8. CON                             | STRUC  | TION AT                    | PROD                   | UCTION L                         | EVEL                      | ,                           | -             | , ,                |             |                  |               |          |      |               |                     |                  | J             |         |       |
| 8.1 Meth                           |  |                            | 8.2 Sc                 |                                  | ing (*If v                |                             |               |                    |             |                  |               | Outer    | D    |               |                     |                  | ·             | Complet |       |
| ,                                  |  |                            | <u> </u>               |                                  |                           | (m)                         | (m)           | (mn                | n)          | (п               | nm)           |          |      | <del>  </del> | rial                |                  |               | of Bas  | :     |
| ☐ Scn                              |  | ug                         | <u> </u>               | <u> </u>                         |                           | /2-57                       | <u> </u>      | 27 0               | -           | 87               |               |          |      | PVC           |                     | ripemo           | 576- 6        | mor (   | دوق   |
| Oth                                | er, give o   | letails                    |                        |                                  |                           |                             |               |                    |             |                  |               |          |      |               |                     |                  |               |         |       |
| 8.3 Line                           | r Seal (Pa   |                            | Intern                 | 12                               |                           |                             | . 1           |                    |             | ٦                |               |          |      | LOG           |                     |                  |               |         |       |
| Mate                               | erial  |                            | Dian                   | n Met                            |                           |                             |               |                    |             |                  |               |          |      |               | ٠                   | Description of   | f Material    |         |       |
| •                                  |  |                            |                        |                                  | ity                       | 8:16                        |               | 7:59               | 75          | 9                |               |          |      |               |                     |                  |               |         |       |
| O TE NO                            | T i n  | TI I PD U                  |                        | L                                |                           |                             |               |                    |             | ┙╽               |               | +        |      | -             |                     |                  |               |         |       |
| 9. IF NO<br>Meth                   |  | Depth                      | Length                 |                                  |                           |                             |               |                    |             | ٦                |               | $\dashv$ |      | _             |                     |                  |               |         |       |
|                                    |  | (m)                        | (m)                    | (m)                              | (m)                       | Mater                       | ıaı           | (m)                | (m)         | $\exists \mid$   |               | $\dashv$ |      |               |                     |                  |               |         |       |
| ·                                  |  |                            | •                      |                                  |                           |                             |               |                    |             |                  | -             |          |      |               |                     |                  |               |         |       |
| 10. DEV                            | ELOPM  |                            | te metho               | ds and time to                   | aken)                     | Hot                         | ırs           | Min                | ntes        | ۱ ۳              |               |          |      |               |                     |                  | •             |         |       |
| Δ                                  | ir lit   |                            |                        |                                  |                           | 1                           | _             | 1.5                |             | $\dashv \mid$    |               | +        |      | +             |                     |                  | •             |         |       |
|                                    |  |                            |                        |                                  | -                         |                             |               |                    |             | ]                |               | _ _      |      |               |                     |                  |               |         |       |
| 11, PUM<br>Interval                |  | EST (mea                   | 1                      | ts from natur                    | al surface to<br>Discha   |                             | lm)<br>hod of |                    | Draw        | ا ر              |               |          |      | +             |                     |                  |               |         |       |
| From                               | То   | Level<br>(m)               | Test<br>Metho          | Denth                            | Rate                      | Mea                         | suring        | Hours<br>Pumped    | Down<br>(m) |                  |               | _        |      |               |                     |                  |               |         |       |
| (m)                                | (m)  | \ <i>y</i>                 |                        |                                  | , 2,30                    |                             |               |                    | (,          | $\dashv \dagger$ |               |          |      | +             |                     |                  |               |         |       |
|                                    |  |                            |                        |                                  | 1                         |                             | ,             |                    |             | ] [              |               |          |      |               |                     |                  |               |         |       |
| 10.0                               |  |                            |                        |                                  | <u></u>                   |                             |               |                    |             | ┛                |               |          |      |               |                     |                  |               |         |       |
| 12. SAM<br>The provis<br>samples m | sion of the  | Water Reso<br>ained. If an | ources Ac<br>y sample: | et 1997 and Ri<br>s have not bee | egulations<br>en obtained | thereto requ<br>state reaso | ire that :    | strata and w       | ater        | ļ                |               |          |      |               |                     |                  |               |         |       |
|                                    |  |                            |                        |                                  |                           |                             | ,             |                    |             | . [              | •             |          | •    |               |                     |                  |               |         |       |
| As the per                         | son respon   | sible for th               | e work ca              | arried out on t                  | his well I a              | dvise that 11               | has bee       | n completed        | <br>I       | ,                | <del></del> . |          |      |               |                     |                  |               |         |       |
|                                    |  |                            |                        |                                  |                           |                             |               |                    |             | ļ                |               | _        |      |               |                     |                  |               |         |       |
|                                    |  |                            |                        |                                  |                           |                             |               |                    | /           | Ĺ                |               |          |      |               |                     |                  | <del></del>   | •       |       |
|                                    |  |                            |                        | ogether w<br>well locat          | ith<br>ion plan           |                             |               | dustries<br>ry Com |             | ₹eso             | ources !      | SA       |      |               |                     |                  | 7030          | 705     |       |
| Willin                             | 14 days  | of com                     | oletion                | to                               |                           | 23 Cc                       | nyngl         | ham Stre           | et          |                  |               | , .      |      | UNIT N        | <u>I I</u><br>IUMRE | <br>:R           | 1030          | 103     |       |
|                                    |  |                            | ٠                      | <del></del>                      |                           | GLE                         | NSIDI         | E SA 506           | 5           |                  |               |          | ٠    | O. HII I      | OWIDE               |                  | - <del></del> |         |       |
|                                    | -  |                            |                        |                                  |                           |                             |               |                    |             | -                |               |          |      |               |                     |                  | -             | -       |       |
|                                    |  |                            |                        |                                  |                           |                             |               |                    |             |                  |               |          |      |               |                     |                  |               |         |       |

| H-4 N- 7000 744   | Obs. Wall No. CHW. FO | DU N - 20112 |
|-------------------|-----------------------|--------------|
| Unit No: 7030 711 | Obs Well No: CHW 59   | DH No: 20113 |

|  |  |  |  | ources i   | Act, 199  |  |  |  |  | -                               |              |                    | ٠                             | 4 2                     |   |                | ite                            |
|--|--|--|--|--|---|--|--|--|--|---------------------------------|--------------|--------------------|-------------------------------|-------------------------|---|----------------|--------------------------------|
| NAME O   |  |  | -  |  |   |  |  |  | l_                                     | ERMIT                           | HOL          | DER<br>G <i>PC</i> | or land occ                   | upier<br>28             | DWLB<br>34, 1                           | c<br>9de/g     | ride                           |
| Name of pla  |  |  |  |  |   |  |  |  |  |                                 |              |                    |                               |                         |   |                | _                              |
| LOCA   |  | _  |  | VISION   | <u> </u>  |  |  |  |  |                                 |              |                    |                               |                         | 6422                                    |                |                                |
| Date of Su   | irvev  | 1/9/   | 104  | Su   | rveved h  | <i>SA</i>  | Wate   | Meth   | od O                                   | المراكب                         | _            | - 1                |                               |                         | FICATION                                |                |                                |
| SPS/COC  |  |  |  |  |   |  |  | 1.100  |  | _                               | NE 54        | - 1                |                               |                         | l Lease No:                             |                |                                |
| <b>≅</b> ∕, GDA  | 4 94/W   | VGS84  | <u> </u>   | 4  | 87.   | 258  |  |  | _                                      | □ zo:                           | NE 53        |                    |                               |                         | ID                                      |                |                                |
| □ AGE  | O 66/8   | 4  |  | 6  | 242   | 252  | 2  |  | 1 '                                    | zo:                             | NE 52        |                    |                               |                         | chan                                    |                |                                |
| . SUMMA  | RY (P  | lease tic  | k approj   | oriate be  | oxes ana  | l comp   | lete all i   | relevant d   | letails)                               |                                 |              |                    |                               |                         |   |                |                                |
| ate work C   |  | nced   | <i>30/3</i><br>Well <b>□</b>   | 104  |   | Deepen   |  | •••••••  | <br>Enlarge                            |                                 | Comp         | leted              | Rehabilitat                   |                         | •                                       |                |                                |
|  |  |  | _  |  |   |  |  | number   |  | _                               |              |                    |                               | _                       | *************************************** | Duckiiii       |                                |
| this an Ex   | cisting v  | well? YE   | S7NO if  | ves pleas  | e quote v   | well nu  | mber or  | mark loca  | ation on                               | map                             |              |                    |                               |                         |   |                |                                |
|  |  |  | -  | -  |   |  |  |  |  |                                 |              |                    |                               |                         |   |                | •••••                          |
|  | _  |  |  |  |   |  |  |  |  |                                 |              |                    | evel                          | (m)                     | Final Yi                                | eld            | (L/sec)                        |
| DRILLIN<br>1 Constru   |  |  | - If no  | a drilled  | l well, ple   | ease cor   |  |  |  |                                 |              |                    | ural surface t                | o neores!               | 0.1 m)                                  |                |                                |
| .i Construi  | LIGHT  | Actains  | Drilling   |  |   |  | 0.2 1  | water Cut  |  | er Cut                          | T            | ding               |                               | Hole                    |   |                | T                              |
|  | To '   | Diam .<br>(mm)   | Cable<br>Rotary<br>Down<br>Hamm  | Auger,<br>Hole   | (Air.   | i Used<br>Water,<br>Type)  |  | Date   | From (m)                               | To (m)                          |              | iter<br>vel        | Estimated<br>Yield<br>(L/sec) | Depth<br>at Test<br>(m) | Casing at<br>Test<br>(m)                | Test<br>Method | Salinity<br>(mg/L) or<br>Taste |
| 0 7  | · 7  | 135  |  | ary  | _//.  |  |  |  |  | ļ                               |              |                    |                               |                         |   |                |                                |
| .  |  |  | Mug  | eř   | (Rio  | -M3)   | +  | +  |  |                                 | <del> </del> |                    |                               |                         |   | -              |                                |
|  |  |  |  |  |   |  |  |  |  |                                 |              |                    |                               |                         |   |                |                                |
| CASING   |  | IN WEL   |  |  |   |  |  | •  |  |                                 |              |                    |                               |                         |   |                | ·                              |
| 1 Dimensi<br>From<br>(m)   | To<br>(m)  | Interna<br>Diam.<br>(mm)   | S S  |  | Welded Co<br>P, PVC, et   |  | 7.3 Casi<br>Yes No   | rg Cemen<br>From   | n T                                    |                                 | ment<br>ags) | Wat<br>(litre      |                               | her<br>itives           | Cementing<br>Method<br>Used             |                | Comments                       |
|  | 5.5  | 80   |  | PVC  | <u> </u>  |  | <u> </u>   | $\rightarrow$  | 9                                      | 4                               |              |                    |                               |                         | Gravit                                  | 4              |                                |
|  |  |  |  |  |   |  |  |  | <u> </u>                               |                                 |              | _                  | <del></del> .                 |                         |   | /   _          |                                |
|  |  |  |  |  |   |  |  |  | +                                      | _                               | •            |                    | <u> </u>                      |                         |   |                |                                |
| . CONSTE   | RUCTI  | ION AT P   | RODUC  | TION L   | <u>EV</u> EL  |  |  |  |  | '                               |              |                    |                               |                         | -                                       |                |                                |
| I Method   |  |  | 8.2 Scree  | n or Casi  | ng (*lf v   | ariable :  | perture :  | screen use   | d give lir                             | nits)                           |              |                    |                               |                         |   |                |                                |
| Open H   | lole   |  |  |  |   | From   | To   | Aper   |  | ner Diam                        | Outer        | Diam               |                               |                         |   |                |                                |
| - ;  |  | - 1-   |  | Туре   |   | From<br>(m)  | To<br>(m)  |  | ure* Ir                                | mer Diam<br>(mm)                | Outer<br>(m  | Diam<br>im)        | Mate                          |                         | Trade Na                                |                | of Base                        |
| Slotted  | -  | ,  -   | ک  | Туре   |   |  | (m)  | (m   | ure* Ir                                |                                 |              |                    | PVC                           |                         | Trade Na                                |                |                                |
| Slotted Screen(  | (s)  |  |  |  |   | (m)  | (m)  | (m   | ure* Ir                                | (mm)                            |              |                    |                               |                         |   |                | of Base                        |
| Slotted Screen(  | (s)<br>give de   | tails:   |  | `C   | ivel Pack   | <b>2</b> ∙ }   | (m)  | (m   | ure* Ir                                | (mm)                            |              | ım)                | PVC                           |                         |   |                | of Base                        |
| Slotted Screen(  | (s)<br>give de<br>al (Pacl   | tails:   | Internal<br>Diam   | 8.4 Gra  | od of   | (m)  S- 2  ing  Gravet I   | (m) 7·7  | From   | To                                     | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         |   | acote.         | of Base                        |
| Slotted Screen( Other, )   | (s)<br>give de<br>al (Pacl   | tails:   | Internal   | 8.4 Gra  | nod of<br>ement   | ing<br>Gravet I  | ' 7.7  | From (m)   | To (m)                                 | (mm)<br><b>&amp;C</b>           | ORMA         | m)                 | PVC                           |                         | Pipem                                   | acote.         | of Base                        |
| Slotted Screen( Other, )   | (s)<br>give de<br>al (Pacl   | tails:   | Internal<br>Diam   | 8.4 Gra  | od of   | (m)  S- 2  ing  Gravet I   | ' 7.7  | From (m)   | To                                     | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Pipem                                   | acote.         | of Base                        |
| Slotted Screen( Other, ) Liner Se Material   | (s) give de  | ctails:  | Internal<br>Diam<br>(mm)   | 8.4 Gra  | nod of ement  | ing<br>Gravet I<br>Mesh  | rassing Size   | From (m)   | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Pipem                                   | acote.         | of Base                        |
| Slotted Screen( Other, ) Liner Se Material   | give de  | beatils:  Depth (m)  LLED WE Depth I   | Internal<br>Diam<br>(mm)   | 8.4 Gra  | nod of<br>ement   | (m) S-2 ing Gravet I Mesh  | ' 7.7  | From (m)   | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Pipem                                   | acote.         | of Base                        |
| Slotted Screen( Other, ) Liner Se Material   | give de  | beatils:   | Internal Diam (mm)  ELL ength  | 8.4 Gra  Mett Place  G **C  Width  | Diam  | ing Gravet I Mesh  | Passing Size   | From (m)   | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Pipem                                   | of Material    | of Base                        |
| Slotted Screen( Other, ) 3 Liner See Material  IF NOT A Method   | (s) give de al (Pac) A DRII  | bepth (m)  LLED WF Depth (m)  LLED WF  | Internal Diam (mm)  ELL ength (m)  | 8.4 Gra  | Diam (m)  | (m) S-2 ing Gravet I Mesh  | Passing Size   | From (m)   | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Pipem                                   | acote.         | of Base                        |
| Slotted Screen( Other, ) 3 Liner See Material  IF NOT A Method   | (s) give de al (Pac) A DRII  | bepth (m)  LLED WF Depth (m)  LLED WF  | Internal Diam (mm)  CLL ength (m)  methods a                                 | 8.4 Gra  | Diam (m)  | ing Gravet I Mesh  | Passing Size   | From (m)   | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Pipem                                   | of Material    | of Base                        |
| Slotted Screen( Other, ) 3 Liner Se. Material  IF NOT A Method   | (s) give de al (Pac) A DRII  | betails:  Depth (m)  LLED WF Depth (m)  ENT (State   | Internal Diam (mm)  ELL ength (m)  methods a                                 | 8.4 Gra  | Diam (m)  | ing Gravet I Mesh  | Passing Size   | From (m)   | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Pipem                                   | of Material    | of Base                        |
| Scheen( Other, ) 3 Liner Se. Material  IF NOT A Method   | (s) give de al (Pacl   | Depth (m)  LLED WF Depth (m)  ENT (State Meth  | Internal Diam (mm)  ELL ength (m)  methods a                                 | 8.4 Grands Method Place Grand Width (m)  | Diam (m)  | ing Gravet I Mesh Sec.   | Passing Size   | From (m)   | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Slotted Screen( Other, ) 3 Liner Se: Material  IF NOT A Method  DEVEL DE | (s) give de cal (Pacl A DRII  OPME   | LLED WE Depth (m)  LLED WE Depth L (m)  ENT (State Meth  | Internal Diam (mm)  ELL ength (m)  methods a                                 | 8.4 Gra  Meth Place  Gra  Width (m)  und time ta   | Diam (m) '  | (m) Sing Gravet I Mesh Mesh  Donearest   | Passing Size  Passing Size  Oung leerial  Ouns  Ouns   | From (m)  From (m)  From (m)                               | To (m) To (m) To Draw                  | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Slotted Screen( Other, ) 3 Liner Se: Material  IF NOT A Method  D. DEVEL.  | (s) give de al (Pacl A DRII  | LLED WF Depth (m)  LLED WF Depth (m)  ENT (State Meth  | ELL ength (m)  methods a od  | 8.4 Grandett Place Grandett Place Grandett Grand | Diam (m) ·  | (m)  S- 2  ling  Gravel I  Mesh  Mesh  Ma  D nearest   | Passing Size   | From (m)   | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Slotted Screen( Other, ) 3 Liner Se: Material  IF NOT A Method  D. DEVEL.  | A DRIII  | LLED WE Ocpth (m)  LLED WE Ocpth (m)  ENT (State Methods of Carter | Internal Diam (mm)  ELL ength (m)  methods a od  rements for                 | 8.4 Gra  Meth Place  Gra  Width (m)  and time ta  Pump Depth   | Diam (m) · · · · · · · · · · · · · · · · · · ·                                      | (m)  S- 2  ling  Gravel I  Mesh  Mesh  Ma  D nearest   | Passing Size   | From (m) From (m) From (m) Hours                           | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Slotted Screen( Other, ) 3 Liner Se: Material  IF NOT A Method  D. DEVEL.  | A DRIII  | LLED WE Ocpth (m)  LLED WE Ocpth (m)  ENT (State Methods of Carter | Internal Diam (mm)  ELL ength (m)  methods a od  rements for                 | 8.4 Gra  Meth Place  Gra  Width (m)  and time ta  Pump Depth   | Diam (m) · · · · · · · · · · · · · · · · · · ·                                      | (m)  S- 2  ling  Gravel I  Mesh  Mesh  Ma  D nearest   | Passing Size   | From (m) From (m) From (m) Hours                           | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Slotted Screen( Other, 3 Liner Se: Material  IF NOT A Method  D. DEVEL  D. DEVEL  C. PUMPII Interval Test rom T m) (n  | A DRIII  | LLED WE Depth (m)  LLED WE Depth L (m)  ENT (State Method)  Water Level (m)  | Internal Diam (mm)  GLL ength (m)  methods a od  C  rees Act 15              | 8.4 Gra  Meth Place  Gra  Width (m)  wind time ta  Pump Depth (m)  | Diam (m) · · · · · · · · · · · · · · · · · · ·                                      | (m)  Sing  Gravel !  Mesh  Mesh  D nearest  rge  | Passing Size  Passing Size  One of the size of the siz | From (m)  From (m)  From (m)  Hours  Pumped                | To (m)  To (m)  To (m)  To (m)         | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Screen( Cother, ) Cother,  | A DRIII  | LLED WE Water Resourced (m)  | Internal Diam (mm)  CLL Length (m)  methods a od  Clumements fr  Test Method | 8.4 Grat  Meth Place  Width (m)  Width (m)  Pump Depth (m)   | Diam (m)  | (m)  Sing  Gravel I  Mesh  Mesh  D nearest  Fige  N  Mesh  Litit  Ma   | Passing Size  Passing Size  On 1m)  Identified of leasuring sischarge  | From (m)  From (m)  From (m)  From (m)  At 7               | To (m)  To (m)  To (m)  To (m)  To (m) | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Screen( Cother, 3 Liner Se: Material  IF NOT A Method  D. DEVEL  L. PUMPIR Interval Test from T (m) (n  L. SAMPL we provision mples must t   | A DRIII  | LLED WE Copth (m) LLED WE COPT | Internal Diam (mm)  ELL Length (m)  methods a od  Test Method                | Width (m)  Width (m)  Width (m)  Width (m)  Width (m)  | Diam (m) · · · · · · · · · · · · · · · · · · ·                                      | (m)  Sing  Gravel I  Mash  Mash  Do nearest  Figure M  Mash  Do nearest  Existing M  Mash  | Passing Size  Passing Size  Online  On | From (m)  From (m)  From (m)  From (m)  All Hours Pumped   | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Slotted Screen( Other, ) 3 Liner Se. Material  IF NOT A Method  D. DEVEL  L. PUMPIR Interval Test rom T (m) (n)  L. SAMPL the provision imples must the person a   | (s)  give de  A DRII  COPME  C | LLED WE Copth (m) LLED WE COPT | Internal Diam (mm)  ELL Length (m)  methods a od  Test Method                | Width (m)  Width (m)  Width (m)  Width (m)  Width (m)  | Diam (m) · · · · · · · · · · · · · · · · · · ·                                      | (m)  Sing  Gravel I  Mash  Mash  Do nearest  Figure M  Mash  Do nearest  Existing M  Mash  | Passing Size  Passing Size  Online  On | From (m)  From (m)  From (m)  From (m)  All Hours Pumped   | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Screen( Cother, ) 3 Liner Se: Material  IF NOT A Method  D. DEVEL  L. PUMPII Interval Test  (m)  C. SAMPL  the provision imples must the person a described ab   | A DRIII  OPME  OPME  Company  Opme   | LLED WE Depth (m)  ENT (State Method  | Internal Diam (mm)  ELL ength (m)  methods a od  Test Method                 | Width (m)  Width (m)  Order natura  Pump Depth (m)  Order not bee  | Diam (m) '  Lisurface to Dischau Rate (L/sec to | (m)  Sing  Gravel 1  Mash  Mash  Department of the state real stat | Passing Size  Passing Size  One of the size of the siz | From (m)  From (m)  From (m)  Hours Pumped                 | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | ORMA         | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Screen( Screen( Cher, ) Screen | OPME OPME  COPME   LLED WE Copth (m) LLED WE Copth (m) LLED WE Copth (m) L Copth (m)  | methods a od  Test Method  mess Act 15 samples ha                            | Width (m) width (m) Pump Depth (m) Pump Depth (m) where we not been sold out on the control of t | Diam (m) ·  Lisurface to Discharance (L/sec   | (m)  Sing Gravel 1  Mash Mash  Do nearest  Fige M  M  M  M  M  M  M  M  M  M  M  M  M  | Passing Size  Passing Size  One of the size of the siz | From (m)  From (m)  From (m)  From (m)  From (m)  From (m) | To (m)                                 | (mm) & C                        | DRMA'        | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |
| Slotted Screen( Other, ) 3 Liner Se: Material  IF NOT A Method  D. DEVEL  L. PUMPII Interval Test from T (m) (n)  2. SAMPL he provision mples must the person a described ab   | OPME OPME  COPME   LLED WE Copth (m) LLED WE Copth (m) LLED WE Copth (m) L Copth (m)  | methods a od  Test Method  mess Act 15 samples ha                            | Width (m) width (m) Pump Depth (m) Pump Depth (m) width out on the residual out  | Diam (m) ·  Lisurface to Discharance (L/sec   | (m)  Sing Gravel 1  Mash Mash  Do nearest  Fige M  M  M  M  M  M  M  M  M  M  M  M  M  | Passing Size  Passing Size  One of the size of the siz | From (m)  From (m)  From (m)  From (m)  From (m)  From (m) | To (m)                                 | (mm)<br><b>&amp;C</b><br>13. F( | DRMA'        | TION               | PVC                           |                         | Description o                           | of Material    | of Base                        |

| DI                |                        | RS W                     | ELL                     | CONS                       | OUTH<br>TRUC<br>s Act, 19   | TION                  |                       |   |              |                   | 1. P     | ERM            | IIT N               | o: 6             | 4 2              | 26             |                | Site                                    |
|-------------------|------------------------|--------------------------|-------------------------|----------------------------|-----------------------------|-----------------------|-----------------------|---|--------------|-------------------|----------|----------------|---------------------|------------------|------------------|----------------|----------------|---|
|                   |                        |                          |                         |                            |                             |                       |                       | 10: <i>342</i>                          |              | ERM               | IT I     | HOLI           | DER o               | r land occ       | upier            | DWLB.          | c<br>Adel      | aide                                    |
|                   |                        |                          |                         |                            |                             |                       |                       |   |              |                   |          |                |                     |                  |                  |                |                | .500/                                   |
|                   | CATIO!                 |                          |                         | ipervision                 |                             |                       |                       | ··············                          |              |                   | ,.,      |                | Τ,                  | ARTER I          | 1 4 3 4 12       | 6427           | <u> </u>       |   |
|                   |                        |                          |                         | S                          | Surveyed                    | by <b>S</b> /         | Mar                   | Meth                                    | 10d <i>Q</i> | وي                | <u>'</u> |                |                     |                  |                  | FICATION       |                |   |
| GPS_C             | COORD                  | NATES                    | s [                     |                            |                             |                       |                       |   | 一 '          | <b>y</b> 2        | ON       | IE 54          | - 1                 |                  |                  |                |                | *************************************** |
|                   | GDA 94/<br>GD 66/      |                          | ·                       |                            | 48                          |                       |                       |   |              | _                 |          | IE 53<br>IE 52 | F                   | ile/Sectio       | n /Parcel        | ID             |                | **********                              |
| • ,               | 1GD 007                | o <del>4</del>           |                         | 1                          | 624                         | 25                    | 22                    |   |              |                   | .OIV     | (E )Z          | l N                 | ame of Pr        | operty           | Chance         | 119            |   |
|                   |                        |                          |                         |                            |                             |                       |                       | l relevant e                            | details)     |                   |          | ·              |                     |                  |                  |                |                |   |
|                   |                        |                          | <b>30</b> ,<br>• Well F | 13/0                       | 4                           | Deepe                 |                       |   | <br>Enlarge  |                   | ork      | Comp           | leted               | Rehabilitat      | 104              |                | Backfill       |   |
|                   | rried out:<br>Replacen |                          |                         | _                          | please que                  | _                     |                       |   | _            | _                 |          |                |                     |                  |                  | ,              |                |   |
|                   | -                      |                          |                         | -                          |                             | -                     |                       |   |              |                   |          |                |                     |                  |                  |                |                |   |
|                   |                        |                          |                         |                            |                             |                       |                       |   |              |                   |          |                |                     |                  |                  |                |                |   |
|                   | m Depth                |                          |                         |                            |                             |                       |                       |   |              |                   |          |                |                     |                  | (m)              | Final Yie      | :ld            | (L/sec)                                 |
|                   | LING D<br>struction    |                          | 11                      | not a dril                 | ed well, p                  | lease co              |                       | Sections: 6.2<br>Water Cut              |              |                   |          |                |                     |                  | to nearest       | 0.1 m)         |                |   |
|                   |                        |                          | 1 ~                     | ing Method<br>able Tool,   |                             | id Used               |                       |   |              | er Cut            |          | Stand          | ding                | Estimated        | Hole             | Casing at      |                | Salinity                                |
| From (m)          | To<br>(m)              | Diam<br>(mm)             | Rot                     | ary Auger,<br>own Hole     | (Aıı                        | , Water,<br>d Type)   |                       | Date                                    | From         | То                | $\dashv$ | Wa<br>Lev      |                     | Yield<br>(L/sec) | Depth<br>at Test | Test<br>(m)    | Test<br>Method | (mg/L) or<br>Taste                      |
|                   |                        |                          | Ha                      | mmer, etc.                 | 1                           |                       | _                     |   | (m)          | (m)               | - 1      | (n             | 1)                  | (12500)          | (m)              | (10)           |                | Tasic                                   |
| 0                 | 17.07                  | /35                      |                         | tary                       | IRio                        | / Q/                  | -1                    |   |              | <b>-</b>          | -        |                | -                   |                  |                  |                |                |   |
|                   |                        |                          | 774                     | gez                        | (8/0                        |                       | <del>'</del>          |   |              |                   |          |                |                     |                  |                  |                |                |   |
|                   |                        |                          |                         |                            |                             |                       |                       |   |              |                   |          |                |                     |                  |                  |                |                |   |
| 7. CAS            | NG LEF                 | T IN WI                  |                         | 7.2 Type                   |                             |                       | 7200                  | sing Cemen                              | utad.        | <del></del>       |          |                |                     | ÷                |                  | <del> </del>   |                | <del></del> ,                           |
| From              | To                     |                          | rnai                    |                            | nt, Welded (                | Collar.               | Yes 1                 | Era                                     | 1            | . T               | Сеп      | nent           | Water               | 0                | ther             | Cementing      | ·              |   |
| (m)               | (m)                    | (m                       | am.<br>m)               |                            | FRP, PVC, o                 | tc.                   | <u> </u>              | (m)                                     |              | _                 | (ba      | gs)            | (litres             | , Add            | itives           | Method<br>Used |                | Comments                                |
| 0                 | 15.0                   | 7 80                     | <del>2  </del>          | PV                         | <u>c</u>                    |                       |                       | <u> </u>                                |              | $\vdash$          |          |                |                     |                  |                  | Gravit         | <del>/</del>   |   |
|                   | + .                    | +                        |                         |                            |                             |                       |                       | <del></del>                             |              |                   |          |                |                     |                  |                  | $\overline{}$  |                |   |
|                   |                        |                          |                         |                            |                             |                       |                       |   |              |                   |          |                |                     |                  |                  |                |                |   |
| 8. CON<br>8.1 Met |                        | ION AT                   | -T                      | UCTION                     |                             |                       |                       |   | d also tie   | -:                |          |                |                     |                  |                  |                |                |   |
|                   | en Hole                |                          | 0.2 30                  | Type                       | asing (*II                  | Fron                  | n T                   | o Aper                                  | ture* Ir     | ner Dia           | m        | Outer          |                     | Mate             | rial             | Trade Nar      | ne             | Completion                              |
| SIc SIc           | tted Casir             | ng                       |                         | SC                         |                             | /5·(m)                |                       | n) (m                                   |              | (mm)<br><b>?O</b> | $\top$   | (m:            | m)                  | PVC              |                  | Pipema         | 5 30           | of Base                                 |
| ☐ Sci             |                        |                          |                         |                            |                             |                       |                       |   |              |                   |          |                | -                   |                  |                  |                |                | 7-                                      |
|                   |                        |                          |                         |                            |                             |                       | ······ <u>·</u>       | *************************************** |              | 1,,               |          | D. 4 40        | DION I              |                  | •••••            |                |                |   |
|                   | r Seal (Pa             | Depth Depth              | Intern                  | nal M                      | Gravel Paci<br>ethod of     |                       | Passing               | From                                    | То           | 1 <u> </u>        | rom      |                | <u>ΓΙΟΝ Ι</u><br>Το | .0G              | <del></del>      |                |                |   |
|                   | erial                  | (m)                      | Diar<br>(mm             |                            | acement                     |                       | h Size                | (m)                                     | (m)          |                   | (m)      |                | (m)                 |                  |                  | Description o  | i Malerial     |   |
|                   |                        | ·                        | ┼                       | Urc                        | arity                       | 8                     | 16                    | 14-07                                   | <u> 7.07</u> | ┨├                |          | +              |                     | +                |                  |                |                |   |
| 9. IF NO          | OT A DR                | LLED V                   | WELL                    |                            |                             |                       |                       |   |              | ' ├─              |          |                |                     | +                |                  |                |                |   |
| Med               | od                     | Depth<br>(m)             | Length<br>(m)           | Width<br>(m)               | Diam<br>(m)                 |                       | ining<br>laterial     | From (m)                                | To<br>(m)    |                   |          |                |                     |                  |                  |                |                |   |
|                   |                        |                          |                         |                            |                             |                       |                       |   |              |                   |          |                |                     |                  |                  |                | •              |   |
| 10 002            | //21 ODD               | ENT (C                   |                         | 1                          |                             |                       |                       |   |              | ┚┝─               | -        | +              |                     | -                | ,                |                |                |   |
| 10. 176.          | ELOFWI                 |                          | ethod                   | ds and time                | накеп)                      | Т                     | Hours                 | ' Mi                                    | nutes        | ı H               |          |                |                     | +                |                  | ·····          |                | -                                       |
| A                 | irlif                  | ted                      |                         |                            |                             |                       |                       | /5                                      | _            |                   |          |                |                     |                  |                  |                |                |   |
| 11 DIN            | IDING T                | FST /ma                  |                         | ** fram                    | ural surface                |                       |                       |   |              | <sup>」</sup>      |          |                |                     | <del> </del>     |                  | <u> </u>       |                |   |
|                   | Tested                 | Water                    | Test                    | Pum                        | p Disch                     | arge                  | Method o              |   | Draw         | 1                 |          | _              |                     |                  |                  |                | ,              |   |
| From<br>(m)       | To<br>(m)              | Level<br>(m)             | Metho                   |                            |                             |                       | Measuma;<br>Discharge | g   Pummed                              | Down<br>(m)  |                   |          |                |                     |                  |                  |                |                |   |
|                   |                        |                          |                         |                            |                             |                       |                       |   |              |                   |          |                |                     |                  |                  |                |                |   |
|                   |                        |                          | -                       | _ -                        | <u> </u> -                  | _                     |                       | -                                       | <b> </b>     | _                 |          | _ _            |                     | -                |                  |                |                |   |
| 12. SAN           | 1PLES                  |                          | !                       | _!                         |                             |                       |                       |   | l            | ¹                 |          | +              |                     |                  |                  |                |                |   |
| The provi         | sion of the            | Water Res<br>uned. If ar | sources Ac<br>ny sample | t 1997 and<br>s have not b | Regulations<br>seen obtaine | thereto<br>d state re | require the           | at strata and v                         | valer        | -                 |          |                |                     |                  |                  |                |                |   |
|                   | •                      |                          |                         |                            |                             | ·····                 |                       | een complete                            |              |                   |          | -              |                     |                  | •                |                |                |   |
| as describ        | ed above:              |                          |                         |                            |                             |                       |                       |   |              |                   |          | #              |                     |                  |                  |                |                |   |
| D 401             |                        | Driller                  |                         | og ther                    |                             |                       |                       | Date /                                  |              |                   |          |                |                     |                  |                  | f              |                |   |
| Mater             |                        | polect                   | ed and                  | well loca                  | with<br>ation pla           | n Co<br>23            | ore Lib<br>Conyr      | Industrie:<br>rary Com<br>igham Str     | plex<br>eet  | esoura            | es S     | SA             |                     | UNIT N           | ILIMADE          | D              | 7030           | 712                                     |
|                   |                        |                          |                         |                            |                             | G                     | LENSI                 | DE SA 50                                | 65           |                   |          |                | •                   | ULTER IN         | OMIDE            | * L            |                |   |

Unit No: 7030 718 Obs Well No: CHW 61 DH No: 201141

| DI               |                       | RS W           | ELL            | OF SO<br>CONST<br>Resources             | RUCT                     | <b>ION</b>      |                        |                     |              |                 | 1. F        | PERM           | IT NO            | o: 6             | 42                     | 3 2                 |            | Site        |                    |
|------------------|-----------------------|----------------|----------------|---|--------------------------|-----------------|------------------------|---------------------|--------------|-----------------|-------------|----------------|------------------|------------------|------------------------|---------------------|------------|-------------|--------------------|
| NAME             | E OF DE               | RILLER         | C.             | Sheil                                   |                          | Li              | cence N                | 342                 | <u> </u>     | ERN             | AIT I       | HOLE           | DER o            | r land occ       | upier                  | DWLB                | C          |             |                    |
|                  |                       |                |                | , |                          |                 |                        |                     | 1_           | ostal .         | Addre       | ss             | JP.              | o Bo             | × 2                    | 2834,               | Ack        | 9/91        | de                 |
|                  |                       |                |                | upervision                              |                          |                 |                        |                     | 1            |                 |             |                |                  |                  |                        | •                   | Post Co    | ode .5.     | 00/                |
|                  | CATIO                 |                |                |   |                          |                 |                        |                     | 1.           |                 |             |                |                  |                  |                        | 642                 |            |             |                    |
| Date of          | f Survey              | 1/9            | 104            | Su                                      | rveyed b                 | y . <b>//</b>   | Wat                    | <b>€</b> ∴ Meth     | od <b>(</b>  | GP.             | یکر         | <del></del>    | - 1              |                  |                        | FICATION            |            |             | ************       |
|                  | OORD                  |                | · [            |   | 1872                     | 7/7             | ,                      |                     |              |                 |             | IE 54          | Н                | undred or        | Pastora                | l Lease No:         |            |             |                    |
|                  | GDA 94/<br>NGD 66/    |                | -              |   |                          |                 | _                      |                     | _            | <u>.</u>        |             | NE 53<br>NE 52 |                  |                  |                        | ID                  |            |             |                    |
|                  |                       |                |                |   | <u> 242</u>              |                 |                        |                     |              |                 |             |                | . N              | ame of Pr        | roperty                | Chan                | 11/9       |             |                    |
| 5. SUM.          | MARY (                | Please ti      | ick app        | ropriate be<br>30/3/0                   | oxes and                 | comp            | lete all               | relevant d          | letails)     | _               |             |                |                  | an.              | 12/04                  | 2                   |            |             |                    |
|                  | rk Comm<br>rried out: |                | Well [         |   |                          | Deeper          |                        |                     | <br>Enlarge  | Date            | work<br>]   | Compl          | eted             | Rehabilitat      | <i>⊙χ.у/.</i> .<br>e □ | <u>.</u>            | Backfil    | ı 🗆         | ,                  |
|                  |                       |                |                |   |                          | -               |                        |                     |              | •••••           |             |                |                  |                  |                        |                     |            |             |                    |
|                  |                       |                |                |   |                          |                 |                        |                     |              |                 |             |                |                  |                  |                        |                     |            |             |                    |
|                  |                       |                |                | ii yes piease(m),                       |                          |                 |                        |                     |              |                 |             |                |                  | /el              |                        | Final Yie           | eld        |             |                    |
|                  | LING D                |                |                | not a drilled                           |                          |                 |                        |                     |              |                 |             | -              |                  |                  | .,,(111)               |                     |            |             | 3300)              |
| 6.1 Con:         | struction             | Details        |                |   |                          |                 | 6.2                    | Water Cut           | Details (1   | meası           | лете        | nts froi       | n natus          | al surface       | to nearest             | 0.1 m)              |            |             |                    |
| From             | То                    | Diam           | C              | ling Method<br>able Tool,               |                          | Used            |                        | Date                | Wat          | er Cut          |             | Stand<br>Wat   |                  | Estimated        | Hole<br>Depth          | Casing at           | Test       |             | Salinity           |
| (m)              | (m)                   | (mm)           | D              | tary Auger,<br>own Hole                 |                          | Water,<br>Type) |                        | Date                | From<br>(m)  |                 | To<br>m)    | Levi           | el               | Yield<br>(L/sec) | at Test<br>(m)         | Test<br>(m)         | Metho      |             | (mg/L) or<br>Taste |
| 0                | 40                    | /35            |                | mmer, etc.                              | Hu                       | d               | +                      |                     | (m)          | +"              | m)          |                | $\dashv$         |                  |                        | <del> </del>        |            | +           |                    |
|                  | _`_                   |                |                | iger                                    |                          | -1/2            | 9                      |                     |              | 1               |             |                |                  |                  |                        |                     |            |             |                    |
|                  |                       | ļ              | ┼─'            |   |                          |                 | —                      |                     |              | +               |             |                |                  | <del></del>      |                        |                     |            | +           |                    |
| 7. CASI          | NG LEF                | T IN WE        | LL             |   |                          |                 | <del></del>            |                     |              | .               |             |                |                  | •                |                        |                     |            |             |                    |
| 7.1 Dim          |                       |                | - 13           | 7.2 Type                                |                          |                 | 7.3 Cas                | ing Cemen           | ted          |                 |             |                |                  |                  |                        |                     |            |             |                    |
| From<br>(m)      | To<br>(m)             | Inter<br>Dra   | m.             | Swell Joint,<br>Steel, FR               | Welded Co<br>RP, PVC, et |                 | Yes N                  | o Fron              |              | o<br>n)         |             | nent<br>igs)   | Water<br>(litres |                  | ther<br>litives        | Cementing<br>Method |            | Сотп        | nents              |
| 0                | 38                    | (mı            |                | PV                                      | <u></u>                  |                 | <b>B</b> C             |                     | ی            | _               |             |                |                  | <del> </del>     | •                      | Used<br>Uravin      | 4./        |             |                    |
|                  | Ţ,                    |                |                |   |                          |                 |                        |                     |              |                 |             |                |                  |                  |                        | tremm               | le_        |             |                    |
|                  | +                     |                | $\dashv$       |   |                          |                 |                        |                     |              | $\dashv$        |             |                |                  |                  |                        | -                   | +          |             |                    |
| 8. CON           | STRUCT                | ION AT         | PROD           | UCTION L                                | EVEL                     |                 |                        |                     |              |                 |             |                |                  |                  | •                      |                     |            |             |                    |
| 8.1 Meth         |                       |                | 8,2 Sc         | creen or Casi                           | ing (*If v               | ariable<br>From |                        |                     |              | mits)<br>aner D | ıam İ       | Outer 1        | Diam             |                  |                        |                     |            | Com         | pletion            |
|                  | en Hole<br>ited Casii |                |                | -S-C                                    |                          | (m)             | (m                     | ) (m                | m)           | (mm             |             | (mn            |                  | Mate             |                        | Trade Nar           |            | of          | Base               |
| ☐ Scr            |                       | ıg             | -              |   | ,                        | <u> </u>        | <del></del>            | 2 0.3               | +            | 80              | +           |                |                  | PVC              | ,                      | Pipemo              | 25/6/      | 500         | Cap                |
| □ Oth            | ner, give c           | letails:       |                |   |                          |                 |                        |                     |              |                 |             |                |                  |                  |                        |                     |            |             |                    |
|                  | r Seal (Pa            | cker)          | Interr         | 8.4 Gra                                 | avel Pack                | ng              |                        | r                   |              | <u> ا</u>       | 3. FO       | RMAT           |                  | .OG              |                        |                     |            |             |                    |
| Mat              | erial                 | Depth<br>(m)   | Diai<br>(mir   | m Meti                                  | hod of<br>ement          |                 | Passing<br>Size        | From .<br>(m)       | To<br>(m)    |                 | From<br>(m) | ١              | To<br>(m)        |                  |                        | Description o       | f Material |             |                    |
|                  | -                     |                | ()IIII         |   | vity                     | Z               | :/6                    |                     |              |                 |             |                | -                |                  |                        |                     |            |             |                    |
|                  |                       |                |                |   | $\bigcirc$               |                 |                        |                     |              | ] [_            |             | <u> </u>       |                  | <u> </u>         |                        |                     |            |             |                    |
| 9. IF NC<br>Meth | OT A DR               | Depth          | VELL<br>Length | Width                                   | Diam                     | L               | ining                  | From                | То           | 7 H             |             | +              |                  | +                |                        |                     |            |             |                    |
|                  |                       | (m)            | ·(m)           | (m)                                     | (m)                      | M <sub>4</sub>  | atenal                 | (m)                 | (m)          | ┧┝              |             | +-             |                  | +                |                        |                     |            |             |                    |
|                  |                       |                |                |   |                          |                 |                        |                     |              | jĘ              |             |                |                  |                  |                        |                     |            |             |                    |
| 10, DEV          | ELOPM                 |                | ate metho      | ods and time to                         | aken)                    |                 | Uor                    | 140                 |              | ╮├              |             | - -            |                  |                  |                        |                     |            |             |                    |
|                  | A                     | rlif           |                |   |                          |                 | Hours                  |                     | O            | ╁┝              |             |                |                  |                  |                        |                     |            | <del></del> |                    |
|                  |                       | - , , , , ,    |                |   | ,                        |                 |                        |                     | <b>-</b>     | ] [             |             | 工              |                  |                  |                        |                     |            |             |                    |
|                  |                       |                | asuremer       | nts from natura                         | $\overline{}$            | -               | •                      |                     | P            | ٦ <u> </u>      |             |                | ,                | 1                |                        | ,                   |            |             |                    |
| From From        | То                    | Water<br>Level | Test<br>Metho  | ~ I nebru                               | Discha<br>Rate           | _   ¥           | Method of<br>Measuring | Pumped              | Draw<br>Down | -               |             | - -            |                  | +                |                        |                     |            |             |                    |
| (m)              | (m)                   | (m)            |                | (m)                                     | (L/sec                   | '   '           | Discharge              |                     | (m)          | ┧┝              |             |                |                  |                  |                        |                     |            |             |                    |
| •                |                       |                |                | <u> </u>                                |                          | +               | <u>-</u>               | 1 .                 |              | 1  -            |             | $\dashv$       |                  | +                |                        |                     |            |             |                    |
|                  |                       |                |                |   |                          |                 |                        |                     |              | ] [             |             |                |                  |                  |                        |                     |            |             |                    |
| 12. SAN          |                       | Water Dec      | ourres A.      | ct 1997 and R                           | egulations               | hereto -        | ronier cha             | t strata and        | vater        |                 |             |                |                  |                  |                        |                     |            |             |                    |
|                  |                       |                |                | es have not bee                         |                          |                 |                        | . ousta 400 V       | - 414.1      | -               |             | +              |                  | -                |                        |                     |            |             |                    |
|                  | ,                     |                |                |   |                          |                 |                        |                     |              | -               |             |                |                  | +                |                        | <del></del>         |            |             | <del></del>        |
|                  | rson respon           | sible for th   | e work c       | arried out on t                         | his well I a             |                 |                        | en complete         | d            | <br>            |             |                |                  | 1                |                        |                     |            |             | <del></del>        |
| _ cotti          | autove.               |                |                |   |                          |                 | •                      |                     |              |                 |             |                |                  |                  |                        |                     | 7          |             |                    |
|                  | of License            |                |                |   |                          |                 |                        | Date /              | /            | L               |             |                |                  |                  |                        |                     |            |             |                    |
| D                | U DEL                 | 到中心            |                | ogether w                               | ith<br>ion nlan          | Pri             |                        | ndustries           |              | esou            | rces        | SA             |                  |                  | T                      |                     | 7854       |             | _                  |
| Willin           | 14 days               | of com         | pletion        | well locat<br>i to                      | -on hian                 | 23              |                        | ary Com<br>gham Str |              |                 |             |                |                  | I INTERE -       | II IB 4 PP T           |                     | 7030       | /18         |                    |
| -                |                       |                |                |   |                          |                 |                        | DE SA 500           |              |                 |             |                |                  | UNIT N           | OMBE                   | .к                  |            |             |                    |

| DI                                      |                        | ERNM.<br>ERS W                                   | ELL                                     | CON  | ST            |                          | Oľ            |                        |   |  |             |          | 1. P          | ERM         | 11T N        | io: 6             |               | 4 2                                     | 3 3                                     |          | Sit          | e                   |                |
|---|------------------------|--|---|--|---------------|--------------------------|---------------|------------------------|---|--|-------------|----------|---------------|-------------|--------------|-------------------|---------------|---|---|----------|--------------|---------------------|----------------|
| NAMI                                    | C OF D                 | RILLER   | . C                                     | Shei   | 7             |                          |               | icence N               | .342  | 25   | PE          | ERN      | 4IT I         | IOL         | DER          | or land           | occ           | upier                                   | DWL                                     | 9C       |              |                     |                |
|   |                        | iobile No  |   |  |               |                          |               |                        |   |  | Pos         | stal .   | Addre         | ss <b>.</b> | PC           | Bo                | X.            | 28                                      | 34, 1                                   | 9de      | 191          | de                  | *******        |
|   |                        | perator if                                       |   |  |               |                          |               |                        |   |  |             |          |               |             | •            |                   |               |   |   | Post     | Code .       | 50                  | 0/             |
|   |                        | N OF W   |   |  | ,             |                          |               |                        |   |  |             |          |               |             |              |                   |               |   | 642                                     |          |              |                     |                |
| Date o                                  | f Survey               | 1/.9   | 101                                     | <u>.</u>                                     | Sur           | rveyed b                 | у <i>S?</i> . | 4War                   | er M  | ethod  | Q           | PS       | 32            |             | .   '        |                   |               |   | ICATION                                 |          |              | ********            | **********     |
| GP\$/C                                  | COORD                  | INATES   | <b>5</b> [                              | -  |               |                          |               |                        |   |  | 7           | ~        | ZON           | E 54        |              | Hundred           | l or          | Pastoral                                | Lease No:                               |          | <b>-</b>     |                     |                |
|   | 3DA 94.<br>AGD 66.     | /WGS84<br>/84                                    | -                                       |  |               | 882                      | -             |                        |   |  |             |          | ZON<br>ZON    |             | ,            |                   |               |   | ID                                      |          |              |                     |                |
|   |                        |  |   |  | - 6           | 52420                    | 23/           | 5                      |   |  |             |          |               | ,           |              | Name of           | Pr            | operty                                  | Chan                                    | 1//9     | <u></u>      |                     |                |
|   |                        | Please t   |   |  |               |                          |               |                        |   |  | ails)       |          |               | •           |              |                   |               |   |   |          |              |                     |                |
|   | ork Comr<br>arried out | nenced   | <i>!!.</i><br>Well                      |  | •••••         |                          |               |                        |   |  |             |          |               | Comp        | leted.       |                   | .XX.<br>itate | . 🗆                                     |   | Back     |              |                     | ;              |
| Is this a                               | Replace                | nent well  | ? <del>VES/</del>                       | —<br>NOify                                   |               | ease quot                | e repl        | aced wel               | l number                                      |  |             |          | •••••         |             |              |                   |               |   |   |          |              | <u> </u>            |                |
|   |                        |  |   |  |               |                          |               |                        |   |  |             |          |               |             |              |                   |               |   |   |          | ••••••       |                     |                |
| Was wel                                 | ll Abando              | ned? ¥   | ES/NO                                   | if yes p                                     | lease         | state me                 | thod          |                        | ~ <b>~</b>                                    | ••••••                                       |             |          |               |             |              |                   |               |   |   |          | •••          |                     |                |
|   |                        | Drilled  |   |  |               | Fin<br>well, ple         |               | pth                    |   |  |             |          |               |             |              | evel              |               | (m)                                     | Final Yi                                | eld      | ••••••       | (L/se               | c)             |
| •                                       | struction              |  | !                                       | r not a d                                    | rillea        | well, ple                | ase co        |                        |   |  |             |          |               |             |              | ıry<br>ural surfa | ce t          | o nearest                               | 0.1 m)                                  |          |              |                     |                |
|   |                        |  |   | lling Meth                                   |               | Fluid                    | Used          |                        |   | T  | Water       |          |               | Stan        | ding         | Estimate          |               | Hole                                    | Casing at                               |          |              | 541                 | inity          |
| From<br>(m)                             | To<br>(m)              | Diam<br>(mm)                                     | Ro                                      | tary Augo                                    | r.            | (Air,                    | Water,        |                        | Date ·  | -  | rom         |          | Го            | Wa<br>Le    |              | Yield             |               | Depth<br>at Test                        | Test                                    |          | st<br>hod    | (mg/                | /L) or         |
| l.                                      |                        |  |   | own Hole<br>ammer, et                        |               | Muo                      | Туре)         |                        |   |  | (m)         |          | m)            | (0          | n)           | (L/sec)           |               | (m)                                     | (m)                                     | ļ        |              | 18                  | Ste            |
| 0                                       | 7.99                   | 1 /35  | _                                       | otac   |               | MY                       |               | $\leftarrow$           |   | +  |             |          |               |             |              |                   |               |   |   |          |              | <del>-</del>        |                |
|   |                        | <del>                                     </del> | 120                                     | igez   | $\dashv$      | (BiO-                    | رك            | 4                      |   | +-   |             |          | $\rightarrow$ |             |              | <u> </u>          | $\dashv$      |   |   |          |              |                     | $\dashv$       |
|   |                        |  |   |  |               |                          |               |                        |   |  |             |          |               |             |              |                   |               | •                                       |   |          |              |                     |                |
| 7. CAS                                  | NG LEI                 | T IN WE  | LL                                      |  |               |                          |               | ,                      |   |  |             |          |               |             |              |                   |               |   |   |          |              |                     |                |
| 7.1 Dim                                 |                        | Inte   |   | 7.2 Type                                     |               |                          |               | 7.3 Ca                 | sing Cerr                                     |  |             |          |               |             | T            | <del></del>       | -             | ····                                    | Cementing                               | ,        |              |                     | <del></del> -1 |
| From<br>(m)                             | To<br>(m)              | Dia  | ım.                                     |  |               | Welded Co<br>P. PVC, etc |               | Yes N                  |   | rom<br>(m)                                   | To<br>(m)   |          | Cen<br>(ba    |             | Wai<br>(litr |                   | Otl<br>Addi   | ner<br>tives                            | Method<br>Used                          |          | C            | omment              | .s             |
| 0                                       | 5.9                    | -  |   | P  | VC            | · · · · ·                |               |                        | J (   | >  | 4           | -        |               |             |              |                   |               |   |   |          |              |                     |                |
|   |                        |  |   |  |               | •                        |               |                        |   |  |             | _        | •             |             |              |                   |               |   |   |          |              |                     |                |
|   |                        |  |   |  |               |                          |               |                        |   |  |             | $\dashv$ |               |             |              | -                 |               | -                                       |   | $\dashv$ |              |                     |                |
| 8. CON                                  | STRUC                  | TION AT  | PROE                                    | OUCTIO                                       | N LI          | EVEL                     |               |                        |   |  |             |          |               |             |              | L                 |               | <u>_</u>                                | •                                       |          |              |                     |                |
| 8.1 Met                                 | hod                    |  | 8.2 S                                   | creen or                                     | Casi          | ng (*if v                |               |                        |   |  |             |          |               |             |              |                   |               |   |   |          |              |                     |                |
|   | en Hole                |  |   | Ту   |               |                          | Fron<br>(m)   | (0                     | 1)  | perture'<br>(mm)                             |             | er D     | )             |             | Diam<br>m)   | ļ                 | 1ater         | iat                                     | Trade Na                                |          | ····         | Completi<br>of Base |                |
| □ Scr                                   | tted Casi              | ng   | <u> </u>                                | SC   |               |                          | ٠٠.           | <del>99 7-</del>       | 99 0  | .2   | 18          | 80       | <u>'</u>      |             |              | PV                | C             |   | <u>Pipom</u>                            | 257C     | - 2          | nd (                | <u>ap</u>      |
|   |                        | details:   |   |  | •             |                          |               |                        | !   | <u>.                                    </u> | !           |          |               |             |              | 1                 | _             | !                                       | -                                       |          | <u> </u>     |                     |                |
|   | r Seal (P              |  | *************************************** | 1  |               | vel Pack                 |               |                        |   | *******                                      |             | 1        | 3. FO         | RMA         | TION         | LOG               |               | *************************************** | *************************************** |          | ***********  |                     | <del></del>    |
| Mai                                     | enal                   | Depth  | Inter                                   |  |               | od of                    |               | l Passing              | From  |  | <b>F</b> o  | Γ        | From          |             | To           |                   | ٠             |   | Description of                          | of Mater | iał          |                     |                |
|   |                        | (m)  | (mı                                     |  | _             | ement                    |               | h Size                 | (m)<br>4.99                                   | -  | m)<br>- 99  | $\vdash$ | (m)           | -           | (m)          |                   |               |   |   |          |              |                     |                |
|   |                        |  |   | +  | įro           | Y TY                     | <u> </u>      | -76                    | 7.74  | 1  | 77          | $\vdash$ |               | _           |              |                   |               |   |   |          | <del>-</del> |                     |                |
| 9. IF NO                                | OT A DR                | ILLED  |   |  |               |                          |               |                        |   | •  |             |          |               |             |              |                   |               |   |   |          |              |                     |                |
| Metl                                    | hod                    | Depth<br>(m)                                     | Lengtl<br>(m)                           | Wid<br>m                                     |               | Diam<br>(m)              |               | uning<br>(aterial      | From<br>(m)                                   |  | To<br>m)    | ,        |               |             |              |                   | •             | •                                       |   |          |              |                     |                |
|   |                        |  |   | 1  | -             |                          |               |                        | <u> </u>                                      | 1  |             |          |               | $\perp$     |              |                   |               |   |   |          |              |                     | ]              |
| to DE                                   | /FLODA                 | 4ENT (C)   |   |  |               | •>                       |               |                        | <u> </u>                                      |  |             | -        |               | +           |              |                   |               |   |   |          |              |                     |                |
| IV. DE                                  | FREUPA                 | MENT (St.  | ate meth<br>thod                        | oos and t                                    | me ta         | ken)                     |               | Hours                  |   | Minute                                       | s           | -        |               | $\dashv$    |              | +                 |               |   |   | -        |              |                     |                |
|   |                        | Airli  | He                                      | 4  |               |                          |               |                        |   | /5   |             |          |               |             |              |                   |               |   |   |          |              |                     |                |
| 44                                      | 4D231.00               | nnem   |   | <u>.                                    </u> |               |                          |               |                        |   |  |             | _        |               | _           |              |                   |               |   |   |          |              |                     | <b></b> ∤      |
|   | MPING Tested           | Water  | T                                       | P  | natura<br>ump | Dischar                  |               | st 0 1m)<br>Method o   | <u>.                                     </u> | <b>—</b>                                     | Draw        | -        |               | ╬           | ·            | -                 |               |   |   |          |              |                     |                |
| From                                    | То                     | Level<br>(m)                                     | Tes<br>Meth                             | D D  | epth<br>m)    | Rate<br>(L/sec           | Ĭ             | Measuring<br>Discharge | Pomp  | S I  | Oown<br>(m) | $\vdash$ |               | +           |              | +                 |               |   |   |          |              |                     |                |
| (m)                                     | (m)                    | (111)  | -                                       | <del>- -</del> `                             | 1117          | (Lasec                   | ,             | Discharge              | +   | +  | 1117        | $\vdash$ |               | +           |              | +                 |               |   |   |          |              |                     |                |
| -                                       |                        |  |   | $\top$                                       |               | † <del></del>            | $\dashv$      |                        | <del> </del>                                  | _  | $\dashv$    |          |               | _           |              | $\dashv$          |               |   |   |          |              |                     |                |
|   |                        | <u> </u>   |   |  |               |                          |               |                        |   |  |             |          |               |             |              |                   |               |   |   |          |              |                     |                |
| 12. SAN                                 |                        | Water Res  | ourses 4                                | Act 1007 -                                   | nd D-         | unletices :              | herer         | Declare 12             | nt ctente c                                   | d wee  |             |          |               |             |              |                   |               | 1                                       |   |          |              |                     |                |
|   |                        | tained. If ar                                    |   |  |               |                          |               |                        | su atii df                                    | #4IC   | •           | $\vdash$ |               | +           |              | +                 |               |   |   |          |              | -                   |                |
| *************************************** |                        | ***************************************          | •                                       |  |               |                          |               | •                      |   | ·····  |             | $\vdash$ |               | +           |              |                   |               |   |   |          |              |                     |                |
|   |                        | nsıble for th                                    | e work                                  | carried ou                                   | t on th       | his well I a             | dvise tl      | nat it has b           | een compl                                     | leted  | •••••       | $\vdash$ |               | +           |              | $\dashv$          |               |   |   |          | •            |                     |                |
| as describ                              | ed above:              |  |   |  |               |                          |               |                        |   |  |             | $\vdash$ |               | $\top$      |              | +                 |               |   | •                                       |          |              |                     | $\dashv$       |
| oranie i                                | A. Luari.              | i vije i   |   |  | *******       |                          |               |                        | Date  | , ,  | /           |          |               |             |              |                   |               |   |   |          |              |                     |                |
| DIT                                     | X.A.                   |  |   | togethe                                      | er wi         | ith                      | Pı            | imary                  | Industr                                       | ies aı                                       | nd Re       | sou      | rces :        | SA          |              |                   |               |   | $\neg \overline{}$                      |          |              | 40                  |                |
| <b>∙wat</b> er<br><u>withi</u> n        | sample:<br>_14 dav     | con com  | ea and<br>pletio                        | i well le<br>n.in:                           | ocati         | on plan                  |               | ore Lib<br>Conyn       |   |  |             |          |               |             |              |                   |               |   | !                                       | 703      | 80 7         | 19                  |                |
|   |                        |  |   | <del>,</del>                                 |               |                          |               | LENSI                  |   |  | •           |          |               |             |              | UNIT              | N             | UMBE                                    | R L                                     |          |              |                     |                |

| D)                | GOV<br>RILLE                  |   | WE                      | ELL           | OF S<br>CONS             | STE           | RUCT                     | ION            |                                  |            | RT              |  |            |                | . PE          | ERM           | IIT NO           | D: [         | 6                           | 4 2               | 3                                       | 4                         |       | Sit         | e                     |
|-------------------|-------------------------------|---|-------------------------|---------------|--------------------------|---------------|--------------------------|----------------|----------------------------------|------------|-----------------|--|------------|----------------|---------------|---------------|------------------|--------------|-----------------------------|-------------------|---|---------------------------|-------|-------------|-----------------------|
| N/A N/I           | E OF D                        | >11.1                                   | ED                      | <u> </u>      | She                      | :/            |                          |                | h                                |            | 420             | _                                      | PE         | RMI            | тн            | OLI           | DER o            | er la        | nd occ                      | upier             | Dh                                      | 128                       | 2     |             |                       |
|                   | t Phone/N                     |   |                         |               |                          |               |                          |                |                                  |            |                 |  | Pos        | tal Ac         | ldress        | ·             | CPC              | <u> </u>     | 8gr                         | 28                | 34,                                     | A                         | se.   | laid        | de                    |
|                   | of plant of                   |   |                         |               |                          |               |                          |                |                                  |            |                 |  |            |                |               |               |                  |              |                             |                   |   |                           |       |             | 5001                  |
|                   | CATIO                         |   |                         |               | •                        |               |                          |                |                                  |            |                 |  |            |                |               |               | 3.               | . w          | ELL N                       | NAME              | 64                                      | 23                        | 4     |             |                       |
| Date o            | f Survey                      |   | 1.97                    | 104           |                          | Surv          | veyed b                  | y <i>SA</i>    | Wat                              | er         | Metl            | hod                                    |            |                |               |               |                  |              |                             | DENTI             |   |                           |       |             |                       |
|                   | C <mark>OORD</mark><br>GDA 94 |   |                         |               | 4                        | 28            | 286                      | ,              |                                  |            |                 |  | <u> </u>   |                | ONE<br>ONE    |               | Н                | lund         | lred or                     | Pastora           | l Leas                                  | e No:                     |       |             |                       |
| _                 | AGD 66                        |   |                         | Г             |                          |               | 20                       |                | 62                               | 420        | 255             |  | , 🗖        |                | ONE           |               |                  |              |                             |                   |   |                           |       |             |                       |
| 5. SUM            | IMARY (                       | Pleas                                   | se tic                  | k app         | ropriate                 | box           | xes and                  | comp           | lete al                          | l rele     | evant .         | detai                                  | ils)       |                |               |               |                  |              |                             |                   |   |                           |       |             |                       |
| Date we<br>Work c | ork Comm                      | nenceo                                  | 1<br>New \              |               | 14/0                     | 4             | l                        | Deeper         |                                  |            |                 | <br>Enla                               | D.<br>arge |                | ork C         | omp           | leted            | Reh          | //. <b>7</b> /.<br>abilitat | υ <i>γ</i>        |   |                           | Back  | fill [      |                       |
| Is this a         | Replace                       | nent w                                  | vell?                   | YES/          | NO if ye                 | s plea        | ase quot                 | e repla        | ced we                           | ll nur     | nber            |  |            |                |               |               |                  |              |                             |                   |   |                           |       |             |                       |
|                   |                               |   |                         |               |                          |               |                          |                |                                  |            |                 |  |            |                |               |               |                  |              |                             |                   |   |                           |       |             |                       |
|                   | ım Depth                      |   |                         |               |                          | ast s         |                          |                | th <b>6</b> :                    |            |                 | *******                                |            |                |               |               |                  |              |                             | (m)               |   |                           |       |             | (L/sec)               |
|                   | LLING D                       |   |                         | . lf          | not a dri                | lled v        | well, ple                | ase co         |                                  |            |                 |  |            |                |               |               |                  |              |                             |                   |   |                           |       |             |                       |
| 6.1 Cor           | istruction                    | Detai                                   | ls                      | Dril          | ling Metho               | ď             |                          |                | 6.2                              | Wat        | er Cut          | Deta                                   |            |                | T             | s fro<br>Stan | -                |              |                             | o nearest<br>Hole |   |                           |       |             |                       |
| From (m)          | To<br>(m)                     |   | iam<br>im)              | Ro            | able Tool,<br>tary Auger |               | (Air.                    | Used<br>Water, |                                  | Date       | c               | -                                      | Water      |                | _             | Wa<br>Lev     | ter.             | Y            | mated<br>ield               | Depth<br>at Test  | Te                                      | ng at                     |       | est<br>thod | Salinity<br>(mg/L) or |
|                   |                               |   |                         |               | own Hole<br>mmer, etc.   |               | Mud                      | Type)          |                                  |            |                 | Fro<br>(n                              |            | To<br>(m)      | $\perp$       | (п            | 1)               | (U           | (sec)                       | (m)               | (1                                      | π)                        |       | ,           | Taste                 |
| 0                 | 6.83                          | 43                                      | _ک                      | R             | nor                      | 1             | Rin-                     | 1d             | +                                |            |                 |  | -          |                | +             |               |                  |              |                             |                   | -                                       |                           |       |             |                       |
|                   |                               |   |                         | 7/1           | 9-                       | ľ             |                          |                |                                  | ٠          |                 |  |            |                |               |               |                  |              |                             |                   |   |                           |       |             |                       |
| 7 CAS             | ING LEI                       | TIN                                     | WEI                     | <u>.</u>      | •                        |               |                          |                |                                  |            |                 |  |            |                |               |               |                  |              |                             |                   |   |                           |       |             |                       |
|                   | nensions                      |   |                         |               | 7.2 Type                 |               |                          |                | 7.3 Ca                           | sing       | Cemer           | nted                                   |            |                |               | •             |                  | _            |                             |                   |   |                           |       |             |                       |
| From<br>(m)       | To<br>(m)                     |   | Interna<br>Diam<br>(mm) | ١.            |                          |               | Velded Co<br>PVC, etc    |                | Yes                              | No         | Fro<br>(m       |  | To<br>(m)  |                | Ceme<br>(bags |               | Water<br>(litres |              |                             | her<br>nives      | М                                       | nenting<br>lethod<br>Used |       | C           | omments               |
| 0                 | 4.8                           | 5 2                                     | 90                      |               | Þy                       | C             |                          |                | Ø                                |            | O               | 寸                                      | 3          |                |               |               |                  | 1            |                             |                   | Gra                                     |                           | _     |             |                       |
|                   | _                             |   |                         | $\dashv$      |                          |               |                          |                | -                                | <u> </u>   |                 | $\dashv$                               |            | +              |               | •             |                  | +            |                             |                   |   | $\overline{}$             |       |             |                       |
|                   |                               | 土                                       |                         |               |                          |               |                          |                |                                  | <u> </u>   |                 |  |            |                |               |               |                  |              |                             | Ì                 |   |                           |       |             |                       |
| 8.1 Met           | STRUC                         | ΓΙΟΝ                                    | — r                     |               | UCTION<br>creen or C     |               |                          | riable         | anadur                           |            |                 | nd air                                 | m limi     | te)            |               |               |                  |              |                             |                   |   |                           |       |             |                       |
|                   | en Hole                       |   | ľ                       | 0,2 0         | Тур                      |               | 2 11 11                  | From<br>(m)    | 1 7                              | ro<br>m)   | Aper            | nure*                                  | Inne       | er Diai<br>mm) | n C           | Outer<br>(m   | Diam<br>m)       |              | Mate                        | rial              | Tra                                     | ade Narr                  | ıc    |             | Completion of Base    |
| = -               | otted Casi                    | ng                                      | ļ                       |               | SC                       |               |                          | 4.8            |                                  |            | 0.              |  |            | 0              |               |               |                  | Z            | PVC                         |                   | Pipe                                    | mq                        | ste   | 3           | nd Cap                |
| _                 | reen(s)<br>her, give          | dataile                                 | . L                     |               |                          |               |                          |                | 1.                               |            | l               |  | _          |                | Д             |               |                  |              |                             |                   |   |                           |       | <u> </u>    |                       |
|                   | er Scal (P                    |   |                         |               |                          | Grav          | el Pack                  | ng             |                                  |            |                 |  |            | 1              |               |               | TION I           |              |                             | ,                 | *************************************** |                           | •     |             |                       |
| Ma                | terial                        | Dep<br>(m                               |                         | Inter<br>Dia: | m                        | detho         |                          |                | Passing<br>Size                  |            | om<br>m)        | To<br>(m                               |            |                | rom<br>(m)    |               | To<br>(m)        |              |                             |                   | Descri                                  | iption of                 | Mater | ial         |                       |
|                   |                               |   |                         | (mn           |                          | Qy'i          | ity                      | 8:             | 16_                              | 3.         | 85              | 6.8                                    | 25         |                |               |               |                  | 士            |                             |                   |   |                           |       |             |                       |
| O IEN             | OT A DE                       |   | · D 11/1                | T. I          |                          |               | <u> </u>                 |                |                                  | <u>.</u>   |                 |  |            | $\vdash$       |               | +             |                  | +            |                             |                   |   |                           |       |             |                       |
| 9. IF N           | OT A DR<br>hod                | Depti<br>(m)                            | h []                    | Length<br>(m) | Widd<br>(m)              | 1             | Diam<br>(m)              |                | ining<br>aterial                 |            | rom<br>(m)      | Ti<br>(n                               |            |                |               | $\dagger$     |                  | _            |                             |                   |   |                           |       |             |                       |
|                   |                               |   |                         |               | 1                        | 1             |                          | ļ              |                                  | 1          |                 |  |            |                |               | 1             |                  | 7            |                             |                   |   |                           |       |             |                       |
| 10. DE            | VELOPN                        | 1ENT                                    | `(State                 | e meth        | ods and tin              | ne tak        | en)                      | <u> </u>       |                                  |            |                 | l                                      |            |                |               | 1             |                  | 1            |                             |                   |   |                           |       |             |                       |
|                   | n 、 F.                        | <i>/</i> -                              | Meth                    | nod           |                          |               |                          |                | Hours                            | $\Box$     | ,M              | inutes                                 |            |                |               | 1             |                  | 7            |                             |                   |   |                           |       |             |                       |
|                   | 717/17                        | rec                                     | <b>У</b>                |               |                          |               |                          |                |                                  |            |                 | 7                                      |            |                |               | 士             |                  | $\dagger$    |                             |                   |   |                           |       |             |                       |
|                   | MPING'                        | r = r                                   |                         | uremei        |                          | $\overline{}$ |                          |                |                                  | <u>.  </u> |                 | T 5                                    | raw        |                |               | $\bot$        |                  | 4            |                             |                   |   |                           |       |             |                       |
| From              | il Tested                     | Wat<br>Lev<br>(m                        | /el                     | Test<br>Meth  |                          | oth           | Discha<br>Rate<br>(L/sec | 1              | Method o<br>Measurin<br>Discharg | g ,        | Hours<br>Pumped | Do                                     | own<br>m)  |                |               | +-            |                  | +            |                             |                   |   |                           |       |             |                       |
| (m)               | (m)                           | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 7                       |               |                          |               | ,                        |                |                                  |            |                 | +                                      |            |                | •             |               |                  | +            |                             |                   |   | **                        |       |             |                       |
|                   |                               |   | $\Box$                  |               |                          | $\Box$        |                          |                |                                  | $\bot$     |                 | $\bot$                                 |            | L              |               | $\perp$       |                  | $-\int$      |                             |                   |   |                           |       |             |                       |
| 12. SA            | MPLES                         | L                                       |                         |               | !                        |               | L                        |                |                                  |            |                 | ــــــــــــــــــــــــــــــــــــــ |            | $\vdash$       |               | +             |                  | +            |                             |                   |   |                           |       |             | <del></del>           |
| The prov          | ision of the<br>must be ob    |   |                         |               |                          |               |                          |                |                                  | nat stra   | ata and         | water                                  |            |                |               |               |                  | $\downarrow$ |                             |                   |   |                           |       |             |                       |
|                   |                               |   |                         |               | ,                        |               |                          |                |                                  |            |                 |  |            | $\vdash$       |               | +             |                  | +            |                             |                   |   |                           |       |             |                       |
|                   | erson respo                   | nsible (                                | or the                  | work o        | arried out               | on thi        | is well I a              | dvise th       | at it has                        | been c     | omplet          | ed                                     |            |                |               |               | •                | $\pm$        |                             |                   |   |                           |       |             |                       |
|                   |                               |   |                         |               |                          |               |                          |                |                                  |            |                 |  |            | 1              |               |               |                  | ſ            |                             |                   |   |                           |       |             |                       |

Primary Industries and Resources SA Core Library Complex 23 Conyngham Street GLENSIDE SA 5065

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Dillip conclude this Court og ther with water samples in rected and well location within 14 days of completion to

location plan

| DR                                   |   | RS W                       | ELL (  | OF SOI<br>CONST<br>esources 1      | RUC'               | TION                                    |                      |                                |  |                 | 1.             | PER!                    | MIT N          | o: 6       | 4 2              | 3 3                 | s            | ite                                   |
|--------------------------------------|---|----------------------------|--|------------------------------------|--------------------|---|----------------------|--------------------------------|--|-----------------|----------------|-------------------------|----------------|------------|------------------|---------------------|--------------|---------------------------------------|
|                                      |   |                            |  | hei!                               |                    |   |                      | 10:3.4                         | 25                                     | PE              | RMIT           | HOL                     | DER (          | or land oc | cupier           | DVLB<br>4, AO       | ic<br>Velaio | le .                                  |
|                                      |   |                            |  |                                    |                    |   |                      |                                | ······································ | Pos             | tai Addr       | ess                     | .w.c <u>.</u>  | KJYA.      | A. U             | ·                   | Post Cod     | . 5001                                |
|                                      |   | OF W                       |  | ervision                           |                    |   |                      |                                | *********                              | 1               | *************  |                         | T .            |            |                  | 6428                | rosi codi    |                                       |
| Date of                              | Survey                                  |                            | 04   | Su                                 | rveyed             | ьу <b>SA</b>                            | wat                  | <u>е</u> м                     | ethod                                  | <i>Q1</i>       | 20)<br>ZO      | /                       | . 4            | . LAND     | IDENTI           | 6 <b>42</b> 3       | Ī            |                                       |
| <b>Ø</b> ∕ G                         | DA 94/\<br>GD 66/8                      | WGS84                      | ` <u>                                     </u> |                                    | 8383               |   |                      |                                |  | 0               | ZO             | NE 54<br>NE 53<br>NE 53 | 3   ^          | ile/Sectio | n /Parcel        | ı id                |              |                                       |
|                                      |   | •                          | ·  |                                    | 4/9                |   |                      |                                |  |                 |                |                         | . 1            | lame of P  | roperty          | Chowl               | 1/9          |                                       |
| Date work<br>Work car<br>Is this a l | rk Comm<br>rried out:<br>Replacerr      | enced<br>New<br>tent well? | Well S   | Oifyespl                           | ease que           | Deeper                                  | ı 🗌                  | ll numbe                       | Enla                                   | D<br>arge       |                |                         |                | Rehabilita | te 🗌             |                     | Backfill     |                                       |
|                                      |   |                            |  |                                    |                    |   |                      |                                |  |                 |                |                         |                |            |                  | .,,                 |              |                                       |
|                                      |   | Drilled/                   |  |                                    |                    |   |                      | •0 <b>∮</b> (n                 |  |                 |                |                         |                | :vel       |                  |                     | eld          |                                       |
| 6. DRIL                              |   |                            | If n   | ot a drilled                       | well, pl           | ease co                                 |                      |                                |  |                 |                |                         |                |            |                  |                     |              |                                       |
| From                                 | To                                      | Diam                       | Cab  | ig Method<br>le Tool,<br>ry Auger, |                    | d Used                                  | 6.2                  | 2 Water C                      |  | ls (me<br>Water |                | Sta<br>W                | nding<br>'ater | Estimated  | Hole<br>Depth    | Casing at           | Test         | Salinity<br>(mg/L) or                 |
| (m)                                  | (m)<br>10.04                            | (mm)                       | Dov<br>Ham                                     | vn Hole<br>mer, etc.               | Mud                | d Type)                                 | +                    |                                | Fro<br>(m                              |                 | To<br>(m)      |                         | evel<br>m)     | (L/sec)    | at Test<br>(m)   | (m)                 | Method       | Taste                                 |
|                                      |   |                            | Ay   | ger                                | (Bio               | -vis,                                   | 5                    |                                |  |                 |                |                         |                |            |                  |                     |              |                                       |
| 7.010                                | Me i ne                                 | T IN SUF                   | ;  |                                    |                    |   |                      |                                |  |                 |                | <u> </u>                |                | •          | <u> </u>         | 1                   | İ            | · ·                                   |
| 7.1 Dime                             |   | T IN WE                    |  | 2 Type                             |                    |   | 7.3 Ca               | ising Cen                      | nented                                 |                 |                |                         |                |            |                  |                     |              |                                       |
| From                                 | To                                      | Inter<br>Dia               | nal  | Swell Joint,                       |                    |   | Yes                  |                                | rom                                    | To              |                | ment                    | Wate           |            | other<br>ditives | Cementing<br>Method | 3            | Comments                              |
| (m)                                  | 8·0·                                    | 4 80                       |  | PVC                                | P, PVC, e          | tc.                                     | 1                    |                                | (m)                                    | (m)             | - (0           | ags)                    | (litre         | s) Au      |                  | Used<br>Gravit      | ,            |                                       |
|                                      | 1 8 · O ·                               | 7 0                        | <del>~</del>                                   |                                    |                    |   |                      |                                |  | <u>.</u>        | -              |                         | 1              | 1          |                  | - GRAVE             | <b>/</b>     |                                       |
|                                      |   |                            |  |                                    |                    |   |                      |                                |  |                 | •              |                         |                | <u> </u>   |                  |                     |              |                                       |
| 9. CON                               | PERLICA                                 | NON AT                     | BBOBU  | CTIONI                             | E311E3             |   |                      | <u> </u>                       |  |                 |                |                         |                |            |                  |                     |              |                                       |
| 8.1 Meth                             |   | IONAL                      | T  | een or Casi                        |                    | variable                                | apertur              | e screen                       | used giv                               | e limi          | ts)            |                         |                |            |                  |                     |              |                                       |
| Ope                                  | n Hole                                  |                            |  | Туре                               |                    | From<br>(m)                             |                      | ro A                           | perture*<br>(mm)                       |                 | er Diam<br>mm) |                         | r Diam<br>nm)  | Mate       | erial            | Trade Nar           | me '         | Completion of Base                    |
| _                                    | ted Casir                               | ıg                         |  | SC                                 |                    | 8.0                                     | 4 10                 | 04 0                           | <u>ی.د</u>                             |                 | 30             |                         |                | PV         | C                | Pipema              | ster E       | nd Cap                                |
| ☐ Scre                               | , .                                     | atails.                    | <u>ـــــــ</u>                                 |                                    |                    |   |                      |                                |  |                 |                |                         | _              | 1          |                  | L                   | <u> </u>     |                                       |
| 8.3 Liner                            |   |                            | ,  |                                    | avel Pacl          |   | *************        |                                | ************                           |                 | 13. FC         | ORM/                    | TION           | LOG        | **************** | •••••               |              | •                                     |
| Mate                                 | rial                                    | Depth                      | Interna<br>Diam                                | Meti                               | nod of             |   | Passing              | From                           | To                                     |                 | Froi           |                         | To             |            | •                | Description of      | of Maternal  |                                       |
|                                      |   | (m)                        | (mm)   | Con                                | ement              |   | 1812e                | (m)<br>7-04                    | (m                                     | _               | (m             | ,                       | (m)            |            |                  |                     |              |                                       |
|                                      |   |                            |  | - Urai                             | <i>iiy</i>         | <b>,</b>                                | 16                   | 707                            | 100                                    | 7               |                |                         |                | 1          |                  | <u>-</u>            |              | -                                     |
| 9. IF NO<br>Meth                     |   | Depth                      | VELL<br>Length<br>(m)                          | Width<br>(m)                       | Diam<br>(m)        |   | ining<br>aterial     | From (m)                       | To (m                                  |                 |                | ·                       |                |            |                  |                     |              |                                       |
|                                      |   |                            |  |                                    |                    | -                                       |                      |                                | _                                      | $\dashv$        | ,              |                         |                | <u> </u>   | •                | -                   |              |                                       |
| 10. DEV                              | ELOPM                                   | ENT (See                   | ite method                                     | s and time ta                      |                    | .I                                      |                      | <u> </u>                       | l                                      |                 | -              | $\dashv$                |                |            |                  |                     |              |                                       |
|                                      | •                                       | Ме                         | thod   |                                    |                    |   | Hours                |                                | Minutes                                |                 |                |                         |                |            |                  |                     |              |                                       |
| 7                                    | 4ic/i                                   | Fted                       |  |                                    |                    |   |                      |                                | <b>₹</b>                               |                 | -              |                         |                |            | <u>.</u>         |                     | •            | ,                                     |
| 11. PUM<br>Interval                  |   | EST (mea                   |  | from natura                        | l surface<br>Disch |   | t 0.1m)<br>Method o  | nf                             |  | aw              |                | -                       |                |            |                  |                     |              |                                       |
| From (m)                             | To (m)                                  | Level<br>(m)               | Test<br>Method                                 | Depth                              | Rat<br>(L/se       | e l                                     | Measurin<br>Discharg | g Hou                          | rs Do                                  | wn<br>n)        |                |                         |                |            | <del>-</del>     |                     |              |                                       |
|                                      |   | -                          | _  | -                                  | -                  | -                                       |                      |                                |  | $\exists$       |                | _                       |                |            |                  |                     |              |                                       |
|                                      | ion of the                              |                            |  | 1997 and Re                        |                    |   |                      | lat strata a                   | nd water                               |                 |                | _                       |                | +          |                  |                     |              | · · · · · · · · · · · · · · · · · · · |
| sampies m                            | *************************************** | ************               |  | have not bee                       | ·············      | *************************************** |                      |                                |  | <br>            |                | $\dashv$                |                |            |                  |                     |              |                                       |
| As the per<br>as describe            | son respon                              |                            |  | ried out on t                      |                    |   |                      |                                | leted                                  |                 |                |                         |                |            |                  |                     |              |                                       |
|                                      | कत्रम्।                                 | न भेष                      | e i ivio                                       | gdher w<br>tel locat               | ith                | Pr<br>n Co                              | imary<br>re Lib      | . Date<br>Industrorary Congham | omplex                                 | d Res           | sources        | SA                      |                |            |                  |                     | 7030         | 721                                   |
|                                      |   | <b>.</b>                   | ب داخوال                                       |                                    |                    |   |                      | DE SA                          |  |                 |                | •                       |                | UNIT       | NUMBI            | SR L                |              |                                       |

