

Macquarie Gold Ltd  
c/- 'Willowie' Delegate Road  
Bombala NSW 2632  
Attention: Mike Walcott

Saturday, September 12, 2015



NATA Accredited Laboratory  
Number: 9597

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## LABORATORY ANALYSIS REPORT

Report Number:1508-0133

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*For all enquiries related to this report please quote document number: 1508-0133*

<u>Facility:</u>	<u>Order #</u>	
<u>Sample Type</u>	<u>Collected By</u>	<u>Date Received</u>
Water	Glenn Murray	31-August-2015

<u>EAL ID</u>	<u>Client ID.</u> Date/Time sample taken	<u>Test</u>	<u>Result (units)</u>	<u>Method Reference</u>	<u>Limit of Reporting</u>
15Aug-0766	Goodwin Spillway 27.08.15 3.15pm	Alkalinity, Total as CaCO3	79 mg/L	APHA 2320 B	2
		Aluminium (acid extractable)	4.14 mg/L	APHA 3030 E/3120 B	0.03
		Arsenic (acid extractable)	<0.02 mg/L	APHA 3030 E/3120 B	0.02
		Biochemical Oxygen Demand	<2 mg/L	APHA 5210 B/4500-O G	2
		Boron (acid extractable)	0.03 mg/L	* APHA 3030 E/3120 B	0.02
		Cadmium (acid extractable)	<0.002 mg/L	APHA 3030 E/3120 B	0.002
		Calcium (acid extractable)	33.0 mg/L	APHA 3030 E/3120 B	0.03
		Chloride	5.5 mg/L	APHA 4110 B	0.1
		Chromium (acid extractable)	0.004 mg/L	APHA 3030 E/3120 B	0.002
		Cobalt (acid extractable)	<0.003 mg/L	* APHA 3030 E/3120 B	0.003
		Copper (acid extractable)	0.004 mg/L	APHA 3030 E/3120 B	0.002
		Cyanide	0.026 mg/L	* APHA 4500-CN E	0.002
		Conductivity	295 µS/cm	APHA 2510 B	1
		Fluoride	0.3 mg/L	APHA 4110 B	0.1
		Total Hardness as CaCO3	127 mg/L	APHA 2340 B	2
		Iron (acid extractable)	2.26 mg/L	APHA 3030 E/3120 B	0.01
		Lead (acid extractable)	<0.01 mg/L	APHA 3030 E/3120 B	0.01
		Magnesium (acid extractable)	10.9 mg/L	APHA 3030 E/3120 B	0.02
		Manganese (acid extractable)	0.047 mg/L	APHA 3030 E/3120 B	0.001
		Mercury	<0.0001 mg/L	Analysis by Ecowise, Melbourne (acc no: 992)	
		Molybdenum (acid extractable)	<0.01 mg/L	* APHA 3030 E/3120 B	0.01
		Nickel (acid extractable)	<0.01 mg/L	APHA 3030 E/3120 B	0.01

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<u>Sample Type</u>	<u>Collected By</u>	
Water	Glenn Murray	31-August-2015

<u>EAL ID</u>	<u>Client ID.</u> Date/Time sample taken	<u>Test</u>	<u>Result (units)</u>	<u>Method Reference</u>	<u>Limit of Reporting</u>
15Aug-0766	Goodwin Spillway 27.08.15 3.15pm	Oil & Grease	5 mg/L	APHA 5520 D	1
		Phosphorus	0.03 mg/L	APHA 3030 E/3120 B	0.02
		pH	7.7 pH units	APHA 4500-H+ B	
		Potassium (acid extractable)	2.1 mg/L	APHA 3030 E/3120 B	0.2
		Sodium Adsorption Ratio	1 Ratio	LTM-W-039	
		Selenium (acid extractable)	<0.02 mg/L	APHA 3030 E/3120 B	0.02
		Sodium (acid extractable)	13.9 mg/L	APHA 3030 E/3120 B	0.05
		Sulphur (acid extractable)	26.1 mg/L	* APHA 3030 E/3120 B	0.06
		Total Suspended Solids	23 mg/L	APHA 2540 D	2
		Turbidity	47 NTU	APHA 2130 B	1
		Zinc (acid extractable)	0.018 mg/L	APHA 3030 E/3120 B	0.002
15Aug-0767	Decline 27.08.15 3.00pm	Alkalinity, Total as CaCO3	194 mg/L	APHA 2320 B	2
		Aluminium (acid extractable)	0.53 mg/L	APHA 3030 E/3120 B	0.03
		Arsenic (acid extractable)	<0.02 mg/L	APHA 3030 E/3120 B	0.02
		Biochemical Oxygen Demand	<2 mg/L	APHA 5210 B/4500-O G	2
		Boron (acid extractable)	0.11 mg/L	* APHA 3030 E/3120 B	0.02
		Cadmium (acid extractable)	<0.002 mg/L	APHA 3030 E/3120 B	0.002
		Calcium (acid extractable)	119 mg/L	APHA 3030 E/3120 B	0.03
		Chloride	7.2 mg/L	APHA 4110 B	0.1
		Chromium (acid extractable)	<0.002 mg/L	APHA 3030 E/3120 B	0.002
		Cobalt (acid extractable)	<0.003 mg/L	* APHA 3030 E/3120 B	0.003

