



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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 MI17128355

Project: Exploration_2017

P.O. No.: MRWMPB

This report is for 167 Soil samples submitted to our lab in Mount Isa, QLD, Australia
on 26-JUN-2017.

The following have access to data associated with this certificate:

MRM GEOLOGY

To: **MCARTHUR RIVER MINING PTY LTD**
ATTN: MRM GEOLOGY
PO BOX 36821
WINNELLE NT 0821

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: 6 (A - C)

Plus Appendix Pages

Finalized Date: 12-JUL-2017

Account: MCARIV

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-32	Pulverize 1000g to 85% < 75 um
PUL-QC	Pulverizing QC Test
LOG-22	Sample login - Rcd w/o BarCode
LEV-01	Waste Disposal Levy
SPL-21	Split sample - riffle splitter
BAG-01	Bulk Master for Storage

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61	33 element four acid ICP-AES	ICP-AES

Signature:

Shaun Kenny, Brisbane Laboratory Manager



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Page: 2 - A
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

Project: Exploration_2017

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	PUL-QC Pass75um %	ME-ICP61 Ag ppm	ME-ICP61 Al %	ME-ICP61 As ppm	ME-ICP61 Ba ppm	ME-ICP61 Be ppm	ME-ICP61 Bi ppm	ME-ICP61 Ca %	ME-ICP61 Cd ppm	ME-ICP61 Co ppm	ME-ICP61 Cr ppm	ME-ICP61 Cu ppm	ME-ICP61 Fe %	ME-ICP61 Ga ppm
		0.02	0.01	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
044867		1.10		<0.5	7.02	43	320	4.7	<2	0.47	<0.5	9	54	40	4.13	20
044868		1.22		<0.5	5.79	45	260	3.3	3	0.21	<0.5	32	42	114	3.28	10
044869		1.09		<0.5	4.90	34	280	2.4	<2	0.26	<0.5	19	43	77	3.66	10
044870		1.35		<0.5	2.40	7	210	1.0	7	0.09	<0.5	6	22	19	1.78	10
044871		1.46		<0.5	1.95	11	230	0.6	<2	0.05	<0.5	5	15	19	1.41	<10
044872		1.06		<0.5	2.84	14	360	0.9	<2	0.09	<0.5	16	19	18	2.14	10
044873		0.91		<0.5	2.57	7	290	0.6	2	0.07	<0.5	5	16	20	0.71	10
044874		1.60		<0.5	2.25	7	250	0.6	<2	0.06	<0.5	10	13	33	0.68	<10
044875		0.74		<0.5	2.05	55	250	0.9	<2	0.07	<0.5	8	17	64	1.92	<10
044876		1.11		<0.5	4.79	18	350	2.0	<2	0.30	<0.5	12	36	55	3.94	10
044877		1.04		<0.5	4.20	20	300	1.6	<2	0.23	<0.5	15	29	79	3.26	10
044878		1.01		<0.5	5.36	37	430	2.1	2	0.12	<0.5	17	31	55	3.10	10
044879		0.80		<0.5	4.90	25	310	1.9	2	0.25	<0.5	16	36	54	3.79	10
044880		0.93		<0.5	7.61	22	240	4.1	<2	0.21	<0.5	10	50	56	4.78	20
044881		1.86		<0.5	2.86	7	260	1.2	<2	0.19	<0.5	6	19	27	2.17	10
044882		1.40	95.3	<0.5	2.34	7	240	0.6	2	0.04	<0.5	5	15	16	0.89	<10
044883		1.67		<0.5	1.59	10	180	<0.5	<2	0.09	<0.5	4	11	20	0.84	<10
044884		1.62		<0.5	2.01	26	230	0.6	<2	0.07	<0.5	11	17	28	1.66	<10
044885		0.97		<0.5	2.31	7	270	0.7	<2	0.08	<0.5	8	16	13	1.22	<10
044886		1.19		<0.5	3.54	11	430	1.8	4	0.10	<0.5	12	39	33	3.27	10
044887		1.10		<0.5	5.33	25	370	2.6	6	0.15	<0.5	14	45	39	4.13	10
044888		1.35		<0.5	4.45	9	350	2.0	5	0.21	<0.5	11	28	38	2.75	10
044889		1.15		<0.5	4.69	13	340	2.9	4	3.90	<0.5	8	28	38	2.92	10
044890		1.18		<0.5	3.49	9	260	1.4	2	0.06	<0.5	6	26	23	2.03	10
044891		0.81		<0.5	2.35	15	260	0.8	<2	0.17	<0.5	7	18	23	1.81	10
044892		1.27		<0.5	2.42	150	190	1.0	<2	0.06	0.8	10	27	25	4.98	10
044893		2.21		<0.5	1.90	45	230	0.8	5	0.20	0.6	13	17	30	2.54	<10
044894		1.26		<0.5	2.34	63	250	1.2	2	0.10	<0.5	8	15	27	2.36	<10
044895		0.97		<0.5	1.94	9	260	0.7	2	0.10	<0.5	14	15	28	1.38	<10
044896		1.41		<0.5	2.58	35	320	1.1	<2	0.11	<0.5	22	17	92	1.72	10
044897		1.50		0.5	2.22	176	210	1.1	2	0.09	0.8	13	21	39	3.40	<10
044898		1.40		<0.5	2.30	129	190	1.3	<2	0.09	0.9	8	19	35	3.82	10
044899		2.03		<0.5	2.47	25	250	0.9	3	0.05	<0.5	4	18	23	1.32	10
044900		1.42		<0.5	2.07	15	290	0.8	2	0.09	<0.5	5	23	17	1.36	<10
044901		0.98		<0.5	6.60	13	430	2.7	5	6.20	<0.5	10	42	48	3.83	20
044902		0.75		<0.5	3.46	<5	270	1.4	3	0.25	<0.5	5	26	18	1.64	10
044903		0.92		<0.5	3.42	6	290	1.0	3	0.05	<0.5	5	19	14	1.18	10
044904		1.06		<0.5	2.94	9	240	0.9	3	0.07	<0.5	6	20	22	1.51	10
044905		0.93		<0.5	5.82	15	280	3.2	<2	0.26	<0.5	9	38	35	3.32	10
044906		1.45		<0.5	3.66	16	520	1.7	3	0.10	<0.5	10	29	45	3.39	10



