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Account: TODRIV

QC CERTIFICATE AD17205451

This report is for 50 Rock 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-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
CRU-21	Crush entire sample >70% -6 mm
PUL-21	Pulverize entire sample

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-MS23	Pt, Pd, Au 30g FA ICP-MS	ICP-MS
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



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QC CERTIFICATE OF ANALYSIS AD17205451

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
		Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Fe %
		5	4	2	0.4	0.1	0.1	0.8	0.2	0.5	0.1	20	0.03	0.02	0.03	0.05
STANDARDS																
AMIS0343		<5	18	78	217	3.1	0.4	<0.8	2.2	2.6	333	50	0.18	0.11	0.03	0.85
Target Range - Lower Bound		<5	<4	68	209	2.4	<0.1	<0.8	<0.2	1.5	0.8	<20	<0.03	<0.02	<0.03	0.65
Upper Bound		10	22	87	257	3.2	0.5	1.6	1.1	3.7	1.4	90	0.14	0.10	0.09	0.93
GLG912-5																
GLG912-5																
Target Range - Lower Bound																
Upper Bound																
GTA-01		<5	<4	51	177.0	1.4	0.4	<0.8	0.2	0.7	146.0	<20	0.03	0.03	<0.03	0.53
Target Range - Lower Bound		<5	<4	48	165.0	1.4	0.3	<0.8	<0.2	<0.5	132.5	<20	<0.03	<0.02	0.23	0.41
Upper Bound		15	10	64	202	2.0	0.8	2.1	0.7	1.6	162.0	50	0.15	0.07	0.38	0.66
GTA-02		<5	<4	57	185.5	1.3	0.4	<0.8	<0.2	0.9	191.5	<20	0.03	0.02	0.03	0.57
GTA-02		5	<4	56	193.5	1.3	0.4	<0.8	0.2	0.8	188.0	<20	0.04	<0.02	0.06	0.53
GTA-02		<5	<4	59	183.0	1.7	0.4	<0.8	<0.2	0.8	178.5	<20	0.07	<0.02	<0.03	0.52
Target Range - Lower Bound		<5	<4	48	172.0	1.1	0.4	<0.8	<0.2	<0.5	157.0	<20	<0.03	<0.02	<0.03	0.39
Upper Bound		14	10	63	211	1.7	0.8	2.0	0.6	1.6	192.0	40	0.10	0.07	0.12	0.64
LEA-16																
LEA-16																
LEA-16																
Target Range - Lower Bound																
Upper Bound																
OREAS 146		<5	7	12950	12.5	2.4	11.3	2.0	3990	31.8	0.4	40	204	80.5	113.5	18.90
OREAS 146		<5	9	13750	14.0	3.0	12.6	1.9	4510	34.5	0.4	40	210	80.3	124.5	20.1
OREAS 146		<5	6	14300	13.9	2.5	11.7	1.9	4180	32.5	0.5	40	217	83.4	111.5	19.45
Target Range - Lower Bound		<5	<4	11900	11.8	2.3	12.1	<0.8	3910	30.0	0.5	<20	202	78.3	111.0	18.30
Upper Bound		15	22	14600	15.3	3.1	15.1	3.7	4790	37.8	0.9	80	246	95.7	136.0	22.5
OREAS-45e																
OREAS-45e																
OREAS-45e																
Target Range - Lower Bound																
Upper Bound																
ST-460																
Target Range - Lower Bound																
Upper Bound																
SY-4		<5	<4	311	3.2	0.2	5.4	<0.8	107.5	2.3	1.4	<20	17.40	13.65	1.81	4.05
Target Range - Lower Bound		<5	<4	299	2.1	<0.1	5.1	<0.8	107.5	1.7	1.2	<20	16.35	12.75	1.75	3.91
Upper Bound		15	12	369	4.0	0.4	6.4	1.6	131.5	3.9	1.8	60	20.1	15.65	2.21	4.89



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QC CERTIFICATE OF ANALYSIS AD17205451

