

Quality Analysis ...



Innovative Technologies

Date Submitted: 14-Feb-11  
Invoice No.: A11-1021  
Invoice Date: 10-Mar-11  
Your Reference: EDGES STEVENSON RIDGE

Geological Survey of Canada-Vancouver  
625 Robson Street, 14th Floor  
Vancouver BC V6B 5J3

ATTN: Jim Ryan

## CERTIFICATE OF ANALYSIS

3 Pulp samples and 22 Rock samples were submitted for analysis.

The following analytical package was requested:

Code 4LTHORES (11+) Major Elements Fusion ICP(WRA)/Trace  
Elements Fusion ICP/MS(WRA4B2)

REPORT A11-1021

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### Notes:

We recommend using option 4B1 for accurate levels of the base metals Cu, Pb, Zn, Ni and Ag. Option 4B-INAA for As, Sb, high W >100ppm, Cr >1000ppm and Sn >50ppm by Code 5D. Values for these elements provided by Fusion ICP/MS, are order of magnitude only and are provided for general information. Mineralized samples should have the Quant option selected or request assays for values which exceed the range of option 4B1. Total includes all elements in % oxide to the left of total.

CERTIFIED BY :

Emmanuel Eseme, Ph.D.

Quality Control



ACTIVATION LABORATORIES LTD.

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**Activation Laboratories Ltd.      Report:**

