# GROUNDWATER SAMPLING

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** AR/ Ridley  
**Sampling Date:** 12/12/2014  
**Well No:** P19

## Well Information
- **Well Finish:** Casing  
  - **Casing Diameter (mm):** 50  
- **Well Depth (m TOC):** 1.92  
  - **Screen Interval (m):** 1.81  
- **Depth to Free Product (m TOC):** na  
- **Product Thickness (mm):** na  
- **Depth to Groundwater (m TOC):** 1.4  
  - **Depth to be Purged (m) (Well Depth - Depth to Groundwater):** 0.30

## Purging Information
- **Purging Volume:** \( \text{vol}^3 = 3.12 \text{ L} \)  
- **Purging Method:** \( \text{bailV} \)  
- **Start Time:**  
- **Finish Time:** 5/3, 13/3, 20/3, 7/4, 14/11

## Groundwater Observations
- **Colour:** Y  
- **Turbidity:** LW  
- **Odour:** nil  
- **Hydrocarbon sheen:** nil

## Weather
- **Temperature:** 30  
- **Cloud Cover:** nil

## Field Measurements
- **Field Parameters:**  
  - **Temp (°C):**  
  - **Conductivity (μS/cm):**  
  - **pH:**  
  - **DO (mg/L):**  
  - **ORP (mV):**  
  - **SWL (m TOC):**  
  - **SG:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>SG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.52</td>
<td>22.6</td>
<td>1.318</td>
<td>7.44</td>
<td>2.94</td>
<td>229</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.56</td>
<td>22.6</td>
<td>128.592</td>
<td>7.06</td>
<td>1.72</td>
<td>179.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.58</td>
<td>22.6</td>
<td>1.851</td>
<td>7.08</td>
<td>1.39</td>
<td>168.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.20</td>
<td></td>
<td>0.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Water Quality Meter Used:
- **Volume Purged (L):**
- **Pumping Notes:** in monitoring well
- **Pumping Time:** 6.3, SG 1.082, @ 25.0°C
- **Volume Purged (L):**
- **Pumping Notes:**
- **Pumping Time:** 0.5, 1.080, 26.1
- **Volume Purged (L):**
- **Pumping Notes:**
- **Pumping Time:** 0.7, 1.079, 26.3

## Sampling Information
**Sampling Method:**
**Tubing Material:**

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres. 1L</th>
<th>Plastic H2SO4 250mL</th>
<th>Plastic HNO3 125mL</th>
<th>Glass H2SO4 125mL</th>
<th>Vial HCl</th>
<th>Plastic Sterile 500mL</th>
<th>Analysis</th>
</tr>
</thead>
</table>

Purged by:  
Sampled by:  
**Signature:**

**Signature:**
Groundwater Sampling

Job No.: 20140089  E  (m)  Well No.: P20
Location: Dry Creek Salt Fields  N  (m)
Client: ARJ/Ridley  RL casing  (m)
Sampling Date: 12/12/2014  RL surface  (m)

Well Information

Well Finish: Standpipe  0.8 Stickup (m)  Casing Diameter (mm)  50
Well Depth (m TOC): 3.516  3.47 Screen Interval (m):  Case Interval (m):
Depth to Free Product (m TOC): na  Product Thickness (mm): na
Depth to Groundwater (m TOC): 1.39  1.57  Depth to be Purged (m) (Well Depth - Depth to Groundwater) 1.90 ± 0.1

Purging Information
(wells should be purged of three to five well volumes or until field parameters are considered to be stable)

Purging Volume: \( \text{vol}^3 = 12.75 \text{ L} \)  \( \text{vol}^3 = 51 \text{ L} \)

Purging Method: \( \text{h} \)

Tubing Material:

Start Time: 2.00  Finish Time: 2.13  5/3  13/3  20/3  7/4  14/11

Well purged dry? \( \text{y} \)

Total Volume Purged (L):

Groundwater Observations

Colour \( \text{clear} \)  Odour \( \text{nil} \)
Turbidity \( \text{low} \)  Hydrocarbon sheen \( \text{nil} \)
Weather

Rain \( \text{nil} \)  Temperature 30°C  Cloud Cover \( \text{nil} \)

Comments

Field Measurements

(when pH readings are within 0.1 units, electrical conductivity within 5% and temperature within 0.2°C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable)

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>SG</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.01</td>
<td>20.2</td>
<td>1251.97</td>
<td>7.03</td>
<td>1.39</td>
<td>-158.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.07</td>
<td>20.2</td>
<td>1247.48</td>
<td>7.00</td>
<td>1.46</td>
<td>-148.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.13</td>
<td>20.0</td>
<td>1231.99</td>
<td>7.02</td>
<td>1.59</td>
<td>-150.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Water Quality Meter Used:

In monitoring well

SG 1.0807  @ 27.5°C

Sampling Information

Sampling Method:

Tubing Material:

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Amber Unpres 1L</th>
<th>Plastic H2SO4 250mL</th>
<th>Plastic HNO3 125mL</th>
<th>Glass H2SO4 125mL</th>
<th>Vial HCl</th>
<th>Plastic Sterile 500mL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Purged by: SE  Signature: 
Sampled by:  Signature:
**GROUNDWATER SAMPLING**

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 12/2014

### Well Information

- **Well Finish:** Standpipe  
- **Well Depth (m TOC):** 3.40  
- **Screen Interval (m):** 3.38  
- **Casing Diameter (mm):** 50  
- **Well To Free Product (m TOC):** na  
- **Product Thickness (mm):** na  
- **Depth to Groundwater (m TOC):** 1.61  
- **Depth to be Purged (m):** 1.50  

### Purging Information

- **Volume Purged (L):** 43  
- **Tubing Material:**  
- **Start Time:** 14:00  
- **Finish Time:** 12:12  
- **Well purged dry?** Yes  

### Groundwater Observations

- **Colour:** Light brown, clear before disturbance  
- **Turbidity:** Moderate to high  
- **Odour:** None  
- **Hydrocarbon sheen:** None  
- **Temperature:** 26°C

### Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>SG</th>
<th>Pump Depth (m):</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00</td>
<td>19.5</td>
<td>184.045</td>
<td>6.5</td>
<td>0.35</td>
<td>-23.7</td>
<td>Dry</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:15</td>
<td>19.7</td>
<td>194.009</td>
<td>6.5</td>
<td>0.35</td>
<td>-50.4</td>
<td>Dry</td>
<td>0.3</td>
<td>SG</td>
<td>In monitoring well</td>
</tr>
<tr>
<td>14.20</td>
<td>19.7</td>
<td>184.577</td>
<td>6.5</td>
<td>0.32</td>
<td>-54.2</td>
<td>Dry</td>
<td>0.2</td>
<td>1.1453 @ 29.7</td>
<td></td>
</tr>
</tbody>
</table>

### Sampling Information

- **Sampling Method:**
- **Tubing Material:**

**Notes:**
- **Sample No**
- **QA/QC**
- **Time Taken**
- **Preservation Details**
- **Analysis**

**Purged by:** BFR  
**Sampled by:**

**Signature:**
**Groundwater Sampling**

- **Job No:** 20140089
- **Location:** Dry Creek Salt Fields
- **Client:** AFI / Ridley
- **Sampling Date:** 12/12/2014
- **Well No:** P22

**Well Information**

- **Well Finish:** Standpipe
- **Casing Diameter (mm):** 50
- **Screen Interval (m):**
- **Case Interval (m):**
- **Product Thickness (mm):**

**Purging Information**

- **Volume of Purge (L):** 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter
- **Purging Method:** Bailex
- **Start Time:** 14:03
- **Finish Time:**
- **Total Volume Purged (L):** 33
- **Purging Notes:** In monitoring well

**Groundwater Observations**

- **Colour:** Light grey
- **Turbidity:** Moderate
- **Weather:** Rain
- **Comments:** Line

**Field Measurements**

<table>
<thead>
<tr>
<th>Time</th>
<th>Temperature (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTDC)</th>
<th>SG</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:03</td>
<td>20.1</td>
<td>18600</td>
<td>6.57</td>
<td>0.21</td>
<td>-65.5</td>
<td>1.94</td>
<td>6</td>
<td>SW</td>
</tr>
<tr>
<td>14:10</td>
<td>20.1</td>
<td>17718</td>
<td>6.62</td>
<td>0.38</td>
<td>-70.2</td>
<td>1.81</td>
<td>4</td>
<td>SW</td>
</tr>
<tr>
<td>14:18</td>
<td>20.9</td>
<td>182400</td>
<td>6.61</td>
<td>0.48</td>
<td>-70.5</td>
<td>1.81</td>
<td>4</td>
<td>SW</td>
</tr>
<tr>
<td>14:22</td>
<td>31.0</td>
<td>232512</td>
<td>7.68</td>
<td>0.26</td>
<td>-22.2</td>
<td></td>
<td></td>
<td>SW</td>
</tr>
</tbody>
</table>

**Sampling Information**

- **Sampled by:** BPT
- **Analysis:**
# Groundwater Sampling

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Rolley  
**Sampling Date:** 12/12/2014

## Well Information

- **Well Finish:** Casing  
- **Well Depth (m TOC):** 1.87  
- **Depth to Free Product (m TOC):** na  
- **Depth to Groundwater (m TOC):** 1.426  
- **Casing Diameter (mm):** 50  
- **Screen Interval (m):** 1.37  
- **Product Thickness (mm):** na  
- **Depth to be Purged (m) (Well Depth - Depth to Groundwater):** 1.25

## Purging Information

- **Casing Volume:** \( \frac{\text{Vol}^3}{\text{r}^3 \times h = 1.96 \times h (r = 0.025 \text{ m})} \)  
- **Total Volume Purged (L):** 4.8  

## Tubing Material:

- **Start Time:** 14:45  
- **Finish Time:** 15:37

## Groundwater Observations

- **Colour:** Light greyish brown  
- **Turbidity:** Low  
- **Odour:** None  
- **Weather:** Rain  
- **Temperature:** 25°C

## Sampling Information

**Sample No** | **QA/QC** | **Time Taken** | **Plastic Unpress 1L** | **Amber Unpress 1L** | **Plastic HSO4 250mL** | **Plastic HNO3 125mL** | **Glass H2SO4 125mL** | **Vial HCl** | **Plastic Sterile 500mL** | **Analysis**
---|---|---|---|---|---|---|---|---|---|---

**Purged by:** BPT  
**Sampled by:**

**Signature:**
GROUNDWATER SAMPLING

Job No: 20140089
Location: Dry Creek Salt Fields
Client: ARI / Ridley
Sampling Date: 12/12/2014
Well No: P24

Well Information
Well Finish: Casing 0.775 Stickup (m) Casing Diameter (mm) 50
Well Depth (m TOC): 1.46
Screen Interval (m): 1.46
Casing Thickness (mm): 0.75

Depth to Free Product (m TOC): na
Product Thickness (mm): 1.2

Depth to Groundwater (m TOC): 1.455
Depth to Purged (m) (Well Depth - Depth to Groundwater): 1.23

Purging Information
(wells should be purged of three to five well volumes or until field parameters are considered to be stable)

Purging Volume:

Casing Volume: \( V = \pi r^2 h = 1.96 \times h (r = 0.025 \text{ m}) \)

\[ V = 3.14159 \times 0.025^2 \times 1.96 = 1.81 \text{ L} \]

\[ V = 3.14159 \times 0.025^2 \times 2.9 = 7.3 \text{ L} \]

OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter

Purging Method: Baier

Purging Tubing Material:

Start Time: 14:42

Purging: Yes

Finish Time: 5/3

Total Volume Purged (L): 2.1

Groundwater Observations

Colour: Light grey

Turbidity: Low

Weather:

Rain: None

Temperature: 25°C

Cloud Cover: None

Field Measurements

When pH readings are within 0.1 units, electrical conductivity within 5% and temperature within 0.2°C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable.

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>SG</th>
<th>Volume Purged (L)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.42</td>
<td>25.1</td>
<td>45627</td>
<td>7.36</td>
<td>0.53</td>
<td>-329.0</td>
<td>Dry</td>
<td>0.2</td>
<td></td>
<td>In monitoring well</td>
</tr>
<tr>
<td>14.42</td>
<td>28.2</td>
<td>55925</td>
<td>7.38</td>
<td>0.13</td>
<td>-366.6</td>
<td>Dry</td>
<td>0.2</td>
<td></td>
<td>SG 1.0284 @ 28.8°C</td>
</tr>
</tbody>
</table>

Sampling Information

Sampling Method:

Tubing Material:

Sample No | QA/QC | Time Taken | Plastic Unpres 1L | Amber Unpres 1L | Plastic H₂SO₄ 250mL | Plastic HNO₃ 125mL | Glass H₂SO₄ 125mL | Vial HCl | Plastic Sterile 500mL | Analysis |
|----------|-------|------------|-------------------|-----------------|----------------------|---------------------|-------------------|---------|------------------------|----------|

Purged by: APT
Sampled by: [Signature]

Analysis

[Signature]
## GROUNDWATER SAMPLING

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job No:</td>
<td>20140089</td>
</tr>
<tr>
<td>Location:</td>
<td>Dry Creek Salt Fields</td>
</tr>
<tr>
<td>Client:</td>
<td>ARi / Ridley</td>
</tr>
<tr>
<td>Sampling Date:</td>
<td>12/12/2014</td>
</tr>
</tbody>
</table>

### Well Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Finish:</td>
<td>Casing 0.74 Stickness (m)</td>
</tr>
<tr>
<td>Well Depth (m TOC):</td>
<td>1.827</td>
</tr>
<tr>
<td>Depth to Free Product (m TOC):</td>
<td>na</td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC):</td>
<td>1.038</td>
</tr>
</tbody>
</table>

### Casing Volume:

\[ V = \pi r^2 h = 1.96 \times h \times r = 0.025 \text{ m} \]

OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter

### Purging Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purging Method:</td>
<td>boil</td>
</tr>
<tr>
<td>Start Time:</td>
<td>8:43</td>
</tr>
<tr>
<td>Finish Time:</td>
<td>8:49</td>
</tr>
<tr>
<td>Well purged dry?</td>
<td>Yes</td>
</tr>
<tr>
<td>Total Volume Purged (L):</td>
<td>4.734 L (vol^3 = 19 L)</td>
</tr>
</tbody>
</table>

### Groundwater Observations

- Colour: Clear
- Odour: Slight
- Turbidity: Low
- Hydrocarbon sheen: nil
- Temperature: 27°
- Cloud Cover: Fair

### Comments

Purge

### Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>SG</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:44</td>
<td>21.9</td>
<td>176109</td>
<td>6.75</td>
<td>2.20</td>
<td>-216.3</td>
<td></td>
<td></td>
<td>0.5</td>
<td>SG 1.23</td>
</tr>
<tr>
<td>8:46</td>
<td>21.9</td>
<td>178064</td>
<td>6.99</td>
<td>1.10</td>
<td>-194.9</td>
<td></td>
<td></td>
<td>1.0</td>
<td>1.1043</td>
</tr>
<tr>
<td>8:48</td>
<td>22.1</td>
<td>154895</td>
<td>7.04</td>
<td>0.82</td>
<td>-192.1</td>
<td></td>
<td></td>
<td>0.1</td>
<td>1.1023</td>
</tr>
</tbody>
</table>