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 2 - B
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	ME-ICP61 K %	ME-ICP61 La ppm	ME-ICP61 Mg %	ME-ICP61 Mn ppm	ME-ICP61 Mo ppm	ME-ICP61 Na %	ME-ICP61 Ni ppm	ME-ICP61 P ppm	ME-ICP61 Pb ppm	ME-ICP61 S %	ME-ICP61 Sb ppm	ME-ICP61 Sc ppm	ME-ICP61 Sr ppm	ME-ICP61 Th ppm	ME-ICP61 Ti %
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
044867		4.58	30	1.15	878	<1	0.05	23	200	9	0.02	<5	12	28	20	0.25
044868		2.86	20	0.54	902	1	0.04	41	160	22	0.01	<5	9	31	<20	0.25
044869		2.70	20	0.40	1295	1	0.03	22	170	20	0.01	<5	8	31	<20	0.24
044870		1.47	10	0.12	672	<1	0.03	7	100	9	0.01	<5	4	28	<20	0.19
044871		1.38	10	0.07	587	<1	0.03	7	100	11	0.01	<5	3	33	<20	0.20
044872		1.73	10	0.12	1085	1	0.04	10	160	24	0.01	<5	6	42	<20	0.31
044873		1.92	20	0.08	322	1	0.04	5	120	65	0.02	<5	3	33	<20	0.19
044874		1.38	10	0.06	442	<1	0.03	8	140	53	0.01	<5	3	38	<20	0.17
044875		1.18	10	0.06	405	9	0.03	7	260	51	0.02	<5	3	54	<20	0.16
044876		2.47	20	0.33	835	1	0.04	17	200	17	0.02	<5	9	34	<20	0.27
044877		2.39	20	0.24	1175	1	0.04	16	190	27	0.02	<5	7	28	<20	0.21
044878		4.44	30	0.31	1240	1	0.05	17	150	38	0.01	<5	8	31	<20	0.27
044879		2.57	20	0.28	1385	1	0.04	18	180	34	0.02	<5	8	30	<20	0.23
044880		3.15	20	0.65	650	1	0.04	23	180	19	0.01	<5	13	27	<20	0.28
044881		1.82	10	0.24	594	1	0.03	8	150	13	0.01	<5	5	30	<20	0.23
044882		1.82	10	0.07	334	1	0.03	6	120	32	0.01	<5	3	33	<20	0.17
044883		0.82	10	0.05	413	1	0.03	5	130	55	0.01	<5	2	35	<20	0.12
044884		1.05	10	0.05	660	1	0.03	7	170	37	0.01	<5	3	52	<20	0.18
044885		1.59	20	0.08	495	1	0.04	5	150	8	0.01	<5	3	41	<20	0.18
044886		2.25	20	0.23	1360	1	0.04	17	130	18	0.01	<5	6	29	<20	0.22
044887		2.78	30	0.38	1420	1	0.05	22	140	15	0.01	<5	9	31	<20	0.28
044888		3.00	30	0.36	958	1	0.05	18	150	15	0.01	<5	7	30	<20	0.24
044889		3.47	20	1.30	766	<1	0.04	15	380	14	0.02	<5	8	33	<20	0.21
044890		2.26	20	0.16	901	1	0.04	8	100	17	0.01	<5	5	34	<20	0.24
044891		1.46	10	0.11	594	2	0.03	7	200	55	0.02	<5	4	35	<20	0.18
044892		0.86	10	0.08	1630	2	0.02	10	510	1500	0.01	<5	3	42	<20	0.12
044893		0.99	10	0.07	1240	2	0.03	12	200	86	0.01	<5	3	37	<20	0.14
044894		1.47	10	0.07	448	2	0.04	11	170	49	0.01	<5	3	38	<20	0.15
044895		0.72	10	0.06	1105	1	0.03	10	210	22	0.02	<5	3	40	<20	0.16
044896		1.53	10	0.10	757	1	0.03	22	210	32	0.01	<5	4	41	<20	0.17
044897		0.98	10	0.08	906	2	0.03	16	190	191	0.01	<5	3	30	<20	0.14
044898		1.04	10	0.08	967	2	0.03	11	230	1110	0.02	<5	3	37	<20	0.14
044899		1.90	10	0.06	264	1	0.03	5	150	190	0.01	<5	3	29	<20	0.16
044900		1.28	10	0.12	530	<1	0.03	7	110	66	0.01	<5	3	31	<20	0.14
044901		2.54	20	0.78	998	<1	0.03	19	480	36	0.03	<5	10	104	<20	0.20
044902		2.44	20	0.21	561	<1	0.04	8	170	12	0.02	<5	5	37	<20	0.21
044903		2.82	20	0.12	506	1	0.05	6	120	11	0.01	<5	4	31	<20	0.21
044904		1.89	20	0.09	685	<1	0.04	6	100	14	0.01	<5	4	27	<20	0.18
044905		2.98	30	0.53	937	1	0.04	17	140	25	0.01	<5	9	33	<20	0.28
044906		2.17	20	0.18	1810	1	0.04	11	120	13	0.01	<5	5	29	<20	0.21



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 2 - C
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		TI	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
044867		<10	<10	65	<10	32
044868		<10	<10	56	<10	22
044869		10	<10	58	<10	21
044870		<10	<10	31	<10	13
044871		<10	<10	28	<10	17
044872		10	<10	49	<10	17
044873		<10	<10	14	<10	56
044874		<10	<10	13	<10	74
044875		<10	<10	20	<10	137
044876		<10	<10	76	<10	26
044877		<10	<10	48	<10	23
044878		<10	<10	49	<10	20
044879		<10	<10	59	<10	29
044880		<10	<10	93	<10	45
044881		<10	<10	43	<10	21
044882		<10	<10	14	<10	67
044883		<10	<10	11	<10	147
044884		<10	<10	20	<10	105
044885		10	<10	20	<10	17
044886		<10	<10	49	<10	23
044887		10	<10	69	<10	26
044888		<10	<10	44	<10	26
044889		10	<10	41	<10	32
044890		<10	<10	29	<10	23
044891		10	<10	28	<10	59
044892		<10	<10	48	<10	1625
044893		<10	<10	23	<10	460
044894		<10	<10	25	<10	346
044895		<10	<10	22	<10	39
044896		<10	<10	26	<10	66
044897		10	<10	40	<10	1090
044898		<10	<10	35	<10	1770
044899		<10	<10	18	<10	322
044900		<10	<10	19	<10	110
044901		10	<10	50	<10	103
044902		10	<10	25	<10	21
044903		<10	<10	21	<10	12
044904		<10	<10	23	<10	14
044905		10	<10	53	<10	27
044906		10	<10	32	<10	22