Sample Description	Method Analyte Units LOR	ME-MS89L Ga ppm 0.5	ME-MS89L Gd ppm 0.03	ME-MS89L Ge ppm 0.5	ME-MS89L Ho ppm 0.01	ME-MS89L In ppm 0.3	ME-MS89L K % 0.05	ME-MS89L La ppm 0.08	ME-MS89L Li ppm 2	ME-MS89L Lu ppm 0.05	ME-MS89L Mn ppm 10	ME-MS89L Mo ppm 2	ME-MS89L Nb ppm 0.8	ME-MS89L Nd ppm 0.07	ME-MS89L Ni ppm 10	ME-MS89L Pb ppm 0.5
STANDARDS																
AMIS0343		44.6	0.28	8.1	0.02	<0.3	2.52	1.46	7080	<0.05	990	4	44.0	1.37	20	6.8
Target Range - Lower Bound		39.7	0.09	6.1	<0.01	<0.3	2.16	0.26	6310	<0.05	810	<2	37.0	0.44	<10	4.3
Upper Bound		49.7	0.23	8.9	0.05	0.7	2.76	0.62	7720	0.12	1010	8	47.0	0.78	30	6.9
GLG912-5																
GLG912-5																
Target Range - Lower Bound																
Upper Bound																
GTA-01		53.7	0.12	7.3	0.02	<0.3	2.27	0.30	3320	<0.05	930	2	46.4	0.10	10	12.6
Target Range - Lower Bound		47.5	<0.03	5.7	<0.01	<0.3	1.91	<0.08	3020	<0.05	800	<2	41.5	<0.07	<10	10.2
Upper Bound		59.1	0.13	8.5	0.03	0.7	2.45	0.42	3700	0.13	1000	6	52.5	0.25	40	13.6
GTA-02		58.2	0.03	8.4	0.01	<0.3	2.56	0.11	1810	<0.05	780	2	60.3	<0.07	<10	14.1
GTA-02		57.1	<0.03	8.8	<0.01	<0.3	2.66	0.14	1820	<0.05	740	2	62.2	0.12	<10	14.4
GTA-02		55.9	0.03	7.6	<0.01	<0.3	2.60	0.09	1820	<0.05	720	2	55.9	<0.07	10	14.2
Target Range - Lower Bound		49.5	<0.03	6.2	<0.01	<0.3	2.19	<0.08	1615	<0.05	630	<2	50.5	<0.07	<10	11.5
Upper Bound		61.7	0.11	9.0	0.02	0.6	2.79	0.28	1975	0.13	790	6	63.5	0.21	40	15.1
LEA-16																
LEA-16																
LEA-16																
Target Range - Lower Bound																
Upper Bound																
OREAS 146		31.3	327	5.4	32.6	0.3	1.13	2340	22	5.49	18800	57	374	1965	60	681
OREAS 146		33.1	336	6.3	33.4	0.3	1.18	2580	23	6.66	20000	58	401	2120	60	708
OREAS 146		35.3	350	6.4	34.5	<0.3	1.12	2370	22	6.13	19100	59	401	2050	70	710
Target Range - Lower Bound		28.8	309	4.3	31.8	<0.3	0.90	2260	21	5.62	18550	52	348	1935	60	657
Upper Bound		36.4	377	6.9	38.8	1.0	1.22	2760	31	6.98	22700	68	428	2370	110	804
OREAS-45e																
OREAS-45e																
OREAS-45e																
Target Range - Lower Bound																
Upper Bound																
ST-460																
Target Range - Lower Bound																
Upper Bound																
SY-4		36.0	13.10	2.4	4.03	<0.3	1.44	53.8	36	1.89	810	<2	13.7	55.8	10	10.0
Target Range - Lower Bound		32.7	12.75	<0.5	3.86	<0.3	1.19	52.1	32	1.84	760	<2	11.3	52.0	<10	8.5
Upper Bound		41.1	15.65	2.6	4.74	1.0	1.57	63.9	44	2.36	950	6	15.9	63.8	30	11.5



