



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053

Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218

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Plus Appendix Pages
Finalized Date: 6-DEC-2017
Account: TODRIV

CERTIFICATE AD17261497

Project: WB

P.O. No.: WB17-03

This report is for 36 Rock samples submitted to our lab in Adelaide, SA, Australia on 30-NOV-2017.

The following have access to data associated with this certificate:

KIM GREY

GAVIN OTTO

CATH WETHERBY

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-23	Pulv Sample - Split/Retain
LOG-22	Sample login - Rcd w/o BarCode
CRU-21	Crush entire sample >70% -6 mm
LEV-01	Waste Disposal Levy
PUL-QC	Pulverizing QC Test
LOG-24	Pulp Login - Rcd w/o Barcode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-MS91	ICP-MS Analysis - Sodium Peroxide Fusion	ICP-MS
ME-ICP89	Peroxide Fusion by ICP-AES	ICP-AES

To: TODD RIVER METALS
ATTN: CATH WETHERBY
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 *****

Signature:

Cameron Brosnan, Laboratory Manager, Perth



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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	PUL-QC Pass75um % 0.01	ME-ICP89 Al2O3 % 0.02	ME-ICP89 As % 0.01	ME-ICP89 CaO % 0.01	ME-ICP89 Co % 0.005	ME-ICP89 Cr2O3 % 0.01	ME-ICP89 Cu % 0.01	ME-ICP89 Fe2O3 % 0.01	ME-ICP89 K2O % 0.01	ME-ICP89 Li % 0.001	ME-ICP89 MgO % 0.01	ME-ICP89 MnO % 0.01	ME-ICP89 Ni % 0.005	ME-ICP89 Pb % 0.01
B197		1.88		16.25	<0.01	0.97	<0.005	<0.01	<0.01	0.36	0.04	0.001	0.12	0.02	<0.005	<0.01
B198		1.28		16.35	<0.01	0.78	<0.005	<0.01	<0.01	0.61	2.92	0.005	0.07	0.04	<0.005	<0.01
B199		1.57		17.20	<0.01	0.42	<0.005	<0.01	<0.01	0.69	3.00	0.078	0.07	0.05	<0.005	<0.01
B200		0.06		35.1	0.01	0.01	<0.005	0.03	<0.01	24.4	0.11	0.001	0.05	0.04	<0.005	<0.01
B201		1.72		14.35	<0.01	0.62	<0.005	<0.01	<0.01	0.59	4.02	0.007	0.08	0.03	<0.005	<0.01
B202		1.74		16.10	0.01	0.49	<0.005	0.01	<0.01	1.03	3.41	0.043	0.15	0.05	<0.005	<0.01
B203		2.17		16.70	<0.01	0.50	<0.005	<0.01	<0.01	0.60	1.81	0.077	0.03	0.09	<0.005	<0.01
B204		1.83	93.6	15.50	<0.01	0.78	<0.005	<0.01	<0.01	0.44	1.69	<0.001	0.05	0.01	<0.005	<0.01
B205		1.82		18.25	<0.01	0.34	<0.005	<0.01	<0.01	0.43	0.61	0.001	0.03	0.03	<0.005	<0.01
B206		1.78		19.10	<0.01	0.25	<0.005	<0.01	<0.01	0.33	11.80	0.004	0.02	0.02	<0.005	<0.01
