

Appendix 2
Assay Laboratory Reports

MINERALS TEST REPORT

CLIENT

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JOB INFORMATION

JOB CODE : 1012.1/1904801
NO. SAMPLES : 112
NO. ELEMENTS : 23
CLIENT ORDER NO. : GW5333 (Job 1 of 1)
SAMPLE SUBMISSION NO. : GW5333
PROJECT : HATCHES CREEK
SAMPLE TYPE : RC Chip
DATE RECEIVED : 02/04/2019
DATE REPORTED : 12/04/2019
DATE PRINTED : 12/04/2019

REPORT NOTES

TESTED BY

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues) will be stored for 60 days without charge. Following this, samples will be stored at a daily rate until clients' written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing, the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m³ per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m³.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	20	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA399501	5.28	9.97	X	110.7	0.3	0.4	228	3.59	5.14	0.64
0002 GA399502	4.46	8.43	X	33.4	0.2	0.3	155	2.54	3.63	0.58
0003 GA399503	4.86	9.17	X	28.7	0.2	0.3	178	2.53	3.61	0.53
0004 GA399504	5.12	9.68	X	37.2	0.3	0.4	272	4.54	6.49	1.10
0005 GA399505	7.05	13.32	X	22.7	0.2	0.3	149	3.04	4.35	0.82
0006 GA399506	6.69	12.65	X	32.8	0.3	0.4	232	3.69	5.28	0.76
0007 GA399507	6.72	12.70	X	23.6	0.2	0.3	126	3.71	5.30	0.61
0008 GA399508	6.73	12.71	X	112.0	0.3	0.4	75	3.97	5.68	0.51
0009 GA399509	6.35	12.00	X	234.3	0.3	0.4	306	3.72	5.31	0.45
0010 GA399510	6.64	12.54	X	29.5	0.2	0.3	93	2.59	3.70	0.45
0011 GA399511	6.39	12.08	X	148.4	0.2	0.3	80	3.76	5.38	0.42
0012 GA399512	5.93	11.21	X	63.5	0.2	0.3	144	3.89	5.56	0.43
0013 GA399513	7.52	14.20	30	75.3	0.3	0.4	231	4.43	6.33	0.62
0014 GA399514	6.59	12.45	X	107.6	0.2	0.3	152	3.96	5.66	0.48
0015 GA399515	5.77	10.89	X	255.1	0.2	0.3	159	4.64	6.63	0.40
0016 GA399516	6.06	11.45	X	40.3	0.3	0.5	273	3.72	5.32	0.64
0017 GA399517	6.61	12.48	X	29.5	0.2	0.3	363	3.28	4.68	0.63
0018 GA399518	5.87	11.09	X	89.9	0.2	0.3	349	3.82	5.47	0.70
0019 GA399519	5.68	10.73	X	118.6	0.4	0.6	475	4.73	6.76	1.00
0020 GA399520	6.18	11.67	24	69.0	0.3	0.4	684	5.73	8.19	1.05
0021 GA399521	5.96	11.27	X	55.3	0.2	0.3	404	4.06	5.80	0.84
0022 GA399522	5.58	10.54	X	131.8	0.2	0.3	513	3.26	4.67	0.65
0023 GA399523	5.37	10.15	21	213.5	0.2	0.3	612	3.98	5.70	0.60
0024 GA399524	5.89	11.12	X	55.9	0.2	0.3	422	3.65	5.21	0.76
0025 GA399525	5.39	10.19	X	184.4	0.2	0.3	333	4.23	6.04	0.92
0026 GA399526	6.84	12.92	X	116.0	0.2	0.2	450	4.60	6.57	0.90
0027 GA399527	6.23	11.76	21	29.8	0.2	0.3	523	4.44	6.35	0.81
0028 GA399528	6.33	11.96	X	29.8	0.2	0.3	687	5.13	7.33	0.81
0029 GA399529	5.86	11.08	X	22.7	0.2	0.3	416	3.45	4.94	0.63
0030 GA399530	5.81	10.99	X	20.7	0.2	0.3	310	3.43	4.91	0.57
0031 GA399531	4.72	8.92	X	24.5	0.2	0.3	545	4.04	5.78	0.91
0032 GA399532	4.54	8.58	X	23.5	0.2	0.3	803	4.64	6.64	0.70
0033 GA399533	6.03	11.39	X	30.6	0.2	0.3	685	4.89	7.00	0.94
0034 GA399534	5.33	10.08	X	53.4	0.2	0.3	678	4.39	6.27	0.61
0035 GA399535	5.59	10.56	X	40.8	0.2	0.2	914	5.21	7.45	0.68
0036 GA399536	6.92	13.08	X	27.3	0.2	0.3	671	4.07	5.82	0.93
0037 GA399537	5.72	10.81	X	44.8	0.2	0.3	449	4.24	6.07	0.89
0038 GA399538	6.17	11.65	X	34.3	0.2	0.3	458	4.35	6.21	0.94
0039 GA399539	5.86	11.07	X	50.9	0.2	0.3	505	3.55	5.08	0.57
0040 GA399540	6.41	12.12	X	25.7	0.2	0.3	1004	3.61	5.16	0.72



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA399501	1.06	598	772	45	X	X	33.8	72.3	X	0.27
0002 GA399502	0.95	235	304	12	X	X	38.3	82.0	X	0.31
0003 GA399503	0.88	212	273	15	X	X	35.5	76.0	X	0.27
0004 GA399504	1.83	583	753	20	X	X	34.7	74.2	0.01	0.24
0005 GA399505	1.35	325	420	10	X	X	33.5	71.8	X	0.39
0006 GA399506	1.27	349	451	20	X	X	34.0	72.8	X	0.32
0007 GA399507	1.02	292	378	28	X	0.5	34.2	73.1	X	0.33
0008 GA399508	0.84	178	229	47	X	X	33.4	71.4	X	0.33
0009 GA399509	0.74	173	223	67	X	X	34.5	73.9	0.03	0.30
0010 GA399510	0.74	181	233	22	X	X	35.7	76.3	X	0.30
0011 GA399511	0.70	187	241	23	X	X	34.9	74.6	X	0.29
0012 GA399512	0.72	210	271	26	X	X	36.3	77.8	0.01	0.27
0013 GA399513	1.03	314	406	23	X	0.6	32.7	69.9	0.01	0.35
0014 GA399514	0.80	279	361	21	X	X	36.2	77.5	X	0.33
0015 GA399515	0.67	230	296	33	X	X	35.0	74.9	0.01	0.27
0016 GA399516	1.06	380	491	25	X	X	36.2	77.4	X	0.26
0017 GA399517	1.05	415	536	7	X	X	34.4	73.7	X	0.30
0018 GA399518	1.16	642	829	14	X	X	37.1	79.4	0.01	0.25
0019 GA399519	1.66	697	899	32	X	X	34.9	74.6	X	0.24
0020 GA399520	1.74	886	1144	32	X	0.5	34.4	73.7	X	0.27
0021 GA399521	1.38	1120	1446	12	X	X	34.5	73.8	X	0.27
0022 GA399522	1.07	1137	1468	12	X	X	36.3	77.7	X	0.25
0023 GA399523	1.00	699	903	33	X	X	36.6	78.3	0.02	0.23
0024 GA399524	1.26	643	830	18	X	X	36.4	77.9	X	0.26
0025 GA399525	1.53	985	1272	13	X	X	37.4	80.0	X	0.25
0026 GA399526	1.49	716	925	32	X	X	33.6	72.0	X	0.31
0027 GA399527	1.35	701	905	27	X	X	35.0	74.8	X	0.27
0028 GA399528	1.34	641	827	54	X	X	35.0	74.8	0.01	0.27
0029 GA399529	1.04	445	575	22	X	X	36.5	78.1	0.01	0.26
0030 GA399530	0.94	349	451	21	X	X	36.0	77.0	0.02	0.26
0031 GA399531	1.52	684	883	17	X	X	37.7	80.7	X	0.23
0032 GA399532	1.17	674	871	26	X	X	38.9	83.2	X	0.22
0033 GA399533	1.55	991	1279	22	X	X	35.7	76.3	X	0.28
0034 GA399534	1.01	872	1126	29	X	X	36.6	78.4	0.01	0.24
0035 GA399535	1.13	895	1155	39	X	0.5	35.7	76.4	X	0.26
0036 GA399536	1.54	818	1056	13	X	X	34.9	74.7	X	0.33
0037 GA399537	1.47	896	1158	16	X	X	34.3	73.5	X	0.26
0038 GA399538	1.56	1015	1311	18	X	X	33.9	72.6	X	0.28
0039 GA399539	0.95	497	641	22	X	X	36.2	77.5	0.01	0.26
0040 GA399540	1.19	599	774	16	X	X	35.3	75.5	0.01	0.28



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA399501	0.45	2503	3156
0002 GA399502	0.51	241	304
0003 GA399503	0.45	223	281
0004 GA399504	0.40	364	459
0005 GA399505	0.65	235	296
0006 GA399506	0.54	331	418
0007 GA399507	0.55	325	410
0008 GA399508	0.54	563	710
0009 GA399509	0.50	1204	1518
0010 GA399510	0.51	415	523
0011 GA399511	0.48	487	614
0012 GA399512	0.44	550	693
0013 GA399513	0.58	588	742
0014 GA399514	0.55	565	713
0015 GA399515	0.45	775	977
0016 GA399516	0.44	549	692
0017 GA399517	0.51	389	490
0018 GA399518	0.42	878	1108
0019 GA399519	0.40	825	1040
0020 GA399520	0.45	1365	1721
0021 GA399521	0.44	632	796
0022 GA399522	0.42	537	677
0023 GA399523	0.39	651	821
0024 GA399524	0.43	357	450
0025 GA399525	0.41	214	270
0026 GA399526	0.51	281	354
0027 GA399527	0.46	119	150
0028 GA399528	0.44	168	212
0029 GA399529	0.43	164	206
0030 GA399530	0.43	191	240
0031 GA399531	0.39	129	162
0032 GA399532	0.37	319	402
0033 GA399533	0.48	190	240
0034 GA399534	0.40	327	412
0035 GA399535	0.44	374	471
0036 GA399536	0.55	177	223
0037 GA399537	0.44	230	290
0038 GA399538	0.47	255	322
0039 GA399539	0.43	181	229
0040 GA399540	0.46	139	175



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	20	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA399541	3.61	6.83	33	31.3	9.2	12.8	X	4.82	6.89	8.03
0042 GA399542	6.07	11.48	X	260.3	0.2	0.3	156	5.20	7.43	0.41
0043 GA399543	6.31	11.92	X	18.4	0.2	0.2	954	4.05	5.79	0.96
0044 GA399544	6.02	11.38	X	28.4	0.2	0.3	759	4.64	6.63	0.92
0045 GA399545	5.88	11.12	X	20.6	0.2	0.3	252	4.36	6.23	1.01
0046 GA399546	6.05	11.44	X	28.4	0.2	0.3	361	4.29	6.13	0.97
0047 GA399547	6.66	12.58	X	22.2	0.3	0.4	186	4.47	6.39	1.08
0048 GA399548	6.18	11.67	X	16.4	0.2	0.3	228	4.35	6.22	1.01
0049 GA399549	5.84	11.03	X	16.2	0.2	0.3	440	4.66	6.66	0.94
0050 GA399550	5.76	10.89	X	33.3	0.2	0.3	1760	4.42	6.31	0.82
0051 GA399551	5.79	10.93	X	22.4	0.2	0.3	1054	4.04	5.77	0.83
0052 GA399552	6.18	11.67	X	11.5	0.2	0.3	750	4.10	5.86	0.98
0053 GA399553	6.18	11.68	X	21.6	0.2	0.3	616	4.17	5.97	0.89
0054 GA399554	6.08	11.49	X	24.7	0.2	0.3	1214	4.29	6.14	0.92
0055 GA399555	5.98	11.29	X	19.9	0.2	0.3	1248	4.72	6.75	1.10
0056 GA399556	5.36	10.14	X	20.0	0.2	0.3	1536	4.39	6.27	0.89
0057 GA399557	6.09	11.51	20	78.2	0.2	0.3	1935	3.50	5.01	0.65
0058 GA399558	6.71	12.68	X	25.7	0.2	0.3	507	3.74	5.35	0.87
0059 GA399559	6.38	12.05	X	27.1	0.2	0.3	332	3.87	5.54	0.90
0060 GA399560	6.04	11.41	X	30.7	0.3	0.4	487	4.17	5.97	1.07
0061 GA399561	7.11	13.44	X	28.6	0.3	0.4	231	3.06	4.37	0.98
0062 GA399562	6.80	12.85	X	32.2	0.2	0.3	113	2.72	3.90	0.81
0063 GA399563	6.93	13.09	X	31.0	0.2	0.3	368	2.51	3.59	0.62
0064 GA399564	5.39	10.19	X	518.4	0.2	0.3	646	2.49	3.55	0.41
0065 GA399565	6.32	11.94	X	125.1	0.2	0.2	428	2.35	3.36	0.51
0066 GA399566	6.09	11.51	X	55.0	0.2	0.3	449	2.76	3.95	0.64
0067 GA399567	5.57	10.53	X	18.5	0.3	0.4	145	2.46	3.52	0.59
0068 GA399568	5.19	9.81	X	19.5	0.2	0.3	53	2.36	3.38	0.74
0069 GA399569	5.62	10.63	X	16.3	0.2	0.3	54	2.30	3.28	0.85
0070 GA399570	5.47	10.34	X	33.4	0.3	0.4	73	2.44	3.49	0.88
0071 GA399571	5.37	10.15	X	17.5	0.3	0.4	61	1.92	2.75	0.89
0072 GA399572	5.72	10.81	X	8.0	0.2	0.3	51	2.11	3.01	1.07
0073 GA399573	5.78	10.93	22	5.8	0.2	0.3	66	1.91	2.73	1.04
0074 GA399574	5.91	11.17	X	12.4	0.2	0.3	85	1.92	2.74	1.04
0075 GA399575	5.87	11.09	X	18.7	0.3	0.4	82	2.19	3.13	1.03
0076 GA399576	5.91	11.16	X	69.2	0.3	0.4	117	2.86	4.09	0.66
0077 GA399577	6.29	11.89	X	87.1	0.3	0.4	88	2.93	4.19	1.07
0078 GA399578	5.67	10.71	X	33.9	0.3	0.4	108	2.76	3.95	1.14
0079 GA399579	6.43	12.16	X	31.2	0.3	0.4	92	2.82	4.03	1.48
0080 GA399580	7.78	14.69	X	148.1	0.3	0.5	75	3.26	4.66	1.60



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA399541	13.31	1147	1481	8	X	0.7	23.7	50.7	X	0.14
0042 GA399542	0.68	228	294	41	X	0.5	35.2	75.4	0.01	0.26
0043 GA399543	1.59	846	1092	16	X	X	34.2	73.1	X	0.28
0044 GA399544	1.53	822	1062	43	X	X	35.5	75.9	0.01	0.27
0045 GA399545	1.67	948	1224	17	X	X	33.8	72.3	X	0.27
0046 GA399546	1.60	852	1100	18	X	X	33.2	71.0	X	0.29
0047 GA399547	1.80	1023	1321	10	X	X	33.6	72.0	X	0.29
0048 GA399548	1.68	885	1143	15	X	X	35.2	75.3	X	0.28
0049 GA399549	1.56	833	1075	22	X	X	35.9	76.8	X	0.27
0050 GA399550	1.36	663	856	17	X	X	36.2	77.5	0.01	0.27
0051 GA399551	1.37	1314	1696	22	X	X	34.9	74.7	X	0.26
0052 GA399552	1.63	831	1073	16	X	X	35.4	75.7	X	0.27
0053 GA399553	1.48	680	878	18	X	X	35.0	75.0	X	0.28
0054 GA399554	1.53	696	898	25	X	X	34.5	73.7	X	0.27
0055 GA399555	1.82	802	1036	22	X	X	34.9	74.6	X	0.27
0056 GA399556	1.48	687	887	21	X	X	35.3	75.5	X	0.24
0057 GA399557	1.08	425	548	22	X	0.5	35.4	75.8	X	0.27
0058 GA399558	1.45	684	883	19	X	X	35.7	76.3	X	0.32
0059 GA399559	1.50	725	937	12	X	X	34.8	74.5	X	0.28
0060 GA399560	1.78	895	1155	14	X	X	34.8	74.6	X	0.25
0061 GA399561	1.63	572	739	7	X	X	34.1	72.9	X	0.34
0062 GA399562	1.34	379	489	7	X	X	35.8	76.7	X	0.29
0063 GA399563	1.02	441	569	19	X	X	35.7	76.5	X	0.28
0064 GA399564	0.68	1608	2077	26	X	X	33.9	72.5	0.01	0.24
0065 GA399565	0.84	530	685	21	X	X	35.9	76.8	X	0.26
0066 GA399566	1.06	347	447	14	X	X	35.6	76.1	0.01	0.29
0067 GA399567	0.98	334	432	21	X	X	34.9	74.7	X	0.25
0068 GA399568	1.23	386	498	14	X	X	30.1	64.4	X	0.27
0069 GA399569	1.41	420	542	8	X	X	36.0	77.0	X	0.28
0070 GA399570	1.46	453	585	16	X	X	35.7	76.3	X	0.28
0071 GA399571	1.48	474	611	7	X	X	35.4	75.8	X	0.30
0072 GA399572	1.77	655	846	8	X	X	36.5	78.0	X	0.28
0073 GA399573	1.73	620	800	37	X	X	35.9	76.8	X	0.26
0074 GA399574	1.73	637	822	37	X	X	37.8	80.9	X	0.31
0075 GA399575	1.71	601	777	9	X	X	37.2	79.6	X	0.28
0076 GA399576	1.10	404	521	76	X	X	36.1	77.2	0.06	0.27
0077 GA399577	1.77	602	777	22	X	X	35.6	76.1	0.02	0.27
0078 GA399578	1.89	640	827	15	X	X	37.9	81.0	X	0.22
0079 GA399579	2.45	647	836	8	X	X	34.4	73.5	X	0.29
0080 GA399580	2.65	638	824	9	X	X	33.7	72.0	X	0.33



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA399541	0.23	9540	1.20%
0042 GA399542	0.44	896	1130
0043 GA399543	0.47	196	247
0044 GA399544	0.45	304	384
0045 GA399545	0.45	222	280
0046 GA399546	0.48	224	282
0047 GA399547	0.48	77	97
0048 GA399548	0.46	118	149
0049 GA399549	0.45	128	161
0050 GA399550	0.44	203	255
0051 GA399551	0.43	1698	2142
0052 GA399552	0.45	325	409
0053 GA399553	0.46	123	155
0054 GA399554	0.45	103	129
0055 GA399555	0.46	158	199
0056 GA399556	0.40	130	164
0057 GA399557	0.46	192	242
0058 GA399558	0.53	201	254
0059 GA399559	0.48	209	263
0060 GA399560	0.42	280	353
0061 GA399561	0.56	153	193
0062 GA399562	0.48	118	148
0063 GA399563	0.46	313	395
0064 GA399564	0.40	3991	5033
0065 GA399565	0.44	1697	2140
0066 GA399566	0.49	526	663
0067 GA399567	0.41	200	252
0068 GA399568	0.45	119	149
0069 GA399569	0.47	133	168
0070 GA399570	0.48	90	113
0071 GA399571	0.49	68	86
0072 GA399572	0.47	76	96
0073 GA399573	0.44	48	60
0074 GA399574	0.52	57	73
0075 GA399575	0.46	55	70
0076 GA399576	0.45	5084	6411
0077 GA399577	0.45	1202	1516
0078 GA399578	0.37	208	262
0079 GA399579	0.48	68	85
0080 GA399580	0.55	137	173



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	20	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA399581	6.16	11.65	X	165.6	0.3	0.5	154	3.81	5.45	1.00
0082 GA399582	5.88	11.12	X	308.8	0.5	0.7	101	3.03	4.33	1.21
0083 GA399583	2.34	4.42	X	33.7	9.1	12.7	43	5.58	7.98	9.09
0084 GA399584	5.77	10.90	X	224.7	0.2	0.3	739	3.98	5.69	0.62
0085 GA399585	6.99	13.21	30	76.6	0.3	0.4	145	2.98	4.26	1.42
0086 GA399586	6.87	12.98	X	83.4	0.3	0.5	142	3.14	4.49	1.41
0087 GA399587	6.88	13.00	21	185.1	0.6	0.9	186	3.02	4.31	1.39
0088 GA399588	6.84	12.93	X	160.0	0.4	0.6	158	3.51	5.02	1.45
0089 GA399589	6.84	12.92	X	64.9	0.4	0.5	95	2.92	4.18	1.33
0090 GA399590	6.44	12.17	31	197.3	0.3	0.4	149	2.96	4.23	1.26
0091 GA399591	6.86	12.96	X	172.3	0.3	0.5	128	3.14	4.49	1.37
0092 GA399592	7.28	13.75	X	332.5	0.5	0.6	98	3.02	4.32	1.78
0093 GA399593	6.63	12.54	X	65.2	0.4	0.6	230	3.38	4.83	2.12
0094 GA399594	6.84	12.92	X	61.8	0.3	0.4	260	3.28	4.70	2.53
0095 GA399595	7.83	14.80	X	1121.1	0.3	0.4	294	7.47	10.69	6.08
0096 GA399596	8.30	15.68	X	313.7	0.3	0.4	179	8.34	11.92	6.54
0097 GA399597	6.85	12.94	20	150.3	0.7	0.9	163	7.08	10.12	4.03
0098 GA399598	7.86	14.85	40	230.6	0.3	0.4	140	9.68	13.84	5.61
0099 GA399599	7.59	14.34	37	248.4	0.3	0.4	128	7.71	11.02	5.29
0100 GA399600	7.33	13.86	X	524.2	0.3	0.4	215	9.24	13.22	5.35
0101 GA399601	7.60	14.37	X	296.7	0.3	0.4	234	10.53	15.06	6.71
0102 GA399602	7.85	14.84	29	252.9	0.3	0.4	114	10.09	14.42	7.03
0103 GA399603	7.88	14.89	X	575.9	0.3	0.5	275	9.49	13.56	6.47
0104 GA399604	7.74	14.63	X	1217.9	0.5	0.7	403	8.82	12.61	6.05
0105 GA399605	7.07	13.36	X	99.1	0.5	0.6	134	7.14	10.20	4.66
0106 GA399606	6.55	12.38	X	327.7	0.3	0.5	95	8.39	12.00	4.76
0107 GA399607	7.55	14.26	X	23.5	0.3	0.4	189	8.62	12.33	5.62
0108 GA399608	8.16	15.41	21	14.1	0.3	0.4	81	9.17	13.11	5.40
0109 GA399609	8.12	15.35	X	16.8	0.3	0.4	44	8.40	12.00	5.51
0110 GA399610	8.03	15.18	X	23.7	0.3	0.5	171	8.41	12.03	4.89
0111 GA399611	8.97	16.94	X	12.9	0.3	0.4	119	7.85	11.23	5.66
0112 GA399612	7.60	14.36	X	79.5	0.3	0.4	303	10.96	15.67	4.77
CHECKS										
0001 GA399509	6.46	12.21	X	222.0	0.3	0.4	313	3.74	5.34	0.45
0002 GA399530	5.84	11.03	24	20.7	0.2	0.3	351	3.42	4.89	0.56
0003 GA399570	5.57	10.52	X	32.8	0.3	0.4	81	2.49	3.56	0.89
0004 GA399589	6.95	13.14	X	60.4	0.4	0.5	93	2.99	4.27	1.37



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA399581	1.66	761	983	33	X	0.5	35.7	76.3	0.01	0.27
0082 GA399582	2.00	747	964	16	X	X	35.5	75.9	X	0.26
0083 GA399583	15.08	1260	1627	8	X	0.8	26.9	57.6	X	0.20
0084 GA399584	1.04	683	882	40	X	X	35.4	75.7	0.01	0.26
0085 GA399585	2.35	668	862	14	X	X	34.8	74.4	X	0.32
0086 GA399586	2.34	638	824	8	X	X	34.2	73.1	X	0.33
0087 GA399587	2.30	811	1047	9	X	X	33.0	70.7	X	0.32
0088 GA399588	2.40	731	944	10	X	X	34.4	73.6	X	0.31
0089 GA399589	2.21	570	736	9	X	X	33.7	72.2	X	0.32
0090 GA399590	2.09	608	786	9	X	X	35.5	76.1	0.01	0.30
0091 GA399591	2.28	690	891	10	X	0.5	34.5	73.7	X	0.31
0092 GA399592	2.95	653	843	6	X	X	33.4	71.6	X	0.31
0093 GA399593	3.51	902	1164	5	X	X	34.2	73.1	X	0.28
0094 GA399594	4.20	1116	1442	6	X	X	33.4	71.6	X	0.32
0095 GA399595	10.08	2715	3506	14	0.07	X	25.4	54.3	X	0.44
0096 GA399596	10.85	2997	3870	23	X	X	22.9	49.0	X	0.49
0097 GA399597	6.68	2366	3055	15	X	X	28.5	61.0	X	0.36
0098 GA399598	9.30	2997	3870	47	X	X	24.7	52.9	X	0.48
0099 GA399599	8.77	2467	3185	16	X	X	26.1	55.8	X	0.46
0100 GA399600	8.87	2752	3553	6	X	X	25.7	55.0	X	0.44
0101 GA399601	11.13	2777	3586	7	X	X	24.1	51.6	X	0.47
0102 GA399602	11.65	2778	3587	10	X	X	22.9	49.0	X	0.50
0103 GA399603	10.73	2599	3356	7	X	X	22.7	48.6	X	0.51
0104 GA399604	10.03	2566	3314	7	X	X	24.8	53.1	X	0.48
0105 GA399605	7.72	2799	3614	44	X	X	26.3	56.3	X	0.42
0106 GA399606	7.90	2678	3458	21	X	X	26.9	57.6	0.01	0.38
0107 GA399607	9.33	2341	3023	25	X	X	26.3	56.2	X	0.48
0108 GA399608	8.95	2591	3346	29	X	X	24.1	51.7	X	0.49
0109 GA399609	9.14	2326	3003	33	X	X	24.9	53.3	X	0.47
0110 GA399610	8.11	2611	3372	30	X	X	25.4	54.4	0.01	0.46
0111 GA399611	9.39	2151	2778	23	X	X	24.3	52.0	X	0.55
0112 GA399612	7.91	2193	2831	18	X	X	24.5	52.4	0.01	0.45
CHECKS										
0001 GA399509	0.75	171	221	66	X	X	34.7	74.2	0.03	0.30
0002 GA399530	0.94	344	445	27	X	X	36.2	77.3	0.02	0.26
0003 GA399570	1.48	458	591	9	X	X	37.7	80.7	X	0.29
0004 GA399589	2.26	579	747	11	X	X	34.0	72.8	X	0.33