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1	1	5	20	1	20	10	30	1	0.5	5	1
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
10RAYJR001A02	62.80	16.45	4.63	0.090	1.44	4.34	4.84	2.40	0.459	0.22	1.04	98.70	8	1	86	30	6	< 20	< 10	60	18	1.3	< 5	49
10RAYJR002A02	51.04	16.86	12.64	0.105	5.35	7.92	4.26	0.30	1.507	0.08	0.64	100.7	44	< 1	368	210	49	120	20	170	16	1.8	< 5	3
10RAYJR007A02	47.23	15.14	8.92	0.114	5.11	14.54	2.88	0.94	0.885	0.28	4.91	100.9	36	< 1	299	220	23	40	40	70	15	1.5	< 5	14
10RAYJR011A02	60.36	18.67	4.67	0.162	1.09	5.41	5.05	3.43	0.475	0.19	0.55	100.0	5	2	97	30	6	< 20	30	60	18	1.8	< 5	81
10RAYJR020A01	48.06	13.86	12.35	0.160	6.77	11.47	3.08	1.13	1.035	0.34	1.91	100.2	42	< 1	336	80	34	20	40	40	14	1.9	< 5	15
10RAYJR022A02	48.55	17.01	11.22	0.187	3.64	9.35	3.05	3.21	1.193	0.46	2.32	100.2	24	1	368	30	27	< 20	190	100	17	1.5	< 5	51
10RAYJR023A02	48.10	15.16	12.24	0.194	5.01	9.10	3.90	0.68	1.704	0.35	3.58	100.0	31	1	336	50	31	< 20	50	110	18	1.6	< 5	10
10RAYJR029A02	51.74	17.32	9.57	0.169	2.85	10.31	1.78	1.79	0.980	0.20	2.53	99.24	28	< 1	243	20	19	< 20	30	70	18	1.7	< 5	33
10RAYJR048A02	69.52	14.50	3.36	0.057	0.99	1.90	3.24	3.96	0.393	0.09	1.01	99.01	6	4	34	40	6	< 20	< 10	40	17	1.4	< 5	151
10RAYJR048B02	74.90	13.18	0.88	0.053	0.08	1.16	3.05	4.75	0.072	< 0.01	1.64	99.77	2	4	< 5	30	< 1	< 20	< 10	< 30	13	1.6	< 5	288
10RAYJR057A02	55.20	17.70	8.19	0.154	3.33	6.22	3.85	3.47	1.098	0.50	0.21	99.91	17	4	206	50	16	< 20	20	90	19	1.5	< 5	96
10RAYJR062A02	55.42	15.59	7.76	0.118	4.94	7.20	2.91	3.42	0.828	0.40	1.95	100.5	22	2	177	140	19	< 20	20	60	16	1.5	< 5	78
10RAYJR063A02	59.73	17.53	6.48	0.098	3.23	7.00	3.31	1.52	0.718	0.16	1.06	100.8	21	1	166	40	12	< 20	20	40	16	1.3	< 5	35
10RAYJR065A02	53.59	14.81	8.05	0.107	5.78	6.61	2.97	3.68	0.873	0.43	2.50	99.41	22	4	200	190	26	90	50	90	16	1.6	< 5	103
10RAYJR074A02	67.44	15.93	3.95	0.091	1.26	3.24	3.62	3.29	0.436	0.17	0.77	100.2	6	2	51	30	6	< 20	< 10	60	15	1.2	< 5	87
10RAYJR090B02	56.10	17.30	6.58	0.162	1.32	5.29	2.85	3.79	0.911	0.32	4.95	99.58	11	2	76	< 20	9	< 20	< 10	150	19	1.4	< 5	148
10RAYJR098A02	69.05	13.17	4.97	0.085	0.98	4.12	4.18	0.77	0.523	0.11	1.88	99.84	17	< 1	75	20	7	< 20	< 10	40	15	1.5	< 5	16
10RAYJR103A02	70.31	14.11	2.63	0.042	1.04	1.96	3.12	4.43	0.380	0.09	0.62	98.73	6	5	28	70	4	< 20	< 10	50	18	1.2	< 5	150
10RAYJR104A02	66.93	15.30	4.75	0.086	1.95	4.50	3.08	2.88	0.518	0.09	0.52	100.6	13	2	93	40	9	< 20	10	50	15	1.4	< 5	88
10RAYJR121A1	61.24	17.78	5.77	0.098	2.42	5.81	3.92	2.03	0.728	0.23	0.84	100.9	12	2	114	60	12	< 20	20	80	18	1.4	< 5	63
10RAYJR122A1	48.56	15.26	12.26	0.156	8.20	8.30	3.94	1.53	2.308	0.49	-0.35	100.6	18	2	219	250	46	160	50	110	20	1.2	< 5	19
10RAYJR123A1	76.16	12.50	1.71	0.044	0.36	1.19	3.17	4.16	0.157	0.03	1.25	100.7	3	2	14	200	2	< 20	< 10	< 30	11	1.5	6	122
10RAYMC005A02	72.88	13.66	1.77	0.012	0.60	1.23	3.55	4.26	0.198	0.04	1.75	99.94	3	2	10	50	4	< 20	20	80	14	1.0	< 5	121
10RAYMC014A01	48.86	15.32	12.80	0.229	7.46	9.75	2.45	1.14	1.508	0.16	0.90	100.6	44	< 1	325	180	48	90	40	110	17	1.8	< 5	30
10RAYMC025A02	74.33	12.45	3.87	0.074	0.63	3.33	3.49	0.88	0.338	0.06	0.60	100.0	13	1	25	30	4	< 20	< 10	40	12	1.1	< 5	19