B207		1.90		16.95	<0.01	0.13	<0.005	<0.01	<0.01	0.39	0.71	0.001	<0.01	<0.01	<0.005	<0.01
B208		1.52		16.45	<0.01	0.41	<0.005	0.01	<0.01	0.47	6.48	0.001	0.02	0.01	<0.005	<0.01
B209		1.21		11.90	<0.01	0.15	<0.005	<0.01	<0.01	0.41	2.61	0.001	0.02	0.01	<0.005	<0.01
B210		2.54		3.06	<0.01	0.08	<0.005	<0.01	<0.01	0.53	0.57	0.001	0.02	0.01	<0.005	<0.01
B211		2.11		15.55	<0.01	0.80	<0.005	<0.01	<0.01	0.37	3.28	0.001	0.03	0.04	<0.005	<0.01
B212		2.01		14.55	<0.01	0.35	<0.005	<0.01	<0.01	0.73	3.40	0.009	0.03	0.03	<0.005	<0.01
B213		1.55		17.95	<0.01	0.21	<0.005	0.01	<0.01	0.34	9.84	0.005	0.02	0.03	<0.005	<0.01
B214		1.46		15.80	0.01	0.42	<0.005	<0.01	<0.01	0.46	3.24	0.003	0.03	0.02	<0.005	<0.01
B215		2.13		14.05	<0.01	0.08	<0.005	<0.01	<0.01	0.94	3.43	0.005	0.05	0.03	<0.005	<0.01
B216		1.81		15.45	<0.01	0.43	<0.005	0.01	<0.01	0.92	3.85	0.004	0.07	0.04	<0.005	<0.01
B217		1.89		15.50	<0.01	0.17	<0.005	0.01	<0.01	0.67	5.77	0.009	0.03	0.02	<0.005	<0.01
B218		1.82		12.60	<0.01	0.45	<0.005	<0.01	<0.01	1.42	4.84	0.024	0.05	0.08	<0.005	<0.01
B219		1.65		16.65	<0.01	0.53	<0.005	<0.01	<0.01	0.50	0.30	0.001	0.03	0.06	<0.005	<0.01
B220		1.67	89.8	15.80	<0.01	0.22	<0.005	<0.01	<0.01	0.97	0.98	0.021	0.05	0.18	<0.005	<0.01
B221		1.88		15.90	<0.01	0.90	<0.005	<0.01	<0.01	0.87	1.01	0.006	0.12	0.05	<0.005	<0.01
B222		1.66	88.4	15.60	<0.01	0.31	<0.005	<0.01	<0.01	0.63	2.95	0.003	0.03	0.05	<0.005	<0.01
B223		1.64		14.85	<0.01	0.20	<0.005	<0.01	<0.01	0.44	5.53	0.002	0.03	0.02	<0.005	<0.01
B224		1.90	90.2	17.00	<0.01	0.29	<0.005	0.01	<0.01	0.89	4.93	0.002	0.07	0.11	<0.005	<0.01
B225		0.04		17.40	<0.01	0.74	<0.005	0.07	<0.01	1.36	3.43	0.497	0.36	0.22	<0.005	<0.01
B226		1.86	95.4	17.15	0.01	0.31	<0.005	0.01	<0.01	0.66	6.70	0.003	0.03	0.03	<0.005	<0.01
B227		1.90		14.80	<0.01	0.81	<0.005	<0.01	<0.01	0.50	6.23	0.001	0.02	0.02	<0.005	<0.01
B228		1.68	92.0	13.35	<0.01	1.74	<0.005	<0.01	<0.01	1.17	3.05	0.001	0.02	0.15	<0.005	<0.01
B229		2.14		15.70	<0.01	0.14	<0.005	<0.01	<0.01	0.94	4.25	0.002	0.07	0.06	<0.005	<0.01
B230		1.77		15.85	<0.01	0.34	<0.005	0.01	<0.01	0.94	3.04	0.008	0.04	0.06	<0.005	0.01
B231		1.95		14.70	<0.01	0.11	<0.005	0.01	<0.01	0.49	10.40	0.001	0.02	0.01	<0.005	<0.01
B232		2.75		25.4	<0.01	0.52	<0.005	0.01	<0.01	2.04	4.52	0.037	0.11	0.08	<0.005	<0.01



