



Date Submitted: 06-Jun-17
Invoice No.: A17-05617
Invoice Date: 10-Jul-17
Your Reference:

ANGLOGOLD Ashanti
L1, 44 St. Georges Terrace
Perth WA 6000
Australia

ATTN: Andrew Tyrrell

CERTIFICATE OF ANALYSIS

122 Heavy Mineral Concentrates samples were submitted for analysis.

The following analytical package(s) were requested:

Code 3A-Large HMC INAA(INAAGEO)

Code 3C Aqua Regia ICP(AQUAGEO)

REPORT **A17-05617**

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Notes:

Unaltered silicates and resistate minerals may not be dissolved. Values which exceed upper limit should be assayed.

Footnote: No material for sample with missing data.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé".

Emmanuel Esemé , Ph.D.
Quality Control

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Results

Activation Laboratories Ltd.

Report: A17-05617

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	S	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm
Lower Limit	0.2	0.5	1	2	2	1	2	1	0.01	5	5	2	200	5	1	5	10	2	0.02	1	5	50	20
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
863501	< 0.2	< 0.5	56	661	< 2	31	49	92	2.54	98	< 5	43	< 200	< 5	8	67	530	< 2	18.0	325	< 5	< 50	< 20
863502	< 0.2	< 0.5	75	999	< 2	60	27	30	2.35	66	< 5	25	800	< 5	3	71	360	< 2	16.0	190	< 5	< 50	< 20
863503	< 0.2	1.1	61	954	< 2	59	28	37	2.24	139	< 5	36	700	< 5	3	73	380	< 2	17.2	169	< 5	< 50	< 20
863504	0.3	< 0.5	148	1650	< 2	164	32	39	4.64	23	< 5	20	< 200	< 5	3	141	340	< 2	17.3	76	< 5	< 50	< 20
863505	< 0.2	< 0.5	174	1440	< 2	139	28	41	4.62	38	< 5	29	< 200	< 5	< 1	162	450	< 2	21.7	81	< 5	< 50	< 20
863510	< 0.2	< 0.5	32	992	< 2	20	< 2	39	0.05	24	< 5	< 2	< 200	< 5	5	23	120	< 2	10.2	3	< 5	< 50	< 20
863511	< 0.2	< 0.5	78	665	< 2	42	29	46	3.06	85	< 5	36	< 200	< 5	5	65	460	< 2	16.5	281	< 5	< 50	< 20
863512	< 0.2	< 0.5	84	856	< 2	46	28	39	2.44	134	< 5	26	800	< 5	3	62	370	2	13.4	160	< 5	< 50	< 20
863513	< 0.2	0.7	100	969	< 2	59	36	55	3.24	138	< 5	32	2700	< 5	< 1	76	530	< 2	17.5	196	< 5	< 50	< 20
863514	< 0.2	< 0.5	189	2790	< 2	136	39	68	4.09	193	< 5	26	< 200	< 5	< 1	180	540	< 2	22.7	157	< 5	< 50	< 20
863515	0.2	0.6	616	2670	4	120	35	167	4.18	170	< 5	36	< 200	< 5	< 1	159	530	< 2	23.6	113	< 5	< 50	< 20
863517	< 0.2	< 0.5	67	872	3	53	28	42	2.77	60	< 5	51	< 200	< 5	< 1	72	600	< 2	18.5	198	< 5	< 50	< 20
863518	0.2	< 0.5	127	1690	< 2	139	37	64	4.90	< 5	< 5	29	< 200	< 5	< 1	127	450	4	19.1	138	< 5	< 50	< 20
863519	0.5	1.2	144	1630	< 2	130	34	105	4.48	178	< 5	51	500	< 5	< 1	121	520	< 2	20.5	135	< 5	< 50	< 20
863520	< 0.2	< 0.5	232	1400	< 2	167	47	99	3.62	70	< 5	28	< 200	< 5	< 1	148	250	< 2	18.5	135	< 5	< 50	< 20
863521	0.6	0.6	279	1310	4	201	61	135	4.66	< 5	< 5	33	< 200	< 5	< 1	172	310	< 2	21.3	166	< 5	< 50	< 20