**Activation Laboratories Ltd.      Report:**

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	0.5	1	0.2	2	0.5	0.1	1	0.2	0.1	3	0.05	0.05	0.01	0.05	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01
Analysis Method	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
10RAYJR001A02	923	14.8	114	7.1	<2	0.6	<0.1	1	<0.2	1.8	1577	15.3	32.5	4.17	16.9	3.52	0.999	3.05	0.47	2.78	0.55	1.62	0.249	1.65
10RAYJR002A02	162	30.1	81	2.2	<2	<0.5	<0.1	1	<0.2	0.2	122	3.32	10.1	1.81	10.0	3.68	1.39	4.81	0.90	5.89	1.19	3.48	0.522	3.31
10RAYJR007A02	733	15.5	42	2.0	<2	<0.5	<0.1	<1	<0.2	0.4	821	7.42	15.5	2.29	10.8	2.78	1.01	3.11	0.50	3.09	0.61	1.72	0.258	1.65
10RAYJR011A02	691	17.7	109	6.0	<2	<0.5	<0.1	1	<0.2	2.3	2151	16.4	30.7	3.65	14.4	3.26	1.08	3.21	0.51	3.19	0.65	2.00	0.316	2.16
10RAYJR020A01	581	15.7	61	4.1	<2	<0.5	<0.1	1	<0.2	0.6	534	10.1	23.2	3.23	14.6	3.51	1.19	3.54	0.56	3.28	0.62	1.74	0.260	1.65
10RAYJR022A02	763	21.2	57	2.5	<2	<0.5	<0.1	1	<0.2	0.8	781	12.5	26.3	3.57	16.2	4.11	1.34	4.24	0.70	4.14	0.82	2.32	0.336	2.24
10RAYJR023A02	426	34.2	127	5.1	<2	<0.5	<0.1	2	<0.2	1.2	271	11.6	28.3	4.17	19.8	5.55	1.88	6.12	1.06	6.56	1.32	3.80	0.564	3.74
10RAYJR029A02	396	19.3	72	7.0	<2	<0.5	<0.1	1	4.1	0.9	709	9.51	21.1	2.85	12.5	3.35	1.16	3.67	0.62	3.76	0.74	2.19	0.315	2.14
10RAYJR048A02	284	22.1	162	10.4	<2	0.7	<0.1	5	<0.2	7.8	961	43.1	76.5	8.92	31.3	5.68	0.989	4.58	0.70	4.04	0.77	2.23	0.334	2.20
10RAYJR048B02	70	12.3	67	14.8	<2	<0.5	<0.1	3	<0.2	9.2	86	11.2	22.5	2.63	9.31	2.04	0.312	1.77	0.30	1.89	0.39	1.23	0.208	1.58
10RAYJR057A02	1121	23.7	132	9.6	<2	0.5	<0.1	2	<0.2	2.1	1354	30.3	61.9	7.73	31.0	6.55	1.76	5.71	0.83	4.90	0.92	2.70	0.398	2.64
10RAYJR062A02	615	22.2	141	9.8	<2	0.6	<0.1	2	2.1	1.3	1202	21.2	43.0	5.29	21.1	4.70	1.19	4.33	0.66	4.04	0.78	2.34	0.353	2.33
10RAYJR063A02	563	16.7	109	5.9	<2	0.5	<0.1	3	1.2	2.1	1779	20.8	39.9	4.76	18.5	3.83	1.09	3.34	0.52	3.17	0.63	1.88	0.276	1.83
10RAYJR065A02	849	20.0	101	6.6	<2	<0.5	<0.1	2	<0.2	1.8	1301	20.2	42.5	5.44	22.6	5.25	1.38	4.57	0.67	3.96	0.73	2.10	0.311	2.05
10RAYJR074A02	609	14.2	168	10.1	<2	0.8	<0.1	2	<0.2	2.1	2880	52.5	89.9	9.22	30.3	4.71	1.13	3.46	0.47	2.72	0.53	1.58	0.234	1.57
10RAYJR090B02	397	30.6	189	11.1	<2	0.9	<0.1	5	<0.2	5.1	1566	35.3	72.0	8.86	35.4	7.50	1.83	6.65	0.99	5.91	1.14	3.34	0.494	3.22
10RAYJR098A02	203	32.0	79	6.8	<2	<0.5	<0.1	2	<0.2	0.4	909	19.1	43.4	5.65	22.6	5.22	0.945	5.47	0.92	5.86	1.19	3.52	0.537	3.55
10RAYJR103A02	209	15.2	137	10.0	<2	0.6	<0.1	6	<0.2	2.8	841	31.0	64.1	6.98	24.9	4.78	0.860	3.65	0.55	3.05	0.57	1.68	0.248	1.65
10RAYJR104A02	239	16.5	102	7.4	<2	<0.5	<0.1	3	<0.2	2.1	902	20.9	40.0	4.56	17.2	3.53	0.842	3.19	0.52	3.11	0.61	1.82	0.276	1.88
10RAYJR121A1	517	19.8	141	8.6	<2	0.6	<0.1	2	<0.2	4.1	453	23.1	48.7	5.99	23.5	4.74	1.16	4.03	0.62	3.84	0.71	2.11	0.316	2.13
10RAYJR122A1	629	17.3	147	26.1	<2	0.7	<0.1	2	<0.2	0.2	293	22.2	45.5	5.69	24.1	5.55	1.85	5.22	0.72	3.99	0.68	1.78	0.239	1.39
10RAYJR123A1	120	9.7	84	4.8	<2	<0.5	<0.1	1	1.4	6.9	830	22.9	39.9	4.13	13.4	2.21	0.336	1.70	0.27	1.62	0.34	1.03	0.172	1.33
10RAYMC005A02	210	19.4	148	11.8	<2	0.7	<0.1	2	<0.2	1.8	1447	46.8	77.3	8.01	26.3	4.20	0.747	3.42	0.52	3.16	0.65	2.00	0.303	2.13
10RAYMC014A01	99	27.9	78	3.3	<2	<0.5	<0.1	1	<0.2	1.5	1575	6.13	13.6	2.37	12.0	3.77	1.38	4.69	0.83	5.33	1.07	3.15	0.457	2.99
10RAYMC025A02	262	16.2	162	4.5	<2	0.8	<0.1	<1	<0.2	0.7	742	10.1	18.0	2.20	10.1	2.85	0.959	3.20	0.53	3.32	0.64	1.79	0.249	1.66