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

SAMPLE NUMBERS			
0081 GA399581	0.45	736	928
0082 GA399582	0.43	160	202
0083 GA399583	0.33	418	527
0084 GA399584	0.43	693	875
0085 GA399585	0.54	100	126
0086 GA399586	0.55	78	98
0087 GA399587	0.53	59	75
0088 GA399588	0.52	59	74
0089 GA399589	0.54	72	91
0090 GA399590	0.50	52	65
0091 GA399591	0.51	69	88
0092 GA399592	0.52	99	124
0093 GA399593	0.47	71	89
0094 GA399594	0.53	70	89
0095 GA399595	0.74	115	145
0096 GA399596	0.82	75	94
0097 GA399597	0.59	43	55
0098 GA399598	0.80	53	67
0099 GA399599	0.76	99	124
0100 GA399600	0.73	240	302
0101 GA399601	0.79	83	104
0102 GA399602	0.83	32	40
0103 GA399603	0.84	29	37
0104 GA399604	0.81	40	51
0105 GA399605	0.71	35	44
0106 GA399606	0.64	163	206
0107 GA399607	0.80	30	38
0108 GA399608	0.82	21	27
0109 GA399609	0.79	132	166
0110 GA399610	0.77	45	57
0111 GA399611	0.91	33	42
0112 GA399612	0.75	364	459

CHECKS			
0001 GA399509	0.51	1207	1522
0002 GA399530	0.43	182	230
0003 GA399570	0.48	89	112
0004 GA399589	0.54	71	90



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	20	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
STANDARDS										
0001 OREAS 701	6.26	11.84	X	6.7	3.8	5.4	4637	23.08	32.99	0.77
0002 OREAS 700	5.74	10.84	X	7.3	6.0	8.3	1983	16.30	23.30	1.08
0003 OREAS 24b	7.79	14.72	X	0.6	1.2	1.7	33	4.34	6.20	1.66
0004 OREAS 522	4.02	7.59	528	9.3	4.1	5.7	9504	24.76	35.41	1.21
0005 OREAS 524	2.90	5.48	695	17.7	3.6	5.1	2.52%	28.85	41.24	1.06
0006 OREAS 901	7.09	13.39	74	5.2	0.3	0.4	1408	3.99	5.71	0.64
0007 AMIS0401	3.57	6.74	X	281.9	10.8	15.1	1658	18.61	26.61	2.17
0008 OREAS 523	3.10	5.85	714	14.2	3.7	5.2	1.70%	28.68	41.01	1.10
0009 GW-01	4.65	8.78	X	2.3	8.7	12.2	255	3.72	5.32	5.58
BLANKS										
0001 Control Blank	X	X	X	X	0.2	0.3	X	0.02	0.03	X
0002 Control Blank	X	X	X	0.1	0.2	0.2	X	0.02	0.03	X
0003 Control Blank	X	X	X	X	0.2	0.2	X	0.01	X	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
STANDARDS										
0001 OREAS 701	1.28	3296	4256	261	0.66	X	15.7	33.5	0.02	0.15
0002 OREAS 700	1.78	3324	4292	80	0.29	0.9	23.2	49.6	0.02	0.20
0003 OREAS 24b	2.75	450	582	3	0.19	0.7	31.2	66.7	X	0.48
0004 OREAS 522	2.01	4224	5454	208	3.14	6.9	15.9	33.9	X	0.40
0005 OREAS 524	1.76	4859	6274	395	5.62	12.4	12.7	27.2	X	0.29
0006 OREAS 901	1.07	308	398	3	X	2.5	33.0	70.6	X	0.36
0007 AMISO401	3.60	2.94%	3.80%	5	8.42	0.8	14.2	30.4	X	0.24
0008 OREAS 523	1.83	4996	6451	330	4.47	10.8	13.5	28.8	X	0.31
0009 GW-01	9.25	856	1106	6	0.22	0.9	26.8	57.3	X	0.09
BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	X	X	X
0002 Control Blank	X	X	X	X	X	X	X	X	X	X
0003 Control Blank	X	X	X	4	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

STANDARDS

0001 OREAS 701	0.26	2.39%	3.01%
0002 OREAS 700	0.33	1.15%	1.45%
0003 OREAS 24b	0.80	13	16
0004 OREAS 522	0.67	143	180
0005 OREAS 524	0.49	181	228
0006 OREAS 901	0.60	8	11
0007 AMISO401	0.41	750	945
0008 OREAS 523	0.52	218	275
0009 GW-01	0.16	2888	3642

BLANKS

0001 Control Blank	X	X	X
0002 Control Blank	X	1	X
0003 Control Blank	X	13	16



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
 PO Box 517
 WEST PERTH, W.A. 6872
 AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904805
 NO. SAMPLES : 112
 NO. ELEMENTS : 23
 CLIENT ORDER NO. : GW5334 (Job 1 of 1)
 SAMPLE SUBMISSION NO. : GW5334
 PROJECT : HATCHES CREEK
 SAMPLE TYPE : RC Chip
 DATE RECEIVED : 02/04/2019
 DATE REPORTED : 12/04/2019
 DATE PRINTED : 12/04/2019

REPORT NOTES

TESTED BY

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues will be stored for 60 days without charge. Following this samples will be stored at a daily rate until clients written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m3 per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m3.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	20	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA399613	4.83	9.13	X	270.1	0.2	0.3	158	4.37	6.25	0.43
0002 GA399614	6.12	11.57	X	22.1	0.2	0.3	183	3.85	5.50	0.71
0003 GA399615	5.98	11.30	X	20.9	0.5	0.8	224	4.18	5.97	1.11
0004 GA399616	5.98	11.30	X	16.5	0.4	0.5	426	4.37	6.25	1.31
0005 GA399617	6.07	11.48	X	31.6	0.4	0.6	326	5.82	8.33	0.91
0006 GA399618	5.59	10.56	X	168.5	0.3	0.4	208	4.33	6.20	0.64
0007 GA399619	5.72	10.81	X	45.7	0.2	0.3	196	3.71	5.31	0.67
0008 GA399620	6.27	11.85	X	20.9	0.2	0.3	312	3.56	5.09	0.90
0009 GA399621	6.38	12.06	X	22.6	0.3	0.4	345	4.06	5.81	1.03
0010 GA399622	6.43	12.15	X	25.0	0.2	0.3	319	4.02	5.75	0.95
0011 GA399623	6.58	12.43	X	21.5	0.2	0.3	145	3.56	5.09	0.80
0012 GA399624	5.40	10.21	X	42.9	0.2	0.2	101	3.16	4.52	0.46
0013 GA399625	6.00	11.33	X	395.0	0.2	0.3	247	5.22	7.46	0.36
0014 GA399626	5.37	10.15	X	105.0	0.2	0.3	75	3.80	5.43	0.32
0015 GA399627	5.68	10.73	X	139.9	0.2	0.3	94	3.35	4.79	0.38
0016 GA399628	6.32	11.94	X	32.8	0.2	0.3	46	4.05	5.79	0.37
0017 GA399629	5.72	10.81	X	42.4	0.2	0.2	107	4.38	6.27	0.51
0018 GA399630	5.43	10.26	X	49.6	0.2	0.3	206	4.01	5.73	0.55
0019 GA399631	5.96	11.27	X	32.0	0.2	0.3	258	4.10	5.86	0.66
0020 GA399632	6.12	11.56	X	18.4	0.2	0.3	376	3.73	5.34	0.78
0021 GA399633	6.39	12.07	20	85.2	0.2	0.3	338	3.86	5.52	0.78
0022 GA399634	6.60	12.47	X	86.2	0.2	0.3	470	4.58	6.54	1.16
0023 GA399635	6.00	11.33	X	476.7	0.2	0.2	336	3.59	5.14	0.94
0024 GA399636	5.95	11.24	X	29.4	0.2	0.3	270	4.01	5.74	0.93
0025 GA399637	5.92	11.18	X	31.8	0.2	0.2	288	3.81	5.45	0.82
0026 GA399638	6.08	11.48	X	114.1	0.2	0.3	63	2.97	4.25	0.30
0027 GA399639	5.59	10.56	X	110.7	0.2	0.3	82	3.51	5.01	0.29
0028 GA399640	5.72	10.81	X	110.3	0.2	0.3	248	5.89	8.42	0.57
0029 GA399641	5.51	10.41	X	38.2	0.2	0.2	211	4.39	6.28	0.87
0030 GA399642	6.23	11.78	X	29.9	0.2	0.3	191	4.03	5.76	0.84
0031 GA399643	6.11	11.55	X	72.3	0.2	0.3	249	4.79	6.85	0.62
0032 GA399644	6.06	11.44	X	69.1	0.2	0.3	162	3.99	5.70	0.63
0033 GA399645	5.72	10.82	X	59.5	0.2	0.3	597	4.64	6.64	0.74
0034 GA399646	5.96	11.27	X	23.3	0.2	0.3	1071	4.36	6.23	0.81
0035 GA399647	4.36	8.24	X	88.5	0.2	0.2	954	3.11	4.45	0.68
0036 GA399648	6.63	12.53	X	35.1	0.2	0.3	1215	4.16	5.95	1.17
0037 GA399649	7.43	14.03	X	50.5	0.2	0.3	1106	3.96	5.67	1.20
0038 GA399650	6.66	12.59	X	37.4	0.2	0.3	1484	3.88	5.55	1.11
0039 GA399651	5.72	10.81	X	39.9	0.2	0.3	1527	3.82	5.46	1.16
0040 GA399652	7.08	13.37	X	251.7	0.2	0.3	1714	4.01	5.73	0.98



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA399613	0.71	424	548	33	X	X	36.2	77.5	0.01	0.26
0002 GA399614	1.17	459	593	16	X	X	33.2	71.0	X	0.28
0003 GA399615	1.85	654	844	12	X	X	33.7	72.1	X	0.27
0004 GA399616	2.17	617	797	9	X	X	33.2	71.1	X	0.28
0005 GA399617	1.51	450	580	23	X	X	33.8	72.4	0.01	0.26
0006 GA399618	1.06	353	456	32	X	X	35.7	76.3	0.02	0.25
0007 GA399619	1.11	459	592	23	X	X	34.6	73.9	X	0.25
0008 GA399620	1.49	625	807	8	X	X	34.4	73.6	X	0.28
0009 GA399621	1.72	667	861	19	X	X	33.4	71.4	X	0.29
0010 GA399622	1.57	538	695	15	X	X	34.9	74.8	X	0.29
0011 GA399623	1.33	543	702	28	X	X	36.0	77.0	X	0.29
0012 GA399624	0.76	297	383	78	X	X	34.5	73.7	0.01	0.25
0013 GA399625	0.60	213	275	592*	X	X	33.6	71.8	0.02	0.23
0014 GA399626	0.53	166	215	44	X	X	36.7	78.5	0.01	0.23
0015 GA399627	0.62	202	261	24	X	X	36.9	78.9	0.04	0.24
0016 GA399628	0.61	191	246	32	X	X	35.0	74.8	0.02	0.28
0017 GA399629	0.84	352	454	47	X	X	32.4	69.4	0.02	0.25
0018 GA399630	0.90	483	624	33	X	X	33.4	71.4	0.02	0.25
0019 GA399631	1.09	573	740	34	X	X	33.0	70.7	0.01	0.26
0020 GA399632	1.29	652	842	11	X	X	35.3	75.5	0.01	0.28
0021 GA399633	1.30	619	800	14	X	X	33.9	72.4	0.02	0.25
0022 GA399634	1.92	862	1113	11	X	X	34.0	72.8	0.01	0.30
0023 GA399635	1.56	719	928	16	X	X	27.1	58.0	X	0.28
0024 GA399636	1.54	798	1030	19	X	X	32.9	70.4	0.09	0.27
0025 GA399637	1.36	720	929	24	X	X	34.8	74.4	X	0.27
0026 GA399638	0.50	190	245	69	X	X	35.2	75.2	0.02	0.25
0027 GA399639	0.48	238	308	78	X	X	33.1	70.8	0.01	0.25
0028 GA399640	0.94	537	694	84	X	X	34.0	72.7	X	0.25
0029 GA399641	1.45	784	1013	36	X	X	32.0	68.4	X	0.25
0030 GA399642	1.39	772	997	28	X	X	36.1	77.1	X	0.28
0031 GA399643	1.03	471	608	58	X	X	32.7	70.0	0.01	0.27
0032 GA399644	1.04	550	710	43	X	X	34.7	74.2	0.01	0.27
0033 GA399645	1.23	2630	3397	32	X	X	34.1	73.0	0.02	0.24
0034 GA399646	1.34	938	1211	19	X	X	34.1	72.9	0.01	0.26
0035 GA399647	1.13	578	747	13	X	X	21.6	46.2	0.01	0.22
0036 GA399648	1.94	860	1110	7	X	X	35.9	76.7	X	0.31
0037 GA399649	1.99	810	1045	8	X	0.5	32.3	69.1	0.02	0.34
0038 GA399650	1.84	841	1086	8	X	X	32.0	68.4	X	0.30
0039 GA399651	1.92	993	1282	6	X	X	32.8	70.2	X	0.26
0040 GA399652	1.62	1274	1645	18	X	X	32.2	68.8	X	0.31



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA399613	0.44	1416	1786
0002 GA399614	0.47	280	353
0003 GA399615	0.46	249	314
0004 GA399616	0.47	150	189
0005 GA399617	0.44	677	853
0006 GA399618	0.41	801	1010
0007 GA399619	0.42	546	689
0008 GA399620	0.47	351	442
0009 GA399621	0.48	372	469
0010 GA399622	0.48	351	443
0011 GA399623	0.49	316	399
0012 GA399624	0.41	354	447
0013 GA399625	0.38	1313	1656
0014 GA399626	0.39	700	883
0015 GA399627	0.41	677	853
0016 GA399628	0.47	424	534
0017 GA399629	0.42	459	578
0018 GA399630	0.41	464	586
0019 GA399631	0.44	504	635
0020 GA399632	0.46	287	362
0021 GA399633	0.41	337	425
0022 GA399634	0.51	212	267
0023 GA399635	0.47	314	396
0024 GA399636	0.44	286	361
0025 GA399637	0.44	369	465
0026 GA399638	0.42	426	537
0027 GA399639	0.42	693	874
0028 GA399640	0.42	1386	1747
0029 GA399641	0.41	405	511
0030 GA399642	0.46	325	409
0031 GA399643	0.46	435	548
0032 GA399644	0.44	571	720
0033 GA399645	0.39	750	946
0034 GA399646	0.43	416	525
0035 GA399647	0.37	305	385
0036 GA399648	0.51	211	266
0037 GA399649	0.56	150	190
0038 GA399650	0.51	245	309
0039 GA399651	0.43	237	298
0040 GA399652	0.52	497	626



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	20	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA399653	10.25	19.37	38	7.0	3.5	4.9	112	3.19	4.56	3.76
0042 GA399654	5.98	11.31	X	430.8	0.2	0.3	274	5.40	7.71	0.38
0043 GA399655	6.26	11.83	X	157.8	0.2	0.3	878	4.27	6.10	1.11
0044 GA399656	5.46	10.32	23	130.5	0.2	0.3	433	4.31	6.17	1.17
0045 GA399657	5.22	9.87	X	38.3	0.2	0.3	578	3.56	5.08	1.09
0046 GA399658	4.73	8.94	X	19.4	0.2	0.2	325	2.69	3.84	1.00
0047 GA399659	5.61	10.60	X	42.1	0.2	0.2	304	2.30	3.29	0.98
0048 GA399660	5.62	10.61	X	12.3	0.2	0.3	276	2.41	3.44	1.04
0049 GA399661	5.26	9.94	X	54.7	0.2	0.3	288	2.24	3.20	0.69
0050 GA399662	5.78	10.93	X	20.9	0.2	0.2	266	2.82	4.04	1.00
0051 GA399663	5.19	9.81	X	40.2	0.2	0.2	246	2.59	3.70	0.88
0052 GA399664	5.48	10.36	X	182.7	0.2	0.3	583	3.26	4.65	0.95
0053 GA399665	6.41	12.12	X	36.6	0.2	0.3	512	3.03	4.33	1.03
0054 GA399666	5.44	10.28	24	23.3	0.2	0.3	512	2.72	3.88	1.01
0055 GA399667	6.31	11.92	X	69.0	0.8	1.2	486	3.01	4.30	0.97
0056 GA399668	4.92	9.31	X	13.1	0.2	0.3	360	2.78	3.97	1.00
0057 GA399669	6.04	11.42	X	24.4	0.3	0.4	206	2.99	4.28	1.12
0058 GA399670	5.63	10.63	X	82.2	0.3	0.4	107	2.74	3.92	0.98
0059 GA399671	5.95	11.24	X	34.7	0.3	0.4	199	2.92	4.18	1.09
0060 GA399672	6.68	12.63	X	42.7	0.3	0.5	675	3.21	4.58	1.16
0061 GA399673	6.42	12.14	X	24.6	0.3	0.4	232	2.82	4.03	1.21
0062 GA399674	6.83	12.90	24	37.0	0.3	0.4	329	2.85	4.08	1.24
0063 GA399675	6.24	11.80	X	50.9	0.3	0.5	757	3.13	4.48	1.22
0064 GA399676	6.28	11.86	X	129.5	0.4	0.5	933	3.18	4.54	1.19
0065 GA399677	5.93	11.20	X	254.6	0.3	0.4	802	2.97	4.24	1.14
0066 GA399678	5.60	10.59	X	633.7	0.3	0.4	2340	5.02	7.18	1.91
0067 GA399679	5.85	11.05	X	351.6	0.3	0.4	568	2.85	4.08	1.23
0068 GA399680	5.70	10.76	X	413.8	0.4	0.5	1124	3.54	5.06	1.20
0069 GA399681	7.45	14.08	X	109.1	0.2	0.3	937	7.81	11.17	3.64
0070 GA399682	5.95	11.25	X	38.6	0.3	0.4	676	3.94	5.63	3.29
0071 GA399683	6.34	11.99	X	134.2	0.3	0.4	588	5.49	7.85	3.90
0072 GA399684	6.54	12.36	X	104.3	0.3	0.4	263	3.69	5.27	3.42
0073 GA399685	5.81	10.98	X	140.1	0.3	0.4	44	3.36	4.81	2.96
0074 GA399686	6.44	12.17	29	68.6	0.3	0.4	50	3.30	4.72	2.30
0075 GA399687	6.14	11.60	X	32.2	0.3	0.4	32	2.82	4.04	2.36
0076 GA399688	6.08	11.49	X	10.2	0.3	0.4	56	3.10	4.43	2.81
0077 GA399689	8.21	15.51	X	37.2	0.3	0.4	X	7.40	10.57	7.07
0078 GA399690	8.41	15.88	X	29.3	0.3	0.4	59	7.24	10.35	7.34
0079 GA399691	8.44	15.95	X	13.2	0.2	0.3	33	6.94	9.92	6.91
0080 GA399692	7.61	14.39	X	21.8	0.3	0.4	27	6.56	9.38	5.65



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA399653	6.24	909	1173	130	2.02	31.6	21.2	45.4	X	0.17
0042 GA399654	0.62	217	280	566	X	X	33.8	72.3	0.02	0.21
0043 GA399655	1.84	955	1234	17	X	X	33.8	72.2	X	0.28
0044 GA399656	1.94	1143	1476	30	0.05	X	34.5	73.9	0.01	0.24
0045 GA399657	1.81	927	1197	10	X	X	32.0	68.4	X	0.24
0046 GA399658	1.66	650	839	6	X	X	33.1	70.9	X	0.21
0047 GA399659	1.63	531	686	5	X	X	25.5	54.6	X	0.26
0048 GA399660	1.72	743	959	5	X	X	36.3	77.7	X	0.22
0049 GA399661	1.14	481	620	23	X	X	32.9	70.5	0.01	0.24
0050 GA399662	1.65	649	838	24	X	X	35.2	75.4	X	0.27
0051 GA399663	1.45	548	707	9	X	X	35.9	76.7	X	0.25
0052 GA399664	1.57	595	769	20	X	X	32.4	69.3	X	0.26
0053 GA399665	1.71	610	788	11	X	X	33.9	72.5	0.01	0.30
0054 GA399666	1.68	615	794	8	X	X	36.2	77.4	X	0.23
0055 GA399667	1.62	665	858	12	X	X	32.9	70.4	0.01	0.23
0056 GA399668	1.66	756	976	9	X	X	35.9	76.9	X	0.18
0057 GA399669	1.85	670	865	7	X	X	35.9	76.7	X	0.26
0058 GA399670	1.63	788	1018	7	X	X	26.9	57.5	X	0.25
0059 GA399671	1.80	905	1169	9	X	X	29.7	63.6	X	0.27
0060 GA399672	1.92	1357	1753	9	X	X	32.2	68.8	X	0.32
0061 GA399673	2.00	734	948	4	X	X	33.2	71.0	X	0.31
0062 GA399674	2.05	757	978	5	X	X	33.4	71.4	X	0.32
0063 GA399675	2.02	1092	1410	8	X	X	34.0	72.7	X	0.28
0064 GA399676	1.97	735	949	8	X	X	32.8	70.1	X	0.27
0065 GA399677	1.89	686	886	9	X	X	33.8	72.2	X	0.26
0066 GA399678	3.17	1255	1620	17	X	X	28.7	61.4	X	0.26
0067 GA399679	2.04	650	840	4	X	X	32.9	70.4	0.01	0.24
0068 GA399680	1.99	713	921	27	X	1.0	33.7	72.2	0.04	0.23
0069 GA399681	6.03	1694	2188	12	X	1.4	26.5	56.7	0.02	0.39
0070 GA399682	5.46	1208	1560	5	X	0.5	32.1	68.6	X	0.30
0071 GA399683	6.47	1548	1999	7	X	X	25.6	54.7	0.03	0.33
0072 GA399684	5.67	1103	1424	5	X	X	31.4	67.2	0.02	0.29
0073 GA399685	4.91	1081	1396	18	X	X	27.7	59.3	X	0.28
0074 GA399686	3.82	995	1285	9	X	26.0	34.2	73.1	X	0.27
0075 GA399687	3.92	853	1101	10	X	X	33.1	70.8	X	0.26
0076 GA399688	4.66	1129	1458	9	X	X	34.2	73.1	X	0.29
0077 GA399689	11.72	2830	3654	9	X	X	23.3	49.8	X	0.48
0078 GA399690	12.17	2636	3404	18	X	X	21.1	45.2	X	0.50
0079 GA399691	11.46	2307	2978	19	X	X	21.1	45.1	X	0.52
0080 GA399692	9.36	2267	2927	34	X	X	25.2	54.0	X	0.41



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA399653	0.28	2.63%	3.32%
0042 GA399654	0.36	1346	1698
0043 GA399655	0.47	254	320
0044 GA399656	0.40	187	236
0045 GA399657	0.40	125	158
0046 GA399658	0.35	111	141
0047 GA399659	0.43	128	161
0048 GA399660	0.37	84	106
0049 GA399661	0.40	122	153
0050 GA399662	0.45	119	150
0051 GA399663	0.42	158	199
0052 GA399664	0.43	195	245
0053 GA399665	0.50	168	212
0054 GA399666	0.38	193	243
0055 GA399667	0.38	313	394
0056 GA399668	0.31	118	148
0057 GA399669	0.43	105	133
0058 GA399670	0.42	288	364
0059 GA399671	0.45	124	156
0060 GA399672	0.53	246	310
0061 GA399673	0.51	101	127
0062 GA399674	0.53	83	105
0063 GA399675	0.47	130	163
0064 GA399676	0.46	121	152
0065 GA399677	0.44	107	136
0066 GA399678	0.44	253	319
0067 GA399679	0.40	104	131
0068 GA399680	0.38	1748	2205
0069 GA399681	0.66	937	1182
0070 GA399682	0.50	89	113
0071 GA399683	0.56	145	182
0072 GA399684	0.49	53	67
0073 GA399685	0.46	48	61
0074 GA399686	0.44	43	54
0075 GA399687	0.44	43	54
0076 GA399688	0.48	30	38
0077 GA399689	0.81	46	58
0078 GA399690	0.84	58	73
0079 GA399691	0.86	87	109
0080 GA399692	0.68	43	55