863522	0.3	0.5	186	2740	< 2	145	39	136	5.04	< 5	< 5	37	< 200	< 5	< 1	151	380	< 2	24.2	53	< 5	< 50	< 20
863523	1.1	< 0.5	2090	6510	< 2	155	30	56	> 10.0	55	< 5	50	< 200	< 5	< 1	381	240	< 2	25.2	22	< 5	< 50	< 20
863524	1.1	1.0	1920	7810	< 2	185	21	32	> 10.0	29	< 5	35	< 200	< 5	< 1	943	6490	< 2	25.7	8	< 5	< 50	< 20
863525	1.4	1.7	3040	5980	< 2	161	27	36	> 10.0	7	< 5	43	< 200	< 5	< 1	919	3020	< 2	22.8	6	< 5	< 50	< 20
863526	2.9	2.8	1420	21000	< 2	68	15	45	2.04	< 5	< 5	10	< 200	< 5	< 1	150	14200	< 2	17.6	< 1	< 5	< 50	< 20
863528	< 0.2	0.9	101	2020	< 2	92	38	347	2.67	< 5	< 5	39	3000	< 5	< 1	112	450	< 2	24.0	93	< 5	< 50	< 20
863529	0.4	< 0.5	265	1170	2	189	58	115	5.49	931	< 5	41	< 200	< 5	< 1	190	300	< 2	20.2	142	< 5	< 50	< 20
863530	0.3	1.4	249	1090	4	179	53	86	5.28	< 5	< 5	34	< 200	< 5	< 1	151	290	< 2	17.2	127	< 5	< 50	< 20
863531	0.6	0.7	1360	2640	< 2	161	33	88	5.62	80	< 5	37	< 200	< 5	5	203	270	< 2	23.4	57	< 5	< 50	< 20
863533	< 0.2	1.1	117	2100	< 2	79	31	116	2.83	402	< 5	17	10000	< 5	< 1	61	350	< 2	19.2	82	< 5	< 50	< 20
863534	0.5	0.8	192	3800	5	253	38	324	6.68	< 5	< 5	49	1900	< 5	< 1	197	970	< 2	29.4	70	< 5	< 50	< 20
863536	0.6	< 0.5	172	4270	< 2	221	36	61	6.70	< 5	< 5	37	< 200	< 5	< 1	200	450	< 2	25.2	36	< 5	< 50	< 20
863539	0.2	0.6	118	1350	< 2	83	28	80	3.29	42	< 5	30	< 200	< 5	4	81	480	< 2	17.2	71	< 5	< 50	< 20
863540	< 0.2	1.3	201	2810	< 2	165	32	124	3.55	57	< 5	29	< 200	< 5	< 1	88	510	< 2	17.2	52	< 5	< 50	< 20
863541	< 0.2	< 0.5	128	2940	< 2	121	25	76	2.53	< 5	< 5	11	< 200	< 5	2	66	240	< 2	16.2	28	< 5	< 50	< 20
863542	< 0.2	< 0.5	95	2770	< 2	121	23	85	2.23	< 5	< 5	12	< 200	< 5	< 1	62	220	< 2	15.5	31	< 5	< 50	< 20
863546	0.5	< 0.5	195	3000	< 2	194	38	72	6.76	89	< 5	22	< 200	< 5	1	100	270	< 2	16.2	20	< 5	< 50	< 20
863550	0.3	0.6	110	1110	3	80	50	48	4.44	< 5	< 5	41	< 200	< 5	< 1	101	600	< 2	22.2	181	< 5	< 50	< 20
863551	0.5	< 0.5	272	3840	3	222	41	100	8.13	< 5	< 5	63	< 200	< 5	< 1	168	460	< 2	25.5	34	< 5	< 50	< 20
863552	0.6	1.2	303	3730	3	235	50	153	9.65	185	< 5	81	< 200	< 5	< 1	179	860	< 2	24.4	22	< 5	< 50	< 20
863554	0.4	0.5	209	2010	< 2	196	48	99	6.64	308	< 5	40	< 200	< 5	5	177	310	< 2	22.5	67	< 5	< 50	< 20
863555	1.8	0.9	197	1990	< 2	193	34	79	6.37	17	< 5	25	< 200	< 5	< 1	119	210	< 2	15.9	49	< 5	< 50	< 20
863556	0.5	0.5	292	2170	< 2	152	39	115	5.80	236	< 5	30	300	< 5	2	156	320	< 2	17.1	37	< 5	< 50	< 20
863558	1.5	0.5	379	1850	< 2	147	183	147	5.90	< 5	< 5	39	< 200	< 5	< 1	208	380	< 2	21.1	71	< 5	< 50	< 20
863560	0.3	1.1	129	1500	3	79	34	73	3.84	60	< 5	28	1600	< 5	< 1	80	480	< 2	16.3	171	< 5	< 50	< 20
863561	0.3	< 0.5	589	2030	< 2	123	25	89	5.14	235	< 5	30	< 200	< 5	8	148	960	< 2	22.3	49	< 5	< 50	< 20