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 3 - A
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	PUL-QC Pass75um % 0.01	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
044907		1.27		<0.5	4.18	27	660	2.1	2	0.12	<0.5	22	32	146	4.42	10
044908		0.89		<0.5	4.37	38	400	2.2	3	0.15	<0.5	31	31	198	5.01	10
044909		0.94		<0.5	4.00	38	310	1.9	3	0.12	<0.5	20	27	167	4.40	10
044910		0.99		<0.5	2.62	21	230	0.9	<2	0.08	<0.5	6	17	20	1.38	10
044911		0.95		<0.5	1.88	14	170	1.1	<2	0.14	<0.5	6	17	16	2.02	<10
044912		1.08		<0.5	3.32	76	370	2.3	<2	0.30	0.9	29	21	67	4.68	10
044913		1.69	98.3	<0.5	2.24	141	210	1.2	<2	0.08	0.7	11	19	39	4.33	10
044914		0.95	97.2	<0.5	1.68	6	200	0.6	<2	0.20	<0.5	9	18	22	1.17	<10
044915		2.18	98.3	<0.5	1.92	154	160	0.8	<2	0.08	0.6	10	21	21	4.16	10
044916		0.81	96.3	<0.5	4.05	24	410	1.5	<2	0.44	<0.5	20	26	19	2.93	10
044917		1.07	98.2	<0.5	2.69	5	280	0.9	2	0.18	<0.5	7	22	12	2.41	10
044918		1.02		<0.5	2.66	102	390	1.2	<2	0.15	1.6	33	22	39	4.29	10
044919		0.73		<0.5	2.78	28	230	0.9	5	0.14	<0.5	14	20	23	2.65	10
044920		1.63		<0.5	1.67	20	220	1.1	<2	0.21	<0.5	12	17	18	2.81	<10
044921		1.94		<0.5	1.85	10	220	0.6	<2	0.03	<0.5	3	12	11	0.99	<10
044922		0.96		<0.5	7.25	19	350	2.6	3	0.10	<0.5	23	63	193	3.24	20
044923		0.96		<0.5	3.24	21	410	1.5	<2	0.43	<0.5	15	21	79	2.95	10
044924		1.06		<0.5	3.88	8	310	1.7	6	0.10	<0.5	7	28	17	2.14	10
044925		0.94		<0.5	4.90	7	340	1.8	<2	0.15	<0.5	10	33	37	1.67	10
044926		1.13		<0.5	2.09	<5	230	0.8	<2	0.20	0.8	8	18	15	2.82	<10
044927		0.85		<0.5	3.63	14	390	1.3	<2	0.14	0.5	10	30	16	3.63	10
044928		0.93		<0.5	4.02	65	550	1.6	2	0.12	0.7	21	41	24	5.07	10
044929		1.02		<0.5	3.16	46	350	1.0	2	0.12	0.5	13	28	22	2.92	10
044930		2.17		<0.5	2.02	151	160	0.8	<2	0.06	2.0	7	19	20	3.55	10
044931		1.36		<0.5	2.56	235	200	1.2	<2	0.13	3.7	15	23	33	4.46	10
044932		0.97		<0.5	2.29	17	390	1.5	<2	0.12	<0.5	16	17	39	2.51	10
044933		1.50		<0.5	2.94	38	340	2.3	3	0.16	<0.5	16	24	33	2.49	10
044934		1.11		<0.5	2.08	15	180	1.1	<2	0.05	<0.5	6	19	18	1.71	<10
044935		1.42		<0.5	2.75	6	230	1.3	2	0.07	<0.5	7	24	12	1.93	10
044936		1.25		<0.5	2.46	16	310	1.0	<2	0.17	<0.5	9	21	39	2.61	10
044937		1.28		<0.5	3.28	12	300	1.5	4	0.12	<0.5	10	30	49	3.19	10
044938		1.21		<0.5	2.81	8	480	1.1	<2	0.09	<0.5	9	23	15	2.67	10
044939		1.66		<0.5	2.34	5	230	0.7	4	0.09	<0.5	4	15	10	1.39	<10
044940		0.99		<0.5	3.98	20	250	1.3	2	0.13	<0.5	11	29	20	3.40	10
044941		0.65		<0.5	5.12	150	320	1.8	<2	0.24	1.5	35	41	304	6.71	10
044942		2.10		<0.5	2.60	134	220	1.2	<2	0.07	1.4	12	22	27	3.59	10
044943		1.01		0.5	5.00	180	480	1.3	3	0.19	2.1	15	32	29	3.73	10
044944		1.10		<0.5	3.19	67	500	1.3	2	0.08	0.9	19	27	28	3.01	10
044945		1.30		<0.5	2.83	24	290	1.0	2	0.08	<0.5	8	22	22	1.77	10
044946		2.02	98.1	<0.5	1.61	6	190	0.5	2	0.05	<0.5	6	11	13	0.95	<10



