



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 AD17083757

Project: MH03

P.O. No.: 338153

This report is for 30 Percussion samples submitted to our lab in Adelaide, SA,
Australia on 2-MAY-2017.

The following have access to data associated with this certificate:

KIM GREY

To: TODD RIVER METALS
ATTN: KIM GREY
LEVEL 1
282 ROKEBY ROAD
SUBIACO WA 6008

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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Plus Appendix Pages

Finalized Date: 15-MAY-2017

Account: TODRIV

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-23	Pulv Sample - Split/Retain
LOG-22	Sample login - Rcd w/o BarCode
PUL-QC	Pulverizing QC Test

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61	33 element four acid ICP-AES	ICP-AES
Au-ICP22	Au 50g FA ICP-AES finish	ICP-AES

Signature:

Cameron Brosnan, Laboratory Manager, Perth



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CERTIFICATE OF ANALYSIS AD17083757

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	PUL-QC Pass75um % 0.01	Au-ICP22 Au ppm 0.001	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
MH20405		0.40		<0.001	<0.5	9.04	8	810	3.5	4	0.16	<0.5	12	60	234	4.16
MH20410		1.56		<0.001	<0.5	5.31	<5	670	2.5	<2	0.35	<0.5	7	28	23	2.01
MH20415		1.55		<0.001	<0.5	4.27	<5	410	1.7	<2	0.41	<0.5	5	25	17	1.68
MH20420		1.82		<0.001	<0.5	8.62	<5	750	3.3	2	0.23	<0.5	13	54	21	3.64
MH20426		1.98		<0.001	<0.5	6.52	<5	480	2.8	2	0.30	<0.5	8	37	5	2.59
MH20431		2.12		0.001	<0.5	9.40	<5	780	3.6	9	0.22	1.1	15	58	254	3.95
MH20436		1.24		<0.001	<0.5	10.35	<5	920	4.9	<2	0.15	<0.5	14	64	86	4.06
MH20441		2.43		<0.001	<0.5	7.01	<5	660	2.8	<2	0.33	<0.5	8	44	9	2.68
MH20446		1.44		0.002	<0.5	10.60	<5	870	3.3	3	0.14	<0.5	14	62	75	4.22
MH20450		0.04		0.019	<0.5	5.88	12	30	1.0	<2	1.76	<0.5	28	47	41	2.80
MH20452		2.37		0.001	<0.5	8.25	<5	640	2.4	2	0.22	<0.5	12	50	25	3.57
MH20454		2.29		<0.001	<0.5	6.61	<5	470	2.5	<2	0.29	<0.5	9	39	5	2.67
MH20456		2.07		0.001	<0.5	5.96	<5	370	2.7	3	0.41	<0.5	9	35	42	2.45
MH20459		1.67		0.001	<0.5	9.91	<5	890	5.0	<2	0.23	<0.5	13	61	17	3.89
MH20462		2.54		0.001	<0.5	5.61	<5	350	2.2	3	0.35	<0.5	7	32	92	2.17
MH20467		1.19	98.0	<0.001	<0.5	8.96	<5	680	4.6	<2	0.40	<0.5	10	52	4	3.22
MH20472		1.83		0.001	<0.5	10.95	<5	910	4.1	4	0.13	<0.5	15	64	22	4.06
MH20474		2.31		<0.001	<0.5	9.33	<5	690	3.3	3	0.13	<0.5	13	63	47	3.97
MH20475		0.04		0.369	0.5	4.69	<5	10	1.2	2	0.13	0.7	1	12	195	0.21
MH20476		2.23		<0.001	<0.5	10.85	<5	870	4.4	2	0.13	<0.5	17	67	35	4.41
MH20477		2.24		<0.001	<0.5	7.81	<5	530	4.1	<2	0.22	<0.5	10	45	8	2.91
MH20478		2.36		<0.001	<0.5	4.96	<5	280	2.3	<2	0.27	<0.5	6	26	5	1.88
MH20483		1.98		<0.001	<0.5	9.15	<5	720	3.7	2	0.19	<0.5	12	56	6	3.71
MH20488		2.11		<0.001	<0.5	6.66	<5	610	2.5	2	0.54	<0.5	9	47	38	2.76
MH20489		1.92		<0.001	<0.5	5.85	5	410	2.6	2	0.71	<0.5	7	38	9	2.40
MH20490		2.25		<0.001	<0.5	5.71	<5	460	2.1	2	0.43	<0.5	7	39	22	2.41
MH20493		2.38		<0.001	<0.5	9.44	<5	710	3.7	3	0.21	<0.5	14	60	13	3.86
MH20498		1.37		<0.001	<0.5	8.53	<5	670	3.6	3	0.32	<0.5	13	60	8	3.83
MH20504		2.30		<0.001	<0.5	6.36	<5	690	2.5	3	0.38	<0.5	8	50	3	2.83
MH20510		2.31		<0.001	<0.5	9.23	<5	680	3.9	<2	0.16	<0.5	13	62	34	3.86



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CERTIFICATE OF ANALYSIS AD17083757

