



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 AD17084116

Project: MH04

P.O. No.: 338154

This report is for 81 Percussion samples submitted to our lab in Adelaide, SA,
Australia on 2-MAY-2017.

The following have access to data associated with this certificate:

PAUL BURTON

KIM GREY

CATH WETHERBY

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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SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
PUL-QC	Pulverizing QC Test
LOG-24	Pulp Login - Rcd w/o Barcode
LEV-01	Waste Disposal Levy
PUL-23	Pulv Sample - Split/Retain
BAG-01	Bulk Master for Storage
SPL-21	Split sample - riffle splitter

ANALYTICAL PROCEDURES

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

Signature:

Cameron Brosnan, Laboratory Manager, Perth



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CERTIFICATE OF ANALYSIS AD17084116

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	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
MH20515		3.70	<0.5	7.09	<5	80	3.5	<2	0.70	<0.5	2	7	44	1.11	10	2.04
MH20520		4.01	<0.5	7.29	<5	80	1.6	<2	0.39	<0.5	1	7	16	0.68	20	5.10
MH20526		3.97	<0.5	7.04	<5	50	2.8	18	0.45	<0.5	1	11	149	0.86	20	2.48
MH20531		4.86	<0.5	9.44	<5	680	7.3	<2	0.25	<0.5	13	59	45	3.75	30	4.08
MH20536		3.47	<0.5	9.54	<5	700	4.4	3	0.18	<0.5	14	72	17	4.14	30	4.69
MH20541		3.54	<0.5	5.93	<5	370	2.7	<2	0.71	<0.5	8	47	5	2.59	20	1.87
MH20546		2.77	<0.5	8.24	<5	320	3.1	2	0.30	<0.5	6	30	7	1.94	20	4.12
MH20550		0.06	<0.5	14.95	21	50	<0.5	4	0.01	<0.5	2	162	7	15.40	50	0.14
MH20552		3.34	<0.5	8.57	<5	650	3.8	2	0.24	<0.5	12	61	16	3.65	20	4.26
MH20557		3.48	<0.5	7.64	14	590	2.7	<2	0.25	<0.5	11	51	21	3.24	20	3.68
MH20562		4.70	<0.5	10.20	<5	690	4.3	<2	0.13	<0.5	14	68	106	4.18	30	5.24
MH20567		1.90	<0.5	5.36	<5	570	2.1	3	0.32	<0.5	8	34	11	2.41	10	2.30
MH20570		4.22	<0.5	5.52	<5	620	2.1	<2	0.30	<0.5	7	36	2	2.31	10	2.40
MH20571		3.72	<0.5	5.66	<5	610	2.4	<2	0.31	<0.5	8	38	2	2.51	20	2.57
MH20572		4.09	<0.5	5.11	<5	480	2.8	<2	0.36	<0.5	7	35	4	2.38	10	2.25
MH20573		2.12	<0.5	7.39	<5	490	3.4	<2	0.27	<0.5	8	38	9	2.76	20	3.67
MH20574		4.32	<0.5	8.82	<5	700	3.3	2	0.18	<0.5	12	58	16	3.62	20	4.81
MH20575		0.05	<0.5	5.43	12	30	1.0	<2	1.67	<0.5	27	46	38	2.64	10	3.75
MH20576		4.57	<0.5	5.15	<5	510	1.9	27	0.24	<0.5	8	34	124	2.40	10	2.47
MH20577		4.31	<0.5	6.72	<5	610	2.7	2	0.26	<0.5	10	44	91	2.98	20	3.33
MH20578		4.37	<0.5	7.23	<5	610	2.9	<2	0.25	<0.5	9	46	3	3.18	20	3.69
MH20579		3.81	<0.5	8.26	<5	720	3.1	<2	0.21	<0.5	11	53	3	3.61	20	4.32
MH20580		3.09	1.0	5.54	7	570	2.0	7	0.18	<0.5	16	38	1160	3.13	10	2.79
MH20581		3.76	<0.5	5.44	<5	680	1.8	<2	0.24	<0.5	7	38	16	2.72	10	2.76
MH20582		3.81	<0.5	4.84	<5	620	1.5	2	0.25	<0.5	8	34	15	2.84	10	2.56
MH20583		4.15	<0.5	5.92	<5	720	2.0	<2	0.25	<0.5	8	42	11	2.99	20	3.00
MH20584		3.90	<0.5	5.85	<5	660	2.1	9	0.27	<0.5	10	41	46	2.95	20	2.80
MH20585		3.16	<0.5	4.99	<5	550	2.0	<2	0.26	<0.5	8	37	7	2.61	10	2.37
MH20586		1.59	<0.5	5.05	<5	500	2.4	<2	0.25	<0.5	6	35	6	2.63	10	2.39
MH20587		4.70	<0.5	10.35	7	780	3.8	<2	0.12	<0.5	15	67	2	4.44	30	5.40
MH20588		3.64	<0.5	7.36	<5	610	2.8	<2	0.14	<0.5	9	48	2	3.12	20	3.76
MH20589		3.91	<0.5	4.24	<5	440	2.1	2	0.30	<0.5	7	33	381	2.35	10	1.97
MH20590		4.18	<0.5	11.35	<5	780	4.3	<2	0.15	<0.5	15	68	6	4.46	30	5.95
MH20591		2.23	<0.5	10.80	<5	770	4.9	<2	0.11	<0.5	15	74	1	4.87	30	6.36
MH20592		2.56	<0.5	7.58	<5	570	3.3	<2	0.13	<0.5	10	46	3	3.15	20	4.06
MH20593		4.37	<0.5	7.88	<5	660	2.9	2	0.18	<0.5	14	53	33	4.08	20	4.02
MH20594		4.27	<0.5	4.68	<5	550	1.9	<2	0.27	<0.5	7	35	18	2.58	10	2.14
MH20595		4.04	<0.5	5.96	<5	590	2.2	2	0.19	<0.5	12	42	90	4.00	20	2.82
MH20596		3.18	<0.5	6.31	9	720	2.6	<2	0.21	<0.5	14	43	13	3.29	20	3.10
MH20597		3.93	<0.5	5.92	5	1100	2.1	<2	0.26	<0.5	12	41	3	3.06	20	2.83