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Sample Description	Method Analyte Units LOR	ME-MS89L Pr ppm	ME-MS89L Rb ppm	ME-MS89L Re ppm	ME-MS89L Sb ppm	ME-MS89L Se ppm	ME-MS89L Sm ppm	ME-MS89L Sn ppm	ME-MS89L Sr ppm	ME-MS89L Ta ppm	ME-MS89L Tb ppm	ME-MS89L Te ppm	ME-MS89L Th ppm	ME-MS89L Ti %	ME-MS89L Tl ppm	ME-MS89L Tm ppm
		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	0.01
STANDARDS																
AMIS0343		0.26	3670	<0.01	6.5	4	0.21	81	<20	160.5	0.02	0.7	2.2	0.005	30.7	0.01
Target Range - Lower Bound		0.04	3280	<0.01	6.0	<3	<0.04	74	<20	160.0	<0.01	<0.5	1.7	<0.005	29.7	<0.01
Upper Bound		0.18	4000	0.03	8.0	8	0.20	97	60	196.0	0.04	1.5	2.3	0.021	36.3	0.03
GLG912-5																
GLG912-5																
Target Range - Lower Bound																
Upper Bound																
GTA-01		<0.03	3640	<0.01	<0.3	9	0.06	450	20	341	0.02	<0.5	3.5	<0.005	30.1	0.01
Target Range - Lower Bound		<0.03	3310	<0.01	<0.3	<3	<0.04	391	<20	373	<0.01	<0.5	3.3	<0.005	24.3	<0.01
Upper Bound		0.09	4040	0.03	1.4	10	0.15	485	70	457	0.04	1.9	4.3	0.010	29.7	0.03
GTA-02		<0.03	4030	<0.01	<0.3	<3	<0.04	395	30	686	0.01	<0.5	3.9	<0.005	33.0	<0.01
GTA-02		0.04	4140	<0.01	<0.3	<3	0.04	397	30	586	<0.01	<0.5	3.9	<0.005	33.5	<0.01
GTA-02		<0.03	3940	<0.01	<0.3	4	<0.04	394	20	625	0.01	<0.5	3.3	<0.005	33.4	<0.01
Target Range - Lower Bound		<0.03	3510	<0.01	<0.3	<3	<0.04	353	<20	622	<0.01	<0.5	3.1	<0.005	27.4	<0.01
Upper Bound		0.06	4290	0.03	1.0	11	0.12	438	80	760	0.02	2.1	4.0	0.010	33.6	0.02
LEA-16																
LEA-16																
LEA-16																
Target Range - Lower Bound																
Upper Bound																
OREAS 146		498	24.8	<0.01	<0.3	<3	406	43	2920	3.51	37.7	<0.5	818	0.816	0.42	8.55
OREAS 146		514	27.0	<0.01	0.3	16	423	42	3130	3.72	40.3	0.5	821	0.886	0.41	9.45
OREAS 146		495	27.4	0.01	0.4	<3	437	45	3020	3.86	41.0	<0.5	833	0.856	0.41	9.83
Target Range - Lower Bound		493	24.6	<0.01	<0.3	<3	390	38	2770	3.10	37.0	<0.5	805	0.752	0.41	8.45
Upper Bound		603	31.2	0.03	1.3	6	476	54	3430	3.88	45.2	1.0	985	1.030	0.55	10.35
OREAS-45e																
OREAS-45e																
OREAS-45e																
Target Range - Lower Bound																
Upper Bound																
ST-460																
Target Range - Lower Bound																
Upper Bound																
SY-4		14.10	53.3	<0.01	<0.3	4	12.05	8	1100	0.74	2.36	<0.5	1.5	0.169	0.20	2.11
Target Range - Lower Bound		13.05	50.5	<0.01	<0.3	<3	11.40	<3	1050	0.59	2.33	<0.5	1.0	0.140	0.20	2.06
Upper Bound		16.05	62.9	0.02	1.0	9	14.00	15	1330	0.83	2.87	1.0	1.6	0.201	0.30	2.54