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Sample Description	Method Analyte Units LOR	ME-ICP89	ME-ICP89	ME-ICP89	ME-ICP89	ME-MS91	ME-MS91	ME-MS91	ME-MS91	ME-MS91	ME-MS91
		S	SiO2	TiO2	Zn	Cs	Nb	Rb	Sn	Ta	Th
		%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.2	0.02	0.01	0.2	5	0.5	5	0.5	0.5
B197		0.05	69.7	0.02	<0.01	3.0	170	3.4	260	140.0	3.3
B198		0.02	76.8	0.03	<0.01	163.0	90	1370	212	108.0	1.7
B199		0.01	76.8	0.02	<0.01	224	83	1620	190	111.5	0.8
B200		0.06	22.7	1.57	0.01	1.0	22	14.3	8	2.7	87.8
B201		0.01	77.9	0.02	0.01	316	53	2420	184	92.8	1.2
B202		0.01	75.7	0.02	0.01	135.5	60	1180	132	69.9	3.5
B203		<0.01	76.2	0.02	0.01	237	99	1105	200	61.2	2.3
B204		0.02	78.3	0.02	<0.01	3.6	60	111.5	11	134.0	0.8
B205		<0.01	73.4	0.02	<0.01	4.1	53	93.5	452	106.0	0.9
B206		0.01	68.9	<0.02	<0.01	97.8	17	2870	57	20.1	0.5
B207		0.02	77.7	<0.02	<0.01	2.6	26	95.2	61	103.5	0.6
B208		0.01	73.8	0.02	<0.01	26.1	49	1030	11	60.6	0.8
B209		0.01	85.1	<0.02	<0.01	13.2	13	445	14	21.0	<0.5
B210		0.02	98.2	0.02	<0.01	4.8	5	83.0	17	12.1	<0.5
B211		0.01	74.2	0.02	<0.01	24.1	50	695	85	96.3	0.5
B212		0.01	78.3	0.02	<0.01	101.5	125	1220	57	59.2	9.4
B213		0.01	69.1	0.02	<0.01	203	27	3430	49	23.4	<0.5
B214		<0.01	70.2	0.02	<0.01	69.3	38	1050	18	23.7	<0.5
B215		<0.01	77.7	0.02	0.01	64.4	47	1115	32	34.9	<0.5
B216		0.01	75.3	0.05	0.01	32.3	68	766	42	25.1	0.8
B217		0.01	76.2	0.02	0.01	127.0	34	1945	173	19.4	<0.5
B218		<0.01	78.9	0.03	0.01	222	96	2350	359	83.2	<0.5
B219		0.02	74.9	<0.02	<0.01	17.9	117	127.0	96	62.9	0.8
B220		<0.01	75.9	0.02	0.01	121.5	78	578	79	33.6	1.3
B221		<0.01	72.7	0.02	0.01	35.6	166	420	64	93.3	1.2
B222		<0.01	77.4	0.02	<0.01	41.5	81	958	57	56.1	0.5
B223		<0.01	75.7	0.02	<0.01	41.2	59	1220	54	36.9	2.3
B224		<0.01	75.5	0.03	<0.01	27.4	74	896	89	29.0	<0.5
B225		0.02	72.3	0.02	0.01	458	153	4290	112	731	5.3
B226		<0.01	74.7	0.02	<0.01	37.0	51	748	51	13.6	<0.5
B227		<0.01	77.0	0.02	<0.01	92.2	15	1950	121	12.9	0.5
B228		<0.01	74.2	<0.02	<0.01	39.3	84	664	13	40.8	1.6
B229		<0.01	74.2	0.02	<0.01	48.2	66	1140	102	29.0	1.3
B230		0.01	74.0	0.02	0.01	91.6	94	1120	242	36.4	0.9
B231		0.01	74.7	<0.02	<0.01	124.5	5	2200	26	1.7	<0.5
B232		<0.01	59.5	0.08	0.01	331	91	2630	461	57.2	1.0



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	CERTIFICATE COMMENTS
	<p style="text-align: center;">LABORATORY ADDRESSES</p> <p>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</p> <p>Applies to Method: ME-ICP89 ME-MS91</p> <p>Processed at ALS Adelaide located at Unit 1, 1 Burma Road, Pooraka, Adelaide, SA, Australia.</p> <p>Applies to Method: CRU-21 LEV-01 LOG-22 LOG-24 PUL-23 PUL-QC WEI-21</p>