Activation Laboratories Ltd. Report:

Analyte Symbol	Lu	Hf	Ta	W	Ti	Pb	Bi	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.002	0.1	0.01	0.5	0.05	5	0.1	0.05	0.01
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
10RAYJR001A02	0.262	3.1	0.44	< 0.5	0.23	20	< 0.1	4.10	1.24
10RAYJR002A02	0.499	2.3	0.10	< 0.5	< 0.05	< 5	< 0.1	0.17	0.30
10RAYJR007A02	0.254	1.4	0.12	< 0.5	0.07	< 5	< 0.1	1.22	0.91
10RAYJR011A02	0.364	3.1	0.42	< 0.5	0.26	10	< 0.1	6.64	3.26
10RAYJR020A01	0.251	1.7	0.27	< 0.5	< 0.05	< 5	< 0.1	1.06	0.59
10RAYJR022A02	0.350	1.9	0.13	< 0.5	0.14	< 5	< 0.1	2.26	1.13
10RAYJR023A02	0.566	3.4	0.34	< 0.5	0.05	< 5	< 0.1	1.19	0.67
10RAYJR029A02	0.340	2.2	0.46	< 0.5	0.23	< 5	< 0.1	1.74	1.13
10RAYJR048A02	0.346	4.7	1.22	1.0	1.02	29	0.1	18.8	5.56
10RAYJR048B02	0.276	2.7	1.70	< 0.5	2.89	47	0.1	43.3	12.6
10RAYJR057A02	0.420	3.7	0.64	< 0.5	0.33	17	< 0.1	6.11	2.58
10RAYJR062A02	0.380	3.6	0.67	< 0.5	0.61	11	< 0.1	7.28	2.27
10RAYJR063A02	0.293	3.0	0.44	< 0.5	0.41	14	0.1	6.11	1.76
10RAYJR065A02	0.323	2.8	0.45	< 0.5	0.27	15	< 0.1	4.98	1.99
10RAYJR074A02	0.251	4.3	0.70	< 0.5	1.00	23	0.1	21.1	4.33
10RAYJR090B02	0.518	5.1	0.88	< 0.5	1.49	56	0.2	11.8	5.25
10RAYJR098A02	0.572	2.8	0.56	< 0.5	0.09	< 5	< 0.1	6.88	2.56
10RAYJR103A02	0.264	4.1	1.18	< 0.5	1.06	42	0.2	14.6	3.50
10RAYJR104A02	0.305	3.1	0.86	< 0.5	0.61	22	< 0.1	10.0	3.94
10RAYJR121A1	0.347	4.0	0.92	< 0.5	0.42	15	0.2	7.59	3.08
10RAYJR122A1	0.206	3.7	1.90	< 0.5	0.06	< 5	< 0.1	2.63	0.76
10RAYJR123A1	0.230	2.6	0.55	< 0.5	0.75	18	0.2	15.3	2.99
10RAYMC005A02	0.361	4.2	1.28	1.9	0.82	21	0.4	21.6	7.01
10RAYMC014A01	0.467	2.3	0.24	< 0.5	0.15	< 5	0.1	0.31	0.23
10RAYMC025A02	0.270	4.0	0.28	< 0.5	0.10	5	< 0.1	3.21	1.37