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	20	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA399693	6.47	12.23	X	18.9	0.3	0.4	25	3.90	5.57	2.79
0082 GA399694	6.70	12.66	X	21.8	0.3	0.4	X	3.29	4.70	2.07
0083 GA399695	2.44	4.61	488	0.6	8.4	11.8	X	5.65	8.07	11.54
0084 GA399696	6.55	12.38	X	82.2	0.2	0.3	341	4.15	5.94	0.81
0085 GA399697	6.09	11.50	X	368.0	0.2	0.3	69	4.76	6.81	3.36
0086 GA399698	6.58	12.44	X	89.7	0.3	0.4	379	5.86	8.38	3.63
0087 GA399699	7.61	14.39	X	39.1	0.3	0.4	1906	8.62	12.33	5.07
0088 GA399700	7.17	13.55	X	29.5	0.3	0.4	2487	8.73	12.49	4.57
0089 GA399701	7.79	14.71	X	35.6	0.2	0.3	1649	8.66	12.38	5.07
0090 GA399702	7.87	14.86	X	310.6	0.3	0.4	1993	9.54	13.65	5.65
0091 GA399703	7.96	15.04	X	105.4	0.3	0.4	369	10.02	14.33	5.71
0092 GA399704	7.05	13.32	X	48.0	0.4	0.6	522	9.95	14.23	4.84
0093 GA399705	7.65	14.46	X	111.9	0.3	0.5	1084	8.34	11.93	4.52
0094 GA399706	8.56	16.18	X	12.8	0.3	0.4	63	7.83	11.19	5.27
0095 GA399707	5.77	10.90	21	9.5	0.3	0.5	250	3.91	5.59	2.70
0096 GA399708	6.10	11.52	X	11.9	0.3	0.4	106	3.94	5.64	2.18
0097 GA399709	5.78	10.92	X	19.0	0.3	0.4	60	3.79	5.42	2.08
0098 GA399710	5.77	10.90	X	35.6	0.3	0.4	51	3.88	5.55	2.13
0099 GA399711	5.85	11.06	X	20.7	0.3	0.4	28	3.77	5.39	2.30
0100 GA399712	4.87	9.20	X	36.5	0.3	0.4	X	2.86	4.09	1.87
0101 GA399713	6.07	11.46	X	9.7	0.3	0.4	X	3.47	4.97	2.74
0102 GA399714	8.29	15.67	X	5.4	0.3	0.4	28	5.82	8.31	5.42
0103 GA399715	7.21	13.61	X	22.0	0.3	0.4	37	3.67	5.24	2.94
0104 GA399716	6.56	12.39	X	156.6	0.3	0.4	56	3.46	4.95	2.51
0105 GA399717	7.69	14.53	X	87.0	0.3	0.4	318	8.01	11.45	5.62
0106 GA399718	6.97	13.17	X	95.4	0.3	0.4	2591	8.99	12.86	4.87
0107 GA399719	7.31	13.82	X	145.6	0.3	0.4	3614	9.72	13.90	5.00
0108 GA399720	7.56	14.28	X	43.2	0.3	0.5	2033	11.22	16.04	5.02
0109 GA399721	7.43	14.04	X	50.4	0.3	0.4	1828	11.95	17.09	4.31
0110 GA399722	7.76	14.66	24	136.3	0.3	0.5	2702	11.64	16.64	4.22
0111 GA399723	7.11	13.43	X	170.6	0.3	0.4	2203	12.48	17.85	4.03
0112 GA399724	6.98	13.19	X	78.7	0.3	0.4	3836	10.69	15.28	4.23
CHECKS										
0001 GA399624	5.30	10.01	X	43.0	0.2	0.2	98	3.02	4.32	0.45
0002 GA399646	5.89	11.14	X	24.1	0.2	0.3	1014	4.19	5.99	0.79
0003 GA399676	6.22	11.76	X	125.6	0.4	0.5	906	3.14	4.49	1.18
0004 GA399701	7.93	14.99	X	34.8	0.3	0.4	1817	8.82	12.61	5.16



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA399693	4.63	1382	1784	10	X	X	32.2	68.9	X	0.29
0082 GA399694	3.44	1120	1447	10	X	X	33.0	70.7	X	0.30
0083 GA399695	19.14	1454	1877	5	X	1.1	25.2	54.0	X	0.13
0084 GA399696	1.34	654	845	13	X	X	34.5	73.7	0.02	0.25
0085 GA399697	5.58	1703	2199	9	X	X	28.3	60.6	X	0.32
0086 GA399698	6.02	1886	2435	4	X	X	28.5	60.9	X	0.37
0087 GA399699	8.41	3319	4286	5	0.07	X	24.6	52.6	0.01	0.46
0088 GA399700	7.58	3285	4241	8	0.13	X	24.3	51.9	0.02	0.41
0089 GA399701	8.41	2948	3806	3	0.07	X	24.0	51.4	0.01	0.46
0090 GA399702	9.37	2672	3450	5	0.11	X	23.5	50.3	0.02	0.48
0091 GA399703	9.47	3328	4297	7	0.07	0.6	22.8	48.8	X	0.47
0092 GA399704	8.03	3945	5094	6	X	X	24.0	51.4	0.01	0.42
0093 GA399705	7.50	2745	3545	8	0.05	X	24.9	53.3	0.02	0.40
0094 GA399706	8.74	2646	3417	3	X	X	22.9	49.1	0.02	0.50
0095 GA399707	4.47	1480	1911	7	X	X	34.5	73.9	0.01	0.27
0096 GA399708	3.62	1438	1857	5	X	X	33.3	71.2	0.01	0.29
0097 GA399709	3.46	1455	1879	6	0.05	X	35.0	74.9	X	0.25
0098 GA399710	3.53	1324	1709	12	X	X	34.1	73.0	0.01	0.27
0099 GA399711	3.81	1434	1851	15	0.07	X	33.4	71.4	0.01	0.26
0100 GA399712	3.10	937	1210	5	X	X	36.3	77.6	X	0.23
0101 GA399713	4.54	1368	1766	17	X	X	33.1	70.8	X	0.30
0102 GA399714	8.98	2398	3096	16	0.05	X	26.1	55.8	X	0.48
0103 GA399715	4.88	1201	1550	23	X	X	31.8	68.0	X	0.37
0104 GA399716	4.16	1072	1384	26	0.08	X	30.8	66.0	X	0.34
0105 GA399717	9.31	2850	3680	6	0.11	1.3	25.9	55.4	0.01	0.45
0106 GA399718	8.08	3381	4366	30	0.08	X	25.2	54.0	0.02	0.43
0107 GA399719	8.30	3034	3918	16	0.15	0.9	24.4	52.2	0.01	0.44
0108 GA399720	8.33	3341	4314	126	0.16	1.2	23.3	49.9	0.01	0.46
0109 GA399721	7.16	2848	3677	5	0.09	X	21.5	46.0	X	0.44
0110 GA399722	7.00	3225	4164	2	0.12	X	22.2	47.4	0.01	0.47
0111 GA399723	6.69	2807	3624	6	0.07	0.6	21.7	46.4	0.01	0.45
0112 GA399724	7.01	2868	3704	4	0.11	0.6	24.1	51.6	0.02	0.43
CHECKS										
0001 GA399624	0.74	267	345	74	X	X	31.8	68.1	0.01	0.23
0002 GA399646	1.31	909	1174	21	X	X	34.3	73.4	0.01	0.25
0003 GA399676	1.96	703	907	6	X	X	32.2	68.9	X	0.27
0004 GA399701	8.55	2988	3858	12	0.14	0.9	24.4	52.2	0.01	0.47



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

SAMPLE NUMBERS			
0081 GA399693	0.49	62	78
0082 GA399694	0.50	49	62
0083 GA399695	0.22	1145	1444
0084 GA399696	0.42	342	432
0085 GA399697	0.53	73	92
0086 GA399698	0.62	157	199
0087 GA399699	0.77	182	229
0088 GA399700	0.69	1062	1340
0089 GA399701	0.76	101	127
0090 GA399702	0.79	97	122
0091 GA399703	0.79	162	204
0092 GA399704	0.70	388	489
0093 GA399705	0.67	1018	1283
0094 GA399706	0.83	74	93
0095 GA399707	0.45	66	83
0096 GA399708	0.48	70	88
0097 GA399709	0.42	79	99
0098 GA399710	0.46	92	116
0099 GA399711	0.43	39	49
0100 GA399712	0.38	34	43
0101 GA399713	0.51	42	53
0102 GA399714	0.80	20	25
0103 GA399715	0.62	27	35
0104 GA399716	0.56	48	60
0105 GA399717	0.75	112	141
0106 GA399718	0.71	2702	3407
0107 GA399719	0.74	248	313
0108 GA399720	0.77	209	264
0109 GA399721	0.74	223	281
0110 GA399722	0.79	318	401
0111 GA399723	0.75	1127	1421
0112 GA399724	0.71	583	736

CHECKS			
0001 GA399624	0.39	348	438
0002 GA399646	0.42	405	510
0003 GA399676	0.46	116	146
0004 GA399701	0.78	84	106



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	20	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
STANDARDS										
0001 OREAS 701	6.47	12.23	X	6.8	3.9	5.5	4783	23.64	33.80	0.82
0002 OREAS 700	5.38	10.17	X	6.8	5.6	7.9	1888	15.23	21.77	1.05
0003 OREAS 24b	7.78	14.69	23	1.2	1.2	1.7	28	4.34	6.20	1.72
0004 OREAS 522	3.88	7.33	487	9.6	3.9	5.4	8799	23.69	33.87	1.20
0005 OREAS 524	2.90	5.48	714	17.4	3.6	5.1	2.55%	29.03	41.50	1.04
0006 OREAS 901	7.24	13.68	69	5.4	0.3	0.4	1450	4.08	5.83	0.64
0007 AMIS0401	3.59	6.78	X	285.9	10.9	15.2	1671	18.76	26.82	2.14
0008 OREAS 523	3.07	5.81	691	14.8	3.7	5.2	1.70%	28.37	40.56	1.08
0009 GW-01	4.54	8.58	X	2.4	8.6	12.0	244	3.66	5.23	5.40
BLANKS										
0001 Control Blank	X	X	X	X	0.2	0.2	X	0.01	X	X
0002 Control Blank	X	X	X	X	0.1	0.2	X	X	X	X
0003 Control Blank	0.01	0.03	X	0.1	0.2	0.2	X	0.02	0.04	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
STANDARDS										
0001 OREAS 701	1.36	3370	4351	271	0.69	X	16.0	34.3	0.02	0.16
0002 OREAS 700	1.73	3063	3956	82	0.28	0.7	21.7	46.4	0.02	0.18
0003 OREAS 24b	2.85	451	582	3	0.19	0.7	31.3	67.0	X	0.48
0004 OREAS 522	1.99	3982	5142	206	3.06	8.9	15.3	32.7	X	0.38
0005 OREAS 524	1.73	4904	6332	385	5.21	11.8	12.8	27.3	X	0.29
0006 OREAS 901	1.07	329	425	4	X	2.7	33.9	72.4	X	0.37
0007 AMIS0401	3.55	2.95%	3.81%	8	8.73	1.3	14.4	30.7	X	0.24
0008 OREAS 523	1.79	4936	6373	318	4.45	10.3	13.4	28.7	X	0.31
0009 GW-01	8.95	830	1072	6	0.21	1.0	26.1	55.8	X	0.09
BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	X	X	X
0002 Control Blank	X	X	X	X	X	X	X	X	X	X
0003 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

STANDARDS

0001 OREAS 701	0.27	2.43%	3.06%
0002 OREAS 700	0.31	1.06%	1.34%
0003 OREAS 24b	0.80	11	14
0004 OREAS 522	0.64	138	174
0005 OREAS 524	0.49	188	237
0006 OREAS 901	0.62	25	31
0007 AMISO401	0.41	709	895
0008 OREAS 523	0.51	185	234
0009 GW-01	0.15	2722	3433

BLANKS

0001 Control Blank	X	12	15
0002 Control Blank	X	11	14
0003 Control Blank	X	12	15



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
PO Box 517
WEST PERTH, W.A. 6872
AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904808
NO. SAMPLES : 132
NO. ELEMENTS : 23
CLIENT ORDER NO. : GW5335 (Job 1 of 1)
SAMPLE SUBMISSION NO. : GW5335
PROJECT : HATCHES CREEK
SAMPLE TYPE : RC Chip
DATE RECEIVED : 01/04/2019
DATE REPORTED : 17/04/2019
DATE PRINTED : 17/04/2019

REPORT NOTES

TESTED BY

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues will be stored for 60 days without charge. Following this samples will be stored at a daily rate until clients written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m³ per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m³.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA399725	6.15	11.62	X	80.5	0.1	X	138	3.00	4.29	0.68
0002 GA399726	5.30	10.02	X	21.6	0.2	0.3	97	1.73	2.47	0.58
0003 GA399727	5.66	10.70	X	13.8	0.3	0.4	161	2.39	3.41	1.02
0004 GA399728	6.48	12.24	X	13.6	0.5	0.7	146	2.16	3.08	0.98
0005 GA399729	5.89	11.13	X	50.1	X	X	149	2.03	2.91	0.90
0006 GA399730	5.92	11.19	X	221.6	X	X	172	2.24	3.20	0.87
0007 GA399731	5.79	10.94	X	440.2	0.2	0.3	196	2.80	4.00	0.84
0008 GA399732	6.25	11.81	X	174.7	0.1	X	198	2.51	3.59	0.97
0009 GA399733	5.52	10.43	X	33.0	X	X	238	3.01	4.30	0.85
0010 GA399734	5.46	10.32	X	473.7	X	X	193	3.95	5.65	0.76
0011 GA399735	6.58	12.43	X	91.1	X	X	193	4.20	6.01	0.82
0012 GA399736	6.44	12.17	X	46.5	X	X	188	4.28	6.12	0.94
0013 GA399737	6.25	11.81	X	33.7	X	X	250	4.03	5.76	0.83
0014 GA399738	6.38	12.05	X	33.0	X	X	186	3.75	5.36	0.81
0015 GA399739	6.61	12.49	X	25.1	X	X	234	4.08	5.84	0.95
0016 GA399740	5.74	10.85	X	96.8	X	X	150	3.51	5.02	0.72
0017 GA399741	6.50	12.29	X	28.9	X	X	263	3.78	5.40	0.93
0018 GA399742	6.40	12.09	X	24.1	X	X	525	3.80	5.43	1.05
0019 GA399743	6.39	12.07	X	100.2	X	X	380	3.98	5.69	0.89
0020 GA399744	5.69	10.74	X	216.9	X	X	474	4.45	6.36	0.77
0021 GA399745	6.89	13.02	X	94.7	X	X	262	3.35	4.79	1.03
0022 GA399746	6.90	13.03	X	40.5	X	X	286	4.00	5.72	0.83
0023 GA399747	6.92	13.07	X	173.8	X	X	380	4.34	6.21	1.01
0024 GA399748	7.61	14.38	X	374.2	X	X	356	3.95	5.65	0.84
0025 GA399749	6.33	11.97	X	138.3	X	X	485	3.30	4.72	0.77
0026 GA399750	5.01	9.46	X	350.9	X	X	868	3.96	5.66	0.53
0027 GA399751	5.64	10.65	X	30.6	X	X	559	2.53	3.62	1.10
0028 GA399752	6.38	12.05	X	21.6	X	X	195	3.82	5.46	1.03
0029 GA399753	6.42	12.12	X	22.6	X	X	167	4.04	5.78	0.89
0030 GA399754	6.34	11.98	X	14.9	X	X	126	3.90	5.57	0.93
0031 GA399755	6.68	12.63	X	24.1	X	X	168	4.33	6.19	1.02
0032 GA399756	6.35	12.00	X	30.5	X	X	156	5.54	7.92	0.76
0033 GA399757	6.23	11.77	X	26.3	X	X	167	4.61	6.59	0.49
0034 GA399758	6.30	11.89	X	61.7	X	X	154	4.52	6.46	0.89
0035 GA399759	6.61	12.48	X	89.2	X	X	97	3.82	5.46	0.70
0036 GA399760	6.04	11.41	X	46.9	X	X	160	4.38	6.26	0.43
0037 GA399761	6.64	12.55	X	168.9	X	X	174	3.85	5.51	0.43
0038 GA399762	6.76	12.77	X	114.3	X	X	164	5.52	7.90	0.43
0039 GA399763	5.83	11.02	X	102.3	X	X	147	5.38	7.70	0.37
0040 GA399764	6.22	11.75	X	34.3	X	X	384	3.77	5.39	0.88



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA399725	1.13	361	466	13	0.06	0.6	36.1	77.3	X	0.32
0002 GA399726	0.97	209	270	5	X	X	38.8	83.0	X	0.30
0003 GA399727	1.69	388	501	7	X	X	37.6	80.4	X	0.33
0004 GA399728	1.63	407	526	4	X	X	37.2	79.6	X	0.30
0005 GA399729	1.49	449	580	10	X	X	38.9	83.2	X	0.27
0006 GA399730	1.45	391	505	9	X	X	38.2	81.7	X	0.30
0007 GA399731	1.39	387	500	21	X	X	37.3	79.8	X	0.24
0008 GA399732	1.61	390	504	8	X	X	37.1	79.3	X	0.27
0009 GA399733	1.42	303	392	11	X	0.6	38.3	82.0	0.01	0.24
0010 GA399734	1.26	356	460	45	X	X	36.8	78.7	0.02	0.24
0011 GA399735	1.36	352	454	63	X	X	35.9	76.9	0.01	0.28
0012 GA399736	1.56	541	698	38	X	X	35.4	75.8	X	0.29
0013 GA399737	1.37	415	536	21	X	X	36.6	78.2	X	0.29
0014 GA399738	1.35	483	623	13	X	X	35.7	76.3	0.01	0.29
0015 GA399739	1.57	566	730	14	X	X	35.6	76.1	0.01	0.29
0016 GA399740	1.19	318	411	20	X	X	37.0	79.2	0.01	0.24
0017 GA399741	1.55	458	591	20	X	0.7	35.1	75.1	0.01	0.30
0018 GA399742	1.74	612	791	11	X	X	35.7	76.4	X	0.30
0019 GA399743	1.47	489	632	15	X	X	34.9	74.7	X	0.29
0020 GA399744	1.27	438	565	30	X	X	36.0	77.0	0.03	0.26
0021 GA399745	1.71	607	784	9	X	X	35.5	76.0	X	0.32
0022 GA399746	1.38	829	1071	19	X	X	35.0	74.8	0.02	0.29
0023 GA399747	1.68	655	846	16	X	X	35.5	75.9	0.01	0.32
0024 GA399748	1.39	533	688	22	X	X	34.8	74.4	0.01	0.35
0025 GA399749	1.27	641	828	27	X	X	35.7	76.4	0.02	0.28
0026 GA399750	0.89	2078	2683	94	X	X	36.3	77.6	0.01	0.20
0027 GA399751	1.82	991	1280	16	X	X	37.0	79.2	0.01	0.26
0028 GA399752	1.70	785	1014	28	X	X	36.1	77.2	X	0.29
0029 GA399753	1.48	756	976	40	X	X	35.5	75.9	X	0.29
0030 GA399754	1.54	697	900	13	X	X	35.3	75.4	X	0.30
0031 GA399755	1.68	800	1034	17	X	X	34.8	74.4	X	0.31
0032 GA399756	1.27	437	564	23	X	X	34.1	72.9	X	0.30
0033 GA399757	0.81	292	377	37	X	X	35.7	76.4	0.01	0.29
0034 GA399758	1.47	668	862	21	X	X	35.4	75.7	0.01	0.28
0035 GA399759	1.16	486	628	16	X	X	34.9	74.7	0.01	0.30
0036 GA399760	0.71	418	540	32	X	X	35.7	76.3	0.03	0.28
0037 GA399761	0.71	442	570	32	X	X	35.5	76.0	0.04	0.24
0038 GA399762	0.72	496	641	46	X	X	32.2	69.0	0.02	0.26
0039 GA399763	0.61	265	342	36	X	X	34.5	73.8	0.01	0.27
0040 GA399764	1.45	555	717	8	X	X	32.1	68.6	X	0.28



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA399725	0.54	344	433
0002 GA399726	0.51	98	124
0003 GA399727	0.54	104	131
0004 GA399728	0.51	114	144
0005 GA399729	0.44	68	85
0006 GA399730	0.49	144	182
0007 GA399731	0.39	1546	1950
0008 GA399732	0.44	431	543
0009 GA399733	0.39	564	711
0010 GA399734	0.40	638	805
0011 GA399735	0.47	346	437
0012 GA399736	0.48	386	487
0013 GA399737	0.48	426	537
0014 GA399738	0.48	344	433
0015 GA399739	0.49	259	327
0016 GA399740	0.41	492	620
0017 GA399741	0.50	306	386
0018 GA399742	0.50	250	315
0019 GA399743	0.49	411	518
0020 GA399744	0.43	513	647
0021 GA399745	0.54	253	319
0022 GA399746	0.49	572	721
0023 GA399747	0.53	446	563
0024 GA399748	0.59	562	708
0025 GA399749	0.47	774	976
0026 GA399750	0.33	6987	8811
0027 GA399751	0.43	279	352
0028 GA399752	0.48	514	648
0029 GA399753	0.49	282	355
0030 GA399754	0.49	206	260
0031 GA399755	0.51	145	183
0032 GA399756	0.50	415	524
0033 GA399757	0.48	392	494
0034 GA399758	0.47	193	244
0035 GA399759	0.50	270	340
0036 GA399760	0.47	1462	1844
0037 GA399761	0.41	1490	1879
0038 GA399762	0.44	1131	1427
0039 GA399763	0.46	778	981
0040 GA399764	0.47	250	316



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA399765	2.31	4.36	X	31.6	8.8	12.3	X	5.47	7.82	9.01
0042 GA399766	6.18	11.68	X	249.7	X	X	206	4.22	6.04	0.80
0043 GA399767	5.02	9.49	X	354.6	X	X	448	3.71	5.30	0.54
0044 GA399768	6.99	13.20	X	30.1	X	X	660	3.77	5.39	0.95
0045 GA399769	6.09	11.51	X	25.0	X	X	594	3.93	5.62	1.04
0046 GA399770	5.91	11.17	X	28.2	X	X	571	4.09	5.85	0.84
0047 GA399771	5.62	10.61	X	28.7	X	X	440	3.67	5.25	0.74
0048 GA399772	5.22	9.87	X	18.4	X	X	451	3.05	4.35	0.71
0049 GA399773	6.95	13.13	X	32.2	X	X	545	3.55	5.08	0.89
0050 GA399774	7.16	13.52	X	142.5	X	X	527	2.97	4.24	0.83
0051 GA399775	6.11	11.54	X	19.6	X	X	390	2.49	3.57	0.86
0052 GA399776	5.91	11.17	X	21.1	X	X	299	2.65	3.79	0.90
0053 GA399777	5.81	10.98	X	11.8	X	X	164	2.23	3.19	0.70
0054 GA399778	5.42	10.24	X	22.3	X	X	236	3.17	4.54	0.88
0055 GA399779	6.24	11.79	X	28.5	X	X	150	3.20	4.58	0.95
0056 GA399780	6.21	11.73	X	26.8	X	X	117	2.81	4.02	0.75
0057 GA399781	6.40	12.10	X	27.8	X	X	146	2.79	3.98	0.80
0058 GA399782	4.83	9.13	X	38.1	X	X	163	2.75	3.93	0.63
0059 GA399783	6.44	12.16	X	83.2	X	X	257	3.13	4.47	0.85
0060 GA399784	7.24	13.68	X	27.8	X	X	351	3.27	4.67	0.96
0061 GA399785	5.54	10.47	X	10.8	X	X	175	2.78	3.98	1.05
0062 GA399786	6.03	11.40	X	14.2	X	X	120	3.04	4.35	1.07
0063 GA399787	7.76	14.67	X	29.8	X	X	205	3.36	4.80	1.10
0064 GA399788	7.72	14.59	X	70.7	0.1	X	243	3.43	4.90	1.28
0065 GA399789	6.24	11.79	X	207.6	0.2	0.3	845	4.04	5.78	1.31
0066 GA399790	7.00	13.22	X	54.5	0.2	0.3	477	3.87	5.53	1.27
0067 GA399791	6.82	12.89	X	17.7	0.1	0.2	296	3.20	4.57	1.29
0068 GA399792	7.44	14.05	X	18.8	0.2	0.2	117	3.19	4.56	1.58
0069 GA399793	7.37	13.93	X	14.1	0.1	0.2	118	3.34	4.77	1.48
0070 GA399794	6.89	13.01	X	62.1	0.4	0.6	273	3.83	5.48	1.37
0071 GA399795	6.71	12.67	X	14.7	0.1	X	27	3.26	4.67	1.58
0072 GA399796	5.72	10.81	X	28.4	0.1	X	96	3.73	5.33	1.83
0073 GA399797	8.43	15.94	X	62.8	0.1	X	22	8.23	11.76	5.73
0074 GA399798	8.44	15.95	X	141.1	0.1	X	57	8.81	12.60	5.44
0075 GA399799	7.97	15.07	X	544.9	0.1	X	424	10.43	14.91	5.17
0076 GA399800	7.79	14.73	X	163.3	0.2	0.2	1340	12.16	17.38	4.66
0077 GA399801	9.24	17.46	X	69.7	0.1	X	41	12.89	18.42	4.70
0078 GA399802	7.96	15.04	X	342.6	0.1	X	725	10.49	15.00	5.43
0079 GA399803	7.70	14.55	X	152.5	0.1	X	301	9.70	13.86	5.01
0080 GA399804	8.43	15.92	X	15.6	X	X	134	9.32	13.33	6.29



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA399765	14.95	1241	1602	7	X	1.1	26.0	55.7	X	0.20
0042 GA399766	1.32	348	449	68	X	X	34.2	73.1	X	0.28
0043 GA399767	0.90	2253	2909	36	X	X	35.0	74.8	X	0.23
0044 GA399768	1.57	772	997	6	X	X	31.9	68.2	X	0.33
0045 GA399769	1.73	745	962	8	X	X	33.8	72.2	X	0.28
0046 GA399770	1.40	1350	1744	12	X	X	34.0	72.8	X	0.27
0047 GA399771	1.23	646	834	14	0.08	0.5	35.2	75.3	0.01	0.24
0048 GA399772	1.18	491	634	6	X	X	35.6	76.1	0.01	0.24
0049 GA399773	1.48	490	633	7	X	X	33.2	71.0	X	0.34
0050 GA399774	1.37	493	637	10	X	X	33.0	70.6	X	0.30
0051 GA399775	1.43	536	692	6	X	X	36.2	77.4	X	0.29
0052 GA399776	1.49	607	783	4	X	X	36.3	77.7	X	0.27
0053 GA399777	1.16	419	540	5	X	X	35.2	75.4	X	0.26
0054 GA399778	1.45	607	784	10	X	X	32.9	70.5	X	0.25
0055 GA399779	1.57	692	893	7	X	X	35.9	76.9	X	0.30
0056 GA399780	1.24	541	699	9	X	X	35.3	75.5	X	0.29
0057 GA399781	1.33	609	786	10	X	X	36.2	77.4	X	0.31
0058 GA399782	1.04	474	612	26	X	X	37.9	81.1	0.01	0.20
0059 GA399783	1.41	581	750	14	X	X	33.2	71.1	X	0.26
0060 GA399784	1.59	705	911	16	X	X	34.6	74.1	X	0.28
0061 GA399785	1.74	774	999	9	X	X	35.4	75.6	X	0.24
0062 GA399786	1.78	789	1019	7	X	X	36.0	77.0	X	0.25
0063 GA399787	1.83	985	1272	7	X	X	34.1	72.9	0.01	0.33
0064 GA399788	2.13	835	1078	7	X	X	33.2	71.1	X	0.36
0065 GA399789	2.18	1063	1372	21	X	X	33.5	71.8	X	0.28
0066 GA399790	2.10	1142	1475	15	X	X	33.9	72.5	X	0.32
0067 GA399791	2.14	850	1098	9	X	X	33.8	72.3	X	0.33
0068 GA399792	2.62	1057	1365	5	X	X	32.1	68.6	X	0.33
0069 GA399793	2.46	907	1172	6	X	X	33.3	71.3	X	0.32
0070 GA399794	2.27	902	1165	15	X	X	33.8	72.4	0.01	0.29
0071 GA399795	2.61	961	1241	7	X	X	32.0	68.5	X	0.29
0072 GA399796	3.04	1331	1719	13	X	X	34.5	73.8	0.01	0.24
0073 GA399797	9.49	2735	3532	11	X	X	24.0	51.4	X	0.50
0074 GA399798	9.03	2660	3434	15	X	X	23.4	50.1	X	0.52
0075 GA399799	8.57	2889	3730	9	X	X	23.6	50.5	0.01	0.48
0076 GA399800	7.72	3240	4183	6	0.08	X	22.5	48.1	0.01	0.49
0077 GA399801	7.80	4005	5172	7	X	X	20.5	43.9	X	0.56
0078 GA399802	9.00	3457	4464	18	X	X	23.6	50.4	X	0.48
0079 GA399803	8.31	3230	4170	16	X	X	24.3	52.0	X	0.47
0080 GA399804	10.43	3355	4332	23	X	X	23.2	49.6	X	0.49



