



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/geochemistry

Page: 1
Total # Pages: 2 (A - D)
Plus Appendix Pages
Finalized Date: 27-OCT-2017
Account: TODRIV

CERTIFICATE AD17205394

This report is for 35 Soil samples submitted to our lab in Adelaide, SA, Australia on 25-SEP-2017.

The following have access to data associated with this certificate:

PAUL BURTON
CATH WETHERBY

KIM GREY

GAVIN OTTO

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode
LOG-22	Sample login - Rcd w/o BarCode
LEV-01	Waste Disposal Levy
PUL-31	Pulverize split to 85% <75 um
PUL-QC	Pulverizing QC Test

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-MS89L	Super Trace DL Na2O2 by ICP-MS	ICP-MS

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:

Colin Ramshaw, Vancouver 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/geochemistry

Page: 2 - A

Total # Pages: 2 (A - D)

Plus Appendix Pages

Finalized Date: 27-OCT-2017

Account: TODRIV

CERTIFICATE OF ANALYSIS AD17205394

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	ME-MS89L Ag ppm 5	ME-MS89L As ppm 4	ME-MS89L Ba ppm 2	ME-MS89L Be ppm 0.4	ME-MS89L Bi ppm 0.1	ME-MS89L Ca % 0.1	ME-MS89L Cd ppm 0.8	ME-MS89L Ce ppm 0.2	ME-MS89L Co ppm 0.5	ME-MS89L Cs ppm 0.1	ME-MS89L Cu ppm 20	ME-MS89L Dy ppm 0.03	ME-MS89L Er ppm 0.02	ME-MS89L Eu ppm 0.03
SC17001		0.06	6	27	50	0.5	1.3	0.1	1.0	24.6	1.9	0.7	<20	0.64	0.70	0.15
SC17002		0.26	<5	15	198	2.0	0.3	0.2	<0.8	47.8	1.2	41.5	<20	4.75	2.76	0.59
SC17003		0.24	5	11	188	2.0	0.4	0.2	<0.8	46.6	1.7	49.9	<20	5.75	3.56	0.83
SC17004		0.23	<5	10	194	2.3	0.6	0.2	<0.8	43.5	1.4	75.4	<20	5.51	3.08	0.58
SC17005		0.22	<5	17	161	2.0	0.5	0.2	1.3	45.6	1.1	36.4	<20	5.50	3.22	0.56
SC17006		0.23	<5	6	141	1.7	0.3	0.1	<0.8	40.5	1.5	20.8	<20	4.75	2.69	0.62
SC17007		0.20	<5	16	171	1.7	0.4	0.2	<0.8	46.8	1.1	24.8	<20	4.33	2.53	0.65
SC17008		0.21	6	8	285	2.8	1.3	0.2	<0.8	67.7	1.9	34.2	<20	4.96	3.10	0.93
SC17009		0.23	<5	9	249	2.4	0.3	0.2	<0.8	69.5	1.8	25.8	<20	5.53	3.07	0.83
