

## CERTIFICATE OF ANALYSIS

<b>Work Order</b> : <b>EP1604303</b> <b>Amendment</b> : <b>2</b> Client : <b>REWARD MINERALS LTD</b> Contact : <b>DANIEL TENARDI</b> Address : <b>PO BOX 1104 NEDLANDS PERTH</b> Telephone : <b>----</b> Project : <b>LAKE DISAPPOINTMENT</b> Order number : <b>LD 00757</b> C-O-C number : <b>----</b> Sampler : <b>----</b> Site : <b>----</b> Quote number : <b>----</b> No. of samples received : <b>7</b> No. of samples analysed : <b>7</b>	Page : 1 of 6  Laboratory : Environmental Division Perth Contact : Customer Services EP Address : 26 Rigali Way Wangara WA Australia 6065  Telephone : +61-8-9406 1301 Date Samples Received : 13-May-2016 08:05 Date Analysis Commenced : 13-May-2016 Issue Date : 21-Mar-2018 14:54
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Accreditation No. 825  
Accredited for compliance with  
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Efua Wilson	Metals Chemist	Perth Inorganics, Wangara, WA
Jeremy Truong	Laboratory Manager	Perth Inorganics, Wangara, WA



## General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.  
LOR = Limit of reporting  
^ = This result is computed from individual analyte detections at or above the level of reporting  
ø = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

- 20/07/2016 - This report has been amended and re-released to allow the reporting of additional analytical data (Th & U as Dissolved Values)
- Amendment (21/03/2018): This report has been amended and re-released to allow the reporting of additional analytical data. Samples now report As, Cd, Cr, Cu, Co, Pb and Mo.