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CERTIFICATE OF ANALYSIS AD17084116

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
MH20515		10	0.11	113	2	3.42	4	470	46	<0.01	<5	1	40	<20	0.03	<10
MH20520		<10	0.06	109	2	2.35	5	750	76	<0.01	<5	2	32	<20	0.02	<10
MH20526		<10	0.09	208	4	2.81	8	700	42	<0.01	<5	4	28	<20	0.03	<10
MH20531		40	0.98	371	2	0.83	32	600	16	<0.01	<5	12	44	20	0.31	<10
MH20536		20	1.05	444	2	0.68	36	530	12	<0.01	<5	13	37	<20	0.33	<10
MH20541		40	0.60	432	3	1.48	21	460	21	<0.01	<5	7	97	20	0.24	<10
MH20546		20	0.40	427	3	1.89	16	660	58	<0.01	<5	8	38	<20	0.13	<10
MH20550		<10	0.01	352	19	0.01	6	110	18	0.05	<5	5	4	40	0.86	<10
MH20552		30	0.95	371	2	0.75	31	510	13	<0.01	<5	12	39	20	0.31	<10
MH20557		40	0.79	397	5	0.57	31	450	9	0.01	<5	10	48	20	0.26	<10
MH20562		30	1.01	469	5	0.42	35	550	8	0.12	<5	14	28	<20	0.30	<10
MH20567		40	0.49	476	4	0.88	14	450	18	0.01	<5	6	64	20	0.21	<10
MH20570		40	0.48	511	2	0.93	18	440	22	<0.01	<5	6	65	20	0.22	<10
MH20571		40	0.50	586	2	0.82	17	470	16	<0.01	<5	6	62	20	0.22	<10
MH20572		40	0.47	473	3	0.83	13	440	13	<0.01	<5	6	62	20	0.20	<10
MH20573		30	0.63	478	2	0.89	20	570	10	0.01	<5	8	36	<20	0.22	<10
MH20574		30	0.91	575	2	0.52	29	550	8	0.01	<5	12	23	20	0.30	<10
MH20575		<10	0.78	348	9	1.52	32	600	33	0.02	<5	8	71	<20	0.29	10
MH20576		40	0.52	410	7	0.62	15	470	33	0.02	<5	6	39	20	0.19	<10
MH20577		30	0.69	494	2	0.70	22	490	9	0.01	<5	8	43	20	0.25	<10
MH20578		40	0.76	598	1	0.61	24	490	10	<0.01	<5	9	39	20	0.26	<10
MH20579		40	0.84	610	2	0.65	26	570	14	0.01	<5	11	36	20	0.28	<10
MH20580		40	0.56	511	3	0.61	15	410	111	0.20	<5	7	32	20	0.20	<10
MH20581		30	0.51	548	2	0.63	15	420	60	0.01	<5	6	50	20	0.21	<10
MH20582		30	0.50	644	2	0.60	16	380	35	0.01	<5	5	53	20	0.18	<10
MH20583		40	0.58	589	2	0.67	21	440	30	0.01	<5	7	49	20	0.23	<10
MH20584		30	0.57	627	2	0.74	16	460	59	0.03	<5	7	51	20	0.23	<10
MH20585		30	0.49	489	2	0.65	15	400	12	<0.01	<5	6	49	20	0.20	<10
MH20586		30	0.51	490	4	0.53	15	440	10	<0.01	<5	6	41	20	0.20	<10
MH20587		20	0.99	733	2	0.54	33	540	8	0.01	<5	14	24	<20	0.31	<10
MH20588		40	0.71	545	2	0.36	22	470	7	<0.01	<5	9	21	20	0.24	<10
MH20589		30	0.40	502	3	0.47	13	390	8	0.04	<5	4	42	20	0.17	<10
MH20590		20	0.95	748	1	0.63	34	580	11	0.01	<5	14	22	<20	0.31	<10
MH20591		20	1.12	733	2	0.21	36	590	9	0.01	<5	14	15	<20	0.34	<10
MH20592		30	0.73	498	1	0.28	22	550	4	0.01	<5	9	17	20	0.26	<10
MH20593		40	0.83	800	2	0.38	24	490	7	0.01	<5	10	26	20	0.27	<10
MH20594		30	0.46	533	2	0.43	14	400	7	0.01	<5	5	42	20	0.18	<10
MH20595		30	0.74	752	2	0.40	19	400	10	0.02	<5	8	34	<20	0.21	<10
MH20596		30	0.65	563	3	0.41	20	430	10	0.01	<5	8	39	20	0.23	<10
MH20597		30	0.58	511	2	0.45	20	440	6	<0.01	<5	7	45	20	0.23	<10