### Water Quality Meter Used:

- In monitoring well
- @ 24.6 °C

### Sampling Information

#### Sampling Method:

- Tubing Material:

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Amber Unpres 1L</th>
<th>Plastic H2SO4 250mL</th>
<th>Plastic HNO3 125mL</th>
<th>Glass H2SO4 125mL</th>
<th>Vial HCl</th>
<th>Plastic Sterile 500mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purged by:</td>
<td>QC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled by:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature: [Signature]

[Signature]
## GROUNDWATER SAMPLING

### Job No: 20140089

<table>
<thead>
<tr>
<th>Location</th>
<th>Client</th>
<th>Sampling Date</th>
<th>Casing Diameter</th>
<th>Case Interval (m):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry Creek Salt Fields</td>
<td>ARI / Ridley</td>
<td>12/12/2014</td>
<td>0.50 mm</td>
<td>50 mm</td>
</tr>
</tbody>
</table>

### Well Information

<table>
<thead>
<tr>
<th>Well Finish</th>
<th>Well Depth (m TOC):</th>
<th>Screen Interval (m):</th>
<th>Depth to Free Product (m TOC):</th>
<th>Product Thickness (mm):</th>
<th>Depth to Groundwater (m TOC):</th>
<th>Depth to be Purged (m) (Well Depth - Depth to Groundwater):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casing</td>
<td>1.53 m</td>
<td>1.51 m</td>
<td>na</td>
<td>na</td>
<td>0.99 m</td>
<td>0.25 m</td>
</tr>
</tbody>
</table>

### Purging Information

(wells should be purged of three to five well volumes or until field parameters are considered to be stable)

<table>
<thead>
<tr>
<th>Tubing Material:</th>
<th>Casing Volume:</th>
<th>vol(^3): 13 L</th>
<th>vol(^3): 3.258 L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dalley</td>
<td></td>
<td>2.0 L</td>
<td>1.5 L</td>
</tr>
</tbody>
</table>

### Water Quality Meter Used:

(when pH readings are within 0.1 units, electrical conductivity within 5 % and temperature within 0.2 C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable)

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOM)</th>
<th>SG</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:52</td>
<td>22.9</td>
<td>118298</td>
<td>6.93</td>
<td>0.73</td>
<td>-213.9</td>
<td>8.52</td>
<td>0.25</td>
<td>SG 1.0673</td>
<td>23.4 C</td>
<td>In monitoring well</td>
</tr>
<tr>
<td>8:54</td>
<td>22.6</td>
<td>117407</td>
<td>6.82</td>
<td>0.94</td>
<td>-209.2</td>
<td>8.54</td>
<td>0.35</td>
<td>1.0673</td>
<td>23.4</td>
<td></td>
</tr>
<tr>
<td>8:56</td>
<td>22.7</td>
<td>117781</td>
<td>6.80</td>
<td>0.96</td>
<td>-212.6</td>
<td>8.56</td>
<td>0.50</td>
<td>1.0668</td>
<td>23.1</td>
<td></td>
</tr>
</tbody>
</table>

**Surface water south of P26 + A25**

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOM)</th>
<th>SG</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.8</td>
<td>23.3168</td>
<td>6.89</td>
<td>6.20</td>
<td>-204.7</td>
<td>27.7</td>
<td>1.2104</td>
<td></td>
<td>27.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Field Measurements

#### Field Parameters

- **Temp (°C)**: 8.52, 8.54, 8.56
- **Conductivity (μS/cm)**: 118298, 117407, 117781
- **pH**: 6.93, 6.82, 6.80
- **DO (mg/L)**: 0.73, 0.94, 0.96
- **ORP (mV)**: -213.9, -209.2, -212.6
- **SWL (mTOM)**: 8.52, 8.54, 8.56
- **SG**: 1.0673, 1.0673, 1.0668
- **Volume Purged (L)**: 0.25, 0.35, 0.50
- **Pump Depth (m)**: 23.4, 23.4, 23.1

### Sampling Information

#### Sampling Method:

- **Tubing Material:**
  - QA/QC
  - Sample No
  - Time Taken
  - Field Parameters
  - Preservation Details
  - Analysis

#### Analysis

- **Signature:**

**Notes:**

- Purged by:
- Sampled by:
- Signature:
## GROUNDWATER SAMPLING

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 12/12/2014  
**Well No:** P27

### Well Information
- **Well Finish:** Standpipe  
- **Well Depth (m TOC):** 4.76  
- **Depth to Free Product (m TOC):** na  
- **Depth to Groundwater (m TOC):** 2.145  
- **Casing Diameter (mm):** 50  
- **Case Interval (m):** na  
- **Product Thickness (mm):** na  
- **Depth to Purge (m):** 2.145  
- **Depth Darcy:** 1.5

### Purging Information
- **Casing Volume:** vol$^3 = \frac{7.58}{32} \text{ L}$
- **Tubing Material:** boiler
- **Start Time:** 7:36
- **Finish Time:** 7:48
- **Well purged dry:** 40.5
- **Total Volume Purged (L):** 2.75

### Groundwater Observations
- **Colour:** brown
- **Turbidity:** moderate
- **Odour:** n/a
- **Hydrocarbon sheen:** n/a
- **Temperature:** 24°C  
- **Cloud Cover:** n/a

### Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>SG</th>
<th>Volume Purged (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:40</td>
<td>19.1°c</td>
<td>16.7</td>
<td>6.36</td>
<td>1.84</td>
<td>282.6</td>
<td>0.8 L</td>
<td>SG 1.127</td>
<td>@ 19.3°C</td>
</tr>
<tr>
<td>7:42</td>
<td>19.4°c</td>
<td>175.5</td>
<td>6.21</td>
<td>0.78</td>
<td>149.7</td>
<td>1.2 L</td>
<td>1.138</td>
<td>19.7</td>
</tr>
<tr>
<td>7:44</td>
<td>19.3°c</td>
<td>173.0</td>
<td>6.20</td>
<td>0.97</td>
<td>186.5</td>
<td>1.6 L</td>
<td>1.146</td>
<td>19.8</td>
</tr>
<tr>
<td>7:47</td>
<td>19.1°c</td>
<td>171.0</td>
<td>6.17</td>
<td>0.98</td>
<td>188.5</td>
<td>1.8 L</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

### Purging Notes
- In monitoring well
- Sampling Method:
- Tubing Material:
- QA/QC:
- Plastic Unpres 1L
- Plastic Unpres 250mL
- Plastic HNO$_3$ 125mL
- Plastic H$_2$SO$_4$ 125mL
- Glass H$_2$SO$_4$ 125mL
- Vial HCl 500mL
- Plastic Sterile 500mL

### Analysis

<table>
<thead>
<tr>
<th>Sample No</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Amber Unpres 1L</th>
<th>Plastic HNO$_3$ 250mL</th>
<th>Plastic H$_2$SO$_4$ 125mL</th>
<th>Glass H$_2$SO$_4$ 125mL</th>
<th>Vial HCl</th>
<th>Plastic Sterile 500mL</th>
</tr>
</thead>
</table>

### Purged by:  
### Sampled by:

### Signature:

---

**评判**
**Groundwater Sampling**

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 12/12/2014  
**Well No:** P28

---

### Well Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Finish</td>
<td>Casing</td>
<td></td>
</tr>
<tr>
<td>0.805 Sticcup (m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casing Diameter (mm)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Well Depth (m TOC)</td>
<td>2.25</td>
<td>2.24</td>
</tr>
<tr>
<td>Screen Interval (m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth to Free Product (m TOC)</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Product Thickness (mm)</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC)</td>
<td>1.16</td>
<td>1.385</td>
</tr>
<tr>
<td>Depth to be Purged (m) (Well Depth - Depth to Groundwater)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Purging Information

(Wells should be purged of three to five well volumes or until field parameters are considered to be stable)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casing Volume</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purging Method</td>
<td>bailey</td>
<td></td>
</tr>
<tr>
<td>Start Time</td>
<td>7:50</td>
<td></td>
</tr>
<tr>
<td>Finish Time</td>
<td>8:00</td>
<td></td>
</tr>
<tr>
<td>Well purged dry?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Total Volume Purged (L)</td>
<td></td>
<td>5.6 3.0 0.5 1.0</td>
</tr>
</tbody>
</table>

---

### Groundwater Observations

- **Colour**: Black  
- **Odour**: Odor  
- **Turbidity**: High  
- **Hydrocarbon sheen**: None  
- **Rain**: nil  
- **Temperature**: 24°C  
- **Cloud Cover**: 0%  
- **Stratified water * black water * clear water**

---

### Field Measurements

*When pH readings are within 0.1 units, electrical conductivity within 2% and temperature within 0.2°C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable.*

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>SG</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:52</td>
<td>21.4</td>
<td>104.1</td>
<td>6.78</td>
<td>0.43</td>
<td>-252.1</td>
<td>-</td>
<td>1.0</td>
<td>0.0650</td>
<td>@ 22.8 C</td>
<td></td>
</tr>
<tr>
<td>7:54</td>
<td>21.6</td>
<td>1000070</td>
<td>6.87</td>
<td>0.46</td>
<td>-259.9</td>
<td>-</td>
<td>1.2</td>
<td>0.0600</td>
<td>29.3</td>
<td></td>
</tr>
<tr>
<td>7:57</td>
<td>21.6</td>
<td>8585</td>
<td>6.92</td>
<td>0.38</td>
<td>-266.4</td>
<td>-</td>
<td>1.7</td>
<td>0.099</td>
<td>25.6</td>
<td></td>
</tr>
<tr>
<td>8:00</td>
<td>21.3</td>
<td>102467</td>
<td>6.98</td>
<td>0.35</td>
<td>-263.0</td>
<td>-</td>
<td>1.9</td>
<td>0.0625</td>
<td>29.8</td>
<td></td>
</tr>
</tbody>
</table>

---

### Sampling Information

**Sampling Method:**

**Tubing Material:**

---

**Sample No**  
**QA/QC**  
**Time Taken**  
**Plastic Unpres 1L**  
**Amber Unpres 1L**  
**Plastic H₂SO₄ 200mL**  
**Plastic HNO₃ 125mL**  
**Plastic HCl 125mL**  
**Glass H₂SO₄ 125mL**  
**Stainless Steel 500mL**  
**Analysis**  
**Purged by:**  
**Sampled by:**  
**Signature:**  
**Signature:**
**GROUNDWATER SAMPLING**

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 12/12/2014  
**Well No:** P29

### Well Information

- **Well Finish:** Casing  
- **Well Depth (m TOC):** 1.46 m  
- **Screen Interval (m):** 1.41  
- **Depth to Free Product (m TOC):** na  
- **Product Thickness (mm):** na  
- **Depth to Groundwater (m TOC):** 0.84 m  
- **Depth to Purge (m):** 0.31 m

### Purging Information

<table>
<thead>
<tr>
<th>Casing Volume:</th>
<th>vol$^3$ =</th>
<th>3.72 L</th>
<th>vol$^3$ × 15 L</th>
</tr>
</thead>
</table>

OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter

### Purging Method:

- **Start Time:** 5/13  
- **Finish Time:** 5/29  
- **Total Volume Purged (L):** 15.7, 1.0, 0.5, 1.0

### Tubing Material:

### Groundwater Observations

<table>
<thead>
<tr>
<th>Colour</th>
<th>Odour</th>
<th>Turbidity</th>
<th>Hydrocarbon sheen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean</td>
<td>Odour</td>
<td>Low</td>
<td>Sheen</td>
</tr>
</tbody>
</table>

### Weather

- **Rain:** yes  
- **Temperature:** 24°C  
- **Cloud Cover:** 3/4

### Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>SG</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.15</td>
<td>22.4</td>
<td>275.77</td>
<td>6.90</td>
<td>0.39</td>
<td>-288.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.18</td>
<td>22.7</td>
<td>275.16</td>
<td>6.99</td>
<td>0.64</td>
<td>-287.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.21</td>
<td>22.8</td>
<td>275.99</td>
<td>6.74</td>
<td>0.54</td>
<td>-307.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.24</td>
<td>22.7</td>
<td>884.48</td>
<td>6.90</td>
<td>0.82</td>
<td>-307.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**In monitoring well**

- **SG:** 1.0549  
- **Pumping Rate:** 24.1 C

### Sampling Information

**Sampling Method:**

**Tubing Material:**

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres. 1L</th>
<th>Amber Unpres. 1L</th>
<th>Plastic H2SO4 250mL</th>
<th>Plastic HNO3 125mL</th>
<th>Glass H2SO4 125mL</th>
<th>Vial HCl</th>
<th>Plastic Sterile 500mL</th>
</tr>
</thead>
</table>

- **Purged by:**  
- **Sampled by:**  
- **Signature:**

**Water Quality Meter Used:**
## Groundwater Sampling

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 12/12/2014  
**Well No:** P30

### Well Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Finish</td>
<td>Standpipe</td>
</tr>
<tr>
<td>Depth (m TOC)</td>
<td>3.76</td>
</tr>
<tr>
<td>Depth to Free Product (m TOC)</td>
<td>na</td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC)</td>
<td>2.295</td>
</tr>
<tr>
<td>Casing Diameter (mm)</td>
<td>50</td>
</tr>
<tr>
<td>Screen Interval (m)</td>
<td>0.69</td>
</tr>
<tr>
<td>Case Interval (m)</td>
<td>0.75</td>
</tr>
<tr>
<td>Product Thickness (mm)</td>
<td>na</td>
</tr>
<tr>
<td>Depth to Be Purged (m)</td>
<td>2.29 - 2.295</td>
</tr>
</tbody>
</table>

### Purging Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purging Volume</td>
<td>23 L</td>
</tr>
<tr>
<td>Start Time</td>
<td>8.10</td>
</tr>
<tr>
<td>Finish Time</td>
<td>6/4 / 14/3 / 20/3 / 7/4 / 10/4 / 12/12</td>
</tr>
<tr>
<td>Well Purged Dry?</td>
<td>No</td>
</tr>
<tr>
<td>Weather</td>
<td>Clear</td>
</tr>
<tr>
<td>Water Quality Meter Used</td>
<td>In monitoring well</td>
</tr>
</tbody>
</table>

### Field Measurements

<table>
<thead>
<tr>
<th>Field Parameters</th>
<th>Temperature</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>SG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Temp (°C)</td>
<td>19.9</td>
<td>1807.57</td>
<td>6.25</td>
<td>0.31</td>
<td>69.7</td>
<td>2.34</td>
</tr>
<tr>
<td></td>
<td>9.14</td>
<td>1844.95</td>
<td>6.27</td>
<td>0.35</td>
<td>-64.6</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