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 3 - B
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	ME-ICP61 K %	ME-ICP61 La ppm	ME-ICP61 Mg %	ME-ICP61 Mn ppm	ME-ICP61 Mo ppm	ME-ICP61 Na %	ME-ICP61 Ni ppm	ME-ICP61 P ppm	ME-ICP61 Pb ppm	ME-ICP61 S %	ME-ICP61 Sb ppm	ME-ICP61 Sc ppm	ME-ICP61 Sr ppm	ME-ICP61 Th ppm	ME-ICP61 Ti %
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
044907		2.19	20	0.20	2830	1	0.04	15	150	23	0.01	<5	7	29	<20	0.21
044908		1.76	20	0.17	2600	1	0.03	19	210	59	0.01	<5	7	34	<20	0.21
044909		1.38	20	0.16	2040	1	0.03	19	190	87	0.01	<5	6	31	<20	0.18
044910		1.75	10	0.09	243	1	0.03	5	170	35	0.01	<5	4	33	<20	0.16
044911		0.71	10	0.08	254	1	0.03	10	190	41	0.01	<5	3	32	<20	0.13
044912		0.52	10	0.14	1715	2	0.02	43	630	237	0.03	<5	5	42	<20	0.15
044913		0.98	10	0.07	483	2	0.03	19	280	164	0.02	<5	3	41	<20	0.13
044914		0.83	10	0.07	367	1	0.03	11	240	53	0.02	<5	2	47	<20	0.13
044915		0.58	10	0.06	1205	1	0.02	19	190	456	0.01	<5	3	25	<20	0.11
044916		0.97	20	0.18	1460	<1	0.03	19	200	42	0.02	<5	6	67	<20	0.20
044917		1.56	20	0.14	591	1	0.03	11	280	35	0.02	<5	4	62	<20	0.16
044918		0.70	10	0.13	3310	2	0.02	42	410	147	0.02	<5	4	32	<20	0.16
044919		0.51	10	0.05	1010	1	0.02	12	350	57	0.02	<5	5	42	<20	0.18
044920		0.65	10	0.06	642	1	0.03	17	310	40	0.02	<5	3	39	<20	0.11
044921		1.19	10	0.05	167	1	0.03	6	130	18	0.01	<5	3	32	<20	0.14
044922		5.44	30	0.60	1415	1	0.05	32	190	23	0.01	<5	17	35	<20	0.36
044923		1.86	20	0.23	1490	1	0.04	11	250	77	0.02	<5	5	36	<20	0.17
044924		2.94	20	0.20	1255	<1	0.05	8	140	9	0.01	<5	6	38	<20	0.24
044925		3.77	30	0.31	539	<1	0.06	11	150	13	0.01	<5	7	44	<20	0.26
044926		0.85	10	0.13	1205	1	0.03	12	540	30	0.01	<5	3	48	<20	0.15
044927		0.81	20	0.12	2490	<1	0.03	18	220	37	0.01	<5	5	47	<20	0.20
044928		0.86	20	0.16	4130	1	0.02	26	220	65	0.01	<5	6	38	<20	0.17
044929		1.59	20	0.11	1515	2	0.03	15	170	156	0.01	<5	4	35	<20	0.17
044930		0.87	10	0.06	1170	1	0.02	12	150	414	0.01	<5	3	24	<20	0.13
044931		0.75	10	0.08	1835	3	0.02	19	260	281	0.01	6	4	28	<20	0.16
044932		0.36	10	0.06	715	1	0.02	16	440	50	0.01	<5	4	39	<20	0.14
044933		2.11	20	0.08	574	2	0.04	14	370	38	0.02	<5	5	47	<20	0.18
044934		1.29	10	0.11	339	1	0.03	7	150	21	0.01	<5	3	29	<20	0.15
044935		1.81	20	0.15	621	<1	0.03	9	100	12	0.01	<5	4	29	<20	0.21
044936		1.48	10	0.13	1030	1	0.03	9	200	61	0.01	<5	4	37	<20	0.16
044937		1.98	20	0.16	1930	1	0.03	10	130	15	0.01	<5	5	29	<20	0.18
044938		0.78	20	0.10	1815	1	0.03	11	180	46	0.01	<5	4	47	<20	0.16
044939		1.91	10	0.10	730	1	0.04	7	110	16	0.01	<5	3	41	<20	0.14
044940		0.77	20	0.14	2390	1	0.03	15	200	35	0.01	5	6	48	<20	0.18
044941		0.94	20	0.33	3320	3	0.03	37	360	653	0.02	<5	7	45	<20	0.20
044942		1.18	10	0.08	1345	2	0.03	16	160	162	0.01	6	4	26	<20	0.14
044943		4.33	30	0.16	1560	5	0.06	23	200	143	0.02	<5	7	36	20	0.26
044944		2.48	20	0.09	1975	4	0.04	20	230	59	0.01	<5	5	31	<20	0.18
044945		2.16	20	0.06	383	2	0.04	8	180	36	0.01	<5	4	35	<20	0.19
044946		0.98	10	0.04	306	1	0.03	4	110	10	0.01	<5	3	30	<20	0.18



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 3 - C
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		TI	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
044907		10	<10	40	<10	28
044908		<10	<10	51	<10	58
044909		10	<10	50	<10	126
044910		<10	<10	24	<10	159
044911		<10	<10	21	<10	586
044912		<10	<10	35	<10	3020
044913		<10	<10	45	<10	1080
044914		<10	<10	78	<10	189
044915		<10	<10	39	<10	1410
044916		10	<10	53	<10	303
044917		<10	<10	39	<10	332
044918		<10	<10	45	<10	2620
044919		<10	<10	33	<10	403
044920		<10	<10	22	<10	577
044921		<10	<10	14	<10	103
044922		<10	<10	128	<10	38
044923		10	<10	29	<10	171
044924		<10	<10	28	<10	20
044925		10	<10	32	<10	18
044926		<10	<10	26	<10	775
044927		<10	<10	47	<10	501
044928		<10	<10	76	<10	410
044929		<10	<10	55	<10	449
044930		<10	<10	29	<10	1850
044931		<10	<10	39	<10	2840
044932		<10	<10	28	<10	427
044933		<10	<10	29	<10	370
044934		<10	<10	22	<10	84
044935		10	<10	27	<10	37
044936		<10	<10	32	<10	103
044937		<10	<10	31	<10	26
044938		<10	<10	34	<10	217
044939		<10	<10	19	<10	34
044940		<10	<10	51	<10	130
044941		<10	<10	91	<10	2130
044942		<10	<10	36	<10	1685
044943		<10	<10	46	<10	1695
044944		<10	<10	33	<10	774
044945		<10	<10	29	<10	199
044946		10	<10	15	<10	24