Results

Activation Laboratories Ltd.

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Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	S	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm
Lower Limit	0.2	0.5	1	2	2	1	2	1	0.01	5	5	2	200	5	1	5	10	2	0.02	1	5	50	20
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
863563	0.2	< 0.5	118	1250	3	68	38	97	3.62	63	< 5	38	< 200	< 5	< 1	106	480	< 2	19.0	180	< 5	< 50	< 20
863565	< 0.2	< 0.5	90	738	< 2	14	20	20	0.10	269	< 5	11	< 200	< 5	6	57	530	< 2	16.7	40	< 5	< 50	< 20
863568	0.2	< 0.5	116	1200	< 2	61	37	46	3.43	< 5	< 5	29	< 200	< 5	< 1	81	450	< 2	17.3	145	< 5	< 50	< 20
863569	8.5	< 0.5	131	1130	< 2	68	30	90	3.22	82	< 5	52	< 200	< 5	8	91	630	< 2	21.5	150	< 5	< 50	< 20
863570	0.5	0.9	504	1440	< 2	108	26	62	5.81	307	< 5	20	< 200	< 5	3	132	350	< 2	14.8	29	< 5	< 50	< 20
863571	0.3	< 0.5	687	1490	< 2	139	22	38	4.71	48	< 5	27	< 200	< 5	2	186	530	< 2	21.8	50	< 5	< 50	< 20
863572	1.3	< 0.5	931	1470	< 2	109	21	29	7.35	136	< 5	65	< 200	< 5	2	219	550	< 2	21.8	31	< 5	< 50	< 20
863574	0.4	< 0.5	105	1670	3	59	110	121	5.11	24	< 5	45	400	< 5	< 1	103	510	< 2	21.2	217	< 5	< 50	< 20
863575	0.3	< 0.5	178	3080	< 2	119	32	56	4.44	45	< 5	16	< 200	< 5	2	112	400	< 2	15.3	83	< 5	< 50	< 20
863576	0.5	< 0.5	274	5120	< 2	234	49	107	8.11	106	< 5	42	< 200	< 5	< 1	180	240	< 2	25.0	35	< 5	< 50	< 20
863577	3.6	< 0.5	212	5520	< 2	204	50	94	7.62	954	< 5	33	< 200	< 5	< 1	142	120	< 2	20.7	20	< 5	< 50	< 20
863578	< 0.2	< 0.5	103	1390	< 2	79	34	54	2.98	< 5	< 5	40	200	< 5	5	74	440	< 2	17.1	105	< 5	< 50	< 20
863579	0.5	< 0.5	179	2510	< 2	156	40	99	7.71	38	< 5	55	< 200	< 5	2	132	310	< 2	19.5	37	< 5	< 50	< 20
863580	0.3	0.6	142	1950	4	110	33	48	3.88	67	< 5	24	< 200	< 5	< 1	85	370	< 2	16.9	79	< 5	< 50	< 20
863581	0.5	0.7	234	1800	< 2	210	65	113	5.65	20	< 5	25	< 200	< 5	< 1	108	310	< 2	15.4	39	< 5	< 50	< 20
863537	1.4	< 0.5	719	2940	12	198	36	66	> 10.0	10	< 5	76	< 200	< 5	< 1	309	850	< 2	32.2	36	< 5	< 50	< 20
863543	0.8	1.4	539	1340	< 2	196	57	290	> 10.0	1100	< 5	46	< 200	< 5	6	263	1850	< 2	25.3	46	< 5	< 50	< 20
863544	2.4	2.4	813	854	9	510	259	501	> 10.0	105	< 5	131	< 200	< 5	< 1	286	510	< 2	26.9	53	< 5	< 50	< 20
863547	0.6	0.8	275	2210	< 2	249	46	84	9.44	423	< 5	56	< 200	< 5	< 1	193	1130	< 2	23.2	52	< 5	< 50	< 20
863548	1.2	5.1	506	2120	6	206	63	45	7.11	149	< 5	52	< 200	< 5	< 1	147	1070	< 2	20.5	66	< 5	< 50	< 20
863557	0.6	< 0.5	346	1280	< 2	227	43	103	8.45	2050	< 5	35	< 200	< 5	< 1	226	510	< 2	19.2	80	< 5	< 50	< 20
863566	0.2	0.5	501	808	< 2	27	21	23	0.81	56	< 5	21	< 200	< 5	4	110	960	< 2	24.7	93	< 5	< 50	< 20
863583	< 0.2	< 0.5	82	1520	< 2	67	28	46	2.47	71	< 5	27	600	< 5	12	77	320	< 2	19.5	77	< 5	< 50	< 20
863586	< 0.2	< 0.5	132	1810	< 2	75	29	59	3.68	73	< 5	45	300	< 5	< 1	78	470	< 2	18.5	74	< 5	< 50	< 20
863587	0.2	< 0.5	213	2050	2	176	35	98	5.19	129	< 5	23	< 200	< 5	< 1	133	290	< 2	17.5	90	< 5	< 50	< 20
863589	0.6	0.8	188	1860	2	245	38	49	8.79	57	< 5	51	< 200	< 5	3	209	340	< 2	26.8	48	< 5	< 50	< 20
863591	2.1	< 0.5	468	3920	6	178	72	113	5.65	< 5	< 5	53	< 200	< 5	< 1	121	170	< 2	23.8	36	< 5	< 50	< 20
863592	29.0	3.0	6410	963	3	496	406	65	> 10.0	1070	< 5	239	< 200	< 5	< 1	717	60	< 2	40.5	24	< 5	< 50	< 20
863595	0.3	< 0.5	242	1410	< 2	89	29	55	4.83	88	< 5	47	200	< 5	3	135	500	< 2	19.3	81	< 5	< 50	< 20
863596	0.7	1.0	1060	1450	< 2	190	27	101	> 10.0	95	< 5	69	< 200	< 5	< 1	445	490	< 2	30.6	27	< 5	< 50	< 20
863597	0.6	< 0.5	1650	615	3	199	9	95	> 10.0	144	< 5	86	< 200	< 5	3	605	440	5	25.2	10	< 5	< 50	< 20
863600	0.7	< 0.5	1030	1110	< 2	117	14	49	6.83	64	< 5	24	< 200	< 5	4	269	250	< 2	18.0	24	< 5	< 50	< 20
863602	0.3	1.1	179	1300	< 2	78	32	92	4.45	82	< 5	45	< 200	< 5	< 1	111	460	< 2	20.3	108	< 5	< 50	< 20
863603	1.3	< 0.5	220	3780	< 2	157	47	146	7.82	463	< 5	51	< 200	< 5	< 1	178	690	< 2	25.3	25	< 5	< 50	< 20
863604	0.5	0.6	217	4060	< 2	149	55	84	9.32	649	< 5	62	< 200	< 5	< 1	178	390	< 2	25.0	11	< 5	< 50	< 20
863605	0.8	4.5	372	2290	< 2	209	43	123	> 10.0	48	< 5	74	< 200	< 5	< 1	231	450	< 2	24.4	15	< 5	< 50	< 20
863606	< 0.2	< 0.5	100	1380	< 2	75	29	53	2.72	43	< 5	33	400	< 5	5	81	350	< 2	18.8	67	< 5	< 50	< 20
863607	< 0.2	< 0.5	152	1450	< 2	84	31	39	2.78	127	< 5	22	500	< 5	< 1	81	330	< 2	17.8	70	< 5	< 50	< 20
863608	< 0.2	< 0.5	36	796	< 2	48	17	23	1.45	82	< 5	12	< 200	< 5	< 1	66	340	< 2	15.9	127	< 5	< 50	< 20
863609	< 0.2	< 0.5	119	1260	< 2	82	28	48	2.30	66	< 5	24	< 200	< 5	5	66	330	< 2	15.0	164	< 5	< 50	< 20
863610	< 0.2	< 0.5	93	1280	< 2	83	24	73	2.33	50	< 5	19	< 200	< 5	5	75	280	< 2	16.8	57	< 5	< 50	< 20
863611	< 0.2	1.1	84	1300	< 2	82	19	48	2.01	55	< 5	25	300	< 5	3	78	290	< 2	15.7	96	< 5	< 50	< 20