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LDRC 1603 COMPOSITE	P31 COMPOSITE	P50 COMPOSITE	COREY BORE	RO FEED TANK
Client sampling date / time				13-May-2016 00:00	13-May-2016 00:00	13-May-2016 00:00	13-May-2016 00:00	13-May-2016 00:00	
Compound	CAS Number	LOR	Unit	EP1604303-001	EP1604303-002	EP1604303-003	EP1604303-004	EP1604303-005	
				Result	Result	Result	Result	Result	
<b>EA005P: pH by PC Titrator</b>									
pH Value	----	0.01	pH Unit	8.09	7.80	7.87	7.93	8.12	
<b>EA010P: Conductivity by PC Titrator</b>									
Electrical Conductivity @ 25°C	----	1	µS/cm	4290	2570	2090	4350	4410	
<b>EA015: Total Dissolved Solids dried at 180 ± 5 °C</b>									
Total Dissolved Solids @180°C	----	1	mg/L	2450	1570	1190	2500	2540	
<b>EA041: Colour (True)</b>									
Colour (True)	----	1	PCU	<1	<1	5	<1	<1	
pH Colour	----	0.01	pH Unit	7.84	7.62	7.66	7.70	8.00	
<b>EA045: Turbidity</b>									
Turbidity	----	0.1	NTU	3.8	211	15.3	0.6	1.5	
<b>EA045F: Turbidity - Filtered</b>									
Turbidity - Filtered	----	0.1	NTU	<0.1	0.1	0.3	<0.1	0.2	
<b>EA065: Total Hardness as CaCO3</b>									
Total Hardness as CaCO3	----	1	mg/L	364	386	325	368	377	
<b>ED037P: Alkalinity by PC Titrator</b>									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	195	192	161	204	210	
Total Alkalinity as CaCO3	----	1	mg/L	195	192	161	204	210	
<b>ED040F: Dissolved Major Anions</b>									
Silicon as SiO2	14464-46-1	0.1	mg/L	69.1	79.6	80.0	72.9	70.7	
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	210	167	129	254	273	
<b>ED045G: Chloride by Discrete Analyser</b>									
Chloride	16887-00-6	1	mg/L	1010	604	476	1020	1040	
<b>ED093F: Dissolved Major Cations</b>									
Calcium	7440-70-2	1	mg/L	75	92	74	78	80	
Magnesium	7439-95-4	1	mg/L	43	38	34	42	43	
Sodium	7440-23-5	1	mg/L	793	414	329	829	848	
Potassium	7440-09-7	1	mg/L	41	26	25	44	46	
<b>EG020F: Dissolved Metals by ICP-MS</b>									
Arsenic	7440-38-2	0.001	mg/L	0.002	<0.001	<0.001	0.002	0.002	
Barium	7440-39-3	0.001	mg/L	0.066	0.066	0.083	0.040	0.038	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LDRC 1603 COMPOSITE	P31 COMPOSITE	P50 COMPOSITE	COREY BORE	RO FEED TANK
Client sampling date / time				13-May-2016 00:00	13-May-2016 00:00	13-May-2016 00:00	13-May-2016 00:00	13-May-2016 00:00	
Compound	CAS Number	LOR	Unit	EP1604303-001	EP1604303-002	EP1604303-003	EP1604303-004	EP1604303-005	
				Result	Result	Result	Result	Result	
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<b>0.001</b>	<0.001	
Cobalt	7440-48-4	0.001	mg/L	<b>0.001</b>	<0.001	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<b>0.001</b>	<0.001	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Manganese	7439-96-5	0.001	mg/L	<b>0.006</b>	<0.001	<b>0.006</b>	<0.001	<0.001	
Molybdenum	7439-98-7	0.001	mg/L	<0.001	<b>0.002</b>	<b>0.004</b>	<0.001	<0.001	
Strontium	7440-24-6	0.001	mg/L	<b>0.982</b>	<b>0.850</b>	<b>0.642</b>	<b>1.05</b>	<b>1.05</b>	
Thorium	7440-29-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Uranium	7440-61-1	0.001	mg/L	<b>0.007</b>	<b>0.004</b>	<b>0.004</b>	<b>0.008</b>	<b>0.009</b>	
Boron	7440-42-8	0.05	mg/L	<b>0.74</b>	<b>0.50</b>	<b>0.46</b>	<b>0.90</b>	<b>0.88</b>	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
<b>EG020T: Total Metals by ICP-MS</b>									
Iron	7439-89-6	0.05	mg/L	<0.05	<b>0.18</b>	<b>0.25</b>	<0.05	<b>0.16</b>	
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	<b>1.0</b>	<b>0.8</b>	<b>0.6</b>	<b>1.1</b>	<b>1.1</b>	
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<b>0.12</b>	<b>0.04</b>	<b>0.11</b>	<0.01	
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	<b>0.07</b>	<b>0.08</b>	<b>0.05</b>	<0.01	<0.01	
<b>EK058G: Nitrate as N by Discrete Analyser</b>									
Nitrate as N	14797-55-8	0.01	mg/L	<b>7.26</b>	<b>7.81</b>	<b>7.27</b>	<b>9.49</b>	<b>9.40</b>	
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>									
Nitrite + Nitrate as N	----	0.01	mg/L	<b>7.33</b>	<b>7.89</b>	<b>7.32</b>	<b>9.49</b>	<b>9.40</b>	
<b>EN055: Ionic Balance</b>									
Total Anions	----	0.01	meq/L	<b>36.8</b>	<b>24.4</b>	<b>19.3</b>	<b>38.1</b>	<b>39.2</b>	
