



Australian Laboratory Services Pty. Ltd.

32 Shand Street  
Stafford  
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Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218  
www.alsglobal.com/geochemistry

ALS Brisbane is a NATA Accredited Testing Laboratory. Corporate  
Accreditation No: 825, Corporate Site No: 818.

## QC CERTIFICATE BR17185476

Project: Georgetown

P.O. No.: ALS SSF278760

This report is for 13 Rock samples submitted to our lab in Brisbane, QLD, Australia  
on 30-AUG-2017.

The following have access to data associated with this certificate:

JIM MCGREGOR-DAWSON

LEE SPENCER

To: ISMINS PTY LTD  
ATTN: JIM MCGREGOR-DAWSON  
C/- R.D. PERKES  
P.O. BOX 386  
CROWS NEST NSW 1585

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as  
submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

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## SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LEV-01	Waste Disposal Levy
PUL-QC	Pulverizing QC Test
LOG-22	Sample login - Rcd w/o BarCode
CRU-21	Crush entire sample >70% -6 mm
PUL-23	Pulv Sample - Split/Retain

## ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61	33 element four acid ICP-AES	ICP-AES
ME-XRF05	Trace Level XRF Analysis	XRF
Au-AA26	Ore Grade Au 50g FA AA finish	AAS

Signature:

Shaun Kenny, Brisbane Laboratory Manager



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**QC CERTIFICATE OF ANALYSIS BR17185476**

Sample Description	Method Analyte Units LOR	Au-AA26 Au ppm 0.01	ME-ICP61 Ag ppm 0.5	ME-ICP61 Al % 0.01	ME-ICP61 As ppm 5	ME-ICP61 Ba ppm 10	ME-ICP61 Be ppm 0.5	ME-ICP61 Bi ppm 2	ME-ICP61 Ca % 0.01	ME-ICP61 Cd ppm 0.5	ME-ICP61 Co ppm 1	ME-ICP61 Cr ppm 1	ME-ICP61 Cu ppm 1	ME-ICP61 Fe % 0.01	ME-ICP61 Ga ppm 10	ME-ICP61 K % 0.01
STANDARDS																
GBM908 - 10			3.0	8.02	60	1280	1.6	<2	4.18	1.5	28	153	3810	6.22	20	2.39
Target Range - Lower Bound			1.9	6.40	44	980	<0.5	<2	3.36	0.6	22	125	3370	4.98	<10	1.87
Upper Bound			4.2	7.84	70	1220	2.5	5	4.12	2.8	30	155	3890	6.10	40	2.31
GBW7405																
Target Range - Lower Bound																
Upper Bound																
LEA-16		0.47														
Target Range - Lower Bound		0.46														
Upper Bound		0.54														
MP-2																
Target Range - Lower Bound																
Upper Bound																
MRGeo08			4.4	6.87	35	1120	3.2	2	2.62	2.0	21	88	595	3.95	20	3.14
Target Range - Lower Bound			3.2	6.64	21	980	2.2	<2	2.35	1.1	17	81	586	3.55	<10	2.79
Upper Bound			5.7	8.14	45	1210	4.5	5	2.90	3.4	23	102	676	4.37	40	3.43
SL76		5.94														
Target Range - Lower Bound		5.59														
Upper Bound		6.33														
TLG-1																
Target Range - Lower Bound																
Upper Bound																
BLANKS																
BLANK		<0.01														
Target Range - Lower Bound		<0.01														
Upper Bound		0.02														
BLANK		<0.5	<0.01	<5	<10	<0.5	<2	<0.01	<0.5	<1	<1	<1	<0.01	<10	<0.01	<0.01
Target Range - Lower Bound		<0.5	<0.01	<5	<10	<0.5	<2	<0.01	<0.5	<1	<1	<1	<0.01	<10	<0.01	<0.01
Upper Bound		1.0	0.02	10	20	1.0	4	0.02	1.0	2	2	2	0.02	20	0.02	0.02
BLANK																
Target Range - Lower Bound																
Upper Bound																



