



Australian Laboratory Services Pty. Ltd.

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

CERTIFICATE AD18265762

This report is for 17 Rock samples submitted to our lab in Adelaide, SA, Australia on 23-OCT-2018.

The following have access to data associated with this certificate:

ROMAN TESLYUK

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 *****

Page: 1

Total # Pages: 2 (A - D)

Plus Appendix Pages

Finalized Date: 3-NOV-2018

This copy reported on 15-FEB-2019

Account: EARTOP

SAMPLE PREPARATION

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

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS41	Ultra Trace Aqua Regia ICP-MS	

Signature:

Cameron Brosnan, Laboratory Manager, Perth



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Page: 2 - A

Total # Pages: 2 (A - D)

Plus Appendix Pages

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CERTIFICATE OF ANALYSIS AD18265762

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-ICP21 Au ppm 0.001	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1
EAIWAV024r		0.37	<0.001	0.01	1.53	0.8	<0.02	10	80	0.51	0.07	0.73	0.02	17.30	23.4	39
EAIWAV026r		0.58	<0.001	0.03	2.47	0.7	<0.02	10	20	0.38	0.04	1.42	<0.01	28.7	30.3	15
EAIWAV027r		0.81	<0.001	<0.01	1.69	0.7	<0.02	10	50	0.56	0.08	0.75	0.01	17.55	29.4	49
EAIWAV065r		0.28	<0.001	<0.01	0.37	0.5	<0.02	<10	40	0.09	0.05	0.10	0.01	8.74	3.0	18
EAICAM035r		0.52	<0.001	0.07	0.06	0.9	<0.02	<10	40	0.05	0.01	0.10	<0.01	1.20	1.3	7
EAICAM041r		0.62	<0.001	<0.01	0.12	1.2	<0.02	<10	10	0.08	0.01	>25.0	0.01	2.27	1.8	3
EAICAM044r		0.42	<0.001	0.03	0.10	5.3	<0.02	<10	140	1.83	0.03	>25.0	0.39	5.89	20.5	2
EAICAM085r		0.42	<0.001	0.01	0.10	0.3	<0.02	<10	20	0.09	0.01	>25.0	0.02	2.26	1.8	3
EAICAM088r		0.45	0.001	0.01	0.09	1.5	<0.02	<10	10	0.20	0.02	>25.0	0.10	2.71	3.2	3
EAICAM134r		0.52	<0.001	0.01	0.04	2.6	<0.02	<10	<10	0.06	0.01	>25.0	0.09	2.01	1.3	1
EAICAM140r		0.56	<0.001	0.01	0.19	1.6	<0.02	<10	10	0.10	0.02	>25.0	0.01	4.00	1.2	3
EAICAM141r		0.65	<0.001	0.01	0.07	1.2	<0.02	<10	<10	<0.05	0.01	>25.0	0.01	2.53	0.7	1
EAICAM142r		0.44	<0.001	0.01	0.11	0.7	<0.02	<10	<10	0.07	0.01	>25.0	0.01	2.28	0.9	2
EAICAM144r		0.46	<0.001	0.01	0.03	0.7	<0.02	<10	<10	<0.05	0.01	>25.0	0.01	1.61	0.6	<1
EAICAM148r		0.47	0.001	0.01	0.08	1.1	<0.02	<10	10	<0.05	0.01	>25.0	<0.01	3.11	0.9	2
EAICAM151r		0.93	<0.001	0.01	0.08	2.2	<0.02	<10	1030	0.05	0.01	>25.0	<0.01	2.18	0.7	2
EAICAM158r		0.73	<0.001	<0.01	0.11	1.6	<0.02	<10	30	0.08	0.01	>25.0	0.01	5.65	3.0	2



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Page: 2 - B

Total # Pages: 2 (A - D)