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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	PUL-QC Pass75um % 0.01	Au-ICP22 Au ppm 0.001
MH20515		<10	4	<10	35		<0.001
MH20520		<10	<1	<10	30		<0.001
MH20526		<10	1	<10	35		0.002
MH20531		<10	61	<10	104		0.001
MH20536		<10	71	<10	322	98.0	0.001
MH20541		<10	37	<10	73		<0.001
MH20546		10	23	<10	61		<0.001
MH20550		<10	408	<10	<2		0.001
MH20552		<10	60	<10	92		<0.001
MH20557		<10	52	<10	101		<0.001
MH20562		<10	71	<10	100		<0.001
MH20567		<10	30	<10	104		0.003
MH20570		<10	32	<10	47		<0.001
MH20571		<10	32	<10	53		<0.001
MH20572		<10	29	<10	56		<0.001
MH20573		<10	40	<10	67		<0.001
MH20574		<10	59	<10	87		0.001
MH20575		<10	63	<10	54		0.017
MH20576		<10	29	<10	67		0.002
MH20577		<10	41	<10	55		<0.001
MH20578		<10	45	<10	53		<0.001
MH20579		<10	52	<10	91		<0.001
MH20580		<10	32	<10	289		0.005
MH20581		<10	31	<10	117		<0.001
MH20582		<10	26	<10	111		0.003
MH20583		<10	36	<10	88		<0.001
MH20584		<10	35	<10	410		0.002
MH20585		<10	29	<10	94		<0.001
MH20586		<10	29	<10	77		<0.001
MH20587		<10	69	<10	73		<0.001
MH20588		<10	44	<10	48		<0.001
MH20589		<10	22	<10	43		0.001
MH20590		10	70	<10	82		<0.001
MH20591		<10	79	<10	93		<0.001
MH20592		<10	46	<10	90		<0.001
MH20593		<10	51	<10	80		<0.001
MH20594		<10	25	<10	43		<0.001
MH20595		<10	37	<10	56		<0.001
MH20596		<10	38	<10	44		<0.001
MH20597		<10	35	<10	40		<0.001