Unit No: 7030 722 Obs Well No: CHW 65 DH No: 201145

| THE OF DIE   | ILLER  | c.sh  | ei/   |  | Licen  | ce Nov   | 7 <i>42</i> 5  | - P   | ERMIT           | HOLI               | DER (          | or land occ                   | upier                    | WLBC                     |                |                                |
|--|--|---|---|--|--|--|--|---|-----------------|--------------------|----------------|-------------------------------|--------------------------|--------------------------|----------------|--------------------------------|
| ontact Phone/Mo  |  |   |   |  |  |  |  | Po  | ,<br>stal Addr  | ess                | 4PC            | Bex                           | 283                      | 4, 10                    | elqid          | le                             |
| lame of plant ope  | rator if un  | der super   | vision  |  |  | *********  |  |   | ······          |                    |                |                               | ,,,,,,,,,,,,,            |                          | Post Co        | ie 300/                        |
| . LOCATION   | •  |   |   |  |  | -  |  |   |                 |                    | 3              | . WELL !                      | NAME                     | 6 <i>F23</i>             | 6              |                                |
| ate of Survey .  | : 1/9/   | 04  | Sur   | veyed b  | y <i>SAM</i>   | ate.   | Metho  | od <i>G</i> .                                 | PSSL            | <b></b>            | 4              | . LAND I                      | DENTI                    | FICATION                 | Ī              |                                |
| GPS COORDING GDA 94/W  | NATES  |   | ¢.  | ~ 10   | /  |  |  | 7 9   |                 | NE 54              | ŀ              | lundred or                    | Pastoral                 | Lease No:                | <u>-</u>       | ••••••                         |
| GDA 94/W<br>□ AGD 66/8   |  | $\vdash$  | -   | _  |  |  |  | - 6   |                 | NE 53<br>NE 52     |                |                               |                          |                          |                |                                |
|  |  |   |   | 4/98   |  |  |  |   |                 |                    | 1              | Name of Pi                    | operty                   | Charl                    | //9            | -                              |
| . SUMMARY (P<br>Date work Comme  | lease tici   | approp<br>20/3  | riate bo<br>10 <b>4</b>   | xes and  | complete   | e all re   | elevant d  | etails)                                       | Into work       | Comp               | latad          | 2013                          | 104                      |                          |                |                                |
| Vork carried out:  | New V  | Vell 🖫  |   | ]  | Deepen [   | ]  |  | Enlarge                                       |                 |                    |                |                               |                          |                          |                |                                |
| s this a Replaceme   |  |   |   |  |  |  |  |   |                 |                    |                |                               |                          |                          |                |                                |
| s this an Existing v<br>Vas well Abandon   |  |   |   |  |  |  |  |   |                 |                    |                |                               |                          |                          |                |                                |
| daximum Depth D  | orilled9   | 84  | (m)   | Fin  | al Depth   | 7.89   |  |   |                 |                    |                |                               |                          | Final Yi                 |                |                                |
| . DRILLING DE  |  |   |   |  | ase compl  |  |  |   |                 |                    |                |                               |                          |                          |                |                                |
| 5.1 Construction D   | Details -  | Drilling i  | Mathod  |  | •  | 6.2 W  | ater Cut E   | Details (r                                    | neasurem        |                    | i              | ral surface                   | to nearest               | 0.1 m)                   |                | -T                             |
| From To (m)  | Diam<br>(mm)   | Cable Rotary A  | Tool,<br>Auger,   | (Air,  | Used '<br>Water<br>Type)   | ۵.   | ate _  | Wate  | r Cut<br>To     | Stand<br>Wa<br>Lev | ter<br>vel     | Estimated<br>Yield<br>(L/sec) | Hole<br>Depth<br>at Test | Casing at<br>Test<br>(m) | Test<br>Method | Salinity<br>(mg/L) or<br>Taste |
| 0 9.84   |  | Hámme   | er, etc.  |  |  |  |  | (m)   | (m)             | (n                 | 1)             |                               | (m)                      | , ,                      |                | <u> </u>                       |
| 0 9.84   | <i>/.</i> 53   | KOTO  | ary   | Mu<br>Rìo-   |  | $\vdash$   |  |   |                 |                    |                |                               | ,                        | <b>.</b>                 |                |                                |
|  |  |   |   |  | )  |  |  |   |                 |                    |                |                               |                          | <u> </u>                 |                |                                |
| , , ,  |  |   |   |  |  |  |  |   |                 |                    | ŀ              |                               | 3                        | <u> </u>                 | L              | ,                              |
| 7. CASING LEFT<br>7.1 Dimensions   | IN WEL   |   | Гуре  |  | 7.   | 3 Casin  | g Cement   | ed  |                 |                    |                |                               |                          |                          | ·              |                                |
| From To  | Interna<br>Diam.   |   | well Joint, V   |  |  | es No  | From   | To (m   |                 | ment               | Wate<br>(litre |                               | ther<br>litives          | Cementing<br>Method      | 3              | Comments                       |
| (m) (m)  | (mm)   |   | PVC   | P, PVC, etc  |  | ·<br>70  | (m)  | 5   | <del>-</del>    | ags)               | (itue          |                               | uuves                    | Gravit                   |                |                                |
| 0 707  |  |   | 7.0   |  |  |  |  |   |                 |                    |                |                               |                          | 474777                   |                |                                |
|  |  |   | ····  |  |  | 3 0  |  |   |                 |                    |                | ~                             | •                        |                          |                |                                |
| B. CONSTRUCTI  | ION AT D   | PODUC   | TION L  | EVEL   |  | 3 🗆  | . L  |   |                 |                    | _              |                               | ·                        |                          |                |                                |
| 3.1 Method   |  |   |   |  | ariable ape  |  |  |   |                 |                    |                |                               |                          | •                        |                | *                              |
| Open Hole .  |  | -   | Туре  |  | From .<br>(m)  | To<br>(m)  | - Apertu   | ıre*   In                                     | ner Diam        |                    | Diam           | Mate                          | nal                      | Trade Na                 | те             | Completion<br>of Base          |
| <u> </u>   | -  |   |   | -  |  |  | (mm  |   | (mm)            | (m                 | .m.)           |                               |                          |                          |                |                                |
| Sloited Casing   | -  |   | sc  |  | 7-84   | 9.8  |  |   | <sup>(mm)</sup> | (m                 | m)             | PVC                           |                          | Pipema                   | ster i         | End Cap                        |
| Slotted Casing Screen(s)   | g  |   | sc  |  | 7.84   | 9.8  | 4 00   |   |                 | (m                 |                |                               |                          | Pipema                   | ster i         |                                |
| Sloited Casing Screen(s) Other, give de  | g<br>etails:   |   | sc  |  | 7-84   | 9.8  | 4 00   |   | 80              | (m                 |                | PVC                           |                          | Pipema                   | ster i         |                                |
| Sloited Casing Screen(s) Other, give de  | etails:eker)   | Internal<br>Diam  | 8.4 Gra   |  | 7-84   | 9.8  | # O  |   | 80              | DRMA'              |                | PVC                           |                          | Pipema<br>Description of |                |                                |
| Slotted Casing Screen(s) Other, give de  | etails:  | Internal  | 8.4 Gra Meth  | vel Packi  | 7-84 ing Gravel Pass Mesh Sin  | 9.8  | From (m)   | To  | 13. Fo          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de  | etails:eker)   | Internal<br>Diam  | 8.4 Gra   | vel Packi  | 7-84   | 9.8  | # O  | To (m)  | 13. Fo          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3. Liner Seal (Pac Material  | etails:eker) Depth (m)   | Internal<br>Diam<br>(mm)  | 8.4 Gra Meth  | vel Packi  | 7-84 ing Gravel Pass Mesh Sin  | 9.8.   | From (m)   | To (m)  | 13. Fo          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3 Liner Seal (Pac Material   | etails:eker) Depth (m)   | Internal<br>Diam<br>(mm)  | 8.4 Gra  Meth Place   | ovel Packi   | 7-84 ing Gravel Pass Mesh Siz  | 9.8.<br>sing   | From (m)   | To (m)  | 13. Fo          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3.3 Liner Seal (Pac Material   | Depth (m)  LLED W  | Internal Diam (min)   | 8.4 Gra Meth Place Grav   | od of ment   | Gravel Pass Mesh Siz   | 9.8.<br>sing   | From (m)   | To (m)  | 13. Fo          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3. Liner Seal (Pac Material . IF NOT A DRII Method   | g stails:bker) Depth (m) LLED WI Depth I (m)   | Internal Diam (mm)  CLL ength (m)  methods a  | 8.4 Gra  Meth Place  Grav  Width (m)  | ovel Packing of of ment  Diam (m)  | 7-84  Gravel Pas Mesh Siz  | 9.8. sing see 6 6  | From (m)   | To (m)  | 13. Fo          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3 Liner Seal (Pac Material  IF NOT A DRII Method  0. DEVELOPMI   | g stails:  | Internal Diam (mm)  CLL ength (m)  methods a od   | 8.4 Gra  Meth Place  Grav  Width (m)  | ovel Packing of of ment  Diam (m)  | 7-84  ing Gravel Pass Mesh Sn  2://  | 9.8. sing see 6 6  | From (m)   | To (m)  | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3.3 Liner Seal (Pac Material D. IF NOT A DRII Method   | g stails:bker) Depth (m) LLED WI Depth I (m)   | Internal Diam (mm)  CLL ength (m)  methods a od   | 8.4 Gra  Meth Place  Grav  Width (m)  | ovel Packing of of ment  Diam (m)  | 7-84  Gravel Pas Mesh Siz  | 9.8. sing see 6 6  | From (m)   | To (m) To (m)                                 | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3. Liner Seal (Pac Material  . IF NOT A DRII Method  0. DEVELOPMI  | g  chails:  cher)  Depth (m)  LLED WI  Depth (m)  ENT (State  Meth  Meth  Meth  Min (F)  | Internal Diam (mm)  ELL ength (m)  methods a od   | 8.4 Gra  Meth Place  Grav  Width (m)  | ovel Packing of of ment  Diam (m)  ken)  | 7-84 Gravel Pass Mesh Sii Si-/   | 7.6.   | From (m)   | To (m)  | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3 Liner Seal (Pac Material  IF NOT A DRII Method  DEVELOPMI  1. PUMPING TE Interval Tested From To   | Depth (m)  LLED WI Depth (m)  ENT (State Meth  | Internal Diam (mm)  ELL ength (m)  methods a od   | 8.4 Gra Meth Place Gray  Width (m)  and time tal  | Diam (m)  l surface tu  Rate   | 7-84  Gravel Pas Mesh Sin  Linin Materi  Hou  Discrete Met Met   | Francisco Santa Sa | From (m)  From (m)  Hours  | To (m) To (m) To (m) To (m)                   | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3.3 Liner Seal (Pac Material D. IF NOT A DRII Method  1.0. DEVELOPMI  1.1. PUMPING TE Interval Tested  | g  ctails:  Depth (m)  LLED WI  Depth I (m)  ENT (State  SET (meass  Water               | Internal Diam (mm)  ELL ength (m) methods a od remements for Test   | 8.4 Gray Meth Place Groy Width (m) and time tal   | Diam (m)   | 7-84  Gravel Pas Mesh Sin  Linin Materi  Hou  Discrete Met Met   | Figure 1 (m) and of (m)  | From (m)  From (m)  From (m)   | To (m)  | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3 Liner Seal (Pac Material  IF NOT A DRII Method  0. DEVELOPMI  1. PUMPING TE Interval Tested From To  | Depth (m)  LLED WI Depth (m)  ENT (State Meth  | Internal Diam (mm)  ELL ength (m) methods a od remements for Test   | 8.4 Gra Meth Place Gray  Width (m)  and time tal  | Diam (m)  l surface tu  Rate   | 7-84  Gravel Pas Mesh Sin  Linin Materi  Hou  Discrete Met Met   | Francisco Santa Sa | From (m)  From (m)  Hours  | To (m) To (m) To (m) To (m)                   | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3 Liner Seal (Pac Material  IF NOT A DRII Method  0. DEVELOPMI  1. PUMPING TF Interval Tested From To (m) (m)  | Depth (m)  LLED WI Depth (m)  ENT (State Meth  | Internal Diam (mm)  ELL ength (m) methods a od remements for Test   | 8.4 Gra Meth Place Gray  Width (m)  and time tal  | Diam (m)  l surface tu  Rate   | 7-84  Gravel Pas Mesh Sin  Linin Materi  Hou  Discrete Met Met   | Francisco Santa Sa | From (m)  From (m)  Hours  | To (m) To (m) To (m) To (m)                   | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3 Liner Seal (Pac Material  IF NOT A DRII Method  DEVELOPMI  1. PUMPING TE Interval Tested From To (m) (m)  2. SAMPLES The provision of the V  | g  tails:  Depth (m)  LLED WI Depth I (m)  ENT (State  Water Level (m)  Vater Resou      | Internal Dawn (mm)  | 8.4 Gra  Meth Place  Grow  Width (m)  and time tal  rom natura  Pump Depth (m)                                      | vel Packing of of ment  Diam (m)  surface to Dischar Rate (L/sec   | Gravel Pass Mesh Si  S:// Linin, Materi  Hou  Discommended thereto requirements of the second | rs  sing  g  g  al  lim)  bod of suring  suring  harge   | From (m)  From (m)  From Pumped  | To (m) To (m) To (m) To (m)                   | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3 Liner Seal (Pac Material  Front A DRII Method  DEVELOPMI  1. PUMPING TE Interval Tested From To (m) (m)  2. SAMPLES The provision of the V amples must be obtain   | ctails:  | Internal Dam (mm)  CLL ength (m)  methods a od  reserved to the color of the color | 8.4 Grave Meth Place Grown and time tall tom natural Pump Depth (m)   | vel Packing of of ament  Diam (m)  l surface to Dischar Rate (L/section obtained in obtain | Gravel Pass Mesh Si  S:// Linin, Materi  Hou  Do nearest 0 1  rge Metl Mea  C) Disco   | Fraging states of the state of  | From (m)  From (m)  From Pumped  | To (m) To (m) To (m)  To (m)  To (m)          | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Screen(s) Other, give de 3.3 Liner Seal (Pac Material  D. IF NOT A DRII Method  10. DEVELOPMI  11. PUMPING TE Interval Tested From To (m) (m)  12. SAMPLES The provision of the V samples must be obtain  | Depth (m)  LLED WI Depth I (m)  ENT (State  Water Level (m)  Water Resounded If any      | Internal Dam (mm)  ELL Length (m)  methods a od  Test Method  rees Act 15 samples ha  | 8.4 Gra Meth Place Grow Width (m)  and time tal  Tom natura Pump Depth (m)  997 and Re we not been                  | vel Packiod of of ment  Diam (m)  List of the control of the contr | T-84  Gravel Pass Mesh Sin  S://  Linun Materi  Hou  Discommoderates to 1  Discommoderates to 1  Discommoderates to 1  Mean Disco | g g lal land of suring harge lare that s ss:   | From (m)  From (m)  From (m)  From (m)  From (m)                           | To (m)  To (m)  To (m)  To (m)  To (m)  atter | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Cher, give de 3.3 Liner Seal (Pac Material  D. IF NOT A DRII Method  10. DEVELOPMI  11. PUMPING TE Interval Tested From To (m) (m)  12. SAMPLES The provision of the V samples must be obtain   | Depth (m)  LLED WI Depth I (m)  ENT (State  Water Level (m)  Water Resounded If any      | Internal Dam (mm)  ELL Length (m)  methods a od  Test Method  rees Act 15 samples ha  | 8.4 Gra Meth Place Grow Width (m)  and time tal  Tom natura Pump Depth (m)  997 and Re we not been                  | vel Packiod of of ment  Diam (m)  List of the control of the contr | T-84  Gravel Pass Mesh Sin  S://  Linun Materi  Hou  Discommoderates to 1  Discommoderates to 1  Discommoderates to 1  Mean Disco | g g lal land of suring harge lare that s ss:   | From (m)  From (m)  From (m)  From (m)  From (m)                           | To (m)  To (m)  To (m)  To (m)  To (m)  atter | 13. FO          | DRMA'              | TION<br>To     | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3.3 Liner Seal (Pac Material  D. IF NOT A DRII Method  10. DEVELOPMI  11. PUMPING TE Interval Tested From To (m) (m)  12. SAMPLES The provision of the V samples must be obtained.  As the person responses to described above:  | ctails:  | Internal Dam (mm)  CLL ength (m)  methods a od  research Method  rees Act 15 samples ha   | 8.4 Grave Meth Place Grow Midth (m) and time tall from natural Pump Depth (m) 2997 and Revenot been seed out on the | vel Packing of of sment  Diam (m)  l surface to Dischar Rate (L/section obtained mobilined mobil | T-84  Gravel Pass Mesh Size Mesh Size Mesh Size Mesh Size Mesh Size Mesh Size Mesh Size Mesh Size Mesh Size Mesh Size Mesh Size Mesh Size Mesh Siz | Fraging street of the street o | From (m)  From (m)  From (m)  From (m)  From (m)  From (m)  From (m)       | To (m)  To (m)  To (m)  To (m)  autes         | 13. FO          | DRMA'              | TION To (m)    | PVC                           |                          |                          |                |                                |
| Slotted Casing Screen(s) Other, give de 3.3 Liner Seal (Pac Material  D. IF NOT A DRII Method  O. DEVELOPMI  O. DE | Depth (m)  LLED WI Depth (m)  ENT (State  Meth  Air (T)  Water Resounded If any  Oriller | Internal Diam (mm)  ELL ength (m)  methods a od  rements fr  Test Method  rees Act 15 samples ha  | 8.4 Gray Meth Place Gray Width (m)  and time tal  Pump Depth (m)  997 and Re we not been do out on the              | vel Packiod of french  Diam (m)  Listance to DischarRate (L/see to | T-84  Gravel Pass Mesh Sir  Linin, Materi  Hou  Discrete Pass Mesh Sir  Wesh Sir  Linin, Materi  Hou  Discrete Pass Mesh Sir  Wesh Sir  Hou  Hou  Hou  Hou  Hou  Hou  Hou  Ho  | g g al al surreturn that s sarry Inhas beet  | From (m)  From (m)  From (m)  From (m)  Min  Hours  Pumped  Autrata and w. | To (m)  To (m)  To (m)  To (m)  To (m)  and R | 13. FO          | DRMA'              | TION To (m)    | PVC                           |                          |                          |                |                                |

**Unit No:** 7030 728 **Obs Well No:** CHW 68 **DH No:** 201156

| DF                  |                  | ERS W  | ELL           | CON<br>Resour           | ISTI             | RUCT   | ΓΙΟΝ   |                      |                |                |               | 1.1        | PERM           | IIT NO            | ): <b>6</b>        | 4 2              | 4 4               | · s            | ite                   |
|---------------------|------------------|--|---------------|-------------------------|------------------|--|--|----------------------|----------------|----------------|---------------|------------|----------------|-------------------|--------------------|------------------|-------------------|----------------|-----------------------|
| NAME                | OF D             | RILLER   | <u> </u>      | Shel                    | <i>i</i> /       |  | Li   | cence N              | 10:3 <i>42</i> | 7              | PEF           | RMIT       | HOLI           | DER o             | r land occ         | cupier           | DWLB              | ۲              |                       |
| Contact             | Phone/N          | Aobile No.                                       | .:            |                         |                  |  |  | ******               |                |                | Posta         | ıl Addr    | ss             | <i>P</i> 0        | BOX                | 283              | 9, A9             | 10/9/9         | c                     |
| Name of             | plant of         | perator if t                                     | under s       | supervisi               | ion              |  |  |                      |                |                |               |            |                |                   |                    |                  |                   | Post Code      | 7001                  |
|                     |                  | N OF W   |               | •                       |                  |  |  |                      |                |                |               |            |                | 3.                | WELL               | NAME             | 6424              | 4              |                       |
| Date of             | Survey           | 1/9  | 104           | •                       | Sur              | veyed t  | oy <i>S.A</i> .                                  | NQ.                  | .е Ме          | thod           | GP            | ĸΥ         | ·····          | 4.                |                    |                  | FICATION          |                | ,                     |
| GPS-C               | OORD             | INATES   | ; <u> </u>    |                         |                  | 909  |  |                      |                |                | <b>9</b>      | ZON        | VE 54          |                   | undred o           | Pastora          | l Lease No:       |                |                       |
|                     | GD 66/           |  | F             |                         |                  |  |  |                      |                | $\dashv$       | 0             |            | NE 53<br>NE 52 | Fi                | le/Sectio          | n /Parcel        | ID                |                |                       |
|                     |                  |  |               |                         |                  | <u> 244</u>                                      |  |                      |                |                |               |            |                | N                 | ame of P           | roperty          | Chan              | 1119           |                       |
| 5. SUMI             | MARY (           | (Please ti                                       | ck ap         | propria                 | te bo.           | xes and  | l comp   | lete al              | l relevani     | t detail       | s)            |            |                |                   |                    |                  |                   |                |                       |
| Date wo:<br>Work ca |                  | nenced   | Well .        |                         | V. <del>Y.</del> |  | Deepen   |                      |                | Enlar          |               | te work    | Comp           | leted::           | Rehabilitat        | <br>e □          |                   | Backfill       | Π                     |
|                     |                  |  |               |                         | es ple           |  |  |                      | ll number.     |                |               |            |                |                   |                    |                  |                   |                |                       |
| Is this an          | Existing         | g well? Y  | ES/NO         | if yes p                | please           | quote  | well nu  | mber o               | r mark lo      | cation         | on ma         | <u>p</u>   |                |                   | .:                 |                  |                   |                |                       |
|                     |                  |  |               |                         |                  |  |  |                      |                |                |               |            |                |                   |                    |                  |                   |                |                       |
|                     |                  | Drilled  |               |                         |                  |  |  |                      |                |                |               |            |                |                   | el                 | (m)              | Final Yie         | ld             | (L/sec)               |
| 6.1 Cons            |                  | Details  | 1             | i not a d               | rilled           | well, ple  | ease cor   |                      | Sections: 6    |                |               |            |                |                   | al surface         | to nearest       | 0 1 m)            |                |                       |
| 0,1 COLL            | a de don         | T T  |               | lling Met               |                  |  | 177  | Ţ                    | ···uici Co     | T              | Water C       |            | Stan           | ding              |                    | Hole             |                   |                | Caliminu              |
| From<br>(m)         | To<br>(m)        | Diam<br>(mm)                                     | Ro            | able Tool<br>stary Auge | er,              | (Air,  | d Used<br>Water,                                 |                      | Date           | Fror           |               | To         | Wa<br>Lev      | ter               | Estimated<br>Yield | Depth<br>at Test | Casing at<br>Test | Test<br>Method | Salinity<br>(mg/L) or |
|                     | ·/               | \  |               | Down Hold<br>ammer, et  |                  | 1  | l Type)  |                      |                | (m)            |               | (m)        | (n             |                   | (L/sec)            | (m)              | (m)               |                | Taste                 |
| 0                   | 7.4              | 135  |               | oton                    |                  | Muc  | <u>/</u>   |                      |                | ļ              |               |            |                |                   |                    |                  |                   |                |                       |
|                     |                  | +  | 1             | riger                   | (                | B10-   | VIS  | 4                    |                | <del> </del>   |               |            |                |                   |                    |                  | <u> </u>          |                |                       |
|                     |                  |  | +             |                         | _                |  |  | _                    |                |                |               |            |                |                   |                    |                  |                   |                |                       |
| 7. CASI             | NG LEI           | FT IN WE   | LL            |                         |                  |  |  |                      |                |                |               |            |                |                   |                    |                  |                   |                |                       |
| 7.1 Dime            |                  | Inter  |               | 7.2 Type                |                  |  |  | 7,3 Ca               | sing Ceme      | $\neg \neg$    |               |            |                |                   | - <del></del>      |                  | Cementing         |                |                       |
| From<br>(m)         | To<br>(m)        | Die  | m.            |                         |                  | Welded C<br>P, PVC, et                           |  | Yes 1                |                | m)             | To<br>(m)     |            | nent<br>igs)   | Water<br>(litres) |                    | ther<br>htives   | Method<br>Used    |                | Comments              |
| 0                   | 5.4              |  | Ö             |                         | PVC              | Ċ  |  | 1                    | 5 (            | 2              | 4             |            |                |                   |                    |                  | Gravit            | ٠,             |                       |
|                     | ļ                |  |               |                         |                  |  |  |                      |                |                |               |            |                |                   |                    |                  | )                 | /              |                       |
|                     | +                | <u> </u>   |               |                         |                  |  |  |                      | <del>-</del>   |                |               |            |                |                   | -                  |                  |                   |                |                       |
| 8. CON              | STRUC            | TION AT  | PROF          | DUCTIO                  | )N LE            | CVEL.  |  |                      |                |                |               |            |                |                   |                    | •                |                   |                |                       |
| 8.1 Meth            |                  |  | 1             |                         |                  |  |  |                      | e screen u     |                |               |            |                |                   |                    |                  |                   |                |                       |
| □Оре                |                  |  |               | Ту                      | pe               |  | From<br>(m)                                      | (1                   | n) (           | erture*<br>mm) |               | Diam<br>m) | Outer<br>(m    |                   | Mate               | rial             | Trade Nar         | ne             | Completion of Base    |
| Slo                 |                  | ing  |               | SC                      |                  |  | 5-1  | <u>'</u>   2.        | 4 0.           | 5              | 8             | 2          |                |                   | PV                 |                  | Pipem             | 25/02 2        | 5d (gp                |
| Sen                 |                  |  | Щ.            |                         | -                |  |  | <u> </u>             |                |                |               |            |                |                   |                    |                  |                   |                | <u> </u>              |
| 8.3 Lines           |                  | details:   |               |                         |                  | vel Pack   |  |                      |                |                | **********    | 13 FC      | DM A           | TION I            | OG.                |                  |                   |                |                       |
| Mate                |                  | Depth  | Inter         | mal                     | Metho            |  | Gravel   | Passing              | From           | То             | _             | Fron       |                | То                | 100                |                  | Dindex            | Chiannal       |                       |
| Mai                 | enau             | (m)  | Dia<br>(mi    |                         | Placer           | ment   | Mesh   |                      | (m)            | (m)            | _             | (m)        |                | (m)               | -                  |                  | Description o     | - Material     |                       |
|                     |                  |  | -             | <i>G</i>                | 19               | UTy.   | رريح   | /6                   | 4.4            | 2.4            | _             |            | _              |                   |                    |                  |                   |                |                       |
| 9. IF NC            | T A DR           | ILLED V  | VELL.         | i_                      |                  |  |  |                      | l              |                | ┈.            |            | -              |                   |                    |                  |                   |                |                       |
| Meth                |                  | Depth<br>(m)                                     | Length<br>(m) | h Wid                   |                  | Diam<br>(m)                                      |  | ning<br>iterial      | From<br>(m)    | To<br>(m)      |               |            |                | •                 |                    |                  |                   |                |                       |
|                     |                  |  | 797.          |                         |                  |  |  |                      | 7.17           | (11)           |               |            |                |                   | 1                  |                  |                   |                |                       |
|                     | $\Box$           |  |               |                         |                  |  |  |                      |                | <u> </u>       | $\sqcup$      |            |                |                   |                    |                  |                   |                |                       |
| 10. DEV             | ELOPA            | MENT (Su   | te meth       | ods and t               | ime tak          | (en)   | <del>                                     </del> | Hours                | <del>.</del>   | /linutes       | -,            |            | - -            |                   | -                  |                  | <del>.</del>      |                |                       |
|                     | Air              | 1.0.   | ~ 6/          |                         |                  |  | <del>                                     </del> |                      |                | 5              | <del>  </del> |            | +              |                   | +                  |                  |                   |                |                       |
|                     | - /**            |  |               |                         |                  |  |  |                      |                |                | $\Box$        |            |                |                   |                    |                  |                   |                |                       |
|                     |                  | TEST (mea  | asureme       |                         |                  |  |  |                      | <u> </u>       | ·<br> -        |               |            | +              |                   | -                  |                  |                   |                |                       |
| Interval<br>From    | Tested<br>To     | Water<br>Level                                   | . Tes         | a In                    | omp<br>epth      | Discha<br>Rate                                   | e   N  | Aethod o<br>Aeasurin |                |                |               |            | _              |                   | -                  |                  |                   |                |                       |
| (m)                 | (m)              | (m)  | ·             |                         | (m)              | (L/se  | c) i   | Discharg             | e Tumpe        | <u>. (m</u>    | <u> </u>      |            | -              |                   | ļ                  |                  |                   |                |                       |
|                     |                  | 1  | <u> </u>      |                         |                  |  | -  |                      | +              |                |               |            | +              |                   | +                  |                  |                   |                |                       |
| -                   |                  | <del>                                     </del> | 4             | +                       |                  | <del>                                     </del> | -  |                      | +              | +              | $\dashv$      |            | +              |                   | 1                  | •                |                   |                |                       |
| 12. SAN             |                  |  | 1             |                         |                  |  |  |                      |                | <u> </u>       | _             |            |                |                   |                    |                  |                   |                |                       |
|                     |                  | e Water Resi<br>tained, If an                    |               |                         |                  |  |  |                      | iat strata and | i water        |               |            |                |                   |                    |                  |                   |                |                       |
|                     |                  |  |               |                         |                  |  |  |                      |                | ,              | . [           |            | $\bot$         |                   |                    |                  |                   |                |                       |
| As the ner          | son respon       | nsible for th                                    | e work        | carned on               | at on thi        | is well I -                                      | advise the                                       | at it has 1          | been comple    | ned            | .             |            |                |                   |                    |                  |                   |                |                       |
| as desemb           |                  |  |               |                         |                  |  | 150 Ul   |                      | · · · ·        |                | }             |            | +              |                   |                    |                  |                   |                | <u></u>               |
| C                   | aff!             |  |               |                         |                  |  |  |                      |                | , .            | }             |            | +              |                   |                    |                  |                   |                | <del></del>           |
| Driller             |                  | ed Driller                                       |               |                         |                  |  |  |                      |                | / /            | Daa:          |            | S.A.           |                   |                    | , ,              |                   |                |                       |
| - "                 | w 744 "E         | ,  | 444 6         |                         |                  |  |  |                      | Industri       |                | wese.         | urces      | 3A             |                   | . I                | 1 1              | 1                 |                |                       |
| WIE                 | ampie<br>14 day: | a children                                       | oletio        |                         | ocam             | on plai  | ~0   |                      | rary Con       |                |               |            |                |                   |                    |                  | ſ                 | 7030           | 728                   |

Unit No: 7030 729 Obs Well No: CHW 69 DH No: 201157

| Di                 |                        | RS W            | ELL (                                 | CONST<br>esources           | RUCT              | ION                                     |                      |                    |              |            | 1. I   | PERN             | MIT N           | o: 6          | 4 2                                    | 4 5  |            | Site                                    |
|--------------------|------------------------|-----------------|---------------------------------------|-----------------------------|-------------------|---|----------------------|--------------------|--------------|------------|--|------------------|-----------------|---------------|--|--|------------|---|
| NAMI               | E OF D                 | 811.1.FF        | C.S                                   | hei!                        |                   | Lic                                     | ence No              | 3425               | -            | PE         | RMIT   | HOL              | DER (           | or land oc    | cupier                                 | DWLD   | ?C         |   |
|                    |                        |                 |                                       |                             |                   |   |                      |                    |              | Post       | tal Addre  | ssG              | PO              | Box           | 28                                     | 34 , A   | L/91       | de                                      |
|                    | f plant of             |                 |                                       | pervision                   |                   |   |                      |                    |              |            |  |                  |                 |               |  |  |            | de .500/                                |
|                    |                        | _               |                                       | Su                          |                   | C4                                      | w/n+                 | سه                 |              | <u>c.</u>  | ΔСΩ  | _                | I               |               |  |  |            |   |
|                    | COORD                  |                 | :                                     |                             |                   |   | CM.H.AS              | w. Meth            | 10 <b>0</b>  | يرب<br>برق | / ZON  | NE 54            | . !             |               |  | FICATION   |            |   |
|                    | GDA 94/<br>AGD 66/     | WGS84           |                                       | ,                           | 4909              | 148                                     |                      |                    | _            | 000        | ZON  | NE 53<br>NE 52   | ,   F           | ile/Section   | n /Parcel                              | ID   |            | *                                       |
| _ ,                | 4OD 00/                | 04              |                                       |                             | 5249              | 539                                     | •                    |                    | _            | u          | ZON  | NE 32            | ۱ ا             | lame of P     | roperty                                | Cho  | wille      | <u>¥</u>                                |
| 5. SUM             | MARY (                 | Please t        | ick appr                              | opriate b                   | oxes and          | compl                                   | ete all ı            | relevant d         | letails      | )          |  |                  |                 |               |  |  |            |   |
| Date we<br>Work ca | ork Comn<br>riried out | nenced<br>: Nev | 6/7<br>Well F                         | 104                         |                   | Deenen                                  | П                    |                    | <br>Enlari   | Da<br>ee   | ate work   | Com              | pleted          | Rehabilita    | ′, <b>/</b>                            |  | Backfil!   |   |
| ls this a          | Replacer               | nent well       | ? <del>YES</del> /N                   | O if yes p                  | lease quot        | e replac                                | ed well              | number             | *********    | ••••       |  |                  |                 |               |  | ***************************************          |            |   |
| Is this a          | n Existing             | g well? Y       | ES/NO                                 | if yes pleas                | e quote v         | vell nun                                | nber or              | mark loca          | ation o      | n m        | <u>ар</u>  |                  | •••••           |               |  |  |            | *************************************** |
| Was we             | ll Abando              | ned? Yi         | es/NO i<br><b>24</b>                  | f yes please(m)             | state me          | thod                                    | 24                   | <br>• /_\          | ••••••       | r:         | 1 64   |                  |                 | vel           | ······································ | F:==1 V:   |            | (L/sec)                                 |
|                    | LLING D                |                 |                                       | (m)<br>not a drilled        |                   |   |                      |                    |              |            |  |                  |                 |               | (m)                                    | Final Yi   | ela        | (L/sec)                                 |
|                    | struction              |                 | -, -                                  |                             | >21, pic          | 2011                                    |                      |                    |              |            |  |                  |                 | ral surface   | to nearest                             | 0.1 m)   | T          |   |
| From               | То                     | Diam            | Cat                                   | ng Method<br>ole Tool,      |                   | Used                                    |                      | .                  | W            | ater (     | Cut  |                  | nding<br>ater   | Estimated     | Hole<br>Depth                          | Casing at  | Test       | Salinity                                |
| (m)                | (m)                    | (mm)            | Do                                    | ry Auger,<br>wn Hole        |                   | Water,<br>Type)                         |                      | Date               | From         | 1          | То   | L                | evel<br>m)      | Yield (L/sec) | at Test                                | Test<br>(m)                                      | Method     | (mg/L) or<br>Taste                      |
| 0                  | 24                     | /35             |                                       | toru                        | Mu                | <del>/</del>                            | +-                   |                    | (m)          | +          | (m)  | <del>-</del> '   | /               |               | (,                                     | <del>                                     </del> |            |   |
|                    |                        | -               |                                       | aer                         | IRTO-             |   | 1                    |                    |              | 1          |  |                  |                 |               |  |  |            |   |
| ļ                  |                        | •               | 1                                     |                             |                   | . ′                                     | +                    |                    | · ·          | +          |  |                  |                 |               | <u> </u>                               |  | <u> </u>   |   |
| 7. CAS             | ING LEF                | T IN WE         | LL                                    |                             |                   |   |                      |                    | <u>.</u>     |            |  |                  |                 | •             | <u> </u>                               | <u> </u>   | <u> </u>   | <del></del>                             |
| 7.1 Din            |                        | ,               | 7.                                    | 2 Type                      |                   |   | 7.3 Casi             | ng Cemen           | ted          |            |  |                  | ,               |               |  |  |            |   |
| From<br>(m)        | To (m)                 | Inte            | m .                                   | Swell Joint,<br>Steel, FR   | Welded Co         |   | Yes No               | Fron               |              | To<br>(m)  |  | nent<br>ags)     | Wate<br>(litre: | _             | ther<br>ditives                        | Cementing<br>Method                              | ·          | Comments                                |
| 0                  | 22                     | F(              |                                       | · PV                        |                   |   | 00                   |                    | —⊦—          | 5          | <del>                                     </del> |                  | 1               |               |  | Grant  | <u> </u>   |   |
|                    |                        |                 |                                       |                             |                   | $\Box$                                  |                      |                    |              |            |  |                  |                 |               |  |  |            |   |
|                    | ·                      |                 | $\dashv$                              |                             |                   |   |                      |                    | -            |            | +  |                  | ├               | +             |  |  |            | <u>-</u>                                |
| 8. CON             | STRUC                  | TION AT         | PRODU                                 | CTION L                     | EVEL              | 1                                       |                      |                    | - '          |            |  |                  |                 |               |  |  |            |   |
| 8.1 Met            | hod                    |                 | 8.2 Scr                               | een or Cas                  | ing (*If va       | ariable a                               | perture :            | screen use         |              |            | ts)<br>r Diam                                    | - Ci             | r Diam          |               |  |  |            | Completion                              |
| _ , .              | en Hole<br>sted Casi   |                 |                                       | Туре                        |                   | (m)                                     | (m)                  | (mı                | m)           | (r         | mm)  |                  | nm)             | Mate          | erial                                  | Trade Nar  |            | of Base                                 |
| U Sci              |                        | ng              |                                       | SÇ                          |                   | 22                                      | 29                   | F 0.               | <del>-</del> |            | 80   |                  |                 | PVC           |  | Pipe ma  | CAGN 1     | and Cap                                 |
| □ Ot               | her, give o            | letails:        |                                       |                             |                   | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                      |                    |              |            |  |                  |                 |               |  |  |            |   |
|                    | r Seal (Pe             |                 | · · · · · · · · · · · · · · · · · · · | 8.4 Gr                      | avel Packi        |   | ·                    |                    |              | _          |  | RMA              | TION            | LOG           |  |  |            |   |
| Ma                 | erial                  | Depth<br>(m)    | Interna<br>Diam<br>(mm)               | Piac                        | hod of .<br>ement | Gravel P<br>Mesh                        |                      | From<br>(m)        | To*<br>(m)   |            | From<br>(m)                                      |                  | To<br>(m)       |               |  | Description o                                    | f Material | İ                                       |
|                    |                        |                 | (11111)                               | ura                         | rity              | دو                                      | 16 :                 | 2/                 | 24           |            |  |                  |                 |               |  |  |            |   |
|                    |                        |                 |                                       |                             |                   |   |                      |                    |              | ļ          |  | $\perp$          |                 | 1             |  |  |            |   |
| 9. IF No           | OT A DR                | Depth           | Length                                | Width                       | Diam              | Lin                                     |                      | From               | То           | $\neg$     | <u> </u>   | $\dashv$         |                 |               |  |  |            |   |
|                    |                        | (m)             | (m)                                   | (m)                         | (m)               | Mat                                     | enal                 | (m)                | (m)          | $\dashv$   | <u> </u>   | $\dashv$         |                 | +             |  | •  |            | <del>'</del> · ·                        |
|                    |                        |                 |                                       |                             |                   |   |                      |                    |              |            |  |                  |                 |               |  | •  |            |   |
| 10. DE             | VELOPM                 |                 | ite method                            | s and time ta               | iken)             | ļu ļu                                   | ours                 | Mi-                | nutes        | 7          | -  | $\dashv$         |                 |               |  |  |            |   |
|                    | A                      | irlit           |                                       | •                           |                   | ."                                      |                      | 75                 |              |            |  |                  |                 |               |  |  |            | . ·                                     |
| 11. PUN            | APING T                | EST (me         | surement                              | s from nature               | ıl surface to     | nearest                                 | 0.1m)                | ٠                  |              |            | <del></del>                                      | $\dashv$         |                 | +             |  |  |            |   |
| Interva            | l Tested               | Water<br>Level  | Test                                  | Pump                        | Dischar<br>Rate   | ge M                                    | ethod of             | Hours              | Drav         |            |  |                  |                 |               |  |  |            |   |
| From<br>(m)        | To<br>(m)              | (m)             | Method                                | (m)                         | (L/sec            |   | easuring<br>ischarge | Pumped             | (m)          |            |  |                  | •               |               |  |  |            |   |
| <del></del>        |                        |                 |                                       | ļ                           | <del> </del> _    | -                                       |                      |                    |              | 4          |  | +                |                 |               |  |  |            |   |
|                    |                        |                 | -                                     | +                           | 1                 | +                                       |                      |                    | -            | +          |  |                  |                 | +-            |  |  |            |   |
| 12. SAN            |                        |                 | ·                                     | <u> </u>                    | <del>'</del>      |   |                      | J                  | 1            |            |  | $\dashv$         |                 |               | <u>.</u>                               |  |            |   |
|                    |                        |                 |                                       | 1997 and Re<br>have not bee |                   |   |                      | strata and w       | vater        |            |  |                  |                 | ļ             |  |  | ····       |   |
|                    |                        |                 |                                       | •••••••                     |                   |   |                      |                    |              |            | <u> </u>   |                  |                 | ļ ·           |  |  |            |   |
|                    | rson respor            |                 |                                       | rried out on t              |                   |   | it has bee           | n complete         | d            |            | -  | <del>-: </del> - |                 | + .           |  |  |            |   |
|                    | ed above:              |                 |                                       |                             |                   | ,                                       |                      | -                  |              |            | -  | +                |                 |               |  |  |            |   |
|                    |                        |                 |                                       |                             |                   |   |                      | Date /             | ,            |            |  |                  |                 |               |  |  |            |   |
| Deill              | ம்று                   | a till          | Sylvan                                | ge her w                    | ith               | Prin                                    | nary Ir              | ndustries          |              | Res        | ources   | SA               |                 |               |  |  | 7466       | 700                                     |
| within             | samples<br>14 days     | of com          | u anu v<br>pletion                    | ven locat<br>to             | ion plan          | Cor<br>23 (                             |                      | ary Com<br>ham Str |              |            |  |                  |                 | <u></u>       | <u> </u>                               |  | 7030       | 729                                     |
| -                  |                        |                 | +                                     |                             |                   |   |                      | E SA 50            |              |            |  |                  |                 | UNIT N        | NUMBE                                  | R L  |            |   |

Unit No: 7030 734 Obs Well No: CHW 70 DH No: 201180

| Dl  |  | RS W   | ELL (  | OF SOI<br>CONST<br>esources A | <b>RUC</b> 1           | ION   |                                 |                  |   | 1.                | PERM                | IT NO     | 6                  | 4 2                      | 51                                     | s              | ite                   |
|---|--|--|--|-------------------------------|------------------------|---|---------------------------------|------------------|---|-------------------|---------------------|-----------|--------------------|--------------------------|--|----------------|-----------------------|
|   | E OF DR                                |  |  | Shei!                         |                        |   |                                 |                  | PE  | RMIT              | HOLE                | DER 0     | r land occ         | upier                    | DWLB<br>834,                           | c<br>Adela     | vide                  |
|   |  |  |  | pervision                     |                        |   |                                 |                  |   |                   |                     |           |                    |                          |  |                |                       |
|   | CATIO                                  |  |  |                               |                        | - 4   |                                 |                  |   | ~~~               |                     | 3.        | WELL !             | NAME                     | 6\$25                                  |                |                       |
|   |  |  |  | Sur                           | rveyed b               | y <i>Still</i>  | W 97e                           | Meth             | od <i>9.1.</i>                                    |                   |                     |           |                    |                          | FICATION                               | _              |                       |
|   | COORDI<br>3DA 94/                      |  | 1  | 4                             | 1909                   | 49  |                                 |                  | ) · C   | -                 | NE 54<br>NE 53      |           |                    |                          |  |                |                       |
|   | AGD 66/3                               |  |  | 6                             | 249                    | 533   |                                 |                  |   | ZO                | NE 52               |           |                    |                          |  |                |                       |
|   |  |  |  | opriate bo                    |                        |   |                                 |                  | etails)   |                   |                     |           | T/4                | 104                      |  |                |                       |
| Work  | eried out                              | Man  | Wali K   | 1/04                          |                        | Deenen  |                                 |                  | D<br>Enlarge                                      | ate worl          | k Compl             | eted      | Rehabilitat        |                          |  | Backfill       |                       |
| Is this a   | Replacen                               | ent well?  | YES/N  | O if yes pl                   | ease quo               | te replac   | ed well i                       | number           |   | ••••              |                     | <i>:</i>  |                    |                          | ······································ | ••••           |                       |
|   |  |  |  | if yes pleas<br>f yes please  |                        |   |                                 |                  |   | -                 |                     |           |                    |                          |  | •••••          |                       |
|   | ım Depth                               |  |  |                               |                        |   |                                 | \$(m)            |   |                   |                     |           | vel                |                          |  | ld             | (L/sec)               |
|   | LING D                                 |  |  | not a drilled                 |                        |   | nplete Se                       | ctions: 6.2      | <b>, 9</b> , 10, 11                               | , 12 and          | 13 as ne            | cessar    | y                  |                          |  |                |                       |
| 6.1 Cor   | struction                              | Details  | Drillio  | ng Method                     |                        |   | 6.2 V                           | Vater Cut I      |   |                   |                     | $ \Gamma$ | al surface         |                          | 0.1 m)                                 |                | 1                     |
| From  | To                                     | Diam   | Cat  | ole Tool,<br>ry Auger,        |                        | i Used<br>Water,  |                                 | Date             | Water   | Cut               | Stand<br>Wat<br>Lev | er        | Estimated<br>Yield | Hole<br>Depth<br>at Test | Casing at<br>Test                      | Test<br>Method | Salinity<br>(mg/L) or |
| (m)   | (m)                                    | (mm)   |  | wn Hole<br>imer, etc.         | Mud                    | Type)   |                                 |                  | From (m)  | To<br>(m)         | (m                  |           | (L/sec)            | (m)                      | (m)                                    | Method         | Taste                 |
| 0   | 35                                     | 732  | -  | lory                          | My                     | <u>d</u>  | $\downarrow$                    |                  |   |                   |                     |           |                    |                          |  |                |                       |
| <del></del>   |  | -  | Aug  | ger                           | (Rio                   | -Vis  | 4-                              |                  |   |                   | $\vdash$            | -         |                    |                          |  |                |                       |
| <del></del>   |  | <del> </del>   | 1  |                               |                        |   |                                 |                  |   |                   |                     |           |                    |                          |  |                |                       |
| 7. CAS  | ING LEF                                | T IN WE  |  |                               |                        |   |                                 |                  |   |                   |                     |           |                    |                          |  |                |                       |
| 7.1 Dim   |  | Inter  |  | 2 Type                        | W-14-4 C               | -13   | 7.3 Casi                        | ng Cement        |   | <del>`</del>      |                     | Water     |                    | ther                     | Cementing                              |                |                       |
| From<br>(m)   | To (m)                                 | Dia<br>(mr   |  | Swell Joint,<br>Steel, FR     | P, PVC, et             |   | Yes No                          | From (m)         | (m)   |                   | ement<br>pags) .    | (litres)  |                    | itives                   | Method<br>Used                         | .              | Comments              |
| _0  | 34                                     | 80   | $\perp$  | PV                            | C                      |   |                                 | 0                | <u>ی</u>  |                   |                     |           |                    |                          | Cravi                                  | <u> </u>       | ,                     |
|   | _33                                    |  |  | •                             |                        |   |                                 | -                |   | _                 |                     |           |                    |                          |  |                | <u> </u>              |
|   |  |  |  |                               |                        |   | 0 0                             |                  |   | -                 |                     |           |                    |                          |  |                | _                     |
|   |  | TON AT   |  | CTION L                       |                        |   |                                 |                  | · · · · · · · · · · · · · · · · · · ·             |                   |                     |           |                    |                          |  |                |                       |
| 8.1 Met   | hod<br>en Hole                         |  | 8.2 Scr  | reen or Casi<br>Type          | ng (*If v              | From  | To                              | Apert            | ure* · Inn  | er Diam           | Outer               |           | Mate               | ria)                     | Trade Nam                              | ne .           | Completion            |
| _ ,   | otted Casin                            | ng   | <u> </u>   | <u> </u>                      |                        | 33?   | (25                             | (mr              | -   | (mm)<br><b>?C</b> | (mr                 | n)        | PVC                |                          | Pipem                                  |                | of Base               |
| ☐ Sc  | reen(s)                                | _  |  |                               |                        |   |                                 |                  |   |                   |                     |           |                    |                          | 7                                      |                |                       |
|   |  |  |  | T                             |                        |   |                                 |                  |   | 1.                |                     |           |                    |                          |  |                |                       |
|   | r Seal (Pa                             | Depth  | Interna  | al Med                        | ovel Pack<br>nod of    | ing<br>Gravel F   | Passing                         | From             | To  | 13. Fo            | ORMAT               | To To     | <u>.0G</u>         | <del></del>              |  |                |                       |
| Ma  | terial                                 | (m)  | Diam<br>(mm)   | Place                         | ement                  | Mesh  | Size                            | (m)              | (m)   | (m                |                     | (m)       |                    |                          | Description o                          | Material       |                       |
|   |  |  | <del> </del>   | Gra                           | rity                   | 8-1   | 6   c                           | <u> </u>         | .25   |                   | +                   |           | <del></del>        |                          |  |                |                       |
| 9. IF N   | OT A DR                                | ILLED V  | VELL   |                               |                        |   |                                 |                  |   |                   |                     |           |                    |                          |  |                |                       |
| Met   | hod                                    | Depth<br>(m)   | Length<br>(m)  | Width<br>(m)                  | Diam<br>(m)            |   | ning<br>terial                  | From (m)         | To<br>(m)   |                   |                     |           |                    |                          |  |                |                       |
|   | . [                                    |  |  | -                             |                        | 4   |                                 |                  |   |                   | $-\Gamma$           |           |                    |                          |  |                |                       |
| 10. DF  | VELOPM                                 | ENT /S··   | ite metho-   | s and time ta                 | iken)                  | <u>l</u>  |                                 |                  |   | ·                 | $\dashv$            |           | -                  |                          |  |                |                       |
|   |  | Ме   | thod   |                               |                        | H   | lours                           |                  | utes  |                   |                     | •         |                    |                          |  | ,              |                       |
|   |  | Airl   | <i>144</i> e   | d                             | -                      | <del> </del>  |                                 | 77               |   | _                 | +                   |           | +                  |                          | •                                      |                | <u></u>               |
| <u> </u>  | -                                      |  | surement   | s from natura                 | ıl surface t           | o nearest   | 0.1m)                           | ٠.               |   |                   |                     | -         | _                  |                          |  |                | •                     |
| 11. PU  | MPING T                                | EST (mea   |  | Pump                          | Discha<br>Rate         | rge M   | fethod of<br>feasuring          | Hours            | Draw<br>Down                                      |                   |                     |           |                    |                          |  |                |                       |
| Interva   | l Tested                               | Water  | Test   | Denth                         |                        |   | reantill.                       | Pumped           | (m)   | 1                 | - 1                 |           | 1                  |                          |  |                |                       |
|   |  |  |  | Denth                         | (L/se                  | c) E  | Discharge                       |                  | <del>  \                                   </del> | -                 |                     |           |                    |                          |  |                | •                     |
| Interva<br>From   | l Tested<br>To                         | Water<br>Level   | Test   | Depth                         |                        | c) E  | Discharge                       |                  |   |                   |                     |           |                    |                          |  |                | •                     |
| Interva<br>From   | l Tested<br>To                         | Water<br>Level   | Test   | Depth                         |                        | c) E  | Discharge                       |                  |   |                   | <del>-</del>        |           |                    |                          |  |                |                       |
| From (m)  | To (m)                                 | Water<br>Level<br>(m)  | Test<br>Method   | Depth (m)                     | (L/se                  |   | :                               |                  |   |                   | ,                   |           |                    |                          |  |                |                       |
| Interva From (m)  12. SAI The prov  | To (m)  MPLES ision of the             | Water<br>Level<br>(m)  | Test<br>Method   | Depth                         | (L/se                  | thereto re  | :<br>equire that                |                  |   |                   | ,                   |           |                    |                          |  |                |                       |
| Interva From (m)  12. SAI The provsamples   | To (m)  MPLES ision of the must be obt | Water<br>Level<br>(m)  | Test Method  | Depth (m)                     | (L/se                  | thereto rea   | :<br>equire that                | strata and w     | vater   |                   | ,                   |           |                    |                          |  |                |                       |
| From (m)  12. SAl The prov samples  As the performance of the province of the | To (m)  MPLES ision of the must be obt | Water Level (m)  Water Research If an  | Test<br>Method   | Depth (m)                     | (L/se                  | thereto rea   | :<br>equire that<br>isons:      | strata and w     | rater   |                   |                     |           |                    |                          |  | ,              |                       |
| From (m)  12. SAl The prov samples  As the performance of the province of the | To (m)  MPLES ision of the must be obt | Water Level (m)  Water Research If an  | Test<br>Method   | Depth (m)                     | (L/se                  | thereto rea   | :<br>equire that<br>isons:      | strata and w     | rater   | ,                 |                     |           |                    |                          |  |                |                       |
| Interva From (m)  12. SAI The prov samples As the peas descri   | MPLES ision of the must be obt         | Water Level (m)  Water Resained. If an inside for the description of t | Test Method  | Depth (m)                     | egulations in obtained | thereto real state rea                                  | equire that is that it has been | strata and w     | rater   |                   |                     |           |                    |                          |  |                |                       |
| Interva From (m)  12. SAI The prov samples  As the pt as descri  Signature Drille   | MPLES ission of the must be obt        | Water Level (m)  Water Resained. If an air air air air air air air air air air   | Test Method  | t 1997 and Re have not bee    | egulations en obtained | thereto re<br>i state rea<br>advise tha                 | cquire that isons:              | strata and w     | rater   | sources           | s SA                |           |                    |                          |  |                |                       |
| Interva From (m)  12. SAI The prov samples  As the pt as descri  Signature Drille water   | MPLES ission of the must be obt        | Water Level (m)  Water Resained. If an airchite for the control of | Test Method Meth | t 1997 and Re have not bee    | egulations en obtained | thereto re i state rea divise that Pri Coi . Coi . 23 ( | cquire that isons:              | bate / ndustries | and Replex  | sources           | i SA                |           | UNIT               |                          |  | 030 73         |                       |
| Interva From (m)  12. SAI The prov samples  As the pt as descri  Signature Drille water   | MPLES ission of the must be obt        | Water Level (m)  Water Researced If an assible for the state of comparison of comparis | Test Method Meth | t 1997 and Re have not bee    | egulations en obtained | thereto re i state rea divise that Pri Coi . Coi . 23 ( | cquire that isons:              | strata and w     | and Replex  | sources           | ; SA                |           | UNIT               |                          |  |                |                       |

| DR                      |  | ERNMI<br>RS W                                    | ELL                   | CON  | NSTI              |                | CION                      |                      |                | Γ                |                     | 1. 1   | PERM             | IIT NO                                       | o: 6                                    | 4 2                             | '53                      |               | Site                     |
|-------------------------|--|--|-----------------------|--|-------------------|----------------|---------------------------|----------------------|----------------|------------------|---------------------|--|------------------|--|---|---------------------------------|--------------------------|---------------|--------------------------|
| NAME                    | OF DR  | ILLER  | ζ.                    | shei   | i/ ·              |                | Lic                       | ence N               | io: <b>3</b> 5 | 25               | Pl                  | ERMIT  | HOL              | DER o  | r land oc                               | cupier                          | DWLB                     |               | 1-5-10                   |
| Contact I               | Phone/M  | obile No.  | .:                    | ************                                   | *********         |                |                           |                      | **********     |                  |                     |  |                  |  |   |                                 |                          |               | laide                    |
| Name of                 | <del></del>                                      |  |                       | upervisi                                       | іоп               |                | ***********               |                      |                |                  |                     |  |                  |  |   |                                 |                          |               | de 5001                  |
| 2. LOC<br>Date of       |  |  |                       | <u>.</u>                                       |                   |                | CA                        | h/m                  | <i>لوب.</i>    | 4                | a                   | 2002   |                  | 3.   |   |                                 | 6925                     |               |                          |
| GPS CO                  |  |  |                       | *********                                      |                   |                |                           | 7.K.96.6             | N              | nethoo           |                     | ZO!  |                  |  |   |                                 | FICATION                 |               |                          |
| g <b>⊈</b> Gi           |  | WGS84  | _                     |  |                   | 49/2           |                           |                      | •              |                  |                     | ZO   | NE 53<br>NE 52   | 172  |   |                                 |                          |               |                          |
|                         |  | 54   | L                     |  | 6                 | 24             | <u> 367</u>               | 8                    |                |                  |                     | ı ZU:  | NE 32            |  |   |                                 |                          |               |                          |
| 5. SUMN                 | AARY (   | Please ti  | ick ap                | propria  | ate bo.           | xes and        | comp                      | lete al              | l releve       | ant det          | ails)               |  |                  |  | 10/2/                                   | 'nd                             |                          |               |                          |
| Date wor<br>Work car    |  |  | <i>I.Y.[.</i><br>Well |  | <i>7</i>          |                | <br>Deepen                |                      |                |                  | . I<br>nlarge       |  | Comp             | leted  | Rehabilita                              | <br>te □                        | ••••••                   | Backfil       | ı 🗆                      |
| Is this a F             | Replacem   | ent well?  | YES                   | NO if  |                   | ase quo        | te replac                 | ed wel               |                | er               |                     |  |                  |  |   |                                 |                          |               |                          |
| Is this an              | Existing   | well? Y  | ES/NC                 | if yes   | please            | quote          | vell nu                   | mber o               | r mark         | locatio          | on on t             | nap  | ••••             |  |   |                                 |                          |               |                          |
| Maximur                 |  |  |                       |  |                   |                | anou<br>nal Depi          |                      | _              |                  |                     |  |                  |  | vel                                     |                                 |                          |               | (L/sec)                  |
| 6. DRIL                 |  |  |                       |  |                   |                |                           |                      |                |                  |                     | 1, 12 and  | _                |  |   |                                 |                          |               |                          |
| 6.1 Cons                | truction l                                       | Details  | Dri                   | lling Met                                      | thod              |                |                           | 6.2                  | Water          | Cut De           |                     |  |                  |  | ral surface                             | I                               | 0.1 m)<br>               |               |                          |
| From<br>(m)             | To<br>(m)  | Diam<br>(mm)                                     | Ro                    | able Too<br>otary Aug<br>Down Hol<br>ammer, et | ol,<br>ger,<br>le | (Air,          | i Used<br>Water,<br>Type) |                      | Date           |                  | Wate<br>From<br>(m) | To (m)   | Stan<br>Wa<br>Le | iter<br>vel                                  | Estimated<br>Yield<br>(L/sec)           | Hole<br>Depth<br>at Test<br>(m) | Casing at<br>Test<br>(m) | Test<br>Metho | Salinity (mg/L) or Taste |
| 0                       | 7.6  | /35  |                       | otor   | 7                 | Mu             | $\overline{}$             | $\perp$              |                | $\blacksquare$   |                     |  |                  |  |   |                                 |                          |               |                          |
|                         |  | <u> </u>   | +1                    | rgez   |                   | (Rio           | - 1/1                     | 4-                   |                | +                |                     |  |                  | _  |   | <u>.</u>                        |                          |               |                          |
|                         |  | l  |                       |  |                   |                |                           |                      |                |                  |                     |  |                  | ,  | *******                                 | [                               | l                        |               | •                        |
| 7. CASIN                |  | T IN WE  |                       | 7.2 Typ  |                   |                |                           | 7 3 Ca               | sing Ca        | mented           |                     |  |                  |  |   |                                 |                          |               |                          |
| From                    | To (m)   | Inte   | mal                   | Swell  | Joint, V          | Welded C       |                           | Yes 'I               |                | From<br>(m)      | To                  | 1  | ment ,           | Water<br>(litres                             |   | ther<br>ditives                 | Cementing<br>Method      |               | Comments                 |
| (m)                     | 5-6  | SC.  |                       | PV   |                   |                | <b>.</b> .                | 9                    | 5+             | 0                | 4                   | <del>`                                    </del> | ags)             | (nues  | , ,,,,,                                 | 214,43                          | Gravit                   | 7,            |                          |
|                         |  |  |                       |  |                   | ,              |                           |                      | J              | ·                | <u> </u>            |  |                  |  |   |                                 | 4,000                    |               |                          |
|                         | <del>                                     </del> | <del>                                     </del> |                       |  |                   |                |                           |                      | 7              |                  |                     |  |                  | -  | +                                       |                                 |                          | +             | · · · · -                |
| 8. CONS                 | TRUCT  | ION AT   | PROI                  | DUCTIO   | ON LE             | EVEL           |                           |                      |                |                  |                     |  |                  | <u>.                                    </u> |   |                                 |                          |               |                          |
| 8.1 Meth                |  | ,  | · -                   |  |                   | ng (*If v      |                           |                      |                |                  |                     |  | 0                | Di   |   |                                 |                          |               | Completes                |
| Ope                     |  |  |                       |  | ype               |                | From<br>(m)               | (r                   | n)             | Aperture<br>(mm) |                     | ner Diam<br>(mm)                                 |                  | Diam<br>nm)                                  | Mat                                     | trial                           | Trade Na                 |               | Completion<br>of Base    |
| Slot                    | ted Casin<br>en(s)                               | ıg   |                       | حد   |                   |                | <u>J.9</u>                | 7-                   | 6              | 2.0              | +-                  | 80   | -                |  | PVC                                     |                                 | Pipems                   | K1715         | End Cap                  |
|                         | er, give d                                       | etails:  |                       |  |                   | -              |                           |                      |                |                  |                     |  | ********         |  | *************************************** |                                 |                          |               |                          |
| 8.3 Liner               |  | cker)  | Inte                  | 8.   | .4 Gra            | vel Pack       | ,                         | -                    |                |                  |                     | 1  |                  | TION I                                       | LOG                                     |                                 |                          |               |                          |
| Mate                    | rial   | Depth . (m)                                      | Dia<br>(m             | am   | Metho<br>Place    | od of          | Gravel Mesh               |                      | From<br>(m)    |                  | To<br>(m)           | From (m)   |                  | To<br>(m)                                    |   |                                 | Description o            | f Material    |                          |
|                         |  |  |                       |  | irax              | city           | 8:                        | <i>16</i> .          | 4.6            | 7.               | 6_                  |  |                  |  |   |                                 |                          |               |                          |
| 9. IF NO                | T A DDI  | HIENY  | WELL                  |  | -                 |                |                           |                      | [              |                  |                     | <b>ا</b> ا                                       | +                |  |   |                                 |                          |               |                          |
| y, IF NO<br>Metho       | 1  | Depth<br>(m)                                     | Lengti                | h Wu   | idth              | Diam<br>(m)    |                           | ning<br>terial       | Fro.           |                  | To<br>(m)           | 1 -  |                  |  |   |                                 |                          |               |                          |
|                         |  | \mj  | (m)                   |  | m)                | (00)           | 1418                      |                      | 1 (1)          |                  | 200                 |  |                  |  |   |                                 |                          | ,             |                          |
| 10 5                    | El Oct :   | 1878700  |                       |  |                   |                |                           | -                    |                |                  |                     | J  | $\dashv$         |  | -                                       |                                 |                          |               |                          |
| 10. DEV                 | ELOPM  |  | thod                  | rods and I                                     | ume tal           | ken)           |                           | lours                |                | Minute           | es                  |  | _                |  |   |                                 | ·                        |               |                          |
|                         |  | Airl   | ift                   | ed/  |                   |                |                           |                      | /              | <u>C</u>         |                     |  | _].              |  |   |                                 |                          |               |                          |
| 11. PUM                 | PING T   | EST (me  | asurem                | nts from                                       | I patural         | surface :      | O DEATES!                 | (0,1m)               |                |                  |                     | <del></del>                                      |                  |  | +                                       |                                 |                          |               |                          |
| Interval                | Tested   | Water  | Te                    | st P   | Pump              | Discha         | urge N                    | dethod o             | ~   m          | ours             | Draw<br>Down        |  |                  |  |   |                                 | -                        |               |                          |
| From<br>(m)             | To<br>(m)  | Level<br>(m)                                     | Meti                  | hod   L  | Depth<br>(m)      | (L/sc          |                           | Aeasuria<br>Discharg | g pur          | nped             | (m)                 |  |                  |  |   |                                 |                          |               |                          |
|                         |  |  | ļ                     |  |                   | -              | -                         |                      | -              |                  |                     |  | +                |  |   |                                 | ····,                    |               | · ·                      |
| +                       |  |  | $\vdash$              | +  |                   |                |                           |                      |                | -                |                     |  | -                |  | <del> </del>                            |                                 |                          |               |                          |
| 12. SAM                 |  |  |                       |  |                   | <del></del>    |                           |                      |                |                  |                     | ·  |                  |  |   |                                 |                          |               |                          |
| The provis<br>samples m |  |  |                       |  |                   |                |                           |                      | at strata      | and wate         | r                   |  |                  |  |   |                                 |                          |               |                          |
|                         |  |  |                       |  |                   |                |                           |                      |                |                  | •                   | -  | +                |  |   |                                 |                          |               | <del></del>              |
| As the pers             | son respon                                       |  |                       |  |                   |                |                           |                      |                |                  |                     |  | _+               |  | 1                                       |                                 |                          |               |                          |
| as describe             | M BOOVE:   | •  | -                     |  |                   |                |                           |                      |                | ,                |                     |  | $\perp$          |  |   |                                 |                          |               |                          |
| Signature o             |  |  |                       |  |                   |                |                           |                      | Date           | 1                | /                   |  |                  |  | 1 .                                     |                                 | 1                        | _             | , .                      |
| Driller<br>Rotes        | tolliğlik<br>anıples                             | कार्रिकटर  | CONT.                 | gogeth<br>i weil i                             | ier wi<br>locati  | ith<br>on plai | Pri                       | mary<br>re I ib      | Indus          | tries a          | nd Ro               | esources   | SA               | •  |   |                                 | i                        | 7020          | 735                      |
| WIF                     | 14 days  | dr com   | pletio                | n to:  |                   | ,              | 23                        | Conyi                | nghan          | ı Stree          | t                   |  |                  |  | UNIT                                    | NUMRE                           | ER I                     | 1030          | 130                      |
|                         |  |  |                       |  |                   |                | GI                        | ENSI                 | DE SA          | A 5065           | •                   |  |                  |  |   |                                 | <u></u>                  | •             |                          |