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA399765	0.33	455	574
0042 GA399766	0.46	510	643
0043 GA399767	0.38	1.49%	1.88%
0044 GA399768	0.54	674	850
0045 GA399769	0.47	416	524
0046 GA399770	0.45	595	751
0047 GA399771	0.41	337	425
0048 GA399772	0.40	189	238
0049 GA399773	0.57	330	416
0050 GA399774	0.50	307	387
0051 GA399775	0.49	160	201
0052 GA399776	0.45	131	165
0053 GA399777	0.43	126	158
0054 GA399778	0.42	182	230
0055 GA399779	0.50	221	278
0056 GA399780	0.49	302	380
0057 GA399781	0.51	226	284
0058 GA399782	0.33	479	604
0059 GA399783	0.43	224	283
0060 GA399784	0.47	200	252
0061 GA399785	0.40	108	136
0062 GA399786	0.42	126	159
0063 GA399787	0.55	185	233
0064 GA399788	0.60	135	170
0065 GA399789	0.47	437	551
0066 GA399790	0.53	399	503
0067 GA399791	0.54	129	163
0068 GA399792	0.56	59	75
0069 GA399793	0.53	70	89
0070 GA399794	0.48	179	225
0071 GA399795	0.49	74	93
0072 GA399796	0.40	59	74
0073 GA399797	0.83	97	123
0074 GA399798	0.87	51	65
0075 GA399799	0.81	491	619
0076 GA399800	0.82	353	445
0077 GA399801	0.93	194	245
0078 GA399802	0.80	258	325
0079 GA399803	0.79	453	572
0080 GA399804	0.82	58	73



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA399805	6.39	12.08	X	12.6	0.1	X	29	5.05	7.22	3.84
0082 GA399806	9.92	18.74	X	20.2	X	X	X	8.55	12.22	7.44
0083 GA399807	2.74	5.17	191	1.2	7.6	10.7	X	5.72	8.18	10.78
0084 GA399808	6.01	11.36	X	227.1	X	X	167	3.36	4.81	0.40
0085 GA399809	7.64	14.44	X	19.0	0.1	X	X	5.61	8.03	4.69
0086 GA399810	7.90	14.93	X	23.4	X	X	X	5.39	7.70	5.05
0087 GA399811	8.31	15.70	X	50.7	0.1	X	X	5.59	8.00	5.42
0088 GA399812	5.81	10.98	X	8.9	0.1	X	28	3.43	4.91	2.55
0089 GA399813	7.90	14.94	X	76.6	X	X	131	9.12	13.04	4.95
0090 GA399814	8.90	16.81	X	19.5	X	X	152	9.58	13.70	5.78
0091 GA399815	6.84	12.92	X	31.1	0.2	0.3	123	5.13	7.34	3.01
0092 GA399816	7.34	13.86	X	21.3	0.1	X	82	3.69	5.27	1.71
0093 GA399817	6.65	12.57	X	10.7	0.1	0.2	31	3.18	4.55	1.67
0094 GA399818	6.99	13.21	X	13.6	0.1	X	104	3.24	4.63	1.71
0095 GA399819	6.57	12.41	X	7.9	0.1	X	27	2.98	4.27	1.79
0096 GA399820	7.55	14.26	X	6.7	0.1	X	24	2.77	3.96	1.79
0097 GA399821	6.92	13.08	X	11.3	0.1	X	98	3.27	4.67	1.80
0098 GA399822	7.77	14.69	X	15.2	0.1	X	123	3.49	4.98	1.77
0099 GA399823	7.25	13.70	X	10.6	0.1	X	21	3.47	4.96	1.80
0100 GA399824	5.47	10.33	X	19.2	0.2	0.3	X	3.06	4.38	1.90
0101 GA399825	9.55	18.04	X	7.5	0.1	0.2	X	7.13	10.19	6.98
0102 GA399826	7.42	14.02	X	22.4	0.1	X	X	5.91	8.44	5.03
0103 GA399827	5.37	10.15	X	18.3	0.4	0.5	47	4.14	5.92	1.89
0104 GA399828	8.35	15.78	X	6.6	0.1	X	81	6.57	9.40	5.10
0105 GA399829	7.22	13.65	X	11.7	0.2	0.2	53	4.41	6.31	2.79
0106 GA399830	7.75	14.64	X	26.1	0.1	X	287	10.72	15.33	5.55
0107 GA399831	7.77	14.68	X	41.9	0.1	X	319	10.58	15.13	4.76
0108 GA399832	7.78	14.69	X	329.7	0.2	0.3	291	9.27	13.26	4.71
0109 GA399833	8.33	15.73	X	228.6	0.2	0.3	241	10.05	14.37	5.40
0110 GA399834	7.96	15.04	X	156.7	0.2	0.2	259	10.26	14.66	5.76
0111 GA399835	8.01	15.13	X	766.1	0.2	0.3	426	10.08	14.40	5.31
0112 GA399836	8.06	15.23	X	330.6	0.2	0.3	274	9.44	13.49	5.67
0113 GA399837	7.75	14.64	X	210.5	0.5	0.7	586	10.81	15.45	4.94
0114 GA399838	8.06	15.23	X	144.1	0.2	0.2	567	9.78	13.98	5.65
0115 GA399839	6.92	13.08	X	110.9	0.2	0.3	172	6.67	9.53	3.28
0116 GA399840	6.85	12.95	X	29.9	0.8	1.1	117	5.32	7.61	2.16
0117 GA399841	8.08	15.27	X	61.4	0.2	0.2	268	11.88	16.99	4.28
0118 GA399842	7.31	13.81	X	341.1	0.2	0.2	5978	13.29	19.00	4.13
0119 GA399843	7.92	14.96	X	47.5	0.1	X	844	6.43	9.20	7.26
0120 GA399844	7.60	14.36	X	172.3	0.1	X	3.06%	8.34	11.92	4.13



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA399805	6.37	1727	2230	16	X	X	30.1	64.4	X	0.31
0082 GA399806	12.34	2944	3802	36	X	X	20.1	43.0	X	0.59
0083 GA399807	17.88	1471	1900	16	X	1.4	23.8	51.0	X	0.16
0084 GA399808	0.66	369	476	29	X	X	33.7	72.1	0.03	0.23
0085 GA399809	7.77	1930	2492	17	X	X	27.6	59.0	X	0.43
0086 GA399810	8.37	2162	2791	15	X	X	26.6	56.9	X	0.44
0087 GA399811	8.98	2233	2884	19	X	X	25.4	54.3	X	0.48
0088 GA399812	4.23	1299	1677	11	X	X	33.3	71.2	X	0.27
0089 GA399813	8.21	3403	4395	47	X	X	23.3	49.8	0.01	0.48
0090 GA399814	9.59	3672	4741	19	X	X	22.1	47.3	X	0.56
0091 GA399815	5.00	1864	2406	10	X	X	31.4	67.1	X	0.33
0092 GA399816	2.83	973	1256	12	X	X	33.4	71.4	X	0.32
0093 GA399817	2.77	1026	1325	7	X	X	35.0	74.9	X	0.32
0094 GA399818	2.83	1086	1402	10	X	X	33.1	70.9	X	0.34
0095 GA399819	2.98	1151	1487	9	X	X	32.2	68.9	X	0.32
0096 GA399820	2.96	1121	1448	11	X	X	33.4	71.5	X	0.37
0097 GA399821	2.99	1237	1598	15	X	X	34.8	74.4	X	0.33
0098 GA399822	2.93	1040	1343	14	X	X	33.1	70.7	X	0.37
0099 GA399823	2.99	1206	1557	18	X	X	32.6	69.8	X	0.36
0100 GA399824	3.15	1208	1559	16	X	X	34.4	73.7	X	0.28
0101 GA399825	11.58	2728	3522	36	X	X	23.3	49.8	X	0.58
0102 GA399826	8.34	2061	2662	16	X	X	28.5	61.0	X	0.42
0103 GA399827	3.13	1237	1598	13	X	X	35.1	75.0	X	0.27
0104 GA399828	8.45	2470	3189	43	X	X	26.4	56.5	X	0.50
0105 GA399829	4.63	1228	1586	14	X	X	32.4	69.3	X	0.37
0106 GA399830	9.20	3410	4403	35	X	X	24.5	52.5	0.01	0.47
0107 GA399831	7.90	3562	4599	25	X	X	25.7	54.9	0.02	0.48
0108 GA399832	7.81	3183	4110	5	X	0.6	26.3	56.3	X	0.47
0109 GA399833	8.95	2459	3175	22	0.05	1.0	22.8	48.8	X	0.52
0110 GA399834	9.55	4626	5973	23	X	0.8	22.2	47.5	X	0.50
0111 GA399835	8.81	3609	4660	24	0.09	0.8	23.2	49.6	0.01	0.50
0112 GA399836	9.41	3749	4840	17	X	0.9	22.3	47.8	X	0.52
0113 GA399837	8.20	3599	4648	11	X	0.8	23.1	49.5	0.01	0.47
0114 GA399838	9.38	3660	4726	13	X	0.9	23.1	49.4	0.01	0.48
0115 GA399839	5.43	2248	2903	6	X	X	28.4	60.7	X	0.39
0116 GA399840	3.58	1526	1970	6	X	X	31.2	66.8	X	0.35
0117 GA399841	7.11	3063	3955	5	X	X	21.8	46.6	X	0.53
0118 GA399842	6.85	3180	4106	7	0.18	0.9	21.0	44.9	X	0.45
0119 GA399843	12.04	2079	2685	7	0.11	0.7	24.0	51.4	X	0.49
0120 GA399844	6.85	2967	3831	63	0.80	1.0	23.4	50.1	0.06	0.44



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0081 GA399805	0.52	113	142
0082 GA399806	0.99	99	125
0083 GA399807	0.26	1682	2121
0084 GA399808	0.38	1173	1479
0085 GA399809	0.72	192	242
0086 GA399810	0.74	103	130
0087 GA399811	0.80	29	37
0088 GA399812	0.44	56	71
0089 GA399813	0.80	1.03%	1.29%
0090 GA399814	0.93	2207	2783
0091 GA399815	0.56	243	306
0092 GA399816	0.53	483	609
0093 GA399817	0.54	57	71
0094 GA399818	0.57	132	166
0095 GA399819	0.53	36	46
0096 GA399820	0.62	41	52
0097 GA399821	0.56	67	85
0098 GA399822	0.62	69	87
0099 GA399823	0.60	44	56
0100 GA399824	0.46	34	43
0101 GA399825	0.97	37	47
0102 GA399826	0.71	27	34
0103 GA399827	0.45	33	42
0104 GA399828	0.83	17	22
0105 GA399829	0.62	124	156
0106 GA399830	0.79	468	590
0107 GA399831	0.79	891	1124
0108 GA399832	0.78	163	206
0109 GA399833	0.86	280	353
0110 GA399834	0.84	157	197
0111 GA399835	0.84	719	907
0112 GA399836	0.87	181	228
0113 GA399837	0.79	193	243
0114 GA399838	0.80	266	335
0115 GA399839	0.65	105	132
0116 GA399840	0.59	64	81
0117 GA399841	0.88	155	196
0118 GA399842	0.75	286	360
0119 GA399843	0.83	269	339
0120 GA399844	0.73	5666	7145



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0121 GA399845	8.70	16.45	X	70.1	0.2	0.3	2451	10.64	15.21	4.54
0122 GA399846	8.17	15.44	X	105.1	0.1	X	7724	10.68	15.26	3.73
0123 GA399847	7.18	13.57	X	75.4	0.1	X	3268	8.82	12.61	3.22
0124 GA399848	7.77	14.69	X	93.1	0.1	X	6140	9.16	13.09	3.62
0125 GA399849	6.69	12.64	X	7.0	3.8	5.3	4721	24.47	34.99	0.79
0126 GA399850	6.12	11.56	X	147.2	0.2	0.3	739	3.92	5.60	1.29
0127 GA399851	7.85	14.82	X	164.4	0.1	X	4900	10.91	15.59	4.29
0128 GA399852	7.88	14.89	X	339.3	0.1	X	4509	10.47	14.97	4.73
0129 GA399853	8.34	15.76	X	280.8	0.1	X	461	10.55	15.08	6.77
0130 GA399854	8.51	16.07	X	86.9	X	X	47	9.06	12.95	7.29
0131 GA399855	8.20	15.50	X	33.4	0.1	X	50	8.32	11.89	6.45
0132 GA399856	8.47	16.00	X	12.5	0.2	0.3	183	8.92	12.75	7.40

CHECKS										
0001 GA399747	6.84	12.92	X	178.4	X	X	377	4.15	5.93	1.00
0002 GA399752	6.00	11.33	X	20.6	X	X	184	3.60	5.15	0.96
0003 GA399790	6.81	12.87	X	53.9	0.2	0.2	463	3.71	5.31	1.23
0004 GA399817	6.62	12.51	X	11.0	0.1	X	35	3.10	4.43	1.66

STANDARDS										
0001 OREAS 522	4.15	7.84	535	9.7	4.0	5.5	9345	25.29	36.16	1.22
0002 OREAS 700	5.52	10.42	X	7.4	5.5	7.8	3909	15.83	22.63	1.02
0003 AMISO401	3.60	6.79	X	281.3	10.9	15.2	1617	18.95	27.09	2.12
0004 OREAS 524	3.09	5.84	723	17.6	3.6	5.1	2.61%	30.43	43.51	1.09
0005 OREAS 24b	7.90	14.93	X	0.7	1.0	1.5	23	4.33	6.19	1.62

BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	0.01	X	X
0002 Control Blank	0.02	0.05	X	0.4	X	X	X	X	X	X
0003 Control Blank	X	X	X	0.2	X	X	X	0.14	0.20	X
0004 Control Blank	X	X	X	X	X	X	X	0.03	0.05	X
0005 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0121 GA399845	7.52	3188	4116	20	0.08	0.8	23.2	49.6	0.02	0.47
0122 GA399846	6.19	2159	2788	13	0.24	1.5	24.1	51.6	0.01	0.53
0123 GA399847	5.35	3005	3880	18	0.11	1.2	27.0	57.7	0.02	0.41
0124 GA399848	6.01	3013	3890	17	0.19	0.6	26.3	56.3	0.02	0.46
0125 GA399849	1.32	3416	4410	267	0.70	X	16.0	34.1	0.02	0.17
0126 GA399850	2.14	988	1276	19	X	X	34.0	72.8	X	0.28
0127 GA399851	7.11	2401	3101	8	0.21	0.8	22.7	48.6	0.01	0.47
0128 GA399852	7.84	2683	3464	7	0.15	0.6	24.3	52.1	0.01	0.49
0129 GA399853	11.23	3122	4031	49	X	X	22.0	47.0	X	0.52
0130 GA399854	12.09	3137	4050	24	X	X	22.6	48.2	X	0.55
0131 GA399855	10.69	3303	4264	4	X	X	24.5	52.4	X	0.51
0132 GA399856	12.27	3739	4827	10	X	X	22.9	49.0	X	0.49

CHECKS										
0001 GA399747	1.66	641	828	18	X	X	35.1	75.0	0.01	0.31
0002 GA399752	1.59	762	984	24	X	X	33.2	71.1	0.01	0.27
0003 GA399790	2.04	1076	1389	17	X	X	33.2	71.1	X	0.31
0004 GA399817	2.75	1024	1323	6	X	X	33.8	72.3	X	0.32

STANDARDS										
0001 OREAS 522	2.03	4272	5516	211	3.15	8.7	15.9	33.9	X	0.42
0002 OREAS 700	1.69	3127	4038	86	0.55	0.6	21.5	46.0	0.02	0.19
0003 AMISO401	3.51	2.95%	3.81%	9	8.93	1.1	14.1	30.1	X	0.25
0004 OREAS 524	1.81	5116	6605	387	5.68	12.3	13.1	28.1	X	0.32
0005 OREAS 24b	2.68	449	580	5	0.19	1.1	30.4	65.1	X	0.49

BLANKS										
0001 Control Blank	X	X	X	4	X	X	X	X	X	X
0002 Control Blank	X	X	X	X	X	X	X	X	X	X
0003 Control Blank	X	X	X	3	X	X	X	X	X	X
0004 Control Blank	X	X	X	X	X	X	X	X	X	X
0005 Control Blank	X	X	X	1	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0121 GA399845	0.79	3510	4426
0122 GA399846	0.88	454	573
0123 GA399847	0.69	5050	6368
0124 GA399848	0.76	2661	3356
0125 GA399849	0.28	2.29%	2.89%
0126 GA399850	0.47	482	608
0127 GA399851	0.78	311	392
0128 GA399852	0.81	314	396
0129 GA399853	0.87	73	92
0130 GA399854	0.91	22	28
0131 GA399855	0.85	51	65
0132 GA399856	0.81	65	82

CHECKS

0001 GA399747	0.52	441	556
0002 GA399752	0.45	483	609
0003 GA399790	0.52	331	417
0004 GA399817	0.54	59	74

STANDARDS

0001 OREAS 522	0.70	138	174
0002 OREAS 700	0.32	1.13%	1.42%
0003 AMISO401	0.41	774	976
0004 OREAS 524	0.53	189	238
0005 OREAS 24b	0.83	7	9

BLANKS

0001 Control Blank	X	4	4
0002 Control Blank	X	10	12
0003 Control Blank	X	6	8
0004 Control Blank	X	2	3
0005 Control Blank	X	10	12



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
PO Box 517
WEST PERTH, W.A. 6872
AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904814
NO. SAMPLES : 112
NO. ELEMENTS : 23
CLIENT ORDER NO. : GW5336 (Job 1 of 1)
SAMPLE SUBMISSION NO. : GW5336
PROJECT : HATCHES CREEK
SAMPLE TYPE : RC Chip
DATE RECEIVED : 02/04/2019
DATE REPORTED : 17/04/2019
DATE PRINTED : 17/04/2019

REPORT NOTES

TESTED BY

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues will be stored for 60 days without charge. Following this samples will be stored at a daily rate until clients written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m³ per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m³.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA399857	7.12	13.45	X	170.4	0.1	X	807	6.68	9.55	3.79
0002 GA399858	8.47	16.00	X	444.1	X	X	486	9.21	13.17	4.01
0003 GA399859	7.07	13.35	X	84.5	X	X	385	4.52	6.46	1.64
0004 GA399860	6.33	11.96	X	43.5	0.1	X	376	3.41	4.88	0.93
0005 GA399861	6.35	12.00	X	37.6	X	X	475	4.06	5.81	0.89
0006 GA399862	6.19	11.70	X	27.5	0.5	0.6	525	3.94	5.63	1.47
0007 GA399863	5.37	10.15	X	20.0	0.3	0.4	355	3.40	4.86	1.18
0008 GA399864	5.50	10.40	X	37.1	0.1	X	255	3.99	5.70	0.90
0009 GA399865	5.48	10.35	X	40.8	X	X	179	3.45	4.94	0.61
0010 GA399866	4.81	9.09	X	206.4	0.1	X	211	3.63	5.20	0.66
0011 GA399867	5.47	10.33	X	241.5	X	X	243	3.86	5.52	0.76
0012 GA399868	4.82	9.10	X	107.9	X	X	169	3.38	4.83	0.54
0013 GA399869	6.09	11.51	X	42.7	X	X	234	3.92	5.61	0.70
0014 GA399870	5.61	10.59	X	595.8	0.1	X	170	3.97	5.67	0.57
0015 GA399871	5.55	10.49	X	34.2	X	X	331	3.67	5.25	0.85
0016 GA399872	5.82	10.99	X	80.2	X	X	338	4.64	6.64	0.96
0017 GA399873	6.00	11.34	X	9.8	X	X	255	3.66	5.23	0.93
0018 GA399874	5.52	10.43	X	31.4	X	X	203	3.48	4.98	1.10
0019 GA399875	5.67	10.72	X	274.6	X	X	278	3.67	5.25	0.92
0020 GA399876	5.69	10.76	X	22.5	X	X	328	3.73	5.33	1.02
0021 GA399877	5.85	11.06	X	40.8	X	X	714	4.65	6.65	0.84
0022 GA399878	5.97	11.29	X	15.2	X	X	305	3.89	5.56	1.10
0023 GA399879	6.03	11.40	X	16.7	X	X	541	4.42	6.32	1.03
0024 GA399880	5.54	10.46	X	11.7	X	X	1480	4.83	6.91	1.21
0025 GA399881	5.99	11.33	X	10.1	X	X	844	3.33	4.77	1.28
0026 GA399882	5.47	10.33	X	13.6	X	X	655	3.59	5.14	1.23
0027 GA399883	6.00	11.34	X	16.4	X	X	596	3.89	5.56	1.18
0028 GA399884	6.13	11.59	X	27.9	X	X	472	3.22	4.60	1.26
0029 GA399885	5.76	10.88	X	17.2	X	X	208	3.69	5.28	1.33
0030 GA399886	6.19	11.70	X	15.2	X	X	211	3.63	5.19	1.17
0031 GA399887	6.51	12.30	X	10.9	X	X	396	3.98	5.69	1.19
0032 GA399888	6.89	13.01	X	12.3	X	X	487	3.84	5.48	1.23
0033 GA399889	5.60	10.58	X	11.0	X	X	372	4.12	5.89	1.58
0034 GA399890	7.35	13.89	X	12.9	X	X	194	3.13	4.48	1.15
0035 GA399891	6.01	11.35	X	18.4	X	X	251	3.31	4.74	1.13
0036 GA399892	6.38	12.05	X	15.6	X	X	881	3.60	5.15	1.11
0037 GA399893	6.50	12.27	X	17.6	X	X	848	3.49	4.99	1.16
0038 GA399894	6.00	11.34	X	14.0	X	X	591	3.73	5.33	1.30
0039 GA399895	5.85	11.06	X	22.9	X	X	376	3.38	4.83	1.13
0040 GA399896	9.10	17.20	X	27.0	0.1	X	375	3.34	4.78	1.03



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA399857	6.28	4578	5911	18	X	X	24.9	53.3	X	0.41
0002 GA399858	6.65	3106	4010	7	X	0.5	20.7	44.2	0.01	0.51
0003 GA399859	2.72	1140	1473	10	X	X	30.0	64.2	X	0.34
0004 GA399860	1.55	571	737	19	X	X	32.2	68.9	X	0.28
0005 GA399861	1.48	751	969	25	X	0.5	31.9	68.2	0.01	0.29
0006 GA399862	2.44	816	1054	22	X	X	30.5	65.3	0.01	0.28
0007 GA399863	1.96	819	1057	17	X	X	32.8	70.3	X	0.26
0008 GA399864	1.49	739	954	20	X	X	32.8	70.2	0.01	0.24
0009 GA399865	1.01	428	552	20	X	X	34.0	72.7	0.01	0.23
0010 GA399866	1.09	278	359	21	X	0.5	34.7	74.3	0.01	0.23
0011 GA399867	1.26	437	565	19	X	X	32.9	70.3	0.01	0.29
0012 GA399868	0.89	341	440	20	X	X	34.8	74.4	X	0.22
0013 GA399869	1.16	475	613	19	X	0.5	34.5	73.8	X	0.30
0014 GA399870	0.94	403	521	22	X	X	33.8	72.4	0.02	0.28
0015 GA399871	1.41	663	857	11	X	X	33.6	71.8	X	0.29
0016 GA399872	1.60	732	945	22	X	X	31.5	67.5	0.01	0.31
0017 GA399873	1.55	696	899	19	X	X	32.2	68.8	0.01	0.31
0018 GA399874	1.82	813	1050	7	X	X	33.4	71.4	X	0.30
0019 GA399875	1.52	631	815	16	X	X	31.6	67.5	X	0.31
0020 GA399876	1.70	588	759	15	X	X	32.3	69.2	X	0.38
0021 GA399877	1.40	1251	1616	45	X	0.8	32.4	69.3	X	0.31
0022 GA399878	1.83	1029	1329	18	X	X	32.8	70.2	X	0.36
0023 GA399879	1.71	1155	1492	35	X	X	34.0	72.8	X	0.35
0024 GA399880	2.01	1117	1442	24	X	X	33.0	70.7	X	0.29
0025 GA399881	2.12	936	1208	16	X	X	27.5	58.9	X	0.36
0026 GA399882	2.04	948	1225	18	X	0.6	34.6	74.1	X	0.35
0027 GA399883	1.96	702	907	14	X	X	35.1	75.0	X	0.35
0028 GA399884	2.09	865	1117	14	X	X	32.3	69.2	X	0.35
0029 GA399885	2.21	1051	1357	7	X	X	34.1	73.0	X	0.32
0030 GA399886	1.94	871	1125	10	X	X	35.7	76.3	0.01	0.33
0031 GA399887	1.98	851	1099	12	X	X	33.6	71.9	X	0.34
0032 GA399888	2.04	844	1089	8	X	X	32.7	70.0	X	0.35
0033 GA399889	2.61	1140	1471	9	X	X	33.5	71.7	X	0.31
0034 GA399890	1.91	721	931	3	X	X	32.6	69.8	X	0.40
0035 GA399891	1.87	769	993	7	X	X	34.1	73.0	X	0.31
0036 GA399892	1.85	791	1022	7	X	X	35.0	74.9	X	0.34
0037 GA399893	1.93	1181	1524	9	X	X	34.6	74.0	X	0.34
0038 GA399894	2.16	1289	1664	5	X	X	34.8	74.5	X	0.31
0039 GA399895	1.87	991	1279	4	X	X	36.2	77.4	X	0.31
0040 GA399896	1.70	719	928	4	X	X	32.4	69.4	X	0.43



