



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

ALS Brisbane is a NATA Accredited Testing Laboratory. Corporate
Accreditation No: 825, Corporate Site No: 818.

CERTIFICATE

The following have access to data associated with this certificate:

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LEV-01	Waste Disposal Levy
LOG-22	Sample login - Rcd w/o BarCode
CRU-21	Crush entire sample >70% -6 mm
PUL-31b	Pulv. Lg split to >80% -75um
PUL-QC	Pulverizing QC Test

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-TL43	Trace Level Au - 25g AR	ICP-MS
ME-MS61	48 element four acid ICP-MS	

To: **ALS MINERALS - SALES**
ATTN: ALS MINERALS

CANADA

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:

Shaun Kenny, Brisbane Laboratory Manager



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Project: RR_0616

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 Finalized Date: 21-JUN-2016
 Account: MICK

CERTIFICATE OF ANALYSIS BU16093707

Sample Description	Method Analyte Units LOR	WEI-21	PUL-QC	ME-MS61												
		Recvd Wt. kg	Pass75um %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm
		0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
97718		0.92		0.06	8.57	11.6	1100	3.23	0.16	0.11	0.02	181.5	3.5	3	6.75	1.6
97719		0.77		0.16	7.44	2.5	1070	2.96	0.24	0.01	0.02	192.5	0.8	1	1.68	13.1
97720		0.57		0.10	9.36	14.9	910	4.06	1.02	0.02	<0.02	164.0	11.4	6	6.04	22.8
97721		0.75		0.10	8.58	8.1	800	4.01	0.24	0.01	<0.02	169.5	4.1	3	6.72	4.7
97722		1.21	91.2	0.11	10.90	14.6	1110	3.60	0.93	0.04	<0.02	91.5	21.9	11	4.73	42.3
97723		0.94		0.08	9.39	10.9	1740	2.60	0.34	0.02	0.02	105.0	23.5	14	3.69	101.0
97724		0.67		0.19	9.18	7.5	560	2.58	0.38	<0.01	<0.02	198.0	2.2	4	1.53	31.0
97725		0.52		0.04	10.15	2.0	530	2.93	0.18	<0.01	<0.02	187.5	1.6	6	2.36	6.3
97726		0.81		0.06	7.76	3.8	1170	3.27	0.50	0.03	0.02	168.0	2.0	5	3.48	2.1
97727		0.44		0.03	7.20	1.9	1090	2.24	0.07	0.02	<0.02	254	1.2	3	2.05	1.3
97728		0.64		0.11	7.97	16.9	2690	2.84	0.38	0.17	0.08	161.0	29.5	13	3.49	64.3
12206		0.09		0.20	2.73	2.0	340	1.14	0.27	0.01	0.05	66.3	0.8	12	1.23	9.0
12208		0.15		0.12	2.47	4.8	270	0.86	0.18	0.02	0.03	147.0	1.9	469	1.30	9.2

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Sample Description	Method Analyte Units LOR	ME-MS61														
		Fe %	Ga ppm	Ge ppm	Hf ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm
97718		5.20	25.2	0.29	6.2	0.413	4.74	86.0	7.9	0.49	248	0.74	0.03	12.9	5.1	1830
97719		0.90	20.6	0.21	4.5	0.105	3.17	104.5	4.2	0.20	23	0.20	0.11	17.5	1.6	160
97720		8.43	27.0	0.36	6.1	0.450	3.59	94.5	13.2	0.69	341	0.68	0.02	12.1	6.7	1230
97721		5.94	25.0	0.26	6.8	0.306	4.30	75.9	10.5	0.54	269	0.83	0.02	13.2	4.7	1380
97722		6.30	24.1	0.21	5.4	0.275	3.82	39.6	13.2	0.91	429	0.64	0.03	10.7	8.9	1390
97723		8.15	28.9	0.27	6.1	0.116	2.53	46.5	20.3	1.54	434	0.46	0.33	11.0	15.3	2610
97724		1.36	17.85	0.18	5.9	0.540	2.20	78.3	6.8	0.27	80	0.48	0.02	15.6	3.2	180
97725		2.42	23.4	0.21	6.3	0.173	2.58	96.1	7.0	0.32	42	0.39	0.02	15.9	3.0	180
97726		2.74	20.0	0.21	4.5	0.079	3.33	83.7	10.7	0.37	118	0.42	1.45	15.5	2.5	220
97727		1.67	19.45	0.27	4.9	0.100	3.07	127.5	10.1	0.29	73	0.32	0.80	15.6	1.3	140
97728		9.67	20.0	0.32	5.2	0.090	5.31	80.5	12.4	1.51	1600	0.98	0.40	9.6	10.9	2640
12206		0.85	7.72	0.09	3.0	0.048	1.17	34.9	2.3	0.12	54	0.42	0.11	17.5	1.6	160
12208		1.09	7.36	0.16	3.2	0.044	0.79	77.2	3.5	0.11	68	0.59	0.25	31.0	5.3	190