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Sample Description	Method Analyte Units LOR	ME-MS89L U ppm 0.2	ME-MS89L V ppm 1	ME-MS89L W ppm 0.3	ME-MS89L Y ppm 0.2	ME-MS89L Yb ppm 0.02	ME-MS89L Zn ppm 10	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001
STANDARDS										
AMIS0343		6.1	7	3.7	1.3	0.03	80			
Target Range - Lower Bound		5.5	<1	2.7	0.4	<0.02	60			
Upper Bound		7.1	6	4.3	1.2	0.09	100			
GLG912-5								0.220	<0.0005	0.001
GLG912-5								0.233	<0.0005	0.001
Target Range - Lower Bound								0.210	<0.0005	<0.001
Upper Bound								0.239	0.0010	0.003
GTA-01		5.5	1	4.7	0.5	<0.02	60			
Target Range - Lower Bound		5.0	<1	4.5	0.3	<0.02	50			
Upper Bound		6.6	4	6.2	1.2	0.06	90			
GTA-02		6.1	1	5.5	<0.2	0.02	50			
GTA-02		5.9	5	5.9	0.2	<0.02	60			
GTA-02		5.7	1	5.4	0.3	0.03	50			
Target Range - Lower Bound		4.8	<1	4.4	<0.2	<0.02	30			
Upper Bound		6.4	5	6.1	0.7	0.06	70			
LEA-16								0.494	0.0008	0.002
LEA-16								0.501	<0.0005	0.001
LEA-16								0.498	0.0005	0.001
Target Range - Lower Bound								0.470		
Upper Bound								0.532		
OREAS 146		2.4	154	26.3	871	46.8	1490			
OREAS 146		2.5	156	27.4	925	51.4	1560			
OREAS 146		2.3	166	27.8	891	50.3	1430			
Target Range - Lower Bound		1.9	144	25.8	814	47.1	1360			
Upper Bound		2.9	178	32.2	996	57.7	1680			
OREAS-45e								0.053	0.1080	0.077
OREAS-45e								0.055	0.1110	0.078
OREAS-45e								0.053	0.1110	0.076
Target Range - Lower Bound								0.049	0.1030	0.070
Upper Bound								0.057	0.1170	0.081
ST-460								0.052	0.0450	0.047
Target Range - Lower Bound								0.048	0.0418	0.042
Upper Bound								0.056	0.0482	0.050
SY-4		3.1	7	<0.3	110.5	14.20	90			
Target Range - Lower Bound		0.4	6	<0.3	107.0	13.65	80			
Upper Bound		1.2	10	0.9	131.0	16.75	130			



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BLANKS																
BLANK		10	<4	<2	<0.4	0.2	0.1	1.6	<0.2	<0.5	0.1	<20	<0.03	<0.02	<0.03	<0.05
BLANK		9	<4	<2	<0.4	0.2	0.1	1.2	<0.2	<0.5	<0.1	<20	<0.03	<0.02	<0.03	<0.05
BLANK		6	<4	<2	<0.4	0.2	0.1	<0.8	0.3	<0.5	0.1	<20	<0.03	0.03	<0.03	<0.05
BLANK		9	<4	3	<0.4	0.3	0.1	1.2	0.2	<0.5	0.1	<20	<0.03	0.02	<0.03	<0.05
BLANK		6	<4	2	<0.4	0.2	0.1	0.8	<0.2	<0.5	<0.1	<20	<0.03	<0.02	<0.03	<0.05
BLANK		6	<4	4	<0.4	0.3	0.1	1.1	0.2	<0.5	<0.1	<20	0.04	0.04	<0.03	<0.05
BLANK		<5	<4	<2	<0.4	<0.1	0.1	<0.8	<0.2	<0.5	0.3	<20	<0.03	<0.02	<0.03	<0.05
BLANK		<5	<4	<2	<0.4	<0.1	0.1	<0.8	<0.2	<0.5	0.1	<20	<0.03	<0.02	<0.03	<0.05
Target Range - Lower Bound		<5	<4	<2	<0.4	<0.1	<0.1	<0.8	<0.2	<0.5	<0.1	<20	<0.03	<0.02	<0.03	<0.05
Upper Bound		10	8	4	0.8	0.2	0.2	1.6	0.4	1.0	0.2	40	0.06	0.04	0.06	0.10
BLANK																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
SC17019		<5	19	201	2.4	1.1	0.2	<0.8	52.6	1.3	55.1	<20	4.39	2.11	0.70	1.07
DUP		<5	22	220	2.6	1.0	0.2	<0.8	53.4	1.1	55.7	<20	4.37	2.27	0.91	1.07
Target Range - Lower Bound		<5	15	198	1.9	0.9	<0.1	<0.8	50.2	0.6	52.5	<20	4.13	2.06	0.73	0.97
Upper Bound		10	26	223	3.1	1.2	0.3	1.6	55.9	1.8	58.3	40	4.63	2.32	0.88	1.17
SC170280																
DUP																
Target Range - Lower Bound																
Upper Bound																
SC170206																
DUP																
Target Range - Lower Bound																
Upper Bound																
SC170218		<5	9	10	6.8	0.2	0.1	<0.8	1.2	0.6	231	<20	0.05	0.03	<0.03	0.96
DUP		<5	7	9	7.0	0.2	0.1	<0.8	1.4	0.6	230	<20	0.08	0.08	0.04	0.99
Target Range - Lower Bound		<5	<4	7	6.0	<0.1	<0.1	<0.8	1.0	<0.5	219	<20	<0.03	0.03	<0.03	0.88
Upper Bound		10	12	12	7.8	0.3	0.2	1.6	1.6	1.0	242	40	0.10	0.08	0.06	1.07



