



ALS Chemex

EXCELLENCE IN ANALYTICAL CHEMISTRY

Australian Laboratory Services Pty Ltd

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QC CERTIFICATE AS08165715

Project: Palmer river

P.O. No.: 266231

This report is for 16 Rock samples submitted to our lab in Alice Springs, NT, Australia on 1-DEC-2008.

The following have access to data associated with this certificate:

MICHAEL GREEN

RUDY LENNARTZ

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
LEV-02	Remote Lab Surcharge
WSH-22	"Wash" pulverizers
LEV-01	Waste Disposal Levy
PUL-23	Pulv Sample - Split/Retain
PUL-QC	Pulverizing QC Test

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-MS61	48 element four acid ICP-MS
Au-AA23	Au 30g FA-AA finish AAS

To: **ATOM ENERGY LTD**
ATTN: RUDY LENNARTZ
PO BOX 3896
ALICE SPRINGS WA

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:

Wayne Abbott, Operations Manager, Western Australia



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QC CERTIFICATE OF ANALYSIS AS08165715

Method	Au-AA23	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
Analyte	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	
Units	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	
Sample Description	LOR	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
STANDARDS																
G2000		3.86	4.77	489	2330	1.57	1.11	0.58	7.38	55.5	26.8	105	13.45	305	3.81	
Target Range - Lower Bound		3.22	4.52	435	2000	1.25	0.98	0.51	6.82	47.9	22.6	90	11.10	273	3.46	
Upper Bound		3.96	5.54	533	2720	1.63	1.22	0.65	8.38	58.5	27.8	112	13.70	334	4.26	
GEOMS-03		0.68	4.91	635	2390	1.55	0.39	0.37	0.39	50.0	11.7	135	10.50	132.0	4.15	
Target Range - Lower Bound		0.67	4.61	570	2060	1.34	0.31	0.33	0.30	47.0	10.7	105	9.04	120.5	3.64	
Upper Bound		0.85	5.65	697	2810	1.74	0.41	0.43	0.42	57.4	13.3	131	11.15	147.5	4.48	
ST-289	1.270															
ST-289	1.305															
Target Range - Lower Bound	1.165															
Upper Bound	1.355															
ST-327	6.77															
ST-327	6.48															
Target Range - Lower Bound	6.35															
Upper Bound	7.31															
BLANKS																
BLANK	<0.005															
BLANK		0.01	<0.01	<0.2	<10	<0.05	0.02	<0.01	0.02	0.01	<0.1	1	<0.05	0.2	<0.01	
BLANK	<0.005															
Target Range - Lower Bound	<0.005	<0.01	<0.01	<0.2	<10	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	<1	<0.05	<0.2	<0.01	
Upper Bound	0.010	0.02	0.02	0.4	20	0.10	0.02	0.02	0.04	0.02	0.2	2	0.10	0.4	0.02	
DUPLICATES																
PRRC0044	<0.005	0.28	1.72	148.5	1310	0.65	0.56	0.18	0.06	19.5	2.6	389	1.14	24.6	49	
DUP	<0.005	0.26	1.72	144.5	1310	0.57	0.55	0.18	0.06	19.10	2.4	395	1.11	23.5	48.8	
Target Range - Lower Bound	<0.005	0.25	1.62	139.0	1200	0.53	0.52	0.16	0.04	18.35	2.3	371	1.02	22.6	46.4	
Upper Bound	0.010	0.29	1.82	154.0	1420	0.69	0.59	0.20	0.08	20.3	2.7	413	1.23	25.5	50.0	
ORIGINAL	<0.005															
DUP	<0.005															
Target Range - Lower Bound	<0.005															
Upper Bound	0.010															



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Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
Analyte	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	
Units	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	
LOR	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5	
STANDARDS																
G2000	13.40	0.25	1.3	0.437	1.30	30.4	45.6	0.74	567	6.55	0.15	12.9	284	960	707	
Target Range - Lower Bound	11.65	0.09	1.1	0.355	1.14	25.9	37.0	0.67	506	5.62	0.12	10.4	246	870	603	
Upper Bound	14.35	0.22	1.6	0.445	1.42	32.7	45.6	0.85	630	6.98	0.16	13.0	302	1080	738	
GEOMS-03	13.30	0.13	1.2	0.050	1.12	28.7	44.7	0.50	521	3.25	0.10	15.9	52.0	1070	6.5	
Target Range - Lower Bound	12.00	0.10	1.2	0.035	1.03	25.6	37.6	0.48	483	3.05	0.06	13.1	48.1	970	7.2	
Upper Bound	14.75	0.24	1.6	0.053	1.29	32.4	46.4	0.60	601	3.83	0.10	16.3	59.3	1210	9.9	
ST-289																
ST-289																
Target Range - Lower Bound																
Upper Bound																
ST-327																
ST-327																
Target Range - Lower Bound																
Upper Bound																
BLANKS																
BLANK	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	0.2	<10	<0.5	
BLANK																
BLANK																
Target Range - Lower Bound	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	<0.2	<10	<0.5	
Upper Bound	0.10	0.10	0.2	0.010	0.02	1.0	0.4	0.02	10	0.10	0.02	0.2	0.4	20	1.0	
DUPLICATES																
PRRC0044	22.9	4.4	2.8	0.071	0.14	9.2	3.2	0.06	256	1.95	0.03	5.3	3.7	690	13.9	
DUP	21.7	3.99	2.7	0.073	0.14	9.0	3.0	0.06	254	1.84	0.03	5.1	4.1	690	13.9	
Target Range - Lower Bound	21.1	3.94	2.5	0.063	0.12	8.1	2.7	0.05	237	1.75	0.02	4.8	3.5	650	12.7	
Upper Bound	23.5	4.45	3.0	0.081	0.16	10.1	3.5	0.07	273	2.04	0.04	5.6	4.3	730	15.1	
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																