Activation Laboratories Ltd. Report:

Quality Control																									
Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	0.5	5	1	
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	
NIST 694 Meas	11.58	1.92	0.76	0.012	0.34	42.94	0.88	0.55	0.118	30.22					1670										
NIST 694 Cert	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2				1740											
DNC-1 Meas	46.82	18.26	9.94	0.147	10.09	11.44	1.89	0.23	0.480	0.07			31		155	290	58	250	100	70					
DNC-1 Cert	47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148.0	270.0	57.0	247	100.0	70.0					
GBW 07113 Meas	72.01	12.60	3.24	0.141	0.14	0.60	2.43	5.37	0.274	0.04			6	4	< 5										
GBW 07113 Cert	72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00										
LKSD-3 Meas																90	32	50	30	150			26	73	
LKSD-3 Cert																87.0	30.0	47.0	35.0	152			27.0	78.0	
TDB-1 Meas																230		90	330	170				21	
TDB-1 Cert																251		92	323	155				23	
W-2a Meas	52.70	15.32	10.87	0.167	6.33	11.02	2.22	0.63	1.090	0.12			35	< 1	279	90	42	70	110	80	17	1.8	< 5	19	
W-2a Cert	52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	1.20	21.0	
SY-4 Meas	49.42	20.33	6.26	0.108	0.50	8.07	6.99	1.68	0.284	0.12			< 1	3	< 5										
SY-4 Cert	49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0										
CTA-AC-1 Meas																	< 1		60						
CTA-AC-1 Cert																	2.72		54.0						
BIR-1a Meas	47.67	15.63	11.16	0.173	9.61	13.50	1.80	0.02	0.977	0.02			43	< 1	336	380	53	170	130	80	15		< 5		
BIR-1a Cert	47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		0.44		
NCS DC86312 Meas																									
NCS DC86312 Cert																									
NCS DC70014 Meas																	25	70	2580	7400	25				
NCS DC70014 Cert																	26.2	70.9	2600.00	7400.00	25.2				
NCS DC86316 Meas																									
NCS DC86316 Cert																									
NCS DC70009 (GBW07241) Meas																40	3	< 20	1020	120	17	11.0	72	507	
NCS DC70009 (GBW07241) Cert																30	3.7	2.8	960.000	100.000	16.5	11.2	69.9	500.00	
OREAS 100a (Fusion) Meas																	17		170						
OREAS 100a (Fusion) Cert																	18.1		169						
OREAS 101a (Fusion) Meas																	47		420						
OREAS 101a (Fusion) Cert																	48.8		434						
OREAS 101b (Fusion) Meas																	44	< 20	400						
OREAS 101b (Fusion) Cert																	47	9	416						
JR-1 Meas																< 20	< 1	< 20	< 10	30	17	2.8	16	244	
JR-1 Cert																2.83	0.83	1.67	2.68	30.6	16.1	1.88	16.3	257	
SARM 3 Meas																									
SARM 3 Cert																									
BCR-2 Meas	53.98	13.52	13.74		3.47	7.17	3.10	1.78	2.254	0.36			32		435										
BCR-2 Cert	54.1	13.5	13.8		3.59	7.12	3.16	1.79	2.26	0.35			33		416										
10RAYJR090B02 Orig	56.07	17.27	6.58	0.162	1.33	5.28	2.85	3.80	0.907	0.33	4.95	99.51	11	2	75	< 20	10	< 20	< 10	150	19	1.4	< 5	149	
10RAYJR090B02 Dup	56.14	17.33	6.59	0.163	1.32	5.29	2.85	3.78	0.915	0.32	4.95	99.65	11	2	76	< 20	9	< 20	< 10	150	19	1.3	< 5	147	
Method Blank Method Blank																< 20	< 1	< 20	< 10	< 30	< 1	< 0.5	< 5	< 1	