SC17010		0.19	<5	<4	195	2.2	0.2	0.3	<0.8	54.8	2.0	15.7	<20	3.82	1.95	0.61
SC17011		0.25	<5	12	181	1.9	0.3	0.1	0.8	49.0	1.4	11.0	<20	4.81	2.61	0.65
SC17012		0.23	<5	9	184	2.4	0.4	0.1	<0.8	47.8	1.8	15.0	<20	4.22	2.03	0.55
SC17013		0.22	<5	11	188	1.8	0.4	0.1	<0.8	48.1	1.4	12.3	<20	3.88	2.38	0.88
SC17014		0.25	<5	11	163	1.2	0.6	0.1	<0.8	39.0	1.1	9.6	<20	4.11	2.22	0.54
SC17015		0.20	<5	8	227	2.4	1.2	0.1	<0.8	55.0	1.0	21.0	<20	4.36	2.28	0.86
SC17016		0.24	<5	9	180	2.4	0.9	0.2	<0.8	53.3	0.9	22.6	<20	4.65	2.62	0.76
SC17017		0.23	<5	10	203	2.2	1.1	0.1	<0.8	60.7	1.1	30.4	<20	4.12	2.03	0.91
SC17018		0.20	<5	31	342	4.3	2.4	0.1	<0.8	72.1	0.9	128.0	<20	4.95	2.65	1.01
SC17019		0.22	<5	19	201	2.4	1.1	0.2	<0.8	52.6	1.3	55.1	<20	4.39	2.11	0.70
SC17020		0.22	<5	19	201	2.3	1.0	0.2	<0.8	52.1	1.4	38.9	<20	4.70	2.28	0.75
SC17021		0.21	<5	14	245	1.9	0.5	0.1	<0.8	58.7	1.7	27.4	<20	4.47	2.49	0.79
SC17022		0.23	<5	8	195	1.5	0.3	0.2	<0.8	54.7	1.5	8.9	<20	4.34	2.64	0.72
SC17023		0.18	<5	15	147	1.3	0.3	0.1	<0.8	44.4	1.5	8.0	<20	3.92	1.87	0.47
SC17024		0.26	<5	8	156	1.6	0.2	0.1	<0.8	41.8	1.2	17.2	<20	3.74	1.70	0.53
SC17025		<0.02	8	<4	53	180.0	1.6	0.4	<0.8	0.3	0.6	156.5	<20	<0.03	<0.02	<0.03
SC17026		0.24	8	6	160	2.9	0.6	0.2	<0.8	50.7	1.6	17.0	<20	4.69	2.79	0.40
SC17027		0.20	8	9	186	2.0	0.5	0.2	<0.8	56.2	1.3	20.5	<20	4.93	2.09	0.47
SC17028		0.23	9	13	190	2.3	0.8	0.1	<0.8	51.3	1.3	35.3	<20	4.99	2.25	0.61
SC17029		0.22	11	5	306	2.8	0.4	0.2	0.8	54.3	3.6	20.7	<20	5.64	3.40	0.60
SC17030		0.22	8	6	261	2.9	0.2	0.3	<0.8	59.1	3.6	45.2	<20	5.64	2.68	0.84
SC17031		0.24	12	5	194	2.3	0.5	0.2	<0.8	59.6	1.1	34.8	<20	5.67	3.13	0.74
SC17032		0.26	7	7	276	2.2	0.4	0.2	<0.8	92.5	1.7	11.5	<20	5.12	2.78	1.10
SC17033		0.26	9	5	191	1.5	0.4	0.2	<0.8	52.9	1.3	8.7	<20	3.98	1.90	0.81
SC17034		0.17	9	11	259	3.3	0.4	0.3	<0.8	41.9	2.3	30.3	<20	3.92	2.37	0.56
SC17035		0.05	9	14	99	87.2	5.6	0.4	<0.8	2.7	3.7	148.5	50	0.35	0.27	0.09