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA399857	0.68	278	351
0002 GA399858	0.85	109	137
0003 GA399859	0.57	157	198
0004 GA399860	0.47	204	257
0005 GA399861	0.49	297	375
0006 GA399862	0.47	297	375
0007 GA399863	0.44	254	321
0008 GA399864	0.41	366	461
0009 GA399865	0.39	376	475
0010 GA399866	0.38	523	660
0011 GA399867	0.48	482	607
0012 GA399868	0.36	591	746
0013 GA399869	0.49	545	688
0014 GA399870	0.47	565	713
0015 GA399871	0.48	405	511
0016 GA399872	0.51	423	533
0017 GA399873	0.52	151	191
0018 GA399874	0.50	97	123
0019 GA399875	0.52	196	247
0020 GA399876	0.63	179	225
0021 GA399877	0.51	358	452
0022 GA399878	0.60	167	211
0023 GA399879	0.58	326	411
0024 GA399880	0.48	210	265
0025 GA399881	0.60	111	140
0026 GA399882	0.58	140	176
0027 GA399883	0.59	237	299
0028 GA399884	0.59	111	140
0029 GA399885	0.54	72	91
0030 GA399886	0.55	72	91
0031 GA399887	0.57	109	138
0032 GA399888	0.59	75	94
0033 GA399889	0.51	58	74
0034 GA399890	0.68	59	74
0035 GA399891	0.52	57	72
0036 GA399892	0.56	114	143
0037 GA399893	0.57	93	118
0038 GA399894	0.51	54	69
0039 GA399895	0.52	46	58
0040 GA399896	0.71	59	74



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA399897	3.54	6.68	50	31.4	9.0	12.5	X	4.83	6.90	7.83
0042 GA399898	5.70	10.76	X	191.0	0.2	0.2	207	4.13	5.91	0.81
0043 GA399899	6.84	12.92	X	31.9	X	X	561	4.91	7.02	1.46
0044 GA399900	5.05	9.55	X	36.9	X	X	573	4.69	6.71	1.24
0045 GA399901	6.01	11.35	X	26.4	X	X	438	4.68	6.69	1.28
0046 GA399902	5.54	10.46	X	39.7	X	X	560	4.18	5.97	1.07
0047 GA399903	5.53	10.46	X	18.2	X	X	519	4.13	5.91	1.26
0048 GA399904	6.66	12.59	X	43.3	X	X	583	5.40	7.72	1.69
0049 GA399905	5.73	10.83	X	17.2	X	X	415	5.26	7.52	1.24
0050 GA399906	6.27	11.85	X	28.8	0.1	X	274	4.97	7.11	1.03
0051 GA399907	5.01	9.46	X	39.8	0.1	X	1191	5.23	7.48	1.56
0052 GA399908	6.57	12.42	X	34.8	0.1	0.2	452	3.45	4.93	0.92
0053 GA399909	6.23	11.78	X	34.6	0.1	X	367	4.08	5.83	1.13
0054 GA399910	6.31	11.93	X	41.8	0.1	X	478	3.99	5.71	1.15
0055 GA399911	5.99	11.31	X	34.8	0.4	0.6	1032	3.25	4.65	1.64
0056 GA399912	6.25	11.82	X	167.2	0.2	0.3	228	2.76	3.95	1.26
0057 GA399913	5.95	11.24	X	58.0	0.2	0.2	328	3.16	4.51	1.18
0058 GA399914	6.00	11.34	X	339.7	0.1	X	190	4.08	5.84	1.61
0059 GA399915	7.13	13.47	X	46.6	0.2	0.2	102	3.82	5.46	1.59
0060 GA399916	3.81	7.20	X	87.6	0.4	0.5	197	2.79	3.99	1.70
0061 GA399917	5.80	10.97	X	32.3	0.4	0.5	153	2.67	3.81	1.76
0062 GA399918	6.87	12.99	X	90.4	0.2	0.3	74	3.37	4.82	1.65
0063 GA399919	6.88	13.00	X	38.9	0.2	0.3	39	3.68	5.26	1.60
0064 GA399920	6.32	11.94	X	71.6	0.2	0.3	103	3.50	5.01	1.82
0065 GA399921	6.07	11.46	X	52.4	0.2	0.3	60	3.56	5.09	2.25
0066 GA399922	5.82	10.99	X	9.7	0.2	0.2	40	3.77	5.40	2.66
0067 GA399923	6.23	11.77	X	8.0	0.2	0.3	96	3.54	5.06	2.31
0068 GA399924	6.04	11.42	X	12.1	0.2	0.3	139	3.73	5.33	2.38
0069 GA399925	5.98	11.30	X	19.3	0.2	0.3	52	3.32	4.74	2.26
0070 GA399926	9.36	17.68	X	22.6	0.1	0.2	77	7.86	11.23	5.64
0071 GA399927	10.26	19.38	X	22.1	0.1	X	319	8.98	12.83	5.53
0072 GA399928	7.54	14.24	X	61.7	0.2	0.3	229	5.65	8.07	2.95
0073 GA399929	10.10	19.07	X	423.4	0.3	0.4	171	9.33	13.34	5.22
0074 GA399930	6.63	12.52	X	155.5	0.7	1.0	145	4.99	7.13	1.87
0075 GA399931	6.60	12.48	X	67.5	0.2	0.3	134	3.70	5.29	1.68
0076 GA399932	7.45	14.07	X	22.2	0.3	0.4	125	5.42	7.75	3.82
0077 GA399933	7.74	14.62	X	88.0	0.2	0.2	23	5.39	7.71	4.25
0078 GA399934	5.71	10.80	X	12.6	0.2	0.2	28	2.84	4.07	1.69
0079 GA399935	5.69	10.75	X	10.0	0.2	0.2	65	3.32	4.75	1.62
0080 GA399936	6.61	12.48	X	16.0	0.2	0.2	134	3.27	4.67	1.99



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA399897	12.98	1123	1450	5	X	X	23.2	49.6	X	0.13
0042 GA399898	1.35	335	433	24	X	X	35.3	75.4	0.01	0.27
0043 GA399899	2.41	1296	1674	8	X	X	33.1	70.8	X	0.32
0044 GA399900	2.06	1270	1640	9	X	X	36.2	77.5	0.01	0.24
0045 GA399901	2.12	1306	1687	4	X	X	34.7	74.2	X	0.27
0046 GA399902	1.77	1021	1318	10	X	X	34.8	74.4	X	0.25
0047 GA399903	2.09	1126	1454	6	X	X	36.0	76.9	X	0.27
0048 GA399904	2.80	1455	1878	8	X	X	33.1	70.9	X	0.32
0049 GA399905	2.06	1223	1579	15	X	X	33.7	72.0	0.01	0.25
0050 GA399906	1.70	851	1099	49	X	X	35.8	76.6	X	0.27
0051 GA399907	2.58	1226	1582	11	X	X	34.4	73.6	X	0.22
0052 GA399908	1.53	636	821	5	X	X	35.4	75.8	X	0.29
0053 GA399909	1.88	906	1170	10	X	X	35.5	75.9	0.01	0.28
0054 GA399910	1.91	779	1006	7	X	X	36.9	78.9	X	0.28
0055 GA399911	2.72	681	879	6	X	X	35.2	75.2	X	0.25
0056 GA399912	2.08	508	656	7	X	X	36.9	78.9	X	0.35
0057 GA399913	1.96	552	713	6	X	X	37.1	79.4	0.02	0.29
0058 GA399914	2.66	837	1081	11	X	X	37.3	79.8	X	0.27
0059 GA399915	2.63	737	951	9	X	X	34.4	73.6	0.02	0.33
0060 GA399916	2.83	751	969	23	X	0.5	39.6	84.7	X	0.15
0061 GA399917	2.92	825	1066	24	X	X	38.3	81.8	X	0.28
0062 GA399918	2.73	897	1159	11	X	X	35.4	75.7	X	0.35
0063 GA399919	2.65	972	1255	8	X	X	35.7	76.4	0.01	0.36
0064 GA399920	3.02	1113	1437	10	X	X	36.6	78.2	X	0.33
0065 GA399921	3.73	1254	1619	13	X	X	35.5	76.0	X	0.31
0066 GA399922	4.41	1353	1747	22	X	X	35.7	76.4	X	0.27
0067 GA399923	3.83	1230	1588	32	X	X	36.0	77.0	0.01	0.28
0068 GA399924	3.95	1203	1553	35	X	0.6	35.7	76.4	0.02	0.34
0069 GA399925	3.74	1186	1531	29	X	X	36.1	77.2	X	0.33
0070 GA399926	9.35	2969	3833	16	X	X	24.8	53.1	X	0.55
0071 GA399927	9.16	2994	3866	14	X	X	22.7	48.5	0.01	0.62
0072 GA399928	4.89	1437	1856	9	X	X	31.4	67.2	0.01	0.40
0073 GA399929	8.66	2670	3448	6	X	X	23.8	50.9	0.01	0.58
0074 GA399930	3.10	1173	1514	7	X	X	35.3	75.6	0.01	0.29
0075 GA399931	2.79	909	1173	17	X	X	37.0	79.2	X	0.35
0076 GA399932	6.34	1802	2326	25	X	X	31.9	68.2	X	0.36
0077 GA399933	7.04	2052	2650	33	X	0.6	30.4	65.1	X	0.44
0078 GA399934	2.80	990	1279	18	X	X	38.8	83.0	X	0.31
0079 GA399935	2.68	1307	1687	18	X	X	38.5	82.5	X	0.31
0080 GA399936	3.30	1170	1511	14	X	X	36.2	77.4	X	0.35



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA399897	0.22	8544	1.08%
0042 GA399898	0.45	560	706
0043 GA399899	0.53	63	80
0044 GA399900	0.40	81	102
0045 GA399901	0.45	65	82
0046 GA399902	0.42	68	86
0047 GA399903	0.46	49	62
0048 GA399904	0.54	52	66
0049 GA399905	0.41	73	92
0050 GA399906	0.46	173	218
0051 GA399907	0.37	158	199
0052 GA399908	0.48	134	169
0053 GA399909	0.46	104	131
0054 GA399910	0.46	137	173
0055 GA399911	0.42	175	221
0056 GA399912	0.58	64	80
0057 GA399913	0.49	104	131
0058 GA399914	0.45	95	120
0059 GA399915	0.55	92	116
0060 GA399916	0.26	174	219
0061 GA399917	0.46	836	1055
0062 GA399918	0.59	96	122
0063 GA399919	0.60	74	93
0064 GA399920	0.55	73	92
0065 GA399921	0.52	43	55
0066 GA399922	0.45	16	20
0067 GA399923	0.47	15	19
0068 GA399924	0.57	24	30
0069 GA399925	0.56	21	26
0070 GA399926	0.92	33	41
0071 GA399927	1.03	142	179
0072 GA399928	0.67	116	146
0073 GA399929	0.97	63	79
0074 GA399930	0.49	134	169
0075 GA399931	0.59	91	115
0076 GA399932	0.59	100	126
0077 GA399933	0.73	28	35
0078 GA399934	0.52	36	46
0079 GA399935	0.52	95	120
0080 GA399936	0.59	143	180



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA399937	8.42	15.91	X	16.8	0.1	0.2	97	8.49	12.14	5.55
0082 GA399938	8.50	16.05	X	101.2	0.1	X	369	12.19	17.43	5.55
0083 GA399939	2.84	5.36	188	1.3	8.2	11.4	X	6.12	8.75	11.37
0084 GA399940	3.93	7.42	X	107.3	0.4	0.6	192	3.24	4.63	1.74
0085 GA399941	8.53	16.12	X	346.8	0.4	0.6	369	12.86	18.39	5.05
0086 GA399942	7.44	14.06	X	48.2	0.2	0.3	86	4.91	7.02	2.01
0087 GA399943	5.84	11.04	X	603.1	0.2	0.3	53	3.56	5.10	1.47
0088 GA399944	5.22	9.86	X	79.9	0.1	X	44	3.33	4.76	1.43
0089 GA399945	5.21	9.84	X	79.3	0.1	X	77	3.42	4.88	1.63
0090 GA399946	7.37	13.93	X	39.7	0.3	0.5	372	5.99	8.56	2.65
0091 GA399947	6.72	12.71	X	58.8	1.6	2.3	148	5.60	8.01	2.77
0092 GA399948	7.73	14.61	X	159.2	0.2	0.3	506	10.65	15.22	4.86
0093 GA399949	8.12	15.35	X	412.3	0.1	X	275	12.77	18.25	5.22
0094 GA399950	7.95	15.03	X	53.3	0.2	0.2	233	12.00	17.15	5.17
0095 GA399951	7.97	15.07	X	65.2	0.2	0.2	216	7.90	11.29	4.89
0096 GA399952	7.21	13.62	X	115.3	0.2	0.3	99	5.57	7.96	3.32
0097 GA399953	7.17	13.54	X	65.1	0.2	0.2	104	4.32	6.18	2.06
0098 GA399954	5.58	10.54	X	18.9	0.3	0.4	41	4.28	6.12	1.63
0099 GA399955	5.40	10.21	X	34.6	0.1	X	77	3.51	5.01	1.37
0100 GA399956	9.53	18.00	X	69.9	0.1	X	161	8.63	12.34	8.46
0101 GA399957	8.90	16.81	X	96.9	0.1	0.2	303	10.37	14.83	6.21
0102 GA399958	8.70	16.43	X	353.8	0.2	0.2	535	10.78	15.42	5.36
0103 GA399959	9.47	17.89	X	371.8	0.2	0.3	232	12.08	17.27	5.41
0104 GA399960	8.64	16.32	X	371.1	0.4	0.5	465	9.85	14.09	5.67
0105 GA399961	6.68	12.62	X	91.6	0.3	0.5	456	8.67	12.39	4.05
0106 GA399962	6.96	13.16	X	129.4	0.7	1.0	372	11.45	16.36	4.13
0107 GA399963	8.86	16.74	X	1216.8	0.3	0.4	215	10.81	15.45	5.76
0108 GA399964	7.17	13.54	X	393.8	0.8	1.1	1281	5.89	8.43	2.41
0109 GA399965	7.93	14.99	X	166.6	0.7	0.9	2889	9.29	13.28	4.57
0110 GA399966	8.27	15.63	X	313.9	0.2	0.2	473	13.54	19.36	4.88
0111 GA399967	8.13	15.35	X	74.9	0.2	0.2	3101	10.48	14.99	5.06
0112 GA399968	8.36	15.79	X	103.9	0.4	0.5	652	12.86	18.39	4.65
CHECKS										
0001 GA399858	9.13	17.25	X	411.9	X	X	542	9.96	14.24	4.26
0002 GA399886	6.17	11.67	X	15.7	X	X	203	3.55	5.07	1.16
0003 GA399921	6.13	11.58	X	52.1	0.2	0.3	60	3.61	5.16	2.26
0004 GA399960	8.50	16.06	X	394.6	0.3	0.5	444	9.83	14.05	5.59



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA399937	9.21	3091	3991	12	X	X	27.2	58.2	X	0.51
0082 GA399938	9.21	4398	5679	7	X	X	23.9	51.2	X	0.54
0083 GA399939	18.85	1560	2014	16	X	0.9	25.5	54.6	X	0.16
0084 GA399940	2.88	807	1042	36	X	X	40.7	87.1	X	0.15
0085 GA399941	8.37	5080	6560	14	X	0.7	23.7	50.6	0.02	0.44
0086 GA399942	3.34	1881	2428	16	X	X	28.5	61.0	0.01	0.41
0087 GA399943	2.44	1167	1507	23	X	0.6	34.4	73.6	X	0.32
0088 GA399944	2.37	1049	1354	19	X	X	35.4	75.6	X	0.27
0089 GA399945	2.71	1291	1668	13	X	0.6	35.6	76.3	X	0.26
0090 GA399946	4.39	1891	2442	8	X	0.9	30.0	64.2	0.01	0.39
0091 GA399947	4.60	2065	2666	9	X	0.9	29.1	62.2	X	0.34
0092 GA399948	8.05	3487	4502	16	X	1.4	23.8	50.8	0.01	0.48
0093 GA399949	8.65	4117	5316	11	X	X	25.2	54.0	0.02	0.51
0094 GA399950	8.57	3887	5019	36	X	0.5	25.4	54.2	X	0.48
0095 GA399951	8.11	2896	3740	39	X	1.1	29.6	63.3	X	0.47
0096 GA399952	5.51	2291	2959	31	X	0.6	31.5	67.4	X	0.38
0097 GA399953	3.42	1589	2052	23	X	1.2	35.9	76.9	X	0.37
0098 GA399954	2.71	1525	1970	58	X	5.8	37.0	79.2	0.01	0.25
0099 GA399955	2.27	941	1215	76	X	5.1	38.7	82.7	0.01	0.22
0100 GA399956	14.03	3996	5160	29	X	1.3	23.3	49.9	X	0.56
0101 GA399957	10.29	3995	5159	17	X	0.9	25.2	53.9	0.01	0.50
0102 GA399958	8.89	4365	5637	11	X	0.7	26.8	57.3	0.02	0.48
0103 GA399959	8.98	3490	4506	10	X	1.4	24.7	52.9	0.01	0.57
0104 GA399960	9.40	3361	4340	12	X	1.8	25.6	54.8	0.02	0.53
0105 GA399961	6.72	3709	4790	202	X	3.5	28.7	61.5	0.01	0.41
0106 GA399962	6.85	4763	6150	67	X	1.6	28.1	60.1	0.02	0.39
0107 GA399963	9.55	3557	4593	12	X	1.2	25.0	53.6	X	0.54
0108 GA399964	3.99	1644	2122	8	X	0.7	32.2	68.8	X	0.39
0109 GA399965	7.59	2493	3219	7	0.08	0.9	26.9	57.6	X	0.46
0110 GA399966	8.09	3435	4436	6	X	X	21.7	46.5	X	0.50
0111 GA399967	8.40	3317	4284	7	0.08	0.6	25.9	55.4	0.02	0.48
0112 GA399968	7.71	3609	4660	4	X	X	22.4	48.0	0.01	0.50
CHECKS										
0001 GA399858	7.06	3215	4152	12	X	X	22.2	47.6	0.01	0.55
0002 GA399886	1.92	849	1096	9	X	X	35.6	76.1	0.01	0.33
0003 GA399921	3.76	1285	1659	13	X	X	35.9	76.8	X	0.31
0004 GA399960	9.27	3345	4319	10	X	2.1	25.1	53.7	0.02	0.52



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

SAMPLE NUMBERS			
0081 GA399937	0.86	462	583
0082 GA399938	0.90	441	556
0083 GA399939	0.26	1663	2097
0084 GA399940	0.25	222	280
0085 GA399941	0.74	101	128
0086 GA399942	0.69	49	62
0087 GA399943	0.54	48	61
0088 GA399944	0.45	24	30
0089 GA399945	0.44	40	51
0090 GA399946	0.65	102	128
0091 GA399947	0.58	132	166
0092 GA399948	0.81	192	242
0093 GA399949	0.85	409	516
0094 GA399950	0.81	1612	2033
0095 GA399951	0.79	848	1069
0096 GA399952	0.64	544	687
0097 GA399953	0.62	83	105
0098 GA399954	0.42	3033	3824
0099 GA399955	0.37	1462	1844
0100 GA399956	0.93	170	214
0101 GA399957	0.83	275	347
0102 GA399958	0.80	92	116
0103 GA399959	0.95	194	244
0104 GA399960	0.88	396	499
0105 GA399961	0.68	1.53%	1.93%
0106 GA399962	0.65	3337	4209
0107 GA399963	0.90	978	1234
0108 GA399964	0.65	590	744
0109 GA399965	0.77	214	269
0110 GA399966	0.83	344	434
0111 GA399967	0.80	490	618
0112 GA399968	0.83	279	352

CHECKS			
0001 GA399858	0.91	114	144
0002 GA399886	0.55	68	86
0003 GA399921	0.52	40	51
0004 GA399960	0.87	438	553



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
STANDARDS										
0001 AMISO401	3.28	6.20	X	266.8	10.2	14.3	1481	17.77	25.41	1.97
0002 OREAS 523	3.03	5.72	713	13.4	3.6	5.0	1.76%	28.77	41.14	1.05
0003 OREAS 522	4.02	7.60	527	9.0	4.0	5.5	9523	25.06	35.83	1.17
0004 OREAS 701	6.86	12.96	X	7.7	4.0	5.6	5140	25.30	36.17	0.83
0005 OREAS 24b	8.36	15.79	X	0.9	1.1	1.6	36	4.62	6.61	1.71
BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	0.04	0.05	X
0002 Control Blank	X	X	X	X	X	X	X	X	X	X
0003 Control Blank	0.02	0.04	X	0.2	X	X	X	0.03	0.04	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
STANDARDS										
0001 AMISO401	3.27	2.72%	3.52%	7	8.46	0.6	13.1	28.0	X	0.22
0002 OREAS 523	1.74	4895	6320	305	4.43	8.9	13.1	28.0	X	0.30
0003 OREAS 522	1.94	4234	5467	189	3.23	7.8	15.7	33.5	X	0.40
0004 OREAS 701	1.37	3531	4559	249	0.74	X	16.7	35.8	0.02	0.17
0005 OREAS 24b	2.83	487	629	4	0.22	0.7	32.9	70.3	X	0.52
BLANKS										
0001 Control Blank	X	X	X	1	X	X	X	X	X	X
0002 Control Blank	X	X	X	2	X	X	X	X	X	X
0003 Control Blank	X	X	X	2	X	X	0.1	0.3	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
STANDARDS			
0001 AMISO401	0.37	682	861
0002 OREAS 523	0.51	169	213
0003 OREAS 522	0.66	132	166
0004 OREAS 701	0.29	2.06%	2.60%
0005 OREAS 24b	0.86	6	8

BLANKS

0001 Control Blank	X	X	X
0002 Control Blank	X	X	X
0003 Control Blank	X	X	X



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
 PO Box 517
 WEST PERTH, W.A. 6872
 AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904823
 NO. SAMPLES : 106
 NO. ELEMENTS : 23
 CLIENT ORDER NO. : GW5337 (Job 1 of 1)
 SAMPLE SUBMISSION NO. : GW5337
 PROJECT : HATCHES CREEK
 SAMPLE TYPE : RC Chip
 DATE RECEIVED : 02/04/2019
 DATE REPORTED : 17/04/2019
 DATE PRINTED : 17/04/2019

REPORT NOTES

TESTED BY

Intertek
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 PO Box 144, Gosnells 6990, Western Australia
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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues) will be stored for 60 days without charge. Following this, samples will be stored at a daily rate until clients' written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing, the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m³ per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m³.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA399969	6.57	12.42	X	111.2	X	X	270	3.29	4.70	0.83
0002 GA399970	5.57	10.52	X	16.2	X	X	234	3.07	4.39	1.17
0003 GA399971	5.10	9.64	X	30.0	X	X	281	4.01	5.73	1.30
0004 GA399972	5.77	10.90	X	27.0	X	X	244	6.28	8.98	2.28
0005 GA399973	8.76	16.56	X	33.1	X	X	254	10.78	15.41	4.99
0006 GA399974	8.82	16.67	X	62.4	X	X	355	10.59	15.14	5.04
0007 GA399975	6.56	12.40	X	58.3	X	X	777	7.23	10.34	1.53
0008 GA399976	5.72	10.81	X	32.1	0.4	0.5	304	4.15	5.94	1.01
0009 GA399977	6.10	11.53	X	38.4	X	X	449	5.45	7.79	1.21
0010 GA399978	6.86	12.96	X	33.5	X	X	428	6.35	9.08	1.37
0011 GA399979	6.14	11.61	X	40.2	X	X	499	6.83	9.76	0.68
0012 GA399980	6.13	11.57	X	33.9	X	X	172	4.74	6.78	0.58
0013 GA399981	5.70	10.76	X	61.2	X	X	527	5.29	7.56	0.56
0014 GA399982	6.11	11.55	X	121.8	X	X	481	6.05	8.65	0.88
0015 GA399983	6.34	11.98	X	111.0	X	X	456	6.32	9.04	0.57
0016 GA399984	6.09	11.50	X	195.3	X	X	418	6.38	9.12	0.62
0017 GA399985	6.34	11.98	X	654.3	X	X	467	8.24	11.78	0.56
0018 GA399986	6.58	12.43	X	120.9	X	X	373	5.76	8.24	0.53
0019 GA399987	5.94	11.23	X	632.5	X	X	437	7.16	10.24	0.55
0020 GA399988	5.88	11.11	X	981.9	X	X	383	5.75	8.22	0.58
0021 GA399989	6.23	11.77	X	145.6	X	X	374	7.77	11.11	0.55
0022 GA399990	5.31	10.04	X	67.7	X	X	131	4.79	6.85	0.39
0023 GA399991	5.88	11.10	X	92.5	X	X	167	4.81	6.87	0.37
0024 GA399992	6.43	12.15	X	94.1	X	X	184	4.90	7.01	0.46
0025 GA399993	4.62	8.74	X	419.4	X	X	272	5.16	7.38	0.29
0026 GA399994	6.28	11.87	X	342.1	0.1	X	129	4.81	6.87	0.32
0027 GA399995	6.33	11.95	X	96.7	X	X	333	5.10	7.29	0.39
0028 GA399996	6.23	11.77	X	35.9	X	X	294	4.16	5.95	0.62
0029 GA399997	6.26	11.82	X	45.3	X	X	187	3.41	4.87	0.65
0030 GA399998	6.30	11.90	X	14.6	X	X	3522	4.16	5.95	0.54
0031 GA399999	5.97	11.28	X	14.0	X	X	2283	4.01	5.73	0.51
0032 GA400000	5.96	11.26	X	199.1	X	X	676	4.30	6.14	0.54
0033 GA400001	6.19	11.70	X	28.9	X	X	976	4.65	6.65	0.51
0034 GA400002	6.15	11.63	X	25.9	X	X	1058	3.90	5.58	0.62
0035 GA400003	6.32	11.95	X	10.2	X	X	1055	3.31	4.74	0.72
0036 GA400004	6.23	11.76	X	11.0	X	X	1017	4.90	7.01	0.53
0037 GA400005	6.01	11.36	X	9.5	X	X	5651	3.57	5.10	0.57
0038 GA400006	5.79	10.95	X	20.7	X	X	8225	3.44	4.92	0.56
0039 GA400007	5.43	10.26	X	4.0	X	X	1337	3.72	5.32	0.54
0040 GA400008	5.65	10.68	X	13.4	X	X	4963	3.57	5.10	0.53