Activation Laboratories Ltd. Report:

Quality Control																									
Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Detection Limit	2	0.5	1	0.2	2	0.5	0.1	1	0.2	0.1	3	0.05	0.05	0.01	0.05	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01	
Analysis Method	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	
NIST 694 Meas																									
NIST 694 Cert																									
DNC-1 Meas	142		38						1.1		103	3.72			5.17		0.574							1.96	
DNC-1 Cert	144.0		38						0.96		118	3.6			5.20		0.59							2.0	
GBW 07113 Meas	39										483														
GBW 07113 Cert	43.0										506														
LKSD-3 Meas		30.1	181		< 2	2.9		2	1.2	2.4		52.7	91.8		42.6	7.66	1.40		0.95	4.78				2.72	
LKSD-3 Cert		30.0	178		2.00	2.70		3.00	1.30	2.30		52.0	90.0		44.0	8.00	1.50		1.00	4.90				2.70	
TDB-1 Meas		34.2	167									16.5	38.7		24.1		2.00							3.23	
TDB-1 Cert		36	156									17	41		23		2.1							3.4	
W-2a Meas	196	21.2	95	7.1	< 2	< 0.5				0.9	171	10.5	22.9		12.9	3.41	1.13		0.63	3.83	0.79	2.18	0.339	2.09	
W-2a Cert	190	24.0	94.0	7.90	0.600	0.0460				0.990	182	10.0	23.0		13.0	3.30	1.00		0.630	3.60	0.760	2.50	0.380	2.10	
SY-4 Meas	1206										338														
SY-4 Cert	1191										340														
CTA-AC-1 Meas		270										> 2000	> 3000		1120	166	45.2	129	15.0					11.0	
CTA-AC-1 Cert		272										2176	3326		1087	162	46.7	124	13.9					11.4	
BIR-1a Meas	110	14.5	20	0.6					0.5		8		2.04		2.58	1.12	0.514	1.95						1.69	
BIR-1a Cert	110	16	18	0.6					0.58		6		1.9		2.5	1.1	0.55	2.0						1.7	
NCS DC86312 Meas		987										> 2000	171		1580			224	34.3	184	35.8	96.6	14.4	87.7	
NCS DC86312 Cert		976.00										2360.000	190.000		1600.000			225.0	34.6	183.00	35.70	96.2	15.1	87.79	
NCS DC70014 Meas		30.0			> 100	16.6				180		43.4	89.9	10.8	37.3	7.60	1.76	6.75	1.11	6.13	1.21	3.31	0.523	3.26	
NCS DC70014 Cert		32.1			270.000	16.7			180.000			45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7	1.3	3.5	0.57	3.3	
NCS DC86316 Meas																									
NCS DC86316 Cert																									
NCS DC70009 (GBW07241) Meas		128				2.1	1.3	> 1000		44.5		24.2	60.9	8.25	33.7	12.9	0.167	14.4	3.27	21.0	4.37	12.9	2.36	16.3	
NCS DC70009 (GBW07241) Cert		128				1.8	1.3	1701.000		41		23.7	60.3	7.9	32.9	12.5	0.16	14.8	3.3	20.7	4.5	13.4	2.2	14.9	
OREAS 100a (Fusion) Meas		143			23							267	429	48.0	156	22.7	3.44	21.7	3.50	21.5	4.65	13.6	2.26	14.3	
OREAS 100a (Fusion) Cert		142			24.1							260	463	47.1	152	23.6	3.71	23.6	3.80	23.2	4.81	14.9	2.31	14.9	
OREAS 101a (Fusion) Meas		181			20							803	1380	135	414	47.9	7.60		5.81	33.5	6.23	18.1	2.81	17.5	
OREAS 101a (Fusion) Cert		183			21.9							816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5	2.90	17.5	
OREAS 101b (Fusion) Meas		178			20							827	1440	126	381	49.9	7.95		5.43	31.1	6.39	18.9	2.92	18.1	
OREAS 101b (Fusion) Cert		178			20.9							789	1331	127	378	48	7.77		5.37	32.1	6.34	18.7	2.66	17.6	
JR-1 Meas		43.6	94	15.2	3	< 0.5	< 0.1	3	1.3	20.8		18.5	48.2	5.65	22.7	5.66	0.271	5.36	1.00	6.03		3.88	0.682	4.61	
JR-1 Cert		45.1	99.9	15.2	3.25	0.031	0.028	2.86	1.19	20.8		19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69		3.61	0.67	4.55	
SARM 3 Meas			> 10000	976																					
SARM 3 Cert			11119	978																					
BCR-2 Meas	335										671														
BCR-2 Cert	346										683														
10RAYJR090B02 Orig	396	30.6	189	11.0	< 2	0.9	< 0.1	5	< 0.2	5.1	1567	35.3	71.9	8.87	35.6	7.43	1.84	6.76	0.99	5.91	1.14	3.37	0.494	3.22	
10RAYJR090B02 Dup	397	30.5	189	11.1	< 2	0.9	< 0.1	4	< 0.2	5.0	1566	35.4	72.1	8.85	35.3	7.58	1.82	6.55	1.00	5.91	1.14	3.32	0.493	3.21	
Method Blank Method Blank	< 0.5	< 1	< 0.2	< 2	< 0.5	< 0.1	< 1	< 0.2	< 0.1	< 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01		