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/geochemistry

Page: 2 - B

Total # Pages: 2 (A - D)

Plus Appendix Pages

Finalized Date: 27-OCT-2017

Account: TODRIV

CERTIFICATE OF ANALYSIS AD17205394

Sample Description	Method Analyte Units LOR	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L
		Fe	Ga	Gd	Ge	Ho	In	K	La	Li	Lu	Mn	Mo	Nb	Nd	Ni
		%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.05	0.5	0.03	0.5	0.01	0.3	0.05	0.08	2	0.05	10	2	0.8	0.07	10
SC17001		17.00	57.3	0.97	1.8	0.22	<0.3	0.21	4.39	13	0.16	380	22	24.8	2.15	10
SC17002		1.44	11.3	4.68	2.3	0.86	<0.3	1.52	23.7	106	0.32	90	<2	24.6	19.85	10
SC17003		1.40	10.5	4.74	2.8	1.02	<0.3	1.33	23.9	150	0.37	120	<2	21.8	18.45	<10
SC17004		1.43	9.7	4.28	3.7	0.98	<0.3	1.29	24.2	230	0.39	140	<2	26.6	16.90	<10
SC17005		1.50	9.6	4.73	3.3	1.03	<0.3	1.19	24.9	125	0.45	100	<2	15.8	17.60	<10
SC17006		1.25	9.6	4.09	2.5	0.85	<0.3	1.17	21.6	68	0.40	70	<2	11.1	15.60	<10
SC17007		1.33	11.2	3.97	2.6	0.77	<0.3	1.39	24.4	97	0.27	90	<2	13.1	18.20	<10
SC17008		1.52	15.2	5.65	3.0	0.95	<0.3	2.00	35.2	153	0.40	140	<2	14.7	27.0	<10
SC17009		1.62	11.4	5.56	2.1	1.05	<0.3	1.44	36.7	109	0.32	110	<2	11.6	29.3	10
SC17010		1.38	9.7	4.02	2.1	0.64	<0.3	1.24	27.8	66	0.28	160	<2	15.6	24.9	10
SC17011		1.66	11.7	3.85	1.8	0.80	<0.3	1.55	25.2	36	0.30	60	<2	10.5	22.2	<10
SC17012		1.49	11.5	4.29	2.0	0.77	<0.3	1.38	23.9	55	0.25	80	<2	12.1	19.50	20
SC17013		1.12	10.1	4.75	2.0	0.82	<0.3	1.20	24.5	47	0.35	60	<2	11.1	21.4	10
SC17014		0.96	8.9	3.84	1.7	0.72	<0.3	1.09	20.4	36	0.25	60	<2	8.0	17.90	<10
SC17015		1.10	11.0	4.73	2.0	0.77	<0.3	1.47	28.7	96	0.31	90	<2	8.5	24.6	<10
SC17016		0.92	9.2	4.62	2.5	0.87	<0.3	1.20	27.3	83	0.34	70	<2	10.8	21.6	10
SC17017		0.89	8.9	4.77	2.3	0.73	<0.3	1.11	34.1	112	0.32	80	<2	10.3	22.4	10
SC17018		1.26	17.0	6.48	3.2	0.91	<0.3	2.13	37.0	400	0.40	230	<2	20.1	33.9	10
SC17019		1.07	10.7	4.84	2.6	0.84	<0.3	1.25	27.9	168	0.29	160	<2	23.7	20.4	10
SC17020		1.19	9.6	5.25	2.4	0.86	<0.3	1.15	27.0	128	0.35	120	<2	23.5	21.7	10
SC17021		1.16	10.7	5.48	2.0	0.86	<0.3	1.32	30.5	85	0.44	100	<2	17.0	25.4	10
SC17022		1.13	8.8	5.29	1.5	0.73	<0.3	1.14	28.4	25	0.36	50	<2	10.9	22.5	20
SC17023		1.82	9.1	4.21	1.9	0.77	<0.3	1.26	23.1	25	0.34	90	<2	9.0	18.60	<10
SC17024		1.28	10.0	4.13	1.7	0.57	<0.3	1.39	21.1	49	0.23	60	<2	13.9	16.60	<10
SC17025		0.56	59.3	0.03	8.3	<0.01	<0.3	2.30	0.21	3290	<0.05	920	2	50.6	0.15	<10
SC17026		1.36	11.1	4.47	2.2	0.90	<0.3	1.30	24.9	82	0.35	90	<2	17.5	19.65	<10
SC17027		1.32	12.1	4.42	2.0	0.83	<0.3	1.67	27.7	65	0.31	80	<2	15.4	21.9	<10
SC17028		1.23	10.8	4.93	2.0	0.94	<0.3	1.45	25.8	115	0.33	100	<2	19.7	19.20	<10
SC17029		1.12	13.9	4.89	1.7	1.08	<0.3	1.97	26.6	52	0.34	220	<2	13.5	20.9	<10
SC17030		1.46	12.9	5.12	2.2	0.97	<0.3	1.82	28.8	104	0.34	280	<2	15.7	22.9	<10
SC17031		1.14	10.9	5.66	1.7	1.11	<0.3	1.59	28.4	56	0.40	70	<2	21.7	24.9	<10
SC17032		1.49	14.1	6.32	1.0	0.98	<0.3	2.01	45.3	21	0.30	60	<2	10.5	37.6	<10
SC17033		0.98	8.9	4.41	1.1	0.68	<0.3	1.21	26.4	15	0.26	60	<2	10.6	21.5	<10
SC17034		1.23	13.8	4.57	2.6	0.82	<0.3	1.98	21.4	83	0.34	270	<2	22.2	16.70	<10
SC17035		1.08	42.2	0.60	6.3	0.03	<0.3	2.85	1.08	1630	<0.05	560	4	75.0	1.52	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/geochemistry

Page: 2 - C

Total # Pages: 2 (A - D)