Results

Activation Laboratories Ltd.

Report: A17-05617

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	S	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm
Lower Limit	0.2	0.5	1	2	2	1	2	1	0.01	5	5	2	200	5	1	5	10	2	0.02	1	5	50	20
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
863612	< 0.2	< 0.5	175	2180	< 2	92	24	48	2.69	16	< 5	20	< 200	< 5	< 1	82	330	< 2	16.5	82	< 5	< 50	< 20
863613	0.3	< 0.5	127	5050	3	135	46	83	3.41	46	< 5	26	< 200	< 5	< 1	102	280	< 2	18.4	68	< 5	< 50	< 20
863614	1.4	0.7	162	1920	< 2	115	31	67	3.10	103	< 5	29	< 200	< 5	< 1	103	390	< 2	19.8	71	< 5	< 50	< 20
863615	1.2	0.6	221	1600	2	203	36	74	6.45	40	< 5	27	< 200	< 5	< 1	164	220	< 2	19.8	49	< 5	< 50	< 20
863616	< 0.2	0.7	122	2910	< 2	106	31	36	3.52	228	< 5	23	< 200	< 5	< 1	109	270	< 2	20.7	46	< 5	< 50	< 20
863617	0.5	< 0.5	102	2770	< 2	109	39	27	4.00	117	< 5	24	< 200	< 5	< 1	123	330	< 2	23.1	52	< 5	< 50	< 20
863618	< 0.2	< 0.5	53	2800	< 2	70	24	22	2.57	89	< 5	19	< 200	< 5	1	104	370	< 2	22.4	89	< 5	< 50	< 20
863619	< 0.2	< 0.5	66	2490	< 2	75	23	22	2.57	80	< 5	28	< 200	< 5	< 1	97	360	< 2	22.1	74	< 5	< 50	< 20
863620	< 0.2	< 0.5	200	8650	< 2	66	16	37	2.07	1780	< 5	207	< 200	< 5	< 1	118	410	< 2	26.6	53	< 5	< 50	< 20
863623	1.0	1.6	233	1720	6	201	56	90	6.62	77	< 5	29	< 200	< 5	9	210	490	< 2	23.8	93	< 5	< 50	< 20
863625	0.6	3.9	282	4640	5	194	27	181	> 10.0	7	< 5	46	< 200	< 5	3	173	330	< 2	22.8	26	< 5	< 50	20
863626	0.2	0.6	118	4380	< 2	98	24	60	4.50	455	< 5	44	< 200	< 5	< 1	115	500	< 2	24.1	67	< 5	< 50	< 20
863627	0.3	1.4	199	2550	7	140	43	128	5.77	566	< 5	29	1100	< 5	< 1	169	430	< 2	23.0	66	< 5	< 50	< 20
863629	0.3	< 0.5	75	6960	< 2	68	23	57	3.45	95	< 5	41	< 200	< 5	3	92	320	< 2	26.6	30	< 5	< 50	< 20
863630	0.3	< 0.5	180	1200	2	73	42	52	4.74	273	< 5	45	< 200	< 5	3	103	510	< 2	20.6	235	< 5	< 50	< 20
863631	0.3	< 0.5	159	2840	< 2	124	27	83	5.69	950	< 5	36	< 200	< 5	< 1	178	380	< 2	23.7	45	< 5	< 50	< 20
863634	0.3	< 0.5	425	2140	6	406	23	39	7.17	303	< 5	499	400	< 5	2	211	470	< 2	12.7	2	< 5	< 50	< 20
863635	< 0.2	< 0.5	182	3070	4	196	25	53	3.14	23	< 5	15	< 200	< 5	2	121	290	< 2	16.8	55	< 5	< 50	< 20
863636	0.5	4.5	806	1070	6	172	10	50	> 10.0	65	< 5	18	< 200	< 5	6	430	240	< 2	18.0	< 1	< 5	< 50	< 20
863637	0.4	< 0.5	903	974	3	160	8	39	> 10.0	123	< 5	17	< 200	< 5	4	470	270	< 2	19.0	< 1	< 5	< 50	< 20
863638	0.4	< 0.5	992	1030	10	376	9	34	9.92	< 5	< 5	9	< 200	< 5	< 1	2250	430	< 2	19.4	< 1	< 5	< 50	< 20
863639	0.2	< 0.5	722	232	< 2	51	< 2	27	7.93	< 5	< 5	< 2	< 200	< 5	15	1130	50	< 2	14.7	< 1	< 5	< 50	< 20
863641	< 0.2	< 0.5	8	658	< 2	8	23	15	0.02	14	< 5	4	< 200	< 5	6	33	430	< 2	13.5	209	< 5	< 50	< 20
863642	0.3	< 0.5	82	880	3	53	38	24	3.96	14	< 5	74	< 200	< 5	5	91	600	< 2	22.1	193	< 5	< 50	< 20
863643	< 0.2	< 0.5	126	1350	2	118	36	38	3.86	1010	< 5	25	< 200	< 5	5	111	270	< 2	14.6	77	< 5	< 50	< 20
863644	1.3	< 0.5	340	2290	2	113	12	35	7.57	989	< 5	33	< 200	< 5	5	339	350	< 2	19.9	34	< 5	< 50	< 20
863646	0.3	< 0.5	121	1430	< 2	71	36	41	4.02	175	< 5	36	< 200	< 5	< 1	85	460	< 2	17.8	167	< 5	< 50	< 20
863647	< 0.2	< 0.5	26	1060	< 2	26	27	22	0.37	76	< 5	10	< 200	< 5	< 1	49	580	< 2	17.5	111	< 5	< 50	< 20
863648	< 0.2	< 0.5	28	891	< 2	22	28	20	0.14	52	< 5	3	< 200	< 5	5	56	480	< 2	20.7	86	< 5	< 50	< 20
863649	< 0.2	< 0.5	21	1000	< 2	20	34	19	0.03	264	< 5	10	< 200	< 5	3	43	570	< 2	19.2	54	< 5	< 50	< 20
863650	< 0.2	< 0.5	28	1030	< 2	24	25	20	0.40	218	< 5	9	< 200	< 5	< 1	55	670	< 2	20.1	79	< 5	< 50	< 20
863651	< 0.2	< 0.5	226	2420	< 2	75	17	22	5.19	42200	< 5	20	< 200	< 5	9	228	290	< 2	20.2	30	15	< 50	< 20
863584	0.5	0.6	191	1890	< 2	233	70	60	9.79	71	< 5	40	< 200	< 5	1	238	550	< 2	27.6	53	< 5	< 50	< 20
863588	0.8	< 0.5	228	1880	3	272	95	130	> 10.0	28	< 5	56	< 200	< 5	< 1	243	380	< 2	26.4	54	< 5	< 50	< 20
863599	0.6	1.1	421	1630	2	214	36	67	7.93	64	< 5	62	< 200	< 5	< 1	297	1180	< 2	28.2	77	< 5	< 50	< 20
863624	0.3	2.0	198	3930	3	98	32	83	4.02	235	< 5	23	< 200	< 5	< 1	93	750	< 2	19.4	61	< 5	< 50	< 20
863628	< 0.2	< 0.5	98	5630	< 2	75	27	87	2.88	210	< 5	20	< 200	< 5	2	104	610	< 2	20.0	80	< 5	< 50	< 20
863632	0.4	< 0.5	270	2520	3	143	25	37	7.33	1210	< 5	32	< 200	< 5	< 1	250	700	< 2	22.2	63	< 5	< 50	< 20