|  | GOV   | ERNME  | NT O  |   | nit No:  |  |  | - 0   | bs We  | ell No:                      | CHW            | 73                | DH                                      | <b>No</b> : 20  | 1184                                    |            |                   |
|--|---|--|---|---|--|--|--|---|--|------------------------------|----------------|-------------------|---|-----------------|---|------------|-------------------|
| D  |   | RS W   |   | ONST  | RUCT   | rion   |  | RT  |  | 1.                           | PERMI          | T NO:             | 6                                       | 4 2             | 5 4                                     |            | Site              |
|  |   |  |   |   |  |  |  | 3425  | PE   | ERMIT                        | HOLD           | <b>ER</b> or 1    | land occ                                | upier<br>28     | DWL.<br>34, A                           | SC<br>We/a | ide               |
|  |   |  |   |   |  |  |  |   | "   10   | Juli Aldai                   |                | *****             | <b>,</b> ,                              |                 |   | Post Co    | می مار            |
|  |   | N OF W   |   | rvision   | ,  |  | ***************************************                            | ***************************************           |  |                              | ***********    |                   |   |                 | / 4 3                                   |            | Jul               |
|  |   |  |   | Ç.,   | rveved b   | w CAL  | Nate.  | . Method  | a <i>C</i>                                       | RSS                          | 4              | 1                 |   | NAME.           | FICATION                                |            | •••••••           |
|  |   |  |   |   |  |  |  |   | ]5   | ZO                           | NE 54          |                   |   |                 | l Lease No:                             |            |                   |
| ਰ (  | GDA 94/   | WGS84  |   | _   | 4911   | 105  |  |   |  |                              |                |                   |   |                 | I ID                                    |            |                   |
| <b>.</b>   | AGD 66/   | 84   |   |   | 624  | 364  | 6  |   | . 🗆  | 20.                          | NE 52          |                   |   |                 | Cha                                     |            |                   |
| 5. SUM   | IMARY (   | Please ti  | ck appro  | priate b  | oxes and   | i comple   | ete all rei  | levant de   | tails)   |                              |                |                   |   |                 |   |            |                   |
|  |   | nenced   | <i>19757.</i><br>Well [97   | 0.4   |  | Deepen   |  |   | E<br>Inlarge                                     | Date worl                    | k Comple       | ted               | ehabilitat                              | <i>04</i>       | •••••                                   | Doale 61   |                   |
|  | arried out<br>Replacer  |  |   |   |  |  |  |   |  |                              |                |                   |   |                 |   | Dackiii    | ·· 🗀              |
|  |   |  |   |   |  |  |  |   |  |                              |                |                   |   |                 |   |            |                   |
| Was we   | ell Abando  | ned? YE  | S/NO if   | yes pleas   | e state me   | thod   |  | ***********                                       |  |                              |                |                   | *************************************** |                 |   |            |                   |
|  |   | Drilled  |   |   |  |  | 8.   |   |  |                              |                |                   | 1                                       | (m)             | Final Yie                               | eld        | (L/se             |
|  |   | ETAILS   | If no   | n a drille  | d well, pl   | ease com   |  | ions: 6.2,  |  |                              |                |                   |   |                 |   |            |                   |
| 6.1 Co   | nstruction  | Details  | Drilling  | Method  | <u> </u>   |  | 6.2 Wa   | iter Cut De                                       |  |                              |                | _ i               | surface                                 |                 | 0.1 m)                                  |            |                   |
| From   | То  | Dıam   | Cable   | Tool,   |  | d Used<br>Water,                                     | Da   | nte   | Water  | r Cut                        | Standi<br>Wate | ř   <u>"</u>      | stimated<br>Yield                       | Hole<br>Depth   | Casing at<br>Test                       | Test       |                   |
| (m)  | (m)   | (mm)   | Down  | Hole<br>ner, etc.   |  | Type)  |  |   | From<br>(m)                                      | To<br>(m)                    | Leve<br>(m)    | ין י              | (L/sec)                                 | at Test<br>(m)  | (m)                                     | Metho      | od T              |
| 0  | 2.8   | /35  |   | a-u   | Hu   | d  |  |   | (,   | ()                           |                |                   |   |                 |   |            |                   |
|  |   |  |   | ger   |  | -Vis   |  |   |  |                              |                |                   |   |                 |   |            |                   |
|  | ļ   | <del> </del>   | 1 0   | <u> </u>  |  |  | -  |   |  |                              | <u> </u>       | -                 |   |                 | <b> </b>                                | ·          |                   |
|  | INC LE  | <u> </u>   |   |   |  |  | ٠  |   |  |                              |                | -                 |   |                 | <u> </u>                                | <u> </u>   |                   |
|  | nensions  | T IN WE  |   | Туре  |  | -  | 7.3 Casing   | Cemente   | d  |                              | <u> </u>       |                   |   |                 |   |            |                   |
| From   |   | Inter  | 1   |   |  |  | , 10 Amount  | 1   |  | 7                            |                |                   |   |                 |   |            |                   |
| rrom   | To  |  |   |   | , Welded C   |  | Van No   | From  | To   | C                            | ment           | Water             |   | ther            | Cementing                               | 3          | Commen            |
| (m)  | (m)   | Dia:   | m. S  | Steel, Fl   | RP, PVC, et  |  | Yes No   | (m)   | (m)  | ) (1                         | ement<br>bags) | Water<br>(litres) |   | ther<br>litives | Method<br>Used                          |            | Commen            |
|  |   | Dia:   | m. S  |   | RP, PVC, et  |  |  |   |  | ) (1                         |                |                   |   |                 | Method                                  |            | Commen            |
| (m)  | (m)   | Dia:   | m. S  | Steel, Fl   | RP, PVC, et  |  | ,  | (m)   | (m)  | ) (1                         |                |                   |   |                 | Method<br>Used                          |            | Commen            |
| (m)  | (m)   | Dia:   | m. S  | Steel, Fl   | RP, PVC, et  |  |  | (m)   | (m)  | ) (1                         |                |                   |   |                 | Method<br>Used                          |            | Commen            |
| (m)<br>-O  | (m)   | Dia:   | m. S  | PVC   | RP, PVC, et  |  |  | (m)   | (m)  | ) (1                         |                |                   |   |                 | Method<br>Used                          |            | Commen            |
| 8. CON<br>8.1 Met  | (m)<br>6 · S  | Dia<br>(mr   | PRODUC<br>8.2 Screen  | PVC  CTION I en or Cas  | LEVEL  | variable a   | perture sci  | (m)   | (m)  | ) (1                         | bags)          | (litres)          |   |                 | Method<br>Used<br>Grov I                | <b>y</b>   |                   |
| 8. CON<br>8.1 Met  | (m) 6 · C   | Dial (mr   | PRODUC<br>8.2 Screen  | PVC  CTION I en or Cas  Type  | LEVEL  | variable a   | perture sci  | reen used Apertur (mm)                            | give lim   | nits) ner Diam (mm)          | bags)          | (litres)          | Add                                     | rial            | Method<br>Used<br>Grow I F              | me         | Complet<br>of Bas |
| 8. COM<br>8.1 Met  | NSTRUC' thod pen Hole otted Casi  | Dial (mr   | PRODUC<br>8.2 Screen  | PVC  CTION I en or Cas  | LEVEL  | rariable a   | perture sci  | (m) O reen used Apertur                           | give lim   | nits)                        | Outer D        | (litres)          | Add                                     | rial            | Method<br>Used<br>Grov I                | me         | Complet           |
| 8. CON<br>8.1 Met  | NSTRUC' thod pen Hole otted Casi rreen(s)   | Diameter Dia | PRODUC<br>8.2 Screen  | PVC  CTION I en or Cas Type   | LEVEL  | rariable a From (m)                                  | perture sci  | reen used Apertur (mm)                            | give lim   | nits) ner Diam (mm)          | Outer D        | (litres)          | Mate                                    | rial            | Method Used Grow In                     | me         | Complet<br>of Bas |
| 8. CON 8.1 Met Ol St St Ol Ol                            | NSTRUC' thod pen Hole otted Casi rreen(s)   | Diau (mr   | PRODUC<br>8.2 Screen  | Steel, FI  PVC  CTION I  en or Cas  Type  | LEVEL  | rariable a From (m) 655                              | perture sci  | reen used Apertur (mm)                            | give lim   | nits) ner Diam (mm)  8 C     | Outer D (mm    | (litres)          | Mate                                    | rial            | Method Used Grow In                     | me         | Complet<br>of Bas |
| 8. COM<br>8.1 Met<br>Ol<br>St<br>Sc<br>Ol                | NSTRUC' thod pen Hole otted Casicreen(s) there, give er Seal (P.  | Diau (mr   | PRODUC<br>8.2 Scree   | Steel, FI PVC  CTION I en or Cas Type SC  8.4 Gi Met                                  | LEVEL sing (*If v  | rariable a From (m) 655                              | perture sci  | reen used Apertur (num) O                         | give lime* Inc                                   | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method<br>Used<br>Grov III              | me .       | Complete of Bas   |
| 8. COM<br>8.1 Met<br>Ol<br>St<br>Sc<br>Ol                | NSTRUC' thod pen Hole otted Casi rreen(s)   | Diau (mr   | PRODUC<br>8.2 Screen  | Steel, FI PVC  CTION I en or Cas Type  8.4 Gr  Met Place                              | LEVEL sing (*If v  | rariable a From (m) 655                              | perture sci To (m)  855  | reen used Apertur (nun) O                         | give lime e* Inc                                 | nits)  ner Diam (mm)  13. Fe | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In                     | me .       | Complete of Bas   |
| 8. COM<br>8.1 Met<br>Ol<br>St<br>Sc<br>Ol                | NSTRUC' thod pen Hole otted Casicreen(s) there, give er Seal (P.  | Diai (mr. S.C.)  FION AT  ng  details:  Depth  | PRODUC<br>8.2 Screi   | Steel, FI PVC  CTION I en or Cas Type  8.4 Gr  Met Place                              | LEVEL sing (*If v  | rariable a From (m) 655                              | perture sci To (m)  855  | reen used Apertur (nun) O                         | give lime* Inc                                   | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method<br>Used<br>Grov III              | me .       | Complete of Bas   |
| 8. CON<br>8.1 Met<br>Ol<br>SI<br>Sc<br>On<br>8.3 Lin     | NSTRUC' thod pen Hole otted Casi creen(s) ther, give er Seal (Praterial   | Pion AT  rion AT  ng  details:  Depth (m)  | PRODUC<br>8.2 Screen  | Steel, FI PVC  CTION I en or Cas Type  8.4 Gr  Met Place                              | LEVEL sing (*If v  | rariable a From (m) 655                              | perture sci To (m)  855  | reen used Apertur (nun) O                         | give lime e* Inc                                 | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method<br>Used<br>Grov III              | me .       | Complete of Bas   |
| 8. CON<br>8.1 Met<br>O<br>SI<br>Sc<br>O<br>8.3 Lin<br>Ma | NSTRUC' thod pen Hole otted Casi creen(s) ther, give er Seal (Praterial   | Dian (mr)  FION AT  right details:acker)  Depth (m)  LLLED W  Depth  | PRODUC<br>8.2 Screen  | Steel, FI PVC  CTION I en or Cas Type SC  8.4 Gr Plac  Width                          | EVEL sing (*If v   | rariable a From (m)  6 S  Gravel P. Mesh :           | perture sci To (m)  assing Size  Fine                              | reen used Apertur (mm) O.                         | give lim e* Int (m) To (m)                       | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method<br>Used<br>Grov III              | me .       | Complete of Bas   |
| 8. CON<br>8.1 Met<br>O<br>SI<br>Sc<br>O<br>8.3 Lin<br>Ma | NSTRUC' thod pen Hole otted Casi creen(s) ther, give er Seal (P   | Dian (mr. S.C.)  FION AT  Ing  details:  Depth (m)   | PRODUC<br>8.2 Screen  | Steel, FI PVC  CTION I en or Cas Type  S.C.  8.4 G1 Met Place                         | LEVEL sing (*If v  | rariable a From (m) 655 Gravel P. Mesh 5             | perture sci To (m)  assing Size  Fine                              | reen used Apertur (nun) O.                        | give lim  e* Inc  To (m)                         | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In Trade Nar Pipers 19 | me .       | Complete of Bas   |
| 8. CON<br>8.1 Met<br>O<br>SI<br>Sc<br>O<br>8.3 Lin<br>Ma | NSTRUC' thod pen Hole otted Casi creen(s) ther, give er Seal (P   | Dian (mr)  FION AT  right details:acker)  Depth (m)  LLLED W  Depth  | PRODUC<br>8.2 Screen  | Steel, FI PVC  CTION I en or Cas Type SC  8.4 Gr Plac  Width                          | EVEL sing (*If v   | rariable a From (m)  6 S  Gravel P. Mesh :           | perture sci To (m)  assing Size  Fine                              | reen used Apertur (mm) O.                         | give lim e* Int (m) To (m)                       | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In Trade Nar Pipers 19 | me .       | Complete of Bas   |
| 8. CON 8.1 Met O Sc O 8.3 Lin Ma 9. JF N Met             | NSTRUC' thod pen Hole otted Casi reen(s) ther, give er Seal (P. sternal   | Diam (mn)  FION AT  rig  details:  Depth (m)  HENT (Sta  | PRODUCE 8.2 Screen (min)  | Steel, FI PVC  CTION I en or Cas Type SC  8.4 G1 Plac Met Plac Width (m)              | EVEL sing (*If v   | rariable a From (m)  6.5  Gravel P. Mesh 5           | perture sci To (m)  assing Size  Final                             | reen used Apertur (mum) O  From (m) From (m)      | give lim e* Inr To (m) To (m)                    | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In Trade Nar Pipers 19 | me .       | Complete of Bas   |
| 8. CON 8.1 Met O Sc O 8.3 Lin Ma 9. JF N Met             | NSTRUC' thod pen Hole otted Casi reen(s) ther, give er Seal (Paterial   | Diameter Control of the Control of t | PRODUCE 8.2 Screen (min)  VELL Length (min)   | Steel, FI PVC  CTION I en or Cas Type SC  8.4 G1 Plac Met Plac Width (m)              | EVEL sing (*If v   | rariable a From (m)  6.5  Gravel P. Mesh 5           | perture sci To (m)  assing Size  Fine                              | reen used Apertur (mm) O.                         | give lim e* Inr To (m) To (m)                    | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In Trade Nar Pipers 19 | me .       | Complete of Bas   |
| 8. CON 8.1 Met O Sc O 8.3 Lin Ma 9. JF N Met             | NSTRUC' thod pen Hole otted Casi reen(s) ther, give er Seal (Paterial   | Diam (mn)  FION AT  rig  details:  Depth (m)  HENT (Sta  | PRODUCE 8.2 Screen (min)  VELL Length (min)   | Steel, FI PVC  CTION I en or Cas Type SC  8.4 G1 Plac Met Plac Width (m)              | EVEL sing (*If v   | rariable a From (m)  6.5  Gravel P. Mesh 5           | perture sci To (m)  assing Size  Final                             | reen used Apertur (mum) O  From (m) From (m)      | give lim e* Inr To (m) To (m)                    | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In                     | me .       | Complete of Bas   |
| 8. CON 8.1 Met O Sc O 8.3 Lin Ma  9. IF N Met            | NSTRUC' thod pen Hole otted Casi treen(s) ther, give er Seal (P. aternal  | Diam (mn)  FION AT  Ing  details:  Depth (m)  AENT (State of the content of       | PRODUCE 8.2 Screen Internal Disarra (mm)  | Steel, FI PVC  CTION I en or Cas Type SC  8.4 G1 Plac  Width (m)                      | EVEL sing (*If v thod of comen (m)                                 | rariable a From (m) 655 Gravel P. Mesh: Lin Mate     | perture sci To (m)  assing Size  fing crial                        | reen used Apertur (mum) O  From (m) From (m)      | give lim e* Inr To (m) To (m)                    | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In                     | me .       | Complete of Bas   |
| 8. CON 8.1 Met O SI O 8.3 Lin Ma 7 10. DE                | NSTRUC' thod pen Hole otted Casi treen(s) ther, give er Seal (P. aternal  | Diameter Control of the Control of t | PRODUC 8.2 Screen  Internal Diarn (mm)  VELL Length (m)   | Steel, FI PVC  CTION I en or Cas Type SC  8.4 Gr Metrology Width (m)  and time i      | LEVEL sing (*If v rave) Pack the dof cement (m)                    | rariable a From (m) 655  Gravel P. Mesh S.  Lin Mate | perture sci To (m)  Size  Fisize  Fisize  Ours                     | reen used Apertur (mm) O                          | give lim e* Inr To (m) To (m) To To To           | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In                     | me .       | Complete of Bas   |
| 8. CON 8.1 Met OI SI SC OI 8.3 Lin Met 10. DE            | (m)  NSTRUC' thod pen Hole otted Casi reen(s) ther, give er Seal (P aternal  OT A DR thod  WELOPM  MPING 1 al Tested To | Diam (mn)  FION AT  Ing  details:  Depth (m)  MENT (State of the content of       | PRODUCE 8.2 Screen Internal Disarra (mm)  | Steel, FI PVC  CTION I en or Cas Type SC  8.4 G1 Plac  Width (m)  width (m)           | LEVEL sing (*If v rave) Pack the dof cement (m)                    | rariable a From (m) 6 S I Lin Mate                   | perture sci To (m) S  assing F Size  Signature  Ours  Ours         | reen used Apertur (mum) O  From (m) From (m)      | give lim e* Inr To (m) To (m)                    | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In                     | me .       | Complete of Bas   |
| 8. CON 8.1 Met Otherwise Sc Otherwise 9. IF N Met 10. DE | NSTRUC' thod pen Hole otted Casi creen(s) ther, give er Seal (P. aternal  | Diam (mr. S.C.)  FION AT  III.LED V  Depth (m)  MENT (Sta  | PRODUCE 8.2 Screen Internal Disarra (mm)  VELL Length (m)  Length (m)  Lessurements Internal Disarra (mm) | Steel, FI PVC  CTION I en or Cas Type  8.4 Gr  Plac  Width (m)  width (m)  Pump Depth | EVEL sing (*If v  ravel Pack thed of cornent (m)  Diam (m)  taken) | rariable a From (m) 6 S I Lin Mate                   | perture sci To (m)  Solution  assing F Size  6 Si  ing erial  ours | reen used Apertur (mun) O.  From (m)  Minut Hours | give lim  e* Inr  To (m)  To (m)  tes  Draw Down | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In                     | me .       | Complete of Bas   |
| 8. CON 8.1 Met OI SI SC OI 8.3 Lin Met 10. DE            | (m)  NSTRUC' thod pen Hole otted Casi reen(s) ther, give er Seal (P aternal  OT A DR thod  WELOPM  MPING 1 al Tested To | Diam (mr. S.C.)  FION AT  III.LED V  Depth (m)  MENT (Sta  | PRODUCE 8.2 Screen Internal Disarra (mm)  VELL Length (m)  Length (m)  Lessurements Internal Disarra (mm) | Steel, FI PVC  CTION I en or Cas Type  8.4 Gr  Plac  Width (m)  width (m)  Pump Depth | EVEL sing (*If v  ravel Pack thed of cornent (m)  Diam (m)  taken) | rariable a From (m) 6 S I Lin Mate                   | perture sci To (m)  Solution  assing F Size  6 Si  ing erial  ours | reen used Apertur (mun) O.  From (m)  Minut Hours | give lim  e* Inr  To (m)  To (m)  tes  Draw Down | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In                     | me .       | Complete of Bas   |
| 8. CON 8.1 Met OI SI SC OI 8.3 Lin Met 10. DE            | (m)  NSTRUC' thod pen Hole otted Casi reen(s) ther, give er Seal (P aternal  OT A DR thod  WELOPM  MPING 1 al Tested To | Diam (mr. S.C.)  FION AT  III.LED V  Depth (m)  MENT (Sta  | PRODUCE 8.2 Screen Internal Disarra (mm)  VELL Length (m)  Length (m)  Lessurements Internal Disarra (mm) | Steel, FI PVC  CTION I en or Cas Type  8.4 Gr  Plac  Width (m)  width (m)  Pump Depth | EVEL sing (*If v  ravel Pack thed of cornent (m)  Diam (m)  taken) | rariable a From (m) 6 S I Lin Mate                   | perture sci To (m)  Solution  assing F Size  6 Si  ing erial  ours | reen used Apertur (mun) O.  From (m)  Minut Hours | give lim  e* Inr  To (m)  To (m)  tes  Draw Down | nits) ner Diam (mm)  8 C     | Outer D<br>(mm | (litres)          | Mate                                    | rial            | Method Used Grow In                     | me .       | Complete of Bas   |

7030 736

UNIT NUMBER

As the person responsible for the work carried out on this well I advise that it has been completed as described above:

Date //
Driller to the lyer this Cip. log ther with primary Industries and Resources SA Core Library Complex 23 Conyngham Street GLENSIDE SA 5065

| Unit No: 7030 737 | Obs Well No: CHW 74 | <b>DH No</b> : 201185 |   |
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| Dl              |  | ERS W  | ELL (            | CONST  |                 | TION I                 |                | ORT                 |              |                | 1. P       | ERN          | 11T N     | io: 6              | 4 2              | 55                 | Si             | te                                    |
|-----------------|--|--|------------------|--|-----------------|------------------------|----------------|---------------------|--------------|----------------|------------|--------------|-----------|--------------------|------------------|--------------------|----------------|---------------------------------------|
| NAMI            | EOFD   | RILLER   | <i>C</i> .S      | hei/   | ,               | Line                   | nce Nov        | 3425                | - P          | ERN            | MIT I      | HOL          | DER       | or land occ        | upier            | DWLB               | 2              |                                       |
|                 |  | Mobile No  |                  |  |                 |                        |                | •                   | P            | ostal          | Addre      | ss <b>C</b>  | PC        | Box                | 28               | 34, 1              | dela           | de                                    |
|                 |  | perator if                                       |                  |  |                 |                        |                |                     |              |                |            |              |           |                    |                  |                    | Post Code      | 5001                                  |
|                 | _  | N OF W   |                  | El VISIUII                                       | *************   | *************          |                |                     |              |                |            |              |           |                    |                  | 6125               | -              |                                       |
|                 |  | y 1/9  |                  | Su   | rveved h        | v SA                   | Work           | <b>e</b> Meth       | od G         | RS             | ير         |              |           |                    |                  | FICATION           |                |                                       |
|                 |  | DINATES  |                  |  |                 |                        |                | 2,1000              | 7 (          |                | ZON        | IE 54        |           |                    |                  |                    |                |                                       |
| _               |  | /WGS84   | ·                | 9  | 19/42           | 25                     |                |                     |              |                | ZON        | IE 53        |           |                    |                  |                    |                |                                       |
| <u> </u>        | AGD 66   | 184  |                  | 6  | 2436            | 40                     |                |                     | '            |                | ZON        | IE 52        |           |                    |                  |                    |                |                                       |
| 5. SUM          | MARY   | (Please t  | ick appn         | priate b   | oxes and        | comple                 | te all r       | elevant a           | letails)     |                |            |              |           |                    |                  |                    |                |                                       |
|                 |  | menced   |                  | 5/0.9  |                 |                        |                |                     |              |                |            | Comp         | leted     | Rehabilitat        | /O.X             | •••••              |                |                                       |
|                 | arried ou<br>Replace                             |  |                  |  |                 | Deepen  <br>te replace |                | umber               |              |                |            |              | ******    | Kenabilitat        | е Ш              |                    | Васкии         | <u></u>                               |
|                 |  |  |                  |  |                 |                        |                |                     |              |                |            |              |           |                    |                  | ****************** |                |                                       |
|                 |  |  |                  |  |                 |                        | _              |                     |              |                |            |              |           |                    |                  |                    |                |                                       |
|                 | -  | h Drilled  |                  |  |                 |                        | •              | (m)                 |              |                |            |              |           | evel               | (m)              | Final Yie          | ld             | (L/sec)                               |
|                 |  | DETAILS<br>Details                               | If n             | ot a drille                                      | d well, ple     | ase comp               |                |                     |              |                |            |              |           | ural surface       | n nearest        | 0.1 m)             |                | •                                     |
| J. CUI          | ucudi  | , Details  |                  | g Method   |                 | 177                    | J.2 N          | . a.c.i Cut I       |              | er Cut         |            | Stan         |           |                    | Hole             |                    |                | 6                                     |
| From<br>(m)     | To<br>(m)  | Diam<br>(mm)                                     | Rotar            | e Tooi,<br>y Auger,                              | (Air,           | Used<br>Water,         | -              | Date _              | From         |                | To         | Wa<br>Le     | ter       | Estimated<br>Yield | Depth<br>at Test | Casing at<br>Test  | Test<br>Method | Salinity<br>(mg/L) or                 |
|                 |  |  |                  | n Hole<br>ner, etc.                              |                 | Type)                  | ļ              |                     | (m)          |                | m)<br>10   | (r           |           | (L/sec)            | (m)              | (m)                |                | Taste                                 |
| 0               | _/0  | 132  |                  | tary   | Mu              |                        | 1              |                     |              | _              |            |              |           |                    |                  |                    |                |                                       |
|                 | <del>                                     </del> | +  | <del>  174</del> | ger  | (KIO            | -Vis)                  | +              | +                   |              | -              | -          |              |           |                    |                  |                    |                |                                       |
|                 |  |  |                  |  |                 |                        | 1              | j                   |              |                |            |              | •         | -                  |                  |                    |                |                                       |
|                 |  | FT IN WI   |                  |  |                 |                        |                |                     |              |                |            |              |           |                    |                  |                    |                |                                       |
| 7.1 Dim         | ensions<br>To                                    | Inte   | errol .          | Type   | , Welded Co     |                        | .3 Casir       | ng Cement<br>From   |              | . 1            | Com        | nent         | Wat       |                    | her              | Cementing          | <del>-,</del>  |                                       |
| (m)             | (m)  |  | un.              |  | RP, PVC, et     | c. '                   | res No         | (m)                 | (n           |                |            | nent<br>igs) | (litro    |                    | itives           | Method<br>Used     | (              | Comments                              |
| 0               | 8  | 8  | 0                | PV   | 'C              |                        | 90             | 0                   | 4            |                |            |              |           |                    |                  | Gravit             | y              | •                                     |
|                 |  | _  | _                |  |                 |                        |                |                     |              |                |            |              | <u> </u>  |                    |                  |                    |                | -                                     |
|                 | +  | _  |                  |  |                 |                        | <del>5 5</del> | +                   |              |                |            |              | $\vdash$  |                    |                  |                    |                | · · · · · · · · · · · · · · · · · · · |
| 8. CON          | STRUC  | TION AT  |                  |  |                 |                        |                |                     |              |                |            |              |           |                    |                  |                    |                |                                       |
| 8.1 Met         |  |  | 8.2 Scr          |  | ing (*If v      | ariable ap<br>From     | erture s       | creen used          |              | nits)<br>mer D | iam [      | Outer        | Diam      | T                  |                  | <del> </del>       | - 1            | Completion                            |
|                 | en Hole<br>otted Cas                             |  | <u> </u>         | Type<br>SC                                       |                 | (m)                    | (m)<br>/0      | (mr                 | n)           | (mm            |            |              | ım)       | Mate               |                  | Trade Nan          |                | of Base                               |
| ☐ Sc:           |  | uig  | <b> </b>         | <u>u c</u>                                       |                 | _                      | 70             | 100                 | .   *        | , ,            |            |              |           | 770                | ,                | Pipem              | 290 0          | mol (ap                               |
| □ Ot            | her, give  | details:   |                  |  |                 |                        |                |                     |              |                |            |              |           |                    |                  |                    |                |                                       |
|                 | r Seal (F  |  | Interna          | 8.4 Gr   | avel Pack       | ing                    |                |                     |              | , 1            | 3. FO      | RMA          | TION      | LOG                |                  |                    |                |                                       |
| Ma              | terial   | Depth<br>(m)                                     | Diam<br>(mm)     | Met  | hod of<br>ement | Gravel Pas<br>Mesh Si  |                | From<br>(m)         | To<br>(m)    | Ш              | . From (m) |              | To<br>(m) |                    |                  | Description of     | f Material     |                                       |
|                 |  |  | (man)            | Gra  | vity            | 8:1                    | 16             | 7                   | 10           | 1 [            |            |              |           |                    |                  |                    |                |                                       |
|                 |  | <u></u>  | <u> </u>         | <u>. L</u>                                       |                 |                        | L              |                     | -            | ┚┝             |            | -            |           |                    |                  |                    |                |                                       |
| 9. IF No<br>Met |  | Depth  | Length           | Width  | Diam            | Linit                  |                | From                | To           | ٦ <del> </del> |            | $\dashv$     |           | +                  | ,                |                    |                |                                       |
| MEL             |  | (m)  | (m)              | (m)  | (m)             | Mater                  | ial            | (m)                 | (m)          | ┧├             |            | +            |           |                    |                  |                    |                |                                       |
|                 |  |  |                  |  |                 |                        |                |                     |              | <u> </u>       |            | _            |           |                    |                  |                    |                | <u> </u>                              |
| 10. DE          | VELOP  | MENT (St   |                  | and time t                                       | aken)           |                        |                | ,                   |              | Ţ              |            | $\Box$       |           |                    |                  |                    |                |                                       |
|                 |  |  | thod             | -~   |                 | · Ho                   | пія            | Min                 | nutes        | ┨┞             |            | +            |           |                    |                  |                    |                |                                       |
|                 |  |  | -li£±            | - <i>y</i>                                       |                 |                        | <del></del> -  | 1                   | <b>.</b>     | 1  -           |            | +            |           |                    |                  | •                  |                |                                       |
|                 |  | TEST (me   | asurements       | from natura                                      | al surface to   | nearest 0.             | lm)            |                     |              |                |            |              |           |                    |                  |                    |                |                                       |
| Interva         | l Tested<br>To                                   | Water<br>Level                                   | Test             | Pump<br>Depth                                    | Discha<br>Rate  |                        | thod of        | Hours               | Draw<br>Down |                |            | _            |           |                    |                  |                    |                |                                       |
| (m)             | (m)  | (m)  | Method           | (m)  | (L/sec          |                        | charge         | Pumped              | (m)          | -              |            | _            |           | _                  |                  |                    |                |                                       |
|                 |  |  | +                | <del>                                     </del> | <del> </del>    | _                      |                |                     | -            | ┨┞             |            | +            |           |                    |                  |                    |                |                                       |
|                 |  | <del>                                     </del> |                  | +  | +               | $\dashv$               |                |                     |              | ┧┞             |            | +            |           |                    |                  |                    |                |                                       |
| 12. SAN         |  | <del></del>                                      | ·                |  |                 |                        |                |                     | i            | <u>'</u>       |            | 丁            |           |                    |                  |                    |                |                                       |
|                 |  | e Water Res<br>stained. If ar                    |                  |  |                 |                        |                | strata and w        | ater         |                |            |              |           |                    |                  |                    |                | •                                     |
|                 | ······   | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,          |                  | ••••••   | ·····           |                        |                |                     |              | L              |            | -            |           |                    |                  |                    |                |                                       |
| As the pe       | rson respo                                       | onsible for th                                   |                  |  |                 |                        |                |                     |              | $\vdash$       | -          | $\dashv$     |           | _                  |                  |                    |                |                                       |
|                 | ed above:  |  |                  |  |                 |                        |                | ,                   |              | $\vdash$       |            | +            |           |                    |                  |                    | •              |                                       |
| Signature       | of Licens  | ed Driller                                       |                  | ***********                                      |                 |                        | *********      | Date /              | , *          | +              |            | +            |           | 1                  |                  |                    | •              | •                                     |
|                 | urpai  |  | (a) (*u          | gether w   | ith             | Prim                   |                | dustries            | and R        | ∟<br>esou      | rces :     | SA           |           |                    | 1 1              |                    |                |                                       |
| 33              | sample<br>14 day                                 |  | d'end-           | iel locat  | ion plan        | Core                   | Libra          | ry Com              | plex         |                |            |              |           |                    |                  |                    | 7030 7         | 37                                    |
|                 |  | -  | _                |  |                 |                        |                | ham Str<br>E SA 500 |              |                |            |              |           | UNIT N             | UMBE             | R L                |                |                                       |

| Unit No: 7030 739 | Obs Well No. CHW 75 | DH No: 20118 |
|-------------------|---------------------|--------------|

| DI                              |  | ers wi                        | ELL (                  | OF SOU<br>C <b>ONST</b><br>esources A | RUCTI                       |                   |                 | RT               |                     |         | 1. P          | ERM                      | it n            | o: 6                         | 4 2                             | 57                                      | si              | te   |
|---------------------------------|--|-------------------------------|------------------------|---------------------------------------|-----------------------------|-------------------|-----------------|------------------|---------------------|---------|---------------|--------------------------|-----------------|------------------------------|---------------------------------|---|-----------------|--|
|                                 |  |                               |                        | heil                                  |                             |                   |                 |                  | PI                  | EF      | RMIT I        | HOLI                     | DER o           | or land occ                  | cupier                          | DWLB                                    | RC<br>Acros (co | `~/e   |
| Contact                         | Phone/M  | 1obile No.                    |                        |                                       |                             |                   | ********        |                  | Po                  | osta    | al Addre      | ss <b>(</b>              | 11.0            |                              |                                 | 9.34, Z                                 | 4514            | 5001   |
|                                 |  |                               |                        | pervision                             |                             |                   |                 |                  |                     |         |               | **********               |                 |                              |                                 | <i>4.4.</i> 0±                          | Post Code       | 300/   |
|                                 |  | N OF W                        |                        | _                                     |                             | :<br>c4.47        | ~40             | <b></b>          |                     | 0       | ×67           |                          | 3               | . WELL                       | NAME.                           | 6423                                    |                 |  |
|                                 |  |                               |                        | Sur                                   | veyed by                    | 7/1/1/            | 9/.0            | Meth             |                     |         | ×።ሩ<br>CZON   |                          | 4               | . LAND I                     | DENTI                           | FICATION                                | <u></u>         |  |
|                                 |  | INATES<br>WGS84               |                        | 4                                     | 91876                       |                   |                 |                  |                     | בע<br>ב |               | IE 54<br>IE 53           |                 |                              |                                 |   |                 |  |
|                                 | GD 66  |                               |                        |                                       | 24/9                        |                   |                 |                  | 7 -                 | _       | ZON           | IE 52                    |                 |                              |                                 |   |                 |  |
|                                 |  | .n. (                         | <u></u>                |                                       |                             |                   |                 |                  | <u> </u>            |         |               |                          | ļ N             | lame of P                    | roperty                         | C.A.Q.                                  | <i></i> 9       |  |
| Date wo<br>Work or<br>Is this a | ork Comm<br>urried out<br>Replaces<br>n Existin  | nenced<br>: New<br>nent well? | 20/<br>Well 2<br>TES/N | O if yes pleas                        | Decase quote                | eepen  replaced   | well nu         | ımber            | Enlarge             | ma      | □<br>œ        |                          |                 | Rehabilita                   | te 🗌                            |   | Backfill        |  |
| Maxim                           | ım Depth   | Drilled                       | 7.80                   | (m)                                   | Final                       | Depth             | 7-80            | )(m)             |                     | Fin     | al Stand      | ling W                   | ater Le         | vel                          | (m)                             | Final Yie                               | :ld             | (L/sec)  |
| 6. DRII                         | LING I   | ETAILS                        | If t                   | not a drilled                         | well, pleas                 |                   |                 |                  |                     |         |               |                          |                 |                              |                                 |   |                 |  |
| 6.1 Con                         | struction  | Details                       | Drilli                 | ng Method                             | •••                         |                   | 6.2 Wa          | ater Cut         | Details (r          | mea     | asureme       |                          |                 | ral surface                  | 1                               | 0.1 m)                                  |                 | <del>                                     </del> |
| From<br>(m)                     | From To Diam (m) (m) Down Hole Hammer, etc. Fluid Used (Air, Water, Down Hole Hammer, etc. |                               |                        |                                       |                             |                   |                 |                  |                     | er C    | To (m) '      | Stand<br>Wa<br>Lev<br>(n | ter<br>vel      | Estimated<br>Yield<br>(Usec) | Hole<br>Depth<br>at Test<br>(m) | Casing at<br>Test<br>(m)                | Test<br>Method  | Salinity<br>(mg/L) or<br>Taste                   |
| _0_                             | 9.8  | 135                           | Ro                     | ton                                   | Huc                         | <del>/</del>      |                 |                  |                     | ╀       | -             | •                        |                 |                              |                                 | ļ                                       |                 |  |
| <u> </u>                        | <del> </del>   | <del> </del>                  | 120                    | 19er                                  | US 10-                      | (13)              |                 |                  |                     | +       |               |                          | $\dashv$        | •                            |                                 | -                                       |                 |  |
|                                 |  |                               |                        |                                       |                             |                   |                 |                  |                     | L       |               |                          |                 |                              |                                 |   |                 |  |
|                                 |  | T IN WE                       |                        |                                       |                             |                   |                 |                  |                     |         |               |                          |                 |                              |                                 |   |                 |  |
|                                 | ensions  | Inter                         |                        | 2 Type                                |                             | 1                 | Casing          | g Cemer          |                     |         | <del></del>   |                          |                 |                              |                                 | Comenting                               | <del></del>     |  |
| From (m)                        | To (m)   | Diau<br>(mm                   | n.                     | Swell Joint,<br>Steel, FR             | Welded Coll<br>P, PVC, etc. | ar, Ye            | s No            | From (m          |                     |         |               | nent<br>igs)             | Wate<br>(litres | -                            | ther<br>litives                 | Method<br>Used                          |                 | Comments   |
| 0                               | 6.8  |                               |                        | PVC                                   |                             | Ū                 |                 | .0               |                     |         |               |                          |                 |                              |                                 | Grarit                                  |                 |  |
|                                 |  |                               |                        |                                       | <del>-</del>                |                   |                 |                  | _ _                 | _       |               |                          |                 |                              |                                 |   |                 |  |
|                                 | <del></del>  | _                             |                        | -                                     |                             |                   |                 | +                | -                   |         | <del> </del>  |                          |                 | _                            | -                               |   |                 |  |
| 8. CON                          | STRUC  | TION AT                       | PRODU                  | CTION L                               | EVEL                        |                   |                 |                  |                     |         |               |                          |                 |                              |                                 | 1                                       | ı               |  |
| 8.1 Met                         | hod  |                               | 8.2 Sci                | een or Casi                           | ng (*If var                 |                   |                 |                  |                     |         |               | Δ                        | Б               | Τ                            |                                 |   |                 | C. lavia   |
| ,                               | en Hole  |                               |                        | Туре                                  |                             | From<br>(m)       | To<br>(m)       | (m               | ım)                 | (n      | r Dıam<br>nm) | Outer<br>(m              |                 | Mate                         | rial                            | Trade Nar                               |                 | Completion<br>of Base                            |
| □ Sc:                           | otted Casi   | ng .                          |                        | <del>برد</del>                        | 6                           | ا چئ              | 9.8             | 0.               | <u> </u>            | å       | to            |                          |                 | PVC                          |                                 | Pipena                                  | user E          | nd ap  |
| _                               |  | detaile                       | L                      |                                       |                             |                   |                 |                  |                     |         |               |                          |                 | L                            |                                 | l                                       |                 |  |
|                                 | r Seal (P  |                               |                        | 1                                     | vel Packin                  |                   |                 | ************     |                     |         | 13. FO        |                          | TION            | LOG                          |                                 | *************************************** |                 |  |
|                                 | terial   | Depth                         | Interna<br>Diam        | al Meth                               | od of                       | ravel Passi       |                 | From             | To                  |         | From          |                          | То              |                              |                                 | Description o                           | f Material      |  |
|                                 |  | (m)                           | (mm)                   | Place                                 | ement                       | Mesh Size         |                 | (m)              | (m)<br><b>9</b> . 8 | -       | (m)           |                          | (m)             |                              |                                 | •                                       |                 |  |
|                                 |  |                               |                        | urar                                  | <i>""</i>                   | 8-10              | _ <u> `</u>     | 0                | 7. 7                | ┨       |               | _                        |                 |                              |                                 |   |                 |  |
| 9. IF N                         | OT A DE  | ILLED V                       | ELL.                   |                                       |                             | -                 |                 |                  |                     | ,       |               |                          |                 |                              |                                 |   |                 |  |
| Met                             |  | Depth<br>(m)                  | Length<br>(m)          | Width<br>(m)                          | Diam<br>(m)                 | Lining<br>Materia |                 | From<br>(m)      | To<br>(m)           |         |               |                          |                 |                              |                                 |   |                 |  |
|                                 |  |                               |                        |                                       |                             |                   |                 |                  |                     | ]       |               | $\Box$                   |                 |                              |                                 |   |                 |  |
|                                 |  |                               |                        | <u> </u>                              |                             |                   | _               |                  |                     | j       | <u> </u>      | - -                      |                 |                              |                                 |   |                 |  |
| 10. DE                          | VELOP  |                               | te method<br>thod      | ds and time ta                        | ken)                        | Hour              | \$              | Mi               | nutes               | ן ן     |               | +                        |                 |                              |                                 |   |                 |  |
|                                 |  | Airli                         |                        | 2                                     |                             |                   |                 | 25               |                     | ]       |               |                          |                 |                              |                                 |   |                 |  |
|                                 |  |                               |                        |                                       |                             |                   |                 |                  |                     |         |               | $\bot$                   |                 |                              |                                 |   |                 |  |
|                                 |  |                               | surement               | s from natura                         |                             |                   |                 |                  | T 5-                | ۱       | ļ             | +                        |                 |                              |                                 |   |                 |  |
| Interva<br>From                 | Tested<br>To   | Water<br>Level                | Test<br>Method         | Pump<br>Depth                         | Discharg<br>Rate            | Meas              | uring           | Hours<br>Pumped  | Draw<br>Down        |         |               | $\dashv$                 |                 | -                            | •                               |   |                 | _  |
| (m)                             | (m)  | (m)                           |                        | (m)                                   | (L/sec)                     | Disch             | arge            |                  | (m)                 |         |               | +                        |                 |                              |                                 |   |                 |  |
|                                 |  |                               |                        | -                                     | +                           | -                 |                 |                  | +                   |         |               | $\dashv$                 |                 |                              |                                 |   | •               |  |
|                                 | •  |                               |                        | +                                     | <del> </del> -              | +                 |                 |                  | +                   |         |               | $\dashv$                 | -               |                              |                                 |   |                 |  |
| The prov                        | MPLES<br>ision of the<br>must be ob  | tained. If an                 | y samples              | t 1997 and Res                        | n obtained s                | tate reasons      | s: .            |                  |                     |         |               |                          |                 |                              |                                 |   | •               |  |
|                                 |  |                               |                        | *******************                   |                             |                   |                 |                  |                     |         |               |                          |                 |                              |                                 |   |                 |  |
|                                 | rson respo<br>bed above:   |                               | e work ca              | rried out on t                        | his well I adv              | rise that it I    | nas been        | complete         | ed                  |         |               |                          |                 |                              |                                 |   |                 |  |
|                                 |  | ,                             | •                      |                                       |                             |                   |                 |                  |                     |         |               | _                        |                 |                              |                                 |   |                 |  |
|                                 |  |                               |                        | <del></del>                           |                             |                   |                 |                  |                     | I       |               |                          |                 |                              |                                 | ī                                       |                 |  |
| water                           | sample   |                               | d and                  | well locati<br>to:                    |                             | Core l<br>23 Co   | Libra:<br>nyngh | ry Con<br>iam St | reet                | es:     | ources        | SA                       |                 | UNIT                         | יסואוזו                         |   | 7030            | 739  |
| سيد. ،                          |  |                               | -                      |                                       |                             | GLEN              | ISIDE           | E SA 50          | 65                  |         |               |                          |                 | UNITE                        | 4 OTATO1                        |   |                 |  |

| NA IV  | OF DR  | ILLER  | C.5  | hei/  |  | Lie   | ence N   | 342  | PI   | RMI               | r HOL                  | DER or                  | land occ         | upier            | DWLBC                                 |                |              |
|--|--|--|--|---|--|---|--|--|--|-------------------|------------------------|-------------------------|------------------|------------------|---------------------------------------|----------------|--------------|
|  |  |  |  |   |  |   |  |  |  | tal Ad            | iress                  | GPO                     | 80               | - 28             | 934, x                                | Ade/a          | de           |
|  |  |  |  |   |  |   |  |  | - 1  |                   |                        |                         |                  |                  |                                       | "Post Code     | 7            |
|  | CATION   |  |  | rvision   |  |   |  | ***************************************  |  | -                 |                        |                         |                  |                  | 692                                   |                |              |
| Date of  | f Survey   | 1/9/   | 104  | Sur   | veved l  | hv. GA  | Wat  | Meth   | nd G   | <i>SS</i> .       | <u> </u>               |                         |                  |                  | FICATION                              | •              | •••••        |
| GPS C  | COORDI   | NATES  |  | Dut   |  | -   |  | Meth   | ت (٦   | / z               | ONE 54                 |                         |                  |                  | Lease No:                             |                |              |
|  | GDA 94/1<br>AGD 66/8   | WGS84<br>34  |  | 4   | 9/8  | 81<br>6241  | 969  | · ·  |  | Z0                | ONE 53<br>ONE 52       |                         |                  | •                | ID                                    |                |              |
|  |  |  |  |   |  |   |  |  | <u> </u>   |                   |                        | Na                      | ne of P          | roperty          | CHO                                   | VIII9          |              |
| Date wo  | ork Comm   | enced  | 21/  | 3/09  | L  | <b>.</b>  |  | relevant o   | etaus)<br>[  | ate wo            | rk Com                 | oleted                  | 2//              | 3/04             | •••••••                               |                |              |
|  | arried out:<br>Replacem  |  | Well W   | if yes ple  |  | Deepen<br>ste repla                               |  | number   | Enlarge  |                   |                        |                         | ehabilitat       | .e 🗀             |                                       | васкии         | <u></u>      |
| Is this a  | n Existing   | well? \  | es/NO if   | yes please  | e quote  | well nu   | mber o   | mark loca  | tion on n  | ар                |                        |                         |                  |                  |                                       |                |              |
| Was wel  | ll Abandor   | ned? Y   | S/NO if  | yes please  | state m  | ethod   | ia   | <u> </u>   | ••••   |                   |                        |                         |                  |                  | ,                                     |                |              |
|  | ım Depth   |  |  |   |  |   |  | Z(m)   |  |                   |                        |                         | 1                | (m)              | Final Yie                             | ld             | (L           |
|  | LLING Di<br>struction  |  | If no  | t a drilled   | well, pl   | ease cor  | nplete S   | ections: 6.2<br>Water Cut  | _9, 10, 1.<br>Details (π   | , 12 an<br>easure | d 13 as j<br>ments fra | necessary<br>nm natural | surface          | to nearest       | 0.1 m)                                |                | <del>.</del> |
| 0.1 00.0   | Sur de la constitución de la con | - Columb   | Drilling   | Method<br>Tool,   | E1   | d Used  | 1  |  | Water  |                   | Star                   | nding _                 | stimated         | Hole             | Casing at                             |                |              |
| From (m)   | To<br>(m)  | Diam<br>(mm)   | Rotary   | Auger,<br>Hole  | (Air   | , Water,<br>d Type)                               |  | Date   | From   | To                |                        | ster<br>wel             | Yield<br>(L/sec) | Depth<br>at Test | Test<br>(m)                           | Test<br>Method | (r           |
|  |  |  | Hamm   | er, etc.  |  |   | —  |  | (m)  | (m)               | (1                     | m)                      |                  | (m)              |                                       |                | ╙            |
| 0  | 19.7   | 135  | Rote   |   | Mi<br>(Rio   | ud.   | +  | ٠  |  |                   | ┪┈                     |                         |                  |                  |                                       |                | ┼            |
|  |  |  | Mg   |   | (ALC).   | - , , s   | 1  |  |  |                   |                        |                         |                  |                  |                                       |                |              |
|  |  |  |  |   |  |   |  |  |  |                   | <u> </u>               |                         |                  |                  | ,                                     |                | 1            |
|  | ING LEF<br>ensions   | T IN WE  |  | Туре  |  | - 1   | 7300   | ing Cemen  | ed .   |                   | -                      |                         |                  |                  |                                       |                |              |
| 7.1 Dim  | . To   | Inter  | nal c  | well Joint,   | Welded C   | ollar,  |  | Emr  |  |                   | Cement                 | Water                   | 0                | ther             | Cementing                             |                |              |
| (m)  | (m)  | Dia:   | m.   | Steel, FR   | P, PVC, e  |   | Yes .N   | (m)  | (m   |                   | (bags)                 | (litres)                | Add              | litives          | Method<br>Used                        |                | Comm         |
| _0_  | 16.7   | 80   | <del>'</del>   | _PV   | <u>C.</u>  |   |  |  | ى  |                   |                        | ļ .                     |                  |                  | Gravit                                | <b>y</b>       |              |
|  | +  | +  | +  |   | _  |   |  | _  |  |                   |                        | <del> </del>            | <del> </del>     |                  |                                       |                |              |
|  |  |  |  |   |  |   |  | ם כ  | •  |                   |                        |                         |                  |                  |                                       | · ·            |              |
|  | STRUCT   | ION AT   |  |   |  |   |  |  |  |                   |                        |                         |                  |                  | · · · · · · · · · · · · · · · · · · · | •              |              |
| 8.1 Meth   | hod<br>en Hole   |  | 8.2 Scree  | en or Casi<br>Type  | ng (*If v  | From  | To   |  | tre* In  | er Dian           |                        | r Diam                  | Mate             | rial             | Trade Nam                             | ne T           | Comp         |
|  | en Hole<br>otted Casir   | ıg   |  | S C   |  | /6·/  | / (n<br>2 /9.  |  |  |                   | (n                     | nm)                     | PVC              |                  | O'pengy                               |                | of E         |
| ☐ Sci  |  | -0   |  | <del></del>   |  | 70.7  | 11.  | <del>-  </del>   | <del></del>  | _                 |                        |                         | <del></del>      |                  | 7,4,77,43                             | 1, C           |              |
| _  | reen(s)  |  |  |   |  |   | _!   |  |  |                   | <u> </u>               |                         |                  |                  | -                                     |                |              |
|  | her, give d  |  | <u> </u>   |   |  |   |  |  | L  |                   |                        |                         |                  |                  |                                       |                |              |
|  | ٠,   | cker)  | Internal   | 8.4 Gra   | vel Pacl   | king  |  |  | ,  | 13.               | FORMA                  | TION LO                 |                  |                  |                                       |                |              |
| 8.3 Line   | her, give d  |  |  | 8.4 Gra   |  |   | Passing  | From (m)   | To (m)   | 13. I             |                        |                         | )G               |                  | Description of                        | f Material     |              |
| 8.3 Line   | her, give der Seal (Pa   | cker)<br>Depth   | Internal<br>Diam   | 8.4 Gra   | od of  | Gravel :  | Passing<br>Size  | From   | To   | 13. I             | FORMA<br>rom           | Tion Lo                 | )G               |                  | Description of                        | f Material     |              |
| 8.3 Line   | her, give der Seal (Pa   | cker)<br>Depth<br>(m)  | Internal<br>Diam<br>(nun)  | 8.4 Gra<br>Meth<br>Place  | od of  | Gravel<br>Mesh                                    | Passing<br>Size  | From (m)   | To (m)   | 13. I             | FORMA<br>rom           | Tion Lo                 | )G               |                  | Description of                        | f Material     |              |
| 8.3 Line   | her, give der Seal (Pa   | Depth (m)  [LLED W   | Internal Diam (mm)   | 8.4 Grz<br>Meth<br>Place<br>Cro   | pict Pac)  | Gravel<br>Mesh                                    | Passing<br>Size  | From (m)   | To (m) /9. 7   | 13. I             | FORMA<br>rom           | Tion Lo                 | )G               |                  | Description of                        | f Material     |              |
| 8.3 Line Mai   | her, give der Seal (Pa   | Depth (m)  | Internal<br>Diam<br>(mm)   | 8.4 Gra<br>Meth<br>Place  | ivel Pac) iod of ement                                       | Gravel<br>Mesh                                    | Passing<br>Size  | From (m)   | To (m)   | 13. I             | FORMA<br>rom           | Tion Lo                 | )G               |                  | Description of                        | f Material     |              |
| 8.3 Line Mai   | her, give der Seal (Pa   | Depth (m)  [LLED W   | Internal Diam (mm)   | 8.4 Grz<br>Meth<br>Place<br>Cro   | pict Pac)  | Gravel<br>Mesh                                    | Passing<br>Size  | From (m)   | To (m) /9. 7   | 13. j             | FORMA<br>rom           | Tion Lo                 | )G               |                  | Description of                        | f Material     |              |
| 9. IF Ne   | her, give der Seal (Pa   | Depth (m)  LLLED W Depth (m)  ENT (Sta   | Internal Diam (mm)  VELL  Length (m)   | 8.4 Gra Meth Place  Cyco  Width (m)   | Diam   | Gravel Mesh                                       | Passing Size   | From (m)  From (m)   | To (m) /9. >   | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 | )G               |                  | Description of                        | f Material     |              |
| 9. IF Ne   | her, give der Seal (Paterial OT A DR.  | Depth (m)  ILLED W Depth (m)  ENT (Sta   | Internal Diam (mm)  VELL  Length (m)  ste methods  | 8.4 Gra Meth Place  Cyco  Width (m)   | Diam   | Gravel Mesh                                       | Passing<br>Size  | From (m)  From (m)   | To (m) /9. 7   | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 | )G               |                  | Description of                        | f Material     |              |
| 9. IF Ne   | her, give der Seal (Paterial OT A DR.  | Depth (m)  LLLED W Depth (m)  ENT (Sta   | Internal Diam (mm)  VELL  Length (m)  ste methods  | 8.4 Gra Meth Place  Cyco  Width (m)   | Diam   | Gravel Mesh                                       | Passing Size   | From (m)  From (m)   | To (m) /9. >   | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        | f Material     |              |
| 9. IF NO Med   | her, give der Seal (Pa<br>er Seal (Pa<br>terial)   | Depth (m)  ILLED W Depth (m)  EENT (State of the state of | Internal Diam (num)  VELL Length (m)   | Width (m)   | Diam (m)   | Gravel Mesh Mash                                  | Passing Size /6 ning terial Hours  | From (m) From (m) From (m)  Mi   | To (m) 79. 7 To (m) utes   | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        |                |              |
| 9. IF No Med   | her, give der Seal (Pa er Seal (Pa terial  OT A DR hod  VELOPM  MPING T d Tested To  | Depth (m)  ILLED W Depth (m)  ENT (State of the state of  | Internal Diam (num)  VELL Length (m)   | 8.4 Grz Meth Place  Width (m)  and time ta  Pump Depth                      | Diam (m)  Surface  Disch Rai                                 | Gravel Mesh Ma                                    | Passing Size  /6  ning terial  Hours  0.1m)  Method of deasuring   | From (m) From (m) From (m)  Mi Mi Hours  | To (m)  7. 7  To (m)  Draw Down  | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        |                |              |
| 9. IF No Med   | her, give der Seal (Pa er Seal (Pa erial  OT A DR hod  VELOPM  MPING T ll Tested   | Depth (m)  ILLED W Depth (m)  ENT (Sta Me  Water   | Internal Diam (mm)  VELL Length (m)  te methods thod  Control of the control of t | 8.4 Grz  Meth Place  Grow  Width (m)  and time ta                           | Diam (m)   | Gravel Mesh Ma                                    | Passing Size  /6  ning terial  Hours  0.1m)  | From (m) From (m) From (m)  Mi Mi Hours  | To (m)  To (m)  To (m)  To (m)   | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        |                |              |
| 9. IF No Med   | her, give der Seal (Pa er Seal (Pa terial  OT A DR hod  VELOPM  MPING T d Tested To  | Depth (m)  ILLED W Depth (m)  ENT (State of the state of  | Internal Diam (mm)  VELL Length (m)  te methods thod  Control of the control of t | 8.4 Grz Meth Place  Width (m)  and time ta  Pump Depth                      | Diam (m)  Surface  Disch Rai                                 | Gravel Mesh Ma                                    | Passing Size  /6  ning terial  Hours  0.1m)  Method of deasuring   | From (m)  From (m)  From (m)  Hours Pumped   | To (m)  7. 7  To (m)  Draw Down  | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        |                |              |
| 9. IF No Med   | her, give der Seal (Pa er Seal (Pa terial  OT A DR hod  VELOPM  MPING T d Tested To  | Depth (m)  ILLED W Depth (m)  ENT (State of the state of  | Internal Diam (mm)  VELL Length (m)  te methods thod  Control of the control of t | 8.4 Grz Meth Place  Width (m)  and time ta  Pump Depth                      | Diam (m)  Surface  Disch Rai                                 | Gravel Mesh Ma                                    | Passing Size  /6  ning terial  Hours  0.1m)  Method of deasuring   | From (m)  From (m)  From (m)  Hours Pumped   | To (m)  7. 7  To (m)  Draw Down  | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        |                |              |
| 9. IF No Methal 10. DE Trom (m)  | her, give der Seal (Parerial  OT A DR hod  WELOPM  MPING T (m)  MPLES  | Depth (m)  LLED W Depth (m)  ENT (Sta Met Level (m)  | Internal Diam (mm)  VELL Length (m)  te methods thod  Crecy Surrements   Test Method   | Width (m)  And time ta  Pump Depth (m)                                      | Diam (m)  Surface  Disch Rach (L/sc                          | Gravel Mesh Mash Mash Mash Mash Mash Mash Mash Ma | Passing Size  /6  Inning terial  Journal  From (m) From (m)  From (m)  Hours Pumped  | To (m)  To (m)  To more than the second of t | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        |                |              |
| 9. IF No Methal 10. DE 11. PUT Interva From (m) 12. SAN The prov samples of the s | her, give der Seal (Pa er Seal | Depth (m)  ILLED W Depth (m)  ENT (Statement of the statement of the state | Internal Diam (mm)  VELL Length (m)  te methods thod  Test Method  Durces Act by samples his   | Width (m)  and time ta  Pump Depth (m)  997 and Reave not becave not becave | Diam (m)  Surface  Disch Rai (L/s)  Cylindric (L/s)          | Gravel Mesh Mesh Mesh Mesh Mesh Mesh Mesh Mesh    | Passing Size  /6  Ining terial  Hours  Action of the same of the s | From (m)  From (m)  Hours Pumped   | To (m)  79.   To (m)  To (m)  To (m)   | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        |                | -            |
| 9. IF No Methal 10. DE 11. PUT Interva From (m) 12. SAN The prov samples of the s | her, give der Seal (Pa er Seal | Depth (m)  ILLED W Depth (m)  ENT (Statement of the statement of the state | Internal Diam (mm)  VELL Length (m)  te methods thod  Test Method  Durces Act by samples his   | Width (m)  and time ta  Pump Depth (m)  997 and Reave not becave not becave | Diam (m)  Surface  Disch Rai (L/s)  Cylindric (L/s)          | Gravel Mesh Mesh Mesh Mesh Mesh Mesh Mesh Mesh    | Passing Size  /6  Ining terial  Hours  Action of the same of the s | From (m) From (m)  From (m)  Hours Pumped  | To (m)  79.   To (m)  To (m)  To (m)   | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        |                |              |
| 9. IF No Methal 10. DE 11. PUt Interva From (m) 12. SAB The prov samples 1. As the per A | her, give der Seal (Pa er Seal (Pa er Seal (Pa der Seal ( | Depth (m)  LLED W Depth (m)  ENT (Sta  Me  Water Level (m)  Water Resained. If an  | Internal Diam (mm)  VELL Length (m)  surements  Test Method  y samples h   | Width (m)  And time ta  From natura  Pump Depth (m)  997 and Reave not bee  | Diam (m)  Surface  Disch Raia (L/so                          | Gravel Mesh Mash Mash Mash Mash Mash Mash Mash Ma | Passing Size  /6  /6  Ining terial  O.1m)  Otherhod of deasuring is charged in the same of | From (m)  From (m)  Hours Pumped   | To (m)  79.  To (m)  To (m)  To (m)  To (m)  | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        |                |              |
| 8.3 Line Mad  9. IF No Med  10. DE  11. PUP Interva From (m)  12. SAP The prov samples 1   | her, give der Seal (Paterial  OT A DR. hod  VELOPM  MPING T  d Tested  To  (m)  MPLES  ission of the must be obtained above:   | Depth (m)  LLED W Depth (m)  ENT (Sta  Me  Water Restained. If an  | Internal Diam (min)  VELL Length (m)  Its methods thod  Test Method  Test Method   | Width (m)  And time ta  From natura  Pump Depth (m)  997 and Reave not bee  | Diam (m)  Surface District Rain (L/s)  Egulations obtaine    | Gravel Mesh Mash Mash Mash Mash Mash Mash Mash Ma | Passing Size  /6  Ining  | From (m)  From (m)  From (m)  Mi  AS  Hours  Pumped  at strata and when the complete | To (m)  79.  To (m)  To (m)  To (m)  | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 |                  |                  | Description of                        |                |              |
| 8.3 Line Mai  9. IF No Med  10. DE  11. PUP Interva From (m)  12. SAP The prov samples 1   | her, give der Seal (Pa er Seal (Pa terial  OT A DR hod  VELOPM  MPING T d Tested To (m)  MPLES rison of the must be obt.   | Depth (m)  LLED W Depth (m)  ENT (Sta  Me  Water Restained. If an  | Internal Diam (min)  VELL Length (m)  Ite methods thod  Test Method  Test Method  Test  y samples h  | Width (m)  width (m)  and time ta  Pump Depth (m)  997 and Reave not bee    | Diam (m)  Surface District Rain (L/s)  Egulations in obtaine | Gravel Mesh Mash Mash Mash Mash Mash Mash Mash Ma | Passing Size  /6  Ining  | From (m)  From (m)  From (m)  Mi  AS  Hours  Pumped  | To (m)  79.  To (m)  To (m)  To (m)  | 13. j             | FORMA<br>rom<br>m)     | Tion Lo                 | OG .             |                  | Description of                        |                |              |
| 8.3 Line Mai  9. IF No Med  10. DE  11. PUT Interva From (m)  12. SAT The prov samples i   | her, give der Seal (Paterial  OT A DR hod  WELOPM  MPING T  I Tested  To  (m)  MPLES rision of the must be obt.  | Depth (m)  LLED W Depth (m)  ENT (Sta  Me  Water Research (m)  Water Research (m)  | Internal Diam (mm)  VELL Length (m)  te methods thod  Test Method  y samples h   | Width (m)  and time ta  from natura  Pump Depth (m)  997 and Reave not bee  | Diam (m)  Lisurface Disch Rain (L/se                         | Gravel Mesh Mash Mash Mash Mash Mash Mash Mash Ma | Passing Size  /6  /6  Inning terial  Ours  Outs  Outs  Outs  And the do outs  East of the sasons:  | From (m)  From (m)  From (m)  Mi  AS  Hours  Pumped  at strata and when the complete | To (m)  79.  To (m)  To (m)  To (m)  | 13. F.            | FORMA from m)          | Tion Lo                 | OG .             |                  | Description of                        |                |              |

| DF               |                  |   | WEL                 | L CC               | ONST                                    |                           | 'IOI            | I RALIA                |                         |               |                        | , 1. F       | ERI      | MIT N          | io: 6_                  | 4 2              | 7              | 3           | Si             | te .                  |                       |
|------------------|------------------|---|---------------------|--------------------|---|---------------------------|-----------------|------------------------|-------------------------|---------------|------------------------|--------------|----------|----------------|-------------------------|------------------|----------------|-------------|----------------|-----------------------|-----------------------|
| NAME             | OF DI            | RILLI                                       | R C                 | .Sh                | ei/                                     |                           | L               | icence No              | J:                      | P             | EF                     | MIT I        | HOL      | DER            | or land oc              | cupier           | Dh             | 118         | <u>C</u>       |                       |                       |
|                  |                  |   |                     |                    |   |                           |                 |                        |                         | 1             |                        | al Addre     |          | GP             | 0 80                    | x 2              | 839,           | Ac          | de/a           | ide                   |                       |
|                  |                  |   |                     |                    |   |                           |                 |                        |                         | ···           |                        |              |          |                |                         |                  |                | P           | ost Code       | 300                   | <u>/</u>              |
| 2. LO            |                  |   |                     |                    | VISIOII                                 |                           |                 |                        | ··········· <u>····</u> |               |                        |              | .,       |                | 3. WELL                 |                  | 64.            | 272         | ,              |                       | _                     |
|                  |                  |   |                     |                    | ç                                       | aranad b                  | C4              | L/~46                  | Metho                   | a C.          | 05                     | 32           |          |                |                         |                  |                |             | ***********    | ***********           |                       |
| GPS C            |                  |   | _                   | _                  |   |                           |                 |                        | Metho                   |               |                        | ZON          |          |                | 4. LAND<br>Hundred o    |                  |                |             | ~              |                       |                       |
| <b>6</b> 6       |                  |   |                     |                    | 4                                       | 964                       | 47              | ·                      |                         | ] (           |                        | ZON          | NE 53    | 3              |                         |                  |                |             |                |                       |                       |
| <b>(</b> ) A     | GD 66/           | 84  |                     |                    | 62                                      | 2432                      | 233             | 3                      |                         |               | _                      | ZON          | NE 52    |                | File/Section  Name of I |                  |                |             |                |                       |                       |
| 5. SUM           | MARY (           | Pleas                                       | e tick a            | pprop              | riate bo                                | oxes and                  | com             | olete all              | relevant de             | etails)       |                        | ,            |          |                |                         |                  |                |             |                |                       |                       |
| Date wo          | rk Comn          | nenced.                                     | 9                   | /3/,               | 04                                      |                           |                 |                        |                         |               | Da                     | te work      | Com      | pleted.        | 9/3/<br>Rehabilita      | <i></i>          |                |             |                |                       | •••                   |
| Work ca          |                  |   | iew Wel             |                    | if was al                               |                           |                 | n 🔲                    | number                  | Enlarge       |                        | Ц            |          |                | Kehabilita              | ate 🔲            |                | В           | ackiiii        |                       |                       |
|                  |                  |   |                     |                    |   |                           |                 |                        | mark locat              |               |                        |              |          |                |                         |                  |                |             |                |                       |                       |
|                  |                  |   |                     |                    |   |                           |                 |                        |                         |               |                        |              |          |                |                         |                  |                |             |                |                       |                       |
| Maximu           |                  |   |                     |                    |   | Fir                       | al Der          | oth10:                 | ./(m)                   | ]             |                        |              |          |                | evel                    |                  |                |             |                | (L/sec)               |                       |
| 6. DRIL          |                  |   |                     |                    |   |                           |                 |                        | ections: 6.2.           |               | _                      |              |          |                |                         |                  |                |             |                |                       | _                     |
| 6.1 Con:         | truction         | Detail                                      |                     |                    |   |                           |                 | 6.2                    | Water Cut D             | etails (1     | mea                    | asureme      | nts fr   | om nat         | ural surface            | to neares        | t 0.1 m)       |             |                |                       |                       |
|                  | _                | _   |                     | rilling l<br>Cable |   | Fluid                     | Used            |                        |                         | Wate          | er C                   | Cut          |          | nding          | Estimated               | Hole             | Casing         | at          | Terr           | Salinit               | у                     |
| From<br>(m)      | To<br>(m)        | Dia<br>(mi                                  |                     | Rotary A           | Auger,                                  | (Air,                     | Water,<br>Type) |                        | Date                    | From          | 1                      | To           | L        | ater<br>evel   | Yield<br>(L/sec)        | Depth<br>at Test | Test<br>(m)    | ,           | Test<br>Method | (mg/L)<br>Taste       | ог                    |
|                  |                  | <u>ــــــــــــــــــــــــــــــــــــ</u> |                     | Hamme              |   |                           |                 |                        |                         | (m)           | L                      | (m)          | _ (      | (m)            | ,,                      | (m)              | (111)          | $\perp$     |                |                       |                       |
| 0                | 10.1             | /3  | 5   8               | <u> 2010</u>       | ry                                      | MUC                       |                 | $\mathcal{L}$          |                         |               | $\perp$                |              |          |                | <del></del>             | <del> </del>     | <del>  -</del> | $\dashv$    |                |                       | $\dashv$              |
|                  |                  | -   |                     | ng                 | CF                                      | (Bio-                     | VIS             | 4                      |                         |               | +-                     |              | _        |                | ļ                       |                  | +              | $\dashv$    |                | -                     | -                     |
| -                |                  | +   |                     |                    |   |                           |                 | +                      | <del></del>             |               | +                      |              |          |                | <u> </u>                | +                | +              | <del></del> |                | <u> </u>              | $\dashv$              |
| 7. CASI          | NG LEE           | TIN   | WELL.               |                    | <u>-</u>                                |                           |                 |                        | 1                       |               | _                      |              | _        |                | ı                       |                  |                |             |                |                       |                       |
| 7.1 Dim          |                  |   | · CLL               | 7.2 T              | Гуре                                    |                           |                 | 7.3 Cas                | ing Cemente             | ed            |                        | -            | -        | •              |                         |                  |                |             |                |                       |                       |
| From             | То               |   | nternal<br>Diam.    | Sw                 |   | Welded Co                 |                 | Yes N                  | From                    |               |                        |              | nent     | Wa             |                         | Other            | Ceme           |             | ,              | Comments              |                       |
| (m)              | (m)              |   | (mm)                | 1                  |   | P, PVC, et                | c.              |                        | (m)                     | (n            | 1)                     | (ba          | igs)     | (litr          | es) Ac                  | lditives         | Us             | <u>ed</u>   | ļ`             |                       | _                     |
| 0                | <del>  7</del> : | 4   | 50_                 | -                  | PV                                      | <u> </u>                  |                 |                        |                         | 19            |                        | <del> </del> |          | -              |                         |                  | Grov           | ity         | +-             |                       |                       |
|                  |                  |   |                     | <del> </del>       |   |                           |                 | 1 2                    |                         |               |                        | +            |          |                |                         |                  | 1              |             | +              |                       |                       |
|                  | +                |   |                     | 1                  |   |                           |                 |                        |                         | +             | _                      | 1            |          | -              | -                       |                  | <del> </del>   |             | 1              |                       | $\dashv$              |
| 8. CON           | STRUC            | TION  | AT PRO              | DDUC'              | TION L                                  | EVEL                      |                 | •                      |                         | •             |                        |              |          |                |                         |                  | ·              |             |                |                       | _                     |
| 8.1 Met          |                  |   |                     |                    |   |                           |                 |                        | screen used             |               |                        |              |          |                |                         |                  |                |             |                |                       |                       |
| □ Op             |                  |   |                     |                    | Туре                                    |                           | Fron<br>(m)     |                        |                         |               |                        | Diam<br>m)   |          | er Diam<br>mm) | Ма                      | terial           | Trade          | e Name      |                | Completion<br>of Base |                       |
|                  | tted Casi        | ing   |                     | ی_                 | C                                       |                           | 7.              | 1 10                   | ·1 0·                   | 5             | 8                      | 0            |          |                | PV                      | 2                | Pipen          | 200         |                | nd Cal                | $\boldsymbol{\omega}$ |
| ☐ Scr            | . ,              |   | L                   |                    |   |                           |                 |                        |                         | <u> </u>      | _                      |              |          |                |                         |                  | <u> </u>       |             |                |                       |                       |
|                  |                  |   | **********          |                    |   |                           |                 |                        | ·····                   |               |                        |              |          |                |                         |                  |                |             | <u>::</u>      |                       | <del></del>           |
| 8.3 Line         | r Seal (P        | Dept  | . In                | itemal             |   | avel Pack<br>nod of       |                 | Passing                | From                    | То            | ו                      | 13. FC       | $\neg$   | T <sub>0</sub> | LUG _                   |                  |                |             |                |                       | $\dashv$              |
| Mat              | erial            | (m)   |                     | Diam<br>(mm)       |   | ement                     |                 | h Size                 | (m) ·                   | (m)           |                        | (m)          |          | (m)            |                         |                  | Descript       | ion of M    | laterial       |                       |                       |
|                  |                  |   |                     |                    | Gra                                     | iste                      | 8               | :/6                    | 6.7 10                  | 2./           | ] .                    |              |          |                |                         |                  |                |             |                |                       |                       |
|                  |                  | <u> </u>                                    |                     |                    | <u> </u>                                |                           |                 |                        |                         |               | ١                      |              |          |                |                         |                  |                |             |                |                       |                       |
| 9. IF NO         |                  | ULLE<br>Depth                               |                     |                    | Width                                   | Diam                      | 1               | ining                  | From                    | То            | ا ر                    |              | +        |                |                         |                  |                | _           |                |                       | $\dashv$              |
| Meth             | iod              | (m)   | . (n                | ٠ .                | (m)                                     | (m)                       |                 | laterial               | (m)                     | (m)           |                        | <u> </u>     | $\dashv$ |                |                         |                  |                |             |                |                       | $\dashv$              |
|                  |                  |   |                     | +                  |   |                           | +               | -                      | <del> </del>            | <del></del> - | 1                      |              | $\dashv$ |                | +                       |                  |                |             |                |                       |                       |
| to DEV           | EI OD            | AENT.                                       | (State -            | ethod: -           | nd time ta                              | ken)                      | 1               |                        | 1                       |               | ٤                      |              | +        |                |                         |                  |                |             |                |                       | -                     |
| IV. DE           | MOIT             |   | Method              | -uious <u>a</u>    | and thile (8                            |                           |                 | Hours                  | Min                     | utes          | ן [                    |              |          |                |                         |                  |                |             |                |                       | $\Box$                |
|                  |                  | 1-7-1                                       | ift                 | co/                |   |                           |                 |                        | 72                      | -             |                        |              | $\Box$   |                |                         |                  |                |             |                |                       |                       |
|                  |                  |   |                     |                    |   |                           |                 |                        |                         |               |                        |              | _        |                |                         |                  |                |             | `              |                       | $\dashv$              |
|                  |                  |   |                     | ments fr           |   | l surface t               | $\overline{}$   |                        |                         | Draw          | ן ר                    |              | $\dashv$ |                |                         |                  |                |             | •              |                       | $\dashv$              |
| Interval<br>From | Tested           | Wate<br>Leve                                | :I   <sub>M</sub> r | Test<br>ethod      | Pump<br>Depth                           | Discha<br>Rate            | ·               | Method of<br>Measuring | Pumped                  | Down          |                        |              | $\dashv$ |                | -                       |                  |                |             |                |                       | $\dashv$              |
| (m)              | (m)              | (m)   | , , , ,             |                    | (m)                                     | (L/se                     | c)              | Discharge              | 1 dinipos               | (m)           | 1                      |              | -        |                |                         | -                |                |             |                |                       | $\dashv$              |
|                  |                  | <del> </del>                                |                     |                    |   | +                         | +               |                        | +                       |               | $\left  \cdot \right $ |              | $\dashv$ | <u>.</u>       | -                       |                  |                |             |                |                       | $\dashv$              |
|                  |                  | $\vdash$                                    | $\dashv$            |                    |   |                           | -               |                        | -                       |               |                        |              | $\dashv$ |                | +                       |                  |                |             |                | <del></del>           |                       |
| 12. SAN          | (PLFS            | ٠.  | L                   | 1                  |   | .1                        |                 |                        |                         |               | J                      |              | $\dashv$ |                |                         |                  |                |             |                |                       | $\dashv$              |
| The provi        | sion of th       |   |                     |                    |   | egulations<br>en obtained |                 |                        | it strata and w         | ater          |                        |              | $\dashv$ |                |                         | •                |                |             |                |                       | $\dashv$              |
| samples r        | mast DC OD       | amed. I                                     | . any sar           | пріся па           | NOI DEC                                 | obtained                  | state f         | casqus;                |                         |               |                        |              | $\dashv$ |                |                         |                  |                |             |                |                       |                       |
|                  |                  |   |                     |                    | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                           |                 |                        |                         |               |                        |              |          |                |                         |                  |                |             |                | ,                     |                       |
| As the pe        |                  |   | or the wo           | rk carne           | ed out on t                             | his well I a              | dvise (         | hat it has b           | een completed           | !             |                        |              |          |                | : [                     |                  |                |             |                |                       |                       |
| 00.70111         |                  |   |                     |                    |   |                           |                 | -                      | -                       |               |                        |              | $\Box$   |                |                         |                  |                |             |                |                       |                       |
| Stenature        | of Licens        | ed Drille                                   |                     |                    |   |                           | <b>.</b>        |                        | Date /                  | , ·           |                        |              |          |                |                         |                  |                |             |                |                       |                       |
| Dille            | A di             | verifi                                      | (Licon              | tog                | ther w                                  | ith                       |                 |                        | Industries              |               | ese                    | ources       | SA       |                | <u></u>                 | Ι' :             | <u> </u>       | _           |                |                       |                       |
| CHAPET<br>Within | sample<br>14 day | s pote<br>stof co                           | cted å<br>omplet    | na we<br>ion ta    | i iocat                                 | ion plai                  |                 |                        | rary Comp<br>gham Stre  |               |                        |              |          |                |                         |                  |                | 7           | 7030 7         | 42                    |                       |
|                  |                  |   |                     | تجموي              | _                                       |                           |                 |                        | DE SA 506               |               |                        |              |          |                | UNIT                    | NUMB             | ER 🗀           |             |                |                       |                       |

| <b>D</b> )   |                            | ERS W                                   | ELL (           | OF SOI<br>C <b>ONST</b><br>esources / | RUCT                     | ION                 |                      |                    |  |            | 1. P              | ERM            | IT N           | o: 6                 | 4 2              | 8 5                         | s            | ite               | ·               |
|--------------|----------------------------|---|-----------------|---------------------------------------|--------------------------|---------------------|----------------------|--------------------|--|------------|-------------------|----------------|----------------|----------------------|------------------|-----------------------------|--------------|-------------------|-----------------|
|              |                            |   | _               | shei!                                 |                          |                     |                      | -                  |  |            |                   |                |                |                      |                  | DWLBO<br>4, Add             |              |                   |                 |
| -            |                            |   |                 |                                       |                          |                     |                      |                    |  |            |                   |                |                |                      | -                |                             |              |                   |                 |
|              |                            | perator if to<br>N OF W                 |                 | pervision                             |                          |                     |                      | ······             |  |            |                   |                |                |                      |                  | (420                        |              |                   |                 |
|              |                            |   |                 | <b>z.</b><br>Sui                      | au de la                 | <i>D</i> h          | JR.                  | Сма                | shad Ca  | 25         | Un                | ,;+            |                |                      |                  | 6128                        |              |                   |                 |
|              |                            | INATES                                  | :               | _                                     |                          | уек                 |                      | Me                 |  |            | ZONI              |                |                |                      |                  | FICATION<br>Il Lease No:    |              |                   |                 |
| <b>9</b> / ( | GDA 94/                    | WGS84                                   | 4               | 18389                                 | 19                       |                     |                      |                    |  | ב כ        | ZON               | E 53           |                |                      |                  | I ID                        |              |                   |                 |
| <u> </u>     | AGD 66/                    | /84                                     | 6               | 2474                                  | -20                      |                     |                      |                    |  | <b>)</b>   | ZON               | E 52           | 1 -            |                      |                  | Cha                         |              |                   |                 |
| 5. SUM       | MARY (                     | Please ti                               | ck appr         | opriate be                            | oxes and                 | comple              | ete all              | relevant           | details)   |            | -                 |                |                |                      |                  |                             |              |                   |                 |
| Date we      | ork Comn                   | nenced<br>New                           | 29/<br>Well [V  | [9]0 <del>4</del>                     | <del>-</del><br>         | Deepen              |                      |                    | <br>Enlarge                                      | Date v     | vork (            | Comple         | eted           | 6/10/<br>Rehabilitat | <i>'04</i><br>•□ |                             | Backfill .   |                   | •••••           |
| Is this a    | n Existin:                 | well?                                   | ES/NO i         | if yes pleas                          | e quote v                | vell num            | nber o               | r mark lo          | cation on  | map        |                   |                | ·······        | ·····                |                  |                             |              |                   |                 |
|              |                            |   |                 |                                       |                          |                     |                      |                    |  |            |                   |                |                |                      |                  |                             |              |                   |                 |
| Maxim        | ım Depth                   | Drilled                                 | 50              | (m)                                   | Fin                      | al Depth            | یک ا                 | ) <u>(m)</u>       |  | Final S    | Standi            | ng Wa          | ter Le         | vel                  | (m)              | Final Yie                   | :ld          | (L/se             | :c)             |
|              |                            | ETAILS                                  | lf r            | not a drilled                         | well, ple                | ase com             |                      |                    |  |            |                   |                |                |                      |                  |                             |              |                   |                 |
| 6.1 Cor      | struction                  | Details                                 | ´Drillii        | ng Method                             |                          |                     | 6.2                  | Water Cu           |  |            | remen             |                |                | ıral surface         | to nearest       | (0.1 m)                     |              | 1                 |                 |
| From         | То                         | * Diam                                  |                 | ole Tool,<br>ry Auger,                |                          | Used<br>Water,      |                      | Date               | Wate   | r Cut      |                   | Standi         | :r             | Estimated<br>Yield   | Depth            | Casing at                   | Test         |                   | in:ty<br>/L) or |
| (m)          | (m)                        | (mm)                                    | Do              | wn Hole                               |                          | Type)               |                      |                    | From<br>(m)                                      | Ti<br>(m   |                   | Leve<br>(m)    |                | (L/sec)              | at Test<br>(m)   | (m)                         | Method       |                   | aste            |
| O            | 20                         | 165                                     |                 | tary                                  | Aus-                     | ge/                 |                      |                    |  |            |                   |                |                |                      |                  | <u> </u>                    |              |                   |                 |
|              |                            | <del>  -</del>                          | +               |                                       | 7                        |                     | ļ                    |                    | ļ  |            |                   |                | _              |                      |                  | <del> </del>                |              | -                 |                 |
| <b>-</b>     |                            | +                                       | +               |                                       |                          |                     | ╁                    |                    | <del>                                     </del> |            | +                 |                | $\dashv$       |                      |                  | <del>  -  </del>            | •            | +                 |                 |
| 7. CAS       | NG LEI                     | T IN WE                                 | LL              | ,                                     |                          |                     |                      |                    | <del>1</del>                                     |            |                   |                |                |                      |                  | <u>'</u>                    |              |                   |                 |
| 7.1 Din      | ensions                    | Inter                                   |                 | 2 Type                                |                          |                     | 7.3 Cas              | sing Ceme          | nted   |            |                   |                |                |                      |                  |                             | 1            |                   |                 |
| From (m)     | To<br>(m)                  | Dia                                     | m.              | Swell Joint,<br>Steel, FR             | Welded Co<br>P, PVC, etc |                     | Yes N                |                    | om To<br>n) (m                                   |            | Cem<br>(bag       |                | Wate<br>(litre | .                    | ther<br>lituves  | Cementing<br>Method<br>Used |              | Comment           | .s              |
| 0            | 50                         | ) <u>(m)</u>                            |                 | PVC                                   |                          |                     | <b>W</b> [           | 1 O                | 4  | 3          |                   |                |                | Aus-                 | ge/              | Gravita                     |              |                   |                 |
| ,            |                            |   |                 |                                       |                          |                     |                      |                    |  |            |                   |                |                |                      | , , ,            |                             |              |                   |                 |
|              | <u> </u>                   | <u>  </u>                               |                 |                                       |                          | -+                  |                      |                    |  |            |                   |                |                | -                    |                  | <u> </u>                    |              |                   |                 |
| 8. CON       | STRUC                      | TION AT                                 | PRODU           | CTION L                               | EVEL                     |                     |                      |                    | L.   |            |                   |                |                |                      | <del></del>      |                             |              |                   |                 |
| 8.1 Met      | hod                        |   | 8.2 Scr         | een or Casi                           | ing (*lf v               |                     |                      |                    |  |            |                   | 0              |                |                      | •                |                             |              |                   |                 |
|              | en Hole                    |   |                 | Туре                                  |                          | From<br>(m)         | To (m                | ) (                | mm)  | ner Di     | 100               | Outer I<br>(mm |                | Mate                 | rial             | Trade Nan                   |              | Complet<br>of Bas |                 |
|              | otted Casi<br>reen(s)      | ng                                      | _Cas            | sing                                  |                          | 47                  | 3.5                  | 9 0                | ·20  | 80         | ╬                 |                |                | PVC                  |                  | <u>Pipema</u>               | ver y        | <u>a</u> @        | <u> </u>        |
| _            | ` '                        | details:                                | L               |                                       | 1                        |                     |                      |                    |  |            |                   |                |                | -l                   |                  |                             |              |                   |                 |
|              | r Seal (P                  |   |                 | 8.4 Gra                               | vel Pack                 |                     |                      | ·                  |  |            |                   | RMAT           |                |                      |                  |                             |              |                   |                 |
| Ma           | terral                     | Depth<br>(m)                            | Interna<br>Diam | Place                                 | nod of                   | Gravel Pa<br>Mesh S |                      | From<br>(m)        | To<br>(m)  |            | From<br>(m)       |                | To<br>(m)      |                      |                  | Description o               | f Material   |                   |                 |
|              |                            | (10)                                    | (mm)            | <u> </u>                              | vita                     | 16/3                |                      | 44                 | .50  | -          | 0                 | $\dashv$       | 2              | Dar                  | t an             | mel h                       | -ones        | Carro             | 15              |
|              |                            |   |                 | 1, 4                                  | • 0                      |                     |                      |                    |  |            |                   |                |                | lim                  | As for           | re por                      | ding         |                   | 7               |
|              |                            | Depth                                   | VELL<br>Length  | Width                                 | Diam                     | Lin                 | ing                  | From               | To   | , L        | 2                 | 2              | 2              | Ligh                 | st g             | rey I A                     | ma           | 199               | 4               |
| ` Met        | hod                        | (m)                                     | (m)             | (m)                                   | (m)                      | Mate                |                      | (m)                | (m)  | _          | 2.0               | +-             |                | yell                 | an_              | bandi                       | 29.          |                   |                 |
|              |                            |   |                 |                                       |                          | -                   |                      | <del> </del> .     | -  | 1 -        | <u>2.2</u><br>2.5 |                | 28             | 16/0                 | nt o             | rey so                      | indy         | <u>Any</u>        | <u>-</u>        |
| 10. DE       | VELOPN                     | AENT (St                                | te method       | ls and time ta                        | iken)                    |                     |                      |                    | 1,   | <u>'</u>   |                   | ╧              | -0             | San                  | d                |                             | <del> </del> | yy                |                 |
|              |                            |   | thod            |                                       |                          | Н                   | ours                 |                    | linutes  | [_         | 28                | ن              | <b>O</b>       | Ye//                 | an b             | cono_k                      | ned/c        | CON               | <u>rc</u>       |
|              | MPING 1                    |   | curement        | s from natura                         |                          | nearest (           | 0.1m)                | 2                  | 0  |            | 30                | <u> </u>       | 34             | Ligh                 | ي عرج            | rey m                       | red/xo       | qr <b>s</b> e     |                 |
|              | l Tested                   | Water                                   | Test            | Pump                                  | Discha                   | rge M               | lethod of            |                    | Draw   | <u>ا</u> ا | 3₹                | 4              | 40             | 10/                  | 1 × 12           | wolle                       | im n         | neo/              | _               |
| From<br>(m)  | To<br>(m)                  | Level<br>(m)                            | Method          | Depth (m)                             | Rate<br>(1./sec          |                     | easuring<br>ischarge | Pumne              |  |            |                   |                |                | Coon                 | se u             | and                         |              | <del></del>       |                 |
|              |                            |   |                 |                                       |                          |                     |                      |                    |  |            | 10                | 4              | 8              | Lio                  | _                | Yann 1                      | ned/a        | OOK               | (So             |
|              |                            |   | <u> </u>        | -                                     | ļ                        |                     |                      |                    |  | <b>∤</b>   | 11 4              | +.             | <del>~</del>   | 1000                 | <u>ø/</u>        |                             |              |                   |                 |
| 12 64        | MPLES                      | L                                       | J               | <u> </u>                              | 1                        |                     | •                    |                    |  | ' ├-       | <u>48</u>         | +              | 50             | Med                  | •                | one h                       | 10d/C        | 091               | e               |
| The prov     | ision of the<br>must be ob | tained. If an                           | y samples       | t 1997 and Re<br>have not bee         | n obtained               | state reas          | sons;                |                    |  |            |                   | ļ. <u>.</u>    |                | 500                  | <del></del>      |                             |              |                   |                 |
|              | <b>7</b>                   | *************************************** |                 | <i>,</i>                              |                          |                     |                      | .,                 |  |            |                   |                |                |                      |                  |                             |              |                   |                 |
|              | erson respo<br>bed above:  |   | e work ca       | rried out on t                        | nis well I a             | avise that          | it has b             | een comple         | ied  | $\vdash$   |                   | +              |                |                      |                  |                             |              |                   |                 |
| _ '          |                            |   | •               |                                       |                          |                     |                      | _                  |  | $\vdash$   |                   | +              |                |                      |                  |                             |              |                   |                 |
| - Charles    | 2 2 2 3                    |   |                 | ge <b>c</b> her w                     |                          |                     |                      | •                  |  |            | occ f             | <u> </u>       |                |                      |                  | , -                         |              |                   |                 |
| WAY          | sample                     |   | d and           | <del>vel</del> locat                  |                          | Cor<br>23 C         | e Libi<br>Conyn      | rary Co<br>igham S | treet ·  | esoui      | ces S             | )A             |                | UNIT N               | JUMBI            | ER                          | 7030         | 743               |                 |
|              |                            |   |                 |                                       |                          | GL                  | ENSI                 | DE SA 5            | U05  |            |                   |                |                |                      |                  |                             |              |                   |                 |