### Sampling Information

**Sampling Method:**  
**Tubing Material:**

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Amber Unpres 1L</th>
<th>Plastic H₂SO₄ 250mL</th>
<th>Plastic HNO₃ 125mL</th>
<th>Glass H₂SO₄ 125mL</th>
<th>Vial HCl</th>
<th>Plastic Sterile 500mL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Purged by:** B.P.T  
**Signed by:**
GROUNDWATER SAMPLING

Job No: 20140089
Location: Dry Creek Salt Fields
Client: ARI / Ridley
Sampling Date: 12/12/2014

Well No: P31

Well Information
Well Finish: Casing
Well Depth (m TOC): 2.275
Depth to Free Product (m TOC): na
Depth to Groundwater (m TOC): 1.65

Casing Diameter (mm): 50
Screen Interval (m): 2.255
Product Thickness imm: na
Depth to be Purged (m) (Well Depth - Depth to Groundwater): 0.65

Purging Information
V = pi r^2 h = 1.96 x h (r = 0.025 m)
OR 1 purge volume = 2 L/m for 80 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter

Purging Method: Driller
Start Time: 8:27
Finish Time: 6/3
Total Volume Purged (L): 2.5

Well purged dry? Yes

Groundwater Observations
Colour: Slightly Black
Odour: None
Turbidity: Low
Hydrocarbon sheen: None
Weather: Rain: None
Temperature: 20
Cloud Cover: Clear

Field Measurements
(when pH readings are within 0.1 units, electrical conductivity within 5 % and temperature within 0.2°C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable)

Time | Temp (°C) | Conductivity (uS/cm) | pH | DO (mg/L) | ORP (mV) | SWL (mTOC) | SG |
-----|---------|----------------------|----|----------|---------|------------|----|
8:27 | 22.4    | 17865.8              | 6.83 | 0.36 | -184 | D-          |    |
8:35 | 23.0    | 172098               | 6.69 | 0.22 | -127.0 | D-          |    |
8:39 | 23.0    | 168866               | 6.58 | 0.11 | -107.5 | D-          |    |

Purging Notes
In monitoring well
SG @ C

Sampling Information
Sampling Method:
Tubing Material:

Purged by: [Signature]
Sampled by: [Signature]
GROUNDWATER SAMPLING

Job No: 20140089
Location: Dry Creek Salt Fields
Client: ARI / Ridley
Sampling Date: 12/12/2014

Well Information
Well Finish: Casing
Casing Diameter (mm): 50
Well Depth (m TOC): 1.56
Screen Interval (m): 4.96
Depth to Free Product (m TOC): na
Product Thickness (mm): na
Depth to Groundwater (m TOC): 1.17
Depth to Groundwater (m): 1.25

Casing Volume:
Veit r h = 1.96 x h(r = 0.025 m)

Purging Information
wells should be purged of three to five well volumes or until field parameters are considered to be stable

Purging Method: Dauler
Start Time: 8:44
Finish Time: 6/3 14/3 20/3 7/4 14/11 12/12
Total Volume Purged (L):
0.76 3.0 0.5 0.8 1.5 L

Groundwater Observations
Colour: Clean to very light gray
Odour: None
Turbidity: Very low, clear
Weather:
Rain: None
Temperature: 2.0
Cloud Cover: Clean

Field Measurements

<table>
<thead>
<tr>
<th>Time (h)</th>
<th>Temp (°C)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>SG</th>
<th>Volume Purged (L)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:44</td>
<td>23.8</td>
<td>180.23.2</td>
<td>6.81</td>
<td>1.00</td>
<td>-295.2</td>
<td>Dry</td>
<td>1 L</td>
<td>@ C</td>
<td>In monitoring well</td>
</tr>
<tr>
<td>8:50</td>
<td>24.0</td>
<td>185.467</td>
<td>6.82</td>
<td>0.41</td>
<td>-300.3</td>
<td>Dry</td>
<td>1 L</td>
<td>@ C</td>
<td></td>
</tr>
<tr>
<td>8:55</td>
<td>23.9</td>
<td>187.312</td>
<td>6.84</td>
<td>0.51</td>
<td>-297.2</td>
<td>Dry</td>
<td>1 L</td>
<td>1.122 @ 50.0</td>
<td></td>
</tr>
</tbody>
</table>

Sampling Information

Sampling Method:

Tubing Material:

Sample No | QA/QC | Time Taken | Plastic Unpres 1L | Amber Unpres 1L | Plastic H2SO4 250mL | Plastic H2SO4 125mL | Glass H2SO4 125mL | Vial HCL | Plastic Sterile 500mL | Analysis |

Purged by: [signature]
Sampled by: [signature]
GROUNDWATER SAMPLING

Job No: 20140089
Location: Dry Creek Salt Fields
Client: ARI / Ridley
Sampling Date: 12/12/2014
Well No: P33

Well Information
- Well Finish: Standpipe
- Casing Diameter (mm): 50
- Well Depth (m TOC): 3.44
- Screen Interval (m): 3.3
- Case Interval (m): na
- Depth to Free Product (m TOC): na
- Product Thickness (mm): na
- Depth to Groundwater (m TOC): 4.88
- Depth to be Purged (m): Well Depth - Depth to Groundwater

Purging Information
- Volume: vol^3 = 6.78 L g. A
- OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter

Purging Method:
- Start Time: 7 35
- Finish Time: 6/3 14/3 20/3 7/4 14/11 12/12
- Total Volume Purged (L): 21.5 0.7 1.0 1.0 10.5

Groundwater Observations
- Colour: Odour: None
- Turbidity: Reddish brown, High T
- Weather: Sunny
- Rain: None
- Temperature: 22
- Cloud Cover: None

Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SW (mTOC)</th>
<th>SG</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:38</td>
<td>20.3</td>
<td>1284.99</td>
<td>6.35</td>
<td>1.30</td>
<td>4.3</td>
<td>2.35</td>
<td>-</td>
<td></td>
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<tr>
<td>7:52</td>
<td>20.5</td>
<td>9.1075</td>
<td>6.49</td>
<td>1.17</td>
<td>3.4</td>
<td>2.5</td>
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<tr>
<td>7:55</td>
<td>20.2</td>
<td>13.548</td>
<td>6.45</td>
<td>0.57</td>
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<td>Dry</td>
<td></td>
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<td>7:59</td>
<td>20.1</td>
<td>12.7650</td>
<td>6.55</td>
<td>1.26</td>
<td>3.9</td>
<td>3.2</td>
<td>1.0781 @ 30.2</td>
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</table>

Water Quality Meter Used:
- In monitoring well

Sampling Information
- Sampling Method: 
- Tubing Material: 

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres. 1L</th>
<th>Amber Unpres. 1L</th>
<th>Plastic H2SO4 260mL</th>
<th>Plastic HNO3 125mL</th>
<th>Glass H3BO4 125mL</th>
<th>Vial HCl</th>
<th>Plastic Sterile 500mL</th>
</tr>
</thead>
</table>

Purged by: 6PT
Sampled by: 
Signature: LSL
Equipment Information

Instrument: YSIPP5A
Serial Number: 12D101398 (Display)
12C100157 (Sonde)

Equipment Check

<table>
<thead>
<tr>
<th>Item</th>
<th>Enclosed</th>
<th>Returned</th>
<th>Comment</th>
</tr>
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<tbody>
<tr>
<td>YSI Pro Plus Display</td>
<td>✔</td>
<td></td>
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<tr>
<td>YSI Quatro Sonde</td>
<td>✔</td>
<td></td>
<td></td>
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<tr>
<td>- YSI 1001 pH Probe (LN: 12C)</td>
<td>✔</td>
<td></td>
<td></td>
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<tr>
<td>- YSI 1002 ORP Probe (LN: 12C)</td>
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<td></td>
<td></td>
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<tr>
<td>- YSI 5560 Cond/Temp Probe (LN: 136)</td>
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<tr>
<td>- YSI Polarographic DO Sensor (LN: 148)</td>
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<tr>
<td>Flow Cell &amp; attachments</td>
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<tr>
<td>Probe Guard</td>
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<tr>
<td>Rubber Storage/Calibration Sleeve</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calibration Cup + cap</td>
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<td>YSI Cable Management Kit</td>
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<td>YSI Pro Series ProComm II Kit</td>
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<tr>
<td>Spare Batteries (x 2) &amp; Screwdriver</td>
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<tr>
<td>Laminated Quick Start Guide</td>
<td></td>
<td></td>
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Sensor Calibration Details

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<tr>
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<th>Calibration Undertaken</th>
<th>Accuracy</th>
<th>Pass</th>
<th>Fail</th>
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<tr>
<td>Temperature</td>
<td>Factory Calibrated</td>
<td>±0.2°C</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>☐ 100% Saturation</td>
<td>±2%</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>Pressure Compensation</td>
<td>±0.13 hPa</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td>Conductivity</td>
<td>☐ 12.88mS/cm</td>
<td>±0.5%</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>☐ Check linearity at 1.413mS/cm</td>
<td>±0.5%</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td>Salinity</td>
<td>Auto Calibrated</td>
<td>±1%</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td>pH</td>
<td>☐ pH 7.00</td>
<td>±0.2</td>
<td>✔</td>
<td>☐</td>
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<tr>
<td></td>
<td>☐ pH 4.00</td>
<td>±0.2</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td>ORP</td>
<td>☐ 233 mV at 23°C</td>
<td>±20mV</td>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>

This is to certify that where possible, this instrument has been calibrated in accordance with the manufacturer's calibration procedure as recommended in the instrument service manual.

ECO Standard Rental Terms & Conditions apply to all equipment calibrations.

Regards

[Signature]
23/12/14

Equipment Specialist
ECO Environmental
Equipment Information
Instrument: HIM1002A
Serial Number: SN#01-5377

Equipment Check

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Enclosed</th>
<th>Returned</th>
<th>Comment</th>
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<tbody>
<tr>
<td>Heron Interface Level Meter</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heron Carry Bag</td>
<td></td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Spare 9V. Battery</td>
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Inspection Details

<table>
<thead>
<tr>
<th>Test</th>
<th>Pass</th>
<th>Fail</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>De-con wash of tape (100m)</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>De-con wash of reel</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection for faults, corrosion, damage</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meter in good working order, clean and ready for use</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check that threaded nut on probe is tight</td>
<td></td>
<td>✔️</td>
<td></td>
</tr>
</tbody>
</table>

This is to certify that where possible, this instrument has been cleaned in accordance with the manufacturer’s general maintenance procedure as recommended in the instrument service manual.

ECO Standard Rental Terms & Conditions apply to all equipment calibrations.

Regards

[Signature]
23/12/14

Equipment Specialist
ECO Environmental
GROUNDWATER SAMPLING

Job No: 20140089  E  (m)  Well No:  
Location: Dry Creek Salt Fields  
Client: AR1 / Ridley  
Sampling Date: 4/02/2015  
Casing Diameter (mm): 50  

Well Information

Well Finish: Standpipe  0.81 Stickup (m)  
Screen Interval (m):  
Well Depth (m TOC): 4.20  
Depth to Free Product (m TOC): na  
Depth to Groundwater (m TOC): 2.75  
Product Thickness (mm): na

Depth to Purged (m) (Well Depth - Depth to Groundwater)

Purging Information

Purging Volume: 8.7 L  
Volume Purged = 35 L

Purging Method: Boiler  
Start Time: 12:02  
Finish Time: 6/3 13/3 20/3 7/4 4/02/15

Well purged dry? No  
Total Volume Purged (L): 55 40 1.0 1.6 18.5

Groundwater Observations

Colour Light grey  
Odour None  
Turbidity Low to Moderate  
Hydrocarbon sheen None  
Weather Clean  
Rain Temperature 23

Comments: V. good exchange  
Deep area virtually dry.

Field Measurements

Field Parameters

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (us/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S</th>
<th>Pump Depth (m):</th>
<th>Purging Notes</th>
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</thead>
<tbody>
<tr>
<td>12.07</td>
<td>21.6</td>
<td>387.80</td>
<td>7.01</td>
<td>2.16</td>
<td>-215.0</td>
<td>-</td>
<td>S</td>
<td>12.5</td>
<td>in monitoring well</td>
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<tr>
<td>12.15</td>
<td>21.6</td>
<td>736.06</td>
<td>7.12</td>
<td>2.32</td>
<td>-186.5</td>
<td>3.5</td>
<td></td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>12.13</td>
<td>21.6</td>
<td>744.71</td>
<td>7.12</td>
<td>2.25</td>
<td>-188.3</td>
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</table>

Water Quality Meter Used:

Sample Information

Sampling Method:

Tubing Material:

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Amber Unpres 1L</th>
<th>Plastic H₂SO₄ 250mL</th>
<th>Glass H₂SO₄ 125mL</th>
<th>Via HC</th>
<th>Plastic Sterile 500mL</th>
<th>Analysis</th>
</tr>
</thead>
</table>

Purged by:  
Sampled by:  
Signature:  
Signature:  

GROUNDWATER SAMPLING

Job No: 20140089 E Well No: P2
Location: Dry Creek Salt Fields N (m)
Client: ARI / Ridley RL casing (m)
Sampling Date: 4/02/2015 RL surface

Well Information
Well Finish: Casing 0.72 Stickup (m)
Well Depth (m TOC): 2.40 2.36 Screen Interval (m): Case Interval (m):
Depth to Free Product (m TOC): na Product Thickness (mm): na
Depth to Groundwater (m TOC): 1.30 1.42 Depth to be Purged (m) (Well Depth - Depth to Groundwater)

Purging Information (wells should be purged of three to five well volumes or until field parameters are considered to be stable)
Casing Volume: 7.44 L

Purging Method: Bauer
Start Time: 12:25 Finish Time: 6/3 13/3 20/3 7/4 04/02/15
Well purged dry? Yes Total Volume Purged (L): 6.8 4.0 1.0 1.0 4.0

Groundwater Observations
Colour: Light brownish grey - clear Odour: Slight
Turbidity: Low to slightly moderate Hydrocarbon sheen: none
Weather: Clear
Rain Temperature 23 °C Cloud Cover Slight

Comments: How recharge

Field Measurements
Field Parameters

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.26</td>
<td>21.8</td>
<td>198118</td>
<td>6.56</td>
<td>0.17</td>
<td>-246.3</td>
<td>Day</td>
<td>2.6</td>
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<tr>
<td>12.33</td>
<td>22.5</td>
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<td>12.35</td>
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<td>-218.0</td>
<td>Day</td>
<td>0.5</td>
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</table>

Water Quality Meter Used:

SG monitoring well

Sampling Information
Sampling Method: Tubing Material:
Sample No QA/QC Time Taken Plastic Unpres 1L Amber Unpres 1L Plastic H$_2$SO$_4$ 250mL Glass H$_2$SO$_4$ 115mL Via HC Plastic Sterile 500mL

Purged by: Signature:

Sampled by: Signature:
### GROUNDWATER SAMPLING

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** AR/RI  
**Sampling Date:** 4022015