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Analyte	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	
Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
LOR	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	
STANDARDS																
G2000	73.9	0.009	0.27	34.0	11.8	6	2.3	118.0	0.84	0.16	7.6	0.343	1.14	3.6	104	
Target Range - Lower Bound	62.9	0.003	0.23	29.3	10.3	4	1.8	104.5	0.65	0.09	6.4	0.314	0.84	2.9	94	
Upper Bound	77.1	0.009	0.30	39.7	12.8	7	2.6	128.0	0.91	0.22	8.2	0.395	1.18	3.7	117	
GEOMS-03	62.9	0.005	0.03	18.05	13.2	4	2.5	165.0	1.00	0.14	6.7	0.450	1.21	3.7	116	
Target Range - Lower Bound	55.7	<0.002	0.03	15.85	12.4	2	2.1	157.5	0.81	0.07	6.2	0.409	0.99	3.1	104	
Upper Bound	68.3	0.004	0.05	21.5	15.4	4	3.0	192.5	1.10	0.19	8.0	0.511	1.39	4.0	130	
ST-289																
ST-289																
Target Range - Lower Bound																
Upper Bound																
ST-327																
ST-327																
Target Range - Lower Bound																
Upper Bound																
BLANKS																
BLANK	<0.1	0.002	<0.01	<0.05	<0.1	1	<0.2	<0.2	<0.05	<0.05	<0.2	<0.005	<0.02	<0.1	<1	
BLANK																
BLANK																
Target Range - Lower Bound	<0.1	<0.002	<0.01	<0.05	<0.1	<1	<0.2	<0.2	<0.05	<0.05	<0.2	<0.005	<0.02	<0.1	<1	
Upper Bound	0.2	0.004	0.02	0.10	0.2	5	0.4	0.4	0.10	0.10	0.4	0.010	0.04	0.2	2	
DUPLICATES																
PRRC0044	9.5	0.005	0.12	2.31	3.6	16	1.4	125	0.34	0.38	30.4	0.138	0.37	7.4	3340	
DUP	9.1	0.004	0.12	2.21	3.4	15	1.3	123.0	0.33	0.38	29.6	0.139	0.36	7.4	3330	
Target Range - Lower Bound	8.7	<0.002	0.10	2.04	3.2	14	1.1	117.5	0.27	0.31	28.3	0.127	0.32	6.9	3170	
Upper Bound	9.9	0.007	0.14	2.48	3.8	17	1.6	130.5	0.40	0.45	31.7	0.150	0.41	7.9	3500	
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																



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Sample Description	Method Analyte Units LOR	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
STANDARDS					
G2000		18.4	23.3	1260	39.4
Target Range - Lower Bound		15.2	21.1	1155	37.5
Upper Bound		20.8	26.0	1415	51.9
GEOMS-03		21.7	21.8	45	37.2
Target Range - Lower Bound		18.1	19.8	40	38.3
Upper Bound		24.7	24.4	54	52.9
ST-289					
ST-289					
Target Range - Lower Bound					
Upper Bound					
ST-327					
ST-327					
Target Range - Lower Bound					
Upper Bound					
BLANKS					
BLANK		0.1	<0.1	<2	<0.5
BLANK					
BLANK					
Target Range - Lower Bound		<0.1	<0.1	<2	<0.5
Upper Bound		0.2	0.2	4	1.0
DUPLICATES					
PRRC0044		1.5	5.6	11	115
DUP		1.5	5.4	11	111.0
Target Range - Lower Bound		1.3	5.1	8	107.0
Upper Bound		1.7	5.9	14	119.0
ORIGINAL					
DUP					
Target Range - Lower Bound					
Upper Bound					



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Method	Au-AA23	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
Analyte	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	
Units	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	
Sample Description	LOR	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
DUPLICATES																
ORIGINAL	0.061															
DUP	0.056															
Target Range - Lower Bound	0.051															
Upper Bound	0.066															



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Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
Analyte	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	
Units	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	LOR	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5
DUPLICATES																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																



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Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
Analyte	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	
Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
Sample Description	LOR	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1
DUPLICATES																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																

***** See Appendix Page for comments regarding this certificate *****



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Sample Description	Method Analyte Units LOR	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
ORIGINAL DUP Target Range - Lower Bound Upper Bound	DUPLICATES				



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Total # Appendix Pages: 1

Finalized Date: 22-DEC-2008

Account: ATOENE

Project: Palmer river

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Method	CERTIFICATE COMMENTS
ME-MS61	REE's may not be totally soluble in this method.