| From 15 (m) (m) Doarn Restary Augar. (na. Wears, 16. Med Ways) Date   From 15 (m) Doarn Method (m) (m) Doarn Method (m) Doarn Method (m) (m) Doarn Method (m) (m) (m) Doarn Method (m) (m) (m) (m) Doarn Method (m) (m) (m) (m) Doarn Method (m) (m) (m) (m) Doarn Method (m) (m) (m) (m) Doarn Method (m) (m) (m) (m) (m) Doarn Method (m) (m) (m) (m) (m) (m) (m) (m) (m) (m)   | DF         |             |              | <i>N</i> EL |                | )NST                                   | RUCT<br>(ct, 199)                       | ION            |              |                 |          |              | · 1. P   | ER       | MIT N              | o: 6            | 4            | 2 8                                     | 4              | Sit          | e           |             |
|--|------------|-------------|--------------|-------------|----------------|--|---|----------------|--------------|-----------------|----------|--------------|--|----------|--------------------|-----------------|--------------|---|----------------|--------------|-------------|-------------|
| 2. LOCATION OF WELL.  Date of Survey   |            |             |              |             |                |  |   |                |              |                 | ١.       | PER<br>Posta | RMIT F   | lOI      | LDER<br><i>GPO</i> | or land o       | cupier       | DWL/<br>2834,                           | SC<br>Ad       | /c/q/        | de          |             |
| 2. LOCATION OF WELL  Due of Survey. Jul. Jul. Surveyed by  | Name of    | f plant of  | perator      | if und      | er super       | vision                                 | , i                                     | ·····          |              |                 | .        |              |  |          |                    |                 |              | 1                                       | Pos            | t Code       | $\sim$      | 2/          |
| Dute of Survey   | 2. LO      | CATIO       | N OF         | WEL         | Ĺ              |  |   |                |              |                 |          |              |  |          |                    | WELL            | NAME         | 642                                     | 84             |              |             |             |
| GPS CORDINATES GDA 94/YGS84 GDA | Date of    | Survey      | 7/           | 10/         | 04             | Sur                                    | veyed b                                 | у              |              | Meth            | od       | PS           | کی   |          |                    |                 |              |   |                | •            |             |             |
| S. SUMMAKY (Flexus rick appropriate bases and complete all relevant details)  Date work Commended. 7/10/16/15  Work carried our. Now Well (2) Deepen   | GPS C      | OORD        | INAT         | ES [        | <del></del>    |  |   |                |              |                 | 7        | 9            | ZON  | E 5      | . 1                |                 |              |   | _              | <b>-</b><br> |             |             |
| S. SUNMARY (Please tick appropriate boxes and complete all relevant details)  S. SUNMARY (Please tick appropriate boxes and complete all relevant details)  Doil work Completed. 2/10/04  West carried out. New Well IV  Doubpen   | _          |             |              | 34          |                | 18                                     | <u>388</u>                              | 19             |              |                 | 4        | Ö            |  |          |                    | File/Secti      | on /Parc     | el ID                                   |                |              |             |             |
| S. SLIMMARY I Please sick appropriate bases and complete all releaves details?  Date work Commenced. 7/10/10-f.  Work carried out: New Well (2/ Despete   Date work Completed. 7/10/10-f.  Work carried out: New Well (2/ Despete   Date work Completed. 7/10/10-f.  Backfill   Bac | u A        | GD 66       | /84          |             |                | 62                                     | 479                                     | 440            | 5            |                 |          | ш            | ZON  | E 3      | 2   1              | Name of         | Property     | . Cho                                   | milk           | 9            |             |             |
| Date work Completed   19/0   19   19/0   19   19/0  | 5 SHM      | MARY        | (Pleasi      | , tick      | annran         |  |   |                |              | relevant d      | etails)  | )            |  | _        |                    |                 |              |   |                |              |             |             |
| is this a Replacement well? YESFNO if yes please quote replaced well number.  Is this in a Estiming well? XESFNO if yes please quote well amphore or mark location on map.  Will well Abundonce? YESFNO if yes please state method.  Maximum Depth Direct Abs  | Date wo    | rk Comr     | nenced.      |             | //0            | 104                                    | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                |              |                 |          | Dat          | te work (  | Con      | ipleted.           | 12/10           | 104          | ,                                       |                |              |             |             |
| Is this a Replacement well? YESFNO if yes please goods reglaced well number.  Is this are Existing well? YESFNO if yes please you well number or mark location on map.  Wis well Abandoned? YESFNO if yes please state method.  A. REALING DETAILS If no a defilled well, please complete Scalenes (2.9, 10, 11, 12, and 13 as necessary.  S. Construction Details  Seed Joint, Widels Coller.  S. Construction Details  Seed Joint, Widels Coller.  S. Construction Details  S. Sorter of Cosing of Trust of Connects  S. Construction Details  S. Sorter of Cosing of Details  S. Sorter of Cosing of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State | Work ca    | rried out   | ı: N         | ew We       | ell 🔽          |  |   | Deeper         | ı 🗆          |                 | Enlarge  | e l          |  |          | •                  | Rehabilit       | ate 🗀        |   | Bas            | kfill        |             |             |
| Wis well Anadoned? PERNO of yes please state method.  Maximum Depth Distal. J.S. (m) Final Depth. J.S. (m) Final Standing Water Level. (m) Final Yield. (U. A. Depth Maximum Depth Distal I (not a drilled well, please complete Sections: 6.2, 9, 10, 11, 12 and 13 as necessary 6. Construction Details 6. Construction Deta |            |             |              |             |                |  |   |                |              |                 |          |              | •••••  |          | ••••               |                 |              |   | ••••••         |              |             |             |
| Maximum Deph Drilled   | Is this ar | Existin     | g well?      | YES!        | NO <u>ir y</u> | es please                              | e quote v                               | vell <u>nu</u> | mber or      | mark loca       | tion on  | n ma         | P  | •••••    | ***********        |                 |              |   | ************   |              | •••••       |             |
| 6. DRILLING DETAILS If no a drilled well, please complete Science 5.2.9, 10, 11, 12 and 13 as necessary  1. Construction Details  1. On Charter food, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10   | Was wel    | I Abando    | oned?        | YES/I       | NO if yo       | es please                              | state me                                | thod           | 14           | <u>ر</u> ک      | ******** |              |  |          |                    |                 |              |   | Viald          | •            |             |             |
| 6.1 Construction Details  From To Dam Chile Took. Pluid Used Chile Took. (a) (iii) Dam Chile Took. (b) Chile T |            |             |              |             |                |  |   |                |              |                 | 9 10     |              |  | _        |                    |                 | (m)          | rinai                                   | rieid          |              | (L/SEC      | )           |
| From To Dam Chebr Frob. Plaid Und. Chebr Chebr. Plaid Und. Chebr Chebr. Plaid Und. Chebr Chebr. Plaid Und. Chebr.  |            |             |              |             | 11 1101        | а оппец                                | wen, pie                                | ase co         |              |                 |          |              |  |          |                    |                 | to neare     | st 0.1 m)                               | _              |              |             |             |
| From   To   Dam   Cable Took   Plack Work   Prom   To   Care   Plack Work   Prom   To   Care   Plack Work     | 2.1 COM    |             | can          |             |                |  | y                                       |                | 7.           |                 |          |              |  |          |                    |                 |              |   |                |              | Salı        | n)!**       |
| Down Flote   New Year   New Yea   |            |             |              |             | Rotary A       | Auger,                                 | (Air,                                   | Water,         |              | Date            |          | 1            |  | V        | Water              | Yield           | Depth        | Test                                    |                |              | (mg/        | L) or       |
| C   1/25   1/2   | (III)      | (10)        | (m)          | ,           |                |  | Mud                                     | Type)          |              |                 |          |              |  |          |                    | (L/sec)         |              | (m)                                     | "              |              | Ta          | ste         |
| 1. CASING LEFT IN WELL   7.2 Type  | 0          | 125         | 28           | 5           |                |  | Aus-                                    | 9e/            |              |                 |          | 土            |  |          |                    |                 | 1            |   |                |              |             |             |
| 7. CASING LEFT IN WELL 7.1 Dimensions 7. CASING LEFT IN WELL 7.1 Dimensions 7. Casing Cemented 7.2 Type 7.3 Caving Cemented 7.0 Incoming 8. Seed Joint, Welded Cullar, 8. On To Cement (Nap) 8. One of Osap) 8. One of Osap) 8. One of Osap) 8. One of Osap) 8. Converted Caving 9. One of Osap) 9. Seed Joint, Welded Cullar, 8. One of Osap) 9. Seed Joint, Welded Cullar, 9. One of Osap) 9. Seed Joint, Welded Cullar, 9. One of Osap) 9. Seed Joint, Welded Cullar, 9. One of Osap) 9. Seed Joint, Welded Cullar, 9. Seed Joint | 125        | 145         | 15           |             |                |  |   | _              |              |                 |          | $\perp$      |  |          |                    |                 |              | _                                       | _              |              |             |             |
| 7.1 Dimensions 12.2 Type 1.3 Casing Cemented 1.5 Cement West Coller, Sted FRR PVC, etc. Ves. No. (m) (m) (m) (bugo) (fluxes) Additives Method Coller, Sted FRR PVC, etc. Ves. No. (m) (m) (m) (bugo) (fluxes) Additives Method Method Method 1.5 Type 1.5 Cements of the second of the sec |            |             |              |             |                | <del>-</del>                           |   |                | - -          |                 |          | +            |  |          |                    |                 | +            | +                                       |                |              | -           |             |
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| From To Lorental Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Swell Justin, Wolded Collar (in) Diam Storted Casing Storted Casing Storted Casing Storted Casing Storted Casing Storted Casing Storted Casing Material Depth Material Diam Method of Grevel Passing From To (in) Diam Material Depth Material Diam Method of Grevel Passing From To (in) Diam Material Depth Material (in) Diam Material Depth Length Wolded Method (in) Diam Material (in) Diam Material Depth Length Wolded (in) Diam Material (in) Diam Material Depth Length Wolded Depth Length Wolded Depth Length Wolded Diam Material Diam Mate |            |             | FIIN         | VELL        |                | Vne                                    |   |                | 7.3 Cas      | ing Cement      | ed       |              |  |          |                    |                 |              |   |                |              |             |             |
| Company   Comp   |            | 1           |              |             |                |  | Welded Co                               | ollar,         |              | 17-0-           |          | То           | Сеп  | nent     | Wat                |                 |              |   |                |              | 'ommen!     |             |
| 8. CONSTRUCTION AT PRODUCTION LEVEL  8. I Method   | (m) .      | (m)         |              |             |                | Steel, FR                              | P. PVC, et                              | c.             |              | (m)             |          |              |  |          | (litro             | :s) A           | dditives     |   |                |              | . Oranican. |             |
| 8. CONSTRUCTION AT PRODUCTION LEVEL  8.1 Method  8. 2 Screen or Caving ("If variable aperture screen used give limits)    Open Hole  | 0_         | 125         | 2   13       | 7           | +              | PV                                     | <u>c</u>                                |                | <del></del>  |                 | 42       | 25           | 123  | 2_       | +-                 | 415             | <u>-ge/</u>  | Proce                                   | surc           |              |             |             |
| 8. CONSTRUCTION AT PRODUCTION LEVEL 8.1 Method    Open Hole  |            | +           | +            |             |                |  |   |                |              |                 | +        |              | -  |          | <del> </del>       |                 | <u> </u>     | +                                       |                |              |             |             |
| 8.1 Method    Solited Casing   Type   From   To   April   Trade Name   Complete  |            | ┪           |              |             | +              |  |   |                |              |                 |          |              | +  |          | +-                 | _               |              | <del> </del>                            |                |              |             |             |
| Soluted Casing   Screen(s)   Stoted Casing   Stote   Screen(s)   Stote     | 8. CON     | STRUC       | TION         | AT PR       | ODUC           | TION L                                 | EVEL                                    |                |              |                 |          |              | -  |          |                    |                 |              |   |                |              |             |             |
| Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Screen(s)   Slotted Casing   Slotted C   | 8.1 Meth   | nod         |              | 8.          | .2 Screer      | or Casi                                | ng (*If v                               |                |              |                 |          |              |  | _        |                    |                 |              |   |                |              | C           |             |
| Other, give details:    Stient Seal (Packer)   Statement   Stateme | Ŭ Op       | en Hole     |              |             |                | Туре                                   |   |                |              |                 |          |              |  |          |                    | . Ma            | iterial      | Trade                                   | Name           |              | of Base     |             |
| Other, give details:  3.3 Liner Scal (Packer)  Material Deph Internal (mn) Duan (mn) Method of (mn) (mn) (mn) (mn) (mn) Description of Material (mn) (mn) (mn) (mn) Duan (mn) (mn) (mn) (mn) (mn) (mn) (mn) (mn  | _          |             | ing          |             |                |  |   |                |              |                 |          |              |  |          |                    | _               |              | <del> </del>                            |                | $\bot$       |             |             |
| 8.3 Liner Seal (Packer)  Maternal  Depth (m)  Maternal  Diam (m)  Diam (pm)  Diam Placement  Method of Mesh Size  Mesh Size  Mesh Size  Method (m)  Mesh Size  Mesh Mesh Size  Mesh Size  Mesh Size  Mesh Size  Mesh Size  Mesh Size  Mesh Size  Mesh Size  Mesh Size  Mesh Size  Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Size  Mesh Mesh Mesh Mesh Mesh Mesh Mesh Mesh   | _          | ` '         |              | L           |                |  |   |                |              | ļ               |          |              |  |          |                    | 1               |              |   |                |              |             |             |
| Material Depth (m) Doam (mm) Method of Placement Method of Placement Method of Placement (mm) Method of Placement (mm) Method of Placement (mm) Method of Method (m) (m) Material (m) (m) (m) Material (m) (m) (m) (m) Material (m) (m) (m) (m) (m) Material (m) (m) (m) (m) (m) (m) (m) (m) (m) (m)   |            |             |              |             |                |  |   |                |              |                 |          |              |  |          |                    | • • • •         |              | *************************************** |                |              | *********   |             |
| Material   (m)   Dram   Placement   Mesh Size   (m)    | 8.3 Line   | r Seal (F   |              | .           | Internal       |  |   |                | Passing      | From            | To       | ┑┃           |  | $\neg$   |                    | LUG             |              |   |                |              |             |             |
| 9. IF NOT A DRILLED WELL  Method Depth (m) (m) (m) (m) (m) Material (m) (m) (m)  10. DEVELOPMENT (State methods and time taken)  Method Hours Minutes  Telting 200 Jepth Agreey med sound  11. PUMPING TEST (measurements from natural surface to nearest 0 lm)  Interval Tested Water Resources Act 1997 and Regulations thereto require that strata and water samples must be obtained. If any samples have not been obtained state reasons:  O 2 Bork arrange / brown SG  E / Imagestric Science / brown SG  E / Imagestric Science / brown SG  E / Imagestric Science / brown SG  E / Imagestric Science / brown SG  E / Imagestric Science / brown SG  E / Imagestric Science / brown SG  I ght Science / | Mat        | erial       |              |             |                |  |   |                |              |                 |          |              |  | ۱ ا      |                    |                 |              | Descripti                               | on of Mai      | erial .      |             |             |
| Method Depth Length Width Diam Lining From To Level (m) (m) (m) Material Surface to nearest 0 lm)  Interval Tested Water From To Level (m) (m) (m) (m) Method (m) (m) (m) Method (m) (m) (m) Method (m) (m) (m) (m) (m) (m) (m) (m) (m) (m)  |            |             |              |             | (Alain)        |  |   |                |              |                 |          |              | 0  |          | 2                  | Do              | rk C         | vomoe                                   | 1 bro          | 2200         | SON         | 201         |
| Method Depth Length Width Diam Lining From To Level (m) (m) (m) Material Surface to nearest 0 lm)  Interval Tested Water From To Level (m) (m) (m) (m) Method (m) (m) (m) Method (m) (m) (m) Method (m) (m) (m) (m) (m) (m) (m) (m) (m) (m)  |            |             |              |             |                |  |   |                |              |                 |          |              | ,  |          |                    | Ε,              | lime         | estone                                  | bo             | ndi          | <u></u>     |             |
| 10. DEVELOPMENT (State methods and time taken)  Method  Hours  Minutes  Te ffing  To Level (m) (m) (m) Maternal (m) (m) (m) 40  To Level (m) (m) (m) (m) Minutes  To Level (m) (m) (m) (m) (m) Minutes  11. PUMPING TEST (measurements from natural surface to nearest 0 lm)  To Level (m) (m) (m) (m) (m) Discharge Method of (m) (L/sec) Discharge Method of (m) (L/sec) Discharge Method of (m) (m) (m) (m) (m) (m) (m) (m) (m) (m)   | 9. IF NO   | OT A DE     |              |             |                | Wade 1                                 | Dram                                    | 1 ,            | ıning.       | General         | Tr.      | <b>-</b>     | _2   | <u>'</u> | <i>2</i> 3         | Lig             | ht_z         | ann,                                    | gre            | yc           | Tay.        |             |
| 10. DEVELOPMENT (State methods and time taken)  Method  Method  Teffing  200  300  Teffing  11. PUMPING TEST (measurements from natural surface to nearest 0 lm)  Interval Tested  Water Test Depth Method (m)  (IJSec)  To Level (m)  (m)  To Level (m)  (m)  To Level (m)  To Method of  | Meth       | ıod         |              |             |                |  |   |                |              |                 |          | 4            | _23  |          | 32                 | <i>\Zj</i> g    | ht 9         | my a                                    | red            | 302          |             |             |
| Method   Hours   Minutes   Sand   S   |            |             |              | _           | -              |  |   | ₩              |              |                 |          | +            | 32   | -        | 40                 | _\ <i>\\\</i> 9 | <i>by</i> 7  | Huns/                                   | brai           | ~            | mea         |             |
| Method   Hours   Minutes   Sand   S   | 10 577     | TEL CT      |              |             |                |  |   |                | <del>-</del> | L               |          | ┙            | ره ا   | $\dashv$ | 54                 | COS             | SYCE.        | Sand                                    | ,<br>          |              | 100         |             |
| 11. PUMPING TEST (measurements from natural surface to nearest 0 lm)  Interval Tested Water Test Depth Rate Measuring Depth Rate Measuring Down (m) (m) (m) (m) (m) (m) (m) (m) (m) (m)  | 10. DEV    | ELOP!       | MENT         | •           |                | nd time ta                             | ken)                                    | F              | Hours        | Mir             | nutes    | ור           | <del>'''</del>                                   | 4        | <u> </u>           | 140             | and          | brown                                   | 9 1            | 754          | 1.000       | <u> </u>    |
| 11. PUMPING TEST (measurements from natural surface to nearest 0 lm)  Interval Tested Water Test Depth Rate Depth Rate Method of (m) (IJ/sec) Discharge Discharge Discharge Discharge Discharge Discharge Discharge Discharge Discharge Discharge Discharge Discharge Discharge Dose Discharge Dose Discharge Dose Discharge Discharge Dose Dose Dose Discharge Dose Dose Dose Dose Dose Dose Discharge Dose Dose Dose Dose Dose Dose Dose Dos   |            | -           | ٦,           |             |                |  |   | -              |              |                 |          | _            | 54   | 2        | 78                 |                 | do           | rese.                                   | 1001/          | ma           | æ           |             |
| Interval Tested Water Test Level Hethod (m) (L/sec) Discharge Pumped (m) (L/sec) Draw Down Pumped (m) (L/sec) Draw Draw Draw Draw Draw Draw Draw Draw             |            |             |              |             | 9              |  |   |                |              |                 |          |              |  |          |                    |                 | not.         | <del></del>                             |                |              |             |             |
| From To (m) (m) (m) Depth (Lose) Depth (Lose) Depth (Lose) Discharge Pumped (m) Hours (m) Hours (Lose) Down (m) Hours (m) Hour |            |             |              |             | ements fr      |  |   |                |              |                 |          | _,           | 75   | 2        | 114                | Me              | <u>d`,g</u>  | vey (                                   | : lay          | ey.          | neq         | //000       |
| 12. SAMPLES The provision of the Water Resources Act 1997 and Regulations thereto require that strata and water samples must be obtained. If any samples have not been obtained state reasons:  As the person responsible for the work carried out on this well I advise that it has been completed as described above:  Signature of Licensed Driller   |            |             |              | ı I         |                |  |   |                |              | Hours           |          |              | <u> </u>   |          | <u> </u>           | Sa              | nd V         |   |                |              |             |             |
| 12. SAMPLES The provision of the Water Resources Act 1997 and Regulations thereto require that strata and water samples must be obtained. If any samples have not been obtained state reasons:  As the person responsible for the work carried out on this well I advise that it has been completed as described above:  Signature of Licensed Driller.  Date //  Description:   |            |             |              |             | Method         |  |   |                |              |                 | (m)      | _            | 114  | -        | 129                | M               | :o/(         | arey .                                  | mar            | 4/4          | 194         | ey.         |
| 12. SAMPLES The provision of the Water Resources Act 1997 and Regulations thereto require that strata and water samples must be obtained. If any samples have not been obtained state reasons:  As the person responsible for the work carried out on this well I advise that it has been completed as described above:  Signature of Licensed Driller   | · ]        |             |              |             |                |  |   |                |              |                 | <u> </u> | _            | <u> </u>   | _        |                    |                 | <u>akse`</u> | šano                                    | <u>/_`</u>     | <del>-</del> |             |             |
| 12. SAMPLES The provision of the Water Resources Act 1997 and Regulations thereto require that strata and water samples must be obtained. If any samples have not been obtained state reasons:  As the person responsible for the work carried out on this well I advise that it has been completed as described above:  Signature of Licensed Driller   |            |             | <del> </del> | $\perp$     |                |  | ļ                                       |                |              | 1               | <b> </b> | 41           | <i>124</i>                                       | -        | 145                |                 | pht_         | grey                                    | /im            | sscy         | ne.         | <u> </u>    |
| The provision of the Water Resources Act 1997 and Regulations thereto require that strata and water samples must be obtained. If any samples have not been obtained state reasons:  As the person responsible for the work carried out on this well I advise that it has been completed as described above:  Signature of Licensed Driller   |            | ****        |              |             | 1              |  | <u> </u>                                |                | <del>.</del> | J               | L        | ┙            | <del>                                     </del> | $\dashv$ |                    | _ Mo            |              |   | <b>&gt;</b> XS | 59           | ndy         | <i>lb</i> _ |
| As the person responsible for the work carried out on this well I advise that it has been completed as described above:  Signature of Licensed Driller   | The provi  | ision of th |              |             |                |  |   |                |              | it strata and w | vater    |              | <del> </del>                                     | $\dashv$ |                    | · +/>           | <u>. 42:</u> | 571                                     |                |              |             |             |
| As the person responsible for the work carried out on this well I advise that it has been completed as described above:  Signature of Licensed Driller   | samples r  | nust be of  | btained. l   | f any sa    | amples ha      | ve not bee                             | n obtained                              | i state re     | easons:      |                 |          |              | <del> </del>                                     | $\dashv$ |                    |                 |              |   |                |              |             |             |
| as described above:  Signature of Licensed Driller Date / /  Drille Little Gis Carrogather with Primary Industries and Resources SA  |            | •           |              | ·····       |                | ······································ |   |                | •            |                 |          |              | <del>                                     </del> | -        | -                  |                 |              |   |                |              |             |             |
| Signature of Licensed Driller Date / / Driller Of Licensed Driller Primary Industries and Resources SA   |            |             |              | or the w    | ork carrie     | d out on t                             | his well I a                            | dvise th       | at it has b  | een complete    | d .      |              | <del> </del>                                     |          |                    |                 |              | •                                       |                |              |             |             |
| Dente of Original Convergence of the Primary Industries and Resources SA   | as describ | ed above    | :            |             |                |  | :                                       |                |              |                 | •        |              |  |          |                    |                 |              |   |                |              |             |             |
| Dente of Original Convergence of the Primary Industries and Resources SA   | Signature  | of Licens   | ed Drille    | r           |                |  |   |                |              | Date /          | ,        |              |  | _        |                    |                 |              |   |                |              |             |             |
|  | Dime       |             | ve d         | Ne          | TYROE          | ther w                                 | ith                                     | Pr             | imary        | Industries      | l bne a  | Res          | ources   | SA       | •                  |                 | 1            |   |                | -            |             |             |
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|                     |                           |                |                   | 109                  | Sur             | veyed b                                   | y                                     |                   | Metho                     | _             |                |                  |                 | ·   4       | LAND I                  | DENTI                | FICATION   | '           |             |   |
|                     | OORDI<br>DA 94/\          |                |                   |                      | . 1             | 1879                                      | 164                                   |                   |                           |               |                | ZON<br>ZON       |                 | '           |                         |                      |  |             |             |   |
| <b>D</b> A          | GD 66/8                   | 34             |                   |                      | •               | 245                                       |                                       |                   |                           | ] '           | )              | ZON              | E 52            | I N         | nie/Sectio<br>Name of P | n /Parcel<br>roperty | Cha  | ill9        |             |   |
| 5. SUM              | MARY (I                   | lease ti       | ick ap            | propr                | iate bo         | xes and                                   | comp                                  | lete all          | relevant de               | tails)        | _              |                  | _               |             |                         |                      |  |             |             | -                                       |
|                     | rk Commo<br>rried out:    |                | Well              |                      | . <b>0</b> ./.Y |   | Deepe                                 |                   |                           | <br>Enlarge   |                |                  | Comp            | leted       | Rehabilita              |                      |  | Backf       | ill [       | ]                                       |
|                     |                           |                |                   |                      |                 | -   | _                                     |                   | l number                  |               |                |                  |                 |             |                         |                      |  |             | •••••       | ••••                                    |
|                     |                           |                |                   |                      |                 |   |                                       |                   | r mark locat              |               |                |                  |                 |             |                         |                      |  |             |             | *************************************** |
|                     | m Depth 1                 |                |                   |                      | •               |   |                                       |                   | 5(m)                      |               |                |                  |                 |             | vel                     |                      | Final Yi   | eld         | <del></del> | .(L/sec)                                |
| 6. DRIL             | LING DI                   | ETAILS         |                   |                      |                 |   |                                       | mplete S          | Sections: 6.2,            | 9, 10, 1      | 1, 12          | and 1            | 3 as n          | ecessa      | у                       |                      |  |             |             |   |
| 6.1 Con             | struction I               | Details        | Dn                | illing M             | lethod          |   |                                       | 6.2               | Water Cut D               |               |                |                  | nts fro<br>Stan | 1           | ral surface             | Hole                 | 0.1 m)   | Ι           | 1           |   |
| From (m)            | To<br>(m)                 | Diam<br>(mm)   | Ro                | Cable To<br>otary Au | ool,<br>uger,   | (Air,                                     | Used<br>Water,                        |                   | Date                      |               | er Cut         |                  | Wa              | iter<br>vel | Estimated<br>Yield      | Depth<br>at Test     | Casing at<br>Test                                  | Tes<br>Meth |             | Salinity<br>(mg/L) or                   |
| ()                  | (10)                      |                |                   | Down H<br>ammer,     |                 | Mud                                       | Type)                                 |                   |                           | From<br>(m)   |                | To<br>m)         |                 | n)          | (L/sec)                 | (m)                  | (m)  |             |             | Taste                                   |
| 0                   | 25                        | 133            |                   | 7/00                 | _               | Mu  | <u>d</u>                              | +                 |                           |               | -              | _                |                 |             |                         | -                    | <del>                                       </del> |             |             |   |
|                     |                           |                | 1                 | rige                 |                 | (A/Q -                                    | V/\sq                                 | 生                 |                           |               |                |                  |                 | •           |                         |                      |  |             |             |   |
|                     |                           |                |                   |                      |                 |   |                                       |                   |                           |               | l              | [                |                 |             |                         | <u> </u>             | <u> </u>   |             |             |   |
| 7. CASI<br>7.1 Dim  | NG LEF<br>ensions         | r in we        |                   | 7.2 Ty               | /pe             |   |                                       | 7.3 Ca            | sing Cemente              | d ·           |                |                  |                 |             |                         |                      |  |             |             |   |
| From                | То                        | Inter          | mal               | Swe                  | ell Joint, V    | Welded Co                                 |                                       | Yes 1             | No From                   | To            | - 1            | Cen              |                 | Wate        |                         | ther<br>litives      | Cementing<br>Method                                | 3           | Co          | mments                                  |
| (m)                 | (m)                       | · S1           |                   | · 3                  | Di/C            | P, PVC, et                                | · · · · · · · · · · · · · · · · · · · |                   | (m)                       | (п<br>20      | - 1            | (ba              | gs)             | (litre      |                         | -                    | Pressu   | 70          |             |   |
|                     | 2.3                       | 8              |                   |                      | سلعام           | <b></b>                                   |                                       |                   | ]                         | 70            |                |                  |                 | 13-         | 7,000                   | <i>J</i> e,          | 7-0.250  |             | -           |   |
|                     | ļ <u>.</u>                | -              |                   |                      |                 |   |                                       |                   | <u> </u>                  |               |                |                  |                 |             | _                       |                      |  |             |             |   |
| 8. CON              | STRUCT                    | ION AT         | PROI              | DUCT                 | TON LI          | EVEL                                      |                                       |                   |                           |               |                |                  |                 |             |                         |                      |  |             |             |   |
| 8.1 Meti            |                           |                | 8.2 S             |                      |                 | ng (*If v                                 | ariable<br>Fron                       |                   | e screen used<br>o Apertu |               | nits)<br>mer D | ıam I            | Outer           | Diam        | T                       |                      | - <del></del>                                      | T           | C           | ompletion                               |
| □ Op                | en Hole<br>tted Casin     | .~             | <u> </u>          |                      | Туре            |   | (m)                                   | (n                | n) (mm                    | )             | (mm            | )                |                 | m)          | PV                      | erial .              | Trade Na   |             |             | of Base                                 |
| ☐ Scr               |                           | R              | $\vdash$          |                      |                 |   | ~~                                    | -   -             | 2 0.7                     |               | <u> </u>       |                  |                 |             | <u> </u>                |                      | piperiia   | 3/0         |             | (Cap                                    |
| □ ou                | ner, give d               | etails:        |                   |                      |                 | · · · · · ·                               |                                       |                   | <u></u>                   | **********    |                |                  |                 |             |                         |                      | <u></u>  | ,           |             |   |
| 8.3 Line            | r Seal (Pa                |                | Inte              |                      |                 | vel Pack                                  |                                       | Dooring           | - ·                       | т_            | 7 1            |                  |                 | TION_<br>To | LOG                     |                      |  |             |             |   |
| Mat                 | enal                      | Depth<br>(m)   | Dia               |                      | Meth<br>Place   | od of<br>ment                             |                                       | Passing<br>h Size | From<br>(m)               | To<br>(m)     |                | From<br>(m)      |                 | (m)         |                         |                      | Description of                                     | f Materia   | ıl          |   |
|                     |                           |                | <u> </u>          |                      | Cura            | vity                                      | 8                                     | :/6               | 21 .                      | 25            | ┦  -           | 0                | _               | <u> </u>    |                         |                      | ge/bro   |             |             | ly clay                                 |
| 9. IF NO            | OT A DRI                  | LLEDA          | VEL I             | 1                    |                 |   |                                       |                   | Ll_                       |               | ┵              | _!_              | +               | 2_          | Ligh                    | ht co                | inge/bo  | DW1         | - 87        | tares                                   |
| Meth                |                           | Depth<br>(m)   | Lengti<br>(m)     | h V                  | Width<br>(m)    | Diam                                      |                                       | aning<br>laterial | ·From (m)·                | To<br>(m)     | <b>]</b>       | 5                |                 | 7           | Yt/k                    | Jan                  | om s   | and         | 40          | lace                                    |
|                     |                           | . 7            | y/.               | $\perp$              |                 |   | _                                     |                   |                           |               | 1 [            | 7                | $\Box$          | 9           | Hul                     | ticole               | wed c  | bys,        |             | .8                                      |
| 10 DES              | /FI OPP                   | ENT (C.        | ate ==1           | hods ==              | ud time • 1     | ken)                                      | 1                                     |                   | 1                         |               | ┙├             | 9                | $\dashv$        | ,,          | 1000                    | y, Fo                | mn &   | soon.       | 2           | 100                                     |
| IO. DE              | VELOPM                    |                | ate meth<br>ethod | IIOGS BII            | ume ta          | ken)                                      |                                       | Hours             | Mint                      | ites .        | ] [            | _/_              |                 | "<br>25     |                         | aw/h                 | rown \   |             |             | medium                                  |
| Air                 | - lit                     | Hed            |                   |                      |                 |   |                                       | •                 |                           | <del></del>   | ╁┝             | ''               | +               |             | \$ c0                   | wise.                | •  |             |             |   |
|                     | APING T                   |                | asureme           | ents fro             |                 |   |                                       |                   |                           |               | ;  -           | -                | 4               |             |                         |                      |  |             |             |   |
| Interva<br>From     | l Tested<br>To            | Water<br>Level | Te<br>Meti        |                      | Pump<br>Depth   | Discha<br>Rate                            | ;                                     | Method o          | g Pumped                  | Draw          | -              |                  | +               |             |                         | <u>.</u>             |  |             |             |   |
| (m)                 | (m)                       | (m)            | MEG               |                      | (m)             | (L/se                                     | c)                                    | Discharge         | e Lumptu                  | (m)           | ╁├             |                  | +               |             | _                       |                      |  |             |             |   |
|                     |                           |                | +                 |                      |                 | 1   | $\dashv$                              |                   |                           |               | 1              |                  | +               | _           |                         |                      |  |             |             |   |
|                     |                           |                | 1                 |                      |                 |   |                                       |                   |                           |               | ] [            | •                |                 |             |                         |                      |  |             |             |   |
| 12. SAN<br>The prov | ision of the              | Water Res      | ources .          | Act 199              | 97 and Re       | gulations                                 | thereto                               | require th        | at strata and wa          | ster '        | <u> </u>       |                  | +               | <u>.</u>    |                         |                      |  |             |             |   |
| samples i           | nust be obta              | uned. If a     | ny samp           | otes hav             |                 |   |                                       |                   |                           |               | L              |                  |                 |             | ٠,                      |                      |  |             |             |   |
|                     |                           |                |                   |                      |                 | 11  |                                       |                   | ,                         |               |                |                  | 1               |             |                         |                      |  |             |             |   |
|                     | rson respon<br>sed above: | sible for ti   | ne work           | carried              | out on th       | ns well [ a                               | iavise t                              | natit has l       | been completed            |               | $\vdash$       |                  |                 |             |                         |                      |  |             |             |   |
| Signature           | of Licenses               | l Driller      |                   |                      |                 |   |                                       |                   | . Date /                  | , .           | $\vdash$       |                  | +               |             |                         |                      | <u> </u>   |             |             |   |
| Dripte<br>BXVE      | A High                    | ANTAL.         | (2) (C2)          | Toge<br>u wel        | ther wi         |   | P <sub>1</sub>                        | rimary<br>ore Lib | Industries<br>rary Comp   | and R<br>olex | esou           | ırces            | SA              |             |                         | ,                    |  | 703         | 0 76        | <br>32                                  |
| WILLIAM             | 14 days                   | a com          | pretto            | ,,, 10:              | <b>j</b> .      |   |                                       |                   | ngham Stre<br>DE SA 506   |               |                |                  |                 |             | UNIT                    | NUMBI                | ER 📖   |             |             |   |

| DF                                     |                 |                       | VELL          | OF SO<br>CONST<br>Resources              | RUCT                         | ION I                                   |                            |                           |                     |                     | 1. P        | ERM        | IT N            | io:                           | 00                              | 29                          | 0 8  | ite                            |
|--|-----------------|-----------------------|---------------|--|------------------------------|---|----------------------------|---------------------------|---------------------|---------------------|-------------|------------|-----------------|-------------------------------|---------------------------------|-----------------------------|--|--------------------------------|
|  |                 |                       |               | niel P                                   |                              |   |                            | •                         | Р                   | Postal              | Addre       | ss         | GP              | 2 <i>K</i>                    | x 2                             | DWLB<br>1834,               | Adele  |                                |
|  |                 |                       |               | supervision                              | ·····                        |   | <u></u>                    |                           |                     |                     |             |            |                 |                               |                                 |                             | Post Code  | √00/                           |
| 2. LO                                  |                 |                       |               | Surveyed I                               | CA LL                        |   |                            | r.000                     | _                   |                     |             |            |                 | 1106                          |                                 |                             |  |                                |
| GPS C                                  |                 |                       |               |  | 04 <b>571.16</b> 10<br>1685  | 77. C/M                                 | etnoa .                    | .W. 99                    |                     |                     |             |            |                 | ICATION                       |                                 |                             |  |                                |
| AND D                                  | DATUM<br>DA 94/ |                       |               |  | 14390                        | 3                                       |                            |                           |                     |                     |             |            |                 |                               |                                 |                             |  |                                |
|  | GD 66/          |                       | •             | □ ZONE                                   |                              | ZONE                                    | 53                         | DZÓNI                     |                     |                     |             |            |                 |                               |                                 |                             |  | ******                         |
|  |                 |                       |               | propriate b                              |                              |   |                            |                           | details)            |                     |             |            |                 |                               | •                               |                             |  |                                |
| Date wor<br>Work car                   |                 |                       | w Well        | !/8/04<br>☑                              | D                            | еереп [                                 | <br>]                      |                           | <br>Enlarge         | Date                | work (      | Compl      | eted            | Rehabilitat                   | <i>l.(0.<del>9</del></i><br>e □ |                             | Backfill   |                                |
|  |                 |                       |               |  | -                            | -                                       |                            |                           |                     |                     |             |            |                 |                               |                                 |                             |  |                                |
|  |                 |                       |               |  |                              |   |                            |                           |                     |                     |             |            |                 |                               |                                 |                             |  |                                |
| Maximu                                 |                 |                       |               |  |                              |   |                            |                           |                     |                     |             |            |                 | evel                          |                                 |                             | eld  |                                |
| 6, DRIL                                |                 |                       | S 1           | lf not a drille                          | l well, plea                 | se comp                                 |                            |                           |                     |                     |             |            |                 |                               |                                 |                             |  |                                |
| 6.1 Cons                               | struction       | Details               |               | illing Method                            | mi.a.t                       | d                                       | 0.2 W                      | ater Cut                  |                     | measi<br>ter Cut    | I           | Stand      |                 | ıral surface                  | Hole                            | 1                           | <del>                                     </del> |                                |
| From (m)                               | To<br>(m)       | Dıan<br>(mm           | Ro            | Cable Tool,<br>otary Auger,<br>Down Hole | Fluid I<br>(Air, W<br>Mud T  | later,                                  | 0                          | Date                      | From                | _                   | To          | Wat<br>Lev |                 | Estimated<br>Yield<br>(L/sec) | Depth<br>at Test                | Casing at<br>Test<br>(m)    | Test<br>Method                                   | Salinity<br>(mg/L) or<br>Taste |
|  | / ==            | 122                   | Н             | ammer, etc.                              | • • •                        | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ļ                          |                           | (m)                 |                     | m)          | (m         | )               | (L) SEC)                      | (m)                             | (111)                       |  | laste                          |
| 0                                      | .W              | /33                   | <del></del>   | rotary<br>ruger                          | MYCH<br>1 RIO-               | Vis)                                    | <u> </u>                   |                           |                     | $\pm$               |             |            |                 |                               |                                 |                             |  |                                |
|  |                 |                       | T             | <i>-</i>                                 | -                            |   | lacksquare                 |                           |                     | F                   |             |            |                 |                               |                                 |                             |  |                                |
| 7. CASI                                | NG LEF          | T IN W                | ELL           |  |                              |   |                            | t                         |                     | <u> </u>            |             |            |                 |                               |                                 | L                           | Į  | <u> </u>                       |
| 7.1 Dime                               | ensions         |                       |               | 7.2 Type                                 |                              |   | 3 Casin                    | g Cemen                   | ited                |                     |             |            |                 | 1                             |                                 | Communication               |  |                                |
| From<br>(m)                            | To<br>(m)       | D                     | iam.<br>nm)   |  | Welded Coll<br>P, PVC, etc.  | lar, Y                                  | es No                      | From<br>(m)               |                     | ľo<br>π)            | Cem<br>(baş |            | Wate<br>(litre  |                               | ther<br>stives                  | Cementing<br>Method<br>Used |  | Comments                       |
| 0                                      | /2              | 8                     |               | PV                                       | C                            | _                                       |                            | 0                         | 10                  | 2                   |             |            |                 |                               |                                 | tremm!                      | ici  |                                |
|  | <del>  -</del>  |                       | $\dashv$      |  |                              |   |                            | -                         | -                   |                     |             |            |                 |                               |                                 | gravit                      | 7  |                                |
|  |                 |                       |               |  |                              | [                                       | ] [                        | <u> </u>                  | . [. ]              |                     |             |            |                 |                               |                                 |                             |  |                                |
| 8. CONS<br>8.1 Meth                    |                 | TION A                | _             | OUCTION L<br>Screen or Cas               |                              | iable ape                               | erture se                  | creen use                 | d give lir          | mits)               |             |            |                 |                               |                                 |                             |  |                                |
| Ope                                    |                 |                       |               | Туре                                     |                              | From (m)                                | To<br>(m)                  | Apen<br>(m                | ture* [n            | nner D<br>(mm       |             | Outer i    |                 | Mate                          | rial                            | Trade Nar                   | me   | Completion of Base             |
| Slot                                   | ted Casin       | ng                    | <u> </u>      |  |                              | /2                                      | 72                         | 0.                        | 20                  | 8-0                 | ン           |            |                 | PVC                           |                                 | Pipema                      | de t   | nd Cap                         |
| Oth                                    | V. /            | letails:              | Щ.            |  |                              |   | *********                  |                           |                     |                     |             |            |                 | 1                             |                                 |                             |  |                                |
| 8.3 Liner                              | Seal (Pa        |                       | Inter         |  | avel Packin                  | ••                                      |                            |                           |                     | <u>ا</u> ر          | 3. FO       | RMAT       |                 | LOG                           |                                 |                             |  |                                |
| Mate                                   | rial            | Depth<br>(m)          | Di:           | am Meti                                  | hod of C                     | Gravel Pas<br>Mesh Si                   |                            | From (m)                  | To<br>(m)           |                     | From (m)    |            | To<br>(m)       |                               |                                 | Description o               | f Material                                       |                                |
|  |                 |                       |               | Gro                                      | wity                         | 8:10                                    | 5 .                        | //                        | 15                  | ] [                 | 0           | /          | , .             | Oran                          | gc/b                            | man (                       | dayey  | Are/                           |
| 9. IF NO                               | TADR            | ILLED                 | WELL          |  |                              |   | !_                         |                           |                     | ┚┝╌                 | 7           | $\vdash$   | 2               | Med                           | San                             | 70/<br>~~~~ / /             | brann.   | mode                           |
| Metho                                  |                 | Depth<br>(m)          | Length<br>(m) | h Width (m)                              | Diam<br>(m)                  | Linın<br>Materi                         |                            | From (m)                  | To<br>(m)           | ][                  |             |            |                 | c/9                           | <u> </u>                        |                             |  | -                              |
|  |                 |                       | ļ <u>.</u>    |  |                              |   | -                          |                           |                     | ┦┝                  | 2           | 1          | 3               | 4194                          | + br                            | ong (                       | layey.   | med_                           |
| 10. DEV                                | ELOPM           | IENT (S               | tate meth     | nods and time to                         | iken)                        |   |                            |                           | _                   | <u> </u>            | 3           |            | 4               | San                           | γ<br>+ .αν                      | eu/ha                       | 2002   | Cores                          |
| <del></del>                            | 1:              | . /:-X                | lethod        |  |                              | Hou                                     | ırs                        | Min                       | nutes               | $\downarrow \vdash$ | A           | _          | _               | Jon                           | d (m                            | (4)                         |  | ,                              |
|  | 77.10           |                       | -707          |  |                              | <u> </u>                                |                            | 7                         |                     | ┧┝                  | 4           | +          | <u> </u>        | San                           |                                 | ronn                        | saed (   | 70 <i>018</i> 5                |
| 11. PUM                                |                 |                       | easureme      | nts from nature                          |                              |   |                            |                           |                     | , F                 | 7           | 1          | 6               |                               | 1200/0                          | uned C                      | lay i  | ste layers                     |
| From                                   | To              | Water<br>Level<br>(m) | Tes<br>Meth   |  | Discharge<br>Rate<br>(L/sec) | Mea                                     | hod of<br>suring<br>:harge | Hours<br>Pumped           | Draw<br>Down<br>(m) |                     | 6           | +-         |                 | 600                           | ى رصہ                           | rrey, b                     | 196K, 7  | and, red                       |
| (m)                                    | (m)             | (44)                  |               |  |                              |   |                            |                           |                     | <u> </u>            | <u>。</u> フ  |            | <u>/_</u><br>'2 | 10/10                         | <u>~/ Dl</u>                    | como                        | med  | Sand.                          |
|  |                 |                       |               |  |                              |   |                            |                           |                     | ] [                 | 12          | 工          | 15              | 1791                          | 1 9                             | rey n                       | red/c  | anse                           |
| 12. SAM                                | PLES            | <u></u>               | <u> </u>      |  | 1,                           | _                                       |                            |                           | <u> </u>            | ┙├                  |             | +          |                 | sán                           | <b>%</b>                        |                             |  |                                |
| The provis                             | ion of the      |                       |               | Act 1997 and Reles have not bee          |                              |   |                            | trata and v               | vater               |                     |             |            |                 |                               | •                               | •                           |  |                                |
|  |                 | ,,,,,,,,              | ************  |  |                              | <b></b>                                 |                            |                           | ***********         | -                   |             |            |                 |                               |                                 |                             |  |                                |
| As the pers                            |                 | sible for             | he work       | carried out on t                         | his well I adv               | rise that II                            | has been                   | complete                  | d                   |                     |             | 士          | <u> </u>        |                               |                                 |                             |  |                                |
|  |                 |                       |               | ,  |                              |   |                            |                           |                     |                     |             |            |                 |                               |                                 |                             |  |                                |
|  |                 |                       |               | tog ther w                               |                              |   |                            | <i>Date /</i><br>dustries | /<br>and R          |                     | rcae S      | <br>:A     |                 |                               |                                 |                             |  |                                |
| Within                                 | amples          | i Wee                 | cd and        | well locati                              |                              | Core                                    | Libra                      | ry Com                    | plex                | UU.                 |             |            |                 |                               |                                 |                             | 7030   | 73                             |
| ************************************** | uays            | or con                | hieno         |  |                              |   |                            | nam Str<br>E SA 50        |                     |                     |             |            |                 | UNIT N                        | UMBE                            | R                           |  |                                |
|  |                 |                       |               |  |                              |   |                            |                           |                     |                     |             |            |                 |                               |                                 |                             |  | _ /                            |

| DF          |                       | RS W          | ELL              |                        | RUCTIO<br>Act, 1997                     |                        | ORT               |             | 1.             | PERM           | IIT N      | io: 6                   | 4 2              | 7 4           | 4         | Sit          | e         |             |
|-------------|-----------------------|---------------|------------------|------------------------|---|------------------------|-------------------|-------------|----------------|----------------|------------|-------------------------|------------------|---------------|-----------|--------------|-----------|-------------|
| NAME        | OF DE                 | HLLER         | Cos              | Sheil                  | ******                                  | Licence No             | 3425              | - P         | ERMIT          | HOL            | DER        | or land oc              | cupier           | DWLL          | 3C        |              |           | *******     |
|             |                       |               |                  |                        |   |                        |                   |             | ostal Add      | ress           | PO         | Box                     | 28               | 34,           | Ade       | 101          | 10        |             |
|             |                       |               |                  |                        |   |                        |                   |             |                |                |            |                         |                  |               |           |              |           |             |
|             |                       | OF W          |                  | aper vision            |   |                        | ······            |             |                |                |            | 3. WELL                 |                  |               |           |              |           |             |
| Date of     | Survey                | 1/9/          | 104              | Su:                    | ک rveyed by                             | Awate                  | Metho             | od <i>G</i> | PSS            | ۲              |            | 3. WELL<br>4. LAND      |                  |               |           | ••••••       |           | *********   |
| GPS C       | OORD                  | INATES        |                  |                        |   | · · ·                  | <u>.     </u>     | 7 (         | <b>3∕</b> zo   | NE 54          |            | Hundred o               |                  |               | _         | <del>-</del> |           |             |
|             | DA 94/<br>GD 66/3     | WGS84         | -                |                        | 4964                                    | <i>t</i>               |                   |             |                | NE 53<br>NE 52 |            | File/Section            | n /Parce         | ID            |           |              |           |             |
|             | OD 00/                | 04            |                  |                        | 62432                                   | 234_                   |                   | ] '         | <b>_</b>       | 1415 32        |            | Name of P               | roperty          | Cha           | sill!     | 7            | •         |             |
| 5. SUM      | MARY (                | Please ti     | ск арр           | ropriate be            | oxes and cor                            | nplete all r           | elevant d         | etails)     |                |                |            |                         |                  |               |           |              |           |             |
|             | rk Comm               |               | .9/3<br>Well [   |                        |   | oen □                  |                   | <br>Enlarge | Date wor       | k Comp         | leted      | <b>9/</b><br>Rehabilita | 5/04             |               |           |              |           |             |
|             |                       |               |                  |                        | ease quote rej                          |                        |                   | Enlarge     |                |                |            | Kenabilita              |                  |               | Бас       |              |           |             |
|             |                       |               |                  |                        | e quote well                            |                        |                   |             |                |                |            |                         |                  |               |           |              |           |             |
|             |                       |               |                  |                        | state method                            | ا                      | <u>α</u>          |             |                |                |            |                         |                  | •••••••       |           |              |           | *********** |
|             |                       | Drilled       |                  |                        |   | epth/.7:               |                   |             |                |                |            | evel                    | (m)              | Final         | Yield     |              | (L/se     | c)          |
|             | LING D<br>struction   |               | If               | not a drilled          | l well, please                          |                        |                   |             |                |                |            | ury<br>ural surface     | to neares        | (0.1 m)       |           |              |           |             |
| 0,1 00.     |                       |               |                  | ling Method            | Fluid Use                               |                        |                   |             | er Cut         | Stan           | ding       | Estimated               | Hole             | Casing a      | .         |              | Sal       | inity       |
| From<br>(m) | To<br>(m)             | Diam<br>(mm)  | Ros              | tary Auger,            | (Air, Wate                              | r, I                   | Date              | From        | То             | Wa<br>Le       |            | Yield<br>(L/sec)        | Depth<br>at Test | Test<br>(m)   |           | fest<br>thod | (mg       | /L,) or     |
|             |                       |               |                  | own Hole<br>mmer, etc. | Mud Type                                | 1                      |                   | (m)         | (m)            | (0             | 1)         | (L7sec)                 | (m)              | (111)         |           |              |           | iste        |
| _0_         | 17.9                  | 135           | 7                | tory                   | B10-                                    | xx                     |                   |             |                | 1              |            |                         | ļ.               | -             |           |              | . –       |             |
|             |                       |               | 12               | uge/                   |   |                        | •                 |             |                |                |            |                         | <del></del>      | <del> </del>  | _         |              |           |             |
|             |                       |               |                  |                        |   |                        |                   |             |                |                |            |                         |                  |               |           |              | , i       |             |
|             |                       | T IN WE       |                  | 7.2 Type               |   | I a Cocio              | ng Cement         | ad          |                |                |            | <del> </del>            |                  |               |           |              |           |             |
| 7.1 Dim     | To                    | Inter         | nal              |                        | Welded Collar,                          |                        | From              | - 1         | 6 C            | ement          | Wat        | er C                    | Other            | Cement        |           |              |           |             |
| (m)         | (m)                   | Dia:          | n)               | Steel, FR              | P, PVC, etc.                            | Yes No                 | (m)               | (n          | n) (1          | oags)          | (litre     | es) Ad                  | ditives          | Metho<br>Used |           |              | ommen     | s           |
| .0          | 14.9                  | <u> </u>      | <del>'  </del>   | <i>PV</i>              | <u>c</u>                                |                        | 10                | 4           | <u> </u>       |                |            | _                       | •                | Grav          | <b>1</b>  |              |           |             |
|             | -                     |               | +                |                        |   | 1 6 6                  |                   | -           |                | _              |            |                         |                  |               |           |              |           |             |
|             |                       |               |                  |                        |   |                        |                   |             |                |                |            |                         |                  |               |           |              |           |             |
|             |                       | TION AT       |                  | UCTION L               |   |                        |                   |             | * `            |                |            |                         |                  | . <u>-</u>    |           |              |           |             |
| 8.1 Metl    | noa<br>en Hole        |               | 8.2 50           | Type                   |   | om To                  | Apert             | ure* is     | ner Diam       |                | Diam       | · Mas                   | елаі             | Trade         | Name      | 1            | Complet   |             |
| _ ;         | eted Casin            | ng            | $\vdash$         | SC                     |   | n) (m)<br>·9 /7·9      | 9 O.              |             | <u>⊕80</u>     | (m             | m)         | PVI                     |                  | Pipem         | ~ 0/e     | 5            | of Bas    |             |
| ☐ Scr       | een(s)                | -             |                  |                        |   |                        |                   |             |                |                |            |                         |                  |               |           |              |           | 7           |
|             |                       |               |                  |                        | *************************************** |                        |                   |             |                |                |            |                         |                  |               |           |              |           |             |
|             | r Seal (Pa            | Depth         | Inter            | nal Met                | avel Packing<br>hod of Grav             | vel Passing            | From              | То          | 13. F          | ORMA'          | TION<br>To | LOG                     |                  |               |           |              |           |             |
| Mai         | crial                 | (m)           | Dia<br>(mn       | m Plac                 |   | esh Size               | (m)               | (m)         | (п             |                | (m)        |                         |                  | Descriptio    | n of Mate | rial         |           |             |
|             |                       |               |                  | _ Gro                  | ring                                    | 5:16 K                 | 3.9               | <u>17.9</u> | ┨┣━            |                |            |                         |                  | _             |           |              |           |             |
| 9. IF NO    | OT A DR               | ILLED V       | !<br>VELL        |                        | · ·                                     |                        |                   |             | <b>'</b>       |                |            | •                       |                  |               |           |              |           |             |
| Meth        |                       | Depth<br>(m)  | Length<br>(m)    | Width (m)              | Diam<br>(m)                             | Lining<br>Material     | From<br>(m)       | To<br>(m)   | 1              |                |            |                         |                  |               |           |              |           |             |
|             |                       |               | ()               |                        |   |                        |                   |             |                | 1              |            |                         |                  |               |           |              |           |             |
|             |                       |               |                  |                        |   |                        |                   |             | J              |                |            | <del></del>             |                  |               |           |              |           |             |
| 10. DE      | ELOPN                 |               | te methe<br>thod | ods and time to        | iken)                                   | Hours                  | Min               | utes        | 1 <del> </del> |                |            |                         |                  |               |           |              |           |             |
|             | A                     | ic lit        | <i>Yea</i>       |                        |   |                        | 20                | >           |                |                |            |                         |                  |               |           |              |           |             |
| 44 850      |                       |               |                  | <u> </u>               |   |                        | <u> </u>          |             | J              |                |            | <del>   </del>          |                  |               |           |              |           |             |
| II. PUN     |                       | Water         |                  | Pumn                   | Discharge                               | Method of              | ,                 | Draw        | 1 ├            |                |            |                         |                  |               |           |              |           |             |
| From (m)    | To<br>(m)             | Level<br>(m)  | Meth-            | Denth                  | Rate • (L/sec)                          | Measuring<br>Discharge | Hours .<br>Pumped | Down<br>(m) |                |                |            |                         |                  | •             |           |              |           |             |
| ,,,,,       |                       |               |                  |                        |   |                        |                   | <u> </u>    |                |                |            |                         |                  |               |           |              |           |             |
|             |                       |               |                  |                        |   |                        | ,                 |             | <u> </u>       |                |            | _                       |                  |               |           |              |           |             |
| 12. SAN     | ADI EC                | l             | L                |                        | 1                                       | <u> </u>               | <u> </u>          | ł           | J              | $\dashv$       |            | -                       |                  | · · · -       |           |              | •         | $\dashv$    |
| The prov    | ision of the          |               |                  |                        | egulations there                        |                        | strata and w      | ater        | -              |                |            | +                       |                  |               |           |              |           |             |
| samples i   |                       |               |                  |                        |   |                        | .,,,,,            |             |                |                |            |                         |                  |               |           |              |           |             |
| A           |                       | milde 6 e     |                  | appeal out             | his well I advise                       | that is been be        |                   |             |                |                |            |                         |                  |               |           |              |           |             |
|             | ed above:             | isible for ut | C WOLK C         | arned out on t         | III2 MEIL I SGALA                       | : unat it mas occ      | en compietes      | •           | <u> </u>       |                |            | <del>-   ·</del>        |                  | -             |           |              |           |             |
| Sienatur    | of Linane             | d Drille-     |                  |                        |   |                        | Date /            | ,           |                | -  -           | -          |                         |                  | - *           |           |              |           | $\dashv$    |
| Drilla      | oj License<br>Contest |               | 34               | pge her w              | ith j                                   | Primary Ir             | ndustries         | and R       | esource.       | S SA           | •          | <del></del>             | - ,,             |               | ·         |              |           |             |
| DATE        | sumple:               | THE CH        | dand             | well locat             | ion plan                                | Core Libra             | ary Com           | płex        |                | ~ ~ * *        |            |                         |                  | ı             | 70        | 30 7         | <b>75</b> |             |
| within      | 14 days               | com           | hicrio           |                        |   | 23 Conyng<br>GLENSID   |                   |             |                |                |            | UNIT                    | NUMBI            | er 📖          |           |              |           |             |
|             | -                     |               |                  | •                      | •                                       |                        |                   |             |                |                |            |                         |                  | •             |           |              |           |             |
|             |                       |               |                  |                        |   |                        |                   |             |                |                |            |                         |                  |               |           |              |           |             |

| DR                      |                      | RS WI           | ELL (             | OF SO<br>CONST            | RUC              | ΓΙΟΝ                |                      |                    |           |             | 1. P        | ERMI             | ΓNO       | ): 6             | 56             | 54             | s              | Site                                   |
|-------------------------|----------------------|-----------------|-------------------|---------------------------|------------------|---------------------|----------------------|--------------------|-----------|-------------|-------------|------------------|-----------|------------------|----------------|----------------|----------------|--|
| NAME                    | OF DR                | ILLER           | c.s,              | hei/                      |                  | Lice                | ence No              | 342                | 2         | PER         | MIT F       | HOLDI            | CR or     | land occ         | cupier .Z      | WLBC           | laid           | / <sub>A</sub>                         |
|                         |                      |                 |                   |                           |                  |                     |                      |                    | - 1       |             |             |                  |           |                  |                |                |                | 'e                                     |
| 2. LOC                  | ATION                | OF W            | ELL               | pervision                 |                  |                     |                      |                    |           |             |             |                  | 3.        | WELL I           | NAME.          | 6565           | Post Cod       | 1001                                   |
| Date of                 | Survey               | 15/9            | 104               | Su                        | rveyed           | by                  |                      | Met                | hod       | YP.         | ∕√دخ        |                  | 4.        | LAND I           | DENTI          | FICATION       | 1              |  |
| GPS CO                  | DORDI<br>DA 94/\     | NATES<br>VGS84  | 4                 | 197                       | 709              |                     |                      |                    | -         | <b>a</b>    | ZON<br>ZON  |                  |           |                  |                |                |                | ······································ |
| □ A                     | GD 66/8              | 4               |                   | 197<br>624                | 7-7-01           | , .                 |                      |                    |           |             | ZON         |                  | Fil       | le/Sectio        | n /Parcel      | . ID           | ·//~           |  |
| 5. SHMN                 | AARY //              | Please ti       | ck appr           | opriate b                 | oxes and         | d compli            | ete all i            | relevant           | details   | :)          |             |                  |           |                  |                | •              |                |  |
| Date wor                | k Comm               | enced           | .15/              | 9/04                      |                  |                     |                      |                    |           | Date        | e work (    | Complet          | ed        | 18/9             | 104            |                | -<br>          |  |
| Work car<br>Is this a R |                      |                 | Well W            |                           |                  | Deepen              |                      | number             | Enlarg    | ge [        |             |                  | F         | Rehabilitat      | ie 🗌           |                | Backfill       |  |
| ls this an              | Existing             | well? ¥         | S/NO              | f yes plea:               | se quote         | well nun            | ıber or              | mark lo            | cation o  | n map       | 2           |                  |           |                  | ·              |                |                |  |
|                         |                      |                 |                   |                           |                  |                     |                      |                    |           |             |             |                  |           |                  |                |                |                |  |
|                         | n Depth I<br>LING DI | Drilled         |                   | (m)<br>iot a drille       |                  | nal Depth           |                      |                    |           |             |             |                  |           | el               | (m)            | Final Yi       | eld            | (L/sec)                                |
| 6.1 Cons                |                      |                 |                   |                           | <u>pi</u>        | , Confi             |                      |                    |           |             |             |                  |           | al surface       | to nearest     | 0.1 m)         | 1              |  |
| From                    | То                   | Diam            | Cat               | ng Method<br>de Tool,     |                  | d Used              |                      | Dec                | w         | ater Cu     | at          | Standin<br>Water |           | Estimated        | Hole<br>Depth  | Casing at      | Test           | Salinity                               |
| (m)                     | (m)                  | (mm)            | Dov               | ry Auger,<br>vn Hole      |                  | , Water,<br>i Type) |                      | Date               | From (m)  | - 1         | To<br>(m)   | Level<br>(m)     |           | Yield<br>(L/sec) | at Test<br>(m) | Test<br>(m)    | Method         | (mg/L) or<br>Taste                     |
| 0                       | 22                   | 285             | Rot               | mer, etc.                 | Rio-             | Vis                 | $\pm$                |                    | (11)      |             | (111)       |                  |           |                  |                |                |                |  |
| 2.8                     | 182                  | 152             |                   | ay                        | Wa               | 10-                 | Γ-                   |                    |           | -           |             |                  | $\top$    |                  |                |                |                |  |
|                         |                      |                 | -                 |                           | <del> </del>     |                     | +                    |                    |           | +           |             |                  | _         |                  |                |                |                |  |
|                         |                      | IN WE           | _                 |                           |                  |                     |                      |                    |           |             |             |                  |           |                  |                |                | •              |  |
| 7.1 Dime<br>From        | nsions<br>To         | Inter           |                   | 2 Type<br>Swell Joint     | Welded C         |                     |                      | ing Ceme           |           | То          | Сеп         | sent .           | Water     | Τ ο              | ther           | Cementing      | g              |  |
| (m)                     | (m)                  | Diat<br>(mn     |                   |                           | RP, PVC, e       |                     | Yes No               | ) (n               |           | (m)         | (ba         |                  | (litres)  |                  | litives        | Method<br>Used |                | Comments                               |
| 0                       | 82                   | 157             | <u>'</u>          | PVC_                      |                  |                     |                      |                    | 3 8       | کت          | 40          | 2                |           | Mus-             | ge/            | Pressu         | re .           | <u> </u>                               |
|                         |                      |                 |                   |                           |                  |                     |                      |                    |           |             |             |                  |           | <u> </u>         |                |                |                |  |
|                         | <u> </u>             | <u> </u>        |                   |                           |                  |                     |                      | ]                  |           |             |             |                  |           | <u> </u>         |                |                |                |  |
| . CONS                  |                      | ION AT          |                   | een or Cas                | •                | variable a          | perture              | screen us          | ed give   | limits)     | )           |                  | -         |                  |                | •              |                |  |
| Ope                     | n Hole               |                 |                   | Туре                      |                  | From<br>(m)         | To<br>(m)            |                    | nm)       | Inner I     |             | Outer Di<br>(mm) |           | Mate             | ria)           | Trade Na       | mė             | Completion<br>of Base                  |
| ☐ Stot                  | ted Casin            | g               |                   |                           | ,                |                     | -                    |                    |           |             |             |                  |           |                  |                |                |                | ,                                      |
| _                       |                      | etails:         |                   | •                         | . <u> </u>       | L                   | _!                   |                    |           |             |             |                  | L         | <u>'</u>         |                |                |                |  |
|                         | Seal (Pa             |                 |                   | 8.4 Gt                    | avel Pacl        | king                |                      |                    |           |             | 13. FO      | RMATI            | ON L      | OG               |                | -              |                |  |
| Mate                    | паІ                  | Depth<br>(m)    | Interna           | Plac                      | thod of          | Gravel P<br>Mesh    |                      | From<br>(m)        | To<br>(m) |             | From<br>(m) |                  | To<br>(m) |                  | •              | Description of | of Material    |  |
|                         |                      |                 | (mm)              |                           |                  |                     | Ť                    |                    |           |             | 0           | : 3              | 3         | 810              | ME             | grey (         | loru           |  |
|                         |                      |                 |                   | $\mathbf{I}$              |                  |                     |                      |                    |           | <u> </u>    | 3           |                  | 6         | Cra              | 19e/           | brans          | s, gr          | ey                                     |
| . IF NO<br>Metho        |                      | LLED W<br>Depth | Length            | Width                     | Diam             | Lin                 |                      | From               | То        | ╗┞          | 16          |                  | ю         | 500              | occ.           | . //           |                | 14                                     |
| 1.10010                 |                      | (m)             | (m)               | (m)                       | (m)              | Mat                 | erial                | (m)                | , (w)     | ┪┝          | 10          | _ <del>  7</del> |           | day              | <u>~ gr</u> (  | y/ <i>pa</i> o | <u> </u>       | <i>iy</i>                              |
|                         |                      |                 |                   | Ì                         | <u> </u>         | J                   |                      |                    |           | ╗╠          | 46          | 3                | 8         | 000              | e gr           | cy clau        | 1. Ay          | citic                                  |
| 10. DEV                 | ELOPM                |                 | te method<br>thod | ls and time t             | aken)            | . н                 | ours                 | N                  | linutes   | $\neg \mid$ | 58          | +                | 4         | laye             | enich          | ores           | ulm de         | rtic                                   |
| Jer                     | ting                 |                 |                   |                           |                  |                     | 2                    | $\rightarrow$      | 0         |             |             |                  |           | clar             | <u> </u>       | arbona         | recus          | Shelly                                 |
| 11 22 2                 | DING T               | 12000           |                   |                           | 1 *              |                     | 0.1.                 |                    |           | }-          | 64          | - 8              | 2         | Brd              | vh/g           | cey m          | ar/ . C        | arbonarea                              |
| 11. PUM<br>Interval     |                      | Water           | Surement<br>Test  | s from natur<br>Pump      | Disch            | arge M              | ethod of             |                    | Drav      |             | 85          | - 1/2            | 25        | Med              | y ore          | u clau         | 1/mari         | ' ε                                    |
| From (m)                | То<br>(m)            | Level<br>(m)    | Method            | Denth                     |                  | te M                | easuring<br>ischarge |                    |           |             |             |                  |           | lim              | eston          | e laur         | es s           | helle                                  |
|                         |                      |                 |                   | <u> </u>                  | 1                |                     |                      |                    |           | <b>-</b>    | 125         | 12               | 82        | 1.191            | ht gi          | ey 💯           | ne <u>- 91</u> | rathed                                 |
|                         | -                    |                 |                   | 1.                        | -                |                     |                      | -                  | +         | <b> </b>    |             | +                |           | cons             | <u>o/ida</u>   | red //         | mes*c          | ne.                                    |
| 12. SAM                 |                      |                 | <u> </u>          |                           |                  | !_                  |                      |                    | Ш.        | ┙┟          |             | +                |           | +                |                |                |                |  |
| The provis              | ion of the           |                 |                   | 1997 and F<br>have not be |                  |                     |                      | i strata and       | water     |             |             |                  |           |                  |                |                |                |  |
|                         |                      |                 |                   |                           |                  | ,<br>,              |                      |                    |           | -           |             | -                |           |                  |                |                |                |  |
|                         |                      | sible for th    | e work ca         | rried out on              | this well I      | advise that         | it has be            | en comple          | ted       | <br>        |             | +                |           | +                |                |                |                |  |
| as describe             | ed above:            |                 |                   |                           |                  |                     |                      |                    |           | ļ           |             |                  |           |                  |                | W              |                |  |
| Signature o             | of License           |                 |                   |                           |                  |                     |                      |                    | / /       | L           |             |                  |           | 1                |                | ,              |                |  |
| Mark a                  | ambje:               | rollect         | o tirio           | ogether v<br>Well loca    | vith<br>tion pla |                     |                      | ndustri<br>ary Co  |           | Reso        | urces (     | SA               | ĺ         |                  |                |                | 7030           | 776                                    |
| WHI.                    | 14 days              | of com          | pletion           | to                        |                  | 23 (                | Conyn                | gham Si<br>DE SA 5 | treet     |             |             |                  | ١         | UNIT I           | NUMBI          | ER             |                |  |
|                         |                      | -               |                   |                           |                  | JL                  | 1211                 | وبأن مت            | 700       |             |             |                  |           |                  |                |                |                |  |

| Unit No: 7130 52 | Obs Well No: CHW 96 | <b>DH No</b> : 201256 |
|------------------|---------------------|-----------------------|