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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	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
MH20598		2.32	0.9	3.79	5	680	1.2	<2	0.16	<0.5	15	32	1535	3.42	10	1.64
MH20599		3.47	<0.5	3.82	<5	420	1.3	<2	0.11	<0.5	14	40	603	4.08	10	1.44
MH20600		0.05	0.5	4.52	<5	10	1.1	<2	0.12	0.6	2	12	185	0.20	10	4.27
MH20601		4.49	<0.5	5.63	<5	540	2.1	<2	0.18	<0.5	13	47	49	4.35	20	2.24
MH20602		4.40	<0.5	4.63	<5	570	1.6	<2	0.21	<0.5	8	40	30	3.20	10	2.00
MH20603		2.77	<0.5	6.00	<5	780	2.2	2	0.24	<0.5	8	45	15	3.07	20	2.73
MH20604		3.81	<0.5	6.64	<5	790	2.5	<2	0.16	<0.5	9	52	13	3.61	20	3.15
MH20605		2.67	<0.5	4.49	<5	730	1.7	<2	0.23	<0.5	6	33	30	2.81	10	2.12
MH20606		5.69	<0.5	4.92	<5	780	1.7	<2	0.20	<0.5	7	42	16	2.89	10	2.36
MH20607		3.39	<0.5	3.81	<5	540	1.4	<2	0.21	<0.5	5	34	11	2.49	10	1.78
MH20608		3.13	<0.5	4.64	<5	730	1.6	<2	0.25	<0.5	6	37	7	2.67	10	2.20
MH20609		3.55	<0.5	3.96	<5	540	1.2	<2	0.20	<0.5	8	36	9	3.46	10	1.97
MH20610		3.63	<0.5	4.06	<5	520	1.3	<2	0.17	<0.5	6	37	9	3.07	10	2.02
MH20611		2.48	<0.5	5.71	<5	600	2.1	<2	0.17	<0.5	12	42	15	4.22	20	3.02
MH20612		3.18	<0.5	4.18	<5	450	1.7	<2	0.13	<0.5	10	37	173	3.77	10	2.15
MH20613		2.87	<0.5	6.53	<5	650	2.4	5	0.14	<0.5	13	48	926	4.75	20	3.33
MH20614		2.67	1.7	5.29	<5	610	1.8	10	0.17	0.5	20	45	2940	5.17	20	2.80
MH20615		2.02	<0.5	3.97	<5	640	1.2	15	0.14	<0.5	7	36	177	3.07	10	2.12
MH20616		3.35	<0.5	3.97	<5	550	1.5	4	0.19	<0.5	7	35	128	2.85	10	2.12
MH20617		1.33	<0.5	6.21	<5	730	2.1	2	0.16	<0.5	11	43	48	3.72	20	3.45
MH20618		1.69	<0.5	5.36	<5	760	2.1	<2	0.18	<0.5	7	41	18	3.23	20	2.77
MH20619		2.95	<0.5	4.93	<5	600	1.7	<2	0.15	<0.5	9	42	24	3.28	10	2.49
MH20620		2.68	<0.5	4.60	<5	470	1.7	<2	0.14	<0.5	9	42	122	3.02	10	2.26
MH20621		2.54	<0.5	5.14	<5	220	1.9	3	0.25	<0.5	4	24	137	1.86	10	2.65
MH20622		1.74	<0.5	5.75	<5	160	2.4	4	0.32	<0.5	5	21	79	1.87	20	2.35
MH20623		1.14	1.5	5.31	<5	280	2.2	3	0.20	2.2	13	27	2140	4.30	10	2.25
MH20624		3.43	4.9	4.41	11	200	1.6	23	0.09	7.9	32	32	6700	6.30	10	2.05
MH20625		0.05	3.1	6.98	56	1130	1.4	2	3.88	1.9	28	142	3620	5.67	20	2.14
MH20626		2.52	1.5	6.21	6	170	3.1	9	0.40	2.0	14	19	1725	3.32	20	2.41
MH20627		2.64	0.5	6.74	<5	170	4.0	7	0.48	<0.5	4	14	244	1.24	20	3.30
MH20628		4.23	<0.5	6.81	<5	180	3.2	4	0.45	<0.5	3	16	148	1.01	10	3.59
MH20629		3.24	<0.5	6.75	<5	240	2.0	5	0.28	<0.5	3	14	160	0.89	10	4.19
MH20630		1.54	<0.5	6.68	<5	240	3.4	6	0.39	<0.5	2	6	83	0.89	20	3.47
MH20635		3.22	<0.5	4.52	<5	480	2.2	<2	0.17	<0.5	5	30	31	1.88	10	2.22
MH20640		3.38	<0.5	6.96	<5	130	3.5	13	0.37	<0.5	2	10	18	0.80	20	3.17
MH20645		3.47	<0.5	5.68	<5	440	3.0	<2	0.35	<0.5	7	37	5	2.40	10	2.55
MH20650		0.06	<0.5	15.20	22	50	<0.5	<2	0.01	<0.5	<1	155	7	15.25	50	0.14
MH20651		1.48	<0.5	6.31	5	590	2.5	<2	0.44	<0.5	9	44	4	2.91	20	2.82
MH20656		2.46	<0.5	8.27	<5	670	3.3	<2	0.35	<0.5	12	57	22	3.61	20	4.09
MH20661		1.65	<0.5	6.14	<5	390	2.5	<2	0.52	<0.5	6	41	38	2.48	20	2.75