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Sample Description	Method Analyte Units LOR	ME-MS61														
		Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
		ppm	ppm	ppm	%	ppm	%	ppm	ppm							
		0.5	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
97718		7.4	219	<0.002	0.01	3.07	25.8	2	18.1	11.2	0.71	<0.05	20.2	0.504	0.98	5.0
97719		17.5	157.0	<0.002	0.01	1.23	3.9	1	2.5	14.0	1.15	<0.05	37.8	0.126	0.67	5.8
97720		37.1	204	<0.002	0.02	4.09	40.0	2	24.6	25.7	0.69	0.08	24.2	0.605	0.89	8.3
97721		25.7	237	<0.002	0.01	3.31	24.6	1	71.3	15.0	0.76	<0.05	19.30	0.473	1.07	5.4
97722		13.9	170.0	<0.002	0.01	3.15	36.8	2	3.3	14.4	0.60	0.06	15.85	0.633	0.99	4.9
97723		30.2	92.8	<0.002	0.03	2.88	42.4	2	1.8	32.9	0.62	<0.05	16.20	0.702	0.65	5.0
97724		25.6	145.0	<0.002	0.01	2.65	5.2	2	6.0	4.6	1.08	<0.05	53.3	0.115	0.55	5.2
97725		35.5	183.5	<0.002	0.01	2.88	6.9	2	5.1	3.8	1.06	<0.05	61.9	0.146	0.70	6.7
97726		12.0	178.0	<0.002	0.01	1.33	5.6	1	1.8	71.9	1.02	<0.05	40.4	0.130	0.82	7.0
97727		9.3	173.5	<0.002	0.01	1.25	4.4	1	6.4	34.0	1.09	<0.05	46.5	0.124	0.76	5.6
97728		31.9	142.5	0.002	0.02	2.13	35.1	2	1.5	45.4	0.54	<0.05	21.3	0.576	0.97	4.3
12206		43.5	76.4	<0.002	0.03	1.45	3.3	1	3.1	8.5	1.03	<0.05	15.50	0.198	0.33	3.4
12208		29.7	58.7	<0.002	0.02	1.57	3.2	1	2.8	14.5	1.79	<0.05	15.30	0.291	0.28	2.9

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Sample Description	Method Analyte Units LOR	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Au-TL43
		V	W	Y	Zn	Zr	Au
		ppm	ppm	ppm	ppm	ppm	ppm
		1	0.1	0.1	2	0.5	0.001
97718		247	12.4	26.0	79	260	<0.001
97719		6	2.2	19.7	25	138.5	0.002
97720		352	13.3	22.2	110	240	0.001
97721		238	8.6	16.0	100	281	0.001
97722		366	6.3	13.3	200	217	0.002
97723		441	3.1	16.6	304	246	0.003
97724		11	3.5	19.7	32	179.0	0.014
97725		19	2.5	19.7	38	197.5	0.002
97726		22	1.3	20.7	44	140.0	0.001
97727		14	3.6	22.5	25	147.0	0.001
97728		364	1.8	21.9	272	205	0.001
12206		22	3.0	10.8	30	108.5	0.014
12208		25	6.2	10.1	29	121.5	0.475

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	CERTIFICATE COMMENTS								
Applies to Method:	<p>ANALYTICAL COMMENTS</p> <p>REE's may not be totally soluble in this method. ME-MS61</p>								
Applies to Method:	<p>ACCREDITATION COMMENTS</p> <p>NATA Accredited. Corporate Accreditation No: 825, Corporate Site No: 818. The Technical Signatory is David Jones, ICPMS Supervising Chemist. Au-TL43 ME-MS61</p>								
Applies to Method:	<p>LABORATORY ADDRESSES</p> <p>Processed at ALS Brisbane located at 32 Shand Street, Stafford, Brisbane, QLD, Australia. NATA Accreditation does not cover the performance of ALS Brisbane Sample Preparation which is processed at 116 Delta Street, Geebung, QLD 4034, Australia Au-TL43 ME-MS61</p>								
Applies to Method:	<p>Processed at ALS Burnie located at 39 River Road, Burnie, TAS, Australia.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">CRU-21</td> <td style="width: 25%;">LEV-01</td> <td style="width: 25%;">LOG-22</td> <td style="width: 25%;">PUL-31b</td> </tr> <tr> <td>PUL-QC</td> <td>WEI-21</td> <td></td> <td></td> </tr> </table>	CRU-21	LEV-01	LOG-22	PUL-31b	PUL-QC	WEI-21		
CRU-21	LEV-01	LOG-22	PUL-31b						
PUL-QC	WEI-21								