|   | GOVERNMENT OF SOUTH AUSTRALIA RILLERS WELL CONSTRUCTION REPORT |                    |  |                               |                        |                  |                 |                |                     |                   |           |  |                |                 | P       | <b>1608</b>      | L216            | 329                   |             |                |           |                   |
|---|--|--------------------|--|-------------------------------|------------------------|------------------|-----------------|----------------|---------------------|-------------------|-----------|--|----------------|-----------------|---------|------------------|-----------------|-----------------------|-------------|----------------|-----------|-------------------|
| DR                                      | ILLE   |                    |  | CONST                         |                        |                  | N R             | EPC            | RT                  |                   | •         | 1.   | PER            | MIT N           | NO:     |                  |                 |                       |             | si             | te        |                   |
|   |  |                    | -  | Pear                          |                        |                  |                 |                |                     | 1                 | PE.       | RMIT   | HOI            | DER             | or l    | and occ          | upier           | DWLR                  | 3 C<br>3 OF | 101            | de        |                   |
|   |  |                    |  |                               |                        |                  |                 |                |                     |                   |           |  |                |                 |         |                  |                 |                       |             |                |           |                   |
| Name of 2. LOC                          |  |                    |  | pervision                     | · <u>·············</u> |                  | ····            | ********       |                     |                   |           |  | **********     |                 |         |                  |                 |                       |             |                |           |                   |
|   |  |                    |  | Su:                           | munuad 1               | رم               | 461             | a te           | ار.<br>انتها المسلم | had C             | אנה       | c C2   |                |                 |         |                  |                 | Bore                  |             |                |           | ••••••            |
| GPS/C                                   |  |                    |  | Su                            | rveyed                 | oy Se.           | . W.V           | 41.7W          | r Meti              | noa <del>.,</del> | <br>•     |  | NE 5           |                 |         |                  |                 | FICATIO<br>l Lease Ne |             | _              |           |                   |
| □ <b>y</b> G                            | DA 94/   | WGS84              |  | 50                            | 269                    | 2_               |                 |                |                     |                   | Ü         | Z0   | NE 5           | 3               |         |                  |                 |                       |             |                |           |                   |
|   | GD 66/   | 84                 |  |                               | 39 <i>4</i>            |                  |                 |                |                     |                   | a         | ZO   | NE 5           |                 |         |                  |                 | cha.                  |             |                |           |                   |
| 5 SHMN                                  | JARY (   | Please ti          | ck ann   | opriate be                    |                        |                  |                 | all n          | elevant             | !<br>details      | r)        |  |                | 1               | Nar     | ne or P          | roperty         |                       | M.A.S.A.    | 7              |           |                   |
| Date wor                                | k Comm   | enced              | 20/  | 5/04                          |                        |                  |                 |                |                     |                   | .,<br>D:  | ate wor  | k Com          | pleted.         | 2       | 0/5              | 104             |                       |             |                | <b></b> . |                   |
| Work car                                |  |                    | Well [   |                               |                        | Deepe            |                 |                |                     | Enlar             | ge        |  |                |                 | Re      | habilitat        | e 🗍             |                       | Ba          | ekfill         |           |                   |
|   |  |                    |  |                               |                        |                  |                 |                |                     |                   |           |  |                |                 |         |                  |                 |                       |             |                |           |                   |
|   |  |                    |  |                               |                        |                  |                 |                |                     |                   |           |  |                |                 |         |                  |                 |                       |             |                |           |                   |
| Maximur                                 |  |                    |  |                               |                        |                  |                 |                | ?(m)                |                   |           |  |                |                 |         | L                |                 |                       |             |                |           |                   |
| 6. DRIL                                 |  |                    | If t   | not a drilled                 | l well, pl             | ease co          |                 |                |                     |                   |           |  |                |                 |         |                  | _               |                       |             |                |           |                   |
| 6.1 Cons                                | truction   | Details            | Drillin  | ng Method                     |                        |                  | $\dashv$        | 6.2 W          | ater Cut            |                   |           |  | 1              |                 | ural    | surface          | to nearest      | (m 1.0                | 1           |                | 1         |                   |
| From                                    | To   | Diam               | Cat  | ole Tool.<br>ry Auger,        |                        | d Used<br>Water, |                 | г              | Date                | "                 | Vater     | Cut  | _ \ v          | inding<br>√ater |         | timated<br>Yield | Hole<br>Depth   | Casing at<br>Test     | 1           | Test           |           | limity<br>v/L) or |
| (m)                                     | (m)  | (mm)               | Do   | wn Hole<br>imer, etc.         |                        | Type)            |                 |                |                     | From<br>(m)       |           | To<br>(m)  |                | ævel<br>(m)     |         | L/sec)           | at Test<br>(m)  | (m)                   | M           | lethod         |           | aste              |
| 0                                       | 7.6  |                    | <del></del>                                      | lary                          | M                      | 1d               |                 |                |                     |                   | T         | <b></b>  | $\top$         |                 |         |                  | _               |                       |             |                |           |                   |
|   |  | ļ. <u> </u>        | M  | ger                           | Bio-                   | ·VNS             | 2]              |                |                     |                   | $\perp$   |  | _              |                 |         |                  |                 |                       |             |                |           |                   |
| $\vdash$                                |  | <u> </u>           | <del>                                     </del> |                               |                        |                  | $\dashv$        |                |                     |                   | +         |  | ╁┈             | <del></del>     | ┢       |                  |                 |                       |             |                |           |                   |
| 7. CASI                                 | NG LEF   | T IN WE            | LL   |                               |                        |                  |                 |                |                     | l .               |           |  | 1              |                 | 1       | •                | I.              | 1                     |             |                |           |                   |
| 7.1 Dime                                | nsions   | Inter              | 7.   | 2 Type                        |                        |                  | 7.3             | Casin          | g Cemei             | nted              |           |  | ì              | ,               |         |                  |                 | Cementi               |             |                |           |                   |
| From (m)                                | To (m)   | Dia                | m.   | Swell Joint,<br>Steel, FR     | Welded C<br>P, PVC, et |                  | Yes             | No             | Fro<br>(m           | - 1               | To<br>(m) |  | ement<br>bags) | Wat<br>(htm     |         |                  | ther<br>litives | Metho                 |             | . (            | Commen    | its               |
| 6                                       | 5.6  | SC (mr             |  | PV                            | C                      |                  | U               |                | 0                   |                   | 2         |  |                | 1               |         |                  |                 | Used<br>(Jrqv1)       | 4           |                |           |                   |
|   |  |                    |  |                               |                        |                  |                 | _=             |                     |                   | _         |  |                |                 |         |                  |                 |                       | $\Box$      |                |           |                   |
| •                                       | <del>                                     </del>               |                    | $\dashv$   |                               |                        |                  | 뭄               |                |                     | <del>-</del>  -   |           |  |                |                 |         | <u> </u>         |                 |                       |             |                |           |                   |
| 8. CONS                                 | TRUCT  | TON AT             | PRODU  | CTION L                       | EVEL                   |                  |                 |                |                     |                   |           |  |                |                 |         | l .              |                 |                       | 1           |                |           |                   |
| 8.1 Metho                               |  |                    | 8.2 Scr  | een or Casi                   | ing (*If v             | ariable<br>Fron  |                 | ture se        |                     | ed give           |           | ts)<br>er Diam                                   | 1 000          | er Diam         | <u></u> |                  |                 | · ·                   |             | Ė              | Comple    | tron              |
| Ope                                     | n Hole<br>ted Casir  |                    | 50   | Type                          |                        | (m)              |                 | (m)<br>7·6     | (п                  | ım)               | ()        | mm)  |                | mm)             | -       | Mate             |                 | Trade N               |             |                | of Bas    |                   |
| ☐ Scre                                  |  | ıg                 | - 0 C  |                               |                        | 5.0              | 2   1           | 7.0            | 10.                 | <u> </u>          | 8         | -0   |                |                 | +       | PVC              |                 | Pipem                 | 9070        | <del>* C</del> | nor.s     | 90                |
| Othe                                    | er, give d   | etails:            |  |                               |                        |                  |                 |                |                     |                   |           |  |                |                 |         |                  |                 | ************          |             |                |           |                   |
| 8.3 Liner                               | Seal (Pa   | cker)              | Interna  |                               | avel Pack              |                  |                 | _              |                     |                   | _         | 13. F  | ORM            | ATION           | LO      | <b>G</b>         |                 |                       |             |                |           |                   |
| Mate                                    | rıal   | Depth<br>(m)       | Diam<br>(mm)                                     | Place                         | nod of<br>ement        | Gravel<br>Mes    | Passi<br>h Size |                | From<br>(m)         | To<br>(m)         |           | Fro<br>(n  |                | To<br>(m)       |         |                  |                 | Description           | of Mat      | crial          |           |                   |
|   |  |                    | (1111)   | Gra                           | vity                   | 8                | 16              | 4              | -6                  | 7.8               |           |  |                |                 |         |                  |                 |                       |             |                |           |                   |
|   |  | <u> </u>           | <u>.                                    </u>     | <u> </u>                      |                        |                  |                 |                |                     | <u> </u>          |           | <u> </u>   | _              |                 |         | ,                |                 |                       |             |                |           |                   |
| 9, IF NO<br>Metho                       |  | Depth              | Length   | Width                         | Diam                   |                  | ining           |                | From                | То                | ٦         | <del> </del>                                     | -              |                 |         |                  |                 | <del></del>           |             |                |           |                   |
|   | -  | (m)                | (m)  | (m)                           | (m)                    | M                | ateria          | +              | (m)                 | (m)               | -         | <del>                                     </del> | +              |                 |         |                  | -               |                       | •           |                |           |                   |
|   |  |                    |  |                               |                        |                  |                 |                |                     |                   |           |  |                |                 |         |                  |                 |                       |             |                |           |                   |
| 10. DEV                                 | ELOPM  |                    | te method  | ls and time ta                | iken)                  |                  | U.              |                |                     | inutes            | _         | <u> </u>   | _              | _               |         |                  |                 |                       |             |                |           |                   |
|   | A;   | -/, <del>-/,</del> | - <u>/</u>                                       |                               |                        | -                | Hour            | <u> </u>       |                     |                   | $\dashv$  |  | $\rightarrow$  |                 |         |                  | <del>-</del>    |                       |             |                |           | <del></del>       |
|   |  |                    |  |                               |                        | <u> </u>         |                 |                |                     |                   | $\exists$ |  |                |                 |         |                  |                 |                       |             |                |           |                   |
|   |  |                    | surement   | s from natura                 |                        |                  | _               | ĺ              |                     | <del></del>       |           |  |                |                 |         |                  |                 |                       |             |                |           |                   |
| Interval From                           | Tested .   | Water<br>Level     | Test<br>Method                                   | Pump<br>Depth                 | Discha<br>Rate         | e l              | Metho<br>Meast  | gnitu          | Hours<br>Pumped     | Drav<br>Dow       | /n        | _  | <del></del>    |                 |         |                  |                 |                       |             |                |           |                   |
| (m)                                     | (m)  | (m)                | -  | (m)                           | (L/se                  | (C)              | Disch           | arge           |                     | (m)               | <u>'</u>  |  | -+             |                 |         |                  |                 |                       |             |                |           |                   |
|   |  |                    |  | -                             |                        | +                |                 |                |                     |                   | $\dashv$  | _  | $\dashv$       |                 |         | L                | ····            |                       |             |                |           |                   |
|   |  | ,                  |  |                               | <u> </u>               |                  |                 |                |                     |                   |           |  |                |                 |         |                  |                 |                       |             |                |           |                   |
| 12. SAM                                 |  | Water Res          | ources Are                                       | 1997 and Re                   | egulatione             | thereto          | rennir          | e that s       | irata and           | water             |           |  | [              |                 |         |                  |                 |                       |             |                |           |                   |
|   |  |                    |  | have not bee                  |                        |                  |                 |                |                     |                   |           | -  |                |                 |         |                  |                 |                       |             |                |           |                   |
| .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |  |                    |  |                               |                        |                  |                 |                |                     |                   |           |  | -              |                 |         | <del></del>      |                 |                       |             |                |           |                   |
| As the pers                             | on respon  |                    |  | rried out on t                |                        |                  |                 |                |                     |                   |           |  |                |                 |         |                  |                 |                       |             |                |           |                   |
|   |  |                    | •  |                               |                        |                  |                 |                |                     |                   |           |  |                |                 |         |                  |                 |                       |             |                | -         |                   |
|   |  |                    |  |                               |                        |                  |                 |                |                     | , i               |           |  |                |                 |         |                  |                 | 1                     |             |                |           |                   |
| DEEP                                    | क्षाकोटा<br>स्व परार्थ   | Hilecte            | d and  | gether w<br>well locat<br>to: | ıın<br>ion plaı        | Pi<br>C          | ima<br>ore I    | ry In<br>Jibra | dustrie<br>rv Con   | s and             | Res       | ource  | s SA           |                 |         |                  | TT              |                       | 71          | 30 5           | ,         |                   |
| Million .                               | 14 days  | of com             | pletion  | to:                           | -                      |                  |                 |                |                     |                   |           |  |                |                 | L       | NIT N            | UMBE            | ER I                  | 11          | UU J           | <b>L</b>  |                   |
| ·                                       |  |                    |  |                               |                        | G                | LEN             | SIDI           | E SA 50             | )65               |           |  |                |                 |         |                  |                 |                       |             |                |           |                   |
|   |  |                    |  |                               |                        |                  |                 |                |                     |                   |           |  |                | _               |         | -                |                 | •                     |             |                |           |                   |

|   | GOV                 | FRNI           | MEN                | VT OF                     | SO            | UTH A                      | AUST            | 'RAL  | ÍΑ       |                     |               |              |             |                |                    | 1        | PN60              | OBL2           | 1632                       | 9         |             |  |               |
|---|---------------------|----------------|--------------------|---------------------------|---------------|----------------------------|-----------------|---|----------|---------------------|---------------|--------------|-------------|----------------|--------------------|----------|-------------------|----------------|----------------------------|-----------|-------------|--|---------------|
| DR                                      |                     |                | VE.                | LL CO                     | ONST          | 'RUC'I<br>Act, 199         | ION             |   |          | RT                  |               |              | 1. P        | ERN            | AIT N              | NO:      |                   |                |                            |           | Si          | e                                      |               |
|   |                     |                |                    |                           |               | 9                          |                 |   |          |                     | 1             | ERN          | MIT I       | HOL            | DER<br>G <i>PC</i> | orla     | nd occ            | upier<br>283   | DWLB<br>4, A               | c<br>del  | aid         | <u></u>                                |               |
|   |                     |                |                    |                           |               |                            |                 |   |          |                     |               |              |             |                |                    |          |                   |                |                            |           |             |  | 2/            |
| Name of                                 | ·                   |                |                    |                           | vision        |                            |                 |   |          | •                   | · <u> </u>    |              |             |                |                    | A 111    |                   |                | Bon                        | o 2       | ,           | 1                                      |               |
|   |                     |                |                    |                           | Su            | rveyed b                   | y <i>S/</i> /   | Ma  | ter      | Method              | 1 <i>Q1</i>   | RS           | <u>52</u>   |                | .                  |          |                   |                | ICATIO                     |           |             |  |               |
| GPS CC                                  |                     |                |                    |                           | 5             | 026                        | 16              | ٠   |          |                     | ָ<br>כ        | 2<br>]       |             | NE 54<br>NE 53 |                    |          |                   |                | Lease No                   |           |             |  |               |
| □ A6                                    | GD 66/              | 84             |                    |                           |               | 239                        |                 |   |          |                     |               | ב            | ZON         | NE 52          |                    |          |                   |                | D<br>Chan                  |           |             |  |               |
| 5. SUMN                                 | IARY (              | Pleas          | tick               | арргор                    |               | oxes and                   |                 |   | l rele   | evant dei           | tails)        |              |             |                |                    |          |                   |                |                            |           |             |  |               |
| Date wor<br>Work car                    | k Comл<br>ried out: | enced<br>N     | ew W               | 21./5./<br>/eli 🔽         | 04            | ·<br>                      | <br>Deepe       | n 🗆   |          | E                   | . I<br>nlarge | L            | j           | -              |                    | Reh      | abilitate         | ; ∐            |                            | Bac       | kfill       |  |               |
|   |                     |                |                    |                           |               |                            |                 |   |          |                     |               |              |             |                |                    |          |                   |                |                            |           |             |  |               |
| Was well                                | Abando              | ned?           | YES                | /NO if ye                 | es please     | e state me                 | thod            |   |          |                     |               |              |             |                |                    |          |                   |                | ·····                      |           |             |  |               |
| Maximun<br>6. DRILI                     |                     |                |                    | )(                        | m) .          | Find well, pla             | al Dep          | oth   | ين       | (m)                 | 10 I          |              |             |                |                    |          |                   | (m)            | Final Y                    | ield      |             | (L/se                                  | 2)            |
| 6.1 Cons                                |                     |                |                    | _11 not                   | a ormec       | ı weji, pie                | ase co          |   |          | er Cut De           |               |              |             |                |                    |          | urface t          | o nearest      | 0.1 m)                     |           |             |  |               |
| From                                    | То                  | Dia            | m                  | Drilling I                | Tool,         |                            | Used            |   | Dat      |                     | Wate          | r Cul        |             |                | ding<br>iter       |          | mated<br>ield     | Hole<br>Depth  | Casing at                  | .         | Test        |  | inity         |
| (m)                                     | (m)                 | (mi            | n)                 | Rotary A<br>Down<br>Hamme | Hole          |                            | Water,<br>Type) |   | Dau      |                     | From<br>(m)   |              | To<br>(m)   |                | vel .<br>n)        |          | sec)              | at Test<br>(m) | Test<br>(m)                | М         | ethod       |  | L) or<br>iste |
| 0                                       | 7-5                 | •              |                    | Rote                      | ary           | Mu                         |                 | <u>,                                     </u> |          |                     |               | -            |             |                |                    | <u> </u> |                   |                |                            |           |             |  | _             |
|   |                     | 1              |                    | ЛUG                       | <i>e</i>      | (BIO-                      | ·VIJ            | 4   |          | -                   |               |              |             |                |                    |          |                   |                |                            | $\dagger$ |             | <u></u>                                |               |
|   |                     |                |                    |                           |               |                            |                 |   |          |                     |               |              |             |                |                    |          |                   |                |                            |           |             |  |               |
| 7. CASIN<br>7.1 Dime                    |                     | TIN            | VEL                | L<br>7.2 T                | Vpe           |                            |                 | 7.3 C   | asing    | Cementee            | i             |              |             |                |                    |          |                   |                |                            |           | <del></del> |  |               |
| From (m)                                | To<br>(m)           | - [            | nterna<br>Diam.    | , su                      | vell Joint,   | , Welded Co<br>RP, PVC, et |                 | Yes   | No       | From (m)            | To            |              |             | nent<br>igs)   | Wa<br>(litt        |          |                   | her<br>tives   | Cementin<br>Method<br>Used |           | C           | omment.                                | s             |
| 0                                       | 2.3                 | _              | (mm)<br><b>?-0</b> |                           | PV            | C                          |                 | 图   |          | 0                   | 2             |              |             |                |                    |          |                   |                | Gravi                      | <i>/</i>  |             |  |               |
| •                                       |                     | -              |                    | -                         |               |                            |                 |   | <u></u>  |                     | <u> </u>      |              | <u> </u>    |                | ├                  |          |                   |                |                            |           | <u> </u>    |  |               |
|   |                     |                |                    |                           |               |                            |                 |   |          |                     |               |              |             |                |                    |          |                   |                |                            |           | ·           |  | _             |
| 8. CONS<br>8.1 Metho                    |                     | TION A         | - 1                |                           |               | EVEL<br>ing (*If v         | ariable         | apertu  | re scre  | een used :          | eive lin      | nits)        |             |                |                    |          |                   |                |                            |           |             |  |               |
| □Оре                                    |                     |                |                    |                           | Туре          |                            | Fron<br>(m)     | ,   | To<br>m) | Apertun<br>(mm)     | e* In         | ner E<br>(mn |             |                | Diam<br>um)        |          | Mate              |                | Trade N                    |           | _l          | Completi<br>of Base                    | ;             |
| Slot Scre                               |                     | ng             | ╁                  |                           | <u>c</u>      |                            | <u>ۍۍ</u>       | 7   | 5        | 0.5                 | _             | 30           |             |                |                    | +        | PVC               |                | Pipemo                     | 257¢      | / E         | 201.C                                  | حرو           |
| _                                       | er, give (          | details:       | L.                 |                           | -             |                            |                 |   |          |                     | 1.<br>        |              |             |                |                    |          |                   |                |                            |           |             |  |               |
| 8.3 Liner                               | Seal (Pa            |                | _                  | Internal                  | ì             | avel Pack                  |                 | _   | Τ_       |                     |               | بإ. ١        |             |                |                    | VLOO     | }                 |                |                            |           |             |  |               |
| Mate                                    | rial                | Dept<br>(m)    |                    | Diam<br>(mm)              |               | hod of<br>rement           |                 | Passing<br>h Size                             |          |                     | To<br>(m)     |              | From<br>(m) | - 1            | To<br>(m)          |          |                   |                | Description                | of Mat    | erial       |  |               |
|   | . <del></del>       | <u> </u>       |                    |                           | Gra           | rity                       | 8               | :/6   | 4        | 5 7                 | <u>ۍ</u>      | ╂            |             | -              |                    | _        | -                 |                | ·                          |           |             | <del></del>                            |               |
| 9. IF NO                                |                     | ILLEI<br>Depth |                    | ELL<br>ength              | Width         | Diam                       | 1               | ining   | 1 6      | rom                 | То            | , [          |             | 1              |                    |          |                   |                |                            |           |             |  |               |
| Metho                                   | χd                  | (m)            | +                  | (m)                       | (m)           | (m)                        |                 | aterial                                       |          | (m)                 | (m)           | ╟            |             |                |                    | +        |                   |                |                            |           |             | -                                      |               |
|   |                     |                |                    |                           |               | -                          |                 |   | 1        |                     |               | 1            |             | #              |                    |          |                   | <u>-</u>       |                            |           |             |  |               |
| 10. DEV                                 | ELOPN               | 1ENT           | (State<br>Methe    | methods a                 | nd time t     | aken)                      | Τ               | Hours   |          | Minu                | tes           | ıŀ           |             | $\dashv$       |                    |          |                   |                |                            |           |             |  |               |
|   |                     | Air            | lit                | Steet                     |               |                            |                 |   | _        | /\$                 |               | 1            |             | _              |                    | _        |                   |                |                            |           |             |  |               |
| 11. PUM                                 | PING 1              | TEST (         | measu              | rements fr                | om natur      | al surface t               | o neare         | st O.1m)                                      |          | _                   |               | <u>'</u>     |             | _              |                    |          |                   |                |                            |           |             |  |               |
| Interval<br>From                        |                     | Wate           | r<br>i             | Test                      | Pump<br>Depth | Discha<br>Rate             | rge             | Method<br>Measuri                             |          | Hours               | Draw<br>Down  |              |             | $\blacksquare$ |                    |          |                   |                |                            |           |             |  |               |
| (m)                                     | (m)                 | (m)            |                    | Method                    | (m)           | (L/se                      |                 | Discharg                                      |          | Pumped              | (m)           | $ \cdot $    |             | -              |                    | -        |                   |                |                            |           |             |  |               |
|   |                     |                | $\perp$            |                           |               |                            |                 |   | $\perp$  |                     |               |              | -           |                |                    |          |                   |                |                            |           |             |  |               |
| 12.5                                    | IDI EC              |                |                    |                           |               |                            | T               |   |          |                     |               | ΙF           |             | $\perp$        | _                  |          |                   |                |                            |           |             |  |               |
|   | ion of the          |                |                    |                           |               | tegulations<br>en obtained |                 |   | hat str  | ata and wat         | er            | F            |             |                | •                  |          |                   |                |                            |           | •           | _                                      |               |
| *************************************** |                     |                | ·····              |                           | •••••         | •                          | *********       |   | •••••    |                     |               | -            |             | -              | -                  | $\dashv$ |                   |                |                            |           |             |  |               |
| As the per-                             | son respo           |                |                    | work carrie               |               | this well I a              | idvise t        | nat it has                                    | been o   | completed           |               |              |             | 1              |                    |          |                   |                |                            |           |             |  |               |
|   |                     |                |                    |                           |               |                            |                 |   |          |                     |               | -            |             | +              | _                  | $\dashv$ |                   |                |                            | _         |             |  |               |
|   |                     | w 2            | ΒG                 | ouv log                   | her w         | vith<br>tion plan          | P <sub>1</sub>  | rimarı  | hel      | ustries s           | and R         | L<br>esou    | ırces       | SA             | <u>·</u>           |          | $\overline{\top}$ | Ţ T            | 7                          | 74        | 30 5        | ······································ |               |
| Whitin                                  | 14 day              | s pr co        | mpl                | etion to                  |               |                            | 23              | Cony  | ngha     | am Stree<br>SA 5065 | et ·          |              |             |                |                    | U!       | NIT N             | UMBE           | ER L                       | 11        | ים חר       | ,                                      |               |

Unit No: 7130 53 Obs Well No: CHW 97 DH No: 201257

|                          | GOV                  | ERNM               | ENT (               | OF SO                       | UTH A                                   | AUST           | RALIA                  |                     |               |             |               |                |                | . PN6                                   | 0812   | 16331                                 |               |              |                              |
|--------------------------|----------------------|--------------------|---------------------|-----------------------------|---|----------------|------------------------|---------------------|---------------|-------------|---------------|----------------|----------------|---|--|---------------------------------------|---------------|--------------|------------------------------|
| DR                       | RILLE                |                    |                     | CONST                       |   |                | REPO                   | ORT                 |               |             | 1. 1          | PERM           | MIT I          | NO:                                     |  |                                       |               | Site         |                              |
|                          |                      |                    |                     | Pearc                       |   |                |                        |                     | I .           | E           | RMIT          | HOL            | DER            | or land occ                             | upier  | DWLB<br>4, Ad                         | elaic         | /p           | **********                   |
|                          |                      |                    |                     |                             |   |                |                        |                     |               |             |               |                |                |   |  |                                       |               |              |                              |
|                          |                      | N OF W             | <del></del>         | ervision                    | *************************************** |                |                        |                     | ···· 1 ·"     |             |               |                |                |   |  | Bore                                  |               |              |                              |
| Date of                  | Survey               | 1/.9               | 104                 | Su                          | rveyed l                                | y <b>SA</b>    | Wate                   | Meth                | 10d <b>9</b>  | /           | پت            | ********       |                |   |  | FICATION                              |               |              |                              |
| GPS C                    | OORD<br>DA 94/       | INATES<br>WGS84    | · 🗀                 | 50                          | 7/56                                    | 0              |                        |                     |               | <b>⊡</b>    | ZOI<br>ZOI    | NE 54<br>NE 53 |                |   |  | l Lease No:                           |               |              |                              |
|                          | GD 66/               |                    |                     |                             | 387                                     |                |                        |                     |               |             |               | NE 52          | , 1            |   |  | Chon                                  |               |              |                              |
|                          |                      |                    |                     | opriate b                   | oxes and                                | l comp         |                        |                     | details)      |             |               |                |                |   |  |                                       |               |              |                              |
| Date wo                  | rk Comm              | ienced             |                     | 104                         |   | Deepen         | П                      | •••••               | <br>Enlarge   | Da          | ite work      | Com            | pleted         | 22/5/<br>Rehabilitat                    | /0≠<br>□                                     |                                       | Rackfil       |              |                              |
| Is this a                | Replacen             | nent well          | ? YES/N             | Oifyesp                     | lease quo                               | te repla       | ed well r              | number              |               |             |               |                |                | *************************************** |  |                                       |               |              |                              |
|                          |                      |                    | -                   |                             |   |                |                        |                     |               |             |               |                |                |   |  |                                       |               |              |                              |
| was wer<br>Maximu        | i Abando<br>m Depth  | nea? ==<br>Drilled | 7:3                 | (m)                         | e state me<br>Fir                       | al Dept        | h 73                   | ><br>(m)            | ************* |             |               |                |                | .evel                                   |  | Final Yie                             |               | (1./         | sec)                         |
| 6. DRIL                  | LING D               | ETAILS             |                     | ot a drille                 |   |                | nplete Se              | ctions: 6.2         | 2, 9, 10,     | 11,         | 12 and        | 13 as 1        | necess         | ary .                                   |  | •                                     |               |              |                              |
| 6.1 Cons                 | truction             | Details            |                     | ng Method                   | Ι.                                      |                | 6.2 V                  | Vater Cut           | Details (     |             |               |                | om na<br>nding | tural surface                           | to nearest<br>Hole                           |                                       |               |              |                              |
| From<br>(m)              | To<br>(m)            | Diam<br>(mm)       | Cat<br>Rota         | de Tool,<br>ry Auger,       | (Air,                                   | Used<br>Water, |                        | Date                | From          | er (        | To            | W              | ater<br>evel   | Estimated<br>Yield<br>(L/sec)           | Depth<br>at Test                             | Casing at<br>Test                     | Test<br>Metho | а (л         | alinity<br>ng/L) or<br>Taste |
|                          |                      |                    | Ham                 | vn Hole<br>mer, etc.        | Mud                                     | Type)          | -                      |                     | (m)           | 1           | (m)           | (              | m)             | (L/sec)                                 | (m)  | (m)                                   |               | _            | Taste                        |
| 0                        | 7-3                  |                    | AU                  | tory<br>rez                 | 180                                     | Vis!           |                        |                     |               | +           |               |                |                |   |  |                                       |               |              |                              |
|                          |                      |                    | 10                  |                             |   |                |                        |                     |               | Ŧ           |               |                |                |   |  |                                       |               |              |                              |
| 7. CASI                  | NG LEF               | T IN WE            | ELL                 |                             |   |                |                        |                     |               |             |               | _              |                |   | <u> </u>                                     |                                       | ļ. <u></u>    |              |                              |
| 7.1 Dime                 | ensions              | Inte               | 7.                  | 2 Туре                      |   |                | 7.3 Casii              | ng Cemer            |               |             | -:            |                | _              | <del></del> _                           |  | Cementing                             |               |              |                              |
| From<br>(m)              | To<br>(m)            | Dia<br>(m          | ım.                 | Swell Joint,<br>Steel, FR   | , Welded Co<br>RP, PVC, et              |                | Yes No                 | From (m)            |               | ľo<br>m)    |               | ment<br>ags)   |                |   | ther<br>htives                               | Method<br>Used                        | <u> </u>      | Comme        | ents                         |
| 0                        | 4.3                  | 3 80               | 2                   | PVC                         | ٥                                       |                |                        | 0                   | 2             |             | _             |                |                |   |  | Gravit                                | 3/            |              |                              |
|                          |                      |                    |                     |                             |   |                |                        |                     |               |             |               |                |                |   |  |                                       |               |              |                              |
| 0 CON                    | CERTIFICA            | CHONI ATT          | PROPI               | CTION L                     | E23/121                                 |                |                        | .                   |               |             |               |                | <u></u>        |   |  |                                       |               |              |                              |
| 8.1 Meth                 |                      | HUNAL              | T                   | een or Cas                  |   |                |                        |                     |               |             |               |                |                |   |  |                                       |               |              |                              |
| ☐ Ope                    | en Hole<br>tted Casi |                    |                     | Type                        |   | From (m)       | (m)                    | (m                  | ım)           | <u>(n</u>   | r Diam<br>nm) |                | r Diam<br>nm)  | PVC                                     |  | Trade Nar                             |               | Comp<br>of B |                              |
| Scn                      |                      | ng                 |                     | <u>ა (</u>                  |   | 4.3            | 7.3                    | 0                   | ٠ <u>٠</u>    | ے           | 0             |                | -              | Pic                                     |  | Pi <i>p</i> enia.                     |               | CYSY         | دوم                          |
|                          |                      |                    |                     |                             |   |                | <u></u>                |                     |               |             |               |                |                |   |  |                                       |               |              | *******                      |
| 8.3 Line                 |                      | Depth              | Interna             | l Met                       | avel_Pack<br>hod of                     | ing<br>Gravel  | Passing                | From                | То            | 1           | 13. FO        |                | TION<br>To     | (LOG                                    |  | D                                     | £ 14-11       | •            |                              |
| Mat                      | епаі                 | (m)                | Diam<br>(mm)        | Plac                        | ement                                   | Mesh           |                        | (m)                 | (m)           | -           | (m)           | <u> </u>       | (m)            | <u> </u>                                |  | Description o                         | i Material    |              |                              |
|                          |                      |                    | <u> </u>            | ura                         | "Ty                                     | .حو            | 16                     | 2.7                 | 7:3           | _           |               |                |                |   |  |                                       |               |              |                              |
| 9. IF NO                 |                      | ILLED V            | WELL<br>Length      | Width                       | Diam                                    | Lı             | ning                   | From                | То            | 7           |               |                | •              |   |  | · · · · · · · · · · · · · · · · · · · |               |              |                              |
| Meth                     | OCT                  | (m)                | (m)                 | (m)                         | (m)                                     |                | terial                 | (m)                 | (m)           | +           |               | $\dashv$       |                |   |  |                                       | ·             |              |                              |
|                          |                      |                    |                     |                             |   | ]              |                        |                     |               |             |               | $\dashv$       |                |   |  |                                       |               |              |                              |
| 10. DEV                  | ELOPN                |                    | ate method<br>ethod | is and time t               | aken)                                   | ] I            | lours                  | Mi                  | inutes        | ]           |               |                |                |   |  |                                       |               |              |                              |
|                          |                      | Air li             | Freq                |                             |   | ··-            | -                      | 25                  |               | -           |               | 7              |                |   |  |                                       |               |              |                              |
| 11. PUN                  | IPING T              | TEST (me           | asurement           | s from natur                | al surface 1                            | o nearest      | (0.1m)                 | _l                  |               | _           |               | $\pm$          |                |   |  |                                       |               | -            |                              |
| Interval                 |                      | Water<br>Level     | Test                | Pump                        | Discha<br>Rate                          | arge N         | dethod of<br>deasuring | Hours               | Draw<br>Down  | 7           |               | $\Box$         |                |   |  |                                       |               |              |                              |
| (m)                      | (m)                  | (m)                | Method              | (m)                         | (L/se                                   |                | Discharge              | Pumped              | (m)           | +           |               | $\dashv$       |                |   | -  |                                       |               |              |                              |
|                          |                      |                    |                     |                             |   | -              |                        | <u>L</u>            |               | 1           |               | 士              |                |   |  |                                       |               |              |                              |
|                          |                      | <u> </u>           |                     |                             |   |                |                        |                     |               |             |               | $\dashv$       |                |   |  |                                       |               |              |                              |
|                          | sion of the          |                    |                     | t 1997 and R<br>have not be |   |                |                        | strata and          | water`        |             |               | $\dashv$       |                |   | <u>.                                    </u> | •                                     |               |              |                              |
|                          |                      |                    | ·············       |                             |   |                |                        |                     |               |             |               |                |                |   |  |                                       |               |              |                              |
| As the per<br>as describ |                      | nsible for t       | he work ca          | rried out on                | this well I                             | advise th      | at it has bee          | n complete          | ed            |             |               | $\dashv$       |                |   |  |                                       |               |              |                              |
| Signatura                | of Licens            | d Driller          |                     | **********                  |   |                | •                      | Date 4              | , ,           |             | -             | _              |                |   |  | -                                     |               | -            | -                            |
| Drilla                   | A Heli               | 極與                 |                     | gether w                    | vith                                    | Pri<br>n Co    | imary II<br>re Libra   | ndustrie<br>ary Con | s and R       | <b>le</b> s | ources        | SA             |                |   |  | }                                     | 7130          | 54           |                              |
| within                   | 14 day               | ou com             | hierron             | .0.                         |   |                | Conyng<br>ÆNSID        |                     |               |             |               |                |                | UNIT N                                  | NUMBI  | ER L                                  |               |              |                              |

Unit No: 7130 54 Obs Well No: CHW 98 DH No: 201258

|                |                     |                       |                             | ι                        | Jnit No                | <b>:</b> 713 | 30 55                            |             | (          | Obs        | W             | ell N          | <b>o</b> : C     | HW :                        | 99   |                          | DH No                             | : 201259                    |             |           |                                |
|----------------|---------------------|-----------------------|-----------------------------|--------------------------|------------------------|--------------|----------------------------------|-------------|------------|------------|---------------|----------------|------------------|-----------------------------|--|--------------------------|-----------------------------------|-----------------------------|-------------|-----------|--------------------------------|
| DI             |                     | RS WI                 | ENT O<br>ELL C<br>Vater Res | ONST                     | <b>RUC</b> 7           | CION         |                                  |             |            |            |               | 1. P           | 'ERN             | AIT N                       |  | PN6                      | OBL2                              | 16331                       |             | ]<br>Site |                                |
|                |                     |                       | D.PE                        |                          |                        |              |                                  |             |            | PE         | ERI           | MIT I          | HOL              | DER (                       | or la  | and occ                  | upier                             | DWL 80<br>34, A             | del         | 6,0       | 10                             |
|                |                     |                       |                             |                          |                        |              |                                  |             |            | 100        | 3141          | Audic          | .33              | m                           |  | <i></i>                  |                                   |                             | Post (      | `ode      | 5001                           |
|                |                     | N OF W                | inder supe<br>ELL           | rvision                  |                        |              |                                  |             |            | 1          |               |                |                  |                             |  |                          |                                   |                             |             |           |                                |
|                |                     |                       | 104                         | Ç.,,                     | cueved b               | <b>(C</b> /  | War                              | ler Ma      | thad       | C)         | P             | SSZ            |                  | 1 -                         |  |                          |                                   | Borc                        |             |           |                                |
|                |                     | INATES                |                             |                          |                        |              |                                  | .ar IVIC    |            |            |               | ZON            |                  |                             |  |                          |                                   | FICATION<br>  Lease No:     |             | -         |                                |
|                | DA 94/<br>GD 66/    | WGS84                 |                             |                          |                        |              |                                  |             | $\dashv$   |            |               |                | NE 53<br>NE 52   | .   F                       |  |                          |                                   |                             |             |           |                                |
|                |                     |                       |                             |                          | 523                    |              |                                  |             |            |            |               |                |                  | ı                           | Vam  | e of Pr                  | operty                            | c ho                        | ווואי       | 9         |                                |
| Date wo        | rk Comn             | enced<br>New          | ck appro<br>22/5<br>Well 🗗  | 104                      |                        | Deeper       |                                  |             | <br>Enl    | D<br>large | Date          | work           | Comp             | leted                       | <b>22,</b><br>Rel                                | /5/0<br>nabilitate       | <i>4</i>                          |                             | Backi       | 511 [     | <u> </u>                       |
|                |                     |                       |                             |                          |                        |              |                                  |             |            |            |               |                |                  |                             |  |                          |                                   |                             |             |           |                                |
|                |                     |                       | 9/NO if                     |                          | state me               | ethod        |                                  |             |            |            |               |                |                  |                             |  |                          |                                   |                             |             |           |                                |
|                | <u> </u>            |                       | 19.6                        |                          |                        |              |                                  | .6 (m       |            |            |               |                |                  |                             |  | •••••                    | (m)                               | Final Yie                   | ld          |           | (L/sec)                        |
|                | LING D<br>struction |                       | If no                       | t a drilled              | l well, pl             | ease co      |                                  | Sections:   |            |            |               |                |                  |                             |  | surface t                | o nearest                         | 0 1 m)                      |             |           |                                |
| From (m)       |                     |                       |                             |                          |                        |              |                                  |             |            |            |               | To<br>(m)      | Stan<br>Wa<br>Le | iding<br>ater<br>evel<br>n) | Est:   | imated<br>rield<br>/sec) | . Hole<br>Depth<br>at Test<br>(m) | Casing at<br>Test<br>(m)    | Te:<br>Meth |           | Salinity<br>(mg/L) or<br>Taste |
| 0              |                     |                       |                             |                          |                        |              |                                  |             |            |            |               |                |                  |                             |  |                          | -                                 |                             |             | $\dashv$  |                                |
|                | Auger (Bio-Vis)     |                       |                             |                          |                        |              |                                  |             |            |            |               |                |                  |                             |  |                          |                                   |                             |             |           |                                |
| <b>5 6</b> • 6 |                     |                       |                             |                          | •                      |              |                                  |             | <u> </u>   |            |               |                |                  |                             |  |                          |                                   |                             |             |           |                                |
| 7. CAS         |                     | T IN WE               |                             | Type                     |                        |              | 7.3 Ca                           | sing Cem    | ented      |            |               |                |                  |                             | -  | -                        |                                   |                             |             |           | -                              |
| From (m)       | To (m)              | Inter<br>Diar<br>(mn  | m.<br>n)                    | well Joint,<br>Steel, FR | Welded C<br>P, PVC, et |              | Yes 1                            | NO (        | rom<br>m)  | ть<br>(m)  |               |                | nent<br>ags)     | Wate<br>(litre              |  |                          | her<br>itives                     | Cementing<br>Method<br>Used |             | C         | omments                        |
|                | 16.6                | ·   al                |                             | <i></i>                  |                        |              |                                  | <b>-</b>    |            | _          |               | <u> </u>       |                  |                             | $\dashv$   |                          |                                   | Cravity                     |             |           |                                |
|                | <del></del>         |                       | -                           |                          |                        |              |                                  | <u> </u>    |            |            | _             |                |                  |                             | $\dashv$   |                          |                                   | <del></del>                 | -           |           |                                |
|                |                     | TION AT               | PRODUC                      |                          |                        |              |                                  |             |            |            |               |                |                  |                             |  |                          |                                   |                             |             |           |                                |
| 8.1 Meti       | nod<br>en Hole      |                       | 8.2 Scree                   | en or Casi<br>Type       | ing (*If v             | From         | T                                |             | erture*    | Inn        | er I          | Diam           |                  | Diam                        | <del>                                     </del> | Mate                     | rial                              | Trade Nan                   | ne          | - C       | ompletion                      |
| Slo            | tted Casi<br>een(s) |                       |                             | sc _                     |                        | /6-6         | 79                               | -6          | mm)<br>O·S |            | (mn           |                | (n               | nm)                         |  | Pro                      |                                   | Boem                        | 889-        | 57        | of Base                        |
|                |                     |                       |                             |                          |                        |              |                                  | <u></u>     | ·<br>····· |            | $\overline{}$ |                |                  |                             |  |                          |                                   | <u></u>                     |             |           |                                |
|                | r Seal (Pa          | cker)<br>Depth        | Internal                    |                          | avel Pack<br>hod of    |              | Passing                          | From        | Т          |            | ľ             | 13. FO<br>From | 1                | TION<br>To                  | LOG  | G                        |                                   |                             |             |           |                                |
| Ma             | erial               | (m)                   | Diam<br>(mm)                | Plac<br>Gras             | ement                  | ļ —          | 1 Size                           | (m)<br>15-6 | (n         | -          | -             | (m)            |                  | (m)                         | -  |                          |                                   | Description o               | i Materi    | AL        |                                |
| 9. IF N        | OT A DR             | ILLED V               | VELL                        | <u> </u>                 |                        | l            |                                  |             |            | I          | H             |                | -                |                             | $\dashv$   |                          |                                   |                             |             |           |                                |
| Meti           | od -                | Depth<br>(m)          | Length<br>(m)               | Width<br>(m)             | Diam<br>(m)            |              | ining<br>aterial                 | From<br>(m) |            | n)<br>[0   |               |                | ļ                |                             | 4  |                          |                                   |                             |             |           |                                |
|                | /CL OD)             | SENT 15               |                             | ·                        |                        | <u> </u>     |                                  |             |            |            | F             |                | _                |                             | 7  |                          |                                   |                             | _           |           |                                |
| 10. DE         | ELUPN               |                       | thod                        | and time ti              | aken)                  | -            | Hours                            |             | Minutes    |            |               |                |                  | •                           | $\exists$  |                          |                                   |                             |             |           |                                |
|                | 47                  | rlitt                 | ec/                         |                          |                        | -            |                                  | <           | ς          | -          | F             |                |                  |                             | $\dashv$   | •                        |                                   |                             |             |           |                                |
|                |                     |                       | surements                   |                          |                        | -            |                                  |             |            |            | Ľ             |                |                  |                             |  |                          |                                   |                             |             |           |                                |
| From<br>(m)    | To<br>(m)           | Water<br>Level<br>(m) | Test<br>Method              | Pump<br>Depth<br>(m)     | Discha<br>Rat<br>(L/se | e l          | Method o<br>Measurin<br>Discharg | g Pump      | s D        | own<br>(m) | _             |                | 1                |                             |  |                          |                                   |                             |             |           |                                |
|                |                     |                       |                             | <u> </u>                 | -                      | -            |                                  |             | +          |            | }             |                |                  |                             | $\dashv$   |                          |                                   |                             |             | -         |                                |
|                |                     |                       | 1                           |                          |                        |              |                                  |             |            |            |               |                |                  |                             | 寸  |                          |                                   |                             |             |           |                                |
|                | ision of the        |                       | ources Act I                |                          |                        |              |                                  |             | d water    |            | -             |                | +                |                             | $\dashv$   |                          |                                   |                             |             |           |                                |
| samples        | nust be ob          |                       | y samples h                 |                          |                        |              |                                  |             |            |            |               |                |                  |                             |  |                          |                                   |                             |             |           |                                |
| As the pe      | rson respo          | sible for th          | e work carr                 | ed out on t              |                        |              |                                  | been compi  |            | ••••       | -             |                | +                |                             | 4  |                          | :                                 |                             |             |           |                                |
|                | ed above:           |                       |                             |                          |                        | •            |                                  | Ť           | •          |            | $\dagger$     |                |                  |                             | _  |                          |                                   |                             |             |           |                                |

7130 55

UNIT NUMBER

Dimetrodelity disconvergence with

Mile samples directed and well location plan
within 14 days of completion to

Primary Industries and Resources SA
Core Library Complex
23 Conyngham Street
GLENSIDE SA 5065

|            |            |                        |                |                       |  | Unit N             | o: 71          | 30 56                  |  |                | Obs           | s V   | Nell I   | No:      | CHV                      | / 1   | 00               | DH N                     | <b>o</b> : 201260   | )              |          |                       |
|------------|------------|------------------------|----------------|-----------------------|--|--------------------|----------------|------------------------|--|----------------|---------------|---|----------|----------|--------------------------|-------|------------------|--------------------------|---------------------|----------------|----------|-----------------------|
| DF         |            | 'ERNM<br>E <b>RS W</b> | ELL            | CON                   | IST  | RUCT               | ION            |                        |  |                |               |   | ,        | ,<br>PFD | MIT                      | NO:   | PN6              | 084.                     | 2 <i>16364</i>      |                | Site     |                       |
|            |            |                        |                |                       |  | ct, 199            |                |                        |  |                | <del></del>   | _   |          |          |                          |       |                  |                          | <u> </u>            |                |          |                       |
|            |            | RILLER<br>Mobile No    |                |                       |  |                    |                |                        |  |                |               |   |          |          |                          |       |                  |                          | DWLB<br>34, x       |                |          |                       |
|            |            | perator if             |                |                       |  |                    |                |                        |  |                | 1             | :   |          |          |                          |       |                  |                          |                     | Post C         | ode ::   | 1002                  |
|            |            | N OF W                 |                | ·                     |  |                    |                |                        |  | •              |               |   |          | •        |                          |       |                  |                          |                     |                |          |                       |
| Date of    | Surve      | y <i>[[9</i> ,         | 104            |                       | . Sur  | veved b            | v <b>SA</b>    | Wat                    | <b>C</b> ⊬ Me                          | thod.          | 91            | R   | SSL      | Ŧ        |                          |       |                  |                          | FICATION            |                |          |                       |
|            |            | INATE                  |                |                       |  |                    |                |                        |  |                | C             |   | ZO1      |          | 4                        |       |                  |                          |                     | -              |          |                       |
| _          |            | /WGS84                 | ·              |                       | J  | 030                | <u>43</u>      |                        |  | _              |               | _   | ZON      |          |                          |       |                  |                          |                     |                |          |                       |
| <b>-</b> A | GD 66      | /84                    |                | •                     | 6  | 030<br>239         | 424            | 7                      |  |                | Ĺ             | _   | ZON      | NE 3     | 12                       |       |                  |                          |                     |                |          |                       |
| 5. SUM     | MARY       | (Please 1              | ick app        |                       |  |                    |                |                        | relevan                                | t detai        | ils)          |   |          | _        |                          |       |                  |                          |                     |                |          |                       |
|            |            | menced                 |                |                       | 4  |                    |                |                        |  |                | Ε             | Dat   | e work   | Con      | npleted                  | 2     | 115/0            | 7 <u>4</u>               |                     |                |          |                       |
| Work ca    |            |                        | v Well         |                       | uaa mla  |                    | Deepen         |                        |  |                | arge          | ١   |          |          |                          | Re    | habilitate       | : 🗆                      | •                   | Backf          | ill [    | ]                     |
|            |            |                        |                |                       |  |                    |                |                        |  |                |               |   |          |          |                          |       |                  |                          |                     |                |          |                       |
|            |            |                        |                |                       |  |                    |                |                        |  |                |               |   | _        |          |                          |       |                  |                          |                     |                |          |                       |
| Maximu     | m Depti    | n Drilled              | 6.1            | (m)                   |  | Fin                | al Dep         | th6:                   | /(m)                                   | )              | F             | ina   | al Stano | ding     | Water                    | Leve  | L                | (m)                      | Final Yi            | eld            |          | .(L/sec)              |
|            |            | DETAILS                | I I            | not a d               | lrilled  | well, ple          | ase co         |                        | ections: (                             |                |               | _   |          |          |                          |       |                  |                          | . <u> </u>          |                |          |                       |
| 6.1 Con:   | struction  | Details_               | Deil           | ling Meth             | hod  |                    |                | 6.2                    | Water Cu                               | ıt Deta        | ils (n        | 1ea   | sureme   |          |                          | tural | surface to       |                          | 0.1 m).<br>1        | 1              |          |                       |
| From (m)   | То<br>(пл) | Diam<br>(mm)           | C<br>Ro        | able Tool<br>ary Auge | l.<br>ст,                                      | (Atr,              | Used<br>Water. |                        | Date                                   | Fac            | Wate          | r C   | ut<br>To | ١ ١      | anding<br>Water<br>Level |       | timated<br>Yield | Hole<br>Depth<br>at Test | Casing at<br>Test   | Tes<br>Meth    |          | Salinity<br>(mg/L) or |
|            |            |                        |                | own Hole<br>mmer, et  |  | миа                | Type)          |                        |  |                | π)            |   | (m)      |          | (m)                      | L'    | (L/sec)          | (m)                      | (m)                 | <u> </u>       |          | Taste                 |
| 0          | 6./        |                        |                | atar                  | <del>y</del>                                   | Mu                 |                |                        |  |                |               |   |          | _        |                          | ╀     |                  |                          |                     |                |          |                       |
|            |            | +                      | +~             | igez                  | +  | (Rìo               | -0/            | <del>'</del> —         |  |                |               |   |          |          |                          | +-    |                  |                          | -                   | <del>  -</del> |          |                       |
|            |            |                        |                |                       |  |                    |                |                        |  |                |               | _   |          |          |                          |       |                  |                          |                     | . `            |          |                       |
|            |            | FT IN WI               |                |                       |  |                    |                |                        |  |                |               | _   |          | ,        |                          |       |                  |                          |                     |                |          |                       |
| 7.1 Dime   | То         | Di                     | mal<br>am.     |                       | Joint, \                                       | Welded Co          |                | 7.3 Cas<br>Yes N       | 0 1                                    | rom            | To            |   |          | ment     |                          | ater  | Oti<br>Addı      |                          | Cementing<br>Method | ;              | Со       | mments                |
| (m)        | (m)        | (10)                   | m)             |                       | VC   | P, PVC, etc        |                | <b>1</b>               |  | m)             | (m)           | <u>,                                     </u> | (6)      | ags)     | (11)                     | res)  | Addi             | uves                     | Used                | 1              |          |                       |
|            | 100        |                        | <del>-  </del> |                       | <u> </u>                                       |                    |                | 0 0                    |  |                | _/_           |   | _        |          |                          |       |                  |                          | LARYT               | <del>/</del> - |          |                       |
|            | ļ          |                        | [              |                       |  |                    | •              |                        |  |                |               |   |          |          | _                        |       |                  |                          |                     |                |          |                       |
| 0.001      | 27546      |                        | 2222           |                       |  |                    |                |                        | J                                      |                |               |   |          |          |                          |       |                  |                          |                     | ٠              |          |                       |
| 8.1 Meth   |            | TION AT                |                |                       | -  |                    | ariable        | aperture               | screen u                               | sed giv        | e tim         | nts   | )        |          |                          |       |                  |                          |                     |                |          |                       |
| □ Ор       |            |                        |                | Ту                    |  |                    | From<br>(m)    |                        | Ар                                     | erture*<br>mm) | In            |   | Diam     |          | er Dian                  | ו     | Mater            | ial ;                    | Trade Nat           | ne             |          | ompletion<br>of Base  |
| Sio        | tted Cas   | ing                    |                | SC                    |  |                    | 3.7            | 6.                     | -                                      | -ي،            | $\overline{}$ | 8   |          |          | (,,,,,,                  |       | PVC              |                          | Pipema              | SZ,            |          | d Cap                 |
| ☐ Sen      |            |                        | L              |                       |  | 1                  |                |                        |  |                | ᆚ_            | _   |          |          |                          |       |                  | <u> </u>                 |                     |                |          |                       |
|            |            | details:               |                |                       |  |                    |                |                        |  |                | •••••         | <u>.</u>                                      |          |          |                          |       |                  |                          |                     | ***********    | ******** |                       |
| 8.3 Line   |            | Depth                  | Inter          | nai                   | 4 Gra<br>Meth                                  | vel Packi<br>od of |                | Passing                | From                                   | То             | , ]           | H   | 13. FC   |          | ATIO<br>To               |       | G                |                          |                     |                |          |                       |
| Mate       | erial      | (m)                    | Dia<br>(mn     |                       | Place  |                    | Mesh           | Size                   | (m)                                    | (m             |               |   | (m)      |          | (m                       |       |                  |                          | Description o       | f Materia      | ı!<br>   |                       |
|            | -          | -                      | -              | -40                   | ira  | 1/5                | 8:             | /6                     | <u>2·/_</u>                            | 6.7            | _             | ŀ   |          | $\dashv$ |                          |       |                  |                          |                     |                |          |                       |
| 9. IF NO   | T A DE     | ULLED '                | VELL           | l                     | _  |                    |                | <u> </u>               |  | L              |               | <b> </b>                                      |          | $\dashv$ | -                        |       |                  |                          | •                   |                |          |                       |
| Meth       |            | Depth<br>(m)           | Length<br>(m)  | Wid<br>, (m           |  | Diam<br>(m)        |                | ining<br>iterial       | From<br>(m)                            | Ti<br>(n       |               |   |          | 一        |                          |       |                  |                          |                     |                |          |                       |
|            |            |                        |                |                       | _  |                    |                |                        | \-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | 1              |               |   |          |          |                          |       | ·                |                          |                     |                |          |                       |
| 10. DEV    | ELOP       | MENT (St               | ate metho      | ds and ti             | ime tal  | ken)               | !              |                        |  |                | '             | ` <u> </u>                                    |          |          |                          |       |                  |                          |                     |                |          |                       |
|            |            | М                      | ethod          |                       |  |                    | 1              | Hours                  | N                                      | Minutes        |               | Ĺ   |          |          |                          |       |                  |                          |                     |                |          |                       |
|            |            | AIRIT                  | +10            | χ <u> </u>            | <u>.                                      </u> |                    |                |                        | 45                                     | -              | -             | ŀ   |          | _        | •                        |       |                  |                          |                     |                |          |                       |
| 11. PUN    | (PING      | TEST (me               | asuremer       | sts fmm i             | natural  | l surface to       | nearesi        | (0.1m)                 | -                                      |                |               | ŀ   |          | 一        |                          |       | -                | -                        |                     |                |          |                       |
| Interval   | Tested     | Water                  | Tesi           | Pı                    | ump  | Dischai            | rge M          | Method of              |  |                | raw           | Į   |          |          |                          |       |                  |                          |                     |                |          |                       |
| From (m)   | To<br>(m)  | Level<br>(m)           | Meth           | w   D                 | epth<br>(m)                                    | Rate<br>(L/sec     |                | deasuring<br>Discharge | Pumpe                                  | м і            | own<br>m)     |   |          |          |                          |       |                  |                          |                     |                |          |                       |
|            |            |                        |                | $\bot$                |  | ļ                  | $\Box$         |                        | <u> </u>                               |                |               |   |          | $\Box$   |                          | _     |                  |                          |                     |                |          |                       |
|            |            | 1                      | <del> </del>   | $\perp$               |  | -                  | +              |                        | -                                      | +              |               | ŀ   |          | $\dashv$ |                          |       |                  |                          |                     |                |          |                       |
| 12. SAN    | (PLFC      | Ц                      | 1              |                       |  | <u></u>            |                |                        | J                                      |                |               | -   | <u> </u> |          |                          | _     |                  |                          |                     |                |          |                       |
| The provi  | sion of th | e Water Res            |                |                       |  |                    |                |                        | t strata and                           | d water        |               | ŀ   |          | $\dashv$ |                          |       |                  |                          |                     |                |          |                       |
|            |            |                        | , -;····pi     | •                     |  |                    |                |                        |  |                |               |   |          | 耳        |                          |       |                  |                          |                     | - 7            |          |                       |

Primary Industries and Resources SA

7130 56

UNIT NUMBER L

As the person responsible for the work carried out on this well I advise that it has been completed as described above:

Disput the time type together with

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GLENSIDE SA 5065

### B. Lithological Logs

W C 2004 52 81



PROJECT: Chowilla Monitoring Network Expansion

|      | The Department of              |             |            |                       |  | XX/      | TFP:       | WELL LOG            |                        |           |          |            |                | _           |            |        |
|------|--------------------------------|-------------|------------|-----------------------|--|----------|------------|---------------------|------------------------|-----------|----------|------------|----------------|-------------|------------|--------|
| Wa   | Departm<br>ter, Land<br>odiver | d and       |            |                       |  | VV F     | X I LIX    | WELL LOG            |                        |           |          | UNIT No. 7 | 030-762        |             |            |        |
|      | nserva                         |             | Coordinate | es: E N               | El.  | Surface( | (m)        | El. Ref. I          | Point(m)               | Datum:    |          | Hundred:   | Sec            | c:          |            |        |
|      |                                |             |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                       |          | RVAL<br>m) |                     | SUPPLY                 |           |          | тот        | AL DISSO       | LVED S      | OLIDS      |        |
|      | AQ                             | UIFER       |            | (m)                   | (m)  | From     | То         | L/sec               | Test length            | M         | ethod    | mg/L       |                | A           | analysis N | lo.    |
|      | SUM                            | IMARY       |            |                       |  |          |            |                     |                        |           |          |            |                |             |            |        |
| DEPT | ГН (m)                         | GRAPHIC     | ROCK       | /SEDIMENT             |  | CEO      | LOCIC      | AL DESCRIPTION      | ON                     |           | EODM     | ATION/AGE  | Depth          | (           | CASIN      | G      |
| From | То                             | LOG         | ı          | NAME                  |  |          |            |                     |                        |           | FURIVIA  | ATION/AGE  | Core<br>Sample | Dia<br>(mm) | From (m)   | To (m) |
| 0    | 1                              |             | Saı        | ndy Clay              | Dark orange/brown sar<br>sticky. White calcareon | us chips | s. Micac   | eous.               |                        |           |          |            |                | 80          | 0          | 22     |
| 1    | 3                              |             |            | Clay                  | Light orange/brown an sticky. Hard bar comin     | g throu  | igh at en  | d. Micaceous.       |                        |           |          |            |                |             |            |        |
| 3    | 5                              |             |            | Sand                  | Yellow/brown solidifie                           | ed sand  | hard ba    | r. Sandy clay lay   | ers coming through     | n at end. |          |            |                |             |            |        |
| 5    | 6                              |             | Saı        | ndy Clay              | Yellow/brown sandy c                             | lay. Lo  | w densit   | y, high plasticity  | , rollable, slightly   | sticky.   |          |            |                |             |            |        |
| 6    | 7                              |             | Saı        | ndy Clay              | Yellow/brown highly s<br>sticky. Sand grains up  |          |            |                     | asticity, rollable, sl | lightly   |          |            |                |             |            |        |
| 7    | 9                              |             | Saı        | ndy Clay              | Multicoloured sandy comedium brown. Moder        |          |            |                     |                        |           |          |            |                |             |            |        |
| 9    | 11                             |             |            | ndy Clay              | Medium brown sandy sticky. Sand grains up        |          |            | ity, high plasticit | y slightly rollable,   | slightly  |          |            |                |             |            |        |
| REMA | ARKS: S                        | creened 22- | 25m        |                       |  |          |            |                     |                        |           | DRILL TY | PE: Auger  | COMPL          | ETED: 1     | 7/8/2004   |        |
|      |                                |             |            |                       |  |          |            |                     |                        |           | DRILL FL | UID: Mud   | LOGGE          | D BY: Z.    | Marsden    |        |
|      |                                |             |            |                       |  |          |            |                     |                        |           | DATE: 17 | /8/2004    | SHEET          | 1 OF 2      |            |        |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |
|                                      |

**PERMIT No. 100252** 

UNIT No. 7030-762

| DEPT | TH (m) | GRAPHIC  | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Depth<br>Core |             | CASINO   |        |
|------|--------|----------|---------------|--|---------------|---------------|-------------|----------|--------|
| From | То     | LOG      | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To (m) |
| 11   | 14     |          | Sand          | Light brown medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1mm.                                     |               |               | , ,         |          |        |
| 14   | 25     |          | Sand          | Light yellow/brown medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.5-1mm. Light grey banding in parts. |               |               |             |          |        |
|      | 1      | <u> </u> |               |  |               | SHEET 2       | 2 OF 2      |          |        |



## GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

| The  | Departm           | ant of      |            |                       |   | WA       | ATER       | WELL LOG                                  |   |                  |           | PERMIT     | 0. 10025       |             |            |        |
|------|-------------------|-------------|------------|-----------------------|---|----------|------------|---|---|------------------|-----------|------------|----------------|-------------|------------|--------|
| Wat  | ter, Land         | and         |            |                       |   |          |            |   |   |                  |           | UNIT No. 7 | 030-773        |             |            |        |
|      | nserva            | tion        | Coordinate | es: E N               | El.   | Surface( | (m)        | El. Ref. Pe                               | oint(m)                                   | Datum:           |           | Hundred:   | Sec            | e:          |            |        |
|      |                   |             |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER  |          | RVAL<br>m) |   | SUPPLY                                    |                  |           | тот        | AL DISSO       | LVED S      | OLIDS      |        |
|      | $\mathbf{AQ}^{T}$ | UIFER       |            | (m)                   | (m)   | From     | То         | L/sec                                     | Test length                               | M                | ethod     | mg/L       | 1              | A           | analysis N | lo.    |
|      | SUM               | IMARY       |            |                       |   |          |            |   |   |                  |           |            |                |             |            |        |
| DEPT | H (m)             | GRAPHIC     | ROCK       | /SEDIMENT             |   | CEO      | LOCIC      | AL DESCRIPTIO                             | NI .                                      |                  | EODM      | ATION/AGE  | Depth          | (           | CASING     |        |
| From | То                | LOG         |            | NAME                  |   |          |            | AL DESCRIPTIO                             |   |                  | FURIVIA   | ATTON/AGE  | Core<br>Sample | Dia<br>(mm) | From (m)   | To (m) |
| 0    | 1.5               |             | Sa         | ndy Clay              | Orange Brown Sandy<br>Sand medium/coarse g                          |          |            |   | y, rollable, slightl                      | y sticky.        |           |            |                | 80          | 0          | 12     |
| 1.5  | 2                 |             |            | Clay                  | Light brown clay. Low   | densit   | y, high    | plasticity, rollable                      | , sticky. Micaceou                        | ıs.              |           |            |                |             |            |        |
| 2    | 3                 |             | Cla        | yey Sand              | Light brown clayey me angular to sub rounded                        |          |            |   | elear and cloudy, s                       | sub              |           |            |                |             |            |        |
| 3    | 4                 |             | Cla        | yey Sand              | Light grey/brown clay angular to sub rounded                        |          |            |   |   | udy, sub         |           |            |                |             |            |        |
| 4    | 5                 |             |            | Sand                  | Orange/brown medium angular to sub rounded                          |          |            |   | , clear and cloudy                        | , sub            |           |            |                |             |            |        |
| 5    | 6                 |             | Cla        | yey Sand              | Multicoloured clayey is brown/black, orange/b rounded, 0.2-0.4mm. M | rown. V  | Well sor   | sand layers. Light<br>ted, clear and clou | t grey, light brown<br>dy, sub angular to | n, dark<br>o sub |           |            |                |             |            |        |
| REMA | RKS: S            | creened 12- | 15m        |                       |   |          |            |   |   |                  |           |            |                |             |            |        |
|      |                   | 21001104 12 |            |                       |   |          |            |   |   |                  | DRILL TY  | PE: Auger  | COMPL          | ETED: 2/    | /8/2004    |        |
|      |                   |             |            |                       |   |          |            |   |   |                  | DRILL FL  | UID: Mud   | LOGGE          | D BY: Z.    | Marsden    |        |
|      |                   |             |            |                       |   |          |            |   |   |                  | DATE: 2/8 | /2004      | SHEET          | 1 OF 2      |            |        |



| <b>PROJECT:</b> Chowilla | <b>Monitoring Network</b> |
|--------------------------|---------------------------|
| Expansion                |                           |

**PERMIT No. 100253** 

UNIT No. 7030-773

Hundred: Se

Sec:

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | CEOLOCICAL DESCRIPTION   | EODMATION/ACE | Depth          | C           | CASING   | ì      |
|------|-------|---------|---------------|--|---------------|----------------|-------------|----------|--------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To (m) |
| 6    | 7     |         | Clayey Sand   | Yellow/brown clayey medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.5mm. Grey clay interlayer, moderate/low density, moderate/high plasticity, rollable, sticky. Micaceous. |               |                |             |          |        |
| 7    | 8     |         | Sand          | Light brown medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.5mm. Micaceous.   |               |                |             |          |        |
| 8    | 11    |         | Sand          | Light brown medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.5mm, traces up to 1mm. Dark grey seams in upper sample. Highly micaceous.                                       |               |                |             |          |        |
| 11   | 12    |         | Sand          | Light brown/grey medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.3-1mm. Micaceous.   |               |                |             |          |        |
| 12   | 14    |         | Gravelly Sand | Light grey medium/coarse quartz sand. Poorly sorted, clear and cloudy, sub angular to sub rounded, 0.4-8mm. Grey clay blebs. Lignite towards end of sample. Micaceous.   |               |                |             |          |        |
| 14   | 15    |         | Sand          | Light grey/brown medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.4-1.5mm. Micaceous.   |               |                |             |          |        |
|      |       |         |               |  |               |                |             |          |        |
|      |       |         |               |  |               |                |             |          |        |
|      |       |         |               |  |               |                |             |          |        |
|      |       |         |               |  |               | SHEET 2        | 2 OF 2      |          |        |



PROJECT: Chowilla Monitoring Network Expansion

PERMIT No. 60BL16329

|      | and the same of the same of |              |            |                       |   | W                    | TFD '      | WELL LOG            | _                        |        |           | Likiviii   | o. oobl        | 1032)       |           |          |
|------|-----------------------------|--------------|------------|-----------------------|---|----------------------|------------|---------------------|--------------------------|--------|-----------|------------|----------------|-------------|-----------|----------|
| Wa   | Departm<br>ter, Lan         | d and        |            |                       |   | VV F                 | AILK       | WELL LOG            |                          |        |           | UNIT No. 7 | 130-52         |             |           |          |
|      | nserva                      |              | Coordinate | es: E N               | El.   | Surface(             | (m)        | El. Ref.            | Point(m)                 | Datum: |           | Hundred:   | Sec            | c:          |           |          |
|      |                             |              |            | DEPTH TO<br>WATER CUT | DEPTH TO STANDING WATER   |                      | RVAL<br>m) |                     | SUPPLY                   |        |           | тот        | AL DISSO       | LVED S      | OLIDS     |          |
|      | AQ                          | UIFER        |            | (m)                   | (m)   | From                 | То         | L/sec               | Test length              | Met    | hod       | mg/L       |                | A           | nalysis N | 0.       |
|      | SUM                         | MARY         |            |                       |   |                      |            |                     |                          |        |           |            |                |             |           |          |
| DEPT | ΓH (m)                      | GRAPHIC      | ROCK       | /SEDIMENT             |   | CEO                  | LOCICA     | AL DESCRIPTION      | ON                       |        | FORM      | TION/A CE  | Depth          | (           | CASINO    | <u> </u> |
| From | То                          | LOG          | 1          | NAME                  |   | GEO.                 | LUGICA     | AL DESCRIPTION      | ON                       |        | FORMA     | ATION/AGE  | Core<br>Sample | Dia<br>(mm) | From (m)  | To (m)   |
| 0    | 1                           |              |            | Clay                  | Dark brown clay. Low Micaceous, gritty.   | density              | y, high p  | lasticity, slightly | rollable, sticky.        |        |           |            |                | 80          | 0         | 5.5      |
| 1    | 2                           |              |            | Clay                  | Light grey and dark bladensity, moderate/low grey/black clay low de structure. Micaceous, § | plastici<br>nsity, h | ity, sligh | tly rollable, sticl | ky. Micaceous. Dark      |        |           |            |                |             |           |          |
| 2    | 3                           |              |            | Clay                  | Light grey/brown clayslightly greasy. Mottle  |                      |            |                     |                          | ky,    |           |            |                |             |           |          |
| 3    | 4                           |              |            | Clay                  | Light brown/grey clay rollable, sticky. Mottle  |                      |            |                     |                          | ghtly  |           |            |                |             |           |          |
| 4    | 5.5                         |              | Sai        | ndy Clay              | Medium grey sandy clark green sandy sean  |                      |            | ensity, moderate    | plasticity, rollable, st | ticky. |           |            |                |             |           |          |
| 5.5  | 7                           |              |            | Sand                  | Medium grey coarse quality sub rounded, 0.6-1.6m  |                      |            |                     |                          |        |           |            |                |             |           |          |
| REMA | ARKS: S                     | Screened 5.5 | -7.5m      |                       |   |                      |            |                     |                          |        | DRILL TY  | PE: Auger  | COMPL          | ETED: 20    | 0/5/04    |          |
|      |                             |              |            |                       |   |                      |            |                     |                          |        | DRILL FL  | UID: Mud   | LOGGE          | D BY: Z.    | Marsden   |          |
|      |                             |              |            |                       |   |                      |            |                     |                          |        | DATE: 20/ | /5/04      | SHEET          | 1 OF 2      |           |          |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |

PERMIT No. 60BL16329

UNIT No. 7130-52

| DEPT | 'H (m) | GRAPHIC | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION  | FORMATION/ACE | Depth          |             | CASING   |           |
|------|--------|---------|---------------|---|---------------|----------------|-------------|----------|-----------|
| From | То     | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |
| 7    | 8      |         | Sand          | Medium grey medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, approx 10% coarse sand up to 1.5mm. Micaceous, traces of lignite. |               |                |             |          |           |
|      |        |         |               |   |               | SHEET 2        | 2 OF 2      |          |           |



### GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

PERMIT No. 60BL16329

| Wat  | Departm<br>er, Land<br>diver | d and  |  |                       |   | WA       | ATER       | WELL LOG         |                      |           |          | UNIT No. 7 | 130-53         |             |            |           |
|------|------------------------------|--|--|-----------------------|---|----------|------------|------------------|----------------------|-----------|----------|------------|----------------|-------------|------------|-----------|
|      | serva                        |  | Coordinate   | es: E N               | El.   | Surface( | (m)        | El. Ref. I       | Point(m)             | Datum:    |          | Hundred:   | Sec            | e:          |            |           |
|      |                              |  |  | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                    |          | RVAL<br>m) |                  | SUPPLY               |           |          | ТОТ        | AL DISSO       | LVED S      | OLIDS      |           |
|      | AQ                           | UIFER  |  | (m)                   | (m)   | From     | То         | L/sec            | Test length          | Met       | hod      | mg/L       |                | A           | analysis N | lo.       |
|      | SUM                          | IMARY  |  |                       |   |          |            |                  |                      |           |          |            |                |             |            |           |
| DEPT | H (m)                        | GRAPHIC  | ROCK   | SEDIMENT              |   | CEO      | LOCICA     | AL DESCRIPTION   | ONI                  |           | EODM     | ATION/ACE  | Depth          |             | CASING     |           |
| From | То                           | GEOLOGICAL DESCRIPTION  Clay  Dark brown alay Law density high placticity, elightly rollable sticky. |  |                       |   |          |            |                  |                      |           | FURMA    | ATION/AGE  | Core<br>Sample | Dia<br>(mm) | From (m)   | To<br>(m) |
| 0    | 1                            |  | Clay Dark brown clay. Low density, high plasticity, slightly rollable, sticky. Micaceous, gritty.  |                       |   |          |            |                  |                      |           |          |            |                | 80          | 0          | 5.5       |
| 1    | 2                            |  | Clay  Light grey/brown clay. High density, low plasticity, non-rollable, slightly stic  Mottled yellow/brown seams. Micaceous.                         |                       |   |          |            |                  |                      |           |          |            |                |             |            |           |
| 2    | 3.5                          |  | Cla  | yey Sand              | Orange/brown clayey sub angular to sub rous   |          |            |                  | ll sorted, clear and | cloudy,   |          |            |                |             |            |           |
| 3.5  | 4.5                          |  | Sai  | ndy Clay              | Medium grey sandy cl<br>Dark green sandy sean |          |            | ensity, moderate | plasticity, rollable | , sticky. |          |            |                |             |            |           |
| 4.5  | 5                            |  |  | Sand                  | Medium grey medium sub rounded, 0.2-0.6m      |          |            |                  |                      |           |          |            |                |             |            |           |
| 5    | 7                            |  | Sand Medium grey medium quartz sand. Well sorted, clear and cloudy, sub angular sub rounded, 0.2-0.6mm, approx 20% coarse sand up to 0.8mm. Micaceous. |                       |   |          |            |                  |                      |           |          |            |                |             |            |           |
| EMA  | RKS: S                       | creened 5.5  | -7.5m  |                       |   |          |            |                  |                      |           | DRILL TY | PE: Auger  | COMPL          | ETED: 2     | 1/5/04     |           |
|      |                              |  |  |                       |   |          |            |                  |                      |           | DRILL FL | UID: Mud   | LOGGE          | D BY: Z.    | Marsden    |           |
|      |                              |  |  |                       |   |          |            |                  |                      |           | DATE: 21 | /5/04      | SHEET          | 1 OF 2      |            |           |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |

PERMIT No. 60BL16329

UNIT No. 7130-53

Hundred: Se

Sec:

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Depth          |             | CASINO   |        |
|------|-------|---------|---------------|---|---------------|----------------|-------------|----------|--------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To (m) |
| 7    | 8     |         | Sand          | Medium grey medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, approx 40% coarse sand up to 1.5mm. Micaceous, traces of lignite. |               |                |             |          |        |
|      |       |         |               |   |               | SHEET 2        | 2 OF 2      |          |        |



## GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

PERMIT No. 60BL216331

| Wa   | Departm<br>ter, Lan | d and       |            |                       |   | **1                    | XILIX      | WEEL LOG           |                       |           |          | UNIT No. 7 | 130-54        |             |           |        |
|------|---------------------|-------------|------------|-----------------------|---|------------------------|------------|--------------------|-----------------------|-----------|----------|------------|---------------|-------------|-----------|--------|
|      | nserva              |             | Coordinate | es: E N               | El.   | Surface                | (m)        | El. Ref. I         | Point(m)              | Datum:    |          | Hundred:   | Sec           | <b>::</b>   |           |        |
|      |                     |             |            | DEPTH TO<br>WATER CUT | DEPTH TO STANDING WATER   | 1                      | RVAL<br>m) |                    | SUPPLY                |           |          | ТОТ        | AL DISSO      | LVED SO     | DLIDS     |        |
|      | AQ                  | UIFER       |            | (m)                   | (m)   | From                   | То         | L/sec              | Test length           | Me        | ethod    | mg/L       | 1             | A           | nalysis N | No.    |
|      | SUM                 | MARY        |            |                       |   | GEOLOGICAL DESCRIPTION |            |                    |                       |           |          |            |               |             |           |        |
| DEPT | 'H (m)              | GRAPHIC     | ROCK       | /SEDIMENT             |   | CEO                    | LOCIC      | AL DESCRIPTION     | )N                    | •         | EODM     | ATION/AGE  | Depth<br>Core | (           | CASIN     | G      |
| From | То                  | LOG         | ] 1        | NAME                  |   | GEO                    | LOGIC      | AL DESCRIPTION     | JIN                   |           | FURM     | ATION/AGE  | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 1                   |             |            | Clay                  | Dark brown clay. High<br>Micaceous.   | densit                 | y, low p   | lasticity, non-rol | lable, non-sticky.    |           |          |            |               | 80          | 0         | 16.5   |
| 1    | 3.5                 |             |            | Clay                  | Light brown/fawn clay<br>moderate/low plasticity<br>moderate density, mod<br>sandy seams in both la | y, sligh<br>lerate p   | tly rollal | ble, sticky. Micae |                       |           |          |            |               |             |           |        |
| 3    | 3.5                 |             | Sa         | ndy Clay              | Highly sandy orange/b sticky. Micaceous.  | rown c                 | lay. Low   | v density, high pl | asticity, rollable, 1 | non-      |          |            |               |             |           |        |
| 3.5  | 4                   |             |            | Sand                  | Light brown/fawn med angular to sub rounded   |                        |            |                    | orted, clear and clo  | oudy, sub |          |            |               |             |           |        |
| 4    | 6                   |             |            | Sand                  | Light brown/orange me<br>sub angular to sub roun  |                        |            |                    | sorted, clear and c   | cloudy,   |          |            |               |             |           |        |
| 6    | 7                   |             |            | Sand                  | Light grey/brown med cloudy, sub angular to   |                        |            |                    |                       | and       |          |            |               |             |           |        |
| REMA | RKS: S              | creened 16. | .5-19.5    |                       |   |                        |            |                    |                       |           | DRILL TY | PE: Auger  | COMPL         | ETED: 22    | 2/5/04    |        |
|      |                     |             |            |                       |   |                        |            |                    |                       |           | DRILL FI | .UID: Mud  | LOGGE         | D BY: Z.    | Marsden   |        |
|      |                     |             |            |                       |   |                        |            |                    |                       | DATE: 22  | /5/04    | SHEET      | 1 OF 2        |             |           |        |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |

**PERMIT No. 60BL216331** 

UNIT No. 7130-54

| DEPT | H (m)   | GRAPHIC | ROCK/SEDIMENT | CEOLOCICAL DESCRIPTION   | FORMATION/AGE | Depth<br>Core | (           | CASINO   | J      |
|------|---------|---------|---------------|--|---------------|---------------|-------------|----------|--------|
| From | То      | LOG     | NAME          | GEOLOGICAL DESCRIPTION   | FORWATION/AGE | Sample        | Dia<br>(mm) | From (m) | To (m) |
| 7    | 8       |         | Sand          | Light grey/brown medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.3mm. Micaceous.   |               |               |             | , ,      |        |
| 8    | 10      |         | Sand          | Light brown/grey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.4mm, traces of coarse sand up to 1mm. Micaceous. Medium grey coarse, lignitic clayey sand band at end of sample.                                    |               |               |             |          |        |
| 10   | 11      |         | Sand          | Medium grey coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.6mm. Orange/brown silty fine/medium sand band at end of sample. Micaceous.  |               |               |             |          |        |
| 11   | 12      |         | Sand          | Light grey medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, approx 20% coarse sand up to 1.3mm. Micaceous.  |               |               |             |          |        |
| 12   | 14      | 14 Sand |               | Medium grey medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.8mm. Micaceous.  |               |               |             |          |        |
| 14   | 15      |         | Sand          | Light grey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm, approx 20% coarse sand up to 1.5mm. Micaceous.   |               |               |             |          |        |
| 15   | 17      |         | Sand          | Light brown/grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, approx 30% medium sand. Micaceous.  |               |               |             |          |        |
| 17   | 18 Sand |         | Sand          | Light grey coarse and fine/medium quartz sand banding. Coarse sand moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm. Fine/medium sand well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.4mm. Slightly silty. Micaceous. |               |               |             |          |        |
| 18   | 20      |         | Sand          | Light brown/grey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.4mm, approx 10% coarse sand. Micaceous.   |               |               |             |          |        |
|      |         |         |               |  |               | SHEET 2       | 2 OF 2      |          |        |



PROJECT: Chowilla Monitoring Network Expansion

PERMIT No. 60BL216331

|   | AND DESCRIPTION OF PERSONS   |                  |                |                       |  | XX/  | TER   | WELL LOG   |   |   |                |                            |          |              |                |     |  |  |
|---|--|------------------|----------------|-----------------------|--|--|---|--|---|---|----------------|----------------------------|----------|--------------|----------------|-----|--|--|
| Wa  | The Department of<br>Water, Land and<br>Biodiversity<br>Conservation |                  |                |                       |  | VV F   | XILK  | WELL LOG   |   |   |                | UNIT No. 7                 | 130-55   |              |                |     |  |  |
|   |  |                  | Coordinate     | es: E N               | El.  | Surface(   | m)  | El. Ref.   | Point(m)  | Datum:  |                | Hundred:                   | Sec      | c:           |                |     |  |  |
|   |  |                  |                | DEPTH TO<br>WATER CUT | DEPTH TO STANDING WATER  |  | RVAL  |  | SUPPLY  |   |                | ТОТ                        | AL DISSO | LVED S       | OLIDS          |     |  |  |
|   | AQ   | UIFER            |                | (m)                   | (m)  | From   | То  | L/sec  | Test length   | Me  | ethod          | mg/L                       |          | A            | analysis N     | lo. |  |  |
|   | SUM  | MARY             |                |                       |  |  |   |  |   |   |                |                            |          |              |                |     |  |  |
| DEP   | ГН (m)   | GRAPHIC          | ROCK           | /SEDIMENT             |  | CEO  | LOCICA  | AL DESCRIPTION   | ON  |   | EODM           | ATION/AGE                  | Depth    | (            | CASIN          | G   |  |  |
| From  | То   | LOG              | 1              | NAME                  |  | GEO  | LUGICA  | AL DESCRIPTI   | FURMA   | ATION/AGE   | Core<br>Sample | Dia<br>(mm)                | From (m) | To (m)       |                |     |  |  |
| <ul><li>0</li><li>1</li><li>4</li><li>5</li><li>6</li></ul> | 5<br>6<br>7  |                  |                | Clay Clay Sand Sand   | Dark brown clay. High Micaceous.  Light brown/fawn clay moderate plasticity, ro plasticity, rollable, stic both layers. Dark orange mediu to sub rounded, 0.2-0.6  Orange/brown medium sub angular to sub rounded cloudy, sub angular to | and sa<br>llable, s<br>ky. Mic<br>ge med<br>m quar<br>fomm, ap<br>n/coarse<br>nded, 0. | ndy clay sticky. M caceous. ium/coar tz sand. v pprox 20 e quartz s.2-1.5mn | interlayers. Cla<br>licaceous. Sandy<br>Orange/brown s<br>se quartz sand b<br>Well sorted, clea<br>% coarse sand to<br>sand. Moderately<br>n. Micaceous. | y moderate density, clay low density, sandy seams through and at end of samplar and cloudy, subup to 1.2mm. Micary sorted, clear and attely sorted, clear a | high<br>ghout<br>ple.<br>angular<br>ceous.<br>cloudy, |                |                            |          | 80           | 0              | 4   |  |  |
| REMA  | <br>ARKS: S  | <br>Screened 4-7 | <u> </u><br>'m |                       |  |  |   |  |   |   | DRILL TY       | PE: Auger                  | COMPL    | <br>ETED: 22 | 2/5/04         |     |  |  |
|   |  |                  |                |                       |  |  |   |  |   |   | DRILL FL       |                            |          |              |                |     |  |  |
|   |  |                  |                |                       |  |  |   |  |   |   |                |                            |          |              | BY: Z. Marsden |     |  |  |
|   |  |                  |                |                       |  |  |   |  |   |   | DATE: 22       | DATE: 22/5/04 SHEET 1 OF 1 |          |              |                |     |  |  |



## GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

SHEET 1 OF 1

DATE: 21/5/04

**PERMIT No. 60BL216364** 

UNIT No. 7130-56

| BIO  | nserva   | sity    |            |                       |  |      |            |                    |                        |         |             |                |             |            |        |
|------|--|---------|------------|-----------------------|--|------|------------|--------------------|------------------------|---------|-------------|----------------|-------------|------------|--------|
| Col  | iserva   | tion    | Coordinate | es: E 503043 N 623    | 9424   | I    | El. Surfac | e(m)               | El. Ref. Point(m)      | Datum:  | Hundred: N  | N/A Sec        | c:          |            |        |
|      |  |         |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                   | I .  | RVAL<br>n) |                    | SUPPLY                 |         | ТОТ         | AL DISSO       | LVED S      | OLIDS      |        |
|      | $\mathbf{AQ}^{T}$                                      | UIFER   |            | (m)                   | (m)  | From | То         | L/sec              | Test length            | Method  | mg/L        | ,              | A           | analysis N | lo.    |
|      | SUM  | IMARY   |            |                       | 2.68   |      |            |                    |                        |         | 42400       |                |             |            |        |
| DEPT | H (m)  | GRAPHIC | ROCK       | SEDIMENT              |  | GEO: |            | AL DESCRIPTION     | 23.4                   | FORM    | (ATION/ACE  | Depth          |             | CASIN      | G      |
| From | То   | LOG     | 1          | NAME                  |  | GEO. | LOGIC      | AL DESCRIPTION     | JN                     | FORM    | IATION/AGE  | Core<br>Sample | Dia<br>(mm) | From (m)   | To (m) |
| 0    | 1  |         |            |                       | Dark brown clay. Mod layer at top. Micaceous |      | ensity, r  | moderate plasticit | y, rollable, sticky. H | arder   |             |                | 80          | 0          | 6      |
| 1    | 2.5 Sandy Clay Light brown/grey sa sticky. Orange/brow |         |            |                       |  |      |            |                    |                        | 7       |             |                |             |            |        |
| 2.5  | 3  |         | Cla        |                       | Orange/brown clayey s cloudy, sub angular to |      |            |                    |                        | d       |             |                |             |            |        |
| 3    | 6  |         |            |                       | Brown/orange medium sub rounded, 0.2-0.6mm   |      |            |                    |                        |         |             |                |             |            |        |
|      |  |         |            |                       |  |      |            |                    |                        |         |             |                |             |            |        |
|      |  |         |            |                       |  |      |            |                    |                        |         |             |                |             |            |        |
| REMA | EMARKS: Screened 3-6m                                  |         |            |                       |  |      |            |                    |                        | DRILL 7 | TYPE: Auger | COMPL          | ETED: 2     | 1/5/04     |        |
|      |  |         |            |                       |  |      |            |                    |                        | DRILL I | FLUID: Mud  | LOGGE          | D BY: Z.    | Marsden    |        |



PROJECT: Chowilla Monitoring Network Expansion

|                  |                    | THE THE      |            |                                      |  | W          | ATERI      | WELL LOG      | <u>-</u>    |        |          | PERMIT N   | 0. 64209      | •           |           |        |
|------------------|--------------------|--------------|------------|--------------------------------------|--|------------|------------|---------------|-------------|--------|----------|------------|---------------|-------------|-----------|--------|
| Wa               | Departmenter, Land | d and        |            |                                      |  | VV F       | AILK (     | WELL LOG      |             |        |          | UNIT No. 7 | 030-695       |             |           |        |
| Co               | nserva             | tion         | Coordinate | es: E N                              | El.  | . Surface( | (m)        | El. Ref. I    | Point(m)    | Datum: |          | Hundred:   | Sec           | e:          |           |        |
|                  |                    |              |            | DEPTH TO<br>WATER CUT                | DEPTH TO STANDING WATER                        |            | RVAL<br>m) |               | SUPPLY      |        |          | ТОТ        | AL DISSO      | LVED SO     | DLIDS     |        |
|                  | $\mathbf{AQ}^{T}$  | UIFER        |            | (m)                                  | (m)  | From       | То         | L/sec         | Test length | N      | lethod   | mg/L       |               | A           | nalysis N | lo.    |
|                  | SUM                | IMARY        |            |                                      |  |            |            |               |             |        |          |            |               |             |           |        |
| DEPT             | H (m)              | GRAPHIC      | ROCK       | /SEDIMENT                            |  | GEO        | LOGICA     | L DESCRIPTIO  | )N          | ·      | FORM     | ATION/AGE  | Depth<br>Core |             | CASINO    | G      |
| From             | То                 | LOG          | ľ          | NAME                                 |  | GLO        | LOGICA     | L DESCRIPTION | J11         |        | PORIVI   | ATION/AGE  | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0<br>2<br>4<br>5 | 2<br>4<br>5<br>8   | creened 5-8  | Sai        | Clay<br>ndy Clay<br>ndy Clay<br>Sand | e, slightly lasticity,  Micaceous.  angular to |            |            |               | 80          | 0      | 5        |            |               |             |           |        |
|                  | iiiis. S           | creeneu 3-8. | 111        |                                      |  |            |            |               |             |        | DRILL TY | PE: Auger  | COMPL         | ETED: 25    | 5/3/04    |        |
|                  |                    |              |            |                                      |  |            |            |               |             |        | DRILL FL | UID: Mud   | LOGGE         | D BY: Z.    | Marsden   |        |
| ſ                |                    |              |            |                                      |  |            |            |               |             |        | DATE: 25 | /3/04      | SHEET         | 1 OF 1      |           |        |



PROJECT: Chowilla Monitoring Network Expansion

|      |                                 |             |  |                       |   | XXI      | TFD        | WELL LOG             |                      |            |           | I EXMITT IV | U. U <del>1</del> 21U | '           |           |        |
|------|---------------------------------|-------------|--|-----------------------|---|----------|------------|----------------------|----------------------|------------|-----------|-------------|-----------------------|-------------|-----------|--------|
| Wa   | Departm<br>ter, Land<br>o diver | d and       |  |                       |   | VV P     | AIEK       | WELL LOG             |                      |            |           | UNIT No. 7  | 030-696               |             |           |        |
|      | nserva                          |             | Coordinate   | es: E N               | El.   | Surface( | (m)        | El. Ref. F           | Point(m)             | Datum:     |           | Hundred:    | Sec                   | c:          |           |        |
|      |                                 |             |  | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                      | 1        | RVAL<br>m) |                      | SUPPLY               |            |           | тот.        | AL DISSO              | LVED SO     | DLIDS     |        |
|      | AQ                              | UIFER       |  | (m)                   | (m)   | From     | То         | L/sec                | Test length          | Me         | ethod     | mg/L        |                       | A           | nalysis N | 0.     |
|      | SUN                             | IMARY       |  |                       |   |          |            |                      |                      |            |           |             |                       |             |           |        |
| DEP  | ΓH (m)                          | GRAPHIC     | ROCK   | /SEDIMENT             | ,   | GEO      | LOGIC      | AL DESCRIPTIO        | ) N                  |            | EODM/     | ATION/AGE   | Depth                 | (           | CASINO    | 3      |
| From | То                              | LOG         | ı  | NAME                  |   | GEO      | LOGIC      | AL DESCRIPTION       | JIN                  |            | FURME     | ATION/AGE   | Core<br>Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 2                               |             |  | Clay                  | Medium brown/grey cowet. Micaceous.             | lay. Hig | gh densi   | ty, low plasticity,  | , non-rollable, stic | cky when   |           |             |                       | 80          | 0         | 17     |
| 2    | 3                               |             |  | Clay                  | Light brown clay. Mod<br>Micaceous.             | lerate d | ensity, r  | moderate plasticit   | ty, rollable, slight | ly sticky. |           |             |                       |             |           |        |
| 3    | 4                               |             | Saı  | ndy Clay              | Light brown sandy cla<br>Orange/brown sandy s   |          |            |                      |                      |            |           |             |                       |             |           |        |
| 4    | 5                               |             | Saı  | ndy Clay              | Brown/orange sandy c<br>Sandy interlayers. Mic  |          |            | ty, high plasticity  | , rollable, slightly | sticky.    |           |             |                       |             |           |        |
| 5    | 6                               |             |  | Clay                  | Dark grey clay. Low d<br>Slightly sandy. Micace |          | high pla   | sticity, rollable, s | sticky, slightly gre | easy.      |           |             |                       |             |           |        |
| 6    | 7                               |             | Sandy Clay  Dark orange/brown and light brown/fawn sandy clay interlayers. Low densit high plasticity, rollable, slightly sticky. Micaceous. |                       |   |          |            |                      |                      | ensity,    |           |             |                       |             |           |        |
| REMA | ARKS: S                         | creened 17- | 20m  |                       |   |          |            |                      |                      |            | DRILL TY  | PE: Auger   | COMPL                 | ETED: 24    | 1/3/04    | I.     |
|      |                                 |             |  |                       |   |          |            |                      |                      |            | DRILL FL  | UID: Mud    | LOGGEI                | D BY: Z.    | Marsden   |        |
|      |                                 |             |  |                       |   |          |            |                      |                      |            | DATE: 24/ | /3/04       | SHEET                 | 1 OF 2      |           |        |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |
|                                      |

PERMIT No. 64210

UNIT No. 7030-696

| DEPT | DEPTH (m) GRAPHIC ROCK/SEDIMENT |     | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION   | EODMATION/ACE | Depth          | CASING      |          |        |  |  |
|------|---------------------------------|-----|---------------|--|---------------|----------------|-------------|----------|--------|--|--|
| From | То                              | LOG | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To (m) |  |  |
| 7    | 9                               |     | Sandy Clay    | Dark grey sandy clay. Low density, high plasticity, rollable, sticky, slightly greasy. Micaceous.  |               |                |             |          |        |  |  |
| 9    | 12                              |     | Gravelly Sand | Grey/brown coarse quartz sand/fine gravel. Poorly sorted, clear and cloudy, sub angular to sub rounded, 0.6-3mm, approx 20% medium sand. Micaceous, lignite coming through at end.                                 |               |                |             |          |        |  |  |
| 12   | 14                              |     | Sand          | Medium grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, approx 40% medium sand, minor traces of fine gravel up to 2.2mm. Micaceous, solidified lignite.          |               |                |             |          |        |  |  |
| 14   | 16                              |     | Sand          | Medium grey coarse quartz sand. Poorly sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, approx 20% fine gravel up to 3.5mm. Micaceous, solidified lignite.   |               |                |             |          |        |  |  |
| 16   | 20                              |     | Sand          | Medium grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.5mm, approx 30% medium sand, traces of fine gravel. Micaceous, solidified lignite, carbonaceous clay blebs. |               |                |             |          |        |  |  |
|      |                                 |     |               |  |               | SHEET 2        | 2 OF 2      |          |        |  |  |



PROJECT: Chowilla Monitoring Network Expansion

|      |                                |  |            |                       |  | W       | ATER       | WELL LOG           | v1                |               |          | PERMIT N               | o. 64212   |             |          |          |
|------|--------------------------------|--|------------|-----------------------|--|---------|------------|--------------------|-------------------|---------------|----------|------------------------|------------|-------------|----------|----------|
| Wat  | Departm<br>ter, Land<br>odiver | d and  |            |                       |  | ***     | ILK        | WEEE EOG           |                   |               |          | UNIT No. 7             | 030-698    |             |          |          |
|      | nserva                         |  | Coordinate | es: E N               | El. Surface(m) El. Ref. Point(m) Datum:                  |         |            | Hundred:           |                   | Sec:          |          |                        |            |             |          |          |
|      |                                |  |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                               | SUPPLY  |            |                    |                   |               | тот      | TOTAL DISSOLVED SOLIDS |            |             |          |          |
|      | AQ                             | UIFER  |            | (m)                   | (m) From To L/sec Test length Method                     |         |            |                    | Method            | mg/L          | ,        | A                      | Analysis N | lo.         |          |          |
|      | SUM                            | IMARY  |            |                       |  |         |            |                    |                   |               |          |                        |            |             |          |          |
| DEPT | Ή (m)                          | GRAPHIC ROCK/SEDIMENT GEOLOGICAL DESCRIPTION FORMATION |            |                       |  |         | ATION/AGE  | Depth<br>Core      |                   | CASIN         | <br>G    |                        |            |             |          |          |
| rom  | То                             | LOG  | N          | NAME                  |  | GEO.    | LOGICE     | AL DESCRIPTIO      | )IN               |               | FORM     | ATION/AGE              | Sample     | Dia<br>(mm) | From (m) | To<br>(m |
| 0    | 1                              |  |            | Clay                  | Medium brown clay. I Micaceous.                          | High de | nsity, lov | v plasticity, non- | rollable, slight  | ly sticky.    |          |                        |            | 80          | 0        | 6        |
| 1    | 2                              |  |            | Clay                  | Light brown/fawn clay Micaceous.                         | . High  | density,   | low plasticity, no | on-rollable, slig | thtly sticky. |          |                        |            |             |          |          |
| 2    | 4                              |  | Sar        | ndy Clay              | Light brown/fawn sand slightly sticky. Orange            |         |            |                    |                   | rollable,     |          |                        |            |             |          |          |
| 4    | 5                              |  | Cla        | yey Sand              | Orange/brown, dark by density, moderate plas             |         |            |                    |                   | oderate       |          |                        |            |             |          |          |
| 5    | 6                              |  |            | Sand                  | Dark orange slightly s cloudy, sub angular to Micaceous. |         |            |                    |                   |               |          |                        |            |             |          |          |
| 6    | 7                              |  |            | Sand                  | Orange/brown medium sub angular to sub rou               |         |            |                    | sorted, clear a   | nd cloudy,    |          |                        |            |             |          |          |
| EMA  | RKS: S                         | creened 6-8  | m          | l                     |  |         |            |                    |                   |               | DRILL TY | YPE: Auger             | COMPL      | ETED: 2     | 3/3/04   |          |
|      |                                |  |            |                       |  |         |            |                    |                   |               | DRILL FI | LUID: Mud              | LOGGE      | D BY: Z.    | Marsden  |          |
|      |                                |  |            |                       |  |         |            |                    |                   |               | DATE: 23 | 3/3/04                 | SHEET      | 1 OF 2      |          |          |
|      |                                |  |            |                       |  |         |            |                    |                   |               | t        |                        |            |             |          |          |



| <b>PROJECT:</b> Chowilla Monitoring Network Expansion |
|---|
| PERMIT No. 64212                                      |

UNIT No. 7030-698

| DEPT | 'H (m) | GRAPHIC | ROCK/SEDIMENT | CEOLOCICAL DESCRIPTION  | EODMATION/ACE | Depth          |             | CASING   | ll ll  |
|------|--------|---------|---------------|---|---------------|----------------|-------------|----------|--------|
| From | То     | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To (m) |
| 7    | 8      |         | Sand          | Light brown medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-2mm. Micaceous. |               |                | (mm)        | (m)      | (m)    |
|      | •      |         |               |   |               | SHEET 2        | 2 OF 2      | 1        |        |



PROJECT: Chowilla Monitoring Network Expansion

|      | Departme |   |            |   |  |                   |                       | WELL LOG                            | vi                                |                    |           | PERMIT N UNIT No. 7 |        | <b>}</b>    |          |        |
|------|----------|---|------------|---|--|-------------------|-----------------------|-------------------------------------|-----------------------------------|--------------------|-----------|---------------------|--------|-------------|----------|--------|
| Bic  | diver    | sity                                      | Coordinate | es: E N   | El.  | . Surface(        | m)                    | El. Ref. I                          | Point(m)                          | Datum:             |           | Hundred:            | Se     | e:          |          |        |
|      |          |   |            | DEPTH TO<br>WATER CUT   |  |                   | INTERVAL SUPPLY       |                                     |                                   |                    |           | AL DISSO            | OLIDS  |             |          |        |
|      | AQ       | UIFER                                     |            | (m) (m) From To L/sec Test length Method  |  |                   |                       |                                     | Method                            | mg/L               | mg/L      |                     |        | No.         |          |        |
|      | SUM      | IMARY                                     |            |   |  |                   |                       |                                     |                                   |                    |           |                     |        |             |          |        |
| DEPT | H (m)    | GEOLOGICAL DESCRIPTION FORMATION/AGE Core |            | Depth Com   |  |                   | G                     |                                     |                                   |                    |           |                     |        |             |          |        |
| From | То       | LOG                                       | l 1        | NAME  |  | GLO               | Logier                | ie beseith in                       | <b>71</b> 1                       |                    | 1 Oldiviz | TITOTWITGE          | Sample | Dia<br>(mm) | From (m) | To (m) |
| 0    | 1        |   |            | Clay  | Dark brown clay. High Micaceous.                               | n densit          | y, low pl             | asticity, non-rol                   | able, non-stick                   | cy.                |           |                     |        | 80          | 0        | 17     |
| 1    | 2        |   |            | Clay  | Light brown clay. Moo rollable, sticky. Orang                  |                   |                       |                                     |                                   |                    |           |                     |        |             |          |        |
| 2    | 4        |   | Sar        | Sandy Clay  Light brown sandy clay. Low density, high plasticity, rollable, sticky.  Orange/brown fine/medium clayey sand coming through at end. Micaceous. |  |                   |                       |                                     |                                   |                    |           |                     |        |             |          |        |
| 4    | 5.5      |   | Cla        | yey Sand  | Orange/brown slightly cloudy, sub angular to 1.3mm. Micaceous. | clayey<br>sub rou | fine/med<br>inded, 0. | dium quartz sand<br>1-0.5mm, traces | l. Well sorted,<br>of coarse sand | clear and<br>up to |           |                     |        |             |          |        |
| 5.5  | 6.5      |   |            | Sand  | Dark orange coarse que to sub rounded, 0.6-1.3 layer.          |                   |                       |                                     |                                   |                    | :         |                     |        |             |          |        |
|      |          |   |            |   |  |                   |                       |                                     |                                   |                    |           |                     |        |             |          |        |
| REMA | RKS: S   | creened 17-                               | 19m        |   |  |                   |                       |                                     |                                   |                    | DRILL TY  | YPE: Auger          | COMPL  | ETED: 2     | 3/3/04   | •      |
|      |          |   |            |   |  |                   |                       |                                     |                                   |                    | DRILL FI  | LUID: Mud           | LOGGE  | D BY: Z.    | Marsden  |        |
|      |          |   |            |   |  |                   |                       |                                     |                                   |                    | DATE: 23  | 3/3/04              | SHEET  | 1 OF 2      |          |        |



| PROJECT: Chowilla Monito | oring Network |
|--------------------------|---------------|
| Expansion                |               |
|                          |               |

**PERMIT No. 64213** 

UNIT No. 7030-699

|      |    | GRAPHIC | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION  | EODMATION/ACE | Depth<br>Core | (           | CASINO   |        |
|------|----|---------|---------------|---|---------------|---------------|-------------|----------|--------|
| From | То | LOG     | NAME          |   |               | Sample        | Dia<br>(mm) | From (m) | To (m) |
| 6.5  | 8  |         | Sand          | Light brown/orange medium quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, approx 30% coarse sand up to 1.8mm. Micaceous.   |               |               |             |          |        |
| 8    | 10 |         | Sand          | Light brown coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.7mm, approx 20% medium sand. Micaceous.  |               |               |             |          |        |
| 10   | 11 |         | Sand          | Medium grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, traces of fine gravel up to 2.2mm. Micaceous.   |               |               |             |          |        |
| 11   | 12 |         | Sand          | Light brown medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.3-1.3mm. Micaceous, lignite.  |               |               |             |          |        |
| 12   | 16 |         | Sand          | Light grey medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.3-1.8mm. Micaceous, lignite.   |               |               |             |          |        |
| 16   | 18 |         | Sand          | Medium grey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.5mm, approx 25% coarse sand up to 1.2mm. Micaceous.   |               |               |             |          |        |
| 18   | 19 |         | Sand          | Medium brown/grey slightly silty fine/medium quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.4mm, approx 30% coarse sand up to 1.5mm. Micaceous, becoming silty with depth. |               |               |             |          |        |
|      |    |         |               |   |               | SHEET         | 1 OF 2      |          |        |



PROJECT: Chowilla Monitoring Network Expansion

|      |                   |   |   |          |   | <b>XX</b> 7 A   | TED        | WELL LOG           |                     |           |           |             | U. U <del>1</del> 211 |             |           |        |
|------|-------------------|---|---|----------|---|---|------------|--------------------|---------------------|-----------|-----------|-------------|-----------------------|-------------|-----------|--------|
| Wa   | ter, Land         | d and   |   |          |   | VV F  | AIEK       | WELL LOG           |                     |           |           | UNIT No. 70 | 030-700               |             |           |        |
|      |                   |   | Coordinate  | es: E N  | El.   | Surface(  | (m)        | El. Ref. l         | Point(m)            | Datum:    |           | Hundred:    | Sec                   | <b>::</b>   |           |        |
|      |                   |   | Coordinates: E  DEP WAT  GRAPHIC LOG  ROCK/SEDIM NAME  Clay  Silty Clay  Sandy Clay  Clay  Sandy Clay  Sandy Clay  Clay  Clay  Clay  Clay  Clay  Clay  Clay  Clay  Clay  Clay  Clay  Clay  Clay  Clay |          | DEPTH TO<br>STANDING WATER                    | 1   | RVAL<br>m) |                    | SUPPLY              |           |           | TOTA        | AL DISSO              | LVED SO     | OLIDS     |        |
|      | $\mathbf{AQ}^{T}$ | UIFER   |   | (m)      | (m)   | From  | То         | L/sec              | Test length         | M         | ethod     | mg/L        |                       | A           | nalysis N | lo.    |
|      | SUM               | AQUIFER SUMMARY  (m) GRAPHIC LOG NAM  1 Clay 2 Silty C 3 Sandy C 4 Clay 6 Sandy C 7 Sandy C 8 Clay          |   |          |   |   |            |                    |                     |           |           |             |                       |             |           |        |
| DEPT | 'H (m)            |   | 1   |          |   | GEO   | I OGICA    | AL DESCRIPTION     | ON                  |           | FORM/     | ATION/AGE   | Depth<br>Core         |             | CASING    |        |
| From | То                | Coordinates: E  AQUIFER SUMMARY  (m) GRAPHIC LOG NAM  1 Clay 2 Silty C 3 Sandy C 4 Clay 6 Sandy C 7 Sandy C |   |          |   |   |            | AL DESCRIPTION FO  |                     |           |           | MONTOL      | Sample                | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 1                 |   |   | Clay     | Dark brown sandy clay                         | . Low   | density,   | high plasticity, r | ollable, sticky. Mi | icaceous. |           |             |                       | 80          | 0         | 9      |
| 1    | 2                 |   | Si  | lty Clay | Light brown/fawn silty slightly sandy. Micace | •   |            |                    |                     |           |           |             |                       |             |           |        |
| 2    | 3                 |   | Saı   | ndy Clay | Light brown/fawn sand sticky. Micaceous.      | brown/fawn sandy clay. Low density, high plasticity, rollable, slightly |            |                    |                     |           |           |             |                       |             |           |        |
| 3    | 4                 |   |   | Clay     | Light brown/fawn clay<br>Micaceous.           | . High  | density,   | low plasticity, n  | on-rollable, non-st | ticky.    |           |             |                       |             |           |        |
| 4    | 6                 |   | Saı   | ndy Clay | Light brown and light sticky. Orange sandy s  |   |            |                    |                     | itly      |           |             |                       |             |           |        |
| 6    | 7                 |   | Saı   | ndy Clay | Light brown/grey sand                         | y clay.   | Friable,   | rollable, slightly | sticky. Micaceou    | ıs.       |           |             |                       |             |           |        |
| 7    | 8                 |   |   | Clay     | Medium grey clay. Low Micaceous.              | w densi   | ity, high  | plasticity, rollab | le, sticky, greasy. |           |           |             |                       |             |           |        |
| REMA | RKS: S            | creened 9-1   | 1m  |          | I   |   |            |                    |                     |           | DRILL TY  | PE: Auger   | COMPL                 | ETED: 23    | 3/3/04    | 1      |
|      |                   |   |   |          |   |   |            |                    |                     |           | DRILL FL  | UID: Mud    | LOGGE                 | D BY: Z.    | Marsden   |        |
|      |                   |   |   |          |   |   |            |                    |                     |           | DATE: 23/ | /3/04       | SHEET                 | 1 OF 2      |           |        |



| PROJECT: Chowilla Monitoring Network | k |
|--------------------------------------|---|
| Expansion                            |   |

**PERMIT No. 64214** 

UNIT No. 7030-700

| DEPT | DEPTH (m)  GRAPHIC ROCK/SEDIMENT  LOG NAME |     | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION   | EODMATION/ACE | Depth          | C           | CASINO   | j         |
|------|--|-----|---------------|--|---------------|----------------|-------------|----------|-----------|
| From | То   | LOG | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |
| 8    | 9  |     | Clayey Sand   | Medium grey clayey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm, approx 20% coarse sand up to 1.2mm. Clay rollable, slightly sticky. Micaceous. |               |                |             |          |           |
| 9    | 10   |     | Sand          | Grey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm, approx 20% coarse sand up to 1.2mm. Micaceous.   |               |                |             |          |           |
| 10   | 11   |     | Clayey Sand   | Medium grey clayey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm. Micaceous.   |               |                |             |          |           |
|      |  |     |               |  |               |                |             |          |           |
|      |  |     |               |  |               |                |             |          |           |
|      |  |     |               |  |               |                |             |          |           |
|      |  |     |               |  |               |                |             |          |           |
|      |  |     |               |  |               |                |             |          |           |
|      |  |     |               |  |               |                |             |          |           |
|      |  |     |               |  |               | SHEET 2        | 2 OF 2      |          |           |



PROJECT: Chowilla Monitoring Network Expansion

|      |  |              |            |                       |  | W        | ATFR V     | WELL LOG           | VI                  |            |          | PERMIT N    | o. 64215       | i           |           |        |
|------|--|--------------|------------|-----------------------|--|----------|------------|--------------------|---------------------|------------|----------|-------------|----------------|-------------|-----------|--------|
| Wa   | Departmenter, Land   | d and        |            |                       |  | **1      | IILK       | WEEL LOG           |                     |            |          | UNIT No. 7  | 030-701        |             |           |        |
|      | nserva   | tion         | Coordinate | es: E N               | El.  | Surface( | (m)        | El. Ref. I         | Point(m)            | Datum:     |          | Hundred:    | Sec            | <b>::</b>   |           |        |
|      |  |              |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                     | 1        | RVAL<br>m) |                    | SUPPLY              |            |          | ТОТ         | AL DISSO       | LVED SO     | DLIDS     |        |
|      | $\mathbf{AQ}^{T}$  | UIFER        |            | (m)                   | (m)  | From     | То         | L/sec              | Test length         | N          | lethod   | mg/L        |                | A           | nalysis N | lo.    |
|      | SUM  | IMARY        |            |                       |  |          |            |                    |                     |            |          |             |                |             |           |        |
| DEPT | 'H (m)   | GRAPHIC      | ROCK       | SEDIMENT              |  | CEO      | LOCICA     | I DESCRIPTION      |                     |            | FORM     | A TIONIA CE | Depth          | (           | CASINO    | 3      |
| From | То   | LOG          | ľ          | NAME                  |  | GEO      | LOGICA     | AL DESCRIPTION     | DΝ                  |            | FORMA    | ATION/AGE   | Core<br>Sample | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 1 Silty Clay Medium brown silty clay. No structure. Micaceous. |              |            |                       |  |          |            |                    |                     |            |          |             |                | 80          | 0         | 8      |
| 1    | 2  |              |            | Clay                  | Medium grey clay. His Micaceous.               | ticky.   |            |                    |                     |            |          |             |                |             |           |        |
| 2    | 3  |              | Si         | lty Clay              | Fawn/light brown silty sandy seams. Micaceo    |          | Low dens   | ity, high plastici | ty, rollable, stick | xy. Orange |          |             |                |             |           |        |
| 3    | 5  |              | Saı        | ndy Clay              | Light grey sandy clay.<br>Micaceous.           | Low do   | ensity, hi | gh plasticity, rol | llable, slightly st | icky.      |          |             |                |             |           |        |
| 5    | 8  |              |            | Sand                  | Medium grey fine/med<br>angular to sub rounded |          |            |                    |                     |            |          |             |                |             |           |        |
| 8    | 10   |              |            | Sand                  | Light brown medium/o<br>angular to sub rounded | , sub    |            |                    |                     |            |          |             |                |             |           |        |
|      |  |              |            |                       |  |          |            |                    |                     |            |          |             |                |             |           |        |
| REMA | RKS: S   | creened 8-10 | 0m         |                       | 1  |          |            |                    |                     |            | DRILL TY | PE: Auger   | COMPL          | ETED: 23    | 5/3/04    | 1      |
|      |  |              |            |                       |  |          |            |                    |                     |            | DRILL FL | UID: Mud    | LOGGEI         | D BY: Z.    | Marsden   |        |
| 1    |  |              |            |                       |  |          |            |                    |                     |            | DATE: 23 | /3/04       | SHEET          | 1 OF 1      |           |        |



PROJECT: Chowilla Monitoring Network Expansion

|      | The Department of<br>Water, Land and |             |            |                       |   | WA       | TFR        | WELL LOG              |                       |          |           |             |               |             |           |        |
|------|--------------------------------------|-------------|------------|-----------------------|---|----------|------------|-----------------------|-----------------------|----------|-----------|-------------|---------------|-------------|-----------|--------|
| Wa   | Departme<br>ter, Land<br>odiver      | dand        |            |                       |   | VV P     | LILI       | WELL LOG              |                       |          |           | UNIT No. 70 | 030-702       |             |           |        |
|      | nserva                               |             | Coordinate | es: E N               | El.   | Surface( | m)         | El. Ref. Po           | oint(m)               | Datum:   |           | Hundred:    | Sec           | e <b>:</b>  |           |        |
|      |                                      |             |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                      |          | RVAL<br>n) |                       | SUPPLY                |          |           | тота        | AL DISSO      | LVED SO     | DLIDS     |        |
|      | $\mathbf{AQ}^{T}$                    | UIFER       |            | (m)                   | (m)   | From     | То         | L/sec                 | Test length           | M        | ethod     | mg/L        |               | A           | nalysis N | 0.     |
|      | SUM                                  | IMARY       |            |                       |   |          |            |                       |                       |          |           |             |               |             |           |        |
| DEPT | TH (m)                               | GRAPHIC     |            | SEDIMENT              |   | GEO      | LOGIC      | AL DESCRIPTIO         | iN                    |          | FORM/     | ATION/AGE   | Depth<br>Core |             | CASINO    |        |
| From | То                                   | LOG         |            | NAME                  |   |          |            |                       |                       |          | TORWIF    | ATION/AGE   | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 2                                    |             | Sar        | ndy Clay              | Dark brown sandy clay<br>Orange/brown sandy so  |          |            |                       | ollable, slightly sti | cky.     |           |             |               | 80          | 0         | 8      |
| 2    | 3                                    |             |            | Clay                  | Medium grey/brown cl<br>slightly sticky. Micace |          | derate o   | density, moderate j   | plasticity, rollable  | ÷,       |           |             |               |             |           |        |
| 3    | 7                                    |             |            | Clay                  | Medium grey clay. Mo sticky. Micaceous.         | derate/  | high de    | ensity, moderate/lo   | w plasticity, rollal  | ble,     |           |             |               |             |           |        |
| 7    | 8                                    |             |            | Sand                  | Grey medium/coarse q sub rounded, 0.3-1mm.      |          |            | ell sorted, clear and | d cloudy, sub angu    | ılar to  |           |             |               |             |           |        |
| 8    | 10                                   |             |            | Sand                  | Grey coarse quartz san rounded, 0.6-1.5mm, a    |          |            |                       |                       | r to sub |           |             |               |             |           |        |
|      |                                      |             |            |                       |   |          |            |                       |                       |          |           |             |               |             |           |        |
| REMA | ARKS: S                              | creened 8-1 | 0m         |                       |   |          |            |                       |                       |          | DRILL TY  | PE: Auger   | COMPL         | ETED: 22    | 2/3/04    |        |
|      |                                      |             |            |                       |   |          |            |                       |                       |          | DRILL FL  | UID: Mud    | LOGGEI        | D BY: Z.    | Marsden   |        |
|      |                                      |             |            |                       |   |          |            |                       |                       |          | DATE: 22/ | 3/04        | SHEET         | 1 OF 1      |           |        |



PROJECT: Chowilla Monitoring Network Expansion

| 1000  | The Department of<br>Water, Land and |             |            |                       |   | WA       | TFR        | WELL LOG            |                     |          |           |             |               |             |           |        |
|---|--------------------------------------|-------------|------------|-----------------------|---|----------|------------|---------------------|---------------------|----------|-----------|-------------|---------------|-------------|-----------|--------|
| Wa  | Departm<br>ter, Land<br>odiver       | d and       |            |                       |   | VV P     | X I LIX    | WELL LOG            |                     |          |           | UNIT No. 70 | 030-703       |             |           |        |
|   | nserva                               |             | Coordinate | es: E N               | El.   | Surface( | (m)        | El. Ref. Po         | oint(m)             | Datum:   |           | Hundred:    | Sec           | <b>::</b>   |           |        |
|   |                                      |             |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER  |          | RVAL<br>m) |                     | SUPPLY              |          |           | TOTA        | AL DISSO      | LVED SO     | OLIDS     |        |
|   | $\mathbf{AQ}^{\prime}$               | UIFER       |            | (m)                   | (m)   | From     | То         | L/sec               | Test length         | M        | ethod     | mg/L        |               | A           | nalysis N | lo.    |
|   | SUM                                  | IMARY       |            |                       |   |          |            |                     |                     |          |           |             |               |             |           |        |
| DEPT  | ΓH (m)                               | GRAPHIC     | 1          | /SEDIMENT             | ·   | GEO      | LOGIC      | AL DESCRIPTIO       | iN                  |          | FORM/     | ATION/AGE   | Depth<br>Core |             | CASINO    |        |
| From  | То                                   | LOG         | N          | NAME                  |   |          |            |                     |                     |          | TORWIA    | TION/AGE    | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0   | 2.5                                  |             |            | Clay<br>Clay          | Dark brown clay. High<br>sandy. Micaceous.<br>Grey/brown clay. High |          |            | •                   | •                   |          |           |             |               | 80          | 0         | 5      |
|   |                                      |             |            |                       | Brown sandy seams. M  |          |            |                     |                     |          |           |             |               |             |           |        |
| 2.5   | 4                                    |             |            | Clay                  | Medium grey clay. Morollable, sticky. Micace                        |          | high de    | ensity, moderate/lo | w plasticity, sligh | tly      |           |             |               |             |           |        |
| 4   | 6                                    |             |            | Sand                  | Grey coarse quartz san rounded, 1-2mm, trace Micaceous, lignite.    |          |            |                     |                     | r to sub |           |             |               |             |           |        |
| Sand Grey medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, traces of coarse sand up to 1.5mm. Micaceous. Fawn clay blebs, moderate/low density, moderate/high plasticity, rollable, sticky. Micaceous. |                                      |             |            |                       |   |          |            |                     |                     |          |           |             |               |             |           |        |
| REMA  | ARKS: S                              | creened 5-7 | m          |                       |   |          |            |                     |                     |          | DRILL TY  | PE: Auger   | COMPLI        | ETED: 22    | 2/3/04    |        |
|   |                                      |             |            |                       |   |          |            |                     |                     |          | DRILL FL  | UID: Mud    | LOGGEI        | D BY: Z.    | Marsden   |        |
|   |                                      |             |            |                       |   |          |            |                     |                     |          | DATE: 22/ | 73/04       | SHEET         | 1 OF 1      |           |        |



## GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

| 444  | with the land                  |             |            |                       |  | $\mathbf{W}^{A}$ | TER        | WELL LOG            |                        |        |          |             |               |             |           |        |
|------|--------------------------------|-------------|------------|-----------------------|--|------------------|------------|---------------------|------------------------|--------|----------|-------------|---------------|-------------|-----------|--------|
| Wat  | Departm<br>ter, Land<br>odiver | d and       |            |                       |  | **1              | X I LIX    | WEEL LOG            |                        |        |          | UNIT No. 70 | 030-704       |             |           |        |
|      | nserva                         |             | Coordinate | es: E N               | El.  | Surface(         | m)         | El. Ref. F          | Point(m)               | Datum: |          | Hundred:    | Sec           | <b>::</b>   |           |        |
|      |                                |             |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER   |                  | RVAL<br>n) |                     | SUPPLY                 |        |          | тот.        | AL DISSO      | LVED SO     | DLIDS     |        |
|      | $\mathbf{AQ}^{\prime}$         | UIFER       |            | (m)                   | (m)  | From             | То         | L/sec               | Test length            | Me     | ethod    | mg/L        |               | A           | nalysis N | lo.    |
|      | SUN                            | IMARY       |            |                       |  |                  |            |                     |                        |        |          |             |               |             |           |        |
| DEPT | H (m)                          | GRAPHIC     | ROCK       | /SEDIMENT             |  | GEO              | LOGIC      | AL DESCRIPTIO       | )N                     |        | EODM/    | ATION/AGE   | Depth<br>Core |             | CASIN     |        |
| From | То                             | LOG         | 1          | NAME                  |  | GEO              | LOGIC      | AL DESCRIFTIC       | )IN                    |        | FURIVIA  | ATION/AGE   | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 1                              |             |            | Clay                  | Dark brown clay. High Micaceous.                                       | densit           | y, low p   | lasticity, non-roll | able, non-sticky.      |        |          |             |               | 80          | 0         | 5      |
| 1    | 2                              |             |            | Clay                  | Light brown clay. Mod sticky, greasy. Orange/                          |                  |            |                     |                        | ole,   |          |             |               |             |           |        |
| 2    | 4                              |             |            | Clay                  | Grey/brown clay. Mod sticky. Orange/brown o                            |                  |            |                     | h plasticity, rollab   | ole,   |          |             |               |             |           |        |
| 4    | 5                              |             | Cla        | yey Sand              | Orange/brown clayey f Micaceous.                                       | ine san          | d. Low     | density, high plas  | sticity, rollable, sti | icky.  |          |             |               |             |           |        |
| 5    | 6                              |             |            | Sand                  | Dark orange/brown me<br>angular to sub rounded<br>sandy seam. Micaceou | , 0.2-0.         |            |                     |                        |        |          |             |               |             |           |        |
| 6    | 8                              |             |            | Sand                  | Grey/brown medium/c angular to sub rounded                             |                  |            |                     |                        | sub    |          |             |               |             |           |        |
| REMA | RKS: S                         | creened 5-8 | m          |                       |  |                  |            |                     |                        |        | DRILL TY | PE: Auger   | COMPL         | ETED: 21    | /3/04     |        |
|      |                                |             |            |                       |  |                  |            |                     |                        |        | DRILL FL | UID: Mud    | LOGGEI        | D BY: Z.    | Marsden   |        |
|      |                                |             |            |                       |  |                  |            |                     |                        |        | DATE: 21 | /3/04       | SHEET         | 1 OF 1      |           |        |



PROJECT: Chowilla Monitoring Network Expansion

| The  | Departm  | ent of      |                |                      |  | WA         | TER        | WELL LOG            |                   |        |           | PERMIT N   |               |              |            |        |
|------|--|-------------|----------------|----------------------|--|------------|------------|---------------------|-------------------|--------|-----------|------------|---------------|--------------|------------|--------|
| Bic  | er, Land<br>diver<br>nserva  | sity        |                |                      |  |            |            |                     |                   |        |           | UNIT No. 7 | 030-705       |              |            |        |
| Col  | nserva   | tion        | Coordinates: E | N                    | El.  | Surface(   | m)         | El. Ref. F          | Point(m)          | Datum: |           | Hundred:   | Sec           | <b>::</b>    |            |        |
|      |  |             |                | DEPTH TO<br>ATER CUT | DEPTH TO<br>STANDING WATER                                       | INTE<br>(r | RVAL<br>n) |                     | SUPPLY            |        |           | тот.       | AL DISSO      | LVED SO      | OLIDS      |        |
|      | AQ   | UIFER       |                | (m)                  | (m)  | From       | То         | L/sec               | Test length       | Me     | thod      | mg/L       |               | A            | analysis N | o.     |
|      | SUM  | IMARY       |                |                      |  |            |            |                     |                   |        |           |            |               |              |            |        |
| DEPT | H (m)  | GRAPHIC     | ROCK/SED       |                      |  | GEO        | OGIC       | AL DESCRIPTION      | )NI               |        | FORMA     | ATION/AGE  | Depth<br>Core |              | CASING     |        |
| From | From To LOG NAME GEOLOGICAL DESCRIPTION  |             |                |                      |  |            |            |                     | <b>71</b> 1       |        | 1 OKWI    | THOWAGE    | Sample        | Dia<br>(mm)  | From (m)   | To (m) |
| 0    | 1  |             | Clay           |                      | Park brown clay. High<br>Micaceous.                              | density    | y, low p   | lasticity, non-roll | able, non-sticky  |        |           |            |               | 80           | 0          | 13     |
| 1    | Clay  Clay  Clay  Light brown clay. Moderate/low density, moderate/high plasticity, rollable, sticky. Orange/brown sandy interlayers. Micaceous. |             |                |                      |  |            |            |                     | able,             |        |           |            |               |              |            |        |
| 2    | 4  |             | Clay           |                      | Grey/brown clay. Low<br>Orange/brown seams. I                    |            |            | lasticity, rollable | , sticky, greasy. |        |           |            |               |              |            |        |
| 4    | 6  |             | Sand           | q                    | Oark orange fine/medicuartz sand. Well sorte .6mm, approx 30% co | d, clear   | and clo    | oudy, sub angular   | to sub rounded,   |        |           |            |               |              |            |        |
| 6    | 7 Sand Grey/brown medium/coarse quartz sand. Well sorted, clear and cloudy, sangular to sub rounded, 0.2-1.3mm. Micaceous.                       |             |                |                      |  |            |            |                     | , sub             |        |           |            |               |              |            |        |
| 7    | 8  |             | Clay           | 7                    | Grey clay. Low density   | y, high j  | plasticit  | y, rollable, sticky | . Micaceous.      |        |           |            |               |              |            |        |
| REMA | RKS: S   | creened 13- | 16m            |                      |  |            |            |                     |                   |        | DRILL TY  | PE: Auger  | COMPLI        | <br>ETED: 21 | 1/3/04     |        |
|      |  |             |                |                      |  |            |            |                     |                   |        | DRILL FL  | UID: Mud   | LOGGEI        | O BY: Z.     | Marsden    |        |
|      |  |             |                |                      |  |            |            |                     |                   |        | DATE: 21/ | 3/04       | SHEET         | 1 OF 2       |            |        |



| <b>PROJECT:</b> Chowilla Monitoring Network |  |
|---|--|
| Expansion                                   |  |
| PERMIT No. 64219                            |  |

UNIT No. 7030-705

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Depth<br>Core | C           | CASING   | j         |
|------|-------|---------|---------------|--|---------------|---------------|-------------|----------|-----------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To<br>(m) |
| 8    | 11    |         | Sand          | Grey/brown coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.8-1.4mm, approx 15% medium sand. Micaceous.                |               |               | , ,         | ` ,      | , ,       |
| 11   | 12.5  |         | Sand          | Dark brown coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, 25% medium sand. Micaceous, abundant lignite. |               |               |             |          |           |
| 12.5 | 16    |         | Sand          | Dark brown coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.8-1.2mm. Micaceous, becoming silty towards end of sample.  |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               | SHEET 2       | OF 2        |          |           |



#### GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

| 646       | Contraction of the last | 20000000    |            |                       |   | $\mathbf{W}$                              | \TFR                     | WELL LOG  |   |               |          |             |               |             |           |        |
|-----------|-------------------------|-------------|------------|-----------------------|---|---|--------------------------|---|---|---------------|----------|-------------|---------------|-------------|-----------|--------|
| Wat       | Departmenter, Land      | and         |            |                       |   | ***                                       | IILK                     | WEEL LOG  |   |               |          | UNIT No. 70 | 030-711       |             |           |        |
|           | nserva                  |             | Coordinate | es: E N               | El.   | Surface(                                  | (m)                      | El. Ref. F  | Point(m)  | Datum:        |          | Hundred:    | Sec           | e <b>:</b>  |           |        |
|           |                         |             |            | DEPTH TO<br>WATER CUT | DEPTH TO STANDING WATER   | 1   | RVAL<br>m)               |   | SUPPLY  |               |          | тот.        | AL DISSO      | LVED SO     | DLIDS     |        |
|           | $\mathbf{AQ}^{T}$       | UIFER       |            | (m)                   | (m)   | From                                      | То                       | L/sec   | Test length   | Me            | ethod    | mg/L        |               | A           | nalysis N | lo.    |
|           | SUM                     | IMARY       |            |                       |   |   |                          |   |   |               |          |             |               |             |           |        |
| DEPT      | H (m)                   | GRAPHIC     | 1          | /SEDIMENT             |   | GEO                                       | LOGIC                    | AL DESCRIPTIO   | ON  | ·             | FORM/    | ATION/AGE   | Depth<br>Core |             | CASIN     |        |
| From      | То                      | LOG         |            | NAME                  |   |   |                          |   |   |               | 1 ORIVII | MIIOIWAGE   | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0 0.5 2 4 | 0.5<br>2<br>4           |             |            | Clay Clay Clay Clay   | Dark brown cay. High Micaceous.  Light brown slightly si sticky. Micaceous, grit Light brown clay. Mod sticky, greasy. Sandy l. Light grey and brown of the sticky of the sticky. | ilty clay<br>ty.<br>derate/lo<br>ayers, c | v. Low down densorange/b | lensity, high plast<br>ity, moderate/hig<br>rown seams. Mic | ticity, rollable, slights plasticity, rollaborateous. | ghtly<br>ble, |          |             |               | 80          | 0         | 6      |
| 5         | 6                       |             |            | Clay                  | rollable, sticky, greasy  Dark grey clay. Low de  | . Orang                                   | ge bandi                 | ng and dark brow  | n seams. Micaceo                                      | ous.          |          |             |               |             |           |        |
| 6         | 8                       |             |            | Sand                  | Light brown medium/c sub angular to sub roun  |   |                          |   | sorted, clear and cl                                  | loudy,        |          |             |               |             |           |        |
| REMA      | RKS: S                  | creened 6-8 | m          |                       |   |   |                          |   |   |               | DRILL TY | PE: Auger   | COMPL         | ETED: 30    | 0/3/04    |        |
|           |                         |             |            |                       |   |   |                          |   |   |               | DRILL FL | UID: Mud    | LOGGEI        | D BY: Z.    | Marsden   |        |
|           |                         |             |            |                       |   |   |                          |   |   |               | DATE: 30 | /3/04       | SHEET         | 1 OF 1      |           |        |



PROJECT: Chowilla Monitoring Network Expansion

| The  | Departme          | ent of      |                |                       |   |          |            | WELL LOG            | VI               |             |          | PERMIT N   |               | <u> </u>    |           |        |
|------|-------------------|-------------|----------------|-----------------------|---|----------|------------|---------------------|------------------|-------------|----------|------------|---------------|-------------|-----------|--------|
| Wat  | er, Land<br>diver | and         |                |                       |   |          |            |                     |                  |             |          | UNIT No. 7 | 030-712       |             |           |        |
| Cor  | nserva            | tion        | Coordinates: E | N                     | El.   | Surface( | m)         | El. Ref. F          | oint(m)          | Datum:      |          | Hundred:   | Sec           | c:          |           |        |
|      |                   |             | ,              | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                        |          | RVAL<br>n) |                     | SUPPLY           |             |          | ТОТ        | AL DISSO      | LVED S      | OLIDS     |        |
|      | AQ                | UIFER       |                | (m)                   | (m)   | From     | То         | L/sec               | Test lengtl      | h           | Method   | mg/L       |               | A           | nalysis N | No.    |
|      | SUM               | IMARY       |                |                       |   |          |            |                     |                  |             |          |            |               |             |           |        |
| DEPT | H (m)             | GRAPHIC     | ROCK/SE        | DIMENT                |   | GEO      | LOGICA     | L DESCRIPTIO        | )NI              |             | FORM     | ATION/AGE  | Depth<br>Core | (           | CASIN     | <br>G  |
| From | То                | LOG         | NAN            |                       |   | GEO.     | LOGICA     | IL DESCRII TIC      | <b>71</b> 1      |             | TORWIZ   | ATION/AGE  | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 0.5               |             | Cla            |                       | Dark brown clay. High Micaceous.                  | densit   | y, low pla | asticity, non-roll  | able, slightly s | ticky.      |          |            |               | 80          | 0         | 15.5   |
| 0.5  | 2                 |             | Cla            |                       | Light brown slightly si rollable, sticky. Micaco  |          | . Modera   | ate/low density,    | moderate/high    | plasticity, |          |            |               |             |           |        |
| 2    | 4                 |             | Cla            |                       | Light brown and grey crollable, sticky. Orange    |          |            |                     |                  | asticity,   |          |            |               |             |           |        |
| 4    | 5                 |             | Cla            |                       | Light/medium grey cla<br>rollable, sticky, greasy |          |            |                     |                  | city,       |          |            |               |             |           |        |
| 5    | 6.5               |             | Cla            | ay                    | Dark grey clay. Low d                             | ensity,  | high plas  | ticity, rollable, s | ticky, greasy.   | Micaceous.  |          |            |               |             |           |        |
| 6.5  | 7.5               |             | Cla            |                       | Fawn and orange/brow rollable, sticky. Micaco     |          | interlaye  | rs. Moderate der    | sity, moderate   | plasticity, |          |            |               |             |           |        |
| 7.5  | 8                 |             | Sar            |                       | Brown medium/coarse angular to sub rounded        |          |            |                     | clear and clou   | ıdy, sub    |          |            |               |             |           |        |
| REMA | RKS: S            | creened 15. | 5-17.5m        | 1                     |   |          |            |                     |                  |             | DRILL TY | PE: Auger  | COMPL         | ETED: 30    | 0/3/04    | •      |
|      |                   |             |                |                       |   |          |            |                     |                  |             | DRILL FL | UID: Mud   | LOGGE         | D BY: Z.    | Marsden   |        |
|      |                   |             |                |                       |   |          |            |                     |                  |             | DATE: 30 | /3/04      | SHEET         | 1 OF 2      |           |        |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |
|                                      |

PERMIT No. 64226

UNIT No. 7030-712

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | CEOLOCICAL DESCRIPTION  | EODMATION/ACE | Depth          | C           | CASING   | ř         |
|------|-------|---------|---------------|---|---------------|----------------|-------------|----------|-----------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |
| 8    | 10    |         | Sand          | Light brown coarse quartz sand. Poorly sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, approx 25% medium sand, 10% fine gravel up to 3.5mm. Micaceous.                 |               |                | , ,         | , ,      |           |
| 10   | 14    |         | Sand          | Light brown medium quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.3-0.6mm, approx 30% coarse sand up to 1.5mm. Micaceous.                            |               |                |             |          |           |
| 14   | 16    |         | Sand          | Light/medium grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.5mm, approx 10% medium sand, traces of fine gravel up to 3mm. Micaceous. |               |                |             |          |           |
| 16   | 17.5  |         | Sand          | Light/medium grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.5mm, approx 30% medium sand, traces of fine gravel up to 3mm. Micaceous. |               |                |             |          |           |
|      | l     | l       | 1             |   |               | SHEET 2        | 2 OF 2      | ļ.       |           |



PROJECT: Chowilla Monitoring Network Expansion

|                         |  | TOTAL SE    |            |                               |   | WA   | TFR  | WELL LOG   |  |   |           | PERMIT N   | 0. 04232      | 1           |           |        |
|-------------------------|--|-------------|------------|-------------------------------|---|--|--|--|--|---|-----------|------------|---------------|-------------|-----------|--------|
| Wat                     | Departmenter, Land   | d and       |            |                               |   | VV F   | XILK   | WEEL LOG   |  |   |           | UNIT No. 7 | 030-718       |             |           |        |
|                         | nserva   |             | Coordinate | es: E N                       | El.   | Surface(   | m)   | El. Ref. I   | Point(m)   | Datum:  |           | Hundred:   | Sec           | e <b>:</b>  |           |        |
|                         |  |             |            | DEPTH TO<br>WATER CUT         | DEPTH TO<br>STANDING WATER  |  | RVAL<br>n)   |  | SUPPLY   |   |           | тот.       | AL DISSO      | LVED SO     | DLIDS     |        |
|                         | $\mathbf{AQ}^{T}$  | UIFER       |            | (m)                           | (m)   | From   | То   | L/sec  | Test length  | M   | ethod     | mg/L       |               | A           | nalysis N | lo.    |
|                         | SUM  | IMARY       |            |                               |   |  |  |  |  |   |           |            |               |             |           |        |
| DEPT                    | H (m)  | GRAPHIC     |            | /SEDIMENT                     |   | GEO  | I OGICA  | AL DESCRIPTION   | ON   |   | FORM A    | ATION/AGE  | Depth<br>Core |             | CASINO    |        |
| From                    | То   | LOG         |            | NAME                          |   |  |  |  |  |   | TORWI     | MITOWAGE   | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0<br>0.5<br>4<br>5<br>6 | <ul><li>0.5</li><li>4</li><li>5</li><li>6</li><li>8</li><li>10</li></ul> |             |            | Clay Clay Clay Clay Sand Sand | Dark brown clay. High Micaceous.  Light brown slightly sisticky. Micaceous, grit moderate plasticity, ro  Light grey clay. Mode greasy. Orange/brown  Dark grey clay. Low d  Light brown medium/c angular to sub rounded.  Light brown coarse que to sub rounded, 0.6-1.8 | ilty clay<br>ty. Non<br>llable, s<br>rate/low<br>banding<br>ensity, l<br>coarse q<br>l, 0.2-1. | v. Low don-silty lighticky, slow density g. Micacon high plantage and the same of the same | density, high plassight brown clay be lightly greasy. Moreous.  sticity, rollable, so and. Well sorted, dicaceous. | ticity, rollable, slig<br>ands. Moderate de<br>icaceous.<br>plasticity, rollable<br>sticky, greasy. Mi-<br>clear and cloudy,<br>ear and cloudy, su | ghtly<br>ensity,<br>e, sticky,<br>caceous.<br>sub |           |            |               | 80          | 0         | 38     |
| REMA                    | RKS: S   | creened 38- | 40m        |                               |   |  |  |  |  |   | DRILL TY  | PE: Auger  | COMPLI        | ETED: 30    | 0/3/04    |        |
|                         |  |             |            |                               |   |  |  |  |  |   | DRILL FL  | UID: Mud   | LOGGEI        | D BY: Z.    | Marsden   |        |
| İ                       |  |             |            |                               |   |  |  |  |  |   | DATE: 30/ | 73/04      | SHEET         | 1 OF 3      |           |        |



| <b>PROJECT:</b> Chowilla Monitoring Network |
|---|
| Expansion                                   |

PERMIT No. 64232

UNIT No. 7030-718

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Depth<br>Core | C           | CASINO   | j         |
|------|-------|---------|---------------|--|---------------|---------------|-------------|----------|-----------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To<br>(m) |
| 10   | 12    |         | Sand          | Light grey medium quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, approx 40% coarse sand up to 1.5mm. Micaceous.                        |               |               |             | , ,      |           |
| 12   | 14    |         | Sand          | Light grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.5mm, approx 20% medium sand. Micaceous.                                    |               |               |             |          |           |
| 14   | 16    |         | Sand          | Medium grey medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.5mm. Micaceous, lignite.   |               |               |             |          |           |
| 16   | 18    |         |               | Medium grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.8mm, approx 30% medium sand. Micaceous.                                   |               |               |             |          |           |
| 18   | 20    |         |               | Light grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.8mm, traces up to 2mm, approx 30% medium sand. Micaceous, grey clay blebs. |               |               |             |          |           |
| 20   | 22    |         | Clayey Sand   | Light grey clayey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.8mm, approx 30% medium sand. Micaceous.                             |               |               |             |          |           |
| 22   | 24    |         | Sand          | Light grey fine/medium quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm, approx 30% coarse sand up to 1.5mm. Micaceous.                   |               |               |             |          |           |
| 24   | 28    | 8 Sand  |               | Medium grey fine/medium quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm, approx 25% coarse sand up to 2mm. Micaceous.                    |               |               |             |          |           |
| 28   | 30    |         | Sand          | Medium grey medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1mm. Micaceous.  |               |               |             |          |           |
|      |       |         |               |  |               | SHEET 2       | 2 OF 3      |          |           |



| PROJECT: Chowilla Monitoring Networl | k |
|--------------------------------------|---|
| Expansion                            |   |

**PERMIT No. 64232** 

UNIT No. 7030-718

| DEPT | H (m) | GRAPHIC         | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION   | EODMATION/ACE | Depth<br>Core | C           | CASINO   | j      |
|------|-------|-----------------|---------------|--|---------------|---------------|-------------|----------|--------|
| From | То    | LOG             | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To (m) |
| 30   | 31    |                 | Sand          | Dark brown medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.8mm. Slightly silty. Micaceous.   |               |               |             |          |        |
| 31   | 33    |                 | Sand          | Medium grey medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1mm. Micaceous.  |               |               |             |          |        |
| 33   | 34    |                 | Sand          | Dark brown medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1mm. Slightly silty. Micaceous.   |               |               |             |          |        |
| 34   | 35    | Silty Sand Clay |               | Dark brown silty medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-2mm. Micaceous.   |               |               |             |          |        |
| 35   | 36    | Clay Silty Sand |               | Dark brown clay. Low density, high plasticity, rollable, sticky, slightly greasy. Slightly sandy. Micaceous.   |               |               |             |          |        |
| 36   | 40    |                 | Silty Sand    | Dark brown silty fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm. Micaceous. Sandy clay interlayers. Low density, high plasticity, rollable, sticky, slightly greasy. Micaceous. |               |               |             |          |        |
|      |       |                 |               |  |               |               |             |          |        |
|      |       |                 |               |  |               | SHEET 3       | 3 OF 3      |          |        |



PROJECT: Chowilla Monitoring Network Expansion

|      | A STATE OF THE REAL PROPERTY.  |             |  |  |   | XX/      | TFP '      | WELL LOG           |                        |        |              |             |                |             |           |        |
|------|--|-------------|--|--|---|----------|------------|--------------------|------------------------|--------|--------------|-------------|----------------|-------------|-----------|--------|
| Wa   | The Department of<br>Water, Land and<br>Biodiversity<br>Conservation |             |  |  |   | VV F     | X I LIX    | WELL LOG           |                        |        |              | UNIT No. 7  | 030-719        |             |           |        |
|      |  |             | Coordinate   | es: E N  | El.   | Surface( | (m)        | El. Ref. F         | Point(m)               | Oatum: |              | Hundred:    | Sec            | e:          |           |        |
|      |  |             |  | DEPTH TO<br>WATER CUT  | DEPTH TO<br>STANDING WATER  |          | RVAL<br>m) |                    | SUPPLY                 |        |              | ТОТ         | AL DISSO       | LVED SO     | OLIDS     |        |
|      | $\mathbf{AQ}^{\prime}$   | UIFER       |  | (m)  | (m)   | From     | То         | L/sec              | Test length            | Me     | ethod        | mg/L        |                | A           | nalysis N | lo.    |
|      | SUM  | IMARY       |  |  |   |          |            |                    |                        |        |              |             |                |             |           |        |
| DEPT | ГН (m)   | GRAPHIC     | ROCK   | SEDIMENT   |   | CEO      | LOCICA     | AL DESCRIPTIO      | ONI .                  |        | EODM         | A TION/A CE | Depth          | (           | CASIN     | G      |
| From | То   | LOG         | 1  | NAME   |   | GEO      | LUGICA     | AL DESCRIPTIO      | JIN                    |        | FURMA        | ATION/AGE   | Core<br>Sample | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 2  |             |  | Clay   | Medium grey/brown costicky. Micaceous.  | lay. Hig | gh densit  | y, low plasticity, | non-rollable, slightly | У      |              |             |                | 80          | 0         | 6      |
| 2    | 4.5  |             |  | Clay   | Light grey/brown clay<br>Orange/brown seams.  |          |            | low plasticity, no | ticky.                 |        |              |             |                |             |           |        |
| 4.5  | 5.5  |             | Sai  | ndy Clay   | Medium grey sandy clay. Moderate density, moderate plasticity, rollable, sticky, greasy. Micaceous. |          |            |                    |                        |        |              |             |                |             |           |        |
| 5.5  | 6.5  |             | Si   | lty Sand   | Medium grey silty fine  | quartz   | sand. Sl   | lightly clayey. M  | icaceous.              |        |              |             |                |             |           |        |
| 6.5  | 7.5  |             |  | Sand Medium grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.5mm, approx 30% medium sand. Micaceous, lignite. |   |          |            |                    |                        |        |              |             |                |             |           |        |
| 7.5  | 8  |             | Sand Light brown coarse quartz sand. Moderately sorted, clear and cloudy, sub anguto sub rounded, 0.6-1.8mm, approx 20% medium sand. Micaceous, traces of lignite. |  |   |          |            |                    |                        |        |              |             |                |             |           |        |
| REMA | ARKS: S  | creened 6-8 | 3m   |  |   |          |            |                    |                        |        | DRILL TY     | PE: Auger   | COMPL          | ETED: 1/    | 4/04      | 1      |
|      |  |             |  |  |   |          |            |                    |                        |        | DRILL FL     | UID: Mud    | LOGGE          | D BY: Z.    | Marsden   |        |
|      |  |             |  |  |   |          |            |                    |                        | 1/04   | SHEET 1 OF 1 |             |                |             |           |        |



PROJECT: Chowilla Monitoring Network Expansion

|                  |                    |             |  |                       |     | <b>XX</b> 7 A | TED        | WELL LOG      |             |        |           | I EKWILL IV | U. U <del>1</del> 231 |             |           |        |
|------------------|--------------------|-------------|--|-----------------------|-----|---------------|------------|---------------|-------------|--------|-----------|-------------|-----------------------|-------------|-----------|--------|
| Wat              | Departmenter, Land | d and       |  |                       |     | VV P          | AILK       | WELL LOG      |             |        |           | UNIT No. 7  | 030-720               |             |           |        |
|                  | nserva             |             | Coordinate   | es: E N               | El. | Surface(      | (m)        | El. Ref. F    | Point(m)    | Datum: |           | Hundred:    | Sec                   | e:          |           |        |
|                  |                    |             |  | DEPTH TO<br>WATER CUT |     |               | RVAL<br>m) |               | SUPPLY      |        |           | ТОТ.        | AL DISSO              | LVED SO     | OLIDS     |        |
|                  | $\mathbf{AQ}^{T}$  | UIFER       |  | (m)                   | (m) | From          | То         | L/sec         | Test length | Me     | ethod     | mg/L        |                       | A           | nalysis N | lo.    |
|                  | SUM                | IMARY       |  |                       |     |               |            |               |             |        |           |             |                       |             |           |        |
| DEPT             | H (m)              | GRAPHIC     |  |                       |     | GEO           | LOGICA     | AL DESCRIPTIO | ON          |        | FORM.     | ATION/AGE   | Depth<br>Core         |             | CASING    |        |
| From             | То                 | LOG         |  |                       |     |               |            |               |             |        | 1 OICIVII | THOWNGE     | Sample                | Dia<br>(mm) | From (m)  | To (m) |
| 0<br>3<br>4<br>5 | 3<br>4<br>5<br>7   | avocand 5 7 | C ROCK/SEDIMENT NAME  Clay  Light grey/brown clay. High density, low plasticity, non-rollable, slightly st Micaceous.  Clay  Light brown clay. High density, low plasticity, non-rollable, slightly sticky. Orange/brown seams. Micaceous.  Sandy Clay  Light grey sandy clay. Moderate density, moderate plasticity, rollable, stick greasy. Orange/brown seams. Micaceous.  Sand  Medium grey medium/coarse quartz sand. Well sorted, clear and cloudy, su angular to sub rounded, 0.2-0.8mm. Micaceous. |                       |     |               |            |               |             |        |           |             |                       | 80          | 0         | 5      |
| REMA             | KKS: S             | creened 5-7 | m  |                       |     |               |            |               |             |        | DRILL TY  | PE: Auger   | COMPL                 | ETED: 1/    | 4/04      |        |
|                  |                    |             |  |                       |     |               |            |               |             |        | DRILL FL  | UID: Mud    | LOGGE                 | D BY: N.    | Rammer    | s      |
|                  |                    |             |  |                       |     |               |            |               |             |        | DATE: 1/4 | 1/04        | SHEET                 | 1 OF 1      |           |        |



PROJECT: Chowilla Monitoring Network Expansion

|      | The Department of<br>Water, Land and<br>Biodiversity |              |   |                       |   | WA       | TFR       | WELL LOG             |                      |           |          | PERMIT N   | 0. 04235      |             |           |        |
|------|--|--------------|---|-----------------------|---|----------|-----------|----------------------|----------------------|-----------|----------|------------|---------------|-------------|-----------|--------|
| Wat  | ter, Land  | d and        |   |                       |   | VV I     |           | WEEL LOG             |                      |           |          | UNIT No. 7 | 030-721       |             |           |        |
|      | nserva   | tion         | Coordinate  | es: E N               | El.   | Surface( | m)        | El. Ref. F           | Point(m)             | Datum:    |          | Hundred:   | Sec           | : <b>:</b>  |           |        |
|      |  |              |   | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                    | I .      | RVAL      |                      | SUPPLY               |           |          | тот.       | AL DISSO      | LVED SC     | DLIDS     |        |
|      | $\mathbf{AQ}^{T}$                                    | UIFER        |   | (m)                   | (m)   | From     | То        | L/sec                | Test length          | M         | lethod   | mg/L       |               | A           | nalysis N | o.     |
|      | SUM  | IMARY        |   |                       |   |          |           |                      |                      |           |          |            |               |             |           |        |
| DEPT | 'H (m)   | GRAPHIC      | l   | SEDIMENT              |   | GEO      | LOGICA    | AL DESCRIPTIO        | )N                   |           | FORMA    | ATION/AGE  | Depth<br>Core |             | CASINO    |        |
| From | То   | LOG          | 1   | NAME                  |   |          |           |                      |                      |           | TORWIZ   | TION/AGE   | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 2  |              |   | Clay                  | Grey clay. High densi                         | ty, low  | plasticit | ty, non-rollable,    | non-sticky. Mica     | ceous.    |          |            |               | 80          | 0         | 8      |
| 2    | 4  |              |   | Clay                  | Light brown/grey. Hig<br>Micaceous.           | h densi  | ty, low p | plasticity, non-rol  |                      |           |          |            |               |             |           |        |
| 4    | 5  |              |   | Clay                  | Fawn/light brown sand sticky. Micaceous.      |          |           |                      |                      |           |          |            |               |             |           |        |
| 5    | 6  |              |   | Clay                  | Dark grey clay. Low d                         | ensity,  | high pla  | sticity, rollable, s | ticky, greasy. M     | icaceous. |          |            |               |             |           |        |
| 6    | 8  |              | Saı   | ndy Clay              | Dark grey sandy clay. content increasing with |          |           |                      | lable, slightly stic | cky. Sand |          |            |               |             |           |        |
| 8    | 10   |              | Sand Light brown coarse quartz sand/fine gravel. Poorly sorted, clear and cloudy angular to sub rounded, 0.6-2.8mm. Micaceous, lignite. |                       |   |          |           |                      |                      |           |          |            |               |             |           |        |
|      |  |              |   |                       |   |          |           |                      |                      |           |          |            |               |             |           |        |
| REMA | RKS: S   | creened 8-10 | 0m  |                       | 1   |          |           |                      |                      |           | DRILL TY | PE: Auger  | COMPLI        | ETED: 20    | /3/04     |        |
|      |  |              |   |                       |   |          |           |                      |                      |           | DRILL FL | UID: Mud   | LOGGEI        | DBY: Z.     | Marsden   |        |
|      |  |              |   |                       |   |          |           |                      |                      | DATE: 20/ | 3/04     | SHEET      | 1 OF 1        |             |           |        |



PROJECT: Chowilla Monitoring Network Expansion

|                       |                        | TOO THE     |            |                                  |   | W  | ATER V   | WELL LOG  | <u>-</u>   |                                 |          | PERMIT N   | 0. 64236      | 1           |           |        |
|-----------------------|------------------------|-------------|------------|----------------------------------|---|--|--|---|--|---------------------------------|----------|------------|---------------|-------------|-----------|--------|
| Wa                    | Departmenter, Land     | d and       |            |                                  |   | VV F   | AIEK (   | WELL LOG  |  |                                 |          | UNIT No. 7 | 030-722       |             |           |        |
|                       | nserva                 |             | Coordinate | es: E N                          | El.   | Surface(   | (m)  | El. Ref. I  | Point(m)   | Datum:                          |          | Hundred:   | Sec           | <b>::</b>   |           |        |
|                       |                        |             |            | DEPTH TO<br>WATER CUT            | DEPTH TO STANDING WATER   |  | RVAL<br>m)   |   | SUPPLY   |                                 |          | ТОТ        | AL DISSO      | LVED SO     | DLIDS     |        |
|                       | $\mathbf{AQ}^{T}$      | UIFER       |            | (m)                              | (m)   | From   | То   | L/sec   | Test length  | N                               | lethod   | mg/L       | ,             | A           | nalysis N | lo.    |
|                       | SUM                    | IMARY       |            |                                  |   |  |  |   |  |                                 |          |            |               |             |           |        |
| DEPT                  | 'H (m)                 | GRAPHIC     | ROCK       | SEDIMENT                         |   | GEO  | I OGICA  | L DESCRIPTION   | )N   |                                 | FORM     | ATION/AGE  | Depth<br>Core | (           | CASING    | G      |
| From                  | То                     | LOG         | ľ          | NAME                             |   |  |  |   |  |                                 | TOKWIZ   | ATION/AGE  | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0<br>2<br>4<br>6<br>8 | 2<br>4<br>6<br>8<br>10 | creened 8-1 | Sai        | Clay  ndy Clay  Sand  Sand  Sand | Light grey slightly silt slightly sticky. Micace Light grey sandy clay. Sand content increasin Light brown/orange fit angular to sub rounded Light orange medium sub rounded, 0.2-0.6m Light orange coarse quangular to sub rounded | Low do g with one/medial, 0.1-0. quartz sam. Mic | ensity, higher depth. Minim quart defined the control of the contr | gh plasticity, rolicaceous.  Iz sand. Well solicaceous.  Il sorted, clear a | llable, slightly sti<br>rted, clear and clo<br>nd cloudy, sub an | icky.<br>oudy, sub<br>ngular to |          |            |               | 80          | 0         | 8      |
| KEIVIA                | IKKS: S                | creenea 8-1 | om         |                                  |   |  |  |   |  |                                 | DRILL TY | PE: Auger  | COMPL         | ETED: 20    | 0/3/04    |        |
|                       |                        |             |            |                                  |   |  |  |   |  | DRILL FL                        | UID: Mud | LOGGE      | D BY: Z.      | Marsden     |           |        |
| İ                     |                        |             |            |                                  |   |  |  |   |  |                                 | DATE: 20 | /3/04      | SHEET         | 1 OF 1      |           |        |



#### GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

| 1000                    | CARLO DE PERSONAL DE LA COMPANSION DE LA | and the same of th |            |                      |  | $\mathbf{W}$ | MALL       | WELL LOG           |                        |         |          |            |               |             |           |        |
|-------------------------|--|--|------------|----------------------|--|--------------|------------|--------------------|------------------------|---------|----------|------------|---------------|-------------|-----------|--------|
| Wa                      | The Department of<br>Water, Land and<br>Biodiversity<br>Conservation   |  |            |                      |  | VV F         | X I LIX    | WEEL LOG           |                        |         |          | UNIT No. 7 | 030-658       |             |           |        |
|                         |  |  | Coordinate | es: E N              | El.  | Surface(     | m)         | El. Ref. I         | Point(m)               | Datum:  |          | Hundred:   | Sec           | c:          |           |        |
|                         |  |  |            | DEPTH TO<br>WATER CU | DEPTH TO STANDING WATER  |              | RVAL<br>n) |                    | SUPPLY                 |         |          | тот.       | AL DISSO      | LVED SO     | OLIDS     |        |
|                         | $\mathbf{AQ}^{\prime}$   | UIFER  |            | (m)                  | (m)  | From         | То         | L/sec              | Test length            | Me      | ethod    | mg/L       |               | A           | nalysis N | lo.    |
|                         | SUN  | IMARY  |            |                      |  |              |            |                    |                        |         |          |            |               |             |           |        |
| DEPT                    | 'H (m)   | GRAPHIC  | ROCK       | /SEDIMENT            |  | CEO          | LOGIC      | AL DESCRIPTION     | )NI                    |         | FORM     | ATION/AGE  | Depth<br>Core | (           | CASIN     | G      |
| From                    | То   | LOG  | 1          | NAME                 |  | GEO          | LOGIC      | AL DESCRIPTION     | JIN                    |         | FURIVIZ  | ATION/AGE  | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0                       | 2  |  | Si         | lty Clay             | Medium brown silty cl<br>rollable, slightly sticky   |              |            |                    | igh plasticity, slight | tly     |          |            |               | 80          | 0         | 7      |
| 2                       | 5  |  | Si         | lty Clay             | Light/medium brown s   | silty cla    | y. No st   | ructure, rollable, | sticky. Micaceous,     | gritty. |          |            |               |             |           |        |
| 5                       | 6  |  |            | Clay                 | Light/medium brown of sticky. Micaceous, grit  |              |            |                    |                        |         |          |            |               |             |           |        |
| 6                       | 7  |  |            | Clay                 | Light brown clay and silty clay interlayers. High density, low plasticity, non-rollable, slightly sticky. Orange/brown sandy seams. Micaceous, gritty.                                   |              |            |                    |                        |         |          |            |               |             |           |        |
| 7                       | 8  |  |            | Sand                 | Light grey and light orange/brown fine/medium quartz sand interlayers. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.4mm, traces of coarse sand up to 1mm. Micaceous. |              |            |                    |                        |         |          |            |               |             |           |        |
| 8                       | 9  |  |            | Sand                 | Orange/brown fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm, approx 10% coarse sand up to 1mm. Micaceous.                                 |              |            |                    |                        |         |          |            |               |             |           |        |
| REMARKS: Screened 7-10m |  |  |            |                      | I  |              |            |                    |                        |         | DRILL TY | PE: Auger  | COMPL         | ETED: 18    | 3/3/04    |        |
|                         |  |  |            |                      |  |              |            |                    |                        |         | DRILL FL | UID: Mud   | LOGGE         | D BY: Z.    | Marsden   |        |
|                         |  |  |            |                      |  |              |            |                    |                        |         | DATE: 18 | /3/04      | SHEET         | 1 OF 2      |           |        |



| <b>PROJECT:</b> Chowilla Monitoring Network Expansion |
|---|
| PERMIT No. 64237                                      |

UNIT No. 7030-658

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | CEOLOCICAL DESCRIPTION   | FORMATION/AGE | Depth          |             | CASING   | j      |
|------|-------|---------|---------------|--|---------------|----------------|-------------|----------|--------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To (m) |
| 9    | 10    |         | Sand          | Orange/brown fine/medium quartz sand. Well sorted, clear & cloudy, sub angular to sub rounded, 0.1-0.6mm, approx 25% coarse sand up to 1mm. Micaceous. |               | Sample         | (mm)        | (m)      | (m)    |
|      |       |         |               |  |               | SHEET 2        | 2 OF 2      |          |        |