Results

Activation Laboratories Ltd.

Report: A17-05617

Analyte Symbol	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Lower Limit	0.05	200	50	0.2	0.1	20	0.2	1	0.5	0.5	4	200	1	3	10	0.1	0.2	2	0.2	0.05	
Method Code	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
863501	0.34	< 200	< 50	0.9	65.8	< 20	< 0.2	< 1	176	21.1	< 4	< 200	347	830	320	55.2	10.1	< 2	25.4	1.89	27.3
863502	0.38	< 200	< 50	0.6	54.7	< 20	< 0.2	< 1	159	20.8	< 4	< 200	316	758	250	55.0	9.6	< 2	20.1	1.38	31.0
863503	0.42	< 200	90	0.6	57.4	< 20	< 0.2	< 1	145	21.6	< 4	< 200	302	711	250	53.2	8.3	< 2	19.2	1.29	24.8
863504	0.45	< 200	< 50	0.5	51.0	< 20	< 0.2	< 1	184	17.4	< 4	< 200	331	753	290	51.2	5.3	< 2	19.5	1.24	38.8
863505	0.42	< 200	< 50	< 0.2	67.1	< 20	< 0.2	< 1	206	15.3	< 4	< 200	359	835	310	54.2	5.5	< 2	21.0	1.32	35.5
863510	0.21	< 200	< 50	0.3	130	< 20	< 0.2	< 1	2.1	1.1	< 4	< 200	22	66	20	11.0	3.2	< 2	9.1	0.22	56.0
863511	0.30	< 200	< 50	0.5	59.0	< 20	< 0.2	< 1	183	26.9	< 4	< 200	326	751	290	48.4	7.3	< 2	24.1	1.71	33.7
863512	0.33	< 200	< 50	< 0.2	48.9	< 20	< 0.2	< 1	111	19.9	< 4	< 200	220	472	190	33.4	8.2	< 2	15.5	1.99	12.5
863513	0.40	< 200	< 50	< 0.2	60.7	< 20	< 0.2	< 1	136	19.3	< 4	< 200	268	588	260	44.6	8.4	< 2	20.5	1.39	6.10
863514	0.60	< 200	< 50	< 0.2	59.4	< 20	< 0.2	< 1	213	22.3	< 4	< 200	433	864	560	66.1	10.2	< 2	24.2	1.12	4.30
863515	0.46	< 200	< 50	1.7	61.1	< 20	< 0.2	< 1	194	11.9	< 4	< 200	362	898	310	54.8	6.1	< 2	22.4	1.35	21.2
863517	0.42	< 200	< 50	1.9	62.7	< 20	< 0.2	< 1	190	32.1	< 4	< 200	337	699	490	105	20.1	< 2	40.4	7.64	16.4
863518	0.32	< 200	< 50	0.8	55.0	< 20	< 0.2	< 1	129	12.5	< 4	< 200	273	595	250	44.8	8.0	3	19.9	2.41	8.10
863519	0.39	< 200	< 50	< 0.2	60.7	< 20	< 0.2	< 1	130	15.5	< 4	< 200	287	655	350	48.4	8.6	< 2	21.0	2.80	6.00
863520	0.84	< 200	< 50	< 0.2	57.9	< 20	< 0.2	< 1	232	27.0	< 4	< 200	483	1160	390	78.8	7.1	< 2	26.1	1.62	24.0
863521	0.84	< 200	< 50	< 0.2	60.1	< 20	< 0.2	< 1	245	28.9	< 4	< 200	531	1050	520	71.1	11.0	< 2	26.9	1.54	8.30
863522	0.42	< 200	< 50	< 0.2	62.7	< 20	< 0.2	< 1	113	16.1	< 4	200	216	474	220	34.0	5.7	< 2	23.1	1.08	6.10
863523	0.69	< 200	< 50	< 0.2	74.3	< 20	< 0.2	< 1	53.8	< 0.5	< 4	< 200	102	244	120	20.1	3.7	< 2	13.1	0.77	5.90
863524	0.38	< 200	< 50	0.9	47.3	< 20	< 0.2	< 1	21.1	< 0.5	< 4	< 200	54	124	60	11.5	3.1	< 2	7.7	0.79	11.9
863525	0.40	< 200	< 50	1.6	50.9	< 20	< 0.2	< 1	17.6	< 0.5	< 4	< 200	58	121	50	15.3	3.7	< 2	8.4	0.82	10.9
863526	0.26	< 200	< 50	0.6	43.2	< 20	< 0.2	< 1	5.9	< 0.5	< 4	900	24	117	30	9.0	3.8	5	8.9	0.57	12.7
863528	0.34	< 200	< 50	2.4	64.7	< 20	< 0.2	< 1	132	16.9	< 4	< 200	309	673	380	54.9	10.6	< 2	18.8	1.51	4.10
863529	0.47	< 200	< 50	< 0.2	58.1	< 20	< 0.2	< 1	231	28.6	< 4	< 200	441	912	390	61.6	8.8	< 2	25.2	3.03	8.10
863530	0.38	< 200	< 50	< 0.2	50.6	< 20	< 0.2	< 1	217	24.8	< 4	< 200	404	811	340	53.9	7.0	< 2	21.9	2.19	11.7
863531	0.34	< 200	< 50	0.4	65.9	< 20	< 0.2	< 1	152	8.8	742	< 200	285	675	260	44.2	3.8	< 2	24.1	1.50	29.2
863533	0.27	< 200	< 50	< 0.2	61.0	< 20	< 0.2	< 1	106	6.9	178	< 200	378	811	260	54.4	12.2	< 2	17.5	1.62	2.30
863534	0.23	< 200	< 50	< 0.2	56.6	< 20	< 0.2	< 1	179	10.4	618	400	334	725	580	49.9	4.4	< 2	23.0	1.04	4.70
863536	0.20	< 200	< 50	0.8	54.4	< 20	< 0.2	< 1	73.8	5.6	149	< 200	205	424	130	24.6	3.3	< 2	16.3	1.23	3.10
863539	0.25	< 200	< 50	0.8	54.4	< 20	< 0.2	< 1	114	11.7	< 4	< 200	227	469	240	32.8	7.0	3	15.2	1.26	31.4
863540	0.28	200	< 50	0.8	40.9	< 20	< 0.2	< 1	74.9	15.2	< 4	< 200	197	400	240	30.0	6.9	< 2	10.7	0.86	27.4
863541	0.21	< 200	< 50	0.8	39.0	< 20	< 0.2	< 1	53.8	4.8	< 4	< 200	160	363	110	26.5	4.6	< 2	8.8	0.54	60.0
863542	0.22	< 200	< 50	0.5	39.3	< 20	< 0.2	13	53.8	6.9	< 4	< 200	168	379	110	27.9	4.8	< 2	8.5	0.47	60.0
863546	0.17	< 200	< 50	0.9	37.2	< 20	< 0.2	1	61.5	6.9	< 4	< 200	127	274	100	17.3	1.5	< 2	11.1	0.69	60.0
863550	0.23	< 200	< 50	< 0.2	60.9	< 20	< 0.2	< 1	144	20.3	< 4	< 200	285	612	230	42.3	10.2	< 2	21.6	2.56	8.70
863551	0.25	< 200	120	1.8	55.7	< 20	< 0.2	6	97.7	18.5	< 4	< 200	170	366	160	23.9	3.7	< 2	16.7	1.36	20.6
863552	0.23	200	< 50	2.6	54.4	< 20	< 0.2	< 1	70.6	11.0	< 4	< 200	123	275	110	18.0	2.8	< 2	13.7	1.15	16.7
863554	0.35	< 200	< 50	0.3	58.0	< 20	< 0.2	< 1	157	17.0	< 4	< 200	306	709	210	46.8	5.5	< 2	19.6	1.23	38.6
863555	0.20	< 200	< 50	0.8	41.9	< 20	< 0.2	5	127	9.2	< 4	< 200	260	539	130	35.3	3.7	2	14.7	0.88	60.0
863556	0.23	< 200	< 50	0.4	49.9	< 20	< 0.2	< 1	96.1	5.8	89	< 200	195	409	110	28.1	2.8	2	13.6	0.90	47.9
863558	0.28	< 200	< 50	1.4	56.8	< 20	< 0.2	< 1	110	27.9	< 4	< 200	236	479	450	35.4	4.3	< 2	18.9	0.93	4.30
863560	0.20	< 200	< 50	0.4	48.3	< 20	< 0.2	< 1	125	18.0	< 4	< 200	248	521	330	35.5	7.2	< 2	18.6	2.14	11.1
863561	0.23	< 200	< 50	1.1	60.8	< 20	< 0.2	4	114	8.8	18	< 200	207	481	130	30.8	3.6	< 2	19.0	1.14	35.2