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Sample Description	Method Analyte Units LOR	ME-MS89L Ga ppm 0.5	ME-MS89L Gd ppm 0.03	ME-MS89L Ge ppm 0.5	ME-MS89L Ho ppm 0.01	ME-MS89L In ppm 0.3	ME-MS89L K % 0.05	ME-MS89L La ppm 0.08	ME-MS89L Li ppm 2	ME-MS89L Lu ppm 0.05	ME-MS89L Mn ppm 10	ME-MS89L Mo ppm 2	ME-MS89L Nb ppm 0.8	ME-MS89L Nd ppm 0.07	ME-MS89L Ni ppm 10	ME-MS89L Pb ppm 0.5
BLANKS																
BLANK		<0.5	<0.03	0.6	<0.01	<0.3	0.09	<0.08	2	<0.05	10	<2	1.4	<0.07	<10	0.6
BLANK		1.0	<0.03	1.7	<0.01	<0.3	0.08	<0.08	<2	<0.05	<10	<2	1.0	<0.07	<10	0.5
BLANK		1.0	<0.03	0.8	<0.01	<0.3	0.08	0.13	<2	<0.05	<10	<2	1.0	<0.07	<10	0.6
BLANK		1.6	<0.03	1.6	<0.01	<0.3	0.09	0.09	<2	<0.05	10	<2	1.7	<0.07	<10	0.6
BLANK		0.6	<0.03	0.8	0.01	<0.3	0.08	<0.08	<2	<0.05	10	<2	<0.8	0.07	10	0.8
BLANK		1.1	<0.03	1.6	0.01	<0.3	0.07	0.13	<2	<0.05	10	<2	0.9	0.07	10	1.3
BLANK		<0.5	<0.03	<0.5	<0.01	<0.3	0.07	<0.08	<2	<0.05	<10	<2	1.0	<0.07	10	<0.5
BLANK		<0.5	0.03	0.5	<0.01	<0.3	0.06	<0.08	<2	<0.05	<10	<2	1.2	<0.07	10	<0.5
Target Range - Lower Bound		<0.5	<0.03	<0.5	<0.01	<0.3	<0.05	<0.08	<2	<0.05	<10	<2	<0.8	<0.07	<10	<0.5
Upper Bound		1.0	0.06	1.0	0.02	0.6	0.10	0.16	4	0.10	20	4	1.6	0.14	20	1.0
BLANK																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
SC17019		10.7	4.84	2.6	0.84	<0.3	1.25	27.9	168	0.29	160	<2	23.7	20.4	10	5.6
DUP		10.7	5.05	2.4	0.76	<0.3	1.26	27.7	165	0.32	160	<2	23.2	21.7	10	5.1
Target Range - Lower Bound		9.7	4.67	1.9	0.75	<0.3	1.14	26.3	156	0.24	140	<2	21.5	19.95	<10	4.6
Upper Bound		11.7	5.22	3.1	0.85	0.6	1.37	29.3	177	0.37	180	4	25.4	22.2	20	6.1
SC170280																
DUP																
Target Range - Lower Bound																
Upper Bound																
SC170206																
DUP																
Target Range - Lower Bound																
Upper Bound																
SC170218		45.9	0.18	6.0	0.02	<0.3	3.27	0.65	211	<0.05	630	<2	91.7	0.76	10	1.5
DUP		47.2	0.20	5.5	0.03	<0.3	3.33	0.96	220	<0.05	680	<2	93.6	0.98	10	1.7
Target Range - Lower Bound		43.7	0.15	5.0	<0.01	<0.3	3.09	0.68	203	<0.05	610	<2	87.2	0.76	<10	1.0
Upper Bound		49.4	0.23	6.5	0.04	0.6	3.52	0.93	228	0.10	700	4	98.1	0.98	20	2.2



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QC CERTIFICATE OF ANALYSIS AD17205451