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<u>Facility:</u>	<u>Order #</u>	<u>Date Received</u>
<u>Sample Type</u>	<u>Collected By</u>	
Water	Glenn Murray	31-August-2015

<u>EAL ID</u>	<u>Client ID.</u> Date/Time sample taken	<u>Test</u>	<u>Result (units)</u>	<u>Method Reference</u>	<u>Limit of Reporting</u>
15Aug-0767	Decline 27.08.15 3.00pm	Copper (acid extractable)	0.011 mg/L	APHA 3030 E/3120 B	0.002
		Cyanide	0.015 mg/L	* APHA 4500-CN E	0.002
		Conductivity	717 µS/cm	APHA 2510 B	1
		Fluoride	0.9 mg/L	APHA 4110 B	0.1
		Total Hardness as CaCO3	374 mg/L	APHA 2340 B	2
		Iron (acid extractable)	0.78 mg/L	APHA 3030 E/3120 B	0.01
		Lead (acid extractable)	<0.01 mg/L	APHA 3030 E/3120 B	0.01
		Magnesium (acid extractable)	18.8 mg/L	APHA 3030 E/3120 B	0.02
		Manganese (acid extractable)	0.241 mg/L	APHA 3030 E/3120 B	0.001
		Mercury	<0.0001 mg/L	Analysis by Ecowise, Melbourne (acc no: 992)	
		Molybdenum (acid extractable)	<0.01 mg/L	* APHA 3030 E/3120 B	0.01
		Nickel (acid extractable)	<0.01 mg/L	APHA 3030 E/3120 B	0.01
		Oil & Grease	3 mg/L	APHA 5520 D	1
		Phosphorus	<0.02 mg/L	APHA 3030 E/3120 B	0.02
		pH	7.2 pH units	APHA 4500-H+ B	
		Potassium (acid extractable)	6.3 mg/L	APHA 3030 E/3120 B	0.2
		Sodium Adsorption Ratio	<1 Ratio	LTM-W-039	
		Selenium (acid extractable)	<0.02 mg/L	APHA 3030 E/3120 B	0.02
		Sodium (acid extractable)	21.1 mg/L	APHA 3030 E/3120 B	0.05
		Sulphur (acid extractable)	78.6 mg/L	* APHA 3030 E/3120 B	0.06
		Total Suspended Solids	4 mg/L	APHA 2540 D	2
		Turbidity	11 NTU	APHA 2130 B	1

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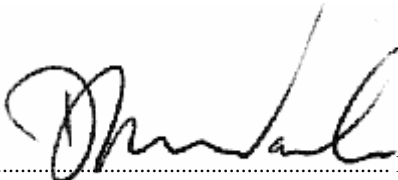
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Water			Glenn Murray	31-August-2015

<u>EAL ID</u>	<u>Client ID.</u> Date/Time sample taken	<u>Test</u>	<u>Result (units)</u>	<u>Method Reference</u>	<u>Limit of Reporting</u>
15Aug-0767	<b>Decline</b> 27.08.15 3.00pm	<b>Zinc (acid extractable)</b>	<b>0.043</b> mg/L	APHA 3030 E/3120 B	0.002

*Note:*

*NATA accreditation not held for tests marked with \**

Signed .....  ..... David Wade, Laboratory Manager.

*All samples analysed as received.  
All soil results are reported on a dry basis.  
The EAL takes no responsibility for the end use of results within this report.  
This report shall not be reproduced except in full.  
This report replaces any previously issued report*

1508-0153



ANALYTES REQUIRED Complete & tick as required

CLIENT:	Challenger Mines P/L																				
CONTACT:	Brett Hampel																				
ADDRESS:	65 Golden Gully Rd Adelong NSW 2729																				
TELEPHONE:	0407 729 788		E-mail		bwh.business@bigpond.com																
SAMPLE IDENTIFICATION	NATURE OF SAMPLE	DATE SAMPLED	TIME SAMPLED	CONTAINER TYPE	NUMBER OF CONTAINERS																
Goodwin Spillway	Water	27/8/15	3:15pm	Plastic	1																
Goodwin Spillway	Water	27/8/15	3:15pm	Glass	1																
Decline	Water	27/8/15	3pm	Plastic	1																
Decline	Water	27/8/15	3pm	Glass	1																

RELINQUISHED BY:	NAME	SIGNATURE	ORGANISATION	DATE	TIME
	Glenn Murray	<i>[Signature]</i>	Challenger Mines	27/8/15	3:30pm
Mode of Transport Include Consignment Note # if applicable					
RECEIVED BY:					