Results

Activation Laboratories Ltd.

Report: A17-05617

Analyte Symbol	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Lower Limit	0.05	200	50	0.2	0.1	20	0.2	1	0.5	0.5	4	200	1	3	10	0.1	0.2	2	0.2	0.05	
Method Code	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
863563	0.24	< 200	< 50	0.3	58.6	< 20	< 0.2	< 1	144	13.2	165	< 200	292	600	230	40.8	7.5	< 2	22.2	2.42	10.6
863565	0.26	< 200	< 50	0.9	64.4	< 20	< 0.2	4	116	6.1	< 4	< 200	208	481	120	32.3	4.0	< 2	17.6	1.12	46.0
863568	0.21	< 200	< 50	1.1	54.2	< 20	< 0.2	< 1	124	12.4	< 4	< 200	250	517	190	35.7	7.3	< 2	18.2	1.86	15.5
863569	0.26	< 200	< 50	1.9	67.1	< 20	< 0.2	< 1	172	24.5	< 4	< 200	326	679	340	48.2	11.0	< 2	21.3	1.72	18.0
863570	0.16	< 200	< 50	0.9	38.3	< 20	< 0.2	4	77.0	7.3	< 4	< 200	146	319	110	20.2	2.2	< 2	10.9	0.65	60.0
863571	0.21	< 200	< 50	1.1	60.4	< 20	< 0.2	< 1	122	8.7	< 4	< 200	212	526	160	32.7	4.2	< 2	16.7	0.97	36.8
863572	0.20	< 200	< 50	2.5	54.9	< 20	< 0.2	4	99.6	4.5	< 4	< 200	172	366	150	23.7	3.6	< 2	15.0	1.37	19.2
863574	0.15	< 200	< 50	1.7	67.6	< 20	< 0.2	10	144	18.2	< 4	< 200	363	726	200	43.8	9.9	< 2	24.2	2.22	2.70
863575	0.11	< 200	< 50	0.3	37.7	< 20	< 0.2	11	152	16.0	< 4	< 200	305	607	160	39.2	4.1	< 2	13.2	0.90	60.0
863576	0.14	< 200	< 50	3.0	43.9	< 20	< 0.2	< 1	79.5	9.7	< 4	< 200	165	337	230	21.7	2.5	< 2	17.5	1.86	10.0
863577	0.13	< 200	< 50	0.6	39.7	< 20	< 0.2	2	71.5	6.6	< 4	< 200	150	329	70	19.9	2.0	< 2	12.1	0.84	60.0
863578	0.25	< 200	< 50	1.4	55.5	< 20	< 0.2	3	134	20.6	< 4	< 200	277	571	400	42.9	10.5	< 2	15.4	1.61	23.5
863579	0.17	< 200	< 50	1.6	43.0	< 20	< 0.2	11	96.3	9.3	< 4	< 200	194	409	100	24.6	2.6	< 2	12.8	0.82	60.0
863580	0.26	< 200	< 50	0.6	47.2	< 20	< 0.2	< 1	88.8	11.6	< 4	< 200	212	446	190	33.1	6.0	< 2	15.0	1.72	13.0
863581	0.26	< 200	< 50	0.6	44.3	< 20	< 0.2	< 1	105	8.1	< 4	< 200	224	459	110	31.6	3.5	< 2	13.9	0.93	60.0
863537	0.15	< 200	< 50	2.2	59.6	< 20	< 0.2	< 1	120	9.9	< 4	< 200	286	582	200	33.2	4.3	< 2	21.4	1.58	1.20
863543	0.29	< 200	< 50	2.2	47.0	< 20	< 0.2	6	104	8.9	< 4	300	209	447	150	27.4	3.1	2	14.4	0.93	61.7
863544	0.19	700	< 50	5.6	23.6	< 20	< 0.2	< 1	51.3	6.2	< 4	600	136	282	170	18.8	4.1	< 2	8.4	0.45	8.80
863547	0.23	< 200	< 50	1.6	45.5	< 20	< 0.2	3	134	11.7	< 4	< 200	231	466	270	28.9	3.7	< 2	17.7	1.55	26.2
863548	0.23	< 200	< 50	2.1	46.3	< 20	< 0.2	3	108	6.6	< 4	< 200	258	515	230	44.4	8.3	< 2	16.5	3.21	27.3
863557	0.26	< 200	< 50	< 0.2	53.0	< 20	< 0.2	< 1	161	12.8	172	< 200	285	567	180	35.2	3.1	< 2	18.7	1.96	12.2
863566	0.24	< 200	< 50	0.8	75.5	< 20	< 0.2	31	170	12.3	< 4	< 200	306	647	390	45.8	4.9	< 2	25.4	1.80	4.80
863583	0.34	< 200	< 50	0.3	56.5	< 20	< 0.2	< 1	106	10.2	< 4	< 200	258	638	180	46.9	8.8	2	14.7	0.86	41.3
863586	0.27	< 200	< 50	< 0.2	51.9	< 20	< 0.2	< 1	110	20.3	< 4	< 200	220	473	370	34.9	7.6	< 2	15.0	1.39	19.1
863587	0.39	< 200	< 50	0.7	46.7	< 20	< 0.2	< 1	136	14.2	< 4	< 200	292	569	340	40.1	6.3	< 2	17.6	1.55	14.8
863589	0.41	300	< 50	1.4	62.5	< 20	< 0.2	4	173	17.1	< 4	300	316	700	230	43.3	4.2	< 2	22.0	1.48	50.0
863591	0.17	< 200	< 50	1.4	37.8	< 20	< 0.2	< 1	45.6	10.6	< 4	< 200	102	204	100	14.3	2.8	< 2	9.6	0.46	10.9
863592	0.16	< 200	< 50	7.9	12.5	40	< 0.2	2	13.2	< 0.5	< 4	< 200	42	86	60	5.8	0.7	< 2	3.0	< 0.05	4.00
863595	0.28	< 200	< 50	< 0.2	55.6	< 20	< 0.2	12	128	16.4	< 4	< 200	231	494	240	35.1	6.5	< 2	16.3	1.42	20.2
863596	0.21	< 200	< 50	3.3	49.2	20	< 0.2	< 1	92.3	7.9	< 4	< 200	153	345	130	23.6	2.1	< 2	15.6	0.96	6.50
863597	0.45	< 200	< 50	< 0.2	38.5	30	< 0.2	< 1	29.1	< 0.5	< 4	< 200	61	138	80	11.1	3.8	< 2	6.8	0.49	23.3
863600	0.39	< 200	< 50	0.3	48.8	< 20	< 0.2	< 1	59.8	5.2	107	< 200	119	290	80	20.0	2.8	< 2	10.1	0.51	41.6
863602	0.20	< 200	< 50	< 0.2	54.7	< 20	< 0.2	< 1	130	15.7	< 4	< 200	232	503	310	33.3	5.5	< 2	17.7	2.06	8.00
863603	0.26	< 200	< 50	1.5	48.5	< 20	< 0.2	4	76.9	6.4	< 4	< 200	157	352	70	21.0	2.1	< 2	15.8	0.97	60.0
863604	0.17	< 200	< 50	1.6	42.3	< 20	< 0.2	4	49.3	5.2	< 4	< 200	99	250	50	13.8	1.5	< 2	12.4	0.78	48.9
863605	0.16	< 200	< 50	1.8	39.3	< 20	< 0.2	< 1	65.0	5.6	< 4	< 200	104	216	70	13.6	2.0	< 2	11.3	1.14	10.6
863606	0.35	< 200	< 50	0.3	54.3	< 20	< 0.2	< 1	105	9.6	< 4	< 200	243	619	220	44.2	6.7	< 2	15.3	0.89	38.8
863607	0.33	< 200	< 50	0.5	53.2	< 20	< 0.2	< 1	117	14.5	< 4	< 200	248	604	210	45.3	7.6	< 2	14.4	0.91	40.1
863608	0.34	< 200	< 50	0.7	62.0	< 20	< 0.2	< 1	131	19.4	< 4	< 200	313	672	180	46.1	6.2	2	19.2	1.19	60.0
863609	0.28	< 200	< 50	1.4	51.4	< 20	< 0.2	8	166	22.9	< 4	< 200	368	757	200	52.2	6.7	< 2	18.7	1.29	60.0
863610	0.36	< 200	< 50	0.7	55.7	< 20	< 0.2	3	95.8	9.5	< 4	< 200	205	454	130	33.5	4.6	< 2	14.8	0.86	60.0
863611	0.50	< 200	< 50	0.6	51.4	< 20	< 0.2	< 1	120	14.0	< 4	< 200	301	678	210	52.9	9.1	2	14.4	0.90	60.0

Results

Activation Laboratories Ltd.