Total Cations	----	0.01	meq/L	<b>42.8</b>	<b>26.4</b>	<b>21.4</b>	<b>44.5</b>	<b>45.6</b>	
Ionic Balance	----	0.01	%	<b>7.60</b>	<b>4.01</b>	<b>5.17</b>	<b>7.72</b>	<b>7.50</b>	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Client sample ID		2/5/16 1602	SAMPLE 2 1604	----	----	----
Client sampling date / time		13-May-2016 00:00		13-May-2016 00:00		----	----	----
Compound	CAS Number	LOR	Unit	EP1604303-006	EP1604303-007	-----	-----	-----
				Result	Result	----	----	----
<b>EA005P: pH by PC Titrator</b>								
pH Value	----	0.01	pH Unit	8.10	8.06	----	----	----
<b>EA010P: Conductivity by PC Titrator</b>								
Electrical Conductivity @ 25°C	----	1	µS/cm	4320	5460	----	----	----
<b>EA015: Total Dissolved Solids dried at 180 ± 5 °C</b>								
Total Dissolved Solids @180°C	----	1	mg/L	2440	3150	----	----	----
<b>EA041: Colour (True)</b>								
Colour (True)	----	1	PCU	<1	<1	----	----	----
pH Colour	----	0.01	pH Unit	7.96	7.86	----	----	----
<b>EA045: Turbidity</b>								
Turbidity	----	0.1	NTU	2.4	7.7	----	----	----
<b>EA045F: Turbidity - Filtered</b>								
Turbidity - Filtered	----	0.1	NTU	<0.1	<0.1	----	----	----
<b>EA065: Total Hardness as CaCO3</b>								
Total Hardness as CaCO3	----	1	mg/L	349	412	----	----	----
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	204	218	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	204	218	----	----	----
<b>ED040F: Dissolved Major Anions</b>								
Silicon as SiO2	14464-46-1	0.1	mg/L	72.4	72.7	----	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	247	242	----	----	----
<b>ED045G: Chloride by Discrete Analyser</b>								
Chloride	16887-00-6	1	mg/L	1040	1320	----	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	74	86	----	----	----
Magnesium	7439-95-4	1	mg/L	40	48	----	----	----
Sodium	7440-23-5	1	mg/L	839	1080	----	----	----
Potassium	7440-09-7	1	mg/L	41	46	----	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	----	----	----
Barium	7440-39-3	0.001	mg/L	0.063	0.043	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	2/5/16 1602	SAMPLE 2 1604	----	----	----
Client sampling date / time				13-May-2016 00:00	13-May-2016 00:00	----	----	----	
Compound	CAS Number	LOR	Unit	EP1604303-006	EP1604303-007	-----	-----	-----	
				Result	Result	----	----	----	
<b>EG020F: Dissolved Metals by ICP-MS - Continued</b>									
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	----	----	----	
Chromium	7440-47-3	0.001	mg/L	<0.001	<b>0.001</b>	----	----	----	
Cobalt	7440-48-4	0.001	mg/L	<0.001	<b>0.001</b>	----	----	----	
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	----	----	----	
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	----	----	----	
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	----	----	----	
Molybdenum	7439-98-7	0.001	mg/L	<0.001	<0.001	----	----	----	
Strontium	7440-24-6	0.001	mg/L	<b>0.898</b>	<b>1.11</b>	----	----	----	
Thorium	7440-29-1	0.001	mg/L	<0.001	<0.001	----	----	----	
Uranium	7440-61-1	0.001	mg/L	<b>0.007</b>	<b>0.009</b>	----	----	----	
Boron	7440-42-8	0.05	mg/L	<b>0.75</b>	<b>0.80</b>	----	----	----	
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	----	----	----	
<b>EG020T: Total Metals by ICP-MS</b>									
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	----	----	----	
<b>EK040P: Fluoride by PC Titrator</b>									
Fluoride	16984-48-8	0.1	mg/L	<b>1.1</b>	<b>1.1</b>	----	----	----	
<b>EK055G: Ammonia as N by Discrete Analyser</b>									
Ammonia as N	7664-41-7	0.01	mg/L	<b>0.03</b>	<b>0.09</b>	----	----	----	
<b>EK057G: Nitrite as N by Discrete Analyser</b>									
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<b>0.05</b>	----	----	----	
<b>EK058G: Nitrate as N by Discrete Analyser</b>									
Nitrate as N	14797-55-8	0.01	mg/L	<b>7.94</b>	<b>7.77</b>	----	----	----	
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>									
Nitrite + Nitrate as N	----	0.01	mg/L	<b>7.94</b>	<b>7.82</b>	----	----	----	
<b>EN055: Ionic Balance</b>									
Total Anions	----	0.01	meq/L	<b>38.6</b>	<b>46.6</b>	----	----	----	
Total Cations	----	0.01	meq/L	<b>44.5</b>	<b>56.4</b>	----	----	----	
Ionic Balance	----	0.01	%	<b>7.17</b>	<b>9.46</b>	----	----	----	