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 4 - A
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	PUL-QC Pass75um % 0.01	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
044947		2.03	98.1	<0.5	0.90	<5	90	<0.5	<2	0.04	<0.5	2	7	13	0.74	<10
044948		1.43	95.7	<0.5	2.32	7	240	1.0	<2	0.13	<0.5	6	17	17	1.71	10
044949		0.95	93.3	<0.5	4.75	17	420	2.4	5	0.59	<0.5	15	32	112	4.00	10
044950		1.55	89.8	<0.5	1.83	<5	210	0.9	2	0.06	<0.5	5	13	8	1.56	<10
044951		1.92		<0.5	0.47	<5	250	<0.5	<2	0.02	<0.5	1	5	9	0.65	<10
044952		1.71		<0.5	1.35	<5	230	<0.5	<2	0.07	<0.5	7	12	11	1.22	<10
044953		1.70		<0.5	1.38	<5	190	<0.5	3	0.03	<0.5	1	10	10	0.88	<10
044954		2.41		<0.5	1.01	8	100	<0.5	2	0.06	<0.5	1	15	12	1.14	<10
044955		0.99		<0.5	2.59	34	230	0.8	<2	0.09	0.5	7	20	17	1.98	10
044956		1.43		<0.5	3.31	92	270	1.1	2	0.06	1.0	11	33	30	3.80	10
044957		1.41		0.5	4.48	99	390	1.4	<2	0.11	3.1	24	33	48	4.29	10
044958		1.17		<0.5	2.62	23	280	0.8	<2	0.08	<0.5	11	20	21	2.00	10
044959		0.96		<0.5	4.24	13	320	1.6	2	0.58	<0.5	10	28	19	2.29	10
044960		1.20		<0.5	2.95	21	240	1.1	2	0.21	<0.5	8	20	20	2.43	10
044961		1.37		<0.5	1.76	6	150	0.6	2	0.08	<0.5	6	16	12	2.41	<10
044962		0.93		<0.5	1.75	<5	200	0.7	<2	0.14	<0.5	11	16	13	3.24	<10
044963		1.83		<0.5	1.91	5	260	0.6	<2	0.05	<0.5	5	13	11	1.60	<10
044964		1.34		<0.5	1.92	<5	210	0.6	<2	0.05	<0.5	5	13	17	1.37	<10
044965		1.93		<0.5	1.15	19	110	0.5	2	0.08	1.0	4	14	16	1.24	<10
044966		1.68		<0.5	1.08	12	90	<0.5	<2	0.05	0.5	2	17	13	1.26	<10
044967		1.76		<0.5	2.08	40	160	0.7	<2	0.04	0.7	5	21	21	2.18	10
044968		1.03		<0.5	5.32	71	370	1.8	<2	0.27	1.7	16	40	37	4.42	10
044969		0.82		<0.5	3.30	14	270	1.2	<2	0.44	<0.5	9	22	21	1.83	10
044970		1.08		<0.5	3.43	18	260	1.4	<2	0.32	<0.5	12	26	29	2.09	10
044971		0.95		<0.5	4.60	21	320	2.1	<2	0.67	<0.5	11	30	25	2.42	10
044972		1.04		<0.5	2.84	20	260	1.2	<2	0.14	<0.5	9	21	21	2.00	10
044973		0.89		<0.5	2.49	15	190	0.8	<2	0.11	<0.5	10	24	14	2.88	10
044974		1.18		<0.5	2.47	9	220	1.0	<2	0.12	<0.5	7	21	16	1.82	10
044975		1.12		<0.5	2.37	7	230	0.9	<2	0.23	<0.5	7	18	18	1.92	10
044976		0.82		<0.5	5.33	24	370	2.4	<2	0.22	<0.5	13	35	35	3.05	10
044977		0.99		<0.5	2.78	26	250	1.1	<2	0.14	0.5	11	20	27	2.02	10
044978		0.89	94.3	<0.5	2.97	29	290	1.1	<2	0.11	0.7	10	26	29	2.91	10
044979		1.89	92.7	<0.5	3.44	85	440	1.4	<2	0.10	2.1	16	37	44	4.41	10
044980		1.43	96.2	<0.5	1.91	64	170	0.8	<2	0.16	1.6	6	27	25	2.93	10
044981		1.91	95.4	<0.5	2.03	57	140	0.7	<2	0.07	0.6	5	34	18	3.07	10
044982		1.98	96.5	<0.5	1.19	27	90	<0.5	<2	0.05	0.5	3	16	12	1.28	<10
044983		1.94		<0.5	1.33	<5	160	<0.5	<2	0.04	<0.5	2	10	9	0.72	<10
044984		1.90		<0.5	0.92	<5	200	<0.5	<2	0.05	<0.5	3	10	14	1.18	<10
044985		1.46		<0.5	1.05	<5	90	<0.5	<2	0.03	<0.5	2	10	12	1.06	<10
044986		1.75		<0.5	1.33	7	230	<0.5	<2	0.24	<0.5	4	11	16	1.20	<10



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 4 - B
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