#### Well Information

<table>
<thead>
<tr>
<th>Field Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casing Diameter</td>
<td>50 mm</td>
</tr>
<tr>
<td>Screen Interval</td>
<td>1.96 m</td>
</tr>
<tr>
<td>Casing</td>
<td>0.712 Stickup (m)</td>
</tr>
<tr>
<td>Product Thickness</td>
<td>na</td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC)</td>
<td>132.5</td>
</tr>
<tr>
<td>Depth to Purge (m)</td>
<td>1.055</td>
</tr>
</tbody>
</table>

#### Purging Information

- **Purging Volume:** 4.89 L  
- **Total Volume Purged:** 5.1 L  
- **Volume Purged:** 1.2 L  
- **Start Time:** 12:20  
- **Finish Time:** 6/3  
- **Tubing Material:** Boiler  
- **Water Purged dry?:** Yes

#### Groundwater Observations

- **Colour:** Clear to light grey  
- **Odour:** Slight  
- **Turbidity:** Low to mod.  
- **Weather:** Clear  
- **Temperature:** 23°  
- **Cloud Cover:** Slight

#### Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.23</td>
<td>22.6</td>
<td>169990</td>
<td>6.60</td>
<td>0.34</td>
<td>-281.9</td>
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<td>1-2</td>
<td>Purging Notes</td>
<td>In monitoring well</td>
</tr>
<tr>
<td>12.26</td>
<td>22.6</td>
<td>169873</td>
<td>6.67</td>
<td>0.36</td>
<td>-279.9</td>
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<td>0.7</td>
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<td>12.30</td>
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#### Sampling Information

- **Sampling Method:**  
- **Tubing Material:**

#### Purged by:  
**Signature:**

- **Sampled by:**
  **Signature:**
GROUNDBWATER SAMPLING

Job No: 20140089  Location: Dry Creek Salt Fields  Client: ARI / Ridley
Sampling Date: 12/12/2014  Sampling Method: RL casing  Sampling Material: RL surface

Well Information

- **Well Finish:** Casing
- **Well Depth (m TOC):** 2.41
- **Screen Interval (m):** 2.975
- **Depth to Free Product (m TOC):** na
- **Product Thickness (mm):** na
- **Depth to Groundwater (m TOC):** 1.37
- **Depth to be Purged (m):** 1.24

**Purging Information**

- **Purging Volume:** 6.81 L
- **Total Volume Purged:** 23 L
- **Purging Method:** No
- **Start Time:** 13:04
- **Finish Time:** 6/31/15
- **Well purged dry:** No

**Groundwater Observations**

- **Colour:** Clear, light grey
- **Odour:** Slight
- **Turbidity:** Clear
- **Hydrocarbon sheen:** None
- **Weather:** Clear
- **Rain:** None
- **Temperature:** 24 °C
- **Cloud Cover:** Light

**Comments:** Reasonable recharge

**Field Measurements**

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
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<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>Volumetric Purgance (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
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<td>In monitoring well</td>
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<td>13.08</td>
<td>23.0</td>
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<td>13.11</td>
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**Sampling Information**

- **Sample No:**
- **QA/QC:**
- **Time Taken:**
- **Preservation Details:** Plastic, Unpares 1L, Amber Unpares 1L, Plastic H₂SO₄ 250mL, Glass H₂SO₄ 125mL, VIA and HC, Plastic Sterile 500mL
- **Analysis:**

**Purged by:**

**Sample by:**
**Groundwater Sampling**

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 4/02/2015

**Well Information**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
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<td>Well Finish</td>
<td>Casing</td>
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<td>Well Depth (m TOC)</td>
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<td>Screen Interval (m)</td>
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<td>Depth to Free Product (m TOC)</td>
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<tr>
<td>Product Thickness (mm)</td>
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<td>Depth to Groundwater (m TOC):</td>
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<tr>
<td>Depth to Purge (m)</td>
<td>1.22</td>
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<tr>
<td>Casing Diameter (mm)</td>
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<tr>
<td>Case Interval (m)</td>
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**Purging Information**

<table>
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<tr>
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<tbody>
<tr>
<td>Casing Volume</td>
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</tr>
<tr>
<td>Tubing Material</td>
<td></td>
</tr>
<tr>
<td>Start Time</td>
<td>12.50</td>
</tr>
<tr>
<td>Finish Time</td>
<td>6/3 13/3 20/3 7/4 24/02/15</td>
</tr>
<tr>
<td>Well purged dry?</td>
<td>Yes</td>
</tr>
<tr>
<td>Total Volume Purged (L)</td>
<td>20 1.2 1.0 1.0 3.1</td>
</tr>
</tbody>
</table>

**Groundwater Observations**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>light grey clear</td>
</tr>
<tr>
<td>Odour</td>
<td>slight am</td>
</tr>
<tr>
<td>Turbidity</td>
<td>Hydrocarbon sheen</td>
</tr>
<tr>
<td>Weather</td>
<td>Clean</td>
</tr>
<tr>
<td>Rain</td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td>2.4</td>
</tr>
<tr>
<td>Cloud Cover</td>
<td>slight</td>
</tr>
</tbody>
</table>

**Field Measurements**

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.53</td>
<td>22.8</td>
<td>208808</td>
<td>6.50</td>
<td>0.45</td>
<td>-282.6</td>
<td>Dry</td>
<td>1.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.59</td>
<td>23.1</td>
<td>208662</td>
<td>6.17</td>
<td>0.18</td>
<td>-287.6</td>
<td>Dry</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.03</td>
<td>23.3</td>
<td>208666</td>
<td>6.60</td>
<td>0.32</td>
<td>-280.1</td>
<td>Daily</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sampling Information**

**Sampling Method:**

**Tubing Material:**

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Glass H2SO4 125mL</th>
<th>Plastic Sterile 500mL</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Purged by:  
Sampled by:  
Signature:
**TER SAMPLING**

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 4/02/2015

---

### Well Information

<table>
<thead>
<tr>
<th>Well Finish:</th>
<th>Standpipe</th>
<th>Casing Diameter (mm):</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Depth (m TOC):</td>
<td>4.06</td>
<td>Screen Interval (m):</td>
<td>na</td>
</tr>
<tr>
<td>Depth to Free Product (m TOC):</td>
<td>na</td>
<td>Product Thickness (mm):</td>
<td>na</td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC):</td>
<td>2.54 2.475</td>
<td>Depth to be Purged (m):</td>
<td>4.06</td>
</tr>
</tbody>
</table>

### Purging Information

- **Casing Volume:** 9.33 L
- **Vol^2 * h = 9.33 L**
- **Start Time:** 11:10
- **Finish Time:** 6/3 13/3 20/3 7/4 04/02/15
- **Tubing Material:** [Bailer](#)
- **Total Volume Purged (L):** 16
- **Well purged dry?** No
- **Temperature:** 21
- **Comments:** Very high reed or Fe Floe only minor

### Groundwater Observations

- **Colour:** Light brown, Orange Fe Floe in the first bed
- **Odour:** None
- **Turbidity:** Low
- **Hydrocarbon sheen:** None
- **Weather:** Clear
- **Cloud Cover:** Light

---

### Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Purged (L)</th>
<th>Pump Depth (m):</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:20</td>
<td>20.0</td>
<td>6732.8</td>
<td>7.19</td>
<td>2.57</td>
<td>-10.6</td>
<td>2.54</td>
<td>12</td>
<td>+5</td>
<td>In-monitoring well</td>
</tr>
<tr>
<td>11:23</td>
<td>20.0</td>
<td>6831.7</td>
<td>7.15</td>
<td>2.48</td>
<td>-106.0</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:26</td>
<td>20.1</td>
<td>6584.7</td>
<td>7.16</td>
<td>2.56</td>
<td>-99.0</td>
<td>-</td>
<td></td>
<td>+3</td>
<td></td>
</tr>
</tbody>
</table>

### Sampling Information

**Sample No**  | **QA/QC** | **Time Taken** | **Preservation Details** | **Analysis**
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plastic Unpres 1L</td>
<td>Amber Unpres 1L</td>
</tr>
<tr>
<td>Purged by:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampled by:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TER SAMPLING

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 4/02/2015

#### Well Information
- **Well Finish:** Casing  
- **Stickup (m):** 0.74  
- **Casing Diameter (mm):** 50  
- **Well Depth (m TOC):** 2.40  
- **Screen Interval (m):** 2.875  
- **Depth to Free Product (m TOC):** na  
- **Product Thickness (mm):** na  
- **Depth to Groundwater (m TOC):** 1.52 - 1.435  
- **Depth to be Purged (m):** (Well Depth - Depth to Groundwater)

#### Purging Information
- **Purging Volume:** \( V = \frac{\pi r^2 h}{2} \times h (r = 0.025 \text{ m}) \)  
  - OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter

#### Purging Method:
- **Method:** Bailer
- **Start Time:** 11:46
- **Finish Time:** 6/3 13/3 20/3 7/4 34/02/15
- **Total Volume Purged (L):** 18

#### Groundwater Observations
- **Colour:** Light grey
- **Odour:** Mixture of light:
- **Turbidity:** Very low
- **Weather:** Clear
- **Rain:** Temperature 22
- **Cloud Cover:** Sky

#### Comments
- Reasonable recharge

### Field Measurements

(when pH readings are within 0.1 units, electrical conductivity within 5% and temperature within 0.2° C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable)

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S</th>
<th>G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:52</td>
<td>22.4</td>
<td>1712.00</td>
<td>6.44</td>
<td>0.24</td>
<td>-279.5</td>
<td>Day</td>
<td>1.8</td>
<td></td>
<td>0.9</td>
<td>1.7</td>
<td>In monitoring well</td>
</tr>
<tr>
<td>11:55</td>
<td>22.5</td>
<td>1712.87</td>
<td>6.62</td>
<td>0.27</td>
<td>-297.9</td>
<td>Day</td>
<td>1.2</td>
<td></td>
<td>0.9</td>
<td>1.7</td>
<td></td>
</tr>
</tbody>
</table>

### Sampling Information

**Sampling Method:**
**Tubing Material:**

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Amber Unpres 1L</th>
<th>Plastic H₂SO₄ 250mL</th>
<th>Glass H₂SO₄ 125mL</th>
<th>Via IHC</th>
<th>Plastic Sterile 500mL</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Purged by:**  
**Sampled by:**

**Signature:**
TER SAMPLING

Job No: 20140089
Location: Dry Creek Salt Fields
Client: ARI / Ridley
Sampling Date: 4/02/2015

Well Information
Well Finish: Casing
Well Depth (m TOC): 1.87
Screen Interval (m): 1.866
Depth to Free Product (m TOC): na
Depth to Groundwater (m TOC): 1.27
Product Thickness (mm): na

Purging Information
Wells should be purged of three to five well volumes or until field parameters are considered to be stable

Purging Method: Boyle
Tubing Material:
Start Time: 11/3
Finish Time: 6/3 13/3 20/3 7/4 3/4/015
Well purged dry? Yes
Total Volume Purged (L): 3.3 3.9 1.0 1.0 1.35

Field Measurements
Field Parameters

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.36</td>
<td>2.3 0</td>
<td>100402</td>
<td></td>
<td>6.46</td>
<td>0.97</td>
<td>-254.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.40</td>
<td>2.3 8</td>
<td>100616</td>
<td></td>
<td>7.03</td>
<td>1120</td>
<td>-256.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.45</td>
<td>2.3 0</td>
<td>103615</td>
<td></td>
<td>7.19</td>
<td>1.62</td>
<td>-249.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Water Quality Meter Used:
In monitoring well

Sampling Information
Sampling Method:
Tubing Material:

Sample No  QA/QC  Time Taken  Preservation Details  Analysis

Purged by: [Signature]
Sampled by: [Signature]
### TER SAMPLING

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 4/02/2015

#### Well Information

- **Well Finish:** Standpipe
- **Screen Interval:** 3.943 m
- **Casing Diameter:** 50 mm
- **Depth to Free Product:** na
- **Depth to Groundwater:** 2.62 m

#### Purging Information

- **Purging Volume:** 5.7 L
- **Purging Method:** Bailey
- **Start Time:** 10:20
- **Finish Time:** 6/3 13/3 20/3 7/4 24/02/15
- **Total Volume Purged:** 21.5 L

#### Groundwater Observations

- **Colour:** Clear to Light Brown
- **Odour:** None
- **Turbidity:** None
- **Weather:** Clear

#### Comments

- **Temperature:** 2°C
- **Cloud Cover:** Bright

### Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:33</td>
<td>22.0</td>
<td>22.0</td>
<td>6.36</td>
<td>0.81</td>
<td>-40.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:36</td>
<td>22.0</td>
<td>17.92-18.1</td>
<td>6.31</td>
<td>0.92</td>
<td>-37.7</td>
<td>2.70</td>
<td>7.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:40</td>
<td>22.0</td>
<td>19.20-20.5</td>
<td>6.31</td>
<td>0.75</td>
<td>-35.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Water Quality Meter Used

- **In monitoring well:**

#### Sampling Information

- **Sampling Method:**
- **Tubing Material:**

#### Analysis

- **Sample No:**
- **QA/QC:**
- **Time Taken:**
- **Plastic Unpres 1L:**
- **Amber Unpres 1L:**
- **Preservation Details:**
- **Plastic H₂SO₄ 250mL:**
- **Glass H₂SO₄ 125mL:**
- **Via HC:**
- **Plastic Sterile 500mL:**

---

**Purged by:** [Signature]

**Sampled by:** [Signature]
## TER SAMPLING

<table>
<thead>
<tr>
<th>Job No:</th>
<th>20140089</th>
<th>Location:</th>
<th>Dry Creek Salt Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client:</td>
<td>ARI / Ridley</td>
<td>Sampling Date:</td>
<td>4/02/2015</td>
</tr>
<tr>
<td>Well No:</td>
<td>(m)</td>
<td>(m)</td>
<td>P10</td>
</tr>
</tbody>
</table>

### Well Information

| Well Finish: | Casing | Casing Diameter (mm): | 50 |
| Screen Interval (m): | 2.14 | Case Interval (m): |
| Depth to Free Product (m TOC): | na | Product Thickness (mm): | na |
| Depth to Groundwater (m TOC): | 1.36 | Depth to be Purged (m): (Well Depth - Depth to Groundwater) |

### Purging Information

( Wells should be purged of three to five well volumes or until field parameters are considered to be stable )

| Casing Volume: | 4.65 L | Total Volume Purged (L): |
| Vol3: | 19 L | 3.1 |

### Purging Method:
- Start Time: | 10:50 |
- Finish Time: | 6/3 13/3 20/3 7/4 04/02/15 |
- Well purged dry?: | Yes |

### Groundwater Observations

| Colour | Clean |
| Odour | Very strong, pungent, decaying smell |
| Turbidity | V. low |
| Weather | Clean |
| Temperature | 21 |
| Cloud Cover | Light |

### Field Measurements

(When pH readings are within 0.1 units, electrical conductivity within 5 % and temperature within 0.2 C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable )

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>S G</th>
<th>Purged (L)</th>
<th>Pump Depth (m):</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:50</td>
<td>24.3</td>
<td>243511</td>
<td>6.62</td>
<td>0.69</td>
<td>-287.0</td>
<td>Dry</td>
<td>1.3</td>
<td>SG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:58</td>
<td>23.2</td>
<td>211654</td>
<td>6.74</td>
<td>0.40</td>
<td>-275.3</td>
<td>Dry</td>
<td>0.3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sampling Information

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Field Parameters</th>
<th>Preservation Details</th>
<th>Analysis</th>
</tr>
</thead>
</table>

| Plastic Unpres 1L | Plastic H2SO4 250mL | Glass H2SO4 115mL | Vit HC | Plastic Sterile 500mL |

Purged by: | Signature: |
Sampled by: | Signature: |
TER SAMPLING

Job No: 2014089
Location: Dry Creek Salt Fields
Client: ARI / Ridley
Sampling Date: 4/02/2015

Well Information

<table>
<thead>
<tr>
<th>Well Finish</th>
<th>0.715 Stickup (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casing</td>
<td></td>
</tr>
<tr>
<td>Screen Interval (m):</td>
<td>1-36</td>
</tr>
<tr>
<td>Depth to Fre Product (m TOC):</td>
<td>na</td>
</tr>
<tr>
<td>Product Thickness (mm):</td>
<td>na</td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC):</td>
<td>1.04</td>
</tr>
<tr>
<td>Depth to be Purged (m) (Well Depth - Depth to Groundwater):</td>
<td>na</td>
</tr>
</tbody>
</table>

Purging Information (wells should be purged of three to five well volumes or until field parameters are considered to be stable)

<table>
<thead>
<tr>
<th>Casing Volume: 2.025 L</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter</td>
</tr>
</tbody>
</table>

Purging Method: Bailen
Tubing Material: 11:00
Start Time: 11:00
Start Time: 11:00
Finish Time: 6/3
Finish Time: 13/3
Well purged dry?: No
Well purged dry?: No
Total Volume Purged (L): 3.4
Total Volume Purged (L): 0.75

Groundwater Observations

<table>
<thead>
<tr>
<th>Colour</th>
<th>Odour</th>
<th>Turbidity</th>
<th>Weather</th>
<th>Rain</th>
<th>Temperature</th>
<th>Cloud Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray to very black</td>
<td>Strong pungent decomposing smell</td>
<td>Medium to very high when disturbed</td>
<td>Clear</td>
<td></td>
<td>21</td>
<td>Light</td>
</tr>
</tbody>
</table>

Comments
Black sed. abundant.
Good recharge

Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00</td>
<td>22.1</td>
<td>2072.85</td>
<td>6.90</td>
<td>0.47</td>
<td>270.0</td>
<td>1-2</td>
<td></td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>11:03</td>
<td>22.7</td>
<td>2095.43</td>
<td>6.89</td>
<td>0.13</td>
<td>282.8</td>
<td>f-o</td>
<td></td>
<td></td>
<td>SG</td>
</tr>
<tr>
<td>11:05</td>
<td>23.3</td>
<td>2123.00</td>
<td>6.88</td>
<td>0.14</td>
<td>278.2</td>
<td>f-o</td>
<td></td>
<td></td>
<td>C</td>
</tr>
</tbody>
</table>

Water Quality Meter Used:

Purging Notes
In monitoring well

Sampling Information

Sampling Method:
Tubing Material:

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres. 1L</th>
<th>Amber Unpres. 1L</th>
<th>Plastic H2SO4 260mL</th>
<th>Glass H2SO4 115mL</th>
<th>Vis I HC</th>
<th>Plastic Sterile 500mL</th>
</tr>
</thead>
</table>

Purged by:

Sampled by:

Signature:

Analysis
**TER SAMPLING**

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 4/02/2015  
**Well No:** P12

### Well Information
- **Well Finish:** Casing  
- **Casing Diameter (mm):** 50  
- **Casing Stickup (m):** 0.805  
- **Screen Interval (m):** 3.19 - 3.46  
- **Depth to Free Product (m TOC):** na  
- **Product Thickness (mm):** na  
- **Depth to Groundwater (m TOC):** 2.30 - 2.485  
- **Depth to Be Purged (m):** Well Depth - Depth to Groundwater

### Purging Information
- **Vigra Temp h = 1.96 x h (r = 0.025 m)**  
- **OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter**  
- **Purging Method:** Bailey  
- **Tubing Material:**  
- **Start Time:** 9:45  
- **Finish Time:** 5/3 13/3 20/3 7/4 14/02/15  
- **Well purged dry?** No, nearly dry  
- **Total Volume Purged (L):** 10.6 1.0 1.0 6.3

### Groundwater Observations
- **Colour:** Light brown to grey  
- **Odour:** None  
- **Turbidity:** Low  
- **Hydrocarbon sheen:** None  
- **Weather:** Clean  
- **Temperature:** 21  
- **Cloud Cover:**  
- **Comments:** Surface water is very low, two pools, light brown.

### Field Measurements
- **Water Quality Meter Used:** In monitoring well

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
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<tbody>
<tr>
<td>9:45</td>
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<td>+</td>
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<td></td>
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<td>+</td>
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</table>

### Sampling Information
- **Sampling Method:**  
- **Tubing Material:**  
- **Sample No**  
- **QA/QC Time Taken**  
- **Field Parameters**  
- **Plastic H₂SO₄ 250mL**  
- **Plastic H₂SO₄ 125mL**  
- **Glas Sterile 500mL**  
- **Analysis**

**Purged by:**  
**Sampled by:**  
**Signature:**
## TER SAMPLING

**Job No:** 20140089  
**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 4/02/2015

### Well Information
- **Well Finish:** Casing  
- **Well Depth (m TOC):** 2.20  
- **Screen Interval (m):** 2.165
- **Depth to Free Product (m TOC):** na
- **Product Thickness (mm):** na
- **Depth to Groundwater (m TOC):** 1.46
- **Depth to Be Purged (m):** 1.25

### Purging Information
- **Casing Volume:** 5.64  
- **Volume:** 23 L
- **Purging Method:** Boulet
- **Start Time:** 10:01  
- **Finish Time:** 5/3 13/3 20/3 7/4 24/02/15
- **Well Purged Dry:** Yes  
- **Total Volume Purged (L):** 4.8 9.5 1.0 1.0 1.5

### Groundwater Observations
- **Colour:** Brown-grey to black once disturbed
- **Odour:** Organic / sulfide
- **Turbidity:** Low to nil
- **Hydrocarbon sheen:** None
- **Weather:** Clean

### Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
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<td>10:07</td>
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<td>0.2</td>
<td></td>
<td></td>
<td>@ C</td>
</tr>
<tr>
<td>10:10</td>
<td>22.1</td>
<td>199.00</td>
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### Sampling Information
- **Sample No:** QA/QC
- **Time Taken:**  
- **Preservation Details:** Plastic H₂SO₄ 250mL, Glass H₂SO₄ 125mL, Via I HC
- **Plastic Sterile 500mL:**

- **Purged by:**  
- **Sampled by:**  
- **Signature:**

---

### Analysis

---
Job No: 20140059  
Location: Dry Creek Salt Fields  
Client: ARI / Ridley  
Sampling Date: 4/02/2015  
Well No: P14

### Well Information

<table>
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<th>Parameter</th>
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<tbody>
<tr>
<td>Well Finish: Casing</td>
<td>0.74 Stickup (m)</td>
</tr>
<tr>
<td>Well Depth (m TOC):</td>
<td>1.29 1.265 Case Interval (m):</td>
</tr>
<tr>
<td>Depth to Free Product (m TOC):</td>
<td>na    Product Thickness (mm): na</td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC):</td>
<td>0.975</td>
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<tr>
<td>Casing Diameter (mm):</td>
<td>50</td>
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</table>

### Purging Information

- **Casing Volume:** 1.74 L  
- **Purging Volume:** 7 L  
- **Start Time:** 10:13  
- **Finish Time:** 5/3 13/3 20/3 7/4 04/02/15  
- **Well purged dry:** No  
- **Total Volume Purged (L):** 11.3 0.5 0.2 0.2 0.1

### Groundwater Observations

- **Colour:** Light brown  
- **Turbidity:** Low  
- **Odour:** None  
- **Temperature:** 21°C  
- **Cloud Cover:** Light

### Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Purging Notes</th>
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<tr>
<td>10.14</td>
<td>22.6</td>
<td>313.63</td>
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</table>

### Water Quality Meter Used

- **In monitoring well:** SG @ C

### Sampling Information

- **Sampling Method:**  
- **Tubing Material:**  

### Analysis

- **Purged by:**  
- **Sampled by:**  

---

*Note: All fields and parameters are measured and recorded as per standard protocols.*
TER SAMPLING

JOD No.: 20140089
Location: Dry Creek Salt Fields
Client: ARI / Ridley
Sampling Date: 4/02/2015

Well Information

<table>
<thead>
<tr>
<th>Well Finish</th>
<th>Standpipe 0.755 Stickup (m)</th>
<th>Casing Diameter (mm) 50</th>
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<tbody>
<tr>
<td>Well Depth (m TOC)</td>
<td>3.47 3:427</td>
<td>Case Interval (m):</td>
</tr>
<tr>
<td>Depth to Free Product (m TOC):</td>
<td>na</td>
<td>Product Thickness (mm): na</td>
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<tr>
<td>Depth to Groundwater (m TOC):</td>
<td>1.67 4:98</td>
<td>Depth to be Purged (m) (Well Depth - Depth to Groundwater)</td>
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</table>

Purging Information

- Casing Volume: 9.882 L
- Purging Method: N/A
- Purging Time: 3 x 40 L
- OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter
- Purging Notes: In monitoring well
- Water Quality Meter Used:
  - Temp (°C) 14.13 14.19 14.22
  - Conductivity (μS/cm) 155760 154286 154018
  - pH 6.36 6.38 6.64
  - DO (mg/L) 1.52 0.97 0.84
  - ORP (mV) -0.7 +0.7 +0.7
  - SWL (mTOC) Day Day Day
  - S.G. 3.6 0.6 0.6
  - Pump Depth (m): 3.6
  - Purging Notes: In monitoring well

Groundwater Observations

- Colour: Clean to light brown
- Odour: None
- Turbidity: Low to slight
- Hydrocarbon sheen: None
- Weather: Clear
- Rain Temperature 25
- Cloud Cover: Slight

Comments: Slow recharge

Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S.G.</th>
<th>Pump Depth (m):</th>
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<td>14.22</td>
<td>2.1.4</td>
<td>154018</td>
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<td>0.84</td>
<td>+0.7</td>
<td>Day</td>
<td>0.6</td>
<td></td>
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</table>

Sampling Information

Sampling Method: N/A
Tubing Material: N/A

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Amber Unpres 1L</th>
<th>Plastic H2SO4 250mL</th>
<th>Glass H2SO4 125mL</th>
<th>Via HC</th>
<th>Plastic Sterile 500mL</th>
<th>Analysis</th>
<th>Purged by:</th>
<th>Sampled by:</th>
</tr>
</thead>
</table>

Signature:
**TER SAMPLING**

**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 4/02/2015

### Well Information
- **Well Finish:** Standpipe  
- **Well Depth (m TOC):** 2.08  
- **Depth to Free Product (m TOC):** na  
- **Depth to Groundwater (m TOC):** 1.76  
- **Casing Diameter (mm):** 50  
- **Screen Interval (m):**
- **Product Thickness (mm):** na  
- **Depth to Be Purged (m):** 1.38  
- **Well Depth - Depth to Groundwater:**

### Purging Information
- **Casing Volume:** 4962 L
- **Vol^3 / h = 1.96 x h (r = 0.025 m)**
- **OR 1 Purge Volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter**

### Tubing Material:
- **Purging Method:** 
- **Start Time:** 14:20  
- **Finish Time:** 5/3  
- **Well Purged Dry:** Yes  
- **Total Volume Purged (L):** 3.1

### Groundwater Observations
- **Colour:** Clear to light brown  
- **Odour:** None  
- **Turbidity:** Low  
- **Hydrocarbon Sheen:** None  
- **Weather:** Clean  
- **Rain Temperature:** 26°C  
- **Cloud Cover:** Slight

### Field Measurements
- **Conductivity (us/cm):** 134930  
- **pH:** 6.86  
- **DO (mg/L):** 1.75  
- **ORP (mV):** +6.5  
- **SWL (m TOC):** 1.2  
- **Purging Notes:** Dry

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (us/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>Pump Depth (m):</th>
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</thead>
<tbody>
<tr>
<td>14:22</td>
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<td>134930</td>
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<td>1.75</td>
<td>+6.5</td>
<td>1.2</td>
<td>Pumping well</td>
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<td>14:27</td>
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<td>+7.3</td>
<td>Dry</td>
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<tr>
<td>14:30</td>
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<td>13177</td>
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<td>1.75</td>
<td>+9.3</td>
<td>Dry</td>
<td>0.3</td>
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### Sampling Information
- **Sampling Method:**
- **Tubing Material:**

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Amber Unpres 1L</th>
<th>Plastic H₂SO₄ 250mL</th>
<th>Glass H₂SO₄ 125mL</th>
<th>Via</th>
<th>Plastic Sterile 500mL</th>
</tr>
</thead>
</table>

**Purged by:**

**Sampled by:**

| Signature: | Signature: |
TER SAMPLING

Location: Dry Creek Salt Fields
Client: ARI / Ridley
Sampling Date: 4/02/2015

Well Information
Well Finish: Casing
Well Depth (m TOC): 0.745
Depth to Free Product (m TOC): na
Depth to Groundwater (m TOC): 1.18
Screen Interval (m): 1.22
1.24
Case Interval (m):

Purging Information
vols should be purged of three to five well volumes or until field
Casing Volume: 1.824 L
Purging Method: """"""
Start Time: 14:48
Finish Time: 5/3 13/3 20/3 7/4 04/02/15
Total Volume Purged (L): 0.6 1.8 1.0 0.5 0.4

Groundwater Observations
Colour: light brown, tan, clear
Odour: Organic
Turbidity: V. Low
Hydrocarbon Sheen: None
Weather: Clear, windy
Rain: 2.4
Comments

Field Measurements
Field Parameters
Time Temp (°C) Conductivity (uS/cm) pH DO (mg/L) ORP (mV) SWL (m TOC) S G Volume Purged (L) Pump Depth (m) Purging Notes
14:28 20.4 864.70 6.79 0.41 -262.9 D 0.25 in monitoring well
14:38 20.5 847.58 7.12 0.72 -273.8 D 0.15

Sampling Information
Sampling Method:
Tubing Material:
Sample No QA/QC Time Taken Plastic Unpres 1L Amber Unpres 1L Plastic H₂SO₄ 250mL Glass H₂SO₄ 125mL Via I HC Plastic Sterile 500mL

Purged by: Sampled by:
Signature: Signature:
**TER SAMPLING**

Location: Dry Creek Salt Fields  
Client: ARJ Ridley  
Sampling Date: 4/02/2015

### Well Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Location</td>
<td>Dry Creek Salt Fields</td>
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<tr>
<td>Client</td>
<td>ARJ Ridley</td>
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<td>Sampling Date</td>
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#### Casing Information

