



Australian Laboratory Services Pty. Ltd.

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

ALS Perth is a NATA Accredited Testing Laboratory. Corporate Accreditation
No: 825, Corporate Site No: 23001.

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Total # Pages: 2 (A - D)
Plus Appendix Pages
Finalized Date: 8-FEB-2019
Account: ACCELE

CERTIFICATE AD19011059

Project: Thomas Creek

This report is for 7 Rock samples submitted to our lab in Adelaide, SA, Australia on 16-JAN-2019.

The following have access to data associated with this certificate:

ROBERT REID

ANDY RUST

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
PUL-32	Pulverize 1000g to 85% < 75 um
PUL-QC	Pulverizing QC Test
LEV-01	Waste Disposal Levy
CRU-21	Crush entire sample

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	

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 *****

Signature:

Cameron Brosnan, Laboratory Manager, Perth



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CERTIFICATE OF ANALYSIS AD19011059

Sample Description	Method Analyte Units LOD	WEI-21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Recvd Wt.	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
		kg	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.02	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
TCR030		1.00	0.04	7.42	12.2	2240	0.83	0.14	0.39	<0.02	120.5	19.9	80	1.63	74.1	7.76
TCR031		0.44	0.02	7.75	12.9	1120	1.13	0.47	1.91	<0.02	46.6	30.5	153	1.18	46.7	8.93
TCR032		1.06	0.03	8.61	8.9	260	1.36	0.19	2.49	<0.02	286	19.5	120	0.18	470	6.94
TCR033		0.67	0.01	0.88	29.8	20	1.02	0.08	6.53	0.02	290	29.2	31	0.21	36.0	16.20
TCR034		1.41	0.09	0.85	53.4	40	0.82	0.11	2.39	<0.02	164.5	16.4	46	0.25	51.0	13.20
TCR035		1.07	0.03	7.25	6.1	170	1.34	0.08	6.96	0.04	23.3	12.6	197	0.67	9.8	4.16
TCR036		0.89	0.02	8.35	7.7	200	1.12	0.08	6.51	0.03	25.2	13.8	79	0.67	12.2	3.92



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		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
		ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
		0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
TCR030		16.35	0.12	4.5	0.045	5.63	69.0	30.1	2.61	536	0.85	0.61	6.7	18.0	450
TCR031		15.40	0.10	1.9	0.079	1.89	23.6	59.1	4.44	1520	0.78	1.31	2.7	93.8	280
TCR032		16.35	0.20	3.1	0.103	1.00	160.0	30.8	3.54	595	1.27	3.93	5.0	102.5	310
TCR033		11.70	0.28	0.7	0.127	0.08	109.5	3.1	4.23	440	0.36	0.13	3.0	203	>10000
TCR034		8.24	0.18	0.1	0.062	0.04	57.1	7.7	0.33	253	1.03	0.02	6.6	117.0	>10000
TCR035		14.90	0.07	2.1	0.066	1.07	9.7	12.1	3.21	762	0.29	2.39	5.3	48.0	260
TCR036		15.20	0.09	1.5	0.049	0.96	10.4	12.9	3.17	728	0.41	3.56	4.8	31.6	170



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Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
		0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02	0.1
TCR030		202	<0.002	0.05	2.18	24.8	<1	2.5	148.5	0.45	<0.05	7.50	0.381	0.41	6.6
TCR031		96.6	<0.002	0.01	1.26	35.2	<1	0.6	231	0.26	<0.05	5.62	0.307	0.25	2.0
TCR032		19.1	<0.002	0.03	0.62	31.2	1	7.7	100.0	0.42	<0.05	7.74	0.361	0.11	7.7
TCR033		1.7	<0.002	0.01	1.43	16.8	<1	2.9	44.9	0.22	<0.05	13.90	0.191	<0.02	2.3
TCR034		2.0	<0.002	0.02	11.10	6.8	1	4.3	34.6	0.29	<0.05	25.0	0.417	<0.02	6.3
TCR035		46.6	<0.002	0.01	0.46	25.4	<1	0.7	277	0.48	<0.05	7.35	0.329	0.12	1.0
TCR036		44.4	<0.002	0.01	0.34	32.9	<1	0.9	390	0.39	<0.05	1.23	0.423	0.14	0.8



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Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Au-ICP21	PUL-QC
		W	Y	Zn	Zr	Au	Pass75um
		ppm	ppm	ppm	ppm	ppm	%
		0.1	0.1	2	0.5	0.001	0.01
TCR030		4.6	17.7	49	167.0	0.002	93.2
TCR031		2.1	12.3	134	63.8	0.001	
TCR032		1.9	15.1	44	107.5	0.015	
TCR033		1.7	70.4	11	21.5	0.010	
TCR034		8.4	55.6	14	4.8	0.002	
TCR035		0.4	20.5	18	74.4	0.001	
TCR036		1.2	23.2	16	48.3	<0.001	



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CERTIFICATE OF ANALYSIS AD19011059

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method:

REE's may not be totally soluble in this method.
ME-MS61

ACCREDITATION COMMENTS

Applies to Method:

NATA Accreditation covers the performance of this service but does not cover the performance of ALS Perth Sample Preparation. Corporate Accreditation No: 825, Corporate Site No: 23001. The Technical Signatory is Wendy Wong, Senior QC Chemist
Au-ICP21 ME-MS61

LABORATORY ADDRESSES

Applies to Method:

Processed at ALS Perth located at 31 Denninup Way, Malaga, Australia. Processed at ALS Perth Sample Preparation at 79 Distinction Road, Wangara, WA, Australia
Au-ICP21 ME-MS61

Applies to Method:

Processed at ALS Adelaide located at Unit 1, 1 Burma Road, Pooraka, Adelaide, SA, Australia.
CRU-21 LEV-01 LOG-22 PUL-32
PUL-QC WEI-21