Report: A17-05617

Analyte Symbol	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Lower Limit	0.05	200	50	0.2	0.1	20	0.2	1	0.5	0.5	4	200	1	3	10	0.1	0.2	2	0.2	0.05	
Method Code	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
863612	0.35	< 200	< 50	0.4	47.2	< 20	< 0.2	< 1	95.0	11.7	< 4	< 200	264	556	250	44.3	9.2	< 2	13.2	1.30	15.6
863613	0.29	< 200	< 50	< 0.2	51.9	< 20	< 0.2	< 1	145	12.7	< 4	< 200	292	618	240	43.5	8.6	< 2	16.3	1.45	15.0
863614	0.28	< 200	< 50	< 0.2	53.0	< 20	< 0.2	< 1	115	12.2	< 4	< 200	269	597	290	45.9	8.6	< 2	16.9	1.09	9.00
863615	0.24	< 200	< 50	0.9	53.5	< 20	< 0.2	3	170	16.9	< 4	< 200	297	633	160	42.0	3.5	< 2	19.5	1.25	60.0
863616	0.19	< 200	< 50	1.0	54.9	< 20	< 0.2	7	130	14.9	< 4	< 200	256	533	130	34.7	3.0	2	16.4	1.00	51.2
863617	0.17	< 200	< 50	1.2	63.3	< 20	< 0.2	22	168	11.6	< 4	< 200	311	672	200	38.3	3.5	< 2	19.1	1.25	63.3
863618	0.17	< 200	< 50	1.1	68.3	< 20	< 0.2	25	210	14.9	< 4	< 200	384	797	180	47.3	4.7	2	19.6	1.21	60.0
863619	0.15	< 200	< 50	1.3	65.6	< 20	< 0.2	14	201	14.6	< 4	< 200	350	721	160	42.3	3.3	2	18.3	1.17	60.0
863620	0.27	< 200	< 50	3.4	63.1	< 20	< 0.2	< 1	137	18.1	< 4	< 200	266	539	300	33.5	2.8	< 2	18.9	1.48	5.00
863623	0.19	< 200	< 50	0.2	61.8	< 20	< 0.2	< 1	212	25.8	< 4	< 200	443	951	230	58.3	5.9	3	19.8	1.32	60.0
863625	0.16	200	< 50	1.3	32.7	< 20	< 0.2	< 1	80.1	7.9	< 4	< 200	154	315	150	18.8	3.6	< 2	9.2	0.76	33.0
863626	0.18	< 200	< 50	1.4	42.7	< 20	< 0.2	4	99.8	7.7	< 4	< 200	203	464	180	29.9	3.8	< 2	12.1	0.77	37.1
863627	0.23	< 200	< 50	0.3	53.5	< 20	< 0.2	< 1	144	16.9	< 4	< 200	272	609	200	40.1	4.8	< 2	16.7	1.06	40.4
863629	0.18	< 200	< 50	1.5	35.7	< 20	< 0.2	3	43.8	5.8	< 4	< 200	103	279	110	18.8	3.0	< 2	9.0	0.56	40.7
863630	0.20	< 200	< 50	2.4	56.4	< 20	< 0.2	< 1	170	26.4	< 4	< 200	311	627	200	42.1	7.0	< 2	23.4	2.38	10.1
863631	0.24	< 200	60	0.8	60.8	< 20	< 0.2	10	158	14.4	< 4	< 200	306	662	210	40.2	4.1	< 2	20.0	1.25	60.0
863634	0.77	< 200	< 50	2.8	31.8	< 20	< 0.2	< 1	116	7.1	4590	< 200	109	253	200	30.5	1.5	< 2	14.2	0.96	41.0
863635	0.26	< 200	< 50	< 0.2	47.7	< 20	< 0.2	< 1	108	10.3	236	< 200	215	479	170	32.5	4.0	< 2	14.5	0.90	48.7
863636	0.23	< 200	< 50	0.9	33.8	< 20	< 0.2	4	44.5	4.8	1190	< 200	95	217	70	15.8	2.7	< 2	7.3	0.34	51.8
863637	0.38	< 200	< 50	< 0.2	36.5	< 20	< 0.2	< 1	38.8	2.2	1750	< 200	86	205	60	15.1	2.2	3	7.3	0.24	43.3
863638	0.54	< 200	< 50	< 0.2	34.8	< 20	< 0.2	< 1	49.7	< 0.5	> 10000	< 200	101	139	< 10	11.6	< 0.2	< 2	7.4	< 0.05	33.3
863639	0.27	< 200	< 50	1.2	22.5	< 20	< 0.2	< 1	< 0.5	< 0.5	> 10000	< 200	25	13	40	3.7	< 0.2	< 2	2.0	< 0.05	60.0
863641	0.33	< 200	< 50	< 0.2	56.5	< 20	< 0.2	8	142	20.4	14	< 200	297	648	200	48.7	9.0	< 2	20.5	1.27	60.0
863642	0.25	< 200	< 50	2.1	69.1	< 20	< 0.2	4	204	28.3	33	< 200	329	711	320	47.6	10.0	< 2	22.1	1.92	19.4
863643	0.43	< 200	< 50	0.4	45.5	< 20	< 0.2	< 1	112	9.1	< 4	< 200	305	734	240	60.3	10.8	< 2	13.1	0.90	46.6
863644	0.36	< 200	< 50	< 0.2	48.3	< 20	< 0.2	< 1	63.1	5.1	549	< 200	164	429	140	33.0	5.4	3	10.9	0.63	38.9
863646	0.17	< 200	< 50	2.4	52.2	< 20	< 0.2	< 1	127	16.2	< 4	< 200	245	522	260	35.3	6.4	< 2	20.4	2.43	11.7
863647	0.23	< 200	< 50	0.3	66.0	< 20	< 0.2	9	199	21.3	< 4	< 200	419	916	330	59.0	7.8	< 2	21.5	1.33	60.0
863648	0.30	< 200	< 50	0.6	81.3	< 20	< 0.2	13	183	17.5	< 4	< 200	351	781	200	53.0	6.9	< 2	25.3	1.60	53.3
863649	0.17	< 200	< 50	0.6	72.6	< 20	< 0.2	< 1	180	11.3	< 4	< 200	316	704	200	44.5	4.4	< 2	24.1	1.50	60.0
863650	0.18	< 200	< 50	< 0.2	69.3	< 20	< 0.2	15	213	13.6	< 4	< 200	385	824	270	50.8	4.7	< 2	23.5	1.50	60.0
863651	0.49	< 200	< 50	0.6	50.3	< 20	< 0.2	< 1	62.8	< 0.5	< 4	< 200	244	589	210	47.8	9.4	< 2	10.9	0.56	60.0
863584	0.25	< 200	< 50	0.4	60.5	< 20	< 0.2	13	188	18.1	23	< 200	326	753	290	44.8	3.9	< 2	23.4	1.36	40.3
863588	0.29	< 200	< 50	1.2	55.3	< 20	< 0.2	< 1	201	17.5	< 4	< 200	360	836	310	51.2	3.9	< 2	21.8	1.36	32.9
863599	0.29	< 200	< 50	1.8	70.9	< 20	< 0.2	< 1	438	29.5	< 4	< 200	435	1650	430	57.6	6.3	< 2	27.0	2.26	17.1
863624	0.15	< 200	< 50	0.8	37.5	< 20	< 0.2	11	135	10.1	< 4	< 200	250	537	180	32.6	3.4	2	12.1	0.69	53.6
863628	0.16	< 200	< 50	0.9	34.3	< 20	< 0.2	5	89.3	8.8	< 4	< 200	179	410	110	25.3	3.1	< 2	10.6	0.70	43.7
863632	0.22	< 200	< 50	< 0.2	49.5	< 20	< 0.2	< 1	153	12.5	263	< 200	278	636	230	36.9	3.7	< 2	15.4	1.00	44.3