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<td>Client</td>
<td>ARJ Ridley</td>
</tr>
<tr>
<td>Sampling Date</td>
<td>4/02/2015</td>
</tr>
</tbody>
</table>

### Purging Information

- **Casing Volume:** 6.678 L  
- **Total Volume Purged:** 1.8 L  
- **Volume Purged:** 1.6 L

### Groundwater Observations

- **Colour:** Light grey brown  
- **Odour:** None  
- **Turbidity:** Clear to low  
- **Hydrocarbon Sheen:** None

### Weather

- **Temperature:** 26 °C  
- **Cloud Cover:** Overcast

### Field Measurements

##### Time

<table>
<thead>
<tr>
<th>Temp (°C)</th>
<th>Conductivity (us/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Pump Depth (m)</th>
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<tr>
<td>14.40</td>
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<td>0.37</td>
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<tr>
<td>14.40</td>
<td>3.2</td>
<td>6.2</td>
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<tr>
<td>14.50</td>
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</table>

### Water Quality Meter Used

- **In monitoring well SG @ C**

### Sampling Information

- **QA/QC:**  
- **Time:**  
- **Tubing Material:**  
- **Sample No:**  
- **Preservation Details:**  
- **Analysis:**

### Purging Information

- **Casing Volume:** 6.678 L  
- **Total Volume Purged:** 1.8 L  
- **Volume Purged:** 1.6 L

### Groundwater Observations

- **Colour:** Light grey brown  
- **Odour:** None  
- **Turbidity:** Clear to low  
- **Hydrocarbon Sheen:** None

### Weather

- **Temperature:** 26 °C  
- **Cloud Cover:** Overcast

### Field Measurements

##### Time

<table>
<thead>
<tr>
<th>Temp (°C)</th>
<th>Conductivity (us/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
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### Water Quality Meter Used

- **In monitoring well SG @ C**

### Sampling Information

- **QA/QC:**  
- **Time:**  
- **Tubing Material:**  
- **Sample No:**  
- **Preservation Details:**  
- **Analysis:**

### Purging Information

- **Casing Volume:** 6.678 L  
- **Total Volume Purged:** 1.8 L  
- **Volume Purged:** 1.6 L

### Groundwater Observations

- **Colour:** Light grey brown  
- **Odour:** None  
- **Turbidity:** Clear to low  
- **Hydrocarbon Sheen:** None

### Weather

- **Temperature:** 26 °C  
- **Cloud Cover:** Overcast

### Field Measurements

##### Time

<table>
<thead>
<tr>
<th>Temp (°C)</th>
<th>Conductivity (us/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
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### Water Quality Meter Used

- **In monitoring well SG @ C**

### Sampling Information

- **QA/QC:**  
- **Time:**  
- **Tubing Material:**  
- **Sample No:**  
- **Preservation Details:**  
- **Analysis:**

### Purging Information

- **Casing Volume:** 6.678 L  
- **Total Volume Purged:** 1.8 L  
- **Volume Purged:** 1.6 L

### Groundwater Observations

- **Colour:** Light grey brown  
- **Odour:** None  
- **Turbidity:** Clear to low  
- **Hydrocarbon Sheen:** None

### Weather

- **Temperature:** 26 °C  
- **Cloud Cover:** Overcast

### Field Measurements

##### Time

<table>
<thead>
<tr>
<th>Temp (°C)</th>
<th>Conductivity (us/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
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<td>-1.24</td>
<td>2.3</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>14.50</td>
<td>2.9</td>
<td>6.2</td>
<td>0.79</td>
<td>-17.0</td>
<td>2.2</td>
<td>2.2</td>
<td></td>
</tr>
</tbody>
</table>

### Water Quality Meter Used

- **In monitoring well SG @ C**

### Sampling Information

- **QA/QC:**  
- **Time:**  
- **Tubing Material:**  
- **Sample No:**  
- **Preservation Details:**  
- **Analysis:**

### Purging Information

- **Casing Volume:** 6.678 L  
- **Total Volume Purged:** 1.8 L  
- **Volume Purged:** 1.6 L

### Groundwater Observations

- **Colour:** Light grey brown  
- **Odour:** None  
- **Turbidity:** Clear to low  
- **Hydrocarbon Sheen:** None

### Weather

- **Temperature:** 26 °C  
- **Cloud Cover:** Overcast

### Field Measurements

##### Time

<table>
<thead>
<tr>
<th>Temp (°C)</th>
<th>Conductivity (us/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.40</td>
<td>2.8</td>
<td>6.2</td>
<td>0.37</td>
<td>-5.9</td>
<td>1.80</td>
<td>4.2</td>
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</tr>
<tr>
<td>14.40</td>
<td>3.2</td>
<td>6.2</td>
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<td>-1.24</td>
<td>2.3</td>
<td>2.2</td>
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<tr>
<td>14.50</td>
<td>2.9</td>
<td>6.2</td>
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### Water Quality Meter Used

- **In monitoring well SG @ C**

### Sampling Information

- **QA/QC:**  
- **Time:**  
- **Tubing Material:**  
- **Sample No:**  
- **Preservation Details:**  
- **Analysis:**

### Purging Information

- **Casing Volume:** 6.678 L  
- **Total Volume Purged:** 1.8 L  
- **Volume Purged:** 1.6 L

### Groundwater Observations

- **Colour:** Light grey brown  
- **Odour:** None  
- **Turbidity:** Clear to low  
- **Hydrocarbon Sheen:** None

### Weather

- **Temperature:** 26 °C  
- **Cloud Cover:** Overcast

### Field Measurements

##### Time

<table>
<thead>
<tr>
<th>Temp (°C)</th>
<th>Conductivity (us/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.40</td>
<td>2.8</td>
<td>6.2</td>
<td>0.37</td>
<td>-5.9</td>
<td>1.80</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>14.40</td>
<td>3.2</td>
<td>6.2</td>
<td>0.39</td>
<td>-1.24</td>
<td>2.3</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>14.50</td>
<td>2.9</td>
<td>6.2</td>
<td>0.79</td>
<td>-17.0</td>
<td>2.2</td>
<td>2.2</td>
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### Water Quality Meter Used

- **In monitoring well SG @ C**

### Sampling Information

- **QA/QC:**  
- **Time:**  
- **Tubing Material:**  
- **Sample No:**  
- **Preservation Details:**  
- **Analysis:**
TER SAMPLING

Location: Dry Creek Salt Fields
Client: ARI / Ridley
Sampling Date: 4/02/2015

Well Information

Well Finish: Casing
Well Depth (m TOC): 1.94
Depth to Free Product (m TOC): na

Purging Information

Casing Volume: 3.12 L
Purging Method: Balance

Groundwater Observations

Colour: Clean - light brown
Turbidity: Very Low
Weather: Clean

Field Measurements

<table>
<thead>
<tr>
<th>Time (h)</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m):</th>
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</thead>
<tbody>
<tr>
<td>13.50</td>
<td>24.0</td>
<td>130337</td>
<td>6.95</td>
<td>1.24</td>
<td>-37.0</td>
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<td>0.7</td>
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<td>In monitoring well</td>
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<tr>
<td>13.55</td>
<td>23.8</td>
<td>130002</td>
<td>6.17</td>
<td>1.57</td>
<td>-28.1</td>
<td>Dry</td>
<td>0.2</td>
<td></td>
<td>@ C</td>
</tr>
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</table>

Sampling Information

Sample No | QA/QC | Time Taken | Plastic Unpres 1L | Amber Unpres 1L | Plastic H2SO4 250mL | Glass H2SO4 15mL | Via HC | Plastic Sterile 500mL | Analysis |
|----------|-------|------------|-------------------|-----------------|---------------------|------------------|--------|-----------------------|----------|

Purged by: [Signature]
Sampled by: [Signature]
**TER SAMPLING**

**Location:** Dry Creek Salt Fields  
**Client:** ARI / Ridley  
**Sampling Date:** 4/02/2015  
**Well No:** P20

### Well Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
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<tbody>
<tr>
<td>Well Finish:</td>
<td>Standpipe</td>
</tr>
<tr>
<td>Well Depth (m TOC):</td>
<td>3.55</td>
</tr>
<tr>
<td>Screen Interval (m):</td>
<td>0.80</td>
</tr>
<tr>
<td>Casing Diameter (mm)</td>
<td>50</td>
</tr>
<tr>
<td>Depth to Groundwater</td>
<td>1.70</td>
</tr>
<tr>
<td>Depth to Free Product (m TOC):</td>
<td>na</td>
</tr>
<tr>
<td>Product Thickness (mm):</td>
<td>na</td>
</tr>
<tr>
<td>Depth to be Purged (m)</td>
<td>1.39</td>
</tr>
</tbody>
</table>

### Purging Information

(wells should be purged of three to five well volumes or until field parameters are considered to be stable)

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
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<tbody>
<tr>
<td>Casing Volume:</td>
<td>12.75 L</td>
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<tr>
<td>Tubing Material:</td>
<td></td>
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<tr>
<td>Purging Method:</td>
<td>Bailor</td>
</tr>
<tr>
<td>Start Time:</td>
<td>13:56</td>
</tr>
<tr>
<td>Finish Time:</td>
<td>5/3 13/3 20/3 7/4 04/02/16</td>
</tr>
<tr>
<td>Well purged dry?</td>
<td>Yes</td>
</tr>
<tr>
<td>Total Volume Purged (L)</td>
<td>5.8 4.2 5.2 1.0 4.0</td>
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</table>

### Groundwater Observations

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>Clean light brown</td>
</tr>
<tr>
<td>Odour:</td>
<td>None</td>
</tr>
<tr>
<td>Turbidity:</td>
<td>Very high</td>
</tr>
<tr>
<td>Hydrocarbon sheen:</td>
<td>None</td>
</tr>
<tr>
<td>Weather:</td>
<td>Clear</td>
</tr>
<tr>
<td>Temperature:</td>
<td>25</td>
</tr>
<tr>
<td>Cloud Cover:</td>
<td>Slight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comments:</td>
<td>V. Slow recharge</td>
</tr>
</tbody>
</table>

### Field Measurements

(when pH readings are within 0.1 units, electrical conductivity within 5 % and temperature within 0.2 C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable)

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>Volume Purged (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:02</td>
<td>22.5</td>
<td>123.0/20</td>
<td>6.95</td>
<td>1.91</td>
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<td>0.5</td>
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<tr>
<td>13:58</td>
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<td>131.92/4</td>
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<td>1.80</td>
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<td></td>
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**Water Quality Meter Used:**

In monitoring well

---

### Sampling Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
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<tbody>
<tr>
<td>Sample No:</td>
<td></td>
</tr>
<tr>
<td>QA/QC:</td>
<td></td>
</tr>
<tr>
<td>Time Taken:</td>
<td>Plastic Unpress 1L</td>
</tr>
<tr>
<td>Plastic Amber Unpress 1L</td>
<td>Plastic H2SO4 250mL</td>
</tr>
<tr>
<td>Plastic H2SO4 125mL</td>
<td>Glass H2SO4 125mL</td>
</tr>
<tr>
<td>Preservation Details:</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purged by:</td>
<td></td>
</tr>
<tr>
<td>Sampled by:</td>
<td></td>
</tr>
</tbody>
</table>

**Signature:**

---

**Signature:**
**TER SAMPLING**

**Location:** Dry Creek Salt Fields  
**Client:** ARJ / Ridley  
**Sampling Date:** 4/02/2015

### Well Information
- **Well Finish:** Standpipe  
- **Well Depth (m TOC):** 3.42  
- **Screen Interval (m):** 3.987  
- **Depth to Free Product (m TOC):** na  
- **Product Thickness (mm):** na  
- **Depth to Groundwater (m TOC):** 1.81  
- **Depth to be Purged (m):** 4.61  

**Casing Diameter (mm):** 50  
**Case Interval (m):**  

**Purging Information**
- **Purging Method:** Biler  
- **Start Time:** 15/14  
- **Finish Time:** 5/3  
- **Well purged dry:** Yes  
- **Total Volume Purged (L):** 3.92  

**Groundwater Observations**
- **Colour:** Clean than light brown  
- **Odour:**  
- **Turbidity:** V.how to moderate  
- **Hydracarbon sheen:**  
- **Weather:** Clean  
- **Rain:**  
- **Temperature:** 25  
- **Cloud Cover:** Light

### Field Measurements

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
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<tbody>
<tr>
<td>15/18</td>
<td>21.4</td>
<td>193.75</td>
<td>6.54</td>
<td>1.31</td>
<td>-77.1</td>
<td>Dry</td>
<td>3.0</td>
<td>0.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15/18</td>
<td>21.4</td>
<td>196.17</td>
<td>6.46</td>
<td>0.67</td>
<td>-67.6</td>
<td>Dry</td>
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<td></td>
<td></td>
<td></td>
</tr>
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</table>

### Sampling Information

**Sample No.**  
**QA/QC**  
**Time Taken**  
**Plastic Unpres 1L**  
**Amber Unpres 1L**  
**Plastic H₂SO₄ 250mL**  
**Glass H₂SO₄ 125mL**  
**Via 1 HC**  
**Plastic Sterile 500mL**

**Analysis**

**Purged by:**  
**Sampled by:**
## TER SAMPLING

### Well Information
- **Client:** ARI / Ridley
- **Sampling Date:** 04/02/2015
- **Well No.:** P22

<table>
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<th>Value</th>
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<tbody>
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<td>Well Finish</td>
<td>Standpipe</td>
</tr>
<tr>
<td>Well Depth (m TOC)</td>
<td>2.47</td>
</tr>
<tr>
<td>Screen Interval (m)</td>
<td>2.465</td>
</tr>
<tr>
<td>Product Thickness (mm)</td>
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</tr>
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<td>Depth to Water Table (m TOC)</td>
<td>1.81</td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC)</td>
<td>4.41</td>
</tr>
<tr>
<td>Casing Diameter (mm)</td>
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</tr>
<tr>
<td>Volume Purged (L)</td>
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</tr>
<tr>
<td>Purging Method</td>
<td>Blanket</td>
</tr>
<tr>
<td>Start Time</td>
<td>15:19</td>
</tr>
<tr>
<td>Finish Time</td>
<td>5/3</td>
</tr>
<tr>
<td>Well purged dry?</td>
<td>Yes</td>
</tr>
<tr>
<td>Total Volume Purged (L)</td>
<td>33</td>
</tr>
<tr>
<td>Groundwater Observations</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>Light grey</td>
</tr>
<tr>
<td>Odour</td>
<td>None</td>
</tr>
<tr>
<td>Turbidity</td>
<td>Low</td>
</tr>
<tr>
<td>Hydrocarbon sheen</td>
<td>None</td>
</tr>
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<td>Weather</td>
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</tr>
<tr>
<td>Temperature</td>
<td>24</td>
</tr>
<tr>
<td>Cloud Cover</td>
<td>Light</td>
</tr>
</tbody>
</table>