Plus Appendix Pages

Finalized Date: 3-NOV-2018

Account: EARTOP

CERTIFICATE OF ANALYSIS AD18265762

Sample Description	Method Analyte Units LOD	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
		0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05
EAIWAV024r		0.05	19.7	7.57	7.79	0.19	1.13	0.01	0.034	0.04	10.6	9.4	2.46	734	0.48
EAIWAV026r		<0.05	316	5.16	12.00	0.19	1.15	<0.01	0.022	0.05	13.1	28.2	3.74	675	0.40
EAIWAV027r		<0.05	12.4	8.51	9.82	0.19	1.33	<0.01	0.042	0.03	11.4	12.9	2.93	678	0.69
EAIWAV065r		0.15	7.9	1.52	1.50	<0.05	0.24	<0.01	0.007	0.12	4.9	1.6	0.22	170	0.55
EAICAM035r		<0.05	26.6	0.92	0.34	<0.05	0.02	<0.01	<0.005	0.01	0.7	0.5	0.03	218	0.67
EAICAM041r		0.07	1.9	0.42	0.59	<0.05	0.10	<0.01	<0.005	0.01	1.2	1.4	0.25	287	0.27
EAICAM044r		0.18	8.0	5.61	0.56	<0.05	0.11	0.01	<0.005	0.02	6.1	0.7	0.17	2340	0.24
EAICAM085r		0.11	10.6	0.12	0.37	<0.05	0.05	0.01	<0.005	0.01	1.1	7.7	0.22	242	0.07
EAICAM088r		0.13	2.8	0.28	0.40	<0.05	0.07	0.01	<0.005	0.01	1.6	5.6	0.34	370	0.32
EAICAM134r		<0.05	22.7	0.19	0.19	<0.05	0.03	<0.01	<0.005	0.01	1.1	0.7	0.22	434	0.50
EAICAM140r		0.09	3.1	0.21	0.60	<0.05	0.06	<0.01	0.006	0.02	2.2	10.8	0.40	350	0.91
EAICAM141r		<0.05	2.1	0.09	0.25	<0.05	0.02	<0.01	<0.005	0.01	1.2	4.1	0.25	356	0.42
EAICAM142r		0.05	2.2	0.13	0.37	<0.05	0.04	<0.01	<0.005	0.01	1.2	3.4	0.25	412	0.15
EAICAM144r		<0.05	7.3	0.11	0.12	<0.05	0.02	<0.01	<0.005	<0.01	0.9	0.4	0.13	448	0.20
EAICAM148r		<0.05	2.2	0.10	0.35	<0.05	0.03	<0.01	<0.005	0.01	1.5	4.2	0.26	343	0.18
EAICAM151r		0.05	2.2	0.17	0.37	<0.05	0.03	<0.01	<0.005	0.01	1.1	7.4	0.31	396	0.68
EAICAM158r		0.07	3.6	0.18	0.45	<0.05	0.03	<0.01	<0.005	0.01	3.8	3.1	0.24	569	0.60



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No: 825, Corporate Site No: 23001.

Page: 2 - C

Total # Pages: 2 (A - D)