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA399969	1.37	554	716	11	X	X	35.3	75.6	X	0.31
0002 GA399970	1.94	829	1070	2	X	X	35.9	76.8	X	0.27
0003 GA399971	2.16	1064	1374	6	X	X	35.8	76.5	X	0.25
0004 GA399972	3.77	2517	3250	8	X	X	33.1	70.8	X	0.29
0005 GA399973	8.28	3609	4660	5	X	X	22.1	47.3	0.01	0.49
0006 GA399974	8.35	3963	5117	5	X	X	22.7	48.6	0.01	0.50
0007 GA399975	2.54	2403	3103	23	X	0.5	31.3	67.0	0.02	0.27
0008 GA399976	1.68	841	1086	8	X	X	35.9	76.7	0.01	0.27
0009 GA399977	2.01	1123	1450	10	X	X	33.6	72.0	X	0.29
0010 GA399978	2.27	1327	1714	16	X	X	31.5	67.3	X	0.34
0011 GA399979	1.12	759	980	26	X	X	34.1	73.0	0.01	0.26
0012 GA399980	0.95	562	725	16	X	X	35.0	74.9	0.01	0.27
0013 GA399981	0.93	632	817	17	X	X	36.2	77.3	0.01	0.25
0014 GA399982	1.47	756	977	28	X	X	33.8	72.4	0.01	0.27
0015 GA399983	0.95	543	701	28	X	0.5	34.1	73.0	0.03	0.26
0016 GA399984	1.02	645	832	33	X	0.5	34.5	73.9	0.03	0.26
0017 GA399985	0.92	595	768	37	X	1.0	34.6	74.0	0.03	0.27
0018 GA399986	0.88	465	600	38	X	X	34.6	74.0	0.02	0.28
0019 GA399987	0.91	599	774	39	X	X	34.1	72.9	0.02	0.26
0020 GA399988	0.97	596	769	25	X	X	34.9	74.7	0.01	0.25
0021 GA399989	0.91	462	596	30	X	X	33.8	72.4	0.02	0.26
0022 GA399990	0.64	1030	1331	36	X	0.6	37.8	80.9	0.01	0.23
0023 GA399991	0.62	415	536	26	X	X	36.2	77.3	0.02	0.25
0024 GA399992	0.77	423	547	27	X	X	34.3	73.4	0.02	0.27
0025 GA399993	0.48	541	698	37	X	X	37.7	80.6	0.02	0.18
0026 GA399994	0.52	314	405	54	X	0.5	36.3	77.6	0.01	0.28
0027 GA399995	0.65	457	591	27	X	X	35.9	76.8	0.02	0.28
0028 GA399996	1.02	726	937	12	X	X	36.4	77.9	0.02	0.27
0029 GA399997	1.08	663	856	6	X	X	34.9	74.7	X	0.28
0030 GA399998	0.90	484	625	8	X	X	36.4	77.8	0.02	0.27
0031 GA399999	0.84	583	753	8	X	X	35.0	75.0	0.01	0.26
0032 GA400000	0.90	1267	1635	10	X	X	35.8	76.6	0.02	0.26
0033 GA400001	0.85	1171	1512	16	X	0.6	35.8	76.7	0.02	0.26
0034 GA400002	1.03	695	897	8	X	X	35.1	75.1	0.01	0.27
0035 GA400003	1.20	599	773	4	X	X	35.5	76.0	X	0.28
0036 GA400004	0.88	614	793	15	X	X	35.2	75.3	X	0.28
0037 GA400005	0.95	515	665	8	0.06	X	34.7	74.3	0.01	0.26
0038 GA400006	0.93	494	638	11	0.10	X	35.1	75.1	0.02	0.25
0039 GA400007	0.90	672	868	50	X	X	36.9	79.0	0.01	0.23
0040 GA400008	0.88	1128	1457	14	0.05	X	34.6	74.0	0.01	0.25



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA399969	0.52	203	256
0002 GA399970	0.46	62	79
0003 GA399971	0.41	122	154
0004 GA399972	0.48	147	186
0005 GA399973	0.82	137	173
0006 GA399974	0.84	145	183
0007 GA399975	0.45	431	543
0008 GA399976	0.45	251	317
0009 GA399977	0.49	208	262
0010 GA399978	0.57	182	229
0011 GA399979	0.43	304	383
0012 GA399980	0.44	264	333
0013 GA399981	0.42	291	367
0014 GA399982	0.44	77	98
0015 GA399983	0.44	341	430
0016 GA399984	0.43	388	489
0017 GA399985	0.46	604	761
0018 GA399986	0.47	81	102
0019 GA399987	0.43	313	394
0020 GA399988	0.42	143	180
0021 GA399989	0.44	436	550
0022 GA399990	0.38	3741	4718
0023 GA399991	0.42	1133	1429
0024 GA399992	0.45	748	943
0025 GA399993	0.29	2354	2969
0026 GA399994	0.47	723	912
0027 GA399995	0.46	996	1256
0028 GA399996	0.45	1275	1608
0029 GA399997	0.46	82	103
0030 GA399998	0.46	66	83
0031 GA399999	0.43	629	794
0032 GA400000	0.43	2626	3311
0033 GA400001	0.44	342	431
0034 GA400002	0.45	359	452
0035 GA400003	0.47	119	150
0036 GA400004	0.47	316	399
0037 GA400005	0.43	153	192
0038 GA400006	0.42	122	154
0039 GA400007	0.39	1422	1794
0040 GA400008	0.42	575	725



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA400009	6.40	12.10	X	7.7	3.8	5.3	4908	23.39	33.44	0.78
0042 GA400010	5.17	9.78	X	412.8	X	X	208	4.57	6.54	0.33
0043 GA400011	5.89	11.13	X	33.0	X	X	5033	3.96	5.67	0.51
0044 GA400012	6.05	11.43	X	23.8	X	X	2365	3.50	5.00	0.56
0045 GA400013	4.17	7.88	X	135.5	X	X	883	3.18	4.55	0.34
0046 GA400014	6.15	11.62	X	34.2	X	X	2202	4.62	6.60	0.62
0047 GA400015	5.94	11.23	X	32.5	X	X	2616	3.81	5.44	0.49
0048 GA400016	5.53	10.45	X	300.5	X	X	7235	4.02	5.75	0.37
0049 GA400017	5.08	9.61	X	1128.4*	X	X	1778	3.55	5.07	0.32
0050 GA400018	5.84	11.04	X	312.7	X	X	7798	3.51	5.01	0.42
0051 GA400019	5.98	11.31	X	398.4	X	X	4799	3.24	4.63	0.44
0052 GA400020	5.85	11.06	X	65.6	X	X	1218	3.94	5.64	0.61
0053 GA400021	5.11	9.66	X	180.2	X	X	2178	3.81	5.45	0.46
0054 GA400022	5.46	10.31	X	305.7	X	X	3984	4.30	6.15	0.44
0055 GA400023	5.92	11.18	X	396.8	X	X	5490	4.28	6.13	0.41
0056 GA400024	3.93	7.43	X	62.6	X	X	4101	2.84	4.06	0.37
0057 GA400025	5.78	10.92	X	28.4	0.1	X	3293	3.76	5.37	0.56
0058 GA400027	5.95	11.24	X	13.9	0.1	X	1132	3.77	5.38	0.68
0059 GA400028	5.99	11.31	X	19.6	0.1	X	237	4.77	6.82	1.10
0060 GA400029	5.92	11.18	X	15.9	X	X	433	3.66	5.24	0.72
0061 GA400030	5.96	11.26	X	16.8	X	X	957	3.58	5.11	0.64
0062 GA400031	5.40	10.20	X	98.4	0.1	X	1045	3.83	5.47	0.66
0063 GA400032	6.25	11.81	X	26.9	0.1	X	418	4.03	5.76	0.79
0064 GA400033	5.86	11.08	X	75.0	X	X	2064	3.58	5.11	0.57
0065 GA400034	4.80	9.06	X	371.3	X	X	5170	3.67	5.25	0.55
0066 GA400035	6.36	12.01	X	80.4	X	X	1993	4.63	6.61	0.73
0067 GA400036	5.72	10.81	X	51.6	X	X	651	3.42	4.89	0.62
0068 GA400037	4.80	9.06	X	96.3	X	X	1540	2.96	4.23	0.47
0069 GA400038	5.20	9.82	X	140.2	X	X	1630	4.52	6.47	0.63
0070 GA400039	5.90	11.14	X	158.5	X	X	1302	4.78	6.84	0.67
0071 GA400040	5.04	9.53	X	206.5	X	X	2077	4.01	5.73	0.69
0072 GA400041	3.54	6.69	X	873.2	X	X	4765	2.55	3.65	0.31
0073 GA400042	5.12	9.67	X	132.0	X	X	1.53%	3.84	5.49	0.40
0074 GA400043	5.34	10.09	X	569.9	X	X	1.19%	3.57	5.10	0.52
0075 GA400044	7.43	14.03	X	795.4	0.2	0.3	4422	3.83	5.47	0.66
0076 GA400045	5.97	11.28	X	108.9	X	X	2564	4.06	5.80	0.56
0077 GA400046	4.84	9.14	X	83.5	X	X	866	5.52	7.90	0.70
0078 GA400047	5.80	10.96	X	41.6	0.1	X	96	5.12	7.33	1.10
0079 GA400048	6.41	12.12	X	27.0	0.2	0.3	137	4.20	6.00	1.15
0080 GA400049	6.87	12.98	X	62.7	0.2	0.2	296	4.10	5.87	1.03



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA400009	1.30	3362	4341	252	0.70	0.6	16.0	34.1	0.02	0.16
0042 GA400010	0.54	414	535	31	X	X	36.9	78.9	0.02	0.20
0043 GA400011	0.84	408	527	18	X	X	36.2	77.4	0.01	0.27
0044 GA400012	0.93	651	840	12	X	X	35.7	76.5	0.02	0.27
0045 GA400013	0.57	1100	1420	26	X	X	37.7	80.7	0.01	0.18
0046 GA400014	1.04	652	842	30	X	X	36.6	78.2	0.01	0.27
0047 GA400015	0.82	367	474	21	X	X	35.1	75.1	0.01	0.27
0048 GA400016	0.62	1619	2091	54	0.09	X	35.9	76.9	0.02	0.23
0049 GA400017	0.54	423	546	102	X	0.5	36.8	78.8	0.01	0.22
0050 GA400018	0.70	239	308	41	X	0.6	36.2	77.4	0.02	0.25
0051 GA400019	0.73	250	322	45	X	0.8	37.0	79.2	0.02	0.25
0052 GA400020	1.01	544	702	23	X	X	35.2	75.2	0.02	0.25
0053 GA400021	0.76	617	796	85	X	X	35.8	76.6	0.01	0.23
0054 GA400022	0.73	385	498	66	0.06	X	35.0	74.8	0.01	0.25
0055 GA400023	0.68	554	715	30	0.20	X	36.6	78.4	0.01	0.27
0056 GA400024	0.62	383	495	10	0.20	X	38.5	82.4	0.01	0.16
0057 GA400025	0.93	499	644	7	0.23	X	36.2	77.5	0.02	0.25
0058 GA400027	1.12	656	847	9	0.12	X	35.7	76.3	0.01	0.27
0059 GA400028	1.83	905	1169	8	X	X	35.8	76.7	X	0.28
0060 GA400029	1.19	626	808	29	X	X	35.0	74.9	X	0.28
0061 GA400030	1.06	666	860	11	0.06	X	33.6	71.9	0.01	0.27
0062 GA400031	1.10	747	965	119	0.07	X	35.4	75.7	0.01	0.25
0063 GA400032	1.31	671	866	52	X	X	34.6	74.1	X	0.28
0064 GA400033	0.95	466	601	21	0.17	X	34.8	74.4	0.01	0.25
0065 GA400034	0.92	590	762	139	0.22	X	37.2	79.6	0.02	0.21
0066 GA400035	1.22	715	923	41	0.08	X	35.2	75.3	0.01	0.29
0067 GA400036	1.04	593	766	14	X	X	35.2	75.4	0.01	0.25
0068 GA400037	0.78	526	680	23	0.05	X	34.5	73.8	0.01	0.21
0069 GA400038	1.04	514	664	36	X	X	36.2	77.3	0.01	0.24
0070 GA400039	1.12	458	592	36	0.06	X	35.0	75.0	0.01	0.26
0071 GA400040	1.15	504	650	47	0.07	0.6	36.7	78.5	0.01	0.23
0072 GA400041	0.52	218	282	70	0.11	0.6	41.4	88.6	0.01	0.15
0073 GA400042	0.66	240	310	50	0.31	0.9	36.6	78.4	0.02	0.24
0074 GA400043	0.86	574	741	30	0.32	X	37.0	79.2	0.02	0.25
0075 GA400044	1.10	462	596	41	0.15	1.5	32.5	69.5	0.02	0.31
0076 GA400045	0.93	503	650	33	0.09	X	34.4	73.6	0.01	0.26
0077 GA400046	1.16	955	1232	32	X	0.6	34.4	73.5	0.01	0.22
0078 GA400047	1.83	935	1207	55	X	0.6	32.9	70.3	0.01	0.25
0079 GA400048	1.91	925	1195	18	X	X	33.5	71.7	0.01	0.28
0080 GA400049	1.70	987	1274	43	X	X	32.7	69.9	0.01	0.31



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA400009	0.26	2.39%	3.02%
0042 GA400010	0.33	1680	2119
0043 GA400011	0.44	339	428
0044 GA400012	0.44	98	124
0045 GA400013	0.30	6923	8731
0046 GA400014	0.46	609	769
0047 GA400015	0.45	187	236
0048 GA400016	0.39	1.53%	1.92%
0049 GA400017	0.36	524	661
0050 GA400018	0.42	292	368
0051 GA400019	0.41	256	323
0052 GA400020	0.42	386	486
0053 GA400021	0.38	2507	3162
0054 GA400022	0.41	1276	1609
0055 GA400023	0.45	3501	4415
0056 GA400024	0.27	194	244
0057 GA400025	0.42	52	66
0058 GA400027	0.45	81	102
0059 GA400028	0.47	59	74
0060 GA400029	0.46	96	120
0061 GA400030	0.45	45	56
0062 GA400031	0.41	544	686
0063 GA400032	0.47	250	315
0064 GA400033	0.42	96	121
0065 GA400034	0.36	381	480
0066 GA400035	0.49	364	459
0067 GA400036	0.42	87	110
0068 GA400037	0.35	1280	1615
0069 GA400038	0.40	304	383
0070 GA400039	0.44	224	282
0071 GA400040	0.38	116	147
0072 GA400041	0.25	293	369
0073 GA400042	0.40	540	681
0074 GA400043	0.41	2118	2672
0075 GA400044	0.52	774	976
0076 GA400045	0.44	228	288
0077 GA400046	0.36	1506	1899
0078 GA400047	0.42	2418	3050
0079 GA400048	0.47	127	160
0080 GA400049	0.52	159	201



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA400050	6.32	11.95	X	19.2	0.1	X	149	3.88	5.55	1.08
0082 GA400051	5.54	10.47	X	16.4	0.1	X	157	3.79	5.41	1.23
0083 GA400052	10.39	19.62	X	7.8	3.4	4.8	101	3.29	4.70	3.68
0084 GA400053	7.66	14.47	X	807.1	0.2	0.2	5369*	3.77	5.39	0.68
0085 GA400054	5.21	9.85	X	12.1	0.1	X	161	4.16	5.94	1.41
0086 GA400055	7.71	14.57	X	37.4	0.1	X	170	3.95	5.65	0.98
0087 GA400056	7.02	13.26	X	26.1	0.1	X	78	3.87	5.53	0.93
0088 GA400057	6.43	12.15	X	15.2	0.1	X	38	4.36	6.23	1.28
0089 GA400058	5.91	11.17	X	32.8	0.2	0.2	180	4.13	5.90	1.10
0090 GA400059	5.47	10.34	X	32.5	0.1	X	267	3.85	5.50	0.83
0091 GA400060	5.26	9.95	X	27.0	0.2	0.3	277	4.20	6.01	0.99
0092 GA400061	5.94	11.23	X	32.1	0.2	0.2	248	5.30	7.58	1.57
0093 GA400062	6.01	11.35	X	32.3	0.1	X	107	4.57	6.54	1.12
0094 GA400063	5.88	11.11	X	25.2	0.2	0.2	193	4.01	5.73	1.08
0095 GA400064	5.99	11.32	X	20.0	0.1	X	168	3.94	5.64	0.95
0096 GA400065	6.16	11.63	X	23.2	0.1	X	220	4.32	6.18	0.88
0097 GA400066	5.82	11.00	X	9.2	X	X	102	3.73	5.34	0.93
0098 GA400067	5.87	11.09	X	24.2	0.1	0.2	129	4.53	6.47	1.04
0099 GA400068	5.55	10.49	X	12.1	X	X	82	3.57	5.10	0.77
0100 GA400069	5.63	10.64	X	12.5	X	X	91	3.66	5.23	0.85
0101 GA400070	5.14	9.71	X	10.0	X	X	51	3.42	4.89	0.82
0102 GA400071	5.12	9.67	X	9.9	0.2	0.2	61	3.58	5.12	1.07
0103 GA400072	4.94	9.34	X	16.3	0.4	0.5	316	2.58	3.69	1.37
0104 GA400073	6.74	12.74	X	48.1	0.1	X	64	4.33	6.19	1.48
0105 GA400074	6.29	11.89	X	40.8	0.1	X	113	4.45	6.36	1.28
0106 GA400075	5.63	10.65	X	38.0	0.1	X	44	4.46	6.37	1.23

CHECKS										
0001 GA399982	5.97	11.29	X	122.2	X	X	467	5.90	8.43	0.87
0002 GA400004	6.03	11.39	X	10.6	X	X	985	4.76	6.81	0.51
0003 GA400024	3.92	7.41	X	67.3	X	X	4246	2.84	4.06	0.38

STANDARDS										
0001 OREAS 700	5.65	10.68	X	7.0	5.8	8.1	2024	16.09	23.01	1.05
0002 OREAS 701	6.50	12.28	X	6.7	3.8	5.3	4804	23.39	33.44	0.79
0003 GW-01	4.56	8.62	X	2.5	8.8	12.3	244	3.78	5.41	5.64
0004 OREAS 24b	7.71	14.56	X	1.0	1.0	1.5	27	4.31	6.16	1.60

BLANKS										
0001 Control Blank	X	X	X	0.3	X	X	X	0.02	0.03	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA400050	1.79	973	1256	33	X	X	34.2	73.2	0.01	0.30
0082 GA400051	2.04	911	1176	15	X	X	34.3	73.4	X	0.26
0083 GA400052	6.11	976	1260	122	2.11	25.9	21.9	46.8	X	0.18
0084 GA400053	1.12	476	615	39	0.18	1.2	32.0	68.5	0.03	0.32
0085 GA400054	2.35	1023	1321	21	X	X	35.0	74.9	X	0.26
0086 GA400055	1.63	675	872	32	X	X	32.3	69.0	X	0.36
0087 GA400056	1.54	736	950	24	X	X	32.5	69.6	X	0.34
0088 GA400057	2.12	1050	1356	19	X	X	32.8	70.1	X	0.30
0089 GA400058	1.83	988	1275	13	X	0.5	33.1	70.9	0.01	0.27
0090 GA400059	1.37	835	1078	12	X	X	34.6	74.0	0.01	0.24
0091 GA400060	1.64	1060	1369	14	X	X	26.7	57.2	0.01	0.24
0092 GA400061	2.61	1282	1655	32	X	1.0	32.8	70.2	X	0.27
0093 GA400062	1.86	1199	1548	35	X	0.6	33.0	70.6	X	0.28
0094 GA400063	1.78	1010	1304	27	X	X	33.4	71.4	X	0.27
0095 GA400064	1.58	834	1077	19	X	X	31.0	66.2	0.01	0.27
0096 GA400065	1.46	946	1221	19	X	X	34.0	72.8	0.02	0.27
0097 GA400066	1.54	849	1097	23	X	X	34.2	73.2	0.01	0.27
0098 GA400067	1.72	1007	1300	26	X	X	33.1	70.8	X	0.26
0099 GA400068	1.28	747	964	15	X	X	33.9	72.6	X	0.26
0100 GA400069	1.41	818	1057	27	X	X	34.8	74.5	X	0.27
0101 GA400070	1.36	733	947	30	X	X	35.3	75.4	X	0.24
0102 GA400071	1.78	729	942	35	X	X	34.5	73.8	0.01	0.24
0103 GA400072	2.28	648	836	21	X	X	34.6	74.1	0.01	0.20
0104 GA400073	2.45	882	1138	10	X	X	32.3	69.2	X	0.31
0105 GA400074	2.12	874	1129	16	X	X	33.3	71.3	0.01	0.29
0106 GA400075	2.03	1118	1443	12	X	X	33.4	71.3	X	0.27
CHECKS										
0001 GA399982	1.44	741	957	28	X	X	33.1	70.9	0.01	0.26
0002 GA400004	0.85	592	765	14	X	X	33.9	72.6	X	0.28
0003 GA400024	0.62	382	493	12	0.21	X	38.9	83.2	0.01	0.16
STANDARDS										
0001 OREAS 700	1.74	3298	4258	79	0.29	0.7	22.8	48.7	0.02	0.19
0002 OREAS 701	1.31	3339	4311	243	0.64	0.5	15.9	34.1	0.02	0.16
0003 GW-01	9.35	870	1123	5	0.22	1.3	26.6	56.8	X	0.10
0004 OREAS 24b	2.65	475	613	3	0.19	1.1	30.9	66.2	X	0.47
BLANKS										
0001 Control Blank	X	21	X	1	X	X	X	X	0.01	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

SAMPLE NUMBERS			
0081 GA400050	0.51	78	98
0082 GA400051	0.44	81	103
0083 GA400052	0.29	2.76%	3.48%
0084 GA400053	0.53	997	1258
0085 GA400054	0.44	72	91
0086 GA400055	0.61	248	312
0087 GA400056	0.56	152	191
0088 GA400057	0.50	59	75
0089 GA400058	0.46	91	115
0090 GA400059	0.40	118	148
0091 GA400060	0.40	78	98
0092 GA400061	0.46	80	101
0093 GA400062	0.46	81	102
0094 GA400063	0.46	89	112
0095 GA400064	0.45	90	113
0096 GA400065	0.45	80	100
0097 GA400066	0.45	194	244
0098 GA400067	0.44	114	144
0099 GA400068	0.43	51	65
0100 GA400069	0.44	46	58
0101 GA400070	0.40	39	50
0102 GA400071	0.40	275	347
0103 GA400072	0.34	693	874
0104 GA400073	0.52	89	112
0105 GA400074	0.48	98	123
0106 GA400075	0.45	62	79

CHECKS			
0001 GA399982	0.43	97	122
0002 GA400004	0.46	309	390
0003 GA400024	0.27	155	195

STANDARDS			
0001 OREAS 700	0.32	1.13%	1.43%
0002 OREAS 701	0.26	2.20%	2.78%
0003 GW-01	0.16	2861	3607
0004 OREAS 24b	0.79	23	29

BLANKS			
0001 Control Blank	X	X	X



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
PO Box 517
WEST PERTH, W.A. 6872
AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904825
NO. SAMPLES : 112
NO. ELEMENTS : 23
CLIENT ORDER NO. : GW5338 (Job 1 of 1)
SAMPLE SUBMISSION NO. : GW5338
PROJECT : HATCHES CREEK
SAMPLE TYPE : RC
DATE RECEIVED : 02/04/2019
DATE REPORTED : 23/04/2019
DATE PRINTED : 23/04/2019

REPORT NOTES

TESTED BY

Intertek
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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues will be stored for 60 days without charge. Following this samples will be stored at a daily rate until clients written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m3 per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m3.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA400076	6.28	11.86	X	32.2	X	X	323	4.19	5.99	0.96
0002 GA400077	6.67	12.60	X	32.3	X	X	501	4.44	6.35	1.19
0003 GA400078	6.93	13.09	X	15.4	X	X	608	4.37	6.25	1.07
0004 GA400079	6.50	12.27	X	17.7	X	X	496	4.57	6.53	1.05
0005 GA400080	6.06	11.45	X	139.8	X	X	477	4.77	6.82	1.26
0006 GA400081	6.81	12.86	X	36.1	X	X	827	5.78	8.26	1.83
0007 GA400082	8.21	15.51	X	423.2	X	X	1148	10.30	14.72	3.71
0008 GA400083	8.96	16.93	X	484.0	X	X	1828	12.02	17.18	4.71
0009 GA400084	9.35	17.66	X	124.3	X	X	824	9.16	13.09	4.37
0010 GA400085	8.10	15.30	X	139.3	X	X	503	5.35	7.65	1.74
0011 GA400086	8.38	15.83	X	65.5	0.2	0.2	818	8.00	11.44	2.65
0012 GA400087	7.73	14.60	X	88.6	0.2	0.3	873	5.72	8.17	1.37
0013 GA400088	6.21	11.74	X	205.8	X	X	652	4.87	6.97	0.89
0014 GA400089	6.36	12.02	X	242.6	X	X	441	4.59	6.56	0.82
0015 GA400090	7.23	13.66	X	1213.1	X	X	455	6.02	8.60	1.20
0016 GA400091	1.25	2.37	X	3706.7	X	X	610	6.05	8.65	0.14
0017 GA400092	5.09	9.62	X	1318.7	X	X	197	5.21	7.44	0.91
0018 GA400093	7.72	14.59	X	220.7	X	X	152	7.44	10.64	1.64
0019 GA400094	6.41	12.11	X	431.9	X	X	181	6.27	8.97	1.04
0020 GA400095	7.85	14.83	X	667.0	X	X	498	12.98	18.56	3.83
0021 GA400096	8.01	15.13	X	616.7	X	X	307	12.17	17.40	4.45
0022 GA400097	6.06	11.44	X	878.4	X	X	197	5.80	8.30	1.56
0023 GA400098	5.95	11.25	X	173.9	0.1	X	175	5.35	7.65	0.68
0024 GA400099	6.68	12.61	X	114.5	0.1	X	240	3.58	5.12	0.86
0025 GA400100	6.06	11.45	X	179.9	0.1	0.2	244	4.30	6.15	1.03
0026 GA400101	6.31	11.92	X	145.4	0.2	0.2	232	3.68	5.27	0.98
0027 GA400102	6.06	11.45	X	180.4	0.2	0.2	138	4.15	5.93	0.86
0028 GA400103	6.04	11.42	X	46.8	0.1	X	67	3.38	4.84	0.77
0029 GA400104	5.20	9.82	X	53.8	0.2	0.2	56	3.75	5.37	0.74
0030 GA400105	5.65	10.67	X	46.2	X	X	79	3.62	5.17	0.75
0031 GA400106	5.79	10.95	X	24.9	0.1	X	154	3.56	5.09	0.88
0032 GA400107	5.65	10.68	X	109.5	0.2	0.2	202	3.95	5.64	0.96
0033 GA400108	5.80	10.96	X	100.6	0.1	X	117	3.71	5.30	0.97
0034 GA400109	5.52	10.44	X	453.9	0.3	0.4	135	3.72	5.32	0.79
0035 GA400110	5.82	10.99	X	48.9	0.1	X	65	4.06	5.81	0.73
0036 GA400111	4.29	8.10	X	25.3	0.3	0.4	133	3.41	4.87	0.53
0037 GA400112	5.98	11.30	X	35.1	0.1	X	72	4.41	6.30	0.79
0038 GA400113	5.82	10.99	X	35.7	X	X	55	3.63	5.19	0.66
0039 GA400114	6.04	11.41	X	23.9	X	X	39	3.55	5.08	0.61
0040 GA400115	6.39	12.08	X	21.1	X	X	90	4.23	6.04	0.64



