

CLIENT:	challenger mines
CONTACT:	Brett Hampel 0407729788
ADDRESS:	65 Golden gully Rd Adelong NSW 2729
	ABN:
TELEPHONE:	0407729788
	E-mail <i>bush.business@bigpond.com</i>

ANALYTES REQUIRED *Complete & tick as required*

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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SAMPLE IDENTIFICATION	NATURE OF SAMPLE	DATE SAMPLED	TIME SAMPLED	CONTAINER TYPE	NUMBER OF CONTAINERS
Goodwin dam spillway	water	20-8-15	9:30am	plastic	1
Water removed from spillway	water	20-8-15	9:40am	plastic	1

RELINQUISHED BY:	NAME	SIGNATURE	ORGANISATION	DATE	TIME
	melanie mather	<i>M Mather</i>	challenger mines	20-8-15	10:10am
Mode of Transport <i>if applicable</i>					
RECEIVED BY:					

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

Friday, September 4, 2015



NATA Accredited Laboratory
Number: 9597

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LABORATORY ANALYSIS REPORT

Report Number:1508-0106

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For all enquiries related to this report please quote document number: 1508-0106

<u>Facility:</u>	<u>Order #</u>	<u>Date Received</u>
<u>Sample Type</u>	<u>Collected By</u>	
Water	Melanie Maher	24-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-0475	Goodwin Dam Spillway 20.08.15 9.30am	Alkalinity, Total as CaCO3	61 mg/L	APHA 2320 B	2
		Aluminium (acid extractable)	2.63 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)	0.30 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)	31.9 mg/L	APHA 3030 E/3120 B	0.03
		Chloride	5.8 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
		Copper (acid extractable)	<0.002 mg/L	APHA 3030 E/3120 B	0.002
		Cyanide	0.007 mg/L	* APHA 4500-CN E	0.002
		Conductivity	291 µS/cm	APHA 2510 B	1
		Fluoride	0.3 mg/L	APHA 4110 B	0.1
		Total Hardness as CaCO3	142 mg/L	APHA 2340 B	2
		Iron (acid extractable)	1.33 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)	15.1 mg/L	APHA 3030 E/3120 B	0.02
		Manganese (acid extractable)	0.0314 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>Facility:</u>	<u>Order #</u>	<u>Date Received</u>
<u>Sample Type</u>	<u>Collected By</u>	
Water	Melanie Maher	24-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-0475	Goodwin Dam Spillway 20.08.15 9.30am	Oil & Grease	I/S mg/L	APHA 5520 D	1
		Phosphorus	<0.02 mg/L	APHA 3030 E/3120 B	0.02
		pH	7.8 pH units	APHA 4500-H+ B	
		Potassium (acid extractable)	3.2 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)	15.5 mg/L	APHA 3030 E/3120 B	0.05
		Sulphur (acid extractable)	26.6 mg/L	* APHA 3030 E/3120 B	0.06
		Total Suspended Solids	2 mg/L	APHA 2540 D	2
		Turbidity	26 NTU	APHA 2130 B	1
		Zinc (acid extractable)	<0.002 mg/L	APHA 3030 E/3120 B	0.002
15Aug-0476	Water from Decline 20.08.15 9.40am	Alkalinity, Total as CaCO3	195 mg/L	APHA 2320 B	2
		Aluminium (acid extractable)	0.79 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)	0.21 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)	123 mg/L	APHA 3030 E/3120 B	0.03
		Chloride	9.6 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	Melanie Maher	24-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-0476	Water from Decline 20.08.15 9.40am	Copper (acid extractable)	0.039 mg/L	APHA 3030 E/3120 B	0.002
		Cyanide	0.005 mg/L	* APHA 4500-CN E	0.002
		Conductivity	738 µS/cm	APHA 2510 B	1
		Fluoride	1.0 mg/L	APHA 4110 B	0.1
		Total Hardness as CaCO3	389 mg/L	APHA 2340 B	2
		Iron (acid extractable)	2.30 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)	19.9 mg/L	APHA 3030 E/3120 B	0.02
		Manganese (acid extractable)	1.64 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	I/S mg/L	APHA 5520 D	1
		Phosphorus	0.04 mg/L	APHA 3030 E/3120 B	0.02
		pH	7.6 pH units	APHA 4500-H+ B	
		Potassium (acid extractable)	8.5 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)	24.0 mg/L	APHA 3030 E/3120 B	0.05
		Sulphur (acid extractable)	85.9 mg/L	* APHA 3030 E/3120 B	0.06
		Total Suspended Solids	<2 mg/L	APHA 2540 D	2
		Turbidity	12 NTU	APHA 2130 B	1

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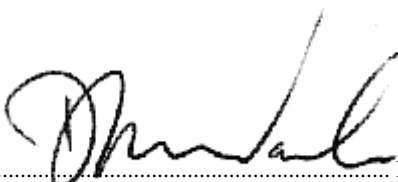
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<u>Facility:</u>	<u>Order #</u>	<u>Sample Type</u>	<u>Collected By</u>	<u>Date Received</u>
Water			Melanie Maher	24-August-2015

<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-0476	Water from Decline 20.08.15 9.40am	Zinc (acid extractable)	0.067 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.
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