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	S	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm
Lower Limit	0.2	0.5	1	2	2	1	2	1	0.01	5	5	2	200	5	1	5	10	2	0.02	1	5	50	20
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
GXR-1 Meas	26.9	2.7	1030	776	14	31	603	636	0.18														
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	0.257														
GXR-1 Meas	27.5	2.6	1040	788	14	31	609	641	0.19														
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	0.257														
GXR-1 Meas	26.6	2.5	1040	767	13	30	584	621	0.17														
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	0.257														
GXR-1 Meas	26.3	2.3	1100	797	13	35	591	688	0.17														
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	0.257														
GXR-1 Meas	26.3	2.3	1130	810	13	33	597	695	0.17														
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	0.257														
GXR-4 Meas	3.4	< 0.5	6130	141	295	36	40	68	1.54														
GXR-4 Cert	4.0	0.860	6520	155	310	42.0	52.0	73.0	1.77														
GXR-4 Meas	3.2	< 0.5	6180	135	299	36	41	70	1.61														
GXR-4 Cert	4.0	0.860	6520	155	310	42.0	52.0	73.0	1.77														
GXR-4 Meas	3.3	0.5	6320	138	300	36	41	71	1.63														
GXR-4 Cert	4.0	0.860	6520	155	310	42.0	52.0	73.0	1.77														
GXR-6 Meas	0.3	< 0.5	66	995	2	21	86	113	0.03														
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	0.0160														
GXR-6 Meas	0.3	< 0.5	67	995	2	21	86	112	0.03														
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	0.0160														
GXR-6 Meas	0.3	< 0.5	65	992	< 2	21	85	112	0.02														
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	0.0160														
GXR-6 Meas	0.3	< 0.5	62	970	< 2	20	87	118	0.01														
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	0.0160														
GXR-6 Meas	0.2	< 0.5	63	987	< 2	21	88	120	0.01														
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	0.0160														
SdAR-M2 (U.S.G.S.) Meas		5.5	262		14	47	879	847															
SdAR-M2 (U.S.G.S.) Cert		5.1	236.00 00		13	49	808	760															
SdAR-M2 (U.S.G.S.) Meas		5.4	258		14	46	857	825															
SdAR-M2 (U.S.G.S.) Cert		5.1	236.00 00		13	49	808	760															
SdAR-M2 (U.S.G.S.) Meas		5.4	251		14	45	848	820															
SdAR-M2 (U.S.G.S.) Cert		5.1	236.00 00		13	49	808	760															
DMMAS 120 Meas										747		1840	1300			49	160		3.74				
DMMAS 120 Cert										727		1790	1270			47.0	138		3.54				
DMMAS 120 Meas										754		1970	< 200			53	190		4.01				
DMMAS 120 Cert										727		1790	1270			47.0	138		3.54				

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	S	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm
Lower Limit	0.2	0.5	1	2	2	1	2	1	0.01	5	5	2	200	5	1	5	10	2	0.02	1	5	50	20
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
DMMAS 120 Meas										658		1700	1100			46	140		3.60				
DMMAS 120 Cert										727		1790	1270			47.0	138		3.54				
DMMAS 120 Meas										734		1690	1100			49	140		3.59				
DMMAS 120 Cert										727		1790	1270			47.0	138		3.54				
863502 Orig	< 0.2	< 0.5	81	978	< 2	59	26	31	2.34														
863502 Dup	< 0.2	< 0.5	69	1020	< 2	61	29	29	2.36														
863541 Orig	< 0.2	0.7	105	2920	< 2	123	24	76	2.55														
863541 Dup	0.3	< 0.5	151	2970	< 2	119	25	75	2.50														
863542 Orig	< 0.2	< 0.5	95	2690	< 2	123	22	98	2.36														
863542 Dup	< 0.2	< 0.5	95	2860	< 2	119	24	73	2.10														
863578 Orig	1.1	< 0.5	105	1240	< 2	79	33	49	3.12														
863578 Dup	< 0.2	< 0.5	102	1540	< 2	78	34	58	2.84														
863591 Orig	2.4	< 0.5	467	3770	5	179	72	121	5.42														
863591 Dup	1.8	0.7	470	4070	7	177	71	105	5.88														
863595 Orig	0.3	< 0.5	238	1390	< 2	93	29	57	4.94														
863595 Dup	0.3	< 0.5	246	1420	< 2	86	28	54	4.71														
863597 Orig	0.6	< 0.5	1430	647	2	174	9	131	> 10.0														
863597 Dup	0.6	< 0.5	1870	584	4	224	10	59	> 10.0														
863602 Orig	0.3	0.6	192	1250	< 2	81	33	103	4.39														
863602 Dup	0.3	1.6	167	1340	< 2	76	30	81	4.51														
Method Blank										< 5	< 5	< 2	< 200	< 5	< 1	< 5	< 10	< 2	0.04	< 1	< 5	< 50	< 20
Method Blank										< 5	< 5	< 2	< 200	< 5	< 1	< 5	< 10	< 2	< 0.02	< 1	< 5	< 50	< 20
Method Blank	< 0.2	< 0.5	< 1	< 2	< 2	< 1	< 2	< 1	< 0.01														
Method Blank	< 0.2	< 0.5	< 1	< 2	< 2	< 1	< 2	< 1	< 0.01														
Method Blank	< 0.2	< 0.5	5	< 2	< 2	< 1	< 2	< 1	< 0.01														
Method Blank	< 0.2	< 0.5	< 1	< 2	< 2	< 1	< 2	1	< 0.01														
Method Blank	< 0.2	< 0.5	< 1	< 2	< 2	< 1	< 2	< 1	< 0.01														
Method Blank	< 0.2	< 0.5	< 1	< 2	< 2	< 1	< 2	< 1	< 0.01														
Method Blank	< 0.2	< 0.5	< 1	< 2	< 2	< 1	< 2	< 1	< 0.01														
Method Blank	< 0.2	< 0.5	< 1	< 2	< 2	< 1	< 2	< 1	< 0.01														
Method Blank	< 0.2	< 0.5	< 1	< 2	< 2	< 1	< 2	< 1	< 0.01														

Analyte Symbol	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Lower Limit	0.05	200	50	0.2	0.1	20	0.2	1	0.5	0.5	4	200	1	3	10	0.1	0.2	2	0.2	0.05	
Method Code	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
GXR-1 Meas																					
GXR-1 Cert																					
GXR-1 Meas																					
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GXR-6 Cert																					
SdAR-M2 (U.S.G.S.) Meas																					
SdAR-M2 (U.S.G.S.) Cert																					
SdAR-M2 (U.S.G.S.) Meas																					
SdAR-M2 (U.S.G.S.) Cert																					
SdAR-M2 (U.S.G.S.) Meas																					
SdAR-M2 (U.S.G.S.) Cert																					
DMMAS 120 Meas	2.21			6.7	6.4					16.8			18	32		2.0					
DMMAS 120 Cert	2.16			7.30	6.50					11.7			17.6	32.0		2.70					
DMMAS 120 Meas	2.33			7.0	7.3					17.0			19	37		2.2					
DMMAS 120 Cert	2.16			7.30	6.50					11.7			17.6	32.0		2.70					

Analyte Symbol	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Lower Limit	0.05	200	50	0.2	0.1	20	0.2	1	0.5	0.5	4	200	1	3	10	0.1	0.2	2	0.2	0.05	
Method Code	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
DMMAS 120 Meas	2.30			6.5	6.5					14.3			18	39		2.3					
DMMAS 120 Cert	2.16			7.30	6.50					11.7			17.6	32.0		2.70					
DMMAS 120 Meas	2.26			5.6	6.1					11.4			19	32		2.3					
DMMAS 120 Cert	2.16			7.30	6.50					11.7			17.6	32.0		2.70					
863502 Orig																					
863502 Dup																					
863541 Orig																					
863541 Dup																					
863542 Orig																					
863542 Dup																					
863578 Orig																					
863578 Dup																					
863591 Orig																					
863591 Dup																					
863595 Orig																					
863595 Dup																					
863597 Orig																					
863597 Dup																					
863602 Orig																					
863602 Dup																					
Method Blank	< 0.05	< 200	< 50	< 0.2	0.1	< 20	< 0.2	< 1	< 0.5	0.7	< 4	< 200	< 1	< 3	< 10	< 0.1	< 0.2	< 2	< 0.2	< 0.05	1.00
Method Blank	< 0.05	< 200	< 50	< 0.2	< 0.1	< 20	< 0.2	< 1	< 0.5	< 0.5	< 4	< 200	< 1	< 3	< 10	< 0.1	< 0.2	< 2	< 0.2	< 0.05	30.0
Method Blank																					
Method Blank																					
Method Blank																					
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