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA400076	1.59	869	1122	5	X	X	34.5	73.8	X	0.32*
0002 GA400077	1.97	1130	1459	14	X	X	32.8	70.1	X	0.31
0003 GA400078	1.77	873	1127	9	X	X	33.8	72.2	X	0.33
0004 GA400079	1.74	906	1170	9	X	X	34.5	73.7	X	0.30
0005 GA400080	2.10	1094	1412	12	X	X	34.8	74.5	X	0.28
0006 GA400081	3.03	1324	1710	8	X	0.5	32.1	68.8	X	0.35
0007 GA400082	6.16	2576	3326	10	X	X	24.0	51.4	0.02	0.47
0008 GA400083	7.82	4156	5366	18	X	X	21.3	45.5	0.01	0.53
0009 GA400084	7.25	3058	3949	6	X	X	23.7	50.6	0.01	0.53
0010 GA400085	2.89	1461	1886	11	X	X	30.1	64.4	0.01	0.38
0011 GA400086	4.40	1575	2034	45	X	X	27.4	58.7	0.01	0.43
0012 GA400087	2.27	2069	2672	14	X	0.5	30.9	66.1	0.02	0.35
0013 GA400088	1.47	2909	3756	18	X	X	35.0	74.9	0.01	0.27
0014 GA400089	1.36	944	1219	8	X	0.6	34.2	73.1	0.01	0.29
0015 GA400090	1.99	1075	1388	9	X	X	33.0	70.5	0.01	0.33
0016 GA400091	0.23	1276	1648	227	X	X	39.9	85.3	X	0.04
0017 GA400092	1.50	910	1176	56	X	X	35.8	76.6	0.01	0.23
0018 GA400093	2.72	1533	1980	51	X	19.1	31.3	67.0	0.02	0.37
0019 GA400094	1.73	883	1140	87	X	0.6	32.3	69.0	0.02	0.30
0020 GA400095	6.35	2462	3179	41	X	X	21.6	46.2	0.02	0.44
0021 GA400096	7.38	2919	3769	11	X	X	20.9	44.6	0.02	0.48
0022 GA400097	2.59	1296	1674	10	X	X	32.9	70.4	0.01	0.29
0023 GA400098	1.13	626	809	24	X	X	33.0	70.6	0.02	0.27
0024 GA400099	1.43	655	846	7	X	X	34.3	73.4	0.01	0.32
0025 GA400100	1.70	1043	1347	10	X	X	32.6	69.7	X	0.28
0026 GA400101	1.63	736	951	14	X	X	34.7	74.3	0.01	0.27
0027 GA400102	1.42	837	1081	6	X	X	31.5	67.4	0.01	0.25
0028 GA400103	1.28	808	1043	29	X	X	32.9	70.4	X	0.27
0029 GA400104	1.22	725	936	44	0.06	X	33.6	71.8	0.01	0.23
0030 GA400105	1.24	792	1022	8	X	X	35.0	74.9	X	0.25
0031 GA400106	1.46	752	971	7	X	X	34.3	73.3	X	0.27
0032 GA400107	1.60	752	971	8	X	X	34.3	73.4	X	0.25
0033 GA400108	1.61	815	1053	29	X	X	35.7	76.4	X	0.27
0034 GA400109	1.31	815	1052	15	X	X	32.3	69.1	0.02	0.24
0035 GA400110	1.20	750	968	12	X	X	33.7	72.2	0.02	0.25
0036 GA400111	0.88	533	689	25	X	X	37.9	81.0	0.01	0.18
0037 GA400112	1.32	581	751	26	X	X	33.8	72.4	0.02	0.26
0038 GA400113	1.10	533	688	25	X	X	28.3	60.6	0.03	0.25
0039 GA400114	1.01	596	769	11	X	X	34.9	74.6	0.01	0.27
0040 GA400115	1.06	696	898	11	X	X	35.7	76.3	X	0.29



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA400076	0.54*	209	263
0002 GA400077	0.52	71	89
0003 GA400078	0.54	66	84
0004 GA400079	0.50	98	124
0005 GA400080	0.47	110	139
0006 GA400081	0.59	174	219
0007 GA400082	0.78	270	341
0008 GA400083	0.88	162	204
0009 GA400084	0.89	110	138
0010 GA400085	0.63	260	328
0011 GA400086	0.72	372	469
0012 GA400087	0.59	644	812
0013 GA400088	0.45	1047	1321
0014 GA400089	0.49	973	1228
0015 GA400090	0.55	969	1222
0016 GA400091	0.06	1.75%*	2.21%*
0017 GA400092	0.39	2744	3460
0018 GA400093	0.62	861	1085
0019 GA400094	0.50	1090	1374
0020 GA400095	0.74	588	742
0021 GA400096	0.80	212	268
0022 GA400097	0.49	390	492
0023 GA400098	0.45	881	1111
0024 GA400099	0.53	155	195
0025 GA400100	0.47	184	232
0026 GA400101	0.45	238	300
0027 GA400102	0.42	143	180
0028 GA400103	0.45	114	144
0029 GA400104	0.39	146	185
0030 GA400105	0.42	107	135
0031 GA400106	0.45	137	173
0032 GA400107	0.42	228	288
0033 GA400108	0.45	91	115
0034 GA400109	0.40	215	271
0035 GA400110	0.42	180	226
0036 GA400111	0.30	310	391
0037 GA400112	0.43	506	638
0038 GA400113	0.42	344	434
0039 GA400114	0.44	255	322
0040 GA400115	0.48	260	327



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA400116	2.42	4.58	496	0.8	8.2	11.5	24*	5.68	8.12	10.79
0042 GA400117	6.31	11.92	X	200.3	X	X	365	4.19	5.98	0.81
0043 GA400118	6.34	11.99	X	30.7	X	X	474	4.38	6.26	0.58
0044 GA400119	6.09	11.51	X	29.3	X	X	267	4.76	6.80	0.66
0045 GA400120	6.39	12.07	X	29.2	X	X	352	3.09	4.41	0.51
0046 GA400121	6.17	11.66	X	25.5	X	X	1185	4.00	5.72	0.50
0047 GA400122	6.27	11.85	X	25.1	X	X	2604	3.78	5.40	0.53
0048 GA400123	6.23	11.77	X	19.3	0.1	X	923	4.94	7.06	0.67
0049 GA400124	6.73	12.71	X	100.4	X	X	1029	4.74	6.78	0.38
0050 GA400125	6.08	11.50	X	52.8	X	X	1623	4.23	6.05	0.39
0051 GA400126	5.66	10.70	X	575.0	0.1	X	358	5.03	7.20	0.61
0052 GA400127	5.25	9.91	X	186.1	0.2	0.2	285	4.84	6.91	0.91
0053 GA400128	5.71	10.78	X	298.5	0.2	0.3	202	5.44	7.78	0.81
0054 GA400129	5.87	11.08	X	125.4	0.3	0.4	198	5.16	7.38	1.04
0055 GA400130	6.25	11.80	X	129.1	0.1	X	208	3.61	5.16	1.52
0056 GA400131	6.22	11.76	X	686.3	0.1	0.2	89	3.85	5.50	1.60
0057 GA400132	5.92	11.18	X	354.3	0.1	X	232	4.10	5.86	0.88
0058 GA400133	6.27	11.86	X	105.2	0.1	X	92	4.06	5.81	0.94
0059 GA400134	6.31	11.93	X	29.2	0.1	X	66	4.29	6.13	0.73
0060 GA400135	6.18	11.68	X	30.4	X	X	61	4.75	6.79	0.70
0061 GA400136	6.44	12.17	X	31.0	0.1	X	28	4.98	7.11	0.81
0062 GA400137	6.03	11.40	X	30.2	0.1	X	21	5.10	7.30	0.74
0063 GA400138	6.36	12.01	X	30.1	X	X	380	4.65	6.65	0.76
0064 GA400139	6.17	11.65	X	22.0	X	X	3003	3.99	5.70	0.57
0065 GA400140	6.16	11.65	X	32.3	X	X	1950	4.67	6.68	0.57
0066 GA400141	6.28	11.86	X	50.0	X	X	3980	5.06	7.23	0.58
0067 GA400142	6.19	11.70	X	31.3	X	X	635	5.02	7.18	0.66
0068 GA400143	5.95	11.24	X	27.4	X	X	486	4.48	6.40	0.58
0069 GA400144	5.93	11.20	X	38.9	0.3	0.4	46	4.50	6.43	0.53
0070 GA400145	6.22	11.75	X	40.0	0.2	0.2	77	5.09	7.28	0.65
0071 GA400146	6.22	11.76	X	37.7	X	X	94	4.63	6.62	0.72
0072 GA400147	6.35	12.00	X	39.9	0.1	X	158	5.21	7.45	0.84
0073 GA400148	6.32	11.95	X	32.6	0.1	X	247	5.10	7.29	0.81
0074 GA400149	6.06	11.45	X	22.8	X	X	1109	4.51	6.45	0.73
0075 GA400150	6.01	11.35	X	32.7	0.1	X	372	4.95	7.07	0.71
0076 GA400151	5.90	11.14	X	50.9	0.1	X	107	4.47	6.39	0.48
0077 GA400152	6.30	11.91	X	112.8	X	X	1562	5.85	8.37	0.58
0078 GA400153	6.12	11.57	X	59.0	X	X	1699	5.34	7.64	0.60
0079 GA400154	6.27	11.85	X	28.4	X	X	307	4.47	6.39	0.75
0080 GA400155	5.92	11.18	X	262.4	X	X	5357	4.93	7.05	0.56



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA400116	17.89	1417	1829	4	X	1.1	24.5	52.4	X	0.13
0042 GA400117	1.34	763	985	9	X	X	34.0	72.7	0.01	0.29
0043 GA400118	0.96	611	788	13	X	X	35.6	76.2	0.02	0.28
0044 GA400119	1.09	671	867	13	X	X	33.7	72.0	X	0.28
0045 GA400120	0.84	337	436	9	X	X	35.0	74.9	X	0.29
0046 GA400121	0.82	418	540	22	X	X	35.0	74.8	0.02	0.28
0047 GA400122	0.87	500	646	18	X	X	35.6	76.2	0.01	0.27
0048 GA400123	1.11	803	1037	20	X	X	35.5	75.9	0.02	0.28
0049 GA400124	0.64	394	508	45	X	X	35.7	76.3	0.02	0.28
0050 GA400125	0.64	415	536	44	X	X	34.8	74.4	0.01	0.27
0051 GA400126	1.01	558	720	45	X	0.6	35.1	75.2	0.02	0.19
0052 GA400127	1.51	907	1172	26	X	0.8	35.1	75.1	0.02	0.23
0053 GA400128	1.34	830	1071	30	X	1.2	36.0	76.9	0.04	0.24
0054 GA400129	1.73	890	1149	18	X	0.7	35.2	75.4	0.02	0.26
0055 GA400130	2.53	712	920	5	X	X	35.5	75.9	0.01	0.27
0056 GA400131	2.65	793	1024	10	X	X	35.1	75.2	0.02	0.27
0057 GA400132	1.46	728	940	14	X	X	34.9	74.7	0.01	0.26
0058 GA400133	1.55	826	1066	76	X	X	33.3	71.3	0.01	0.28
0059 GA400134	1.21	832	1075	14	X	X	34.6	74.0	0.02	0.28
0060 GA400135	1.16	922	1191	25	X	X	34.6	74.0	0.02	0.26
0061 GA400136	1.34	967	1249	16	X	X	34.6	74.1	0.02	0.27
0062 GA400137	1.22	1035	1336	9	X	X	34.4	73.6	0.01	0.26
0063 GA400138	1.27	807	1042	6	X	X	35.5	76.0	0.01	0.28
0064 GA400139	0.95	602	777	8	0.09	X	35.3	75.6	0.02	0.27
0065 GA400140	0.95	633	817	10	0.06	X	34.5	73.7	0.02	0.26
0066 GA400141	0.97	685	884	12	0.11	X	35.6	76.2	0.02	0.26
0067 GA400142	1.09	838	1082	11	X	X	35.7	76.3	0.01	0.27
0068 GA400143	0.95	601	776	13	X	X	34.5	73.7	0.01	0.26
0069 GA400144	0.88	582	752	10	X	X	33.5	71.6	0.02	0.23
0070 GA400145	1.08	768	992	8	X	X	34.4	73.6	0.01	0.27
0071 GA400146	1.19	832	1074	15	X	X	33.0	70.6	0.02	0.27
0072 GA400147	1.40	845	1091	17	X	X	32.5	69.5	0.01	0.28
0073 GA400148	1.34	843	1088	10	X	X	33.7	72.1	0.01	0.27
0074 GA400149	1.22	841	1086	12	X	X	34.5	73.7	X	0.26
0075 GA400150	1.18	738	952	11	X	X	34.9	74.7	X	0.27
0076 GA400151	0.79	405	523	10	X	X	34.2	73.2	0.01	0.25
0077 GA400152	0.96	679	877	13	X	X	34.5	73.8	0.02	0.27
0078 GA400153	0.99	765	988	20	0.05	X	33.6	71.8	0.02	0.27
0079 GA400154	1.25	874	1129	13	X	X	32.7	69.9	0.01	0.27
0080 GA400155	0.92	549	709	21	0.14	0.5	31.7	67.8	0.02	0.26



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA400116	0.22	1279*	1612*
0042 GA400117	0.48	744	938
0043 GA400118	0.47	317	400
0044 GA400119	0.46	332	419
0045 GA400120	0.48	256	323
0046 GA400121	0.46	293	369
0047 GA400122	0.46	199	250
0048 GA400123	0.46	268	338
0049 GA400124	0.47	250	315
0050 GA400125	0.45	292	368
0051 GA400126	0.32	765	965
0052 GA400127	0.38	323	407
0053 GA400128	0.41	258	325
0054 GA400129	0.43	221	279
0055 GA400130	0.46	98	123
0056 GA400131	0.45	137	173
0057 GA400132	0.44	162	204
0058 GA400133	0.46	3610	4552
0059 GA400134	0.46	302	381
0060 GA400135	0.44	589	743
0061 GA400136	0.45	144	181
0062 GA400137	0.44	123	155
0063 GA400138	0.47	143	180
0064 GA400139	0.45	139	176
0065 GA400140	0.44	208	262
0066 GA400141	0.44	213	268
0067 GA400142	0.45	151	190
0068 GA400143	0.43	366	461
0069 GA400144	0.39	174	219
0070 GA400145	0.45	148	186
0071 GA400146	0.45	127	160
0072 GA400147	0.47	169	213
0073 GA400148	0.45	608	766
0074 GA400149	0.43	138	174
0075 GA400150	0.44	133	167
0076 GA400151	0.42	139	176
0077 GA400152	0.45	320	404
0078 GA400153	0.44	277	349
0079 GA400154	0.46	130	164
0080 GA400155	0.43	568	716



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA400156	6.29	11.88	X	76.2	0.2	0.2	753	4.96	7.09	0.56
0082 GA400157	5.90	11.14	X	77.6	0.1	X	1213	4.41	6.31	0.59
0083 GA400158	2.79	5.27	187	1.5	7.8	11.0	X	5.92	8.46	10.74
0084 GA400159	6.00	11.33	X	48.4	0.1	X	112	3.80	5.44	0.82
0085 GA400160	6.25	11.81	X	184.3	X	X	630	4.48	6.41	0.68
0086 GA400161	6.30	11.91	X	112.3	0.1	X	1643	5.11	7.31	0.68
0087 GA400162	5.91	11.17	X	257.5	X	X	368	4.78	6.84	0.60
0088 GA400163	6.00	11.33	X	235.7	0.1	X	489	4.35	6.21	0.46
0089 GA400164	5.82	11.00	X	384.1	0.1	X	322	5.03	7.19	0.49
0090 GA400165	5.73	10.82	X	226.1	0.1	X	403	4.36	6.24	0.57
0091 GA400166	6.03	11.39	X	95.8	0.1	X	810	4.88	6.98	0.57
0092 GA400167	6.01	11.35	X	51.1	0.3	0.4	1932	4.29	6.14	0.41
0093 GA400168	6.12	11.57	X	107.3	0.1	X	4064	4.37	6.25	0.43
0094 GA400169	5.96	11.27	X	239.2	X	X	5269	5.29	7.56	0.45
0095 GA400170	6.11	11.55	X	56.8	X	X	4716	4.52	6.47	0.43
0096 GA400171	6.41	12.11	X	36.0	X	X	982	4.19	5.99	0.54
0097 GA400172	6.58	12.44	X	15.4	X	X	1348	4.16	5.94	0.60
0098 GA400173	6.43	12.15	X	100.8	X	X	6709	4.36	6.24	0.47
0099 GA400174	5.95	11.24	X	369.3	X	X	8336	3.32	4.75	0.41
0100 GA400175	5.79	10.95	X	699.9	X	X	4680	4.08	5.84	0.37
0101 GA400176	6.21	11.74	X	51.7	X	X	1064	3.78	5.40	0.54
0102 GA400177	6.20	11.72	X	184.8	X	X	4652	4.15	5.93	0.51
0103 GA400178	6.02	11.37	X	251.8	X	X	3421	4.10	5.86	0.46
0104 GA400179	6.51	12.29	X	202.1	0.1	X	915	4.50	6.44	0.40
0105 GA400180	4.47	8.44	X	655.2	X	X	2096	3.40	4.87	0.27
0106 GA400181	5.79	10.93	X	882.3	X	X	1023	4.11	5.87	0.32
0107 GA400182	5.04	9.53	X	2377.1	X	X	1389	3.82	5.46	0.38
0108 GA400183	5.95	11.24	X	72.1	X	X	1653	4.03	5.76	0.40
0109 GA400184	5.81	10.98	X	46.1	X	X	1215	4.32	6.17	0.38
0110 GA400185	6.12	11.56	X	162.4	X	X	3935	3.80	5.43	0.45
0111 GA400186	6.05	11.43	X	70.2	0.2	0.2	1880	4.52	6.47	0.46
0112 GA400187	5.97	11.27	X	127.2	X	X	5063	4.35	6.23	0.43
CHECKS										
0001 GA400094	6.44	12.17	X	444.6	X	X	145	6.19	8.85	1.06
0002 GA400113	5.90	11.15	X	37.9	0.1	X	58	3.76	5.37	0.67
0003 GA400130	6.05	11.43	X	125.9	0.1	X	220	3.46	4.94	1.44
0004 GA400173	6.55	12.38	X	99.4	X	X	6819	4.40	6.30	0.47



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA400156	0.92	1535	1982	156	X	X	33.1	70.7	0.01	0.25
0082 GA400157	0.98	754	974	42	0.07	X	35.5	76.0	0.01	0.25
0083 GA400158	17.82	1480	1911	17	X	1.1	24.8	53.0	X	0.16
0084 GA400159	1.36	844	1089	7	X	X	36.5	78.2	0.01	0.26
0085 GA400160	1.12	719	928	26	X	X	35.5	76.0	0.01	0.28
0086 GA400161	1.13	776	1002	19	0.05	X	36.2	77.3	0.01	0.27
0087 GA400162	0.99	631	815	20	X	X	32.6	69.8	0.01	0.25
0088 GA400163	0.76	432	558	221	X	X	36.1	77.3	X	0.26
0089 GA400164	0.81	749	967	666	0.07	0.7	36.2	77.5	0.01	0.24
0090 GA400165	0.94	699	903	731	0.07	X	37.1	79.4	0.01	0.25
0091 GA400166	0.95	554	716	38	0.05	X	34.6	74.0	X	0.26
0092 GA400167	0.68	388	501	33	0.10	X	33.9	72.5	0.01	0.26
0093 GA400168	0.72	364	470	37	0.16	X	34.3	73.4	0.02	0.26
0094 GA400169	0.75	470	607	46	0.18	X	33.6	71.9	0.02	0.25
0095 GA400170	0.71	389	502	53	0.15	X	33.5	71.7	0.02	0.25
0096 GA400171	0.89	440	568	20	X	X	34.4	73.6	0.02	0.28
0097 GA400172	1.00	462	597	15	0.06	X	35.4	75.7	0.01	0.29
0098 GA400173	0.79	291	376	22	0.28	X	33.2	71.0	0.02	0.27
0099 GA400174	0.68	397	513	20	0.40	X	34.6	73.9	0.02	0.26
0100 GA400175	0.61	658	849	37	0.22	0.7	34.5	73.8	0.02	0.25
0101 GA400176	0.89	497	641	16	0.07	X	35.4	75.7	0.02	0.27
0102 GA400177	0.85	403	521	25	0.28	X	35.2	75.3	0.02	0.26
0103 GA400178	0.77	311	402	27	0.18	X	34.0	72.8	0.02	0.27
0104 GA400179	0.66	313	404	39	0.06	1.0	33.4	71.4	0.02	0.26
0105 GA400180	0.44	365	472	2369	0.25	1.4	37.3	79.8	0.02	0.19
0106 GA400181	0.53	297	383	1528	0.17	1.2	34.0	72.8	0.02	0.22
0107 GA400182	0.63	415	536	2616	0.23	0.9	36.0	76.9	0.01	0.22
0108 GA400183	0.67	338	436	106	0.06	0.6	34.0	72.7	0.01	0.26
0109 GA400184	0.63	371	479	122	0.06	X	33.6	72.0	0.01	0.25
0110 GA400185	0.74	375	484	51	0.13	X	34.3	73.5	0.01	0.26
0111 GA400186	0.76	464	599	33	0.09	X	34.3	73.4	0.01	0.27
0112 GA400187	0.72	542	700	95	0.14	X	34.4	73.6	0.01	0.26
CHECKS										
0001 GA400094	1.75	901	1163	80	X	0.6	28.2	60.3	0.02	0.31
0002 GA400113	1.11	548	707	28	X	X	36.2	77.4	0.03	0.25
0003 GA400130	2.39	681	879	9	X	X	32.1	68.7	0.01	0.26
0004 GA400173	0.79	293	379	24	0.28	X	34.0	72.7	0.02	0.28



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

SAMPLE NUMBERS			
0081 GA400156	0.41	1.20%	1.52%
0082 GA400157	0.41	631	796
0083 GA400158	0.26	1671	2107
0084 GA400159	0.44	160	202
0085 GA400160	0.46	236	297
0086 GA400161	0.45	216	272
0087 GA400162	0.42	133	168
0088 GA400163	0.43	257	324
0089 GA400164	0.40	3525	4445
0090 GA400165	0.41	2793	3522
0091 GA400166	0.44	268	338
0092 GA400167	0.43	257	325
0093 GA400168	0.43	208	263
0094 GA400169	0.42	225	284
0095 GA400170	0.42	175	220
0096 GA400171	0.46	110	138
0097 GA400172	0.48	105	133
0098 GA400173	0.46	194	245
0099 GA400174	0.43	1089	1373
0100 GA400175	0.42	4331	5462
0101 GA400176	0.46	195	246
0102 GA400177	0.44	354	447
0103 GA400178	0.44	107	136
0104 GA400179	0.43	317	400
0105 GA400180	0.31	838	1057
0106 GA400181	0.36	411	518
0107 GA400182	0.36	1844	2325
0108 GA400183	0.44	275	347
0109 GA400184	0.42	208	262
0110 GA400185	0.43	243	306
0111 GA400186	0.45	312	393
0112 GA400187	0.44	1343	1694

CHECKS			
0001 GA400094	0.51	1085	1369
0002 GA400113	0.43	374	471
0003 GA400130	0.44	136	172
0004 GA400173	0.47	234	295



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
STANDARDS										
0001 OREAS 901	7.23	13.67	73	4.4	0.1	X	1481	4.04	5.77	0.63
0002 OREAS 523	2.95	5.57	655	14.6	3.5	4.8	1.68%	27.49	39.31	1.01
0003 OREAS 701	6.54	12.36	X	6.9	3.8	5.3	4982	24.09	34.44	0.77
0004 AMISO401	3.53	6.66	X	290.3	10.6	14.8	1644	18.69	26.72	2.01
0005 GW-01	4.44	8.39	X	2.6	8.2	11.5	259	3.57	5.10	5.15
BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	0.02	0.02	X
0002 Control Blank	0.05	0.10	X	0.2	X	X	X	0.02	0.03	X
0003 Control Blank	0.02	0.04	X	X	X	X	X	X	X	X
0004 Control Blank	0.05	0.09	X	X	X	X	X	0.02	0.03	X
0005 Control Blank	0.03	0.06	X	0.5	X	X	X	X	X	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
STANDARDS										
0001 OREAS 901	1.05	306	395	8	0.05	2.5	33.3	71.2	X	0.36
0002 OREAS 523	1.68	4688	6054	323	4.39	11.0	12.7	27.2	X	0.29
0003 OREAS 701	1.27	3282	4238	256	0.67	0.6	15.9	34.1	0.02	0.16
0004 AMISO401	3.33	2.82%	3.64%	5	8.66	1.2	14.0	30.0	X	0.24
0005 GW-01	8.54	782	1009	11	0.23	0.9	25.2	53.9	X	0.09
BLANKS										
0001 Control Blank	X	X	X	2	X	X	X	X	X	X
0002 Control Blank	X	X	X	X	X	X	0.3	0.6	X	X
0003 Control Blank	X	X	X	X	X	X	0.1	X	X	X
0004 Control Blank	X	X	X	X	X	X	0.3	0.6	X	X
0005 Control Blank	X	X	X	2	X	X	0.1	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
STANDARDS			
0001 OREAS 901	0.61	30	38
0002 OREAS 523	0.49	179	225
0003 OREAS 701	0.27	2.30%	2.90%
0004 AMIS0401	0.40	774	976
0005 GW-01	0.15	2924	3687

