1511-0075

Charles Sturt University

CLIENT:	Macquarie Gold (Challenger Mines)				
CONTACT:	Brett Hampel/Ramon Atayde				
ADDRESS:	65 Golden Gully Road adelong NSW 2729 ABN:				
TELEPHONE:	0407 729 788		E-mail	bwh.business@bigpond.com	
SAMPLE IDENTIFICATION	NATURE OF SAMPLE	DATE SAMPLED	TIME SAMPLED	CONTAINER TYPE	NUMBER OF CONTAINERS
#7 decline sample	Water	12-11-15	10.30	Plastic/~~glass~~	1 ~~2~~
#7 decline sample	Water	12-11-15	10-30	~~Plast~~ic/glass	1 ~~2~~
#3 goodwin dam sample	Water	12-11-15	9-30	Glass	1
#3 goodwin dam sample	Water	12-11-15	9-30	plastic	1

ANALYTES REQUIRED *Complete & tick as required*

Alkalinity, BOD, CN, Ec, pH	Hardness, SAR	TSS, Turbidity	Al, As, B, Cd, Ca, Cr, Co, Cu	Fe, Pb, Mg, Mn, Hg, Mo, Ni, F	K, Se, Na, S, Zn	Oil & Grease	Cl, F						

Pleas supply a brown glass O&G bottle if Oil and grease is required as well as a 1L plastic

	NAME	SIGNATURE	ORGANISATION	DATE	TI
RELINQUISHED BY:	Melanie Maher	MMaher	challenger mines	12-11-15	10.30
Mode of Transport Include Consignment Note # if applicable	Pack & send				
RECEIVED BY:					

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

Tuesday, December 1, 2015

NATA Accredited Laboratory Number: 9597

LABORATORY ANALYSIS REPORT

Report Number:1511-0075
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For all enquiries related to this report please quote document number: 1511-0075

Facility:

Order # Job Work Order 126

Sample Type
Water

Collected By
Client

Date Received
17-November-2015

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
15Nov-0320	**# 3 Spillway Goodwin** 12.11.15 9.30					
		Alkalinity, Total as CaCO3	**108**	mg/L	APHA 2320 B	2
		Aluminium (acid extractable)	**0.94**	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)	**0.33**	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)	**47.5**	mg/L	APHA 3030 E/3120 B	0.03
		Chloride	**6.0**	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	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Conductivity	**454**	µS/cm	APHA 2510 B	1
		Fluoride	**0.4**	mg/L	APHA 4110 B	0.1
		Total Hardness as CaCO3	**195**	mg/L	APHA 2340 B	2
		Iron (acid extractable)	**0.42**	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)	**18.6**	mg/L	APHA 3030 E/3120 B	0.02
		Manganese (acid extractable)	**0.067**	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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LABORATORY ANALYSIS REPORT

Report Number:1511-0075
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For all enquiries related to this report please quote document number: 1511-0075

Facility: **Order #** Job Work Order 126

Sample Type **Collected By** **Date Received**
Water Client 17-November-2015

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
15Nov-0320	**# 3 Spillway Goodwin** 12.11.15 9.30					
		Oil & Grease	**1**	mg/L	APHA 5520 D	1
		Phosphorus	**<0.02**	mg/L	APHA 3030 E/3120 B	0.02
		pH	**8.1**	pH units	APHA 4500-H+ B	
		Potassium (acid extractable)	**3.4**	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)	**23.0**	mg/L	APHA 3030 E/3120 B	0.05
		Sulphur (acid extractable)	**35.8**	mg/L	* APHA 3030 E/3120 B	0.06
		Total Suspended Solids	**10**	mg/L	APHA 2540 D	2
		Turbidity	**2**	NTU	APHA 2130 B	1
		Zinc (acid extractable)	**<0.002**	mg/L	APHA 3030 E/3120 B	0.002
15Nov-0321	**# 7 Decline** 12.11.15 10.30					
		Alkalinity, Total as CaCO3	**218**	mg/L	APHA 2320 B	2
		Aluminium (acid extractable)	**2.40**	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	**7**	mg/L	APHA 5210 B/4500-O G	2
		Boron (acid extractable)	**0.37**	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)	**122**	mg/L	APHA 3030 E/3120 B	0.03
		Chloride	**9.1**	mg/L	APHA 4110 B	0.1
		Chromium (acid extractable)	**0.010**	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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LABORATORY ANALYSIS REPORT

Report Number:1511-0075
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For all enquiries related to this report please quote document number: 1511-0075

Facility: **Order #**

Sample Type **Collected By** **Date Received**
Water Client 17-November-2015

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)		Method Reference	Limit of Reporting
15Nov-0321	**# 7 Decline** 12.11.15 10.30					
		Copper (acid extractable)	**0.060**	mg/L	APHA 3030 E/3120 B	0.002
		Cyanide	**<0.002**	mg/L	* APHA 4500-CN E	0.002
		Conductivity	**761**	µS/cm	APHA 2510 B	1
		Fluoride	**0.8**	mg/L	APHA 4110 B	0.1
		Total Hardness as CaCO3	**390**	mg/L	APHA 2340 B	2
		Iron (acid extractable)	**4.72**	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)	**20.8**	mg/L	APHA 3030 E/3120 B	0.02
		Manganese (acid extractable)	**1.17**	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	**<1**	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)	**6.7**	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)	**15.6**	mg/L	APHA 3030 E/3120 B	0.05
		Sulphur (acid extractable)	**60.7**	mg/L	* APHA 3030 E/3120 B	0.06
		Total Suspended Solids	**38**	mg/L	APHA 2540 D	2
		Turbidity	**30**	NTU	APHA 2130 B	1

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Facility:
Order #
Sample Type
Water
Collected By
Client
Date Received
17-November-2015

EAL ID	Client ID. / Date/Time sample taken	Test	Result (units)	Method Reference	Limit of Reporting
15Nov-0321	**# 7 Decline** 12.11.15 10.30	**Zinc (acid extractable)**	**0.085** 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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