### Field Measurements

#### Water Quality Meter Used:
- In monitoring well

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>S G</th>
<th>Purging Notes</th>
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<tbody>
<tr>
<td>15-20</td>
<td>21.5</td>
<td>138.1</td>
<td>6.5</td>
<td>0.77</td>
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<td>4.1</td>
<td>In monitoring well</td>
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<td>6.44</td>
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<td>-61.9</td>
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<table>
<thead>
<tr>
<th>Sample</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic</th>
<th>Amber</th>
<th>Glass</th>
<th>Via</th>
<th>Plastic</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Unpres 1L</td>
<td>Unpres 1L</td>
<td>H2SO4 250mL</td>
<td>H2SO4 115mL</td>
<td>HC</td>
<td>Sterile 500mL</td>
</tr>
</tbody>
</table>

### Sampling Information
- **Sample No.:**
- **Time Taken:**
- **Plastic:**
- **Amber:**
- **Glass:**
- **Via:**
- **Plastic Sterile:**

**Purged by:** [Signature]

**Sampled by:** [Signature]
# Groundwater Sampling

**Client:** AR/I Ridley  
**Sampling Date:** 4/02/2015

## Well Information

<table>
<thead>
<tr>
<th>Well Finish</th>
<th>Casing</th>
<th>0.785 Stickup (m)</th>
<th>Casing Diameter (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1.90</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Well Depth (m TOC):</th>
<th>1.90</th>
<th>Screen Interval (m):</th>
<th>1.87</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth to Free Product (m TOC):</td>
<td>na</td>
<td>Product Thickness (mm):</td>
<td>na</td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC):</td>
<td>1.26</td>
<td>Depth to be Purged (m) (Well Depth - Depth to Groundwater):</td>
<td>1.425</td>
</tr>
</tbody>
</table>

## Purging Information

(wells should be purged of three to five well volumes or until field parameters are considered to be stable)

<table>
<thead>
<tr>
<th>Purging Method:</th>
<th>Casing Volume:</th>
<th>Volume Purged (L):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Air</td>
<td>4.47 L</td>
<td>18 L</td>
</tr>
</tbody>
</table>

**Start Time:** 15:35

**Purging Method:** Head Air

**Well purged dry?** Yes

**Total Volume Purged (L):** 4.8

## Groundwater Observations

<table>
<thead>
<tr>
<th>Colour</th>
<th>Odour</th>
<th>Turbidity</th>
<th>Hydrocarbon sheen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Brown</td>
<td>None</td>
<td>Low</td>
<td>None</td>
</tr>
</tbody>
</table>

## Weather

<table>
<thead>
<tr>
<th>Rain</th>
<th>Temperature</th>
<th>Cloud Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25</td>
<td>Clean</td>
</tr>
</tbody>
</table>

## Comments

Reasonable recharge

## Field Measurements

(when pH readings are within 0.1 units, electrical conductivity within 5 % and temperature within 0.2 C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable)

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m):</th>
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<tbody>
<tr>
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<td>24.6</td>
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<td>6.36</td>
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<td>92.1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>15:46</td>
<td>24.5</td>
<td>194.32</td>
<td>6.34</td>
<td>0.35</td>
<td>163.3</td>
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<td></td>
<td></td>
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<tr>
<td>15:50</td>
<td>23.7</td>
<td>193.643</td>
<td>6.36</td>
<td>0.37</td>
<td>119.1</td>
<td>Dry</td>
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## Sampling Information

### Sampling Method:

### Tubing Material:

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Preservation Details</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plastic Unpres 1L</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amber Unpres 1L</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plastic H₂SO₄ 250mL</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Glass H₂SO₄ 125mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Via I HC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plastic Sterile 500mL</td>
<td></td>
</tr>
</tbody>
</table>

## Purged by: Signature:

## Sampled by: Signature:
**GROUNDWATER SAMPLING**

**Client:** AIR / Ridley  
**Sampling Date:** 4/02/2015  
**Well No:** P24

### Well Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>E (m)</td>
<td></td>
</tr>
<tr>
<td>N (m)</td>
<td></td>
</tr>
<tr>
<td>Casing Stickup (m)</td>
<td>0.775</td>
</tr>
<tr>
<td>Casing Diameter (mm)</td>
<td>50</td>
</tr>
<tr>
<td>Well Finish: Casing</td>
<td></td>
</tr>
<tr>
<td>Well Depth (m TOC):</td>
<td>1.49</td>
</tr>
<tr>
<td>Screen Interval (m):</td>
<td>1.46</td>
</tr>
<tr>
<td>Depth to Free Product (m TOC):</td>
<td>na</td>
</tr>
<tr>
<td>Product Thickness (mm):</td>
<td>na</td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC):</td>
<td>1.23</td>
</tr>
<tr>
<td>Depth to Be Purged (m):</td>
<td>1.45</td>
</tr>
</tbody>
</table>

### Purging Information

- **Casing Volume:** 1.83 L<br>- **Vol** 3 = 7.3 L<br>- OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 6 L/m for 100 mm Internal Diameter
- **Purging Method:** BAILEY
- **Start Time:** 15/40
- **Finish Time:** 5/3 13/3 20/3 7/4 04/02/15
- **Well purged dry?** Yes
- **Total Volume Purged (L):** 0.21 0.7 1.3 1.5 0.6

### Groundwater Observations

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Light grey</td>
</tr>
<tr>
<td>Odour</td>
<td>Sulphatic, Organic</td>
</tr>
<tr>
<td>Turbidity</td>
<td>Clean, low</td>
</tr>
<tr>
<td>Weather</td>
<td>Clear</td>
</tr>
<tr>
<td>Rain</td>
<td>Clear</td>
</tr>
<tr>
<td>Temperature</td>
<td>24°C</td>
</tr>
<tr>
<td>Cloud Cover</td>
<td>Clear</td>
</tr>
</tbody>
</table>

### Comments

Very slow exchange

### Field Measurements

**Field Parameters**

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.41</td>
<td>24.0</td>
<td>428.0</td>
<td>7.27</td>
<td>0.73</td>
<td>-253.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.4</td>
<td>25.0</td>
<td>458.3</td>
<td>7.33</td>
<td>0.69</td>
<td>-257.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Water Quality Meter Used:**

- In monitoring well
- @ C

### Sampling Information

**Sampling Method:**

**Tubing Material:**

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Preservation Details</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plastic Unpres 1L</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amber Unpres 1L</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plastic H₂SO₄ 250mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Glass H₂SO₄ 125mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Via HC</td>
<td>Plastic 500mL</td>
</tr>
</tbody>
</table>

**Purged by:**  
**Sampled by:**  
**Signature:**  
**Signature:**
GROUNDWATER SAMPLING

Client: ARI / Ridley

Sampling Date: 4/02/2015

Well Finish: Casing

Well Depth (m TOC): 1.86

Screen Interval (m): .1387

Depth to Free Product (m TOC): na

Product Thickness (mm): na

Depth to Groundwater (m TOC): 1.28

Pumping Information: (wells should be purged of three to five well volumes or until field parameters are considered to be stable)

Casing Volume: 4.734 L

Purging Volume: 19 L

Purging Method: BAILEY

Tubing Material:

Start Time: 16:40

Well purged dry? Yes

Finish Time: 5/3 14/3 20/3 7/4 4/02/15

Total Volume Purged (L): 1.5 1.2 1.2 1.3 1.3

Groundwater Observations:

Colour: Clean, slight brown tannin

Odour: Slight organic sulphide

Turbidity: Very Low

Hydrocarbon sheen: None

Weather: Clear

Rain: Temperature 25

Cloud Cover: None

Comments:

Field Measurements:

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:42</td>
<td>23.1</td>
<td>164564</td>
<td>6.87</td>
<td>0.35</td>
<td>-81.9</td>
<td>Dry</td>
<td></td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>16:59</td>
<td>23.8</td>
<td>171344</td>
<td>6.78</td>
<td>0.15</td>
<td>-70.0</td>
<td>Dry</td>
<td></td>
<td>0.2</td>
<td></td>
</tr>
</tbody>
</table>

Water Quality Meter Used: In monitoring well

Pumping Depth (m):

163 SWL toc, depth 2.15

137 SWL toc, depth 2.45

2.18 SWL toc, depth 0

Sampling Information:

Sampling Method:

Tubing Material:

Sample No | QA/QC | Time Taken | Plastic Unpres 1L | Amber Unpres 1L | Plastic H₂SO₄ 250mL | Glass H₂SO₄ 125mL | Via | Plastic Sterile 500mL | Analysis |
|----------|-------|------------|-------------------|-----------------|---------------------|-------------------|-----|---------------------|----------|

Purged by: [Signature]

Sampled by: [Signature]
# Groundwater Sampling

**Client:** SWN

**Sampled:** 89

**Well Information**

- **Well Finish:** Casing
- **Stickup:** 0.77 m
- **Depth to Free Product (m TOC):** na
- **Product Thickness (mm):** na
- **Depth to Groundwater (m TOC):** 1.20
- **Volume Purged:** 3258 L

**Purging Information**

- **Method:** Brine
- **Start Time:** 16:45
- **Finish Time:** 16:46
- **Well Purged Dry:** Yes
- **Total Volume Purged (L):** 3258

**Groundwater Observations**

- **Colour:** Light orange brown tannin
- **Turbidity:** Low
- **Odour:** Organic Sulfide
- **Weather:** Clear

**Comments**

**Field Measurements**

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (us/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:47</td>
<td>23.3</td>
<td>96875</td>
<td>6.87</td>
<td>0.92</td>
<td>-43.0</td>
<td>0.65</td>
<td>Dry</td>
<td>0.65</td>
<td>In monitoring well</td>
</tr>
<tr>
<td>17:00</td>
<td>23.6</td>
<td>98696</td>
<td>7.07</td>
<td>1.96</td>
<td>-49.0</td>
<td></td>
<td>Dry</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>Sunfie L</td>
<td>43.6</td>
<td>215344</td>
<td>6.50</td>
<td>0.24</td>
<td>-69.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pond Grp</td>
<td>49.3</td>
<td>238349</td>
<td>7.55</td>
<td>0.45</td>
<td>-41.1</td>
<td></td>
<td></td>
<td></td>
<td>Orange flecks deep hole</td>
</tr>
<tr>
<td>CS100 Pit</td>
<td>30.2</td>
<td>238349</td>
<td>7.55</td>
<td>0.45</td>
<td>-41.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS100 Pit</td>
<td>27.8</td>
<td>180499</td>
<td>8.11</td>
<td>4.24</td>
<td>-30.5</td>
<td></td>
<td></td>
<td></td>
<td>Clean light brown water, stannous</td>
</tr>
</tbody>
</table>

**Sampling Information**

- **Sample No:** QA/QC
- **Time Taken:**
- **Preservation Details:**
  - Plastic Unpres 1L
  - Amber Unpres 1L
  - Plastic H2SO4 250mL
  - Glass H2SO4 125mL
  - Visa 1 HC
  - Plastic Sterile 500mL
- **Analysis:**

**Purged by:**

**Sampled by:**

**Signature:**
**GROUNDWATER SAMPLING**

**Well Information**
- **Well Finish:** Standpipe
- **Well Depth (m TOC):** 3.32
- **Screen Interval (m):** 3.475
- **Depth to Free Product (m TOC):** NA
- **Product Thickness (mm):** NA
- **Depth to Groundwater (m TOC):** 2.815
- **Depth to be Purged (m):** (Well Depth - Depth to Groundwater)
- **Casing Volume:** 7.98 L
- **Well Diameter:** 30 mm
- **Case Interval (m):**
- **Volume Purged:** 32 L

**Purging Information**
- **Purging Method:** Brine
- **Start Time:** 8:10
- **Finish Time:** 5/3 14/3 20/3 7/4
- **Total Volume Purged (L):** 2.75 2.2 2.1 1.5

**Groundwater Observations**
- **Light Brown**
- **Odour:** None
- **Turbidity:** Low - clear until disturbed, then high
- **Hydrocarbon Sheen:** None
- **Weather:** Clean
- **Rain:** Temperature 28
- **Cloud Cover:** None

**Field Measurements**
- **Field Parameters**
  - **Time:** 8:14 8:18 8:22 9:32 11:15
  - **Temp (°C):** 20.9 21.0 20.0 20.9 21.7
  - **Conductivity (µS/cm):** 20210 20590 206600 208500 194788
  - **pH:** 6.17 6.01 6.01 5.91 6.12
  - **DO (mg/L):** 0.98 0.52 0.75 0.56 0.37
  - **ORP (mV):** 85.0 80.0 35.2 22.2 24.4
  - **SWL (m TOC):** 1.5 1.5 1.5 1.5
- **Volume Purged (L):**
- **Pump Depth (m):**

**Water Quality Meter Used:**
- **In monitoring well:** SG

**Purging Notes:**
- **In Well:**

**Sampling Information**
- **Sampling Method:**
- **Tubing Material:**

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Amber Unpres 1L</th>
<th>Plastic H₂SO₄ 250mL</th>
<th>Glass H₂SO₄ 125mL</th>
<th>Via I HC</th>
<th>Plastic Sterile 500mL</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Purged by:**

**Sampled by:**

**Signature:**
**GROUNDWATER SAMPLING**

**Well Information**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Finish:</td>
<td>Casing</td>
</tr>
<tr>
<td>Casing Diameter (mm)</td>
<td>50</td>
</tr>
<tr>
<td>Screen Interval (m):</td>
<td></td>
</tr>
<tr>
<td>Depth to Free Product (m TOC):</td>
<td>na</td>
</tr>
<tr>
<td>Product Thickness (mm):</td>
<td>na</td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC):</td>
<td>1.53</td>
</tr>
<tr>
<td>Depth to be Purged (m):</td>
<td></td>
</tr>
</tbody>
</table>

**Purging Information**

- **Casing Volume:** 6.54 L
- **Volume Purged:** 26 L
- **Total Volume Purged (L):** 5.6
- **Start Time:** 5/3
- **Finish Time:** 7/4
- **Notes:** 04/02/15

**Groundwater Observations**

- **Colour:** Clear to light brownish grey
- **Odour:** Aromatic sulfide
- **Turbidity:** High to dark
- **Hydrocarbon sheen:** None
- **Weather:** Clear
- **Temperature:** 26°C
- **Cloud Cover:** None

**Field Measurements**

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>S</th>
<th>G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m):</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.37</td>
<td>22.7</td>
<td>100870</td>
<td>6.72</td>
<td>0.32</td>
<td>-241.7</td>
<td>Dry</td>
<td>1.4</td>
<td>0.7</td>
<td></td>
<td>C</td>
</tr>
<tr>
<td>8.40</td>
<td>22.8</td>
<td>109360</td>
<td>6.81</td>
<td>0.34</td>
<td>-240.5</td>
<td>Dry</td>
<td>1.4</td>
<td>0.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sampling Information**

- **QA/QC:**
- **Time Taken:** Plastic: 1L, Amber: 1L
- **Plastic H2SO4:** 250mL
- **Glass H2SO4:** 125mL
- **Via:** HC
- **Plastic Sterile:** 500mL