Sample Description	Method Analyte Units LOR	ME-MS89L Pr ppm 0.03	ME-MS89L Rb ppm 0.5	ME-MS89L Re ppm 0.01	ME-MS89L Sb ppm 0.3	ME-MS89L Se ppm 3	ME-MS89L Sm ppm 0.04	ME-MS89L Sn ppm 3	ME-MS89L Sr ppm 20	ME-MS89L Ta ppm 0.04	ME-MS89L Tb ppm 0.01	ME-MS89L Te ppm 0.5	ME-MS89L Th ppm 0.1	ME-MS89L Ti % 0.005	ME-MS89L Tl ppm 0.02	ME-MS89L Tm ppm 0.01
BLANKS																
BLANK		<0.03	<0.5	<0.01	<0.3	11	<0.04	<3	<20	0.30	<0.01	<0.5	<0.1	<0.005	0.03	<0.01
BLANK		<0.03	<0.5	<0.01	<0.3	5	<0.04	<3	<20	0.08	<0.01	<0.5	<0.1	<0.005	<0.02	<0.01
BLANK		0.03	0.6	<0.01	<0.3	10	<0.04	<3	<20	0.07	<0.01	<0.5	<0.1	<0.005	<0.02	<0.01
BLANK		<0.03	1.1	<0.01	<0.3	10	<0.04	<3	<20	0.19	<0.01	0.5	<0.1	<0.005	0.02	<0.01
BLANK		<0.03	<0.5	0.01	<0.3	6	0.04	<3	<20	0.06	<0.01	<0.5	<0.1	<0.005	<0.02	<0.01
BLANK		<0.03	<0.5	<0.01	0.3	<3	0.04	<3	<20	0.53	<0.01	<0.5	<0.1	<0.005	0.02	0.01
BLANK		<0.03	0.6	<0.01	0.3	3	<0.04	<3	<20	1.21	<0.01	0.7	<0.1	<0.005	0.03	<0.01
BLANK		<0.03	1.0	0.01	<0.3	<3	<0.04	<3	<20	1.19	<0.01	0.7	<0.1	<0.005	<0.02	<0.01
Target Range - Lower Bound		<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	<0.01
Upper Bound		0.06	1.0	0.02	0.6	6	0.08	6	40	0.08	0.02	1.0	0.2	0.010	0.04	0.02
BLANK																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
SC17019		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	0.35
DUP		6.15	189.5	0.01	0.6	<3	4.57	1250	70	14.05	0.79	<0.5	10.4	0.185	1.03	0.36
Target Range - Lower Bound		5.82	176.5	<0.01	<0.3	<3	4.00	1170	40	15.70	0.69	<0.5	9.8	0.167	0.95	0.33
Upper Bound		6.50	196.5	0.02	0.6	6	4.51	1300	90	17.45	0.78	1.0	11.1	0.205	1.09	0.38
SC170280																
DUP																
Target Range - Lower Bound																
Upper Bound																
SC170206																
DUP																
Target Range - Lower Bound																
Upper Bound																
SC170218		0.18	1780	<0.01	<0.3	7	0.25	6900	<20	79.6	0.02	<0.5	0.6	0.008	8.47	0.01
DUP		0.22	1795	<0.01	<0.3	6	0.10	7000	<20	94.1	0.03	<0.5	0.7	0.007	8.86	0.01
Target Range - Lower Bound		0.16	1700	<0.01	<0.3	<3	0.13	6600	<20	82.5	<0.01	<0.5	0.5	<0.005	8.21	<0.01
Upper Bound		0.24	1875	0.02	0.6	10	0.22	7300	40	91.2	0.04	1.0	0.8	0.010	9.12	0.02