PROJECT: Chowilla Monitoring Network Expansion

|      | and the same of the same of |              |            |   |  | W   | TFD '      | WELL LOG           |                          |          |          | I LIWITI IV | 0. 01230       | •           |           |        |  |
|------|-----------------------------|--------------|------------|---|--|---|------------|--------------------|--------------------------|----------|----------|-------------|----------------|-------------|-----------|--------|--|
| Wa   | Departm<br>ter, Lan         | d and        |            |   |  | VV F  | AILK       | WELL LOG           |                          |          |          | UNIT No. 7  | 030-659        |             |           |        |  |
|      | nserva                      |              | Coordinate | es: E N   | El.  | . Surface(  | (m)        | El. Ref.           | Point(m)                 | Datum:   |          | Hundred:    | Sec            | c:          |           |        |  |
|      |                             |              |            | DEPTH TO<br>WATER CUT   | DEPTH TO<br>STANDING WATER                     |   | RVAL<br>m) |                    | SUPPLY                   |          |          | тот         | AL DISSO       | LVED S      | OLIDS     |        |  |
|      | AQ                          | UIFER        |            | (m)   | (m)  | From  | То         | L/sec              | Test length              | Me       | thod     | mg/L        |                | A           | nalysis N | lo.    |  |
|      | SUM                         | MARY         |            |   |  |   |            |                    |                          |          |          |             |                |             |           |        |  |
| DEPT | TH (m)                      | GRAPHIC      | ROCK       | SEDIMENT  |  | CEO   | LOCICA     | AL DECCRIPTION     | ON                       |          | EODM     | ATION/AGE   | Depth          | (           | CASIN     | G      |  |
| From | То                          | LOG          | N          | NAME  |  | GEO.  | LUGICA     | AL DESCRIPTION     | ON                       |          | FURMA    | ATION/AGE   | Core<br>Sample | Dia<br>(mm) | From (m)  | To (m) |  |
| 0    | 2                           |              | Si         | lty Clay  | Dark orange/brown sil Micaceous.               | ty clay.  | Low de     | ensity, high plast | ticity, rollable, non-st | ticky.   |          |             |                | 80          | 0         | 17     |  |
| 2    | 4                           |              |            | Clay  |  |   |            |                    |                          |          |          |             |                |             |           |        |  |
| 4    | 6                           |              |            | Clay  | Light brown clay. Mod sticky. Orange/brown     |   |            |                    |                          |          |          |             |                |             |           |        |  |
| 6    | 8                           |              | Sar        | ndy Clay  | Light grey sandy clay.<br>sticky. Orange/brown |   |            |                    | ightly rollable, slightl |          |          |             |                |             |           |        |  |
| 8    | 10                          |              |            | Sand Orange fine/medium quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm, approx 30% coarse sand up to 1.8mm. Micaceous, clay blebs. |  |   |            |                    |                          |          |          |             |                |             |           |        |  |
| 10   | 15                          |              |            | Sand  |  | Orange medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to ub rounded, 0.2-1.2mm. Micaceous. |            |                    |                          |          |          |             |                |             |           |        |  |
| REMA | RKS: S                      | Screened 17- | 20m        |   | 1  |   |            |                    |                          |          | DRILL TY | PE: Auger   | COMPL          | ETED: 1     | 8/3/04    | 1      |  |
|      |                             |              |            |   |  |   |            |                    | DRILL FL                 | UID: Mud | LOGGE    | D BY: Z.    | Marsden        |             |           |        |  |
|      |                             |              |            |   |  |   |            |                    |                          |          |          | /3/04       | SHEET 1 OF 2   |             |           |        |  |



| <b>PROJECT:</b> Chowilla Monitoring Network |
|---|
| Expansion                                   |
| PERMIT No. 64238                            |

UNIT No. 7030-659

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Depth<br>Core |             | CASINO   |           |
|------|-------|---------|---------------|--|---------------|---------------|-------------|----------|-----------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION   | TORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To<br>(m) |
| 15   | 16    |         | Sand          | Grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, approx 25% medium sand. Micaceous, lignite.           |               |               |             |          | , ,       |
| 16   | 18    |         | Sand          | Grey medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.2mm. Micaceous, lignite.                                |               |               |             |          |           |
| 18   | 20    |         | Sand          | Grey coarse quartz sand. Moderately sorted, clear & cloudy, sub angular to sub rounded, 0.6-1.5mm, approx 20% medium sand. Micaceous, traces of lignite. |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               | SHEET 2       | 2 OF 2      |          |           |



PROJECT: Chowilla Monitoring Network Expansion

| The  | Departme  | ent of        |            |                       |  |          |            | WELL LOG           | vi               |               |           | PERMIT N       |             |           |            |     |
|------|---|---------------|------------|-----------------------|--|----------|------------|--------------------|------------------|---------------|-----------|----------------|-------------|-----------|------------|-----|
| Wat  | ter, Land<br>diver  | d and<br>sity |            |                       |  |          |            |                    |                  |               |           | UNIT No. 7     | 030-728     |           |            |     |
| Cor  | nserva  | tion          | Coordinate | es: E N               | El.  | Surface( | m)         | El. Ref. P         | Point(m)         | Datum:        |           | Hundred:       | Sec         | <b>::</b> |            |     |
|      |   |               |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                                     | l .      | RVAL<br>n) |                    | SUPPLY           |               |           | ТОТ            | AL DISSO    | LVED S    | OLIDS      |     |
|      | AQ  | UIFER         |            | (m)                   | (m)  | From     | То         | L/sec              | Test length      | h N           | Method    | mg/L           |             | A         | analysis N | lo. |
|      | SUM   | IMARY         |            |                       |  |          |            |                    |                  |               |           |                |             |           |            |     |
| DEPT | H (m) To GRAPHIC LOG ROCK/SEDIMENT NAME GEOLOGICAL DESCRIPTION  |               |            |                       |  |          |            |                    |                  |               | EODM      | ATION/ACE      | Depth       | (         | CASINO     |     |
| From | To NAME   |               |            |                       |  |          |            |                    |                  | FORM          | ATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m)  | To (m)     |     |
| 0    | 1   |               |            |                       | Medium/dark brown consticky. Micaceous.                        | slightly |            |                    |                  | 80            | 0         | 6              |             |           |            |     |
| 1    | Sandy Clay Fawn/light brown sandy clay. Moderate density, moderate plasticity, slightly rollable, slightly sticky. Micaceous. |               |            |                       |  |          |            |                    | slightly         |               |           |                |             |           |            |     |
| 2    | 5   |               | Sai        |                       | Fawn/light brown sand<br>moderate/low plasticity<br>Micaceous. |          |            |                    |                  |               |           |                |             |           |            |     |
| 5    | 6   |               |            |                       | Light brown/fawn fine angular to sub rounded                   |          |            |                    | ed, clear and cl | oudy, sub     |           |                |             |           |            |     |
| 6    | 8   |               |            |                       | Light grey fine/mediur sub rounded, 0.1-0.4m                   |          |            | Vell sorted, clear | and cloudy, si   | ub angular to |           |                |             |           |            |     |
| REMA | RKS: S  | creened 6-8   | m          |                       |  |          |            |                    |                  |               |           |                | 90          |           | 11/04      |     |
|      |   |               |            |                       |  |          |            |                    |                  |               | DRILL TY  | YPE: Auger     | COMPLI      | ETED: 5/  | 4/04       |     |
|      |   |               |            |                       |  |          |            |                    |                  |               | DRILL FL  | LUID: Mud      | LOGGEI      | D BY: Z.  | Marsden    |     |
|      |   |               |            |                       |  |          |            |                    |                  |               | DATE: 5/4 | 4/04           | SHEET       | 1 OF 1    |            |     |



PROJECT: Chowilla Monitoring Network Expansion

|      |  |   |            |                       |   | <b>XX</b> 7 A | TED            | WELL LOG          |                         |           |          | I LIMITI II | 0. 01215              |              |           |        |
|------|--|---|------------|-----------------------|---|---------------|----------------|-------------------|-------------------------|-----------|----------|-------------|-----------------------|--------------|-----------|--------|
| Wat  | Departm<br>ter, Land<br>odiver   | d and   |            |                       |   | VV F          |                | WELL LOG          |                         |           |          | UNIT No. 7  | 030-729               |              |           |        |
|      | nserva   |   | Coordinate | es: E N               | El.   | Surface(      | (m)            | El. Ref. I        | Point(m)                | Datum:    |          | Hundred:    | Sec                   | <b>::</b>    |           |        |
|      |  |   |            | DEPTH TO<br>WATER CUT |   | l .           | RVAL<br>m)     |                   | SUPPLY                  |           |          | тот         | AL DISSO              | LVED SO      | OLIDS     |        |
|      | $\mathbf{AQ}^{\prime}$   | UIFER   |            | (m)                   | (m)   | From          | То             | L/sec             | Test length             | Me        | ethod    | mg/L        |                       | A            | nalysis N | lo.    |
|      | SUM  | IMARY   |            |                       |   |               |                |                   |                         |           |          |             |                       |              |           |        |
| DEPT | H (m)  | GRAPHIC   | 1          | SEDIMENT              |   | GEO           | LOGIC <i>!</i> | AL DESCRIPTION    | ON                      |           | FOR M.   | ATION/AGE   | Depth<br>Core         |              | CASIN     |        |
| From | То   | LOG   | N          | NAME                  |   |               |                |                   |                         |           | 1 ORIVIZ | THOWAGE     | Sample                | Dia<br>(mm)  | From (m)  | To (m) |
| 0    | 1  | Clay Dark brown clay. High density, low plasticity, non-rollable, slightly sticky. Micaceous. |            |                       |   |               |                |                   |                         |           |          |             |                       | 80           | 0         | 23     |
| 1    | 2  |   | Saı        | ndy Clay              | Light brown/fawn sand slightly sticky. Micace   |               | Modera         | te density, mode  | erate plasticity, rolla | able,     |          |             |                       |              |           |        |
| 2    | 5  |   | Saı        | ndy Clay              | Light brown/fawn sandy clay. Moderate/high density, moderate/low plasticity, slightly rollable, slightly sticky. Orange/brown seams. Micaceous. |               |                |                   |                         |           |          |             |                       |              |           |        |
| 5    | 7  |   |            | Sand                  | Light brown/fawn fine angular to sub rounded  |               |                |                   | ed, clear and cloudy    | y, sub    |          |             |                       |              |           |        |
| 7    | 10   |   |            | Sand                  | Light grey medium quarounded, 0.2-0.6mm. M  |               |                | sorted, clear and | l cloudy, sub angula    | ar to sub |          |             |                       |              |           |        |
| 10   | 10 Gravelly Sand Medium grey gravelly quartz sand. Poorly sorted, clear and cloudy, sub angula to sub rounded, 0.2-3mm. Micaceous, lignite, grey clay blebs. |   |            |                       |   |               |                |                   | ngular                  |           |          |             |                       |              |           |        |
| REMA | RKS: S   | creened 23-   | 25m        |                       |   |               |                |                   |                         |           | DRILL TY | PE: Auger   | COMPL                 | <br>ETED: 6/ | 4/04      |        |
|      |  |   |            |                       |   |               |                |                   |                         |           | DRILL FL |             | LOGGED BY: Z. Marsden |              |           |        |
|      |  |   |            |                       |   |               |                |                   |                         |           |          |             |                       |              |           |        |
|      |  |   |            |                       |   |               |                |                   |                         | DATE: 6/4 | 1/04     | SHEET       | 1 OF 2                |              |           |        |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |
|                                      |

**PERMIT No. 64245** 

UNIT No. 7030-729

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Depth<br>Core |             | CASING   | j         |
|------|-------|---------|---------------|---|---------------|---------------|-------------|----------|-----------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To<br>(m) |
| 12   | 14    |         | Gravelly Sand | Medium grey gravelly and clayey sand. Poorly sorted, clear and cloudy, sub angular to sub rounded, 0.2-4mm. Micaceous, lignite.                           |               |               | , ,         | ` ,      | , ,       |
| 14   | 16    |         | Sand          | Light grey medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.2mm. Micaceous, traces of lignite.                 |               |               |             |          |           |
| 16   | 18    |         | Gravelly Sand | Light grey coarse quartz sand/fine gravel. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2.2mm, approx 10% medium sand. Micaceous. |               |               |             |          |           |
| 18   | 20    |         | Sand          | Light grey medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1mm. Micaceous.                                      |               |               |             |          |           |
| 20   | 24    |         | Sand          | Light brown coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.8mm, approx 10% medium sand. Micaceous, lignite.   |               |               |             |          |           |
| 24   | 25    |         | Sand          | Light brown coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.6mm, approx 30% medium sand. Micaceous.            |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               | SHEET 2       | 2 OF 2      |          |           |



PROJECT: Chowilla Monitoring Network Expansion

| Lower S | CONTRACTOR OF THE PARTY  |             |            |                      |   | XX/      | TFR        | WELL LOG          |                          |                           |           |            |               |             |           |        |
|---------|--|-------------|------------|----------------------|---|----------|------------|-------------------|--------------------------|---------------------------|-----------|------------|---------------|-------------|-----------|--------|
| Wa      | Departmenter, Land   | dand        |            |                      |   | VV F     | X I LIX    | WELL LOG          |                          |                           |           | UNIT No. 7 | 030-734       |             |           |        |
|         | nserva   |             | Coordinate | es: E N              | El.   | Surface( | (m)        | El. Ref.          | Point(m)                 | Datum:                    |           | Hundred:   | Sec           | e <b>:</b>  |           |        |
|         |  |             |            | DEPTH TO<br>WATER CU | DEPTH TO STANDING WATER   |          | RVAL<br>m) |                   | SUPPLY                   |                           |           | ТОТ        | AL DISSO      | LVED SO     | OLIDS     |        |
|         | $\mathbf{AQ}^{T}$  | UIFER       |            | (m)                  | (m)   | From     | То         | L/sec             | Test length              | Me                        | thod      | mg/L       |               | A           | nalysis N | lo.    |
|         | SUM  | IMARY       |            |                      |   |          |            |                   |                          |                           |           |            |               |             |           |        |
| DEPT    | H (m)  | GRAPHIC     | 1          | /SEDIMENT            |   | GEO      | LOGIC      | AL DESCRIPTION    | ON                       |                           | FORM      | ATION/AGE  | Depth<br>Core |             | CASIN     |        |
| From    | То   | LOG         |            | NAME                 |   |          |            |                   |                          |                           | T OICIVII | THOWNGE    | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 1       | 3  |             |            | Clay<br>ndy Clay     | Medium/dark brown cl<br>sticky. Micaceous.<br>Fawn/light brown sand<br>sticky. Orange sandy s | , , ,    |            |                   |                          |                           | 80        | 0          | 33            |             |           |        |
| 3       | 4  |             |            | Clay                 | Fawn/light grey clay. High density, low plasticity, non-rollable, slightly sticky. Micaceous. |          |            |                   |                          |                           |           |            |               |             |           |        |
| 4       | 6  |             | Sar        | ndy Clay             | Fawn/light grey sandy slightly sticky. Micace   |          | Ioderate   | e density, modera | ate plasticity, rollable | е,                        |           |            |               |             |           |        |
| 6       | 8  |             |            | Sand                 | Light grey fine/mediur sub rounded, 0.1-0.4m  |          |            | Well sorted, clea | r and cloudy, sub ang    | gular to                  |           |            |               |             |           |        |
| 8       | Sand Light grey medium quartz sand. Well sorted, clear and cloudy, sub angular to rounded, 0.2-0.6mm. Micaceous. |             |            |                      |   |          |            |                   | r to sub                 |                           |           |            |               |             |           |        |
| REMA    | RKS: S   | creened 33- | 35m        |                      | ,   |          |            |                   |                          |                           | DRILL TY  | PE: Auger  | COMPL         | ETED: 5/    | 4/04      | 1      |
|         |  |             |            |                      |   |          |            |                   |                          |                           | DRILL FL  | UID: Mud   | LOGGEI        | D BY: Z.    | Marsden   |        |
|         |  |             |            |                      |   |          |            |                   |                          | DATE: 5/4/04 SHEET 1 OF 2 |           |            |               |             |           |        |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |
|                                      |

**PERMIT No. 64251** 

UNIT No. 7030-734

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Depth<br>Core | C           | CASINO   | <u>.</u> |
|------|-------|---------|---------------|---|---------------|---------------|-------------|----------|----------|
| From | To    | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To (m)   |
| 10   | 12    |         | Gravelly Sand | Medium grey gravelly quartz sand. Poorly sorted, clear and cloudy, sub angular to sub rounded, 0.2-3mm. Micaceous, lignite, grey clay blebs.              |               |               |             |          |          |
| 12   | 14    |         | Gravelly Sand | Medium grey gravelly and clayey sand. Poorly sorted, clear and cloudy, sub angular to sub rounded, 0.2-4mm. Micaceous, lignite.                           |               |               |             |          |          |
| 14   | 16    |         | Sand          | Light grey medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.2mm. Micaceous.                                    |               |               |             |          |          |
| 16   | 18    |         | Gravelly Sand | Light grey coarse quartz sand/fine gravel. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2.2mm, approx 10% medium sand. Micaceous. |               |               |             |          |          |
| 18   | 20    |         | Sand          | Light grey medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1mm. Micaceous.                                      |               |               |             |          |          |
| 20   | 22    |         | Sand          | Light brown coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.6-1mm, approx 10% medium sand. Micaceous, lignite.           |               |               |             |          |          |
| 22   | 28    |         | Sand          | Light brown coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.5mm, approx 30% medium sand. Micaceous.            |               |               |             |          |          |
| 28   | 31    |         | Sand          | Light brown coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.8-1.8mm. Micaceous.  |               |               |             |          |          |
| 31   | 32    |         | Silty Gravel  | Medium grey silty quartz gravel. Moderately sorted, clear and cloudy, sub angular to sub rounded, 2-3mm. Micaceous.                                       |               |               |             |          |          |
| 32   | 35    |         | Silty Sand    | Dark grey silty sand, approx 25% gravels up to 3mm. Micaceous.  |               |               |             |          |          |
|      |       |         |               |   |               | SHEET 2       | 2 OF 2      |          |          |



PROJECT: Chowilla Monitoring Network Expansion

| Wat                | Departmer, Land<br>er, Land<br>diver  | dand<br>sity<br>tion | Coordinate | DEPTH TO WATER CUT (m) | <b>DEPTH TO</b> | WA Surface( | MTER V | WELL LOG  El. Ref. F | Point(m) SUPPLY  |     |          |                         | <b>Sec</b> TAL DISSO | c:<br>LVED S |                   |        |
|--------------------|---|----------------------|------------|------------------------|-----------------|-------------|--------|----------------------|--|-----|----------|-------------------------|----------------------|--------------|-------------------|--------|
|                    |   | UIFER<br>IMARY       |            | ()                     | (III)           | From        | То     | L/sec                | Test lengt   | h I | Method   | mg/L                    |                      | A            | analysis N        | ю.     |
| DEPT               | H (m)   | GRAPHIC              | ROCK       | /SEDIMENT              |                 | CEO         | LOCICA | I DESCRIPTIO         | ) NI   | I   | EODM     | A TION/A CE             | Depth                |              | CASING            | <br>G  |
| From               | To CRAPHIC LOG NAME GEOLOGICAL DESCRIPTION  Silty Clay Light grey silty clay. Low density, high plasticity, rollable, sticky. Mica  |                      |            |                        |                 |             |        |                      |  |     | FUKMA    | ATION/AGE               | Core<br>Sample       | Dia<br>(mm)  | From (m)          | To (m) |
| 0<br>2<br>4<br>5.5 | Silty Clay  Light grey silty clay. Low density, high plasticity, rollable, sticky. Micaceo gritty.  Light grey/brown silty fine/medium quartz sand. Well sorted, clear and clou sub angular to sub rounded, 0.1-0.5mm. Orange/brown sandy seams. Micaceous.  Clay  Medium grey clay. Moderate/low density, moderate/high plasticity, rollable sticky. Dark brown sandy seams. Micaceous.  Medium grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, approx 10% fine gravel up top 2.3mm, approx 30% medium sand. Micaceous, lignite coming through at end.  Light grey/brown coarse quartz sand. Moderately sorted, clear and cloudy, angular to sub rounded, 0.6-2mm, traces of fine gravel, approx 30% medium sand. Micaceous, lignite. |                      |            |                        |                 |             |        |                      | nd cloudy,<br>Micaceous.<br>ollable,<br>v, sub<br>mm, approx |     |          |                         | 80                   | 0            | 6                 |        |
| ŒMA                | KKS: S  | creened 6-8          | m          |                        |                 |             |        |                      |  |     |          | YPE: Auger<br>LUID: Mud | LOGGE                |              | 9/3/04<br>Marsden |        |
|                    |   |                      |            |                        |                 |             |        |                      |  |     | DATE: 19 | /3/04                   | SHEET                | 1 OF 1       |                   |        |



PROJECT: Chowilla Monitoring Network Expansion

PERMIT No. 6/253

| The Department of<br>Water, Land and<br>Biodiversity |                   |              |            |   |                         | WA         | TFR        | WELL LOG      |             |        |           | PERMIT N   | 0. 04255      |             |           |        |
|--|-------------------|--------------|------------|---|-------------------------|------------|------------|---------------|-------------|--------|-----------|------------|---------------|-------------|-----------|--------|
| Wat  | er, Land          | dand         |            |   |                         | VV F       | XILIX      | WELL LOG      |             |        |           | UNIT No. 7 | 030-735       |             |           |        |
|  | nserva            | tion         | Coordinate | es: E N   | El                      | . Surface( | (m)        | El. Ref. F    | Point(m)    | Datum: |           | Hundred:   | Sec           | : <b>:</b>  |           |        |
|  |                   |              |            | DEPTH TO<br>WATER CUT   | DEPTH TO STANDING WATER | l .        | RVAL<br>m) |               | SUPPLY      |        |           | ТОТ.       | AL DISSO      | LVED SC     | DLIDS     |        |
|  | $\mathbf{AQ}^{T}$ | UIFER        |            | (m)   | (m)                     | From       | То         | L/sec         | Test length | M      | ethod     | mg/L       |               | A           | nalysis N | lo.    |
|  | SUM               | IMARY        |            |   |                         |            |            |               |             |        |           |            |               |             |           |        |
| DEPT   | H (m)             | GRAPHIC      | l          | SEDIMENT  |                         | GEO        | I OGICA    | AL DESCRIPTIO | ON          |        | FORM A    | ATION/AGE  | Depth<br>Core |             | CASING    |        |
| From   | То                | LOG          | 1          | NAME  |                         |            |            |               |             |        | TORWI     | THOWAGE    | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| <ul><li>0</li><li>2</li><li>4</li><li>6</li></ul>    | 2<br>4<br>6<br>8  |              |            | Clay  Light brown/grey clay. Low density, high plasticity, rollable, slightly sticky Micaceous, gritty, slightly silty.  Clay  Light grey/brown clay. Low density, high plasticity, rollable, slightly sticky Micaceous, gritty.  Clay  Medium grey clay. Moderate/low density, moderate/high plasticity, rollable sticky. Micaceous.  Sand  Light grey coarse quartz sand. Moderately sorted, clear and cloudy, sub ang to sub rounded, 0.6-2mm, traces of fine gravel up to 3mm, approx 30% med sand. Micaceous, lignite, clay blebs. |                         |            |            |               |             |        |           |            |               | 80          | 0         | 6      |
| REMA   | .RKS: S           | creened 6-81 | m.         |   |                         |            |            |               |             |        | DRILL TY  | PE: Auger  | COMPL         | ETED: 19    | /3/2004   |        |
|  |                   |              |            |   |                         |            |            |               |             |        | DRILL FL  | UID: Mud   | LOGGEI        | DBY: Z.     | Marsden   |        |
| 1  |                   |              |            |   |                         |            |            |               |             |        | DATE: 19/ | 3/2004     | SHEET         | 1 OF 1      |           |        |



PROJECT: Chowilla Monitoring Network Expansion

| The Department of<br>Water, Land and<br>Biodiversity |                       |             |            |                          | WA   | TFR  | WELL LOG   |   |   |                           | PERMIT N  | 0. 04254   |               |             |           |        |
|--|-----------------------|-------------|------------|--------------------------|--|--|--|---|---|---------------------------|-----------|------------|---------------|-------------|-----------|--------|
| Wat  | er, Land              | d and       |            |                          |  | VV F   | XIEK   | WELL LOG  |   |                           |           | UNIT No. 7 | 030-736       |             |           |        |
|  | nserva                |             | Coordinate | es: E N                  | El.  | Surface(   | (m)  | El. Ref. F  | Point(m)  | Datum:                    |           | Hundred:   | Sec           | : <b>:</b>  |           |        |
|  |                       |             |            | DEPTH TO<br>WATER CUT    | DEPTH TO<br>STANDING WATER   |  | RVAL<br>m)   |   | SUPPLY  |                           |           | тот.       | AL DISSO      | LVED SC     | DLIDS     |        |
|  | $\mathbf{AQ}^{T}$     | UIFER       |            | (m)                      | (m)  | From   | То   | L/sec   | Test length   | M                         | ethod     | mg/L       |               | A           | nalysis N | lo.    |
|  | SUM                   | IMARY       |            |                          |  |  |  |   |   |                           |           |            |               |             |           |        |
| DEPT   | H (m)                 | GRAPHIC     |            | SEDIMENT                 |  | GEO  | I OGICA  | AL DESCRIPTIO   | )N  |                           | FORM A    | ATION/AGE  | Depth<br>Core |             | CASING    |        |
| From   | То                    | LOG         | 1          | NAME                     |  |  |  |   |   |                           | TORIVIT   | MITOWAGE   | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0<br>1<br>2<br>3<br>4                                | 1<br>2<br>3<br>4<br>5 |             |            | Clay Clay Clay Clay Clay | Medium brown/grey c Dark brown seams. Mi Medium brown/grey c slightly rollable, slight Medium brown/grey c slightly rollable, slight Medium grey clay. His slightly greasy. Mottle Medium grey clay. Mottle Medium grey clay. Mottle Medium grey clay. Mottle Medium grey clay. Mottle Micaceous. Grey/brow moderate/high plasticit Micaceous. | lay. Mo ly stick lay. Mo ly stick gh dens d yellov oderate on slight | oderate/h<br>y. Dark<br>oderate/h<br>y, greasy<br>ity, low<br>w seams<br>density,<br>tly sandy | high density, mod<br>brown seams. M<br>high density, mod<br>y. Micaceous, sli<br>plasticity, non-ro<br>. Micaceous.<br>moderate plastic<br>y clay bands. Mo | lerate/low plastici<br>icaceous.<br>lerate/low plastici<br>ghtly gritty.<br>ollable, slightly st<br>ity, rollable, stick<br>derate/low densit | ty, ty, icky, xy, greasy. |           |            |               | 80          | 0         | 6      |
| REMA   | RKS: S                | creened 6-8 | m          |                          | <u> </u>   |  |  |   |   |                           | DRILL TY  | PE: Auger  | COMPLI        | ETED: 19    | /5/04     | 1      |
|  |                       |             |            |                          |  |  |  |   |   |                           | DRILL FL  | UID: Mud   | LOGGEI        | DBY: Z.     | Marsden   |        |
|  |                       |             |            |                          |  |  |  |   |   |                           | DATE: 19/ | 5/04       | SHEET         | 1 OF 2      |           |        |



| PRO-<br>Expai | JECT: Chowilla Monitoring Network |
|---------------|-----------------------------------|
| PER           | MIT No. 64254                     |
| UNIT          | Г No. 7030-736                    |

| DEPT | H (m) | GRAPHIC             | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION   | FORMATION/A CE | Depth          | C           | CASING   | j         |
|------|-------|---------------------|---------------|--|----------------|----------------|-------------|----------|-----------|
| From | То    | LOG                 | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE  | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |
| 5    | 6     |                     | Clay          | Medium grey clay. Moderate density, moderate plasticity, rollable, slightly sticky, slightly greasy. Sandy brown seams. Micaceous. Grey sands coming through at end.         |                |                |             |          |           |
| 6    | 7     |                     | Sand          | Light grey medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, approx 30% coarse sand up to 1mm. Micaceous.                            |                |                |             |          |           |
| 7    | 8     | To Clay  Clay  Sand |               | Medium grey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm, approx 20% coarse sand up to 0.9mm. Micaceous, traces of lignite. |                |                |             |          |           |
|      |       |                     |               |  |                |                |             |          |           |
|      |       |                     |               |  |                | SHEET 2        | 2 OF 2      |          |           |



### GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

| 646  | Control of the said  | 70000 A 100 |            |   |   | $\mathbf{W}$ | <b>TER</b> | WELL LOG            |                       |          |          |                   |                    |              |           |        |  |  |
|------|--|-------------|------------|---|---|--------------|------------|---------------------|-----------------------|----------|----------|-------------------|--------------------|--------------|-----------|--------|--|--|
| Wat  | The Department of<br>Water, Land and<br>Biodiversity<br>Conservation |             |            |   |   | **1          | IILI       | WEEL LOG            |                       |          |          | UNIT No. 7030-737 |                    |              |           |        |  |  |
|      |  |             | Coordinate | es: E N   | El.   | Surface(     | (m)        | El. Ref. P          | Point(m)              | Datum:   |          | Hundred:          | Sec                | e <b>:</b>   |           |        |  |  |
|      |  |             |            | DEPTH TO<br>WATER CUT   | DEPTH TO STANDING WATER   | l .          | RVAL<br>m) |                     | SUPPLY                |          |          | TOTA              | AL DISSO           | LVED SO      | DLIDS     |        |  |  |
|      | $\mathbf{AQ}^{\prime}$   | UIFER       |            | (m)   | (m)   | From         | То         | L/sec               | Test length           | Me       | ethod    | mg/L              |                    | A            | nalysis N | lo.    |  |  |
|      | SUM  | IMARY       |            |   |   |              |            |                     |                       |          |          |                   |                    |              |           |        |  |  |
| DEPT | H (m)  | GRAPHIC     | ROCK       | /SEDIMENT   |   | GEO          | LOGIC      | AL DESCRIPTIO       | )N                    |          | FODM/    | ATION/AGE         | Depth<br>Core      |              | CASIN     |        |  |  |
| From | То   | LOG         | 1          | NAME  |   |              |            |                     |                       |          | FURIVIA  | ATION/AGE         | Sample             | Dia<br>(mm)  | From (m)  | To (m) |  |  |
| 0    | 1  |             |            | Clay  | Dark brown/grey clay. Micaceous.  | High d       | lensity, l | low plasticity, nor | n-rollable, non-sti   | icky.    |          |                   |                    | 80           | 0         | 6      |  |  |
| 1    | 3  |             |            | Clay Medium brown/grey clay. Moderate/high density, moderate/low plasticity, slightly rollable, slightly sticky, greasy. Micaceous. |   |              |            |                     |                       |          |          |                   |                    |              |           |        |  |  |
| 3    | 4  |             |            | Clay  | Medium brown/grey clay. High density, low plasticity, non-rollable, sticky, greasy. Mottled yellow/brown sandy seams. Micaceous, slightly gritty. |              |            |                     |                       |          |          |                   |                    |              |           |        |  |  |
| 4    | 4.5  |             |            | Clay  | Light grey clay. Moder greasy. Sandy yellow/b   |              |            |                     | rollable, sticky, s   | slightly |          |                   |                    |              |           |        |  |  |
| 4.5  | 5  |             |            | Clay  | Light grey/brown sand sticky. Mottled yellow.   |              |            |                     | city, rollable, sligh | ntly     |          |                   |                    |              |           |        |  |  |
| 5    | 6  |             | Sai        | ndy Clay  | Medium grey sandy cla<br>greasy. Micaceous. Me  |              |            |                     |                       | lightly  |          |                   |                    |              |           |        |  |  |
| REMA | RKS: S   | creened 6-8 | m          |   |   |              |            |                     |                       |          | DRILL TY | PE: Allger        | COMPL              | <br>ETED: 20 | )/5/04    |        |  |  |
|      |  |             |            |   |   |              |            |                     |                       |          |          |                   | PLETED: 20/5/04    |              |           |        |  |  |
|      |  |             |            |   |   |              |            |                     |                       | DRILL FL | UID: Mud | LOGGEI            | GED BY: Z. Marsden |              |           |        |  |  |
|      |  |             |            |   |   |              |            |                     |                       |          | DATE: 20 | /5/04             | SHEET              | 1 OF 2       |           |        |  |  |



| PROJECT: Chowilla Monitoring Network Expansion |
|--|
| <b>PERMIT No. 64255</b>                        |

UNIT No. 7030-737

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION  | EODMATION/ACE | Depth          | (           | CASINO   | j         |
|------|-------|---------|---------------|---|---------------|----------------|-------------|----------|-----------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |
| 6    | 8     |         | Sand          | Medium grey medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, approx 20% coarse sand up to 1mm. Micaceous, traces of lignite. |               |                |             |          |           |
| 8    | 9     |         | Sand          | Medium brown grey medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.3-0.6mm, approx 40% coarse sand up to 1.2mm. Micaceous.            |               |                |             |          |           |
|      |       | 1       | 1             |   |               | SHEET 2        | 2 OF 2      |          |           |



PROJECT: Chowilla Monitoring Network Expansion

| Coordinates: E N El. Surface(m) El. Ref. Point(m) Datum: Hundred: Sec:    AQUIFER  | The  | Danastos    | ant of      |            |          | WATER WELL LOG            |            |         |              |             |        |          | PERMIT No. 64257 |          |          |            |     |  |  |  |  |
|--|------|-------------|-------------|------------|----------|---------------------------|------------|---------|--------------|-------------|--------|----------|------------------|----------|----------|------------|-----|--|--|--|--|
| Coordinates: E   N   El. Surface(m)   El. Ref. Point(m)   Datum:   Hundred:   Sec:   | Wa   | ter, Lane   | d and       |            |          |                           |            |         |              |             |        |          | UNIT No. 7       | 030-739  |          |            |     |  |  |  |  |
| AQUIFER SUMMARY  STANDING WATER (III)  STANDING WATER (IIII)  STANDING WATER (IIIII)  STANDING WATER (IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII   |      |             |             | Coordinate | es: E N  | El                        | . Surface( | (m)     | El. Ref. P   | oint(m)     | Datum: |          | Hundred:         | Sec      | c:       |            |     |  |  |  |  |
| SUMMARY    SEPTH (m)   GRAPHIC   LOG   ROCK/SEDIMENT   NAME   GEOLOGICAL DESCRIPTION   FORMATION/AGE   Depth   Core   Cor |      |             |             |            |          |                           |            |         |              | SUPPLY      |        |          | тот              | AL DISSO | LVED S   | OLIDS      |     |  |  |  |  |
| DEPTH (m)   GRAPHIC   LOG   ROCK/SEDIMENT   RO |      | AQ          | UIFER       | -          | (m)      | (m)                       | From       | То      | L/sec        | Test length | Mo     | ethod    | mg/L             | ,        | A        | Analysis N | lo. |  |  |  |  |
| MARKS: Screened 8-10m   To   Clog   Clay     |      | SUM         | IMARY       |            |          |                           |            |         |              |             |        |          |                  |          |          |            |     |  |  |  |  |
| NAME    To   DO   NAME   Sample   Do   Do   NAME   Sample   Do   Do   Do   Do   Do   Do   Do   D   | DEPT | TH (m)      |             | ROCK/      | SEDIMENT |                           | GEO        | I OGICA | I DESCRIPTIO | )N          |        | FORM/    | ATION/AGE        |          |          |            |     |  |  |  |  |
| rollable, slightly sticky. Micaceous.  Light yellow/brown sandy clay. Low density, high plasticity, rollable, slightly sticky. Micaceous.  Light brown/grey silty clay. Low density, high plasticity, slightly rollable, slightly rollable, slightly sticky. Micaceous.  Silty Clay Light grey silty clay. Low density, high plasticity, slightly rollable, slightly sticky. Micaceous.  Light grey silty clay. Low density, high plasticity, slightly rollable, slightly sticky. Micaceous.  Light brown/grey medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6–1.8mm. Micaceous, lignite.  DRILL TYPE: Auger COMPLETED: 20/3/04  DRILL FLUID: Mud LOGGED BY: Z. Marsden  | From | То          | LOG         | N          | NAME     |                           |            | TORWI   | ATION/AGE    |             |        | 1        | To<br>(m         |          |          |            |     |  |  |  |  |
| sticky. Micaceous.  Light brown/grey silty clay. Low density, high plasticity, slightly rollable, slightly sticky. Micaceous.  Silty Clay  Light grey silty clay. Low density, high plasticity, slightly rollable, slightly sticky. Micaceous.  Sand  Light brown/grey medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.8mm. Micaceous, lignite.  DRILL TYPE: Auger  COMPLETED: 20/3/04  DRILL FLUID: Mud  LOGGED BY: Z. Marsden  | 0    |             |             |            | ·        | rollable, slightly sticky |            |         |              |             | 80     | 0        | 8                |          |          |            |     |  |  |  |  |
| Silghtly sticky. Micaceous.  Light grey silty clay. Low density, high plasticity, slightly rollable, slightly sticky. Micaceous.  Light brown/grey medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.8mm. Micaceous, lignite.  DRILL TYPE: Auger  COMPLETED: 20/3/04  DRILL FLUID: Mud  LOGGED BY: Z. Marsden  | 2    |             |             |            |          | sticky. Micaceous.        |            |         |              |             |        |          |                  |          |          |            |     |  |  |  |  |
| sticky. Micaceous.  Light brown/grey medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.8mm. Micaceous, lignite.  DRILL TYPE: Auger COMPLETED: 20/3/04  DRILL FLUID: Mud LOGGED BY: Z. Marsden  | 4    |             |             |            |          | slightly sticky. Micace   | eous.      |         |              |             |        |          |                  |          |          |            |     |  |  |  |  |
| MARKS: Screened 8-10m  DRILL TYPE: Auger  COMPLETED: 20/3/04  DRILL FLUID: Mud  LOGGED BY: Z. Marsden  | 6    |             |             |            |          | sticky. Micaceous.        |            |         |              |             |        |          |                  |          |          |            |     |  |  |  |  |
| DRILL TYPE: Auger COMPLETED: 20/3/04  DRILL FLUID: Mud LOGGED BY: Z. Marsden   | 8    | 10          |             |            | Sand     |                           |            |         |              |             | r and  |          |                  |          |          |            |     |  |  |  |  |
| DRILL TYPE: Auger COMPLETED: 20/3/04  DRILL FLUID: Mud LOGGED BY: Z. Marsden   |      |             |             |            |          |                           |            |         |              |             |        |          |                  |          |          |            |     |  |  |  |  |
| DRILL FLUID: Mud LOGGED BY: Z. Marsden   | EMA  | <br>ARKS: S | creened 8-1 | 0m         |          |                           |            |         |              |             |        | DRILL TY | PE: Auger        | COMPL    | ETED: 2  | 0/3/04     |     |  |  |  |  |
| DATE: 20/3/04 SHEET 1 OF 1   |      |             |             |            |          |                           |            |         |              |             |        | DRILL FL | UID: Mud         | LOGGE    | D BY: Z. | Marsden    |     |  |  |  |  |
|  |      |             |             |            |          |                           |            |         |              |             |        | DATE: 20 | /3/04            | SHEET    | 1 OF 1   |            |     |  |  |  |  |



PROJECT: Chowilla Monitoring Network Expansion

|      | Contract of the last |              |            |   |  | WATER WELL LOG |            |                    |                        |           |          |            |                | ,            |          |        |
|------|----------------------|--------------|------------|---|--|----------------|------------|--------------------|------------------------|-----------|----------|------------|----------------|--------------|----------|--------|
| Wa   | Departm<br>ter, Lan  | d and        |            |   |  | VV F           | X I LIX    | WELL LOG           |                        |           |          | UNIT No. 7 | 030-740        |              |          |        |
|      | nserva               |              | Coordinate | es: E N   | El.  | Surface(       | (m)        | El. Ref.           | Point(m)               | Datum:    |          | Hundred:   | Sec            | c:           |          |        |
|      |                      |              |            | DEPTH TO<br>WATER CUT   | DEPTH TO STANDING WATER  |                | RVAL<br>m) |                    | SUPPLY                 |           |          | тот        | AL DISSO       | LVED S       | OLIDS    |        |
|      | AQ                   | UIFER        |            | (m)   | (m)  | From           | То         | L/sec              | Test length            | M         | ethod    | mg/L       |                | Analysis No. |          |        |
|      | SUM                  | <b>IMARY</b> |            |   |  |                |            |                    |                        |           |          |            |                |              |          |        |
| DEPT | TH (m)               | GRAPHIC      | ROCK       | /SEDIMENT   |  | CEO            | LOCICA     | AL DECODIDED       | ONI                    |           | FORM     | ATION/AGE  | Depth          | (            | CASINO   | G      |
| From | То                   | LOG          | 1          | NAME  |  | GEO            | LUGIC      | AL DESCRIPTION     | JIN                    |           | FURMA    | ATION/AGE  | Core<br>Sample | Dia<br>(mm)  | From (m) | To (m) |
| 0    | 2                    |              |            | Clay Grey clay, slightly silty. Moderate/high density, moderate/low plasticity, rolls sticky. Micaceous.  Clay Fawn/light brown clay Moderate/high density moderate/low plasticity rolls. |  |                |            |                    |                        | rollable, |          |            |                | 80           | 0        | 18     |
| 2    | 6                    |              |            | Clay Fawn/light brown clay. Moderate/high density, moderate/low plasticity, rollable sticky. Dark orange sandy seams. Light grey clay band. Micaceous.                                    |  |                |            |                    |                        |           |          |            |                |              |          |        |
| 6    | 8                    |              | Sai        | ndy Clay  | Dark grey highly sand<br>Micaceous.                              | y clay. l      | Low den    | sity, high plastic | city, rollable, sticky | 7.        |          |            |                |              |          |        |
| 8    | 10                   |              |            | Sand  | Light brown coarse qu rounded, 0.6-1.6mm.                        |                |            |                    | l cloudy, sub angul    | ar to sub |          |            |                |              |          |        |
| 10   | 12                   |              | Grav       | velly Sand  | Light grey corse quartz<br>angular to sub rounded<br>clay blebs. |                |            |                    |                        |           |          |            |                |              |          |        |
| 12   | 14                   |              |            | Sand  | Light brown/grey coar angular to sub rounded                     |                |            |                    |                        | y, sub    |          |            |                |              |          |        |
| REMA | RKS: S               | creened 18-  | -20m       |   | 1  |                |            |                    |                        |           | DRILL TY | PE: Auger  | COMPL          | ETED: 2      | 1/3/04   | 1      |
|      |                      |              |            |   |  |                |            |                    |                        |           | DRILL FL | UID: Mud   | LOGGE          | D BY: Z.     | Marsden  |        |
|      |                      |              |            |   |  |                |            |                    |                        |           | DATE: 21 | /3/04      | SHEET          | 1 OF 2       |          |        |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |
| PERMIT No. 64258                     |

UNIT No. 7030-740

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION  | FORMATION/ACE | Depth          | C           | CASING   | j      |
|------|-------|---------|---------------|---|---------------|----------------|-------------|----------|--------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To (m) |
| 14   | 16    |         | Sand          | Light grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.8mm. Micaceous, lignite.        |               |                |             |          |        |
| 16   | 20    |         | Sand          | Light grey medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.8mm. Micaceous, lignite. |               |                |             |          |        |
|      |       |         |               |   |               |                |             |          |        |
|      |       |         |               |   |               | SHEET 2        | 2 OF 2      |          |        |



PROJECT: Chowilla Monitoring Network Expansion

|                  |                    | 0000000      |            |                       | WATER WELL LOG  |   |            |               |             |           |          |             | PERWITI NO. 04259 |             |           |        |  |  |  |
|------------------|--------------------|--------------|------------|-----------------------|---|---|------------|---------------|-------------|-----------|----------|-------------|-------------------|-------------|-----------|--------|--|--|--|
| Wat              | Departmenter, Land | dand         |            |                       |   | VV F  | XILIX      | WELL LOG      |             |           |          | UNIT No. 70 | 030-662           |             |           |        |  |  |  |
|                  | nserva             | tion         | Coordinate | es: E N               | El.   | Surface(  | m)         | El. Ref. F    | Point(m)    | Datum:    |          | Hundred:    | Sec               | : <b>:</b>  |           |        |  |  |  |
|                  |                    |              |            | DEPTH TO<br>WATER CUT | DEPTH TO STANDING WATER   | 1   | RVAL<br>n) |               | SUPPLY      |           |          | TOTA        | AL DISSO          | LVED SC     | DLIDS     |        |  |  |  |
|                  | $\mathbf{AQ}^{T}$  | UIFER        |            | (m)                   | (m)   | From  | То         | L/sec         | Test length | M         | ethod    | mg/L        |                   | A           | nalysis N | lo.    |  |  |  |
|                  | SUM                | IMARY        |            |                       |   |   |            |               |             |           |          |             |                   |             |           |        |  |  |  |
| DEPT             | H (m)              | GRAPHIC      | l          | /SEDIMENT             |   | GEO   | LOGICA     | AL DESCRIPTIO | ON          |           | FORMA    | ATION/AGE   | Depth<br>Core     |             | CASINO    |        |  |  |  |
| From             | То                 | LOG          | 1          | NAME                  |   |   |            |               |             |           | TORIVIT  | THOWAGE     | Sample            | Dia (mm) 80 | From (m)  | To (m) |  |  |  |
| 0<br>1<br>2<br>4 | 1<br>2<br>4<br>5   | around 2.55  |            | Clay Clay Sand Sand   | Micaceous, gritty.  Medium grey clay. Mo Micaceous, gritty.  Light brown fine/medit to sub rounded, 0.1-0.5  Light grey fine/medium angular to sub rounded. | edium grey clay. Moderate density, moderate plasticity, rollable, sticky. |            |               |             |           |          |             |                   |             | 0         | 2      |  |  |  |
| REMA             | RKS: S             | creened 2-51 | m          |                       |   |   |            |               |             |           | DRILL TY | PE: Auger   | COMPLI            | ETED: 17    | //3/04    |        |  |  |  |
|                  |                    |              |            |                       |   |   |            |               |             |           | DRILL FL | UID: Mud    | LOGGEI            | OBY: Z.     | Marsden   |        |  |  |  |
|                  |                    |              |            |                       |   |   |            |               |             | DATE: 17/ | 3/04     | SHEET       | 1 OF 1            |             |           |        |  |  |  |



### GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

| 1000 | CARL STATE OF THE STATE OF   |              |            |  |   |           |                   |                      |                    |         |          |              |                |             |           |         |
|------|--|--------------|------------|--|---|-----------|-------------------|----------------------|--------------------|---------|----------|--------------|----------------|-------------|-----------|---------|
| Wa   | The Department of<br>Water, Land and<br>Biodiversity<br>Conservation |              |            |  |   | VV F      |                   | WELL LOG             |                    |         |          | UNIT No. 7   | 030-663        |             |           |         |
|      |  |              | Coordinate | es: E N  | El.   | Surface(  | m)                | El. Ref. F           | Point(m)           | Datum:  |          | Hundred:     | Sec            | c:          |           |         |
|      |  |              |            | DEPTH TO<br>WATER CUT  | DEPTH TO<br>STANDING WATER  |           | RVAL              |                      | SUPPLY             |         |          | TOT          | AL DISSO       | LVED SO     | OLIDS     |         |
|      | $\mathbf{AQ}$  | UIFER        |            | (m)  | (m)   | From      | То                | L/sec                | Test length        | M       | ethod    | mg/L         |                | A           | nalysis N | lo.     |
|      | SUN  | <b>IMARY</b> |            |  |   |           |                   |                      |                    |         |          |              |                |             |           |         |
| DEPT | TH (m)   | GRAPHIC      | ROCK       | /SEDIMENT  |   | CEO       | LOCIC             | AL DECCRIPTIO        | )                  |         | FORM     | A TIONI/A CE | Depth          | (           | CASING    | <u></u> |
| From | То   | LOG          | 1          | NAME   |   | GEO.      | LOGIC             | AL DESCRIPTIO        | DN                 |         | FORM     | ATION/AGE    | Core<br>Sample | Dia<br>(mm) | From (m)  | To (m)  |
| 0    | 1  |              |            | Clay   | Light grey clay. Moder Micaceous.   | rate der  | sity, mo          | oderate plasticity,  | rollable, sticky.  |         |          |              |                | 80          | 0         | 17      |
| 1    | 2  |              |            | Sand Light grey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular sub rounded, 0.1-0.3mm. Micaceous. |   |           |                   |                      |                    |         |          |              |                |             |           |         |
| 2    | 4  |              |            | Sand   | Light brown fine/medi rounded, 0.1-0.4mm. N                                 |           | sorted, clear and | cloudy, sub angula   | ar to sub          |         |          |              |                |             |           |         |
| 4    | 6  |              |            | Sand   | Light brown medium of sub rounded, 0.2-0.6m                                 |           |                   | ell sorted, clear an | nd cloudy, sub ang | ular to |          |              |                |             |           |         |
| 6    | 8  |              |            | Sand   | Light brown coarse que to sub rounded, 0.6-2m 2.5mm. Micaceous.             |           |                   |                      |                    |         |          |              |                |             |           |         |
| 8    | 10   |              |            | Sand   | Light grey medium/coa<br>angular to sub rounded<br>lignite, light grey clay | l, 0.2-21 |                   |                      |                    |         |          |              |                |             |           |         |
| REMA | RKS: S   | creened 17-  | -20m       |  |   |           |                   |                      |                    |         | DRILL TY | PE: Auger    | COMPL          | ETED: 17    | 7/3/04    |         |
|      |  |              |            |  |   |           |                   |                      |                    |         | DRILL FL | UID: Mud     | LOGGEI         | D BY: Z.    | Marsden   |         |
|      |  |              |            |  |   |           |                   |                      |                    |         | DATE: 17 | /3/04        | SHEET          | 1 OF 2      |           |         |
|      |  |              |            |  |   |           |                   |                      |                    |         |          |              |                |             |           |         |



| <b>PROJECT:</b> Chowilla Monitoring Network |
|---|
| Expansion                                   |
| PERMIT No. 64260                            |

UNIT No. 7030-663

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Depth<br>Core | C           | CASING   | j         |
|------|-------|---------|---------------|--|---------------|---------------|-------------|----------|-----------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To<br>(m) |
| 10   | 12    |         | Gravelly Sand | Grey coarse quartz sand/fine gravel. Poorly sorted, clear and cloudy, sub angular to sub rounded, 0.2-3mm, approx 10% medium sand. Micaceous, lignite.                               |               |               |             |          |           |
| 12   | 14    |         | Gravelly Sand | Grey medium/coarse quartz sand/fine gravel. Poorly sorted, clear and cloudy, sub angular to sub rounded, 0.2-5mm. Micaceous.   |               |               |             |          |           |
| 14   | 16    |         |               | Dark grey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.4mm, approx 10% coarse sand up to 2mm. Slightly silty. Micaceous, minor lignite. |               |               |             |          |           |
| 16   | 18    |         |               | Dark grey medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.8mm. Slightly silty. Micaceous, minor lignite.                           |               |               |             |          |           |
| 18   | 20    | Sand    |               | Dark grey fine/medium quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm, 40% coarse sand up to 1.8mm. Micaceous.                               |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               |               |             |          |           |
|      |       |         |               |  |               | SHEET 2       | OF 2        |          |           |



PROJECT: Chowilla Monitoring Network Expansion

|      |                                    |             |  |   |  |            |            | TER PROGRAM<br>WELL LOG | L                |           |          | PERMIT N    | o. 64261      |                      |            |     |
|------|------------------------------------|-------------|--|---|--|------------|------------|-------------------------|------------------|-----------|----------|-------------|---------------|----------------------|------------|-----|
| Was  | Departm<br>ter, Land<br>diver      | d and       |  |   |  | **1        | XILIX ,    | WELL LOG                |                  |           |          | UNIT No. 7  | 030-661       |                      |            |     |
|      | nserva                             |             | Coordinates:   | E N   | E1.  | . Surface( | m)         | El. Ref. Po             | oint(m)          | Datum:    |          | Hundred:    | Sec           | c:                   |            |     |
|      |                                    |             |  | DEPTH TO<br>WATER CUT   | DEPTH TO<br>STANDING WATER                                     |            | RVAL<br>n) |                         | SUPPLY           |           |          | ТОТ         | AL DISSO      | LVED S               | OLIDS      |     |
|      | AQ                                 | UIFER       |  | (m)   | (m)  | From       | То         | L/sec                   | Test length      | N         | Method   | mg/L        |               | A                    | Analysis N | lo. |
|      | SUM                                | IMARY       |  |   |  |            |            |                         |                  |           |          |             |               |                      |            |     |
| DEPT | H (m)                              | GRAPHIC     | ROCK/S   | SEDIMENT  |  | GEO        | LOGICA     | I DESCRIPTIO            | N                |           | FORM     | ATION/AGE   | Depth<br>Core |                      | CASIN      |     |
| From | To LOG NAME GEOLOGICAL DESCRIPTION |             |  |   |  |            |            |                         | TORIVI           | ATION/AGE | Sample   | Dia<br>(mm) | From (m)      | To (m)               |            |     |
| 2    | 5                                  |             | Clay  Dark brown clay. High density, low plasticity, non-rollable, slightly sticky.  Orange/brown sandy seams. Micaceous.  Clay  Light and dark grey clay interlayers. Light grey clay moderate/high density, moderate/low plasticity, slightly rollable, sticky. Micaceous. Grey sandy seam Dark grey clay low density, high plasticity, rollable, sticky, greasy. Micaceou |   |  |            |            |                         |                  | ensity,   |          |             |               | 80                   | 0          | 6   |
| 5    | 6                                  |             | S  | Sand  | Dark grey medium quato sub rounded, 0.2-0.6 traces of lignite. |            |            |                         |                  |           |          |             |               |                      |            |     |
| 6    | 7                                  |             | S  | Sand  | Medium brown medium angular to sub rounded                     |            |            |                         | l, clear and clo | oudy, sub |          |             |               |                      |            |     |
| 7    | 8                                  |             | S  | Sand Medium grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 20% medium sand. Micaceous, abundant lignite up to 2cm. |  |            |            |                         |                  |           |          |             |               |                      |            |     |
| REMA | RKS: S                             | creened 6-8 | m  | <u> </u>  |  |            |            |                         |                  |           | DRILL TY | PE: Auger   | COMPL         | L<br>ETED: 1         | 7/3/04     |     |
|      |                                    |             |  |   |  |            |            |                         |                  |           | DRILL FI | UID: Mud    | LOGGE         | OGGED BY: Z. Marsden |            |     |
|      |                                    |             |  |   |  |            |            |                         |                  |           | DATE: 17 | /3/04       | SHEET         | 1 OF 1               |            |     |



PROJECT: Chowilla Monitoring Network Expansion

|   | Departm   |   |   |                  |  | WA        | TER      | WELL LOG                 |                      |            |          | PERMIT N            |                |          |           |     |
|---|---|---|---|------------------|--|-----------|----------|--------------------------|----------------------|------------|----------|---------------------|----------------|----------|-----------|-----|
| Bio   | er, Land<br>diver<br>nserva   | sity  | Coordinates: E  | N                | E1   | Surface(  | m)       | El. Ref. P               | oint(m)              | Datum:     |          | UNIT No. 7 Hundred: | 030-660<br>Sec |          |           |     |
|   |   |   | Г   | DEPTH TO         | DEPTH TO STANDING WATER                                  | INTE      | RVAL     | 2                        | SUPPLY               |            |          |                     | AL DISSO       |          | OLIDS     |     |
|   | AQ  | UIFER   | W   | /ATER CUT<br>(m) | (m)  | From      | То       | L/sec                    | Test length          | Me         | thod     | mg/L                |                | A        | nalysis N | lo. |
|   | SUM   | IMARY   |   |                  |  |           |          |                          |                      |            |          |                     |                |          |           |     |
| DEPTH (m) GRAPHIC LOG ROCK/SEDIMENT GEOLOGICAL DESCRIPTION NAME GROUP TO NAME |   |   |   |                  |  |           | )N       | FORMATION/AGE Depth Core |                      |            |          |                     |                | CASING   |           |     |
| From  | m To LOG NAME GEOLOGICAL DESCRIPTION  |   |   |                  |  |           |          |                          | 1 OICWI              | IIIOIWIIGE | Sample   | Dia<br>(mm)         | From (m)       | To (m)   |           |     |
| 0   | 2 Clay Light grey clay. Moderate/high density, moderate/low plasticity, rollable, sti Brown sandy seams. Micaceous. |   |   |                  |  |           |          |                          | e, sticky.           |            |          |                     | 80             | 0        | 6         |     |
| 2   | 3   |   | Clay  |                  | ight grey/fawn clay. I<br>Brown sandy seams. M           |           |          | ty, moderate plas        | ticity, rollable, st | icky.      |          |                     |                |          |           |     |
| 3   | 5   |   | Clay  | y D              | Oark grey clay. Low do                                   | ensity, l | high pla | sticity, rollable, s     | ticky, greasy. Mi    | caceous.   |          |                     |                |          |           |     |
| 5   | 6   |   | Sand  | a                | Medium/dark grey fine<br>ngular to sub rounded<br>gnite. |           |          |                          |                      |            |          |                     |                |          |           |     |
| 6   | 7   |   | Sand Medium/dark grey medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, 30% coarse sand up to 1.2mm. Micaceous abundant lignite up to 3cm, shell fragments. |                  |  |           |          |                          |                      |            |          |                     |                |          |           |     |
| 7   | 8   | Sand Light brown coarse quartz sand. Moderately sorted, clear and cloudy, sub an to sub rounded, 0.6-1.5mm, approx 20% medium sand. Micaceous, lignite. |   |                  |  |           |          |                          |                      |            |          |                     |                |          |           |     |
| REMA  | RKS: S  | creened 6-8i  | m   | <u> </u>         |  |           |          |                          |                      |            | DRILL TY | PE: Auger           | COMPLI         | ETED: 17 | 7/3/04    |     |
|   |   |   |   |                  |  |           |          |                          |                      |            | DRILL FL | UID: Mud            | LOGGEI         | O BY: Z. | Marsden   |     |
|   |   |   |   |                  |  |           |          |                          |                      | DATE: 17/  | /3/04    | SHEET               | 1 OF 1         |          |           |     |



PROJECT: Chowilla Monitoring Network Expansion

|      | AND DESCRIPTION OF THE PARTY.  |             |   |                       |  | XX/      | TFP        | WELL LOG         |                        |          |                            |            |                |             |           |        |
|------|--|-------------|---|-----------------------|--|----------|------------|------------------|------------------------|----------|----------------------------|------------|----------------|-------------|-----------|--------|
| Wa   | The Department of<br>Water, Land and<br>Biodiversity<br>Conservation |             |   |                       |  | VV F     | X I LIX    | WELL LOG         |                        |          |                            | UNIT No. 7 | 030-665        |             |           |        |
|      |  |             | Coordinate  | es: E N               | El.  | Surface( | (m)        | El. Ref.         | Point(m)               | Datum:   |                            | Hundred:   | Sec            | e:          |           |        |
|      |  |             |   | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER   |          | RVAL<br>m) |                  | SUPPLY                 |          |                            | ТОТ        | AL DISSO       | LVED SO     | OLIDS     |        |
|      | AQ   | UIFER       |   | (m)                   | (m)  | From     | То         | L/sec            | Test length            | Me       | ethod                      | mg/L       |                | A           | nalysis N | No.    |
|      | SUM  | IMARY       |   |                       |  |          |            |                  |                        |          |                            |            |                |             |           |        |
| DEPT | TH (m)   | GRAPHIC     | ROCK  | /SEDIMENT             |  | CEO      | LOCIC      | AL DECCRIPTION   | ONI                    |          | EODM                       | ATION/AGE  | Depth          | (           | CASIN     | G      |
| From | То   | LOG         | 1   | NAME                  |  |          |            | AL DESCRIPTION   |                        |          | FURIVIA                    | ATION/AGE  | Core<br>Sample | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 0.5  |             |   | Clay                  | Medium brown clay. F Micaceous.  |          | • •        |                  |                        |          |                            | 80         | 0              | 7           |           |        |
| 0.5  | 2  |             |   | Clay                  | greasy. Micaceous.   |          |            |                  |                        |          |                            |            |                |             |           |        |
| 2    | 4  |             |   | Clay                  | Light grey/fawn clay. High density, low plasticity, non-rollable, slightly sticky. Light brown sandy seams. Micaceous. |          |            |                  |                        |          |                            |            |                |             |           |        |
| 4    | 5  |             |   | Clay                  | Light grey clay. Moder<br>Orange/brown sandy s   |          |            |                  |                        |          |                            |            |                |             |           |        |
| 5    | 6  |             |   | Clay                  | Medium grey clay. Mo<br>Slightly sandy. Micace   |          | density,   | moderate plastic | city, rollable, sticky | ·.       |                            |            |                |             |           |        |
| 6    | 7  |             | Clay  Light brown/fawn clay. Moderate/high density, moderate/low plasticity, slig rollable, sticky. Orange/brown sandy seam. Micaceous. |                       |  |          |            |                  |                        | slightly |                            |            |                |             |           |        |
| REMA | ARKS: S  | creened 7-9 | mm  |                       | 1  |          |            |                  |                        |          | DRILL TY                   | PE: Auger  | COMPL          | ETED: 12    | 2/3/04    | I      |
|      |  |             |   |                       |  |          |            |                  |                        |          | DRILL FL                   | UID: Mud   | LOGGE          | D BY: Z.    | Marsden   |        |
|      |  |             |   |                       |  |          |            |                  |                        |          | DATE: 12/3/04 SHEET 1 OF 2 |            |                |             |           |        |



| PROJECT: Chowilla Monitoring Network Expansion |
|--|
| PERMIT No. 64263                               |

Hundred: Sec:

UNIT No. 7030-665

| DEPT | H (m)  | GRAPHIC | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION  | FORMATION/A CE | Depth          | (           | CASINO   | j         |
|------|--------|---------|---------------|---|----------------|----------------|-------------|----------|-----------|
| From | То     | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE  | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |
| 7    | 8      |         | Sand          | Grey brown medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.3mm. Micaceous.  |                |                |             |          |           |
| 8    | 9 Sand |         | Sand          | Light brown medium/coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.3mm. Micaceous. |                |                |             |          |           |
|      |        |         |               |   |                |                |             |          |           |
|      |        |         |               |   |                | SHEET 2        | 2 OF 2      |          |           |



PROJECT: Chowilla Monitoring Network Expansion

|                        |                                |         |            |                       |  | <b>XX</b> 7 A  | TED T      | WELL LOG           |                     |                    |          | I LIMITI II | 0. 0.20.      |                    |           |        |
|------------------------|--------------------------------|---------|------------|-----------------------|--|--|------------|--------------------|---------------------|--------------------|----------|-------------|---------------|--------------------|-----------|--------|
| Wa                     | Departm<br>ter, Land<br>odiver | d and   |            |                       |  | VV P   | XIEK (     | WELL LOG           |                     |                    |          | UNIT No. 7  | 030-664       |                    |           |        |
|                        | nserva                         |         | Coordinate | es: E N               | El.  | Surface(   | (m)        | El. Ref. I         | Point(m)            | Datum:             |          | Hundred:    | Sec           | c:                 |           |        |
|                        |                                |         |            | DEPTH TO<br>WATER CUT |  |  | RVAL<br>m) |                    | SUPPLY              |                    |          | ТОТ         | AL DISSO      | LVED SO            | DLIDS     |        |
|                        | $\mathbf{AQ}^{\prime}$         | UIFER   |            | (m)                   | (m)  | From   | То         | L/sec              | Test length         | Me                 | thod     | mg/L        |               | A                  | nalysis N | lo.    |
|                        | SUM                            | IMARY   |            |                       |  |  |            |                    |                     |                    |          |             |               |                    |           |        |
| DEPT                   | 'H (m)                         | GRAPHIC | 1          | /SEDIMENT             |  | GEO  | LOGICA     | AL DESCRIPTION     | ON                  |                    | FORM     | ATION/AGE   | Depth<br>Core |                    | CASIN     |        |
| From                   | То                             | LOG     |            | NAME                  |  |  |            |                    |                     |                    | 1 OKWI   | THOWAGE     | Sample        | Dia<br>(mm)        | From (m)  | To (m) |
| 0                      | 1                              |         |            | Clay                  | Medium brown clay. M<br>rollable, non-sticky. M  |  |            | ensity, moderate   |                     |                    |          | 80          | 0             | 7                  |           |        |
| 1                      | 2                              |         |            | Clay                  | Light grey clay. Modernon-sticky. Micaceous  |  |            |                    |                     |                    |          |             |               |                    |           |        |
| 2                      | 4                              |         |            | Clay                  | Light/medium brown of rollable, sticky, slightly   |  |            |                    |                     |                    |          |             |               |                    |           |        |
| 4                      | 5                              |         | Sai        | ndy Clay              | Light brown sandy clay. Low density, high plasticity, rollable, sticky. Orange/brown sandy seams. Micaceous. |  |            |                    |                     |                    |          |             |               |                    |           |        |
| 5                      | 6                              |         | Saı        | ndy Clay              | Medium grey sandy cl.<br>Micaceous.  | ay. Low  | v density  | , high plasticity, | , rollable, sticky. |                    |          |             |               |                    |           |        |
| 6                      | 8                              |         |            | Clay                  |  | ght brown clay. Moderate density, moderate plasticity, rollable, slightly sticky. ange/brown sandy seams. Micaceous. |            |                    |                     |                    |          |             |               |                    |           |        |
| REMARKS: Screened 7-9m |                                |         |            |                       | 1  |  |            |                    |                     |                    | DRILL TY | PE: Auger   | COMPL         | ETED:              | I         |        |
|                        |                                |         |            |                       |  |  |            |                    |                     | -                  | DRILL FL | UID: Mud    | LOGGE         | GED BY: Z. Marsden |           |        |
|                        |                                |         |            |                       |  |  |            |                    |                     | DATE: SHEET 1 OF 2 |          |             |               |                    |           |        |



| PROJECT: Chowilla Monitoring Network Expansion |
|--|
| PERMIT No. 64264                               |
| UNIT No. 7030-664                              |

Sec:

**Hundred:** 

|      |        |         |               |   | Humarca.      | SCC            | •           |          |           |
|------|--------|---------|---------------|---|---------------|----------------|-------------|----------|-----------|
| DEPT | 'H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Depth          |             | CASINO   |           |
| From | То     | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |
| 8    | 9      |         | Sand          | Light grey/brown medium quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, approx 30% coarse sand up to 2mm. Micaceous. |               |                |             |          |           |
|      |        |         |               |   |               | SHEET 2        | 2 OF 2      |          |           |



PROJECT: Chowilla Monitoring Network Expansion

|                  |   | TOTAL CONTRACTOR |            |                            |  | WA                        | TFR   | WELL LOG  |                      |                 |          | PERMIT NO   | 0. 042/0      |            |           |     |
|------------------|---|------------------|------------|----------------------------|--|---------------------------|---|---|----------------------|-----------------|----------|-------------|---------------|------------|-----------|-----|
| Wat              | Departmenter, Land  | dand             |            |                            |  | VV E                      | XILK  | WELL LOG  |                      |                 |          | UNIT No. 70 | 030-666       |            |           |     |
|                  | nserva  | tion             | Coordinate | es: E N                    | El.  | Surface(                  | m)  | El. Ref. F  | Point(m)             | Datum:          |          | Hundred:    | Sec           | : <b>:</b> |           |     |
|                  |   |                  |            | DEPTH TO<br>WATER CUT      | DEPTH TO STANDING WATER  |                           | RVAL<br>n)                                  |   | SUPPLY               |                 |          | TOTA        | AL DISSO      | LVED SO    | DLIDS     |     |
|                  | $\mathbf{AQ}^{T}$   | UIFER            |            | (m)                        | (m)  | From                      | То  | L/sec   | Test length          | Me              | ethod    | mg/L        |               | A          | nalysis N | lo. |
|                  | SUM   | IMARY            |            |                            |  |                           |   |   |                      |                 |          |             |               |            |           |     |
| DEPT             | DEPTH (m) GRAPHIC LOG ROCK/SEDIMENT NAME GEOLOGICAL DESCRIPTION |                  |            |                            |  |                           |   |   |                      |                 | FORMA    | ATION/AGE   | Depth<br>Core |            | CASING    |     |
| From             | From To NAME  |                  |            |                            |  |                           |   |   |                      | 1 ORIVIT        | TIOWAGE  | Sample      | Dia<br>(mm)   | From (m)   | To (m)    |     |
| 0<br>1<br>2<br>4 | 1<br>2<br>4<br>6  |                  |            | Clay  Ity Clay  Sand  Sand | Red/brown clay. Mode Micaceous.  Light brown silty clay. Micaceous.  Orange medium/coarse angular to sub rounded Light brown/orange m cloudy, sub angular to | Low do e quartz l, 0.6-1. | ensity, h<br>sand. M<br>8mm. M<br>coarse qu | nigh plasticity, sli  Moderately sorted  Micaceous.  uartz sand. Mode | ightly rollable, sti | icky.<br>y, sub |          |             |               | 80         | 0         | 3   |
| REMA             | .RKS: S   | creened 3-6      | m          |                            |  |                           |   |   |                      |                 | DRILL TY | PE: Auger   | COMPL         | ETED: 12   | 2/3/04    |     |
|                  |   |                  |            |                            |  |                           |   |   |                      |                 | DRILL FL | UID: Mud    | LOGGEI        | DBY: Z.    | Marsden   |     |
|                  |   |                  |            |                            |  |                           |   |   |                      | DATE: 12/       | 3/04     | SHEET       | 1 OF 1        |            |           |     |



PROJECT: Chowilla Monitoring Network Expansion

PERMIT No. 6/271

|      |  |             |  |                       |  | WA       | TFR        | WELL LOG       |             |        |           | PERMIT N   | 0. 042/1      |            |           |    |
|------|--|-------------|--|-----------------------|--|----------|------------|----------------|-------------|--------|-----------|------------|---------------|------------|-----------|----|
| Wat  | Departmenter, Land   | d and       |  |                       |  | VV F     | XILK       | WEEL LOG       |             |        |           | UNIT No. 7 | 030-667       |            |           |    |
|      | nserva   |             | Coordinate   | es: E N               | El.  | Surface( | m)         | El. Ref. I     | Point(m)    | Datum: |           | Hundred:   | Sec           | : <b>:</b> |           |    |
|      |  |             |  | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                                     | 1        | RVAL<br>n) |                | SUPPLY      |        |           | ТОТ.       | AL DISSO      | LVED SO    | OLIDS     |    |
|      | $\mathbf{AQ}^{T}$  | UIFER       |  | (m)                   | (m)  | From     | То         | L/sec          | Test length | M      | ethod     | mg/L       |               | A          | nalysis N | o. |
|      | SUM  | IMARY       |  |                       |  |          |            |                |             |        |           |            |               |            |           |    |
| DEPT | H (m)  | GRAPHIC     | 1  | /SEDIMENT             |  | GEO      | LOGIC      | AL DESCRIPTION | ON          |        | FORMA     | ATION/AGE  | Depth<br>Core |            | CASINO    |    |
| From | To NAME  |             |  |                       |  |          |            |                |             | TORWIT | MITOWAGE  | Sample     | Dia<br>(mm)   | From (m)   | To (m)    |    |
| 0    | 2  |             |  | Clay<br>lty Clay      | Micaceous.  Light orange/brown sil                             | ·        |            |                |             | 80     | 0         | 15         |               |            |           |    |
|      |  |             |  |                       | sticky. Micaceous.   |          |            |                |             |        |           |            |               |            |           |    |
| 2    | 4  |             |  | Sand                  | Orange/brown slightly angular to sub rounded                   |          |            |                |             |        |           |            |               |            |           |    |
| 4    | 6  |             |  | Sand                  | Orange/brown coarse of angular to sub rounded sand. Micaceous. |          |            |                |             |        |           |            |               |            |           |    |
| 6    | 8  |             | Sand Orange/brown medium/coarse quartz sand. Moderately sorted, clear and closub angular to sub rounded, 0.2-2mm, 10% fine gravel up to 3mm. Micaced clay blebs. |                       |  |          |            |                |             |        |           |            |               |            |           |    |
| 8    | to sub rounded, 0.2-2mm, 20% fine gravel up to 2.5mm. Micaceous. |             |  |                       |  |          |            |                | angular     |        |           |            |               |            |           |    |
| REMA | RKS: S   | creened 15- | 18m.   |                       |  |          |            |                |             |        | DRILL TY  | PE: Auger  | COMPLI        | ETED: 11   | /3/04     |    |
|      |  |             |  |                       |  |          |            |                |             |        | DRILL FL  | UID: Mud   | LOGGEI        | DBY: Z.    | Marsden   |    |
|      |  |             |  |                       |  |          |            |                |             |        | DATE: 11/ | 73/04      | SHEET         | 1 OF 2     |           |    |



| Expansion | PROJECT: Chowilla | <b>Monitoring Network</b> |
|-----------|-------------------|---------------------------|
|           | Expansion         |                           |

PERMIT No. 64271

UNIT No. 7030-667

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Depth<br>Core | C           | CASING   | $\vec{j}$ |
|------|-------|---------|---------------|---|---------------|---------------|-------------|----------|-----------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To<br>(m) |
| 10   | 12    |         | Gravelly Sand | Grey coarse quartz sand/fine gravel. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.8-3mm., approx 10% medium sand. Micaceous, abundant lignite up to 4cm, grey clay blebs. |               |               |             |          |           |
| 12   | 14.5  |         | Sandy Clay    | Dark brown/black sandy clay. Low density, high plasticity, rollable, non-sticky. Sands moderately sorted, 0.2-2mm. Micaceous.   |               |               |             |          |           |
| 14.5 | 18    |         | Sand          | Grey coarse quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.5mm. Micaceous.   |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               |               |             |          |           |
|      |       |         |               |   |               | SHEET 2       | 2 OF 2      |          |           |



PROJECT: Chowilla Monitoring Network Expansion

|      | CONTRACTOR OF THE PARTY |             |            |  |                         | WA       | TFR      | WELL LOG          |                     |          |           |             |               |             |           |        |
|------|-------------------------|-------------|------------|--|-------------------------|----------|----------|-------------------|---------------------|----------|-----------|-------------|---------------|-------------|-----------|--------|
| Wat  | Departmenter, Land      | dand        |            |  |                         | VV F     | 1 LIX    | WELL LOG          |                     |          |           | UNIT No. 70 | 030-742       |             |           |        |
|      | nserva                  |             | Coordinate | es: E N  | El.                     | Surface( | (m)      | El. Ref. P        | oint(m)             | Datum:   |           | Hundred:    | Sec           | : <b>:</b>  |           |        |
|      |                         |             |            | DEPTH TO<br>WATER CUT  | DEPTH TO STANDING WATER |          |          |                   | SUPPLY              |          |           | тот.        | AL DISSO      | LVED SO     | DLIDS     |        |
|      | $\mathbf{AQ}^{\dagger}$ | UIFER       |            | (m)  | (m)                     | From     | То       | L/sec             | Test length         | Me       | ethod     | mg/L        |               | A           | nalysis N | lo.    |
|      | SUM                     | IMARY       |            |  |                         |          |          |                   |                     |          |           |             |               |             |           |        |
| DEPT | H (m)                   | GRAPHIC     | 1          |  |                         | GEO      | I OGIC   | AI DESCRIPTIO     | )N                  |          | FORM.     | ATION/AGE   | Depth<br>Core |             | CASING    |        |
| From | То                      | LOG         |            |  |                         |          |          |                   |                     |          | TORIVIT   | MIIOIWAGE   | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 2                       |             |            | DEPTH TO WATER CUT (m)  CK/SEDIMENT NAME  Clay  Light brown/fawn clay. Moderate/high density, moderate/low plar rollable, non-sticky. Medium brown sandy interlayers. Micaceout Clay  Light grey/fawn clay. Moderate/high density, moderate/low plar rollable, non-sticky. Orange/brown sandy seams. Light grey sand interlayers. Moderate density, moderate plasticity rollable, slight Micaceous.  Clayey Sand  Dark orange clayey fine/medium quartz sand. Well sorted, clear angular to sub rounded, 0.1-0.6mm. Micaceous.               |                         |          |          |                   |                     | non-     |           |             |               | 80          | 0         | 8      |
| 2    | 4                       |             |            | Clay  Light brown/fawn clay. Moderate/high density, moderate/low plasticity, non-rollable, non-sticky. Medium brown sandy interlayers. Micaceous.  Clay  Light grey/fawn clay. Moderate/high density, moderate/low plasticity, non-rollable, non-sticky. Orange/brown sandy seams. Light grey sandy clay interlayers. Moderate density, moderate plasticity rollable, slightly sticky. Micaceous.  Clayey Sand  Dark orange clayey fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.6mm. Micaceous. |                         |          |          |                   |                     |          |           |             |               |             |           |        |
| 4    | 5                       |             | Cla        | yey Sand   |                         |          |          |                   | ted, clear and clou | dy, sub  |           |             |               |             |           |        |
| 5    | 7                       |             |            | Clay   |                         |          | interlay | ers. Low density, | high plasticity, ro | ollable, |           |             |               |             |           |        |
| 7    | 8                       |             |            | Sand   |                         |          |          |                   |                     | ıdy, sub |           |             |               |             |           |        |
| 8    | 9                       |             |            | Sand   |                         |          |          |                   |                     | r and    |           |             |               |             |           |        |
| REMA | RKS: S                  | creened 8-1 | 0m         |  |                         |          |          |                   |                     |          | DRILL TY  | PE: Auger   | COMPL         | ETED: 9/    | 3/04      |        |
|      |                         |             |            |  |                         |          |          |                   |                     |          | DRILL FL  | UID: Mud    | LOGGEI        | DBY: Z.     | Marsden   |        |
|      |                         |             |            |  |                         |          |          |                   |                     |          | DATE: 9/3 | 5/04        | SHEET         | 1 OF 2      |           |        |



| PROJECT: Chowilla Monitoring Network Expansion |
|--|
| <b>PERMIT No. 64273</b>                        |
| PERMIT No. 64273                               |

UNIT No. 7030-742

| DEPT | 100 |     | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION   | EODMATION/ACE | Depth          | CASING      |          |           |  |  |
|------|-----|-----|---------------|--|---------------|----------------|-------------|----------|-----------|--|--|
| From | То  | LOG | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |  |  |
| 9    | 10  |     | Gravelly Sand | Medium grey coarse sand/fine gravel. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2.5mm, approx 10% medium sand. Micaceous, abundant lignite up to 4cm long. |               |                |             |          |           |  |  |
|      |     |     |               |  |               | SHEET 2        | 2 OF 2      |          |           |  |  |



### GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

| 400  | Marie Britain                  | and the same |          |                       |  | $\mathbf{W}^{A}$                  | TER        | <b>WELL LOG</b>     |                       |          |           | T LIKWIII I | 0. 02171            |             |            |         |
|------|--------------------------------|--------------|----------|-----------------------|--|-----------------------------------|------------|---------------------|-----------------------|----------|-----------|-------------|---------------------|-------------|------------|---------|
| Wat  | Departm<br>ter, Land<br>odiver | d and        |          |                       |  | **1                               | IILI       | WELL LOG            |                       |          |           | UNIT No. 7  | 030-775             |             |            |         |
|      | nserva                         |              | Coordina | tes: E N              | El   | Surface(                          | m)         | El. Ref. l          | Point(m)              | Datum:   |           | Hundred:    | ndred: Sec:         |             |            |         |
|      |                                |              |          | DEPTH TO<br>WATER CUT |  |                                   | RVAL<br>m) |                     | SUPPLY                |          |           | ТОТ         | AL DISSOLVED SOLIDS |             |            |         |
|      | AQ                             | UIFER        |          | (m)                   | (m)  | From                              | То         | L/sec               | Test length           | Me       | ethod     | mg/L        |                     | A           | Analysis N | lo.     |
|      | SUN                            | IMARY        |          |                       |  |                                   |            |                     |                       |          |           |             |                     |             |            |         |
|      |                                |              |          |                       |  |                                   |            |                     |                       |          |           |             |                     |             |            |         |
| DEPT | H (m)                          | GRAPHIC      |          | K/SEDIMENT            |  | GEO                               | LOGIC      | AL DESCRIPTION      | )N                    |          | FORM/     | ATION/AGE   | Depth<br>Core       |             | CASIN      |         |
| rom  | То                             | LOG          |          | NAME                  |  |                                   |            |                     |                       |          | 1 010.11  | 1110111102  | Sample              | Dia<br>(mm) | From (m)   | T<br>(r |
| 0    | 3                              |              |          | Clay                  | Fawn/grey clay. High sandy seams. Micaceo                                |                                   | , low pla  | asticity, non-rolla | ıble, non-sticky. B   | rown     |           |             |                     | 80          | 0          | 1       |
| 3    | 4                              |              | Sa       | andy Clay             | Light grey sandy clay.   | Low do                            | ensity, h  |                     |                       |          |           |             |                     |             |            |         |
|      |                                |              |          |                       | Orange/brown sandy s   | nge/brown sandy seams. Micaceous. |            |                     |                       |          |           |             |                     |             |            |         |
| 4    | 5                              |              | Cl       | ayey Sand             | Light brown/grey clay cloudy, sub angular to Orange sandy seams. I       | sub rou                           | ınded, 0   |                     |                       |          |           |             |                     |             |            |         |
| 5    | 6                              |              |          | Clay                  | Light grey and dark gr<br>sticky, greasy. Micace                         |                                   | interlay   | vers. Low density   | , high plasticity, ro | ollable, |           |             |                     |             |            |         |
| 6    | 9                              |              |          | Sand                  | Light brown/orange m cloudy, sub angular to                              |                                   |            |                     |                       | r and    |           |             |                     |             |            |         |
| 9    | 10                             |              |          | Sand                  | Medium grey coarse q<br>angular to sub rounded<br>gravel. Micaceous, lig | 1, 0.6-2                          | mm, app    | prox 10% mediur     |                       |          |           |             |                     |             |            |         |
| EMA  | RKS: S                         | creened 16-  | 18m      |                       |  |                                   |            |                     |                       |          | DRILL TY  | PE: Auger   | COMPL               | ETED: 9     | /3/04      | •       |
|      |                                |              |          |                       |  |                                   |            |                     |                       |          | DRILL FL  | UID: Mud    | LOGGE               | D BY: Z.    | Marsden    |         |
|      |                                |              |          |                       |  |                                   |            |                     |                       |          | DATE: 9/3 | 3/04        | SHEET               | 1 OF 2      |            |         |
|      |                                |              |          |                       |  |                                   |            |                     |                       |          |           |             |                     |             |            |         |



| <b>PROJECT:</b> Chowilla Monitoring Net | work |
|---|------|
| Expansion                               |      |
|   |      |

PERMIT No. 62474

UNIT No. 7030-775

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Depth<br>Core | (           | CASING   | j      |
|------|-------|---------|---------------|--|---------------|---------------|-------------|----------|--------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION   | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To (m) |
| 10   | 12    |         | Gravelly Sand | Medium grey coarse quartz sand/fine gravel. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2.5mm, approx 10% medium sand. Micaceous, lignite up to 4cm long.   |               |               |             |          |        |
| 12   | 14    |         | Sand          | Medium grey medium/coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-2mm. Micaceous, lignite up to 4cm, clay blebs.   |               |               |             |          |        |
| 14   | 16    |         | Sand          | Light brown/grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, traces of medium sand and fine gravel. Micaceous, lignite up to 6cm.  |               |               |             |          |        |
| 16   | 18    |         | Sand          | Light brown/grey medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.6mm, 20% coarse sand up to 1.2mm. Micaceous. Sticky sand coming through at end, medium/coarse quartz sand up to 2mm, 20% fine gravels up to 3mm. Micaceous, lignite. |               |               |             |          |        |
|      |       |         |               |  |               | SHEET 2       | 2 OF 2      |          |        |



PROJECT: Chowilla Monitoring Network Expansion

|      | Departmer, Land |             |              |                       |  | WA  | TER                | WELL LOG                                |                            |         |          | UNIT No. 7             |               |             |          |        |  |
|------|-----------------|-------------|--------------|-----------------------|--|---|--------------------|---|----------------------------|---------|----------|------------------------|---------------|-------------|----------|--------|--|
| Bio  | diver           | sity        | Coordinates: | E N                   | El.  | Surface(  | m)                 | El. Ref. F                              | Point(m)                   | Datum:  |          | Hundred:               | Sec           | ::          |          |        |  |
|      |                 |             |              | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER   |   | RVAL               |   | SUPPLY                     |         |          | TOTAL DISSOLVED SOLIDS |               |             |          |        |  |
|      | AQ              | UIFER       |              | (m)                   | (m)  | From  | То                 | L/sec                                   | Test length                | Ме      | thod     | mg/L                   |               | Analysis    |          | o.     |  |
|      | SUM             | IMARY       |              |                       |  |   |                    |   |                            |         |          |                        |               |             |          |        |  |
| DEPT | H (m)           | GRAPHIC     |              | SEDIMENT              |  | GEO!  | LOGIC              | AL DESCRIPTIO                           | )<br>N                     |         | FORM/    | ATION/AGE              | Depth<br>Core |             | CASING   |        |  |
| From | To              | LOG         | N/           | AME                   |  | GEO.  | Locie              | and begonding                           | <i>.</i>                   |         | 1 OIUI   | 111011/1102            | Sample        | Dia<br>(mm) | From (m) | To (m) |  |
| 0    | 2               |             | Clay         |                       | Dark brown clay. Mod density, low plasticity, density, high plasticity | non-ro  | llable, r          | non-sticky. Remai                       |                            |         |          | 80                     | 0             | 7           |          |        |  |
| 2    | 3               |             | C            |                       |  | ght grey clay. Low density, high plasticity, rollable, sticky, greasy. Orange ady seams. Micaceous. |                    |   |                            |         |          |                        |               |             |          |        |  |
| 3    | 4               |             | S            |                       | Orange medium quartz rounded, 0.2-0.6. Mica                            |   | Well so            | rted, clear and clo                     | oudy, sub angular t        | o sub   |          |                        |               |             |          |        |  |
| 4    | 6               |             | S            | Sand                  | Orange coarse quartz s<br>sub rounded, 0.6-2mm                         | and. M<br>, approx  | oderate<br>x 30% r | ly sorted, clear an<br>nedium sand. Mic | d cloudy, sub ang caceous. | ular to |          |                        |               |             |          |        |  |
| 6    | 8               |             | S            |                       | Light grey/orange coar<br>angular to sub rounded                       |   |                    |   |                            |         |          |                        |               |             |          |        |  |
| 8    | 10              |             | S            | ;                     | Medium grey/brown coangular to sub rounded centimetres thick.          |   |                    |   |                            |         |          |                        |               |             |          |        |  |
| REMA | RKS: S          | creened 7-1 | 0m           | '                     |  |   |                    |   |                            |         | DRILL TY | PE: Auger              | COMPLI        | ETED: 10    | 0/3/04   |        |  |
|      |                 |             |              |                       |  |   |                    |   |                            |         | DRILL FL | UID: Mud               | LOGGEI        | DBY: Z.     | Marsden  |        |  |
|      |                 |             |              |                       |  |   |                    |   |                            |         | DATE: 10 | /3/04                  | SHEET         | 1 OF 1      |          |        |  |



#### GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

| 1000 |                     | CONTRACT LINE |            |                       |  | $\mathbf{W}$ | VTRB.                | WELL LOG                          |  |           |          |             |                |             |           |        |
|------|---------------------|---------------|------------|-----------------------|--|--------------|----------------------|-----------------------------------|--|-----------|----------|-------------|----------------|-------------|-----------|--------|
| Wa   | Departm<br>ter, Lan | d and         |            |                       |  | VV I         | XILK                 | WELL LOG                          |  |           |          | UNIT No. 7  | 030-671        |             |           |        |
|      | nserva              |               | Coordinate | es: E N               | El.  | Surface(     | (m)                  | El. Ref. P                        | oint(m)                                  | Datum:    |          | Hundred:    | Sec            | 2:          |           |        |
|      |                     |               |            | DEPTH TO<br>WATER CUT | DEPTH TO STANDING WATER  |              | RVAL<br>m)           |                                   | SUPPLY                                   |           |          | TOT         | AL DISSO       | LVED SO     | OLIDS     |        |
|      | AQ                  | UIFER         |            | (m)                   | (m)  | From         | То                   | L/sec                             | Test length                              | M         | ethod    | mg/L        |                | A           | nalysis N | lo.    |
|      | SUM                 | MARY          |            |                       |  |              |                      |                                   |  |           |          |             |                |             |           |        |
| DEPT | TH (m)              | GRAPHIC       | ROCK       | /SEDIMENT             |  | CEO          | LOGIG                | AL DESCRIPTIO                     | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\   |           | FORM     | A THOMAS CE | Depth          | (           | CASING    |        |
| From | То                  | LOG           | 1          | NAME                  |  | GEO.         | LOGIC                | AL DESCRIPTIC                     | )N                                       |           | FORMA    | ATION/AGE   | Core<br>Sample | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 1.5                 |               |            | Clay                  | Medium grey/brown communication Micaceous.   | lay. Hig     | gh densi             | ty, low plasticity,               | non-rollable, non-                       | -sticky.  |          |             |                | 80          | 0         | 15     |
| 1.5  | 4                   |               |            | Clay                  | Light grey clay. Low of greasy. Orange/brown   |              |                      |                                   | slightly sticky, slig                    | ghtly     |          |             |                |             |           |        |
| 4    | 4.5                 |               |            | Sand                  | Light brown coarse qu<br>rounded, 0.6-1.6mm. S   |              |                      |                                   | cloudy, sub angul                        | ar to sub |          |             |                |             |           |        |
| 4.5  | 8                   |               |            | Sand                  | Orange coarse quartz s<br>sub rounded, 0.6-2mm   |              |                      |                                   |  | ular to   |          |             |                |             |           |        |
| 8    | 10                  |               |            | Sand                  | Orange/brown coarse of angular to sub rounded  |              |                      |                                   |  |           |          |             |                |             |           |        |
| 10   | 12                  |               | Cla        | yey Sand              | Grey slightly clayey co<br>cloudy, sub angular to<br>lignite up to 3cm. Yell<br>cloudy, sub angular to | sub rou      | inded, 0<br>dium/coa | .2-3mm, 10% me arse sand layer. W | dium sand. Micac<br>Vell sorted, clear a | eous,     |          |             |                |             |           |        |
| REMA | RKS: S              | creened 15-   | -18m       |                       |  |              |                      |                                   |  |           | DRILL TY | PE: Auger   | COMPL          | ETED: 10    | 0/3/04    | •      |
|      |                     |               |            |                       |  |              |                      |                                   |  |           | DRILL FL | UID: Mud    | LOGGE          | D BY: Z.    | Marsden   |        |
|      |                     |               |            |                       |  |              |                      |                                   |  |           | DATE: 10 | /3/04       | SHEET          | 1 OF 2      |           |        |
|      |                     |               |            |                       |  |              |                      |                                   |  |           |          |             |                |             |           |        |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |
|                                      |

PERMIT No. 64276

UNIT No. 7030-671

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Depth<br>Core |             | CASINO   |        |
|------|-------|---------|---------------|---|---------------|---------------|-------------|----------|--------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To (m) |
| 12   | 13.5  |         | Sand          | Yellow/grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, 30% medium sand. Micaceous.   |               |               | , ,         | , ,      | , ,    |
| 13.5 | 16    |         | Sand          | Grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.5mm, approx 30% medium sand. Micaceous. |               |               |             |          |        |
| 16   | 18    |         | Sand          | Grey coarse quartz sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.6-2mm, approx 20% medium sand. Micaceous.   |               |               |             |          |        |
|      |       |         |               |   |               |               |             |          |        |
|      |       |         |               |   |               |               |             |          |        |
|      |       |         |               |   |               |               |             |          |        |
|      |       |         |               |   |               |               |             |          |        |
|      |       |         |               |   |               |               |             |          |        |
|      |       |         |               |   |               |               |             |          |        |
|      |       |         |               |   |               |               |             |          |        |
|      |       |         | l             |   |               | SHEET 2       | 2 OF 2      |          |        |



#### GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

|      | and the latest of the latest o | manus.      |            | WATER WELL LOG  |   |   |            |                 |             |           | PERIVITI NO. 042// |            |               |          |            |           |  |
|------|--|-------------|------------|---|---|---|------------|-----------------|-------------|-----------|--------------------|------------|---------------|----------|------------|-----------|--|
| Wat  | Departm<br>er, Land<br>diver   | d and       |            |   |   | ***   | X I LIX    | WELL LOG        |             |           |                    | UNIT No. 7 | 030-669       |          |            |           |  |
|      | serva  | tion        | Coordinate | es: E N   | El.   | Surface(  | m)         | El. Ref. I      | Point(m)    | Datum:    |                    | Hundred:   | <b>c:</b>     |          |            |           |  |
|      |  |             |            | DEPTH TO<br>WATER CUT   | DEPTH TO<br>STANDING WATER                    | I .   | RVAL<br>n) |                 | SUPPLY      |           |                    | тот        | AL DISSO      | LVED S   | OLIDS      |           |  |
|      | $\mathbf{AQ}^{T}$  | UIFER       |            | (m)   | (m)   | From  | То         | L/sec           | Test length | Me        | ethod              | mg/L       |               | A        | Analysis N | lo.       |  |
|      | SUM  | IMARY       |            |   |   |   |            |                 |             |           |                    |            |               |          |            |           |  |
| DEPT | H (m)  | GRAPHIC     | 1          | /SEDIMENT   |   | GEO   | LOGIC      | AL DESCRIPTION  | )N          |           | FORM               | ATION/AGE  | Depth<br>Core |          | CASIN      |           |  |
| From | To   | LOG         | l N        | NAME  |   | GLO   | Logic      | THE BESCHII III | <i>5</i> 11 |           | TORWI              | monwhol    | Sample        | Dia (mm) | From (m)   | To<br>(m) |  |
| 0    | 2  |             |            | Clay  Light/medium grey clay. Moderate/high density, moderate/low plasticity, sl rollable, slightly sticky. Micaceous.  Clay  Medium brown clay. Low density, high plasticity, rollable, sticky, slightly |   |   |            |                 |             |           |                    |            |               | 80       | 0          | 6         |  |
| 1    |  |             |            | •   | greasy. Micaceous.                            | greasy. Micaceous.  |            |                 |             |           |                    |            |               |          |            |           |  |
| 2    | 3  |             |            | Clay  | Light brown/fawn clay rollable, sticky. Sandy |   |            |                 |             | slightly  |                    |            |               |          |            |           |  |
| 3    | 4  |             |            | Clay  | Medium grey clay. Mo<br>Micaceous.            | edium grey clay. Moderate density, moderate plasticity, rollable, sticky. icaceous. |            |                 |             |           |                    |            |               |          |            |           |  |
| 4    | 6  |             |            | Sand  | Grey coarse quartz san rounded, 0.6-1.8mm, a  |   |            |                 |             | ar to sub |                    |            |               |          |            |           |  |
| 6    | 8  |             |            | Sand  | Grey coarse quartz san rounded, 0.6-2mm, app  |   |            |                 |             |           |                    |            |               |          |            |           |  |
| EMA  | RKS: S   | creened 6-8 | m          |   |   |   |            |                 |             |           | DRILL TY           | PE: Auger  | COMPL         | ETED: 1  | 1/3/04     |           |  |
|      |  |             |            |   |   |   |            |                 |             |           | DRILL FL           | UID: Mud   | LOGGE         | D BY: Z. | Marsden    |           |  |
|      |  |             |            |   |   |   |            |                 |             |           | DATE: 11           | /3/04      | SHEET         | 1 OF 1   |            |           |  |



### GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

| Wa   | ter, Lan | d and       |            |                       |  |         |             |                      |                       |         |          | UNIT No. 7 | 030-668       |             |           |        |
|------|----------|-------------|------------|-----------------------|--|---------|-------------|----------------------|-----------------------|---------|----------|------------|---------------|-------------|-----------|--------|
|      | nserva   |             | Coordinate | es: E N               | El.  | Surface | (m)         | El. Ref. P           | oint(m)               | Datum:  |          | Hundred:   | Sec           | <b>::</b>   |           |        |
|      |          |             |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                   | I .     | ERVAL<br>m) |                      | SUPPLY                |         |          | ТОТ        | AL DISSO      | LVED SO     | OLIDS     |        |
|      | AQ       | UIFER       |            | (m)                   | (m)  | From    | То          | L/sec                | Test length           | M       | ethod    | mg/L       |               | A           | nalysis N | lo.    |
|      | SUM      | IMARY       |            |                       |  |         |             |                      |                       |         |          |            |               |             |           |        |
| DEPT | 'H (m)   | GRAPHIC     | ROCK       | /SEDIMENT             |  | GEO     | I OCIC      | AL DESCRIPTIO        | NI.                   |         | FORM     | ATION/AGE  | Depth<br>Core | (           | CASIN     | G      |
| From | То       | LOG         | 1          | NAME                  |  | GEO     | LOGIC       | AL DESCRIPTIC        | )IN                   |         | FORMA    | ATION/AGE  | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 1.5      |             |            | Clay                  | Medium grey clay. Hig<br>Micaceous.          | gh dens | sity, low   | plasticity, non-ro   | llable, slightly stic | eky.    |          |            |               | 80          | 0         | 6      |
| 1.5  | 2        |             |            | Clay                  | Dark brown clay. Low Micaceous.              | density | y, high p   | plasticity, rollable | , sticky, slightly si | ilty.   |          |            |               |             |           |        |
| 2    | 4        |             |            | Sand                  | Orange coarse quartz s sub rounded, 0.6-1.5m |         |             |                      |                       | ular to |          |            |               |             |           |        |
| 4    | 5.5      |             |            | Sand                  | Grey/brown coarse quato sub rounded, 0.6-1.5 |         |             |                      |                       | angular |          |            |               |             |           |        |
| 5.5  | 6        |             |            | Clay                  | Medium grey clay. Low Micaceous.             | w dens  | ity, high   | plasticity, rollable | le, sticky, greasy.   |         |          |            |               |             |           |        |
| 6    | 8        |             |            | Sand                  | Grey medium/coarse q up to 3.5mm. Micaceo    |         |             | derately sorted, 0   | .2-2mm, traces of     | gravel  |          |            |               |             |           |        |
| REMA | RKS: S   | creened 6-8 | 3m         |                       | l  |         |             |                      |                       |         | DRILL TY | PE: Auger  | COMPL         | ETED: 11    | /3/04     |        |
|      |          |             |            |                       |  |         |             |                      |                       |         | DRILL FL | UID: Mud   | LOGGE         | D BY: Z.    | Marsden   |        |
|      |          |             |            |                       |  |         |             |                      |                       |         | DATE: 11 | /3/04      | SHEET         | 1 OF 1      |           |        |



PROJECT: Chowilla Monitoring Network Expansion

|      |                              |              |            |                       |   | <b>XX</b> 7.6 | TED        | WELL LOG          |                      |            |           | I LEIXIVIII IV | U. U <del>1</del> 201 |             |           |        |
|------|------------------------------|--------------|------------|-----------------------|---|---------------|------------|-------------------|----------------------|------------|-----------|----------------|-----------------------|-------------|-----------|--------|
| Wa   | Departm<br>er, Land<br>diver | d and        |            |                       |   | VV P          | AILK       | WELL LOG          |                      |            |           | UNIT No. 7     | 030-744               |             |           |        |
|      | nserva                       |              | Coordinate | es: E N               | El.   | Surface(      | (m)        | El. Ref. I        | Point(m)             | Datum:     |           | Hundred:       | Sec                   | <b>::</b>   |           |        |
|      |                              |              |            | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER                        | 1             | RVAL<br>m) |                   | SUPPLY               |            |           | ТОТ            | AL DISSO              | LVED SO     | OLIDS     |        |
|      | $\mathbf{AQ}^{\prime}$       | UIFER        |            | (m)                   | (m)   | From          | То         | L/sec             | Test length          | Me         | ethod     | mg/L           |                       | A           | nalysis N | lo.    |
|      | SUM                          | IMARY        |            |                       |   |               |            |                   |                      |            |           |                |                       |             |           |        |
| DEPT | H (m)                        | GRAPHIC      | 1          | SEDIMENT              |   | GEO           | LOGICA     | AL DESCRIPTION    | ON                   |            | FORM.     | ATION/AGE      | Depth<br>Core         |             | CASING    |        |
| From | То                           | LOG          |            | NAME                  |   |               |            |                   |                      |            | 1 ORIVII  | ITIOTVITGE     | Sample                | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 2                            |              | Sand &     | & Limestone           | Orange/brown sand an and cloudy, sub angula       |               |            |                   |                      |            |           |                |                       | 157         | 0         | 125    |
| 2    | 4                            |              |            | Clay                  | Light grey/brown clay                             | slurry.       | No struc   | cture. Off-white  | cemented limestor    | ne chips.  |           |                |                       |             |           |        |
| 4    | 6                            |              |            | Clay                  | Light grey clay. High of Crimson/orange seams     |               |            |                   |                      |            |           |                |                       |             |           |        |
| 6    | 8                            |              |            | Clay                  | Light grey clay. Moder<br>Crimson/orange seams    |               |            | . Moderate/high   | plasticity, rollable | e, sticky. |           |                |                       |             |           |        |
| 8    | 10                           |              |            | Clay                  | Light fawn/grey clay. I sticky.                   | Modera        | te/low d   | lensity, moderate | /high plasticity, ro | ollable,   |           |                |                       |             |           |        |
| 10   | 12                           |              |            | Clay                  | Light fawn/grey clay. I rollable, slightly sticky |               |            |                   |                      | on-        |           |                |                       |             |           |        |
| 12   | 16                           |              |            | Clay                  | Light fawn/grey clay. I rollable, slightly sticky |               |            |                   | e/low plasticity, no | on-        |           |                |                       |             |           |        |
| REMA | RKS: O                       | pen hole fro | om 125-1   | 45m                   |   |               |            |                   |                      |            | DRILL TY  | PE: Auger      | COMPL                 | ETED: 12    | 2/10/2004 |        |
|      |                              |              |            |                       |   |               |            |                   |                      |            | DRILL FL  | UID: Mud       | LOGGEI                | O BY: Z.    | Marsden   |        |
|      |                              |              |            |                       |   |               |            |                   |                      |            | DATE: 7/1 | 0/2004         | SHEET                 | 1 OF 4      |           |        |



|           | PROJECT: Chowilla Monitoring Network |
|-----------|--------------------------------------|
| Expansion | Expansion                            |

**PERMIT No. 64284** 

UNIT No. 7030-744

| DEPT | H (m) | GRAPHIC | ROCK/SEDIMENT | CEOLOGICAL DESCRIPTION  | FORMATION/AGE | Depth<br>Core | C           | ŕ        |           |
|------|-------|---------|---------------|---|---------------|---------------|-------------|----------|-----------|
| From | То    | LOG     | NAME          | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To<br>(m) |
| 16   | 23    |         | Clay          | Light grey clay. Moderate/high density, moderate/low plasticity, non-rollable, slightly sticky. Moderate density interlayers throughout.            |               |               |             |          |           |
| 23   | 24    |         | Sand          | Light grey medium sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.3-0.6mm.   |               |               |             |          |           |
| 24   | 30    |         | Sand          | Light grey medium sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.3-0.6mm. Yellow/brown seams throughout. Grey clay interlayers. |               |               |             |          |           |
| 30   | 40    |         | Sand          | Light fawn/brown medium/coarse sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.4-0.8mm.  |               |               |             |          |           |
| 40   | 42    |         | Sand          | Light yellow/brown medium/coarse sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.4-1mm. Traces of limestone, spherical shape.    |               |               |             |          |           |
| 42   | 48    |         | Sand          | Light brown coarse sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.6mm. Traces of medium sand.                               |               |               |             |          |           |
| 48   | 54    |         | Sand          | Medium brown medium/coarse sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.5-1.5mm.  |               |               |             |          |           |
| 54   | 66    |         | Sand          | Medium grey medium/coarse sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.6mm. Micaceous.                              |               |               |             |          |           |
| 66   | 68    |         | Sand          | Medium grey medium sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.4mm. Micaceous.   |               |               |             |          |           |
| 68   | 78    |         | Sand          | Medium grey medium/coarse sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.5mm. Micaceous.                              |               |               |             |          |           |
|      |       | 1       |               |   |               | SHEET 2       | 2 OF 4      |          |           |



| <b>PROJECT:</b> Chowilla Monitoring Network | k |
|---|---|
| Expansion                                   |   |

**PERMIT No. 64284** 

UNIT No. 7030-744

| DEPT | LOG NAME |     | ROCK/SEDIMENT             | CEOLOCICAL DESCRIPTION  | FORMATION/AGE | Depth<br>Core | C           | CASINO   |           |  |  |
|------|----------|-----|---------------------------|---|---------------|---------------|-------------|----------|-----------|--|--|
| From | То       | LOG | NAME                      | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Sample        | Dia<br>(mm) | From (m) | To<br>(m) |  |  |
| 78   | 82       |     | Clayey Sand               | Medium grey clayey medium/coarse sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.5mm, becoming finer towards end of sample.  |               |               |             |          |           |  |  |
| 82   | 88       |     | Clayey Sand               | Medium grey clayey medium sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.5mm. Minor shell fragments.  |               |               |             |          |           |  |  |
| 88   | 96       |     | Clayey Sand               | Medium grey, medium/coarse clayey sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.2-1.5mm. Black specs throughout. Minor shell fragments. Micaceous.   |               |               |             |          |           |  |  |
| 96   | 114      |     | Clayey sand               | Medium grey clayey medium/coarse sand. Moderately sorted, clear and cloudy, sub angular to sub rounded, 0.5-2.2mm. Abundant shell fragments.  |               |               |             |          |           |  |  |
| 114  | 122      |     | Marly Sand                | Medium grey marly coarse sand. Well sorted, clear and cloudy, sub angular to sub rounded, 1.5-2.2mm. Shell fragments. Becoming more clayey with depth.  |               |               |             |          |           |  |  |
| 122  | 124      |     | Marly Sand                | Medium grey marly coarse sand. Well sorted, clear and cloudy, sub angular to sub rounded, 1.5-2.2mm. Shell fragments. Thin chips of dark grey marly, high density. Limestone chips, soft.   |               |               |             |          |           |  |  |
| 124  | 128      |     | Sand, Marl &<br>Limestone | Light grey limestone, sand and marl interlayers. Limestone in chips, cemented, fine-grained. Sand coarse, well sorted, clear and cloudy, sub angular to sub rounded, 1.5-2mm, content decreasing with depth. Marl both light grey, soft blebs and dark grey, hard chips. Shell fragments. |               |               |             |          |           |  |  |
| 128  | 134      |     | Marl and Limestone        | Light grey marl and limestone. Limestone in chips, cemented, fine-grained. Marl both light grey, soft blebs and dark grey, hard chips. Shell fragments.   |               |               |             |          |           |  |  |
| 134  | 138      |     | Marl                      | Light grey marl. Low density. Minor dark grey hard marl chips. Minor limestone chips, minor shell fragments.  |               |               |             |          |           |  |  |
|      |          |     |                           |   |               | SHEET 3       | 3 OF 4      |          |           |  |  |



| PROJECT: Chowilla Monitoring Network Expansion |
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| PERMIT No. 64284                               |
| UNIT No. 7030-744                              |

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SHEET 4 OF 4

**Hundred:** 

| DEPT | ГН (m) | GRAPHIC | ROCK/SEDIMENT      | CDOLOGICAL PROCEDENTION  | FORMATION/A CF | Depth          | (           | CASINO   | J         |
|------|--------|---------|--------------------|--|----------------|----------------|-------------|----------|-----------|
| From | То     | LOG     | NAME               | GEOLOGICAL DESCRIPTION   | FORMATION/AGE  | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |
| 138  | To 145 | LOG     | Marl and Limestone | Medium grey marl and limestone interlayers. Limestone in chips, fine-grained, cemented. Marl medium and light grey, soft. Minor shell fragments. |                | Sample         |             |          | 10<br>(m) |
|      |        |         |                    |  |                |                |             |          |           |



#### GROUNDWATER PROGRAM WATER WELL LOG

PROJECT: Chowilla Monitoring Network Expansion

| 1000 | CARGO TO A LANGE   | 2002200     |            |                       |   | W        | TFR        | WELL LOG          |                      |            |          |             |               |             |           |        |
|------|--------------------|-------------|------------|-----------------------|---|----------|------------|-------------------|----------------------|------------|----------|-------------|---------------|-------------|-----------|--------|
| Wat  | Departmenter, Land | d and       |            |                       |   | VV I     | XILK       | WEEL LOG          |                      |            |          | UNIT No. 70 | 030-743       |             |           |        |
|      | nserva             |             | Coordinate | es: E N               | El.   | Surface( | (m)        | El. Ref. I        | Point(m)             | Datum:     |          | Hundred:    | Sec           | <b>::</b>   |           |        |
|      |                    |             |            | DEPTH TO<br>WATER CUT | DEPTH TO STANDING WATER                           |          | RVAL<br>m) |                   | SUPPLY               |            |          | тотл        | AL DISSO      | LVED SO     | DLIDS     |        |
|      | $\mathbf{AQ}^{T}$  | UIFER       |            | (m)                   | (m)   | From     | То         | L/sec             | Test length          | Me         | ethod    | mg/L        |               | A           | nalysis N | lo.    |
|      | SUM                | IMARY       |            |                       |   |          |            |                   |                      |            |          |             |               |             |           |        |
| DEPT | 'H (m)             | GRAPHIC     | ROCK       | /SEDIMENT             |   | GEO      | LOGIC      | AL DESCRIPTION    | )NI                  |            | FORM     | ATION/AGE   | Depth<br>Core |             | CASING    | G      |
| From | То                 | LOG         | 1          | NAME                  |   | GEO      | LOGIC      | AL DESCRIPTION    | JIN                  |            | FURIVIA  | ATION/AGE   | Sample        | Dia<br>(mm) | From (m)  | To (m) |
| 0    | 2                  |             | Sand &     | & Limestone           | Orange/brown sand an and cloudy, sub angula       |          |            |                   |                      |            |          |             |               | 80          | 0         | 47     |
| 2    | 4                  |             |            | Clay                  | Light grey/brown clay                             | slurry.  | No stru    | cture. Off-white  | cemented limestor    | ne chips.  |          |             |               |             |           |        |
| 4    | 6                  |             |            | Clay                  | Light grey clay. High of Crimson/orange seams     |          |            |                   |                      |            |          |             |               |             |           |        |
| 6    | 8                  |             |            | Clay                  | Light grey clay. Moder<br>Crimson/orange seams    |          |            | y. Moderate/high  | plasticity, rollable | e, sticky. |          |             |               |             |           |        |
| 8    | 10                 |             |            | Clay                  | Light fawn/grey clay. I sticky.                   | Modera   | te/low o   | lensity, moderate | /high plasticity, ro | ollable,   |          |             |               |             |           |        |
| 10   | 12                 |             |            | Clay                  | Light fawn/grey clay. I rollable, slightly sticky |          |            |                   |                      | on-        |          |             |               |             |           |        |
| 12   | 16                 |             |            | Clay                  | Light fawn/grey clay. I rollable, slightly sticky |          |            |                   | e/low plasticity, ne | on-        |          |             |               |             |           |        |
| REMA | RKS: S             | creened 47- | 50m        |                       |   |          |            |                   |                      |            | DRILL TY | PE: Auger   | COMPL         | ETED: 1/    | 10/2004   |        |
|      |                    |             |            |                       |   |          |            |                   |                      |            | DRILL FL | UID: Mud    | LOGGE         | D BY: Z.    | Marsden   |        |
|      |                    |             |            |                       |   |          |            |                   |                      |            | DATE: 29 | /9/2004     | SHEET         | 1 OF 2      |           |        |



| <b>PROJECT:</b> Chowilla Monitoring Network Expansion |
|---|
| PERMIT No. 64285                                      |

UNIT No. 7030-743

| DEPT | LOG NAME |     | THO CHOICAL DESCRIPTION FOR MATION/ACTE |   |               |                |             |          |           |
|------|----------|-----|---|---|---------------|----------------|-------------|----------|-----------|
| From | To       | LOG | NAME                                    | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |
| 16   | 23       |     | Clay                                    | Light grey clay. Moderate/high density, moderate/low plasticity, non-rollable, slightly sticky. Moderate density interlayers throughout.            |               |                | , ,         | ` ,      |           |
| 23   | 24       |     | Sand                                    | Light grey medium sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.3-0.6mm.   |               |                |             |          |           |
| 24   | 30       |     | Sand                                    | Light grey medium sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.3-0.6mm. Yellow/brown seams throughout. Grey clay interlayers. |               |                |             |          |           |
| 30   | 40       |     | Sand                                    | Light fawn/brown medium/coarse sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.4-0.8mm.  |               |                |             |          |           |
| 40   | 42       |     | Sand                                    | Light yellow/brown medium/coarse sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.4-1mm. Traces of limestone, spherical shape.    |               |                |             |          |           |
| 42   | 48       |     | Sand                                    | Light brown coarse sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.6-1.6mm. Traces of medium sand.                               |               |                |             |          |           |
| 48   | 50       |     | Sand                                    | Medium brown medium/coarse sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.5-1.5mm.  |               |                |             |          |           |
|      |          |     |   |   |               |                |             |          |           |
|      |          |     |   |   |               |                |             |          |           |
|      |          |     |   |   |               |                |             |          |           |
|      |          |     |   |   |               | SHEET 2        | 2 OF 2      |          |           |



PROJECT: Chowilla Monitoring Network Expansion

| Wat   | Departm<br>er, Land       | d and       |                |                       |  |            |            | WELL LOG     | /1          |        |          | UNIT No. 7      |                |          |                     |        |
|---|---------------------------|-------------|----------------|-----------------------|--|------------|------------|--------------|-------------|--------|----------|-----------------|----------------|----------|---------------------|--------|
|   | serva                     |             | Coordinates:   | E N                   | El.  | . Surface( | m)         | El. Ref. P   | oint(m)     | Datum: |          | Hundred:        |                |          |                     |        |
|   |                           |             |                | DEPTH TO<br>WATER CUT | DEPTH TO<br>STANDING WATER   |            | RVAL<br>n) |              | SUPPLY      |        |          | TOT             | AL DISSO       | LVED S   | OLIDS               |        |
| AQUIFER<br>SUMMARY  |                           |             |                | (m)                   | (m)  | From       | То         | L/sec        | Test length | N      | Method   | mg/L            |                | A        | Analysis N          | Jo.    |
| DEPT  |                           | GRAPHIC     | ROCK/S         | SEDIMENT              |  |            |            |              |             |        |          |                 | Depth          |          | CASIN               | G      |
| From  | То                        | LOG         | 1              | AME                   |  | GEO:       | LOGICA     | L DESCRIPTIC | )N          |        | FORM     | ATION/AGE       | Core<br>Sample | Dia (mm) | From (m)            | To (m) |
| <ul><li>0</li><li>1.5</li><li>3</li><li>4</li><li>6</li></ul> | 1.5<br>3<br>4<br>6<br>8.5 |             | Sand<br>S<br>S |                       | Medium grey clay. Moderate/high density, moderate/low plasticity, slightly rollable, slightly sticky, friable. Traces of coarse quartz sand, sub angular to sub rounded, up to 3mm. Micaceous, vegetation matter.  Light grey sandy clay, Low density, high plasticity, rollable, sticky.  Medium/coarse sand, up to 1mm. Micaceous.  Orange/brown medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.2-0.5mm. Micaceous.  Orange/brown medium/coarse quartz sand. Well sorted, clear and cloudy, sub-angular to sub-rounded, 0.2-1.2mm. Micaceous.  Orange/brown coarse quartz sand. Poorly sorted, clear and cloudy, sub-angular to sub-rounded, 0.6-2.5mm. Approx 30% medium sand, approx 20% fines possibly silt or clay. Micaceous. |            |            |              |             |        |          | Sample (mm) 157 |                | 0        | 85                  |        |
| EMA   | RKS: C                    | pen hole 85 | 5-180m         |                       |  |            |            |              |             |        |          | YPE: Auger      | COMPL          |          | 8/9/2004<br>Marsden |        |
|   |                           |             |                |                       |  |            |            |              |             |        | DATE 15/ |                 | SHEET          |          | - Iviai sucii       |        |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |
|                                      |

**PERMIT No. 65654** 

UNIT No. 7030-776

| DEPTH (m) |    | GRAPHIC | ROCK/SEDIMENT       | CEOLOGICAL DESCRIPTION   | EODMATION/ACE | Depth          | CASING      |          |           |  |
|-----------|----|---------|---------------------|--|---------------|----------------|-------------|----------|-----------|--|
| From      | То | LOG     | NAME                | NAME GEOLOGICAL DESCRIPTION FORMATION/AGE  |               | Core<br>Sample | Dia<br>(mm) | From (m) | To<br>(m) |  |
| 8.5       | 10 |         | Sand                | Medium grey coarse quartz sand. Moderately sorted, clear and cloudy, subangular to sub-rounded, 0.6-2mm some grains up to 5mm. 10% fine gravel, 10% medium sand. Micaceous, grey clay blebs. Hard bar and lignite at end of interval.                              |               |                |             |          |           |  |
| 10        | 13 |         | Clayey Sand         | Dark orange brown clayey coarse quartz sand. Moderately sorted, clear and cloudy, sub-angular to sub-rounded, 0.6-2.5mm. Approx 10% medium sands. Micaceous, small amount of grey clay blebs-possibly contamination from above. Hard bar at beginning of interval. |               |                |             |          |           |  |
| 13        | 16 |         | Clayey Sand         | Medium grey clayey quartz sand. Moderately sorted, clear and cloudy, subangular to sub-rounded, 0.7-2mm. 10% medium sand. Micaceous.   |               |                |             |          |           |  |
| 16        | 18 |         | Silty Sand          | Dark grey/brown silty fine/medium quartz sand. Well sorted, clear and cloudy, sub angular to sub rounded, 0.1-0.3mm. 30% coarse sand, clear and cloudy, subangular to sub-rounded, 0.8-2mm. Slightly clayey. Micaceous.  |               |                |             |          |           |  |
| 18        | 22 |         | Silty Sand          | Dark grey/brown silty fine/medium quartz sand. Traces of coarse sand up to 2mm. Slightly clayey. Micaceous.  |               |                |             |          |           |  |
| 22        | 24 |         | Silty Sand          | Dark grey/brown silty fine/medium quartz sand. Traces of coarse sand up to 1.5mm. Micaceous.   |               |                |             |          |           |  |
| 24        | 40 |         | Silty Sand          | Dark grey/brown silty fine/medium quartz sand. Clay content increasing with depth. Micaceous.  |               |                |             |          |           |  |
| 40        | 44 |         | Clayey & Silty Sand | Dark grey clayey and silty fine sand. Micaceous.   |               |                |             |          |           |  |
| 44        | 46 |         | Sandy Clay          | Medium/dark grey sandy clay. Low density, non-rollable, slightly silty. Micaceous. Traces of pyrite.   |               |                |             |          |           |  |
|           |    |         |                     |  |               | SHEET 2        | 2 OF 5      |          |           |  |



| <b>PROJECT:</b> Chowilla Monitoring Network |
|---|
| Expansion                                   |
| PERMIT No. 65654                            |

UNIT No. 7030-776

| DEPTH (m) |    | GRAPHIC |            | GEOLOGICAL DESCRIPTION  | FORMATION/AGE | Depth<br>Core | CASING      |          |           |
|-----------|----|---------|------------|---|---------------|---------------|-------------|----------|-----------|
| From      | To | LOG     | NAME       | NAME GEOLOGICAL DESCRIPTION   |               | Sample        | Dia<br>(mm) | From (m) | To<br>(m) |
| 46        | 50 |         | Clay       | Dark grey clay. Low density, high plasticity, slightly rollable, sticky. Slightly sandy (fine sand), pyritic. Micaceous.  |               |               |             |          |           |
| 50        | 51 |         | Sandy Clay | Dark grey very soft sandy clay. No structure. Micaceous   |               |               |             |          |           |
| 51        | 52 |         | Sandy Clay | Dark grey sandy clay. Low density, high plasticity, rollable, sticky, moderate sheen. Micaceous.  |               |               |             |          |           |
| 52        | 56 |         | Clay       | Dark grey clay. Low density, high plasticity, rollable, sticky, moderate sheen. Slightly sandy, abundant pyrite. Clay becoming slightly denser with depth. Micaceous. |               |               |             |          |           |
| 56        | 58 |         | Clay       | Dark grey clay. Moderate/low density, moderate/high plasticity, rollable, sticky, moderate sheen. Traces of pyrite, slightly calcareous. Micaceous.                   |               |               |             |          |           |
| 58        | 61 |         | Clay       | Dark greenish grey clay. Moderate/low density, moderate/high plasticity, rollable, sticky. Glauconitic, shell fragments, calcareous. Micaceous.                       |               |               |             |          |           |
| 61        | 62 |         | Sandy Clay | Greenish grey sandy clay. Soft, no structure, sticky. Shell fragments, calcareous. Micaceous.   |               |               |             |          |           |
| 62        | 63 |         | Clay       | Greenish grey clay. Soft, no structure, sticky. Shell fragments, calcareous. Micaceous.   |               |               |             |          |           |
| 63        | 64 |         | Sandy Clay | Greenish grey clay. Soft, no structure, sticky. Slight brown tinge in parts. Shell fragments, calcareous. Micaceous.  |               |               |             |          |           |
| 64        | 65 |         | Marl       | Medium brown marl. Soft, sticky. Light grey seams throughout. Shell fragments, highly calcareous. Micaceous.  |               |               |             |          |           |
|           |    |         |            |   |               | SHEET 3       | 3 OF 5      |          |           |



| PROJECT: Chowilla Monitoring Network |
|--------------------------------------|
| Expansion                            |
| PERMIT No. 65654                     |

UNIT No. 7030-776

| DEPTH (m) |     | GRAPHIC | ROCK/SEDIMENT    | CEOLOCICAL DESCRIPTION  | EODMATION/ACE | Depth<br>Core | CASING      |          |           |  |
|-----------|-----|---------|------------------|---|---------------|---------------|-------------|----------|-----------|--|
| From      | То  | LOG     | NAME             | GEOLOGICAL DESCRIPTION FORMATION/AGE  |               | Sample        | Dia<br>(mm) | From (m) | To<br>(m) |  |
| 65        | 68  |         | Marl             | Medium brown/grey marl. Very soft, sticky. Abundant shell fragments, highly calcareous  |               |               |             |          |           |  |
| 68        | 72  |         | Marl             | Medium grey marl. Very soft, sticky. Shell fragments, calcareous. Becoming more clayey.   |               |               |             |          |           |  |
| 72        | 73  |         | Marl             | Medium grey marl. Soft, sticky. Brown and grey clay banding. Traces of shell fragments, highly calcareous.  |               |               |             |          |           |  |
| 73        | 81  |         | Marl             | Medium grey marl. Moderate/low density, moderate/high plasticity, sticky, rollable. Becoming more clayey.   |               |               |             |          |           |  |
| 81        | 82  |         | Marl             | Medium grey marl. Moderate/low density, moderate/high plasticity, sticky, slightly rollable. Medium brown clay banding.   |               |               |             |          |           |  |
| 82        | 84  |         | Marl             | Medium brown/grey marl. Moderate/low density, moderate/high plasticity, sticky, slightly greasy. Traces of shell fragments. Glauconitic.  |               |               |             |          |           |  |
| 84        | 86  |         | Marl             | Greenish grey marl. Moderate/low density, moderate/high plasticity, sticky, slightly greasy. Medium brown clay interlayers. Glauconitic. Shell fragments, white limestone flecks coming through at end. |               |               |             |          |           |  |
| 86        | 92  |         | Marl & Limestone | Light grey/off-white limestone and light grey marl interlayers. Consolidated, with dark grey hard clay blebs. Shell fragments.  |               |               |             |          |           |  |
| 92        | 102 |         | Marl & Limestone | Light grey/off-white limestone and light grey marl interlayers. Marl moderate density, moderate plasticity, rollable, sticky. Glauconitic seams. Shell fragments.                                       |               |               |             |          |           |  |
| 102       | 104 |         | Marl             | Medium brown marl. Low density, high plasticity, rollable, sticky. Shell fragments. Carbonaceous.   |               |               |             |          |           |  |
|           |     |         |                  |   |               | SHEET 4       | 4 OF 5      |          |           |  |



| PROJECT: Chowilla Monitoring Network Expansion |
|--|
| PERMIT No. 65654                               |

Hundred: Sec:

UNIT No. 7030-776

| DEPTH (m) |     | GRAPHIC | ROCK/SEDIMENT    | CEOLOGICAL DESCRIPTION   | EODMATION/AC | TION/ACE      | Depth<br>Core | CASING      |          |           |
|-----------|-----|---------|------------------|--|--------------|---------------|---------------|-------------|----------|-----------|
| From      | То  | LOG     | NAME             | GEOLOGICAL DESCRIPTION   |              | FORMATION/AGE |               | Dia<br>(mm) | From (m) | To<br>(m) |
| 104       | 132 |         | Marl & Limestone | Light/medium grey limestone and medium grey marl interlayers. Limestone fine-grained, consolidated, chip size becoming smaller with depth. Marl moderate density, moderate plasticity, sticky, rollable. Shell fragments, calcareous.                    |              |               |               |             |          |           |
| 132       | 180 |         | Marl & Limestone | Light/medium grey limestone and medium grey marl interlayers. Limestone fine-grained, consolidated. Marl moderate density, moderate plasticity, sticky, rollable. Shell fragments, some long and cylindrical in shape. Calcareous. Hard bars throughout. |              |               |               |             |          |           |
|           |     |         |                  |  |              |               |               |             |          |           |
|           |     |         |                  |  |              |               | SHEET 5       | 5 OF 5      |          |           |

#### C. Geophysical Logs



#### Log ID: 7030-776 Total Depth: 180m Elevation (Ground Surface): 19.1m Drilling Date: 18/9/2004 Location: Chowilla - Gum Flat Drilled By: C.Sheil Easting: 497790 Northing: 497790 Lithology Logged By: Z.Marsden Casing Diameter: 157mm Geophysical Log Operator: V.Freschi Resistivity Depth (meters) Depth (Meters) Lithology Caliper 20 320 Gamma Neutron SP 130 340 320 30 -50 CLAY: Medium grey clay. SANDY CLAY: Light grey sandy clay. SAND: Orange/brown medium/coarse sand. SAND: Medium grey coarse sand. SAND: Dark orange/brown clayey coarse sand. CLAYEY SAND: Medium grey clayey sand. CLAYEY SAND: Dark grey/brown clayey fine/medium -60 -50 -40 -30 -20 SILTY SAND: Dark grey/brown silty fine sand. SILTY SAND: Dark grey/brown silty fine/medium quarta sand. CLAYEY SAND: Dark grey clayey and silty fine sand. SANDY CLAY: Medium/dark grey sandy clay. CLAY: Dark grey clay. ß, SANDY CLAY: Dark grey sandy clay. CLAY: Dark grey clay. CLAY: Dark greenish grey clay. 8-SANDY CLAY: Greenish grey sandy clay. MARL: Medium grey/brown marl. -120 -110 -100 -90 -80 -70 Ŗ. 읋. MARL: Greenish grey marl. LIMESTONE AND MARL: Light grey/off-white limestone and light grey marl interlayers. LIMESTONE AND MARL: Light grey/off-white limestone and light grey marl interlayers. MARL: Medium brown marl. LIMESTONE AND MARL: Light/medium grey limestone and medium grey marl interlayers. LIMESTONE AND MARL: Light/medium grey limestone and medium grey marl interlayers.



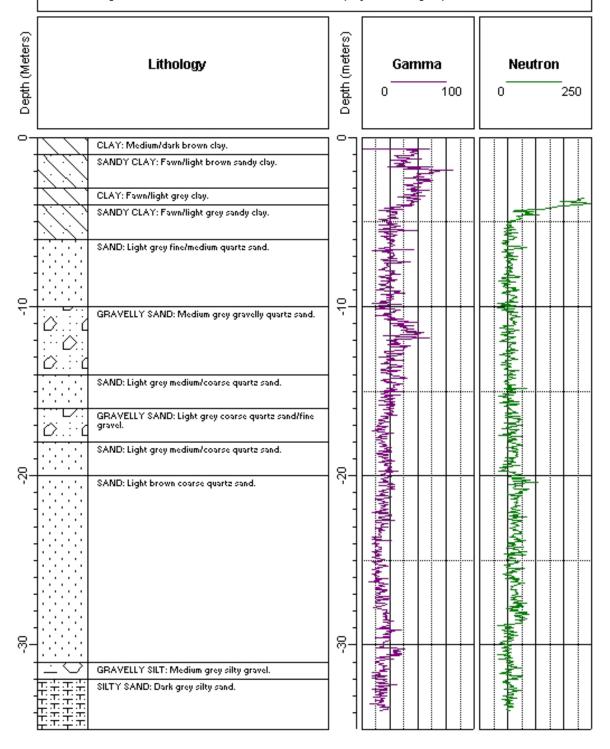
Department of Weter, Land and Blodwersty Conservation Log ID: 7030-734

Total Depth: 35m Location: Chowilla Easting: 490949 Northing: 6244535

Northing: **6244535** Casing Diameter: **80mm**  Elevation (Ground Surface):20.35m

Drilling Date: 1/9/2004 Drilled By: C.Sheil

Lithology Logged By: **Z.Marsden** Geophysical Log Operator: **V.Freschi** 



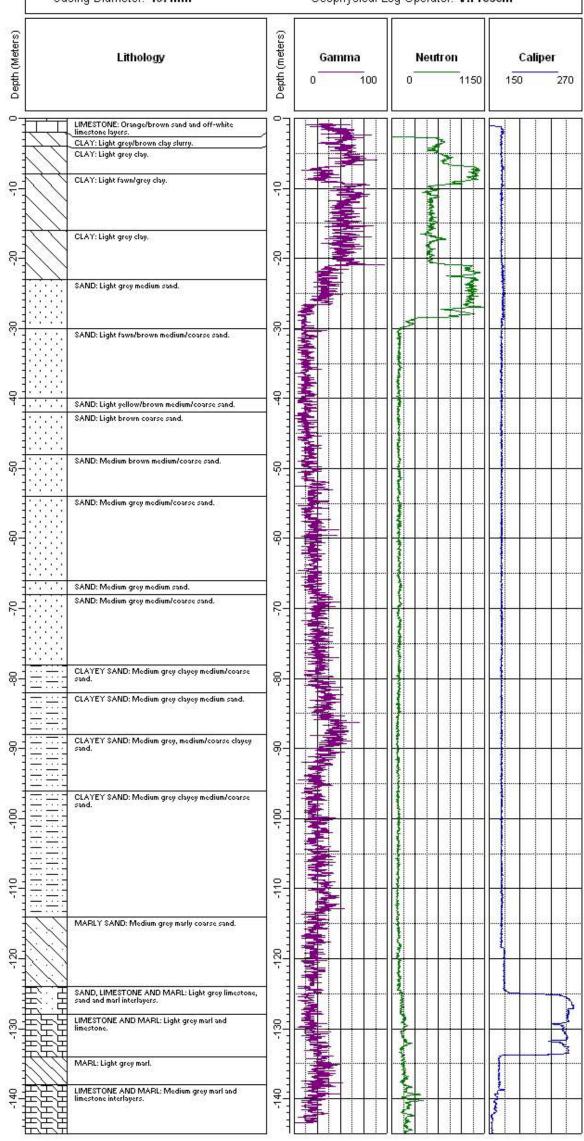


Log ID: 7030-744

Total Depth: 145m Location: Chowilla Easting: 483884 Northing: 6247440 Casing Diameter: 157mm

Elevation (Ground Surface): 51.67m Drilling Date: 12/10/2004 Drilled By: C.Sheil Lithology Logged By: Z.Marsden

Geophysical Log Operator: V.Freschi





Department of Water, Land and Biodiversity Conservation

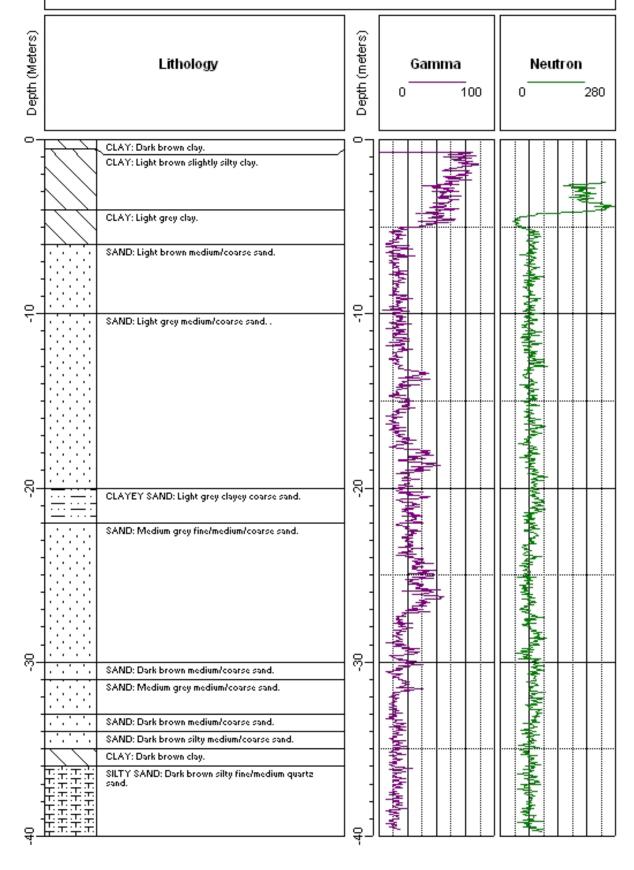
Log ID: 7030-718

Total Depth: 40m Location: Chowilla Easting: 487263 Northing: 6242557 Casing Diameter: 80mm

Elevation (Ground Surface): 20.08m

Drilling Date: 1/9/2004
Drilled By: C.Sheil

Lithology Logged By:**Z.Marsden** Geophysical Log Operator:**V.Freschi** 



#### SHORTENED FORMS

#### Units of measurement commonly used (SI and non-SI Australian legal)

| Name of unit | Symbol | Definition in terms of other metric units | Quantity      |
|--------------|--------|---|---------------|
| day          | d      | 24 h                                      | time interval |
| gigalitre    | GL     | $10^6  \mathrm{m}^3$                      | volume        |
| gram         | g      | $10^{-3} \text{ kg}$                      | mass          |
| hectare      | ha     | $10^4  \text{m}^2$                        | area          |
| hour         | h      | 60 min                                    | time interval |
| kilogram     | kg     | base unit                                 | mass          |
| kilolitre    | kL     | 1 m <sup>3</sup>                          | volume        |
| kilometre    | km     | 10 <sup>3</sup> m                         | length        |
| litre        | L      | $10^{-3}  \text{m}^3$                     | volume        |
| megalitre    | ML     | $10^3  \text{m}^3$                        | volume        |
| metre        | m      | base unit                                 | length        |
| microgram    | μg     | 10 <sup>-6</sup> g                        | mass          |
| microlitre   | μL     | 10 <sup>-9</sup> m <sup>3</sup>           | volume        |
| milligram    | mg     | 10 <sup>-3</sup> g                        | mass          |
| millilitre   | mL     | $10^{-6} \text{ m}^3$                     | volume        |
| millimetre   | mm     | 10 <sup>-3</sup> m                        | length        |
| minute       | min    | 60 s                                      | time interval |
| second       | s      | base unit                                 | time interval |
| tonne        | t      | 1000 kg                                   | mass          |
| year         | У      | 356 or 366 days                           | time interval |

 $\delta D$  hydrogen isotope composition

 $\delta^{18}$ O oxygen isotope composition

<sup>14</sup>C carbon-14 isotope (percent modern carbon)

CFC chlorofluorocarbon (parts per trillion volume)

DWLBC Department of Water, Land and Biodiversity Conservation

EC electrical conductivity (μS/cm)

pH acidity

ppm parts per million
ppb parts per billion

TDS total dissolved solids (mg/L)

Report DWLBC 2004/52 Chowilla floodplain groundwater observation network upgrade and expansion

#### **GLOSSARY**

Act. The Water Resources Act 1997 (South Australia).

Adaptive management. A management approach, often used in natural resource management, where there is little information and/or a lot of complexity and there is a need to implement some management changes sooner rather than later. The approach is to use the best available information for the first actions, implement the changes, monitor the outcomes, investigate the assumptions and regularly evaluate and review the actions required. Consideration must be given to the temporal and spatial scale of monitoring and the evaluation processes appropriate to the ecosystem being managed.

**Algal bloom.** A rapid accumulation of algal biomass (living organic matter) which can result in deterioration in water quality when the algae die and break down consuming the dissolved oxygen and releasing toxins.

**Ambient.** The background level of an environmental parameter (e.g. a background water quality like salinity).

Anabranch. A branch of a river that leaves the main stream.

Annual adjusted catchment yield. Annual catchment yield with the impact of dams removed.

**Aquifer.** An underground layer of rock or sediment which holds water and allows water to percolate through.

**Aquifer, confined.** Aquifer in which the upper surface is impervious and the water is held at greater than atmospheric pressure. Water in a penetrating well will rise above the surface of the aquifer.

**Aquifer, storage and recovery (ASR).** The process of recharging water into an aquifer for the purpose of storage and subsequent withdrawal.

**Aquifer test.** A hydrological test performed on a well, aimed to increase the understanding of the aquifer properties, including any interference between wells, and to more accurately estimate the sustainable use of the water resource available for development from the well.

**Aquifer, unconfined.** Aquifer in which the upper surface has free connection to the ground surface and the water surface is at atmospheric pressure.

**Aquitard.** A layer in the geological profile that separates two aquifers and restricts the flow between them.

**Arid lands.** In South Australia arid lands are usually considered to be areas with an average rainfall of less than 250 mm and support pastoral activities instead of broad acre cropping.

**Artesian.** Under pressure such that when wells penetrate the aquifer water will rise to the ground surface without the need for pumping.

**Artificial recharge.** The process of artificially diverting water from the surface to an aquifer. Artificial recharge can reduce evaporation losses and increase aquifer yield. (See recharge, natural recharge, aquifer.)

**Barrage.** Specifically any of the five low weirs at the mouth of the River Murray constructed to exclude seawater from the Lower Lakes.

**Baseflow.** The water in a stream that results from groundwater discharge to the stream. (This discharge often maintains flows during seasonal dry periods and has important ecological functions.)

**Basin.** The area drained by a major river and its tributaries.

Benchmark condition. Points of reference from which change can be measured.

**Biological diversity (biodiversity).** The variety of life forms: the different life forms including plants, animals and micro-organisms, the genes they contain and the *ecosystems* (see below) they form. It is usually considered at three levels — genetic diversity, species diversity and ecosystem diversity.

Biota. All of the organisms at a particular locality.

Bore. See well.

**Buffer zone.** A neutral area that separates and minimises interactions between zones whose management objectives are significantly different or in conflict (e.g. a vegetated riparian zone can act as a buffer to protect the water quality and streams from adjacent land uses).

**Catchment.** A catchment is that area of land determined by topographic features within which rainfall will contribute to runoff at a particular point.

**Catchment water management board.** A statutory body established under Part 6, Division 3, s. 53 of the Act whose prime function under Division 2, s. 61 is to implement a catchment water management plan for its area.

**Catchment water management plan.** The plan prepared by a CWMB and adopted by the Minister in accordance with Part 7, Division 2 of the Water Resources Act 1997.

**Codes of practice.** Standards of management developed by industry and government, promoting techniques or methods of environmental management by which environmental objectives may be achieved.

**Cone of depression.** An inverted cone-shaped space within an aquifer caused by a rate of groundwater extraction which exceeds the rate of recharge. Continuing extraction of water can extend the area and may affect the viability of adjacent wells, due to declining water levels or water quality.

Conjunctive use. The utilisation of more than one source of water to satisfy a single demand.

**Council of Australian Governments (COAG).** A council of the Prime Minister, State Premiers, Territory Chief Ministers and the President of the Australian Local Government Association which exists to set national policy directions for Australia.

**CWMB.** Catchment Water Management Board.

**Dams, off-stream dam.** A dam, wall or other structure that is not constructed across a watercourse or drainage path and is designed to hold water diverted, or pumped, from a watercourse, a drainage path, an aquifer or from another source. Off-stream dams may capture a limited volume of surface water from the catchment above the dam.

**Dams, on-stream dam.** A dam, wall or other structure placed or constructed on, in or across a watercourse or drainage path for the purpose of holding and storing the natural flow of that watercourse or the surface water.

**Dams, turkey nest dam.** An off-stream dam that does not capture any surface water from the catchment above the dam.

**Diffuse source pollution.** Pollution from sources such as an eroding paddock, urban or suburban lands and forests; spread out, and often not easily identified or managed.

**Domestic purpose.** The taking of water for ordinary household purposes and includes the watering of land in conjunction with a dwelling not exceeding 0.4 hectares.

**Domestic wastewater.** Water used in the disposal of human waste, for personal washing, washing clothes or dishes, and swimming pools.

**DSS (decision support system).** A system of logic or a set of rules derived from experts, to assist decision making. Typically they are constructed as computer programs.

**EC.** Abbreviation for electrical conductivity. 1 EC unit = 1 micro-Siemen per centimetre ( $\mu$ S/cm) measured at 25 degrees Celsius. Commonly used to indicate the salinity of water.

Ecological processes. All biological, physical or chemical processes that maintain an ecosystem.

**Ecological values.** The habitats, the natural ecological processes and the biodiversity of ecosystems.

**Ecologically sustainable development (ESD).** Using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.

**Ecology.** The study of the relationships between living organisms and their environment.

**Ecosystem.** Any system in which there is an interdependence upon and interaction between living organisms and their immediate physical, chemical and biological environment.

**Effluent.** Domestic wastewater and industrial wastewater.

**EIP.** Environment improvement program.

**Entitlement flows.** Minimum monthly River Murray flows to South Australia agreed in the Murray-Darling Basin Agreement 1992.

**Environmental values.** The uses of the environment that are recognised as of value to the community. This concept is used in setting water quality objectives under the Environment Protection (Water Quality) Policy, which recognises five environmental values — protection of aquatic ecosystems, recreational water use and aesthetics, potable (drinking water) use, agricultural and aquaculture use, and industrial use. It is not the same as ecological values, which are about the elements and functions of ecosystems.

**Environmental water provisions.** Those parts of environmental water requirements that can be met, at any given time. This is what can be provided at that time with consideration of existing users' rights, social and economic impacts.

**Environmental water requirements.** The water regimes needed to sustain the ecological values of aquatic ecosystems, including their processes and biological diversity, at a low level of risk.

**EPA.** Environment Protection Agency.

**Ephemeral streams / wetlands.** Those streams or wetlands that usually contain water only on an occasional basis after rainfall events. Many arid zone streams and wetlands are ephemeral.

**Erosion.** Natural breakdown and movement of soil and rock by water, wind or ice. The process may be accelerated by human activities.

**ESD.** Ecologically sustainable development (see above for definition).

**Estuaries.** Semi-enclosed waterbodies at the lower end of a freshwater stream that are subject to marine, freshwater and terrestrial influences and experience periodic fluctuations and gradients in salinity.

**Eutrophication**. Degradation of water quality due to enrichment by nutrients (primarily nitrogen and phosphorus), causing excessive plant growth and decay. (See algal bloom).

**Evapotranspiration.** The total loss of water as a result of transpiration from plants and evaporation from land, and surface waterbodies.

**Fishway.** A generic term describing all mechanisms that allow the passage of fish along a waterway. Specific structures include fish ladders (gentle sloping channels with baffles that reduce the velocity of water and provide resting places for fish as they 'climb' over a weir) and fishlifts (chambers, rather like lift-wells, that are flooded and emptied to enable fish to move across a barrier).

**Floodplain.** Of a watercourse means: (a) the floodplain (if any) of the watercourse identified in a catchment water management plan or a local water management plan; adopted under Part 7 of the Water Resources Act 1997; or (b) where paragraph (a) does not apply — the floodplain (if any) of the watercourse identified in a development plan under the Development Act 1993, or (c) where neither paragraph (a) nor paragraph (b) applies — the land adjoining the watercourse that is periodically subject to flooding from the watercourse.

Flow bands. Flows of different frequency, volume and duration.

GAB. Great Artesian Basin.

Gigalitre (GL). One thousand million litres (1 000 000 000).

**GIS** (geographic information system). Computer software allows for the linking of geographic data (for example land parcels) to textual data (soil type, land value, ownership). It allows for a range of features, from simple map production to complex data analysis.

GL. See gigalitre.

**Greenhouse effect.** The balance of incoming and outgoing solar radiation which regulates our climate. Changes to the composition of the atmosphere such as the addition of carbon dioxide through human activities, have the potential to alter the radiation balance and to effect changes to the climate. Scientists suggest that changes would include global warming, a rise in sea level and shifts in rainfall patterns.

**Greywater.** Household wastewater excluding sewage effluent. Wastewater from kitchen, laundry and bathroom.

Groundwater. See underground water.

**Habitat.** The natural place or type of site in which an animal or plant, or communities of plants and animals, lives.

**Heavy metal.** Any metal with a high atomic weight (usually, although not exclusively, greater than 100), for example mercury, lead and chromium. Heavy metals have a widespread industrial use, and many are released into the biosphere via air, water and solids pollution. Usually these metals are toxic at low concentrations to most plant and animal life.

**Hydrogeology.** The study of groundwater, which includes its occurrence, recharge and discharge processes and the properties of aquifers. (See hydrology.)

**Hydrography.** The discipline related to the measurement and recording of parameters associated with the hydrological cycle, both historic and real time.

**Hydrology.** The study of the characteristics, occurrence, movement and utilisation of water on and below the earth's surface and within its atmosphere. (See hydrogeology.)

**Hyporheic zone.** The wetted zone among sediments below and alongside rivers. It is a refuge for some aquatic fauna.

Indigenous species. A species that occurs naturally in a region.

**Industrial wastewater.** Water (not being domestic wastewater) that has been used in the course of carrying on a business (including water used in the watering of irrigation of plants) that has been allowed to run to waste or has been disposed of or has been collected for disposal.

**Infrastructure.** Artificial lakes; or dams or reservoirs; or embankments, walls, channels or other works; or buildings or structures; or pipes, machinery or other equipment.

**Integrated catchment management.** Natural resources management that considers in an integrated manner the total long-term effect of land and water management practices on a catchment basis, from production and environmental viewpoints.

**Intensive farming.** A method of keeping animals in the course of carrying on the business of primary production in which the animals are confined to a small space or area and are usually fed by hand or by mechanical means.

Irrigation. Watering land by any means for the purpose of growing plants.

**Irrigation season.** The period in which major irrigation diversions occur, usually starting in August–September and ending in April–May.

**Lake.** A natural lake, pond, lagoon, wetland or spring (whether modified or not) and includes: part of a lake; and a body of water declared by regulation to be a lake; a reference to a lake is a reference to either the bed, banks and shores of the lake or the water for the time being held by the bed, banks and shores of the lake, or both, depending on the context.

**Land.** Whether under water or not and includes an interest in land and any building or structure fixed to the land.

**Land capability.** The ability of the land to accept a type and intensity of use without sustaining long-term damage.

Leaching. Removal of material in solution such as minerals, nutrients and salts through soil.

**Licence.** A licence to take water in accordance with the Water Resources Act 1997. (See water licence.)

Licensee. A person who holds a water licence.

**Local water management plan.** A plan prepared by a council and adopted by the Minister in accordance with Part 7, Division 4 of the Act.

**Macro-invertebrates.** Animals without backbones that are typically of a size that is visible to the naked eye. They are a major component of aquatic ecosystem biodiversity and fundamental in food webs.

MDBC. Murray-Darling Basin Commission.

Megalitre (ML). One million litres (1 000 000).

ML. See megalitre.

**Model.** A conceptual or mathematical means of understanding elements of the real world which allows for predictions of outcomes given certain conditions. Examples include estimating storm runoff, assessing the impacts of dams or predicting ecological response to environmental change.

Mount Lofty Ranges Watershed. The area prescribed by Schedule 1 of the regulations.

**Natural recharge.** The infiltration of water into an aquifer from the surface (rainfall, streamflow, irrigation etc.) (See recharge area, artificial recharge.)

NHMRC. National Health and Medical Research Council.

NHT. Natural Heritage Trust.

Occupier of land. A person who has, or is entitled to, possession or control of the land.

**Owner of land.** In relation to land alienated from the Crown by grant in fee simple — the holder of the fee simple; in relation to dedicated land within the meaning of the *Crown Lands Act 1929* that has not been granted in fee simple but which is under the care, control and management of a Minister, body or other person — the Minister, body or other person; in relation to land held under Crown lease or licence — the lessee or licensee; in relation to land held under an agreement to purchase from the Crown — the person entitled to the benefit of the agreement; in relation to any other land — the Minister who is responsible for the care, control and management of the land or, if no Minister is responsible for the land, the Minister for Environment and Heritage.

**Palaeochannels.** Ancient buried river channels in arid areas of the state. Aquifers in palaeochannels can yield useful quantities of groundwater or be suitable for ASR.

Pasture. Grassland used for the production of grazing animals such as sheep and cattle.

**Percentile.** A way of describing sets of data by ranking the data set and establishing the value for each percentage of the total number of data records. The 90th percentile of the distribution is the value such that 90% of the observations fall at or below it.

Permeability. A measure of the ease with which water flows through an aquifer or aquitard.

**Personal property.** All forms of property other than real property. For example, shares or a water licence.

**Phreaphytic vegetation.** Vegetation that exists in a climate more arid than its normal range by virtue of its access to groundwater.

**Phytoplankton.** The plant constituent of organisms inhabiting the surface layer of a lake; mainly single-cell algae.

PIRSA. (Department of) Primary Industries and Resources South Australia.

**Pollution, diffuse source.** Pollution from sources that are spread out and not easily identified or managed (e.g. an eroding paddock, urban or suburban lands and forests).

Pollution, point source. A localised source of pollution.

Potable water. Water suitable for human consumption.

**Potentiometric head.** The potentiometric head or surface is the level to which water rises in a well due to water pressure in the aquifer.

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**Precautionary principle.** Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

**Prescribed area, surface water.** Part of the State declared to be a surface water prescribed area under the Water Resources Act 1997.

Prescribed lake. A lake declared to be a prescribed lake under the Water Resources Act 1997.

**Prescribed water resource.** A water resource declared by the Governor to be prescribed under the Act, and includes underground water to which access is obtained by prescribed wells. Prescription of a water resource requires that future management of the resource be regulated via a licensing system.

**Prescribed watercourse.** A watercourse declared to be a prescribed watercourse under the Water Resources Act 1997.

Prescribed well. A well declared to be a prescribed well under the Water Resources Act 1997.

**Property right.** A right of ownership or some other right to property, whether real property or personal property.

**Proponent.** The person or persons (who may be a body corporate) seeking approval to take water from prescribed water.

PWA. Prescribed wells area.

PWCA. Prescribed watercourse area.

PWRA. Prescribed water resource area.

Ramsar Convention. This is an international treaty on wetlands titled The Convention on Wetlands of International Importance Especially as Waterfowl Habitat. It is administered by the International Union for Conservation of Nature and Natural Resources. It was signed in the town of Ramsar, Iran in 1971, hence its common name. The Convention includes a list of wetlands of international importance and protocols regarding the management of these wetlands. Australia became a signatory in 1974.

**Recharge area.** The area of land from which water from the surface (rainfall, streamflow, irrigation, etc.) infiltrates into an aquifer. (See artificial recharge, natural recharge.)

**Reclaimed water.** Treated effluent of a quality suitable for the designated purpose.

**Rehabilitation (of waterbodies).** Actions that improve the ecological health of a waterbody by reinstating important elements of the environment that existed prior to European settlement.

**Remediation (of waterbodies).** Actions that improve the ecological condition of a waterbody without necessarily reinstating elements of the environment that existed prior to European settlement.

**Restoration (of waterbodies).** Actions that reinstate the pre-European condition of a waterbody.

**Reticulated water.** Water supplied through a piped distribution system.

Riffles. Shallow stream section with fast and turbulent flow.

**Riparian landholder.** A person whose property abuts a watercourse or through whose property a watercourse runs.

Riparian rights. These were old common law rights of access to, and use of water. These common law rights were abolished with the enactment of the Water Resources Act 1997, which now includes similar rights under s. 7. Riparian rights are therefore now statutory rights under the Act. Where the resource is not prescribed (Water Resources Act 1997, s. 8) or subject to restrictions (Water Resources Act 1997, s. 16), riparian landholders may take any amount of water from watercourses, lakes or wells without consideration to downstream landholders, if it is to be used for stock or domestic purposes. If the capture of water from watercourses and groundwater is to be used for any other purpose then the right of downstream landholders must be protected. Landholders may take any amount of surface water for any purpose without regard to other landholders, unless the surface water is prescribed or subject to restrictions.

**Riparian zone.** That part of the landscape adjacent to a water body, that influences and is influenced by watercourse processes. This can include landform, hydrological or vegetation definitions. It is commonly used to include the in-stream habitats, bed, banks and sometimes floodplains of watercourses.

**Seasonal watercourses or wetlands.** Those watercourses and wetlands that contain water on a seasonal basis, usually over the winter/spring period, although there may be some flow or standing water at other times.

State water plan. The plan prepared by the Minister under Part 7, Division 1, s. 90 of the Act.

**Stock Use.** The taking of water to provide drinking water for stock other than stock subject to intensive farming (as defined by the Act).

Stormwater. Runoff in an urban area.

**Surface water.** (a) water flowing over land (except in a watercourse), (i) after having fallen as rain or hail or having precipitated in any another manner, (ii) or after rising to the surface naturally from underground; (b) water of the kind referred to in paragraph (a) that has been collected in a dam or reservoir.

**Taxa.** General term for a group identified by taxonomy — which is the science of describing, naming and classifying organisms.

**To take water.** From a water resource includes (a) to take water by pumping or syphoning the water; (b) to stop, impede or divert the flow of water over land (whether in a watercourse or not) for the purpose of collecting the water; (c) to divert the flow of water in a watercourse from the watercourse; (d) to release water from a lake; (e) to permit water to flow under natural pressure from a well; (f) to permit stock to drink from a watercourse, a natural or artificial lake, a dam or reservoir.

**Total kjeldhal nitrogen (TKN).** The sum of aqueous ammonia and organic nitrogen. Used as a measure of probable sewage pollution.

**Transfer.** A transfer of a licence (including its water allocation) to another person, or the whole or part of the water allocation of a licence to another licensee or the Minister under Part 5, Division 3, s. 38 of the Act. The transfer may be absolute or for a limited period.

**Underground water (groundwater).** Water occurring naturally below ground level or water pumped, diverted or released into a well for storage underground.

**Volumetric allocation.** An allocation of water expressed on a water licence as a volume (e.g. kilolitres) to be used over a specified period of time, usually per water use year (as distinct from any other sort of allocation).

Wastewater. See domestic wastewater, industrial wastewater.

Water affecting activities. Activities referred to in Part 4, Division 1, s. 9 of the Act.

**Water allocation.** (a) in respect of a water licence means the quantity of water that the licensee is entitled to take and use pursuant to the licence; (b) in respect of water taken pursuant to an authorisation under s. 11 means the maximum quantity of water that can be taken and used pursuant to the authorisation.

**Water allocation, area based.** An allocation of water that entitles the licensee to irrigate a specified area of land for a specified period of time usually per water use year.

**Water allocation plan.** A plan prepared by a CWMB or water resources planning committee and adopted by the Minister in accordance with Division 3 of Part 7 of the Act.

**Water licence.** A licence granted under the Act entitling the holder to take water from a prescribed watercourse, lake or well or to take surface water from a surface water prescribed area. This grants the licensee a right to take an allocation of water specified on the licence, which may also include conditions on the taking and use of that water. A water licence confers a property right on the holder of the licence and this right is separate from land title.

**Water plans.** The State Water Plan, catchment water management plans, water allocation plans and local water management plans prepared under Part 7 of the Act.

**Water service provider.** A person or corporate body that supplies water for domestic, industrial or irrigation purposes or manages wastewater.

**Waterbody.** Waterbodies include watercourses, riparian zones, floodplains, wetlands, estuaries, lakes and groundwater aquifers.

**Watercourse.** A river, creek or other natural watercourse (whether modified or not) and includes: a dam or reservoir that collects water flowing in a watercourse; and a lake through which water flows; and a channel (but not a channel declared by regulation to be excluded from the this definition) into which the water of a watercourse has been diverted; and part of a watercourse.

**Water-dependent ecosystems.** Those parts of the environment, the species composition and natural ecological processes, which are determined by the permanent or temporary presence of flowing or standing water, above or below ground. The in-stream areas of rivers, riparian vegetation, springs, wetlands, floodplains, estuaries and lakes are all water-dependent ecosystems.

**Water-use year.** The period between 1 July in any given calendar year and 30 June the following calendar year. This is also called a licensing year.

**Well.** (a) an opening in the ground excavated for the purpose of obtaining access to underground water; (b) an opening in the ground excavated for some other purpose but that gives access to underground water; (c) a natural opening in the ground that gives access to underground water.

**Wetlands.** Defined by the Act as a swamp or marsh and includes any land that is seasonally inundated with water. This definition encompasses a number of concepts that are more specifically described in the definition used in the Ramsar Convention on Wetlands of International Importance. This describes wetlands as areas of permanent or periodic/intermittent inundation, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tides does not exceed six metres.

### **REFERENCES**

Marsden, Z.E. and Howles, S.R. (2003). Chowilla floodplain groundwater monitoring and investigation program Stage 1. Department of Water, Land and Biodiversity Conservation Report Book 2003/13.