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**QC CERTIFICATE OF ANALYSIS BR17185476**

Sample Description	Method Analyte Units LOR	ME-ICP61 La ppm 10	ME-ICP61 Mg % 0.01	ME-ICP61 Mn ppm 5	ME-ICP61 Mo ppm 1	ME-ICP61 Na % 0.01	ME-ICP61 Ni ppm 1	ME-ICP61 P ppm 10	ME-ICP61 Pb ppm 2	ME-ICP61 S % 0.01	ME-ICP61 Sb ppm 5	ME-ICP61 Sc ppm 1	ME-ICP61 Sr ppm 1	ME-ICP61 Th ppm 20	ME-ICP61 Ti % 0.01	ME-ICP61 Tl ppm 10
STANDARDS																
GBM908 - 10		60	2.04	866	60	2.35	2480	1080	2240	0.42	<5	20	309	20	0.72	<10
Target Range - Lower Bound		20	1.61	715	57	1.93	2030	880	1860	0.33	<5	14	260	<20	0.59	<10
Upper Bound		70	1.99	885	72	2.38	2480	1100	2280	0.43	12	20	320	60	0.74	20
GBW7405																
Target Range - Lower Bound																
Upper Bound																
LEA-16																
Target Range - Lower Bound																
Upper Bound																
MP-2																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		20	1.28	548	14	1.97	692	1050	1055	0.30	<5	10	308	20	0.50	<10
Target Range - Lower Bound		<10	1.17	497	12	1.76	621	930	969	0.27	<5	10	276	<20	0.44	<10
Upper Bound		60	1.45	619	18	2.18	761	1160	1190	0.35	15	15	340	60	0.56	20
SL76																
Target Range - Lower Bound																
Upper Bound																
TLG-1																
Target Range - Lower Bound																
Upper Bound																
BLANKS																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK		<10	<0.01	<5	<1	<0.01	<1	<10	<2	<0.01	<5	<1	1	<20	<0.01	<10
Target Range - Lower Bound		<10	<0.01	<5	<1	<0.01	<1	<10	<2	<0.01	<5	<1	<1	<20	<0.01	<10
Upper Bound		20	0.02	10	2	0.02	2	20	4	0.02	10	2	2	40	0.02	20
BLANK																
Target Range - Lower Bound																
Upper Bound																



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Sample Description	Method Analyte Units LOR	ME-ICP61 U ppm 10	ME-ICP61 V ppm 1	ME-ICP61 W ppm 10	ME-ICP61 Zn ppm 2	ME-XRF05 Sn ppm 5
STANDARDS						
GBM908-10		<10	152	<10	1110	
Target Range - Lower Bound		<10	123	<10	939	
Upper Bound		20	153	20	1155	
GBW7405						20
Target Range - Lower Bound						9
Upper Bound						31
LEA-16						
Target Range - Lower Bound						
Upper Bound						
MP-2						400
Target Range - Lower Bound						382
Upper Bound						478
MRGeo08		<10	110	10	766	
Target Range - Lower Bound		<10	97	<10	722	
Upper Bound		30	121	30	886	
SL76						
Target Range - Lower Bound						
Upper Bound						
TLG-1						10
Target Range - Lower Bound						<5
Upper Bound						23
BLANKS						
BLANK						
Target Range - Lower Bound						
Upper Bound						
BLANK		<10	<1	<10	<2	
Target Range - Lower Bound		<10	<1	<10	<2	
Upper Bound		20	2	20	4	
BLANK						<5
Target Range - Lower Bound						<5
Upper Bound						10