**Purged by:**

**Sampled by:**
GROUNDWATER SAMPLING

TONKIN

Well No: P29

Sampling Date: 4/02/2016

Well Information

Well Finish: Casing

Well Depth (m TOC): 4.49

Depth to Free Product (m TOC): na

Depth to Groundwater (m TOC): 1.085

Casing Diameter (mm): 50

Screen Interval (m): 4.46

Product Thickness (mm): na

Depth to be Purge (m) (Well Depth - Depth to Groundwater): 0.84

Purging Information (wells should be purged of three to five well volumes or until field parameters are considered to be stable)

Casing Volume: 3.72 L

Vol^3 = 15 L

OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter

Purging Method: Baker

Tubing Material:

Start Time: 8

Finish Time: 5/3 14/3 20/3 7/4 04/02/15

Total Volume Purged (L): 15.7 1.0 0.5 1.0 3.3

Groundwater Observations

Colour: Brown to grey to gray once disturbed

Odour: Organic, sulfhydryl

Turbidity: How to moderate

Hydrocarbon sheen: None

Weather

Rain: Clean

Temperature: 20

Cloud Cover: None

Comments: Better recharge than the deeper aquifers. Much less sediment

Field Measurements

(when pH readings are within 0.1 units, electrical conductivity within 5 % and temperature within 0.2 C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable)

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>S</th>
<th>G</th>
<th>Volume Purged (L)</th>
<th>Purging Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.46</td>
<td>22.1</td>
<td>511.5</td>
<td>6.83</td>
<td>0.54</td>
<td>-268.7</td>
<td></td>
<td></td>
<td></td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>8.48</td>
<td>22.8</td>
<td>527.5</td>
<td>6.87</td>
<td>1.16</td>
<td>-267.3</td>
<td></td>
<td></td>
<td></td>
<td>1.0</td>
<td>In monitoring well</td>
</tr>
<tr>
<td>8.81</td>
<td>23.6</td>
<td>350.4</td>
<td>6.86</td>
<td>0.65</td>
<td>-274.3</td>
<td></td>
<td></td>
<td></td>
<td>1.1</td>
<td></td>
</tr>
</tbody>
</table>

Purging Information

Sampling Method:

Tubing Material:

Sample No | QA/QC | Time Taken | Field Parameters | Preservation Details | Analysis |
|----------|-------|------------|------------------|----------------------|----------|

Purged by: [Signature]

Sampled by: [Signature]
**GROUNDWATER SAMPLING**

**Well Information**
- **Well No:** P30
- **Sampling Date:** 4/02/2015
- **Well Finish:** Standpipe 0.69 Stickup (m)
- **Casing Diameter (mm):** 50
- **Screen Interval (m):**
- **Case Interval (m):**
- **Depth to Free Product (m TOC):** na
- **Product Thickness (mm):** na
- **Depth to Groundwater (m TOC):** 2.925
- **Depth to be Purged (m):** (Well Depth - Depth to Groundwater)

**Purging Information**
- **Casing Volume:** 5.7 L
- **Tubing Material:**
- **Start Time:** 9:08
- **Finish Time:** 6/3 14/3 20/3 7/4 04/02/15
- **Well purged dry?** No
- **Total Volume Purged (L):** 36 1.0 1.0 20

**Groundwater Observations**
- **Colour:** Clear to light gray
- **Odour:** None
- **Turbidity:** Low to moderate
- **Weather:**
  - Temperature: 21.0°C
  - Cloud Cover: Bright

**Field Measurements**

<table>
<thead>
<tr>
<th>Time (h)</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.04</td>
<td>21.3</td>
<td>2017.00</td>
<td>6.30</td>
<td>1.42</td>
<td>-61.5</td>
<td>2.57</td>
<td>12</td>
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<td></td>
</tr>
<tr>
<td>9.08</td>
<td>21.3</td>
<td>2049.00</td>
<td>6.29</td>
<td>0.77</td>
<td>-52.6</td>
<td>-</td>
<td>1</td>
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<td></td>
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<tr>
<td>9.12</td>
<td>21.0</td>
<td>2032.00</td>
<td>6.25</td>
<td>0.25</td>
<td>-51.7</td>
<td>-</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Water Quality Meter Used:**
- In monitoring well
- **SG:** @ C

**Sampling Information**
- **Sampling Method:**
- **Tubing Material:**
- **Sample No** | **QA/QC** | **Time Taken** | **Preservation Details** | **Analysis**
|---------------|------------|----------------|--------------------------|----------------|

**Purged by:**

**Sampled by:**

**Signature:**
### GROUNDWATER SAMPLING

- **Well No:** P31
- **Sampling Date:** 4/02/2015

#### Well Information
- **Well Finish:** Casing
- **Casing Diameter (mm):** 50
- **Screen Interval (m):**
- **Case Interval (m):**
- **Depth to Free Product (m TOC):** na
- **Product Thickness (mm):** na
- **Depth to Groundwater (m TOC):** 1.73
- **Depth to be Purged (m):** 1.48

#### Purging Information
(wells should be purged of three to five well volumes or until field parameters are considered to be stable)

- **Casing Volume:** 4.62 L
- **Total Volume Purged (L):**
  - 6/3: 14/3
  - 20/3: 7/4
  - 2/3: 04/02/15

#### Groundwater Observations
- **Colour:** Light grey to black
- **Odour:** Organic, sulfide
- **Turbidity:** Slightly to high once disturbed
- **Hydrocarbon Sheen:** None
- **Weather:** Clear
- **Cloud Cover:** Light

#### Field Measurements
(when pH readings are within 0.1 units, electrical conductivity within 5 % and temperature within 0.2 C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable)

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m):</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.18</td>
<td>22.7</td>
<td>136827</td>
<td>6.70</td>
<td>0.18</td>
<td>-215.3</td>
<td>Day</td>
<td>1.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.20</td>
<td>23.1</td>
<td>184155</td>
<td>6.67</td>
<td>0.23</td>
<td>-29.6</td>
<td>Day</td>
<td>0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.23</td>
<td>23.3</td>
<td>19600</td>
<td>6.56</td>
<td>0.29</td>
<td>-140.0</td>
<td>Day</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Purging Notes
- In monitoring well
- SG @ C

#### Sampling Information
- **Tubing Material:** Plastic Sterile 500mL

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Preservation Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plastic Unpres 1L</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amber Unpres 1L</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plastic H2SO4 250mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Glass H2SO4 125mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vac 1 HC</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Analysis</th>
</tr>
</thead>
</table>

- **Purged by:** [Signature]
- **Sampled by:** [Signature]
## GROUNDWATER SAMPLING

**Well Information**

<table>
<thead>
<tr>
<th>Well Finish</th>
<th>Casing</th>
<th>0.755 Stickup (m)</th>
<th>Casing Diameter (mm)</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Depth (m TOC):</td>
<td>1-2</td>
<td>1.535</td>
<td>Screen Interval (m):</td>
<td>Case Interval (m):</td>
</tr>
<tr>
<td>Depth to Free Product (m TOC):</td>
<td>na</td>
<td>Product Thickness (mm):</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Depth to Groundwater (m TOC):</td>
<td>1.447</td>
<td>Depth to be Purge (m) (Well Depth - Depth to Groundwater):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Purging Information** (wells should be purged of three to five well volumes or until field parameters are considered to be stable)

| Casing Volume: | 2.19 | L | vol'3 x 8.8 L |
| Purging Method: | Bailen | Tubing Material: |
| Start Time: | 7/6 | Finish Time: | 6/3 14/3 20/3 7/4 04/02/15 |
| Well purged dry? | Yes | Total Volume Purged (L): | 0.75 3.0 0.5 0.8 1.6 |

**Groundwater Observations**

| Colour | Light grey to clean (tonna). |
| Odour | Organic, sulfide |
| Turbidity | Hydrcarbon sheen |
| Weather | Clear |
| Rain | Temperature | 21 |
| Cloud Cover | Light |

**Field Measurements** (when pH readings are within 0.1 units, electrical conductivity within 5% and temperature within 0.2°C, for three consecutive readings at intervals of 5 minutes or more, the well can be considered to be stable)

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (m TOC)</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m):</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:26</td>
<td>23.7</td>
<td>166700</td>
<td>6.69</td>
<td>0.29</td>
<td>-232.0</td>
<td>Dry</td>
<td>0.6</td>
<td>In monitoring well</td>
</tr>
<tr>
<td>9:29</td>
<td>24.3</td>
<td>174400</td>
<td>6.69</td>
<td>0.45</td>
<td>-256.0</td>
<td>Dry</td>
<td>0.6</td>
<td>@ C</td>
</tr>
<tr>
<td>9:32</td>
<td>24.1</td>
<td>170749</td>
<td>6.70</td>
<td>0.50</td>
<td>-256.7</td>
<td>Dry</td>
<td>0.6</td>
<td></td>
</tr>
</tbody>
</table>

**Sampling Information**

<table>
<thead>
<tr>
<th>Sample No</th>
<th>QA/QC</th>
<th>Time Taken</th>
<th>Plastic Unpres 1L</th>
<th>Amber Unpres 1L</th>
<th>Plastic H₂SO₄ 250mL</th>
<th>Glass H₂SO₄ 125mL</th>
<th>Via 1 HC</th>
<th>Plastic Sterile 500mL</th>
<th>Analysis</th>
</tr>
</thead>
</table>

Purged by: 
Sampled by: 
Signature: 

### GROUNDWATER SAMPLING

**Well Information**
- Well Finish: Standpipe
- 0.78 Stickup (m)
- Casing Diameter (mm): 50
- Well Depth (m TOC): 3.46
- Screen Interval (m): 3.9
- Depth to Free Product (m TOC): na
- Product Thickness (mm): na
- Depth to Groundwater (m TOC): 2.55
- Depth to be Purged (m) (Well Depth - Depth to Groundwater): 3.2

**Purging Information**
- Casing Volume: 8.73 L
- vol^3: 35 L
- OR 1 purge volume = 2 L/m for 50 mm Internal Diameter casing and 8 L/m for 100 mm Internal Diameter

**Groundwater Observations**
- Colour: Reddish Brown
- Odour: None
- Turbidity: High, becoming clear
- Hydracarbon sheen
- Weather: Clean
- Temperature: 20°C
- Cloud Cover: None

**Field Measurements**

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (°C)</th>
<th>Conductivity (uS/cm)</th>
<th>pH</th>
<th>DO (mg/L)</th>
<th>ORP (mV)</th>
<th>SWL (mTOC)</th>
<th>S</th>
<th>G</th>
<th>Volume Purged (L)</th>
<th>Pump Depth (m)</th>
<th>Purging Notes</th>
<th>Pumping Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:55</td>
<td>21.7</td>
<td>14262</td>
<td>6.49</td>
<td>1.73</td>
<td>555.7</td>
<td>2.62</td>
<td>11</td>
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<td>In monitoring well</td>
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<tr>
<td>8:03</td>
<td>21.8</td>
<td>15320</td>
<td>6.48</td>
<td>1.49</td>
<td>256.2</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>SG @</td>
<td></td>
</tr>
<tr>
<td>8:05</td>
<td>21.8</td>
<td>14062</td>
<td>6.49</td>
<td>1.66</td>
<td>280.4</td>
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</tbody>
</table>

**Sampling Information**

**Sampling Method:**

**Tubing Material:**

**Sample No**

<table>
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<tr>
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<th>Time Taken</th>
<th>Preservation Details</th>
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</thead>
</table>

**Analysis**

Purged by: [Signature]

Sampled by: [Signature]
Preliminary Hydrogeological CSM Model for the Dry Creek Salt Evaporation Ponds Site (Section 2)
31 March 2015

Professor Rob Fitzpatrick,
Director, Acid Sulfate Soil Centre
The University of Adelaide
ADELAIDE SA 5005

Attention: Professor Rob Fitzpatrick

Dear Rob

RE: RECOMMENDATIONS ARISING FROM THE FINAL REPORT ENTITLED “MONITORING OF SHALLOW PIEZOMETERS – DRY CREEK SALT FIELDS”

As requested, please see below our recommendations/suggestions for further monitoring in response to our assessment of groundwater conditions within the acid sulfate soil environments in Section 2 of the Dry Creek Salt Fields, detailed in Tonkin Consulting report “Monitoring of Shallow Piezometers - Dry Creek Salt Fields. Ref No. 20140089FL4) dated 30 March 2015. We request that you pass these recommendations on to Ridley Land Corporation.

Recommendations

Over the 2014-2015 summer period strong and persistent high pressure systems across the Great Australian Bight, combined with little tropical activity have resulted in the Adelaide region experiencing its longest dry spell since 2007. The dry spell started on 21 January 2014, with Adelaide registering no rain until the last day of February, when 0.6 mm of rain was recorded. Tonkin Consulting monitored groundwater levels and quality on three occasions over the 2014-2015 summer period, with data clearly showing a decreasing trend in standing water levels (SWLs) and groundwater pH. These decreasing trends are expected to continue while dry climatic conditions remain and may result in further exposure and oxidation of acid sulfate soil materials at the site.

With Adelaide only receiving 2.4 mm of rainfall during March 2015 (and 146 mm of evaporation), SWLs are expected to be significantly lower now than during the last monitoring event, undertaken on 4th February 2015.

Based on the conclusions presented in above, Tonkin recommends the following:

- Field monitoring of groundwater levels and quality (field parameters) to confirm identified trends during lower (lowest) seasonal groundwater levels expected in late March – April 2015, and during the re-wetting / recovery period during early winter;
  - Include monitoring of groundwater conditions at four piezometers recently installed for SA Water as part of their groundwater monitoring program during re-flooding trials at Pond PA9;
Survey SA Water piezometer locations to obtain relative elevations (mAHD) to enable SWLs to be compared to existing piezometers in Section 2 and improve groundwater contour plans for the site;

- Measure (field) titratable acidity and/or alkalinity of groundwater (during monitoring) to identify areas of higher acidification risk. Groundwater pH measurements are not an ideal indicator of acidification risk due to buffering - until the inherent alkalinity is consumed at which point pH will rapidly decline. This tipping point can be predicted by monitoring changes in alkalinity (i.e. declining to <25 mg/L expressed as CaCO₃) and may occur during the drying phase or re-wetting phase. Predicting the tipping point enables for a management response before pH of <5.5 is reached and impacts from increased Al solubility may occur;
- Compare groundwater monitoring data to soil chip-tray incubation experimental results (for samples collected during installation of the piezometers) to provide an additional line of evidence for identifying the critical depth and risk areas (high and low) for groundwater acidification at the site. Although the net acidity for the landscape is considered low within Section 2, spatial variability may allow local pockets of acidification to develop.

It is recommended that the data collected be related to the preliminary conceptual hydrogeological model presented in Tonkin Consulting report “Shallow Piezometers Installation and Monitoring - Dry Creek Salt Fields (Ref No. 20140089FR, 14 January 2015).

Please do not hesitate to contact me if you have any queries.

Yours faithfully
TONKIN CONSULTING

Dr Brett Thomas
Senior Scientist