Plus Appendix Pages

Finalized Date: 27-OCT-2017

Account: TODRIV

CERTIFICATE OF ANALYSIS AD17205394

Sample Description	Method Analyte Units LOR	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L
		Pb	Pr	Rb	Re	Sb	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.03	0.5	0.01	0.3	3	0.04	3	20	0.04	0.01	0.5	0.1	0.005	0.02
SC17001		16.4	0.84	11.2	<0.01	2.1	8	0.44	6	<20	2.41	0.10	<0.5	79.4	0.860	0.05
SC17002		4.6	5.65	137.5	0.01	0.8	<3	3.95	1560	40	26.0	0.72	0.6	11.0	0.183	0.75
SC17003		4.9	5.53	122.5	0.01	0.6	3	3.79	1320	40	19.60	0.88	<0.5	10.7	0.186	0.54
SC17004		4.4	4.85	154.5	<0.01	0.4	3	3.42	641	40	26.3	0.87	<0.5	9.3	0.179	1.02
SC17005		4.1	5.36	93.8	<0.01	<0.3	<3	3.28	263	30	16.50	1.00	<0.5	10.6	0.183	0.55
SC17006		4.8	4.61	74.7	0.01	<0.3	<3	3.69	175	30	4.50	0.69	<0.5	9.4	0.196	0.37
SC17007		4.1	5.23	94.5	<0.01	0.3	3	3.37	231	40	5.40	0.66	<0.5	10.9	0.210	0.57
SC17008		5.7	8.43	145.0	0.01	<0.3	3	5.26	253	70	8.52	0.90	<0.5	13.4	0.232	0.67
SC17009		5.3	8.11	111.0	<0.01	1.0	<3	5.28	126	50	5.69	0.83	0.9	13.4	0.203	0.75
SC17010		4.5	6.45	102.0	<0.01	0.7	<3	4.63	97	50	8.81	0.65	<0.5	11.1	0.191	0.57
SC17011		4.5	5.77	80.6	<0.01	<0.3	<3	4.17	169	40	3.87	0.67	<0.5	12.7	0.214	0.43
SC17012		4.7	5.54	88.8	<0.01	0.5	3	5.27	308	40	8.15	0.65	0.6	11.2	0.197	0.55
SC17013		5.3	5.71	73.5	0.01	0.3	<3	4.04	500	40	7.61	0.69	<0.5	10.4	0.183	0.43
SC17014		5.1	4.97	64.7	<0.01	<0.3	5	3.20	234	30	1.46	0.60	<0.5	9.1	0.161	0.28
SC17015		5.8	6.92	101.0	<0.01	<0.3	<3	5.04	168	50	2.05	0.77	<0.5	11.6	0.191	0.57
SC17016		6.6	6.28	86.7	<0.01	0.4	4	4.62	264	40	4.67	0.74	0.5	11.3	0.186	0.55
SC17017		6.2	6.57	86.9	<0.01	1.0	4	4.86	227	40	6.90	0.66	0.7	11.2	0.182	0.54
SC17018		8.0	8.53	344	<0.01	0.5	<3	5.75	813	90	12.70	1.01	<0.5	13.6	0.215	2.07
SC17019		5.6	6.17	183.5	0.01	0.3	<3	3.94	1220	60	19.10	0.68	0.8	10.5	0.187	1.01
SC17020		6.0	5.78	114.5	0.01	<0.3	5	4.57	545	70	17.75	0.77	<0.5	10.8	0.196	0.61
SC17021		6.2	6.84	115.0	<0.01	0.5	<3	5.35	535	60	12.75	0.85	<0.5	11.3	0.204	0.64
SC17022		5.9	6.05	80.7	0.01	0.6	3	4.45	59	40	8.73	0.77	<0.5	11.0	0.179	0.35
SC17023		5.2	5.38	67.3	<0.01	0.3	<3	3.90	39	40	2.01	0.59	<0.5	11.0	0.177	0.25
SC17024		4.2	5.07	89.9	<0.01	<0.3	7	3.56	484	30	13.95	0.58	<0.5	9.7	0.165	0.38
SC17025		11.8	<0.03	3690	<0.01	0.3	<3	<0.04	488	20	400	0.02	<0.5	3.8	<0.005	28.1
SC17026		5.1	5.69	107.0	<0.01	0.5	<3	4.31	472	40	21.6	0.76	<0.5	11.5	0.177	0.40
SC17027		4.7	6.38	120.5	<0.01	0.8	<3	4.55	334	50	15.65	0.84	<0.5	12.0	0.184	0.57
SC17028		5.0	5.60	123.0	<0.01	0.6	<3	4.02	883	60	18.85	0.89	<0.5	11.3	0.188	0.74
SC17029		4.9	6.25	130.0	<0.01	0.5	<3	3.93	113	40	11.90	0.94	0.7	12.5	0.233	0.39
SC17030		5.3	6.68	183.0	<0.01	0.4	<3	5.76	459	50	24.1	0.92	<0.5	14.1	0.213	0.82
SC17031		4.5	6.63	148.5	<0.01	0.6	<3	5.66	615	60	50.2	1.00	<0.5	14.0	0.175	0.59
SC17032		4.7	10.30	110.0	<0.01	<0.3	<3	6.95	50	50	2.79	0.89	<0.5	15.7	0.208	0.32
SC17033		4.6	6.14	69.5	<0.01	0.3	<3	4.60	49	40	6.97	0.74	<0.5	10.4	0.174	0.24
SC17034		4.0	4.63	195.5	<0.01	1.1	<3	3.60	62	40	10.25	0.80	<0.5	10.6	0.141	0.76
SC17035		9.7	0.35	2240	<0.01	8.0	<3	0.34	52	<20	175.0	0.07	<0.5	3.2	0.015	16.30