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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
		La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti	Ti
		ppm 10	% 0.01	ppm 5	ppm 1	% 0.01	ppm 1	ppm 10	ppm 2	% 0.01	ppm 5	ppm 1	ppm 1	ppm 20	% 0.01	ppm 10
MH20598		30	0.54	561	3	0.28	16	320	6	0.20	<5	4	23	<20	0.15	<10
MH20599		20	0.69	681	3	0.19	15	280	5	0.08	<5	5	14	<20	0.14	<10
MH20600		<10	0.03	45	<1	1.20	10	470	24	0.06	<5	<1	19	<20	0.02	10
MH20601		30	0.87	669	4	0.32	19	400	3	0.01	<5	7	24	<20	0.21	<10
MH20602		30	0.57	503	4	0.33	17	360	6	0.01	<5	6	26	<20	0.17	<10
MH20603		30	0.61	512	2	0.39	17	440	7	0.01	<5	7	36	20	0.21	<10
MH20604		30	0.70	589	4	0.38	19	400	5	0.01	<5	9	27	<20	0.21	<10
MH20605		30	0.49	504	3	0.37	13	380	5	0.01	<5	5	40	20	0.18	<10
MH20606		30	0.53	505	4	0.39	14	360	5	0.01	<5	6	39	<20	0.18	<10
MH20607		30	0.42	439	4	0.37	11	340	4	<0.01	<5	4	37	<20	0.15	<10
MH20608		30	0.49	494	3	0.44	13	410	5	<0.01	<5	5	58	20	0.19	<10
MH20609		30	0.53	694	4	0.35	12	340	3	<0.01	<5	4	33	<20	0.16	<10
MH20610		30	0.50	539	3	0.28	12	330	<2	<0.01	<5	4	26	<20	0.16	<10
MH20611		30	0.72	743	3	0.32	20	430	10	0.01	<5	7	26	20	0.21	<10
MH20612		20	0.58	713	4	0.24	19	320	15	0.03	<5	5	18	<20	0.16	<10
MH20613		30	0.82	798	3	0.32	21	440	6	0.12	<5	8	21	20	0.24	<10
MH20614		30	0.73	895	11	0.30	17	420	10	0.40	<5	7	23	20	0.23	<10
MH20615		30	0.46	550	16	0.17	11	410	4	0.02	<5	4	19	<20	0.15	<10
MH20616		30	0.45	543	43	0.15	9	660	6	0.02	<5	5	15	<20	0.15	<10
MH20617		30	0.70	741	11	0.19	17	580	5	0.01	<5	8	17	20	0.23	10
MH20618		30	0.59	653	4	0.31	16	450	6	0.01	<5	6	27	20	0.21	<10
MH20619		30	0.57	666	4	0.35	13	380	5	<0.01	<5	6	21	<20	0.19	<10
MH20620		20	0.50	561	4	0.36	12	340	6	0.01	<5	6	16	<20	0.17	<10
MH20621		10	0.22	722	4	1.12	5	470	29	0.02	<5	4	20	<20	0.08	<10
MH20622		10	0.22	614	4	1.54	5	450	24	0.01	<5	4	32	<20	0.08	<10
MH20623		20	0.62	741	8	0.62	7	440	27	0.30	<5	5	23	<20	0.14	<10
MH20624		20	0.75	1030	5	0.10	12	350	27	0.99	<5	5	7	<20	0.14	<10
MH20625		50	1.88	823	61	2.19	2270	1030	2040	0.40	<5	18	296	20	0.66	<10
MH20626		10	0.39	854	7	1.48	7	430	46	0.25	<5	3	44	<20	0.06	<10
MH20627		<10	0.13	253	4	2.17	1	540	84	0.04	<5	2	63	<20	0.03	<10
MH20628		10	0.11	173	3	2.26	4	440	66	0.03	<5	1	71	<20	0.03	<10
MH20629		<10	0.09	123	3	1.96	2	480	76	0.03	<5	2	72	<20	0.03	<10
MH20630		10	0.12	133	2	2.19	2	490	61	0.03	<5	2	66	<20	0.04	<10
MH20635		30	0.32	270	60	0.48	10	440	11	0.01	<5	4	24	20	0.15	<10
MH20640		<10	0.10	129	6	2.35	1	570	44	<0.01	<5	2	60	<20	0.03	<10
MH20645		30	0.54	364	2	0.74	16	430	11	<0.01	<5	6	60	20	0.20	<10
MH20650		<10	0.02	337	19	0.01	7	100	14	0.05	<5	6	4	50	0.84	<10
MH20651		40	0.65	485	2	0.99	18	480	13	<0.01	<5	8	65	20	0.26	<10
MH20656		40	0.88	444	1	0.75	26	530	9	0.01	<5	11	52	20	0.30	10
MH20661		30	0.45	422	3	1.43	13	470	24	0.01	<5	6	58	<20	0.19	<10