Activation Laboratories Ltd. Report:

Quality Control									
Analyte Symbol	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.002	0.1	0.01	0.5	0.05	5	0.1	0.05	0.01
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NIST 694 Meas									
NIST 694 Cert									
DNC-1 Meas									
DNC-1 Cert									
GBW 07113 Meas									
GBW 07113 Cert									
LKSD-3 Meas	0.400		0.66	0.9				11.2	4.79
LKSD-3 Cert	0.400		0.700	2.00				11.4	4.60
TDB-1 Meas								2.74	
TDB-1 Cert								2.7	
W-2a Meas	0.332	2.5	0.49	0.9	0.09	8	< 0.1	2.29	0.59
W-2a Cert	0.330	2.60	0.500	0.300	0.200	9.30	0.0300	2.40	0.530
SY-4 Meas									
SY-4 Cert									
CTA-AC-1 Meas	1.14		2.51					21.5	4.41
CTA-AC-1 Cert	1.08		2.65					21.8	4.4
BIR-1a Meas		0.5				< 5			
BIR-1a Cert		0.60				3			
NCS DC86312 Meas	12.1							23.5	
NCS DC86312 Cert	11.96							23.6	
NCS DC70014 Meas	0.468					> 10000	80.3		
NCS DC70014 Cert	0.50					27200.00	80.3		
NCS DC86316 Meas		712							
NCS DC86316 Cert		712							
NCS DC70009 (GBW07241) Meas	2.31			2200				29.3	
NCS DC70009 (GBW07241) Cert	2.4			2200.00				28.3	
OREAS 100a (Fusion) Meas	2.03							50.0	137
OREAS 100a (Fusion) Cert	2.26							51.6	135
OREAS 101a (Fusion) Meas	2.38							34.8	421
OREAS 101a (Fusion) Cert	2.66							36.6	422
OREAS 101b (Fusion) Meas	2.47							36.8	413
OREAS 101b (Fusion) Cert	2.58							37.1	396
JR-1 Meas	0.685		1.82	1.5	1.58	20	0.6	27.2	9.49
JR-1 Cert	0.71		1.86	1.59	1.56	19.3	0.56	26.7	8.88
SARM 3 Meas									
SARM 3 Cert									
BCR-2 Meas									
BCR-2 Cert									
10RAYJR090B02 Orig	0.517	5.0	0.87	0.6	1.52	58	0.2	11.9	5.32
10RAYJR090B02 Dup	0.518	5.1	0.89	< 0.5	1.45	55	0.3	11.7	5.17
Method Blank Method Blank	< 0.002	< 0.1	< 0.01	< 0.5	< 0.05	< 5	< 0.1	< 0.05	< 0.01