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
		K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th
		%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20
044947		0.35	10	0.03	150	<1	0.01	5	60	6	0.01	<5	1	20	<20
044948		1.35	10	0.15	581	1	0.03	7	140	16	0.01	<5	4	25	<20
044949		2.66	20	0.41	2210	<1	0.03	14	300	29	0.03	<5	8	28	<20
044950		1.19	10	0.09	266	1	0.03	6	100	7	0.01	<5	3	24	<20
044951		0.17	10	0.02	77	<1	0.01	3	60	3	<0.01	<5	1	16	<20
044952		0.67	10	0.04	430	1	0.03	3	100	7	0.01	<5	2	29	<20
044953		0.88	10	0.03	66	1	0.02	4	60	9	0.01	<5	2	21	<20
044954		0.47	10	0.03	159	1	0.01	4	70	11	0.01	<5	1	16	<20
044955		1.65	20	0.07	719	1	0.03	10	120	61	0.01	<5	4	23	<20
044956		1.55	20	0.09	1375	2	0.03	17	150	177	0.01	<5	5	29	<20
044957		1.54	20	0.18	2610	1	0.03	24	200	317	0.01	<5	7	35	<20
044958		1.41	20	0.11	1185	1	0.03	11	120	61	0.01	<5	4	34	<20
044959		3.14	20	0.33	1185	1	0.05	14	290	29	0.03	<5	6	32	<20
044960		1.64	20	0.23	1440	1	0.04	11	170	37	0.02	<5	5	28	<20
044961		0.50	10	0.06	1055	<1	0.02	9	160	37	0.01	<5	3	28	<20
044962		0.60	10	0.07	881	<1	0.02	13	360	65	0.01	<5	3	37	<20
044963		1.17	10	0.07	301	<1	0.04	5	160	10	0.01	<5	3	28	<20
044964		1.00	10	0.08	291	<1	0.03	5	160	7	0.01	<5	4	25	<20
044965		0.45	10	0.05	409	<1	0.01	6	90	25	0.01	<5	2	15	<20
044966		0.45	10	0.03	188	<1	0.02	4	100	41	0.01	<5	2	17	<20
044967		0.72	10	0.06	651	1	0.02	7	120	47	<0.01	<5	3	22	<20
044968		1.06	20	0.28	2840	2	0.03	25	260	114	0.02	<5	8	39	<20
044969		2.70	20	0.30	722	1	0.04	10	170	18	0.02	<5	5	25	<20
044970		2.24	20	0.24	821	<1	0.04	11	190	27	0.02	<5	6	30	<20
044971		3.38	20	0.49	794	<1	0.04	15	250	33	0.02	<5	7	33	<20
044972		1.97	20	0.22	1190	<1	0.03	10	150	24	0.01	<5	4	28	<20
044973		1.05	20	0.07	1035	1	0.02	11	230	57	0.01	<5	4	31	<20
044974		1.49	20	0.12	675	<1	0.03	8	120	28	0.01	<5	4	28	<20
044975		1.46	20	0.12	899	<1	0.03	9	140	29	0.01	<5	4	28	<20
044976		4.08	30	0.48	1100	1	0.05	18	190	19	0.01	<5	8	33	<20
044977		2.03	20	0.12	756	<1	0.03	13	110	31	0.01	<5	4	24	<20
044978		1.34	20	0.25	2240	1	0.03	14	160	32	0.01	<5	5	28	<20
044979		0.90	20	0.17	3270	1	0.03	23	240	303	0.01	<5	6	33	<20
044980		0.72	10	0.14	810	1	0.02	9	180	164	0.01	<5	3	23	<20
044981		0.62	10	0.06	653	<1	0.02	8	150	94	0.01	<5	3	21	<20
044982		0.48	10	0.03	351	<1	0.01	4	90	19	<0.01	<5	2	15	<20
044983		0.84	10	0.05	217	<1	0.03	2	90	9	0.01	<5	2	23	<20
044984		0.40	10	0.05	215	<1	0.01	3	130	7	0.01	<5	2	19	<20
044985		0.35	10	0.04	119	<1	0.01	2	150	7	0.01	<5	2	24	<20
044986		0.82	10	0.09	438	<1	0.03	3	170	7	0.01	<5	2	24	<20



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 4 - C
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		TI	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
044947		<10	<10	7	<10	20
044948		<10	<10	23	<10	28
044949		<10	<10	43	<10	46
044950		<10	<10	16	<10	12
044951		<10	<10	4	<10	11
044952		<10	<10	14	<10	13
044953		<10	<10	19	<10	18
044954		<10	<10	12	<10	172
044955		<10	<10	27	<10	473
044956		<10	<10	57	<10	1205
044957		<10	<10	84	<10	2390
044958		<10	<10	32	<10	356
044959		<10	<10	33	<10	31
044960		<10	<10	29	<10	70
044961		<10	<10	24	<10	152
044962		<10	<10	25	<10	201
044963		<10	<10	17	<10	17
044964		<10	<10	21	<10	23
044965		<10	<10	16	<10	396
044966		<10	<10	15	<10	262
044967		<10	<10	35	<10	514
044968		10	<10	77	<10	1560
044969		10	<10	28	<10	111
044970		10	<10	30	<10	33
044971		10	<10	40	<10	32
044972		10	<10	26	<10	79
044973		<10	<10	32	<10	68
044974		<10	<10	26	<10	34
044975		<10	<10	24	<10	65
044976		10	<10	51	<10	79
044977		<10	<10	36	<10	169
044978		10	<10	46	<10	253
044979		<10	<10	77	<10	1590
044980		<10	<10	39	<10	1100
044981		10	<10	46	<10	689
044982		<10	<10	17	<10	266
044983		<10	<10	8	<10	22
044984		<10	<10	10	<10	15
044985		10	<10	12	<10	15
044986		<10	<10	13	<10	17



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Page: 5 - A
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