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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	PUL-QC Pass75um % 0.01	Au-ICP22 Au ppm 0.001
MH20598		<10	21	<10	75		0.002
MH20599		<10	24	<10	69		<0.001
MH20600		<10	3	<10	292		0.356
MH20601		<10	36	<10	55		<0.001
MH20602		<10	28	<10	44	99.0	<0.001
MH20603		<10	35	<10	42		<0.001
MH20604		<10	42	<10	49		<0.001
MH20605		<10	25	<10	45		<0.001
MH20606		<10	29	<10	44		<0.001
MH20607		<10	20	<10	37		<0.001
MH20608		<10	25	<10	40		<0.001
MH20609		<10	21	<10	47		<0.001
MH20610		<10	22	<10	41		<0.001
MH20611		<10	34	<10	67		<0.001
MH20612		<10	24	<10	63		<0.001
MH20613		<10	41	<10	89		0.003
MH20614		<10	33	<10	158		0.007
MH20615		<10	21	10	57		0.010
MH20616		<10	22	10	48		0.003
MH20617		<10	37	10	75		0.002
MH20618		<10	31	<10	51		<0.001
MH20619		<10	29	<10	44		<0.001
MH20620		<10	28	<10	45		0.002
MH20621		<10	10	<10	42		0.002
MH20622		10	8	<10	48		0.004
MH20623		10	23	<10	268		0.004
MH20624		10	25	<10	998		0.033
MH20625		<10	137	<10	1050		0.482
MH20626		10	8	<10	306		0.010
MH20627		20	2	<10	67		0.001
MH20628		10	1	<10	49		0.001
MH20629		10	1	<10	49		0.001
MH20630		20	1	<10	45		0.001
MH20635		<10	22	<10	63		<0.001
MH20640		10	1	<10	24		0.002
MH20645		<10	33	<10	45		<0.001
MH20650		<10	408	<10	<2		<0.001
MH20651		<10	40	<10	54		<0.001
MH20656		<10	55	<10	90		<0.001
MH20661		<10	27	<10	83		<0.001



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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	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
MH20666		1.97	<0.5	7.68	<5	530	3.7	<2	0.38	<0.5	12	54	7	3.44	20	3.65



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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
		La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti	Tl
		ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm
		10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01	10
MH20666		30	0.82	492	2	1.02	24	520	9	<0.01	<5	10	56	20	0.30	<10



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Sample Description	Method Analyte Units LOR	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	PUL-QC	Au-ICP22
		U	V	W	Zn	Pass75um	Au
		ppm	ppm	ppm	ppm	%	ppm
		10	1	10	2	0.01	0.001
MH20666		<10	48	<10	80		<0.001



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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.
BAG-01 LEV-01 LOG-22
PUL-23 PUL-QC SPL-21

LOG-24
WEI-21