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DUPLICATES																
645954		4.42														
DUP		5.47														
Target Range - Lower Bound		4.69														
Upper Bound		5.20														
646044			0.5	6.71	12	420	4.4	<2	0.29	<0.5	2	4	17	0.92	20	4.19
DUP			0.7	6.65	11	410	4.3	<2	0.29	<0.5	3	4	17	0.90	20	4.11
Target Range - Lower Bound			<0.5	6.34	6	380	3.6	<2	0.27	<0.5	<1	3	15	0.85	<10	3.93
Upper Bound			1.0	7.02	17	450	5.1	4	0.31	1.0	4	5	19	0.97	30	4.37
646822		0.08														
DUP		0.08														
Target Range - Lower Bound		0.07														
Upper Bound		0.09														
ORIGINAL		<0.01														
DUP		<0.01														
Target Range - Lower Bound		<0.01														
Upper Bound		0.02														
ORIGINAL			<0.5	4.38	<5	2980	3.9	12	5.62	<0.5	56	192	62	7.80	20	5.20
DUP			<0.5	4.34	<5	2960	3.9	12	5.63	<0.5	54	188	62	7.73	20	5.10
Target Range - Lower Bound			<0.5	4.13	<5	2810	3.2	9	5.33	<0.5	51	180	59	7.37	<10	4.88
Upper Bound			1.0	4.59	10	3130	4.6	15	5.92	1.0	59	201	65	8.16	30	5.42



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		10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01	10
645954 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
646044 DUP Target Range - Lower Bound Upper Bound		10 10 <10 20	0.18 0.18 0.16 0.20	170 164 154 180	1 <1 <1 2	2.26 2.19 2.10 2.35	4 4 3 5	280 280 260 300	271 260 250 281	0.01 0.01 <0.01 0.02	<5 <5 <5 10	2 2 <1 3	103 101 96 108	<20 <20 <20 40	0.04 0.04 0.03 0.05	<10 <10 <10 20
646822 DUP Target Range - Lower Bound Upper Bound																
ORIGINAL DUP Target Range - Lower Bound Upper Bound																
ORIGINAL DUP Target Range - Lower Bound Upper Bound		170 170 150 190	5.84 5.80 5.52 6.12	921 920 869 972	<1 <1 <1 2	0.69 0.68 0.64 0.73	269 267 254 282	3490 3440 3280 3650	19 18 16 21	<0.01 <0.01 <0.01 0.02	<5 <5 <5 10	18 18 16 20	2190 2170 2070 2290	30 30 <20 40	3.36 2.83 2.93 3.26	20 20 <10 30



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645954 DUP Target Range - Lower Bound Upper Bound		DUPLICATES				
646044 DUP Target Range - Lower Bound Upper Bound		10 10 <10 20	8 8 7 9	<10 <10 <10 20	62 61 56 67	
646822 DUP Target Range - Lower Bound Upper Bound					206 196 186 216	
ORIGINAL DUP Target Range - Lower Bound Upper Bound						
ORIGINAL DUP Target Range - Lower Bound Upper Bound		<10 <10 <10 20	193 193 182 204	<10 <10 <10 20	117 117 109 125	



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**QC CERTIFICATE OF ANALYSIS BR17185476**

**CERTIFICATE COMMENTS**

**ACCREDITATION COMMENTS**

Applies to Method:

NATA Accredited. Corporate Accreditation No: 825, Corporate Site No: 818. The Technical Signatory is James Lo, XRF Supervising Chemist.  
ME-XRF05

Applies to Method:

NATA Accredited. Corporate Accreditation No: 825, Corporate Site No: 818. The Technical Signatory is Samantha Profke, ICPAES Supervising Chemist  
ME-ICP61

**LABORATORY ADDRESSES**

Applies to Method:

Processed at ALS Townsville located at 14-15 Desma Court, Bohle, Townsville, QLD, Australia.  
Au-AA26

Applies to Method:

Processed at ALS Brisbane located at 32 Shand Street, Stafford, Brisbane, QLD, Australia. NATA Accreditation does not cover the performance of ALS Brisbane Sample Preparation which is processed at 116 Delta Street, Geebung, QLD 4034, Australia

CRU-21	LEV-01	LOG-22	ME-ICP61
ME-XRF05	PUL-23	PUL-QC	WEI-21