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Sample Description	Method Analyte Units LOR	ME-MS89L U ppm 0.2	ME-MS89L V ppm 1	ME-MS89L W ppm 0.3	ME-MS89L Y ppm 0.2	ME-MS89L Yb ppm 0.02	ME-MS89L Zn ppm 10	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001
BLANKS										
BLANK		0.4	2	0.5	<0.2	<0.02	<10			
BLANK		0.3	4	<0.3	<0.2	<0.02	<10			
BLANK		0.2	1	0.3	<0.2	<0.02	10			
BLANK		0.2	1	0.3	<0.2	<0.02	10			
BLANK		0.3	2	<0.3	0.2	<0.02	<10			
BLANK		0.3	2	0.3	0.3	<0.02	10			
BLANK		0.3	<1	<0.3	<0.2	<0.02	<10			
BLANK		0.3	1	<0.3	0.2	0.02	20			
Target Range - Lower Bound		<0.2	<1	<0.3	<0.2	<0.02	<10			
Upper Bound		0.4	2	0.6	0.4	0.04	20			
BLANK								0.001	<0.0005	<0.001
BLANK								<0.001	<0.0005	<0.001
BLANK								<0.001	<0.0005	<0.001
Target Range - Lower Bound								<0.001	<0.0005	<0.001
Upper Bound								0.002	0.0010	0.002
DUPLICATES										
SC17019		3.3	23	28.5	20.9	2.26	40			
DUP		3.2	21	30.7	21.6	2.04	70			
Target Range - Lower Bound		2.9	20	27.8	20.0	2.02	40			
Upper Bound		3.6	24	31.4	22.5	2.28	70			
SC170280								0.003	<0.0005	0.001
DUP								0.001	<0.0005	<0.001
Target Range - Lower Bound								<0.001	<0.0005	<0.001
Upper Bound								0.003	0.0010	0.002
SC170206								0.002	<0.0005	0.001
DUP								0.001	<0.0005	0.001
Target Range - Lower Bound								<0.001	<0.0005	<0.001
Upper Bound								0.002	0.0010	0.002
SC170218		0.7	3	23.2	0.6	<0.02	60			
DUP		0.7	3	23.5	0.6	0.03	70			
Target Range - Lower Bound		0.5	2	21.9	0.4	<0.02	50			
Upper Bound		0.9	4	24.8	0.8	0.04	80			



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Sample Description	Method Analyte Units LOR	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	ME-MS89L Fe % 0.05
SC170248 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
ORIGINAL DUP Target Range - Lower Bound Upper Bound																



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Sample Description	Method Analyte Units LOR	ME-MS89L Ga ppm 0.5	ME-MS89L Gd ppm 0.03	ME-MS89L Ge ppm 0.5	ME-MS89L Ho ppm 0.01	ME-MS89L In ppm 0.3	ME-MS89L K % 0.05	ME-MS89L La ppm 0.08	ME-MS89L Li ppm 2	ME-MS89L Lu ppm 0.05	ME-MS89L Mn ppm 10	ME-MS89L Mo ppm 2	ME-MS89L Nb ppm 0.8	ME-MS89L Nd ppm 0.07	ME-MS89L Ni ppm 10	ME-MS89L Pb ppm 0.5
SC170248 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
ORIGINAL DUP Target Range - Lower Bound Upper Bound																



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Sample Description	Method Analyte Units LOR	ME-MS89L Pr ppm 0.03	ME-MS89L Rb ppm 0.5	ME-MS89L Re ppm 0.01	ME-MS89L Sb ppm 0.3	ME-MS89L Se ppm 3	ME-MS89L Sm ppm 0.04	ME-MS89L Sn ppm 3	ME-MS89L Sr ppm 20	ME-MS89L Ta ppm 0.04	ME-MS89L Tb ppm 0.01	ME-MS89L Te ppm 0.5	ME-MS89L Th ppm 0.1	ME-MS89L Ti % 0.005	ME-MS89L Tl ppm 0.02	ME-MS89L Tm ppm 0.01
SC170248 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
ORIGINAL DUP Target Range - Lower Bound Upper Bound																



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Sample Description	Method Analyte Units LOR	ME-MS89L U ppm 0.2	ME-MS89L V ppm 1	ME-MS89L W ppm 0.3	ME-MS89L Y ppm 0.2	ME-MS89L Yb ppm 0.02	ME-MS89L Zn ppm 10	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001
DUPLICATES										
SC170248 DUP Target Range - Lower Bound Upper Bound								0.008	<0.0005	0.001
								0.009	<0.0005	0.001
								0.007	<0.0005	<0.001
								0.010	0.0010	0.002
ORIGINAL DUP Target Range - Lower Bound Upper Bound								<0.001	<0.0005	<0.001
								<0.001	<0.0005	0.001
								<0.001	<0.0005	<0.001
								0.002	0.0010	0.002



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	CERTIFICATE COMMENTS			
	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 PGM-MS23			
Applies to Method:	Processed at ALS Adelaide located at Unit 1, 1 Burma Road, Pooraka, Adelaide, SA, Australia. CRU-21 LEV-01 LOG-22 LOG-24 PUL-21 PUL-QC WEI-21			
Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. ME-MS89L			