Project: Exploration_2017

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	PUL-QC Pass75um % 0.01	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
044987		0.74		<0.5	3.00	22	340	1.1	<2	0.76	<0.5	9	22	29	1.98	10
044988		1.28		<0.5	3.66	38	540	1.8	<2	0.40	0.5	16	32	48	4.61	10
044989		1.20		<0.5	2.79	23	300	1.0	<2	0.31	<0.5	7	22	23	2.21	10
044990		1.13		<0.5	4.62	11	370	1.8	<2	1.22	0.6	11	30	25	2.24	10
044991		1.08		<0.5	3.74	19	330	1.6	<2	0.16	<0.5	12	24	32	2.03	10
044992		1.33		<0.5	3.80	16	240	2.0	<2	7.74	<0.5	15	27	25	1.91	10
044993		1.01		0.6	2.55	18	230	0.9	<2	0.21	<0.5	11	18	14	1.56	<10
044994		1.48		<0.5	2.19	7	200	0.8	<2	0.06	<0.5	7	16	15	1.56	<10
044995		1.09		<0.5	1.77	5	170	0.7	<2	0.11	<0.5	7	14	8	1.67	<10
044996		1.48		<0.5	1.53	5	240	0.5	<2	0.17	<0.5	3	11	8	1.12	<10
044997		1.28		<0.5	1.30	9	140	<0.5	<2	0.09	<0.5	5	11	11	0.94	<10
044998		1.90		<0.5	1.36	20	110	0.5	<2	0.11	<0.5	4	13	12	1.32	<10
044999		1.98		<0.5	1.42	7	100	0.5	<2	0.04	<0.5	2	14	10	1.14	<10
045000		1.52		<0.5	1.64	11	120	0.6	<2	0.08	<0.5	3	21	14	1.55	<10
042201		1.39		<0.5	2.43	22	240	1.1	<2	0.13	<0.5	7	32	30	3.16	10
042202		1.51		<0.5	2.84	30	430	1.2	<2	0.15	<0.5	11	39	30	3.57	10
042203		0.80		<0.5	3.83	14	330	1.4	<2	1.89	<0.5	8	25	23	1.95	10
042204		0.79	98.7	<0.5	3.59	24	330	1.5	<2	0.18	<0.5	19	26	82	2.13	10
042205		0.99		<0.5	5.08	31	250	2.4	<2	0.42	<0.5	18	39	48	3.19	10
042206		0.83		0.5	4.20	29	440	1.6	<2	0.66	<0.5	14	31	44	2.81	10
042207		0.90		0.5	3.10	27	280	1.2	<2	0.10	<0.5	14	22	36	1.98	10
042208		1.47		<0.5	2.44	7	210	0.9	<2	0.23	<0.5	6	18	10	1.98	10
042209		0.85		<0.5	1.43	<5	160	<0.5	<2	0.24	<0.5	6	10	7	1.22	<10
042210		1.40		<0.5	2.09	8	200	0.5	<2	0.06	<0.5	4	11	7	1.40	<10
042211		1.06		<0.5	1.05	<5	140	<0.5	<2	0.06	<0.5	3	8	7	0.78	<10
042212		0.95		<0.5	3.42	18	310	0.8	<2	0.12	<0.5	6	24	14	1.57	10
042213		1.60		<0.5	1.54	5	110	0.5	<2	0.04	<0.5	1	13	9	0.85	<10
042214		1.62		<0.5	1.76	<5	110	0.6	<2	0.05	<0.5	3	14	9	1.35	<10
042215		1.62		<0.5	2.00	6	130	0.7	<2	0.05	<0.5	4	16	10	1.46	<10
042216		1.08		<0.5	3.60	15	370	1.3	<2	0.09	<0.5	10	27	19	2.98	10
042217		1.20		<0.5	3.73	10	290	1.4	<2	0.50	<0.5	9	26	18	2.14	10
042218		1.22		<0.5	3.71	12	300	1.6	<2	0.70	<0.5	9	27	35	1.79	10
042219		0.76		<0.5	4.36	15	360	2.4	<2	0.96	<0.5	14	32	49	2.30	10
042220		0.84		<0.5	3.76	19	310	1.5	<2	0.15	<0.5	8	23	19	1.81	10
042221		0.92		<0.5	4.14	14	340	1.7	<2	0.19	<0.5	10	26	20	2.13	10
042222		0.84		<0.5	3.57	26	350	1.6	<2	0.32	<0.5	11	25	29	2.18	10
042223		1.09		<0.5	1.86	10	220	0.9	<2	0.26	<0.5	13	15	34	2.19	<10
042224		1.35		<0.5	2.65	9	300	1.0	<2	0.39	<0.5	9	20	20	1.89	10
042225		0.87		<0.5	2.92	23	290	1.2	<2	0.25	<0.5	9	22	33	2.00	10
042226		0.87	96.9	<0.5	4.13	11	320	2.0	<2	0.32	<0.5	9	31	29	2.54	10



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 5 - B
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

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
		K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th
		%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20
044987		1.16	10	0.32	1260	<1	0.02	14	360	29	0.03	<5	4	29	<20
044988		1.07	20	0.88	4650	1	0.03	18	320	51	0.01	<5	6	33	<20
044989		1.77	20	0.15	1090	<1	0.03	9	200	54	0.02	<5	4	29	<20
044990		3.40	30	0.75	934	<1	0.05	16	470	21	0.04	<5	8	36	<20
044991		3.04	20	0.22	969	1	0.04	12	120	50	0.01	<5	6	32	<20
044992		2.47	20	2.18	679	<1	0.03	13	300	41	0.02	<5	6	41	<20
044993		1.62	10	0.14	784	<1	0.03	8	110	211	0.01	<5	4	26	<20
044994		1.37	20	0.09	600	<1	0.03	5	100	34	0.01	<5	3	29	<20
044995		0.68	10	0.07	723	<1	0.02	7	160	19	0.01	<5	3	35	<20
044996		0.86	10	0.06	310	<1	0.03	3	160	8	0.01	<5	2	31	<20
044997		0.55	10	0.05	306	<1	0.02	4	110	12	0.01	<5	2	20	<20
044998		0.44	10	0.04	433	<1	0.01	3	100	22	0.01	<5	2	18	<20
044999		0.42	10	0.04	290	<1	0.01	3	100	15	<0.01	<5	2	19	<20
045000		0.52	10	0.08	395	<1	0.02	5	120	12	0.01	<5	3	21	<20
042201		0.60	10	0.16	1455	<1	0.02	8	180	25	0.01	<5	4	24	<20
042202		0.79	20	0.09	2760	<1	0.02	13	130	47	<0.01	<5	5	27	<20
042203		2.87	20	0.69	736	<1	0.04	12	410	14	0.04	<5	6	33	<20
042204		2.67	20	0.22	1020	<1	0.04	16	150	44	0.01	<5	6	32	<20
042205		2.40	20	0.44	911	<1	0.03	18	190	90	0.02	<5	9	31	<20
042206		2.82	20	0.48	1370	<1	0.04	15	240	52	0.03	<5	7	31	<20
042207		2.24	20	0.14	1095	<1	0.03	13	150	37	0.01	<5	5	30	<20
042208		1.52	10	0.17	635	<1	0.03	8	180	20	0.01	<5	4	30	<20
042209		0.68	10	0.07	287	<1	0.02	2	210	8	0.02	<5	2	72	<20
042210		0.99	10	0.05	247	<1	0.04	2	160	10	0.01	<5	3	24	<20
042211		0.51	10	0.03	303	<1	0.02	2	100	6	0.01	<5	3	25	<20
042212		2.85	20	0.08	676	<1	0.04	10	120	34	0.01	<5	5	24	<20
042213		0.54	10	0.05	259	<1	0.02	2	90	5	0.01	<5	2	20	<20
042214		0.47	10	0.05	461	<1	0.02	3	100	7	0.01	<5	2	21	<20
042215		0.49	10	0.06	629	<1	0.02	4	110	7	<0.01	<5	3	22	<20
042216		0.97	20	0.12	2210	<1	0.03	13	170	18	0.01	<5	6	35	<20
042217		2.39	20	0.49	819	<1	0.04	11	270	13	0.03	<5	6	31	<20
042218		2.51	20	0.46	677	<1	0.03	11	260	21	0.03	<5	6	30	<20
042219		2.89	20	0.67	1205	<1	0.04	15	430	23	0.05	<5	7	35	<20
042220		3.17	20	0.21	670	<1	0.04	11	120	26	0.01	<5	6	31	<20
042221		3.11	20	0.26	709	1	0.05	13	130	25	0.01	<5	6	34	<20
042222		2.21	20	0.25	1295	<1	0.03	17	230	40	0.02	<5	6	28	<20
042223		0.66	10	0.12	1550	<1	0.02	16	250	40	0.02	<5	3	34	<20
042224		1.40	20	0.18	903	<1	0.03	11	190	34	0.02	<5	4	34	<20
042225		2.02	20	0.15	534	<1	0.03	8	210	19	0.02	<5	5	30	<20
042226		2.90	20	0.46	756	1	0.04	16	230	15	0.02	<5	7	31	<20