Sample Description	Method Analyte Units LOR	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Ga	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th
		ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
		10	0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20
MH20405		30	3.62	30	0.59	393	2	0.27	23	180	61	0.03	<5	10	41	20
MH20410		10	2.22	40	0.47	377	1	0.94	15	430	30	0.01	<5	6	63	20
MH20415		10	1.71	50	0.36	256	1	0.96	13	480	16	<0.01	<5	5	63	30
MH20420		20	4.01	30	0.90	418	1	0.78	27	530	25	<0.01	<5	11	35	20
MH20426		20	2.80	40	0.65	373	1	0.72	20	490	19	<0.01	<5	8	42	20
MH20431		20	4.03	30	0.96	619	2	0.67	34	560	20	0.07	<5	12	37	20
MH20436		30	4.61	20	0.95	557	1	0.61	31	610	27	0.02	5	13	28	20
MH20441		20	2.70	40	0.65	452	1	0.91	20	480	19	<0.01	<5	9	49	20
MH20446		30	4.53	30	0.93	335	1	0.53	33	550	27	0.04	<5	13	28	20
MH20450		20	3.80	<10	0.81	357	10	1.57	29	620	31	0.02	6	9	77	<20
MH20452		20	3.69	40	0.83	447	1	0.53	26	510	13	0.01	<5	10	29	20
MH20454		20	2.56	40	0.66	362	2	0.90	18	440	15	<0.01	<5	8	46	20
MH20456		20	2.11	40	0.57	365	1	1.03	16	480	21	0.02	<5	7	56	20
MH20459		30	4.12	30	0.92	452	1	0.85	30	580	33	<0.01	<5	13	39	20
MH20462		10	1.96	40	0.50	359	1	0.84	14	420	25	0.01	<5	6	35	20
MH20467		20	3.51	40	0.80	436	1	1.09	24	570	23	<0.01	<5	11	51	20
MH20472		30	5.18	20	0.87	358	2	0.56	31	580	20	0.01	5	13	25	20
MH20474		30	4.07	20	0.81	311	1	0.38	30	540	21	0.04	<5	12	23	20
MH20475		10	4.43	<10	0.03	44	1	1.20	11	470	26	0.06	<5	<1	21	<20
MH20476		30	5.29	20	0.97	391	1	0.52	32	610	21	0.01	<5	14	23	<20
MH20477		20	3.15	30	0.69	302	1	0.65	22	490	21	<0.01	<5	9	33	20
MH20478		10	1.97	40	0.42	219	1	0.71	13	420	21	<0.01	<5	5	37	20
MH20483		20	4.06	30	0.86	419	1	0.69	27	540	14	<0.01	<5	12	29	20
MH20488		20	2.40	40	0.62	467	2	1.23	21	480	35	0.01	<5	8	54	20
MH20489		10	1.93	40	0.54	441	2	1.34	16	480	39	<0.01	<5	7	68	20
MH20490		10	2.23	40	0.55	382	2	0.88	16	430	47	0.01	<5	7	47	20
MH20493		30	4.39	30	0.93	414	1	0.60	30	580	30	<0.01	<5	12	30	20
MH20498		20	3.78	40	0.88	538	2	0.80	27	580	33	<0.01	<5	11	52	20
MH20504		20	2.55	40	0.68	544	2	1.31	20	450	52	<0.01	5	9	62	20
MH20510		20	4.53	40	0.92	435	1	0.53	29	500	41	0.01	<5	12	25	20



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Sample Description	Method Analyte Units LOR	ME-ICP61 Ti %	ME-ICP61 Ti ppm	ME-ICP61 U ppm	ME-ICP61 V ppm	ME-ICP61 W ppm	ME-ICP61 Zn ppm
		0.01	10	10	1	10	2
MH20405		0.29	10	<10	86	<10	68
MH20410		0.22	<10	<10	32	<10	67
MH20415		0.22	<10	<10	25	<10	39
MH20420		0.30	<10	<10	57	10	80
MH20426		0.24	<10	<10	40	<10	53
MH20431		0.31	<10	<10	63	<10	778
MH20436		0.31	<10	<10	67	<10	111
MH20441		0.25	<10	<10	45	<10	58
MH20446		0.30	<10	<10	67	<10	109
MH20450		0.31	10	<10	69	<10	57
MH20452		0.28	<10	<10	54	10	86
MH20454		0.25	<10	<10	40	<10	79
MH20456		0.23	<10	<10	35	<10	102
MH20459		0.31	<10	<10	64	<10	89
MH20462		0.20	<10	<10	30	<10	65
MH20467		0.29	<10	<10	56	<10	108
MH20472		0.30	<10	<10	72	<10	89
MH20474		0.32	<10	<10	62	<10	97
MH20475		0.02	10	<10	3	<10	304
MH20476		0.31	<10	<10	73	<10	107
MH20477		0.24	<10	<10	46	<10	75
MH20478		0.19	<10	<10	25	<10	50
MH20483		0.29	10	<10	59	<10	81
MH20488		0.24	<10	<10	41	<10	130
MH20489		0.23	<10	<10	35	<10	71
MH20490		0.23	<10	<10	35	<10	69
MH20493		0.30	<10	<10	63	<10	88
MH20498		0.31	<10	<10	57	<10	174
MH20504		0.29	<10	<10	43	<10	79
MH20510		0.28	<10	<10	58	<10	86



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CERTIFICATE OF ANALYSIS AD17083757

CERTIFICATE COMMENTS

ACCREDITATION COMMENTS

Applies to Method:

NATA Accredited. Corporate Accreditation No: 825, Corporate Site No: 23001. The Technical Signatory is Wendy Wong, Senior QC Chemist.
Au-ICP22 ME-ICP61

LABORATORY ADDRESSES

Applies to Method:

Processed at ALS Perth located at 31 Denninup Way, Malaga, Australia. NATA Accreditation does not cover the performance of ALS Perth Sample Preparation which is processed at 79 Distinction Road, Wangara, WA, Australia
Au-ICP22 ME-ICP61

Applies to Method:

Processed at ALS Adelaide located at Unit 1, 1 Burma Road, Pooraka, Adelaide, SA, Australia.
LOG-22 PUL-23 PUL-QC WEI-21