Plus Appendix Pages

Finalized Date: 3-NOV-2018

Account: EARTOP

CERTIFICATE OF ANALYSIS AD18265762

Sample Description	Method Analyte Units LOD	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
		ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
EAIWAV024r		0.16	59.2	320	2.5	1.9	<0.001	<0.01	<0.05	16.0	<0.2	0.9	13.7	<0.01	<0.01	4.3
EAIWAV026r		0.17	43.6	390	2.5	2.0	0.001	0.01	<0.05	9.7	<0.2	0.7	14.2	<0.01	<0.01	4.5
EAIWAV027r		0.13	65.0	290	2.7	1.1	<0.001	<0.01	<0.05	18.2	<0.2	0.9	11.8	<0.01	<0.01	4.7
EAIWAV065r		0.21	7.3	50	1.1	4.1	<0.001	0.01	0.05	1.8	<0.2	0.3	4.9	<0.01	0.01	1.8
EAICAM035r		<0.05	3.0	10	0.8	0.5	0.002	<0.01	0.07	0.2	<0.2	0.2	1.1	<0.01	<0.01	0.2
EAICAM041r		0.11	3.3	70	4.5	0.8	<0.001	0.03	<0.05	1.5	0.4	<0.2	228	<0.01	0.01	0.4
EAICAM044r		0.14	11.4	570	4.7	1.5	<0.001	0.03	0.14	6.7	0.3	<0.2	37.1	<0.01	0.01	0.6
EAICAM085r		<0.05	2.0	100	6.2	1.2	<0.001	0.04	<0.05	1.4	0.4	<0.2	185.0	<0.01	<0.01	0.3
EAICAM088r		<0.05	2.2	60	5.5	1.4	<0.001	0.03	0.05	1.2	0.4	<0.2	248	<0.01	<0.01	0.4
EAICAM134r		<0.05	0.9	30	15.5	0.6	<0.001	0.03	0.05	0.4	0.3	<0.2	525	<0.01	<0.01	<0.2
EAICAM140r		<0.05	2.2	70	5.0	1.5	<0.001	0.03	<0.05	1.1	0.3	<0.2	178.5	<0.01	<0.01	0.4
EAICAM141r		<0.05	1.3	30	2.6	0.4	<0.001	0.03	<0.05	0.6	0.2	<0.2	175.0	<0.01	<0.01	<0.2
EAICAM142r		<0.05	1.6	30	2.7	0.8	<0.001	0.03	<0.05	0.7	0.4	<0.2	190.5	<0.01	<0.01	0.2
EAICAM144r		<0.05	0.9	20	2.9	0.3	<0.001	0.03	<0.05	0.3	0.3	<0.2	163.5	<0.01	<0.01	<0.2
EAICAM148r		<0.05	1.2	30	3.0	0.7	<0.001	0.04	<0.05	0.9	0.3	<0.2	171.0	<0.01	<0.01	0.2
EAICAM151r		<0.05	1.5	30	5.7	0.7	<0.001	0.06	<0.05	0.9	0.4	<0.2	169.0	<0.01	<0.01	0.2
EAICAM158r		<0.05	3.3	70	4.8	1.0	<0.001	0.04	<0.05	1.0	0.3	<0.2	161.0	<0.01	<0.01	0.3
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Page: 2 - D
Total # Pages: 2 (A - D)
Plus Appendix Pages
Finalized Date: 3-NOV-2018
Account: EARTOP

CERTIFICATE OF ANALYSIS AD18265762

Sample Description	Method Analyte Units LOD	ME-MS41 Ti %	ME-MS41 Ti ppm	ME-MS41 U ppm	ME-MS41 V ppm	ME-MS41 W ppm	ME-MS41 Y ppm	ME-MS41 Zn ppm	ME-MS41 Zr ppm	PUL-QC Pass75um %
		0.005	0.02	0.05	1	0.05	0.05	2	0.5	0.01
EAIWAV024r		0.335	<0.02	0.59	121	0.37	12.30	48	46.9	
EAIWAV026r		0.430	<0.02	0.83	128	0.15	16.00	72	40.4	
EAIWAV027r		0.367	<0.02	0.64	137	0.55	14.45	58	54.4	99.0
EAIWAV065r		0.033	0.02	0.39	20	0.12	2.22	5	8.5	
EAICAM035r		<0.005	0.02	0.06	4	<0.05	0.41	3	0.8	
EAICAM041r		0.013	<0.02	0.35	7	<0.05	1.42	5	3.5	
EAICAM044r		<0.005	1.06	1.59	27	0.07	26.7	19	7.4	
EAICAM085r		<0.005	0.03	0.22	3	<0.05	1.98	6	1.6	
EAICAM088r		<0.005	0.07	0.43	5	<0.05	1.97	6	2.2	
EAICAM134r		<0.005	0.02	0.37	5	<0.05	0.97	4	1.3	
EAICAM140r		<0.005	0.04	0.33	7	<0.05	1.51	3	1.8	
EAICAM141r		<0.005	<0.02	0.23	4	<0.05	0.74	2	0.6	
EAICAM142r		<0.005	<0.02	0.22	3	<0.05	0.85	2	1.2	
EAICAM144r		<0.005	<0.02	0.12	2	<0.05	0.47	2	0.6	
EAICAM148r		<0.005	<0.02	0.18	3	<0.05	1.01	<2	0.7	
EAICAM151r		<0.005	<0.02	0.19	5	<0.05	0.89	2	0.7	
EAICAM158r		<0.005	0.03	0.21	8	<0.05	2.04	2	1.1	

CERTIFICATE OF ANALYSIS AD18265762

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method:

Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
ME-MS41

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-MS41

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

Applies to Method:

Processed at ALS Adelaide located at Unit 1, 1 Burma Road, Pooraka, Adelaide, SA, Australia.

LEV-01	LOG-22	PUL-32	PUL-QC
WEI-21			