Australian Laboratory Services Pty. Ltd.
 32 Shand Street
 Stafford
 Brisbane QLD 4053
 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.

Project: Exploration_2017

Page: 5 - C
 Total # Pages: 6 (A - C)
 Plus Appendix Pages
 Finalized Date: 12-JUL-2017
 Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		TI	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
044987		<10	<10	30	<10	167
044988		10	<10	68	<10	344
044989		<10	<10	40	<10	102
044990		10	<10	35	<10	93
044991		10	<10	33	<10	23
044992		10	<10	31	<10	20
044993		<10	<10	23	<10	24
044994		<10	<10	23	<10	23
044995		<10	<10	22	<10	42
044996		<10	<10	12	<10	9
044997		<10	<10	16	<10	14
044998		<10	<10	22	<10	20
044999		10	<10	21	<10	24
045000		<10	<10	24	<10	51
042201		10	<10	51	<10	76
042202		10	<10	62	<10	115
042203		<10	<10	29	<10	26
042204		10	<10	34	<10	28
042205		10	<10	48	<10	23
042206		10	<10	40	<10	25
042207		10	<10	31	<10	56
042208		<10	<10	24	<10	56
042209		10	<10	18	<10	12
042210		10	<10	16	<10	10
042211		10	<10	13	<10	10
042212		10	<10	29	<10	19
042213		<10	<10	16	<10	16
042214		<10	<10	20	<10	38
042215		10	<10	22	<10	38
042216		<10	<10	49	<10	50
042217		10	<10	30	<10	28
042218		10	<10	30	<10	22
042219		<10	<10	35	<10	32
042220		10	<10	31	<10	14
042221		10	<10	36	<10	17
042222		10	<10	34	<10	72
042223		10	<10	22	<10	92
042224		<10	<10	26	<10	55
042225		10	<10	33	<10	22
042226		<10	<10	37	<10	23



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 6 - A
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	PUL-QC Pass75um %	ME-ICP61 Ag ppm	ME-ICP61 Al %	ME-ICP61 As ppm	ME-ICP61 Ba ppm	ME-ICP61 Be ppm	ME-ICP61 Bi ppm	ME-ICP61 Ca %	ME-ICP61 Cd ppm	ME-ICP61 Co ppm	ME-ICP61 Cr ppm	ME-ICP61 Cu ppm	ME-ICP61 Fe %	ME-ICP61 Ga ppm
		0.02	0.01	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
042227		1.15		<0.5	5.24	19	410	2.5	<2	0.18	<0.5	12	37	24	3.14	10
042228		0.85		<0.5	2.67	16	250	1.0	<2	0.14	<0.5	10	19	39	1.66	10
042229		1.08		<0.5	2.76	13	240	1.0	<2	0.10	<0.5	9	20	21	1.73	10
042230		1.49		<0.5	0.99	6	60	<0.5	<2	0.05	<0.5	2	13	6	0.99	<10
042231		0.96		<0.5	1.51	6	80	0.5	<2	0.05	<0.5	2	14	8	1.11	<10
042232		1.39		<0.5	1.21	8	80	<0.5	<2	0.03	<0.5	3	12	8	1.17	<10
042233		0.94		<0.5	2.06	9	150	0.6	<2	0.16	<0.5	4	24	10	1.83	<10



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 6 - B
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

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
		K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th
		%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20
042227		3.67	30	0.53	1040	1	0.05	15	180	25	0.01	<5	9	31	<20
042228		1.88	20	0.12	930	1	0.04	9	110	25	0.01	<5	4	29	<20
042229		1.96	20	0.13	713	<1	0.03	10	90	19	0.01	<5	4	26	<20
042230		0.21	10	0.06	103	<1	0.01	2	80	6	0.01	<5	2	14	<20
042231		0.30	10	0.04	354	<1	0.01	5	90	4	0.01	<5	2	15	<20
042232		0.34	10	0.03	342	<1	0.01	3	80	6	0.01	<5	2	16	<20
042233		0.41	20	0.04	349	<1	0.02	9	200	9	0.02	<5	4	33	<20



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: 6 - C
Total # Pages: 6 (A - C)
Plus Appendix Pages
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

Sample Description	Method Analyte Units LOR	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Ti	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
042227		<10	<10	48	<10	21
042228		10	<10	23	<10	10
042229		10	<10	26	<10	10
042230		<10	<10	14	<10	31
042231		<10	<10	18	<10	31
042232		10	<10	19	<10	14
042233		<10	<10	42	<10	28



Australian Laboratory Services Pty. Ltd.

32 Shand Street
Stafford
Brisbane QLD 4053
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.

Project: Exploration_2017

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 12-JUL-2017
Account: MCARIV

CERTIFICATE OF ANALYSIS MI17128355

CERTIFICATE COMMENTS

ACCREDITATION COMMENTS

Applies to Method:

NATA Accredited. Corporate Accreditation No: 825, Corporate Site No: 818. The Technical Signatory is Samantha Profke, ICPAES Supervising Chemist
ME-ICP61

LABORATORY ADDRESSES

Applies to Method:

Processed at ALS Mount Isa located at Unit 4, 16 Enterprise Rd, Mount Isa, QLD, Australia.

BAG-01

LEV-01

LOG-22

PUL-32

PUL-QC

SPL-21

WEI-21

Applies to Method:

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
ME-ICP61