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/geochemistry

Page: 2 - D

Total # Pages: 2 (A - D)

Plus Appendix Pages

Finalized Date: 27-OCT-2017

Account: TODRIV

CERTIFICATE OF ANALYSIS AD17205394

Sample Description	Method Analyte Units LOR	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	ME-MS89L	PUL-QC
		Tm	U	V	W	Y	Yb	Zn	Pass75um
		ppm 0.01	ppm 0.2	ppm 1	ppm 0.3	ppm 0.2	ppm 0.02	ppm 10	% 0.01
SC17001		0.09	6.1	487	2.5	6.4	0.77	20	
SC17002		0.37	2.9	23	17.6	25.3	2.50	50	
SC17003		0.43	2.8	23	17.6	32.1	2.63	30	
SC17004		0.38	2.7	27	16.8	32.8	2.89	40	
SC17005		0.42	2.7	23	20.5	31.2	2.73	20	
SC17006		0.32	2.5	25	12.7	26.9	2.62	20	
SC17007		0.29	2.5	26	15.9	24.2	2.28	20	
SC17008		0.35	3.6	42	19.0	28.7	2.49	40	
SC17009		0.39	2.4	33	18.2	26.7	2.67	60	
SC17010		0.32	1.9	27	11.1	20.4	2.02	40	
SC17011		0.30	2.7	28	12.6	23.7	2.53	30	
SC17012		0.42	2.6	32	14.4	19.8	2.21	10	88.0
SC17013		0.32	3.0	30	10.5	23.5	2.42	20	
SC17014		0.28	2.7	23	8.7	19.7	1.73	20	
SC17015		0.27	3.4	27	17.8	23.1	1.88	20	
SC17016		0.32	3.0	24	16.5	23.6	2.37	70	
SC17017		0.27	2.8	23	16.5	22.3	2.19	70	
SC17018		0.35	4.5	31	36.4	24.1	2.42	70	
SC17019		0.35	3.3	23	28.5	20.9	2.26	40	
SC17020		0.37	3.1	24	24.1	22.9	2.64	20	
SC17021		0.39	2.8	28	15.6	24.7	2.59	20	
SC17022		0.37	2.7	22	7.2	24.5	2.63	20	
SC17023		0.32	2.3	25	12.4	20.3	1.97	20	
SC17024		0.29	2.1	23	13.4	21.0	1.90	20	
SC17025		<0.01	6.2	2	4.7	0.6	0.05	60	
SC17026		0.37	2.9	22	12.5	26.3	2.70	30	99.8
SC17027		0.30	2.8	25	13.0	24.6	2.56	20	
SC17028		0.40	3.4	24	16.8	28.9	2.66	30	
SC17029		0.38	4.5	27	11.1	31.9	2.51	30	
SC17030		0.38	3.4	26	15.6	29.5	2.68	40	
SC17031		0.32	4.0	22	13.7	32.9	2.70	30	
SC17032		0.35	3.2	34	9.3	25.8	2.65	20	
SC17033		0.23	2.2	24	5.5	20.2	1.58	20	
SC17034		0.37	4.4	16	19.2	25.5	2.30	30	
SC17035		<0.01	8.8	8	3.7	2.9	0.19	50	



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/geochemistry

Page: Appendix 1

Total # Appendix Pages: 1

Finalized Date: 27-OCT-2017

Account: TODRIV

CERTIFICATE OF ANALYSIS AD17205394

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method:

Processed at ALS Adelaide located at Unit 1, 1 Burma Road, Pooraka, Adelaide, SA, Australia.

LEV-01

LOG-22

LOG-24

PUL-31

PUL-QC

WEI-21

Applies to Method:

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

ME-MS89L