BLANKS			
0001 Control Blank	X	X	X
0002 Control Blank	X	29	37
0003 Control Blank	X	20	26
0004 Control Blank	X	29	37
0005 Control Blank	X	19	24



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
PO Box 517
WEST PERTH, W.A. 6872
AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904873
NO. SAMPLES : 176
NO. ELEMENTS : 23
CLIENT ORDER NO. : GW5339 (Job 1 of 1)
SAMPLE SUBMISSION NO. : GW5339
PROJECT : HATCHES CREEK
SAMPLE TYPE : RC
DATE RECEIVED : 02/04/2019
DATE REPORTED : 17/04/2019
DATE PRINTED : 17/04/2019

REPORT NOTES

TESTED BY

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues will be stored for 60 days without charge. Following this samples will be stored at a daily rate until clients written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m3 per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m3.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice fo return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA400188	5.26	9.95	X	43.6	X	X	203	5.43	7.77	0.37
0002 GA400189	6.71	12.68	X	49.1	X	X	252	5.41	7.73	0.44
0003 GA400190	6.24	11.79	X	28.2	X	X	174	4.51	6.45	0.51
0004 GA400191	6.11	11.55	X	15.3	X	X	184	5.49	7.85	0.62
0005 GA400192	5.88	11.10	X	252.3	X	X	196	5.32	7.61	0.61
0006 GA400193	5.50	10.38	X	42.2	X	X	477	5.69	8.14	0.39
0007 GA400194	5.98	11.29	X	37.7	0.1	X	431	6.35	9.09	0.42
0008 GA400195	5.51	10.41	X	80.1	X	X	913	6.27	8.97	0.40
0009 GA400196	4.53	8.55	X	27.4	X	X	742	5.22	7.47	0.37
0010 GA400197	5.38	10.16	X	26.6	X	X	541	6.29	9.00	0.30
0011 GA400198	6.24	11.79	X	40.0	X	X	860	5.51	7.88	0.78
0012 GA400199	6.24	11.79	X	23.5	X	X	775	4.75	6.80	0.69
0013 GA400200	6.33	11.97	X	14.5	X	X	900	5.55	7.94	0.67
0014 GA400201	5.11	9.65	X	44.1	0.1	X	473	4.75	6.79	0.38
0015 GA400202	6.04	11.41	X	64.7	0.2	0.3	735	5.44	7.78	0.69
0016 GA400203	6.08	11.49	X	32.8	0.1	X	1531	5.13	7.33	0.78
0017 GA400204	6.19	11.70	X	42.9	0.1	X	603	5.05	7.23	0.79
0018 GA400205	5.21	9.85	X	493.0	X	X	1109	4.53	6.47	0.47
0019 GA400206	5.40	10.20	X	301.7	X	X	911	4.19	5.99	0.56
0020 GA400207	6.45	12.19	X	100.2	X	X	738	3.84	5.50	0.54
0021 GA400208	7.32	13.83	X	29.5	0.1	X	2851	4.25	6.08	0.72
0022 GA400209	5.72	10.81	X	465.8	0.1	X	2236	4.21	6.02	0.51
0023 GA400210	4.32	8.17	X	253.0	X	X	844	4.18	5.97	0.40
0024 GA400211	4.23	7.99	X	628.7	X	X	1677	4.00	5.72	0.38
0025 GA400212	5.11	9.65	X	428.0	X	X	2075	3.89	5.56	0.49
0026 GA400213	5.88	11.11	X	37.4	X	X	1329	4.87	6.96	0.86
0027 GA400214	6.34	11.97	X	43.5	X	X	968	5.02	7.18	0.71
0028 GA400215	5.95	11.24	X	57.1	X	X	913	4.83	6.91	0.84
0029 GA400216	6.32	11.94	X	61.6	X	X	1810	4.24	6.07	0.78
0030 GA400217	5.46	10.31	X	51.0	X	X	1998	5.54	7.92	0.83
0031 GA400218	5.33	10.06	X	174.6	X	X	3391	4.78	6.84	0.84
0032 GA400219	3.75	7.09	X	15.3	0.1	X	2201	4.54	6.49	0.24
0033 GA400220	8.07	15.26	X	9.1	0.1	X	1262	5.41	7.73	0.71
0034 GA400221	6.23	11.78	X	4.9	0.1	X	307	5.04	7.21	1.13
0035 GA400222	5.09	9.61	X	6.5	X	X	187	4.61	6.59	0.89
0036 GA400223	6.23	11.77	X	11.7	0.1	X	361	5.71	8.17	0.82
0037 GA400224	6.07	11.47	X	10.0	0.1	X	294	5.13	7.34	1.03
0038 GA400225	6.50	12.28	X	17.1	0.1	0.2	213	4.96	7.09	1.13
0039 GA400226	5.78	10.92	X	8.0	0.3	0.4	777	4.30	6.14	0.83
0040 GA400227	6.20	11.71	X	7.1	0.1	X	652	4.81	6.88	1.06



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA400188	0.62	689	889	19	X	X	35.0	74.9	0.02	0.32
0002 GA400189	0.72	533	688	9	X	X	33.6	72.0	0.02	0.32
0003 GA400190	0.84	592	765	6	X	X	33.5	71.6	0.03	0.31
0004 GA400191	1.03	504	651	10	X	X	33.7	72.2	0.02	0.31
0005 GA400192	1.01	520	671	12	X	X	34.2	73.3	0.01	0.31
0006 GA400193	0.65	381	492	24	X	X	35.3	75.5	0.02	0.28
0007 GA400194	0.69	426	550	15	X	0.6	33.2	71.0	0.02	0.30
0008 GA400195	0.67	970	1252	23	X	0.6	34.0	72.8	0.02	0.29
0009 GA400196	0.62	286	370	35	X	0.5	36.9	78.9	0.01	0.23
0010 GA400197	0.50	287	371	39	X	0.6	31.2	66.8	0.02	0.27
0011 GA400198	1.29	728	940	13	X	X	35.1	75.0	0.02	0.32
0012 GA400199	1.15	549	709	9	X	X	33.4	71.4	X	0.34
0013 GA400200	1.12	600	774	24	X	X	34.1	73.0	0.01	0.33
0014 GA400201	0.63	332	429	19	X	X	34.6	74.1	0.02	0.25
0015 GA400202	1.15	764	987	13	X	X	33.8	72.3	0.02	0.31
0016 GA400203	1.30	909	1173	17	X	X	34.6	74.1	0.02	0.32
0017 GA400204	1.30	951	1228	12	X	X	33.2	71.1	0.01	0.32
0018 GA400205	0.78	2751	3553	28	X	0.5	35.1	75.1	0.02	0.25
0019 GA400206	0.93	695	898	15	X	X	32.4	69.2	0.04	0.26
0020 GA400207	0.90	995	1285	15	X	X	34.3	73.4	0.03	0.24
0021 GA400208	1.19	1064	1374	13	X	X	33.1	70.9	0.04	0.29
0022 GA400209	0.85	586	756	25	X	X	35.7	76.4	0.03	0.26
0023 GA400210	0.66	432	558	16	X	0.5	37.8	80.9	0.02	0.21
0024 GA400211	0.63	737	951	18	X	0.7	38.3	81.8	0.03	0.20
0025 GA400212	0.81	979	1264	19	X	0.7	37.0	79.1	0.02	0.25
0026 GA400213	1.43	2675	3454	11	X	X	32.1	68.7	0.02	0.30
0027 GA400214	1.18	822	1062	17	X	X	34.8	74.4	0.01	0.32
0028 GA400215	1.39	1004	1297	10	X	X	35.0	74.9	0.01	0.31
0029 GA400216	1.30	913	1178	12	X	X	35.0	74.8	0.01	0.33
0030 GA400217	1.37	736	950	29	X	X	35.1	75.2	0.02	0.26
0031 GA400218	1.39	813	1050	21	X	X	35.5	75.9	0.02	0.27
0032 GA400219	0.40	2554	3298	54	X	0.5	36.4	77.9	0.01	0.19
0033 GA400220	1.17	660	853	24	X	X	33.7	72.1	0.02	0.38
0034 GA400221	1.88	1161	1499	13	X	X	33.8	72.3	X	0.33
0035 GA400222	1.48	975	1259	14	X	X	35.7	76.4	0.01	0.26
0036 GA400223	1.36	939	1212	24	X	X	33.8	72.4	0.02	0.32
0037 GA400224	1.71	1112	1436	17	X	X	34.1	73.0	X	0.32
0038 GA400225	1.88	1204	1554	20	X	X	34.7	74.1	0.01	0.33
0039 GA400226	1.38	858	1108	23	X	X	36.3	77.6	0.01	0.27
0040 GA400227	1.76	986	1273	16	X	X	33.7	72.2	0.01	0.32



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA400188	0.53	3825	4824
0002 GA400189	0.54	998	1259
0003 GA400190	0.52	577	728
0004 GA400191	0.52	421	531
0005 GA400192	0.51	262	330
0006 GA400193	0.47	482	608
0007 GA400194	0.50	879	1108
0008 GA400195	0.48	6530	8235
0009 GA400196	0.38	679	856
0010 GA400197	0.45	658	830
0011 GA400198	0.53	228	288
0012 GA400199	0.56	137	173
0013 GA400200	0.55	322	406
0014 GA400201	0.41	327	412
0015 GA400202	0.52	376	474
0016 GA400203	0.53	488	615
0017 GA400204	0.54	222	280
0018 GA400205	0.41	1.57%	1.98%
0019 GA400206	0.43	1258	1586
0020 GA400207	0.41	1905	2402
0021 GA400208	0.48	2944	3713
0022 GA400209	0.43	870	1097
0023 GA400210	0.34	462	583
0024 GA400211	0.33	2580	3253
0025 GA400212	0.42	3956	4989
0026 GA400213	0.51	1.20%	1.51%
0027 GA400214	0.53	769	970
0028 GA400215	0.51	452	569
0029 GA400216	0.55	261	329
0030 GA400217	0.44	643	811
0031 GA400218	0.45	275	347
0032 GA400219	0.31	1.64%	2.07%
0033 GA400220	0.63	347	438
0034 GA400221	0.55	107	135
0035 GA400222	0.43	100	127
0036 GA400223	0.53	191	241
0037 GA400224	0.53	143	180
0038 GA400225	0.55	122	154
0039 GA400226	0.45	116	147
0040 GA400227	0.53	170	215



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA400228	10.63	20.08	55	7.3	3.5	5.0	97	3.34	4.78	3.74
0042 GA400229	5.92	11.19	X	46.1	X	X	442	5.89	8.43	0.39
0043 GA400230	5.84	11.04	X	6.1	0.1	X	1729	4.86	6.95	0.94
0044 GA400231	5.57	10.52	X	25.2	0.1	X	1955	4.26	6.09	0.86
0045 GA400232	5.47	10.34	X	15.3	0.2	0.2	785	4.08	5.84	0.81
0046 GA400233	6.09	11.51	X	7.8	0.1	X	106	4.73	6.76	1.03
0047 GA400234	5.45	10.30	X	28.4	0.1	X	2170	5.15	7.37	0.84
0048 GA400235	6.19	11.70	X	25.6	0.1	X	2779	4.74	6.78	0.92
0049 GA400236	6.00	11.34	X	10.6	0.1	X	1212	4.55	6.51	1.11
0050 GA400237	6.17	11.66	X	7.5	0.1	X	228	5.14	7.35	1.08
0051 GA400238	5.89	11.13	X	6.0	0.1	X	64	4.80	6.86	1.08
0052 GA400239	5.96	11.26	X	10.1	0.1	X	948	5.24	7.50	0.90
0053 GA400240	5.73	10.82	X	7.9	0.1	0.2	81	5.13	7.34	1.18
0054 GA400241	6.08	11.49	X	16.7	0.2	0.3	173	5.38	7.69	1.13
0055 GA400242	5.95	11.24	X	21.2	0.1	X	1291	5.52	7.89	0.94
0056 GA400243	4.76	9.00	X	8.3	0.1	X	2131	3.92	5.60	0.64
0057 GA400244	6.11	11.54	X	6.7	0.1	X	331	4.61	6.59	1.03
0058 GA400245	5.34	10.09	X	6.4	0.1	X	171	4.04	5.78	0.92
0059 GA400246	5.92	11.19	X	7.3	0.1	X	95	4.33	6.19	1.02
0060 GA400247	5.98	11.30	X	7.1	0.1	X	30	3.87	5.53	1.08
0061 GA400248	6.29	11.88	X	11.5	0.2	0.2	68	4.75	6.79	1.25
0062 GA400249	6.03	11.40	X	9.2	0.2	0.2	798	5.08	7.26	1.23
0063 GA400250	5.93	11.21	X	10.3	0.1	0.2	767	4.84	6.92	1.17
0064 GA400251	6.14	11.59	X	12.6	0.2	0.2	431	4.19	5.99	1.08
0065 GA400252	5.81	10.97	X	5.3	0.2	0.3	188	4.11	5.88	1.25
0066 GA400253	5.91	11.16	X	7.2	0.1	X	180	4.43	6.34	1.06
0067 GA400254	5.77	10.91	X	11.8	0.1	X	410	4.66	6.66	1.26
0068 GA400255	5.43	10.25	X	11.8	0.1	X	650	4.40	6.29	0.98
0069 GA400256	5.28	9.97	X	23.9	0.1	X	1852	4.63	6.62	1.08
0070 GA400257	5.44	10.28	X	22.0	0.1	X	4943	5.44	7.77	0.93
0071 GA400258	5.80	10.97	X	12.7	0.2	0.2	5723	4.38	6.26	0.76
0072 GA400259	5.90	11.14	X	26.9	0.1	X	2414	3.63	5.19	0.64
0073 GA400260	5.21	9.85	X	17.7	0.1	X	4560	3.82	5.46	0.65
0074 GA400261	3.49	6.59	X	8.5	0.1	X	3328	2.55	3.64	0.50
0075 GA400262	6.61	12.48	X	28.0	0.2	0.3	4098	4.55	6.51	1.06
0076 GA400263	5.61	10.60	X	23.3	0.3	0.3	3559	5.44	7.78	1.22
0077 GA400264	5.80	10.96	X	9.0	0.2	0.2	153	3.82	5.47	1.89
0078 GA400265	5.82	11.00	X	13.5	0.1	X	238	4.92	7.03	3.14
0079 GA400266	5.75	10.86	X	9.7	0.1	0.2	140	5.81	8.31	2.62
0080 GA400267	7.80	14.74	X	19.7	0.2	0.3	802	5.88	8.40	3.03



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA400228	6.19	965	1246	132	2.14	31.7	21.9	46.9	X	0.18
0042 GA400229	0.65	389	503	24	X	X	35.2	75.3	0.02	0.30
0043 GA400230	1.56	1027	1326	27	X	X	34.2	73.2	X	0.31
0044 GA400231	1.43	1029	1328	11	X	X	35.6	76.2	0.01	0.28
0045 GA400232	1.34	775	1001	17	X	X	35.1	75.0	0.01	0.29
0046 GA400233	1.71	863	1115	17	X	X	31.2	66.6	0.01	0.32
0047 GA400234	1.38	770	994	19	X	X	35.9	76.8	0.02	0.27
0048 GA400235	1.52	917	1185	16	X	X	34.3	73.3	0.01	0.32
0049 GA400236	1.84	1061	1369	38	X	X	29.2	62.4	X	0.32
0050 GA400237	1.79	1013	1308	18	X	0.5	33.6	71.9	0.01	0.32
0051 GA400238	1.79	1090	1408	12	X	X	31.8	68.1	X	0.31
0052 GA400239	1.49	923	1192	23	X	X	32.9	70.4	0.02	0.31
0053 GA400240	1.96	1144	1477	17	X	X	33.1	70.7	0.01	0.30
0054 GA400241	1.87	920	1188	20	X	X	33.6	71.9	0.02	0.31
0055 GA400242	1.56	757	978	36	X	X	33.4	71.4	0.01	0.30
0056 GA400243	1.06	943	1218	278	0.09	X	35.7	76.3	0.02	0.23
0057 GA400244	1.71	841	1085	25	X	X	33.7	72.2	X	0.32
0058 GA400245	1.53	788	1018	16	X	X	34.6	74.1	0.01	0.28
0059 GA400246	1.69	912	1178	21	X	X	34.0	72.8	X	0.31
0060 GA400247	1.79	850	1097	27	X	X	32.4	69.3	X	0.32
0061 GA400248	2.07	1010	1304	14	X	X	32.2	68.8	0.01	0.31
0062 GA400249	2.05	1214	1568	25	X	X	34.2	73.1	0.01	0.31
0063 GA400250	1.94	1087	1404	11	X	X	33.8	72.2	0.01	0.31
0064 GA400251	1.79	939	1213	14	X	X	33.0	70.6	0.01	0.32
0065 GA400252	2.08	886	1144	9	X	0.6	32.3	69.1	X	0.31
0066 GA400253	1.76	758	979	15	X	X	33.1	70.8	X	0.31
0067 GA400254	2.08	1040	1342	12	X	X	32.9	70.5	X	0.31
0068 GA400255	1.63	1134	1464	13	X	X	33.7	72.0	0.01	0.28
0069 GA400256	1.80	1360	1756	16	0.07	X	30.6	65.4	0.01	0.27
0070 GA400257	1.55	1248	1612	21	0.19	X	32.4	69.3	0.01	0.28
0071 GA400258	1.25	830	1072	14	0.18	X	32.4	69.3	0.01	0.30
0072 GA400259	1.07	617	797	19	0.08	X	32.4	69.2	0.01	0.29
0073 GA400260	1.08	733	947	12	0.14	X	32.5	69.5	X	0.28
0074 GA400261	0.83	432	558	15	0.13	X	36.6	78.3	X	0.19
0075 GA400262	1.76	887	1146	16	0.18	X	34.0	72.8	0.01	0.34
0076 GA400263	2.02	1052	1358	18	0.18	X	33.3	71.3	0.01	0.29
0077 GA400264	3.14	861	1112	9	X	X	32.6	69.8	X	0.31
0078 GA400265	5.20	1254	1619	12	X	X	31.7	67.8	X	0.31
0079 GA400266	4.34	1363	1760	16	X	X	33.9	72.5	X	0.31
0080 GA400267	5.03	1586	2047	10	X	X	30.6	65.5	0.01	0.40



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA400228	0.30	2.71%	3.42%
0042 GA400229	0.50	544	686
0043 GA400230	0.51	284	359
0044 GA400231	0.47	742	936
0045 GA400232	0.48	166	209
0046 GA400233	0.53	196	247
0047 GA400234	0.46	323	407
0048 GA400235	0.53	149	187
0049 GA400236	0.54	184	233
0050 GA400237	0.54	128	161
0051 GA400238	0.52	36	45
0052 GA400239	0.52	165	208
0053 GA400240	0.50	93	117
0054 GA400241	0.52	160	202
0055 GA400242	0.49	177	223
0056 GA400243	0.38	3774	4759
0057 GA400244	0.53	131	165
0058 GA400245	0.46	101	127
0059 GA400246	0.52	104	132
0060 GA400247	0.53	45	57
0061 GA400248	0.52	228	288
0062 GA400249	0.51	1427	1799
0063 GA400250	0.51	109	137
0064 GA400251	0.53	254	320
0065 GA400252	0.51	33	41
0066 GA400253	0.52	53	67
0067 GA400254	0.51	79	100
0068 GA400255	0.46	790	996
0069 GA400256	0.46	890	1123
0070 GA400257	0.46	264	333
0071 GA400258	0.50	137	173
0072 GA400259	0.49	120	151
0073 GA400260	0.46	145	182
0074 GA400261	0.32	146	185
0075 GA400262	0.57	451	569
0076 GA400263	0.48	887	1119
0077 GA400264	0.52	89	112
0078 GA400265	0.52	62	78
0079 GA400266	0.52	179	225
0080 GA400267	0.67	98	124



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA400268	5.69	10.75	X	10.3	0.1	X	276	4.85	6.94	1.78
0082 GA400269	6.22	11.75	X	9.3	0.1	X	216	4.75	6.79	1.35
0083 GA400270	2.56	4.84	534	0.7	8.8	12.3	X	6.11	8.73	11.68
0084 GA400271	5.31	10.03	X	567.4	0.1	X	1049	4.45	6.36	0.49
0085 GA400272	6.36	12.01	X	10.5	0.2	0.2	333	4.71	6.74	1.28
0086 GA400273	6.13	11.59	X	10.0	0.1	X	281	4.48	6.41	1.10
0087 GA400274	6.26	11.83	X	5.2	0.2	0.3	97	4.40	6.29	1.24
0088 GA400275	6.28	11.87	X	8.5	0.2	0.2	86	4.87	6.97	1.23
0089 GA400276	6.27	11.85	X	10.5	0.1	X	98	4.27	6.10	1.06
0090 GA400277	5.67	10.71	X	9.6	0.1	X	58	4.43	6.34	0.98
0091 GA400278	6.17	11.65	X	32.9	0.4	0.5	183	7.34	10.49	1.22
0092 GA400279	6.26	11.83	X	17.4	0.1	X	107	4.72	6.75	1.20
0093 GA400280	6.11	11.55	X	9.4	0.1	0.2	35	4.46	6.37	1.16
0094 GA400281	6.11	11.54	X	8.2	0.1	X	36	4.35	6.22	1.26
0095 GA400282	6.14	11.60	X	7.1	0.1	0.2	77	4.41	6.31	1.12
0096 GA400283	6.20	11.71	X	13.9	0.1	X	1144	4.56	6.52	0.82
0097 GA400284	5.85	11.05	X	40.3	0.2	0.2	4327	4.26	6.10	0.42
0098 GA400285	6.45	12.19	X	14.0	0.1	X	573	4.49	6.42	0.57
0099 GA400286	4.68	8.84	X	22.7	0.3	0.4	1973	3.37	4.81	0.41
0100 GA400287	6.55	12.38	X	21.3	0.1	0.2	806	5.50	7.86	1.36
0101 GA400288	6.38	12.05	X	10.0	0.1	X	241	4.40	6.30	1.26
0102 GA400289	6.30	11.91	X	5.8	0.1	X	69	4.29	6.14	1.23
0103 GA400290	6.20	11.72	X	6.2	0.2	0.2	101	5.44	7.78	1.78
0104 GA400291	6.34	11.98	X	8.7	0.1	X	146	4.79	6.85	1.25
0105 GA400292	6.00	11.33	X	6.3	0.1	0.2	58	4.77	6.81	1.35
0106 GA400293	6.05	11.44	X	9.7	0.1	X	194	4.80	6.86	1.31
0107 GA400294	6.36	12.01	X	5.6	0.1	X	104	4.58	6.55	1.30
0108 GA400295	6.61	12.50	X	20.5	0.3	0.4	161	4.53	6.47	1.25
0109 GA400296	5.75	10.86	X	17.3	0.2	0.3	116	3.61	5.16	1.16
0110 GA400297	4.35	8.21	X	17.2	0.1	X	499	3.06	4.37	0.32
0111 GA400298	6.23	11.76	X	12.4	0.1	X	89	4.59	6.56	0.87
0112 GA400299	5.98	11.31	X	10.3	0.2	0.2	81	4.27	6.10	1.16
0113 GA400300	6.29	11.89	X	15.6	0.2	0.2	137	5.67	8.10	1.31
0114 GA400301	6.23	11.76	X	9.4	0.1	0.2	160	4.81	6.88	1.38
0115 GA400302	6.33	11.95	X	10.8	0.1	X	105	4.80	6.86	1.31
0116 GA400303	6.28	11.86	X	9.8	0.2	0.3	140	5.17	7.39	1.47
0117 GA400304	6.02	11.38	X	7.7	0.1	X	88	4.56	6.52	1.30
0118 GA400305	5.99	11.32	X	11.5	0.1	X	360	6.25	8.94	1.76
0119 GA400306	6.29	11.88	X	8.6	0.2	0.2	109	5.51	7.88	1.43
0120 GA400307	6.00	11.34	X	10.3	0.2	0.2	145	5.34	7.63	1.43



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA400268	2.95	1395	1802	13	X	X	31.1	66.5	X	0.30
0082 GA400269	2.24	1144	1477	11	X	X	34.9	74.7	0.01	0.32
0083 GA400270	19.36	1578	2037	6	X	1.3	25.9	55.4	X	0.14
0084 GA400271	0.81	2851	3682	29	X	0.6	35.0	74.9	0.02	0.24
0085 GA400272	2.13	1137	1469	16	X	X	34.0	72.7	0.02	0.32
0086 GA400273	1.83	944	1219	34	X	X	34.3	73.4	0.01	0.32
0087 GA400274	2.05	856	1106	28	X	X	34.1	73.0	X	0.34
0088 GA400275	2.04	946	1222	10	X	X	35.2	75.3	0.01	0.33
0089 GA400276	1.76	827	1067	19	X	X	34.7	74.3	X	0.33
0090 GA400277	1.62	961	1240	7	X	X	34.4	73.7	0.01	0.30
0091 GA400278	2.03	1544	1993	20	X	X	31.6	67.5	0.05	0.29
0092 GA400279	1.99	1201	1550	8	X	X	34.6	74.1	0.02	0.32
0093 GA400280	1.93	1007	1301	7	X	X	33.5	71.7	X	0.33
0094 GA400281	2.08	789	1019	17	X	X	33.2	71.1	X	0.33
0095 GA400282	1.85	708	914	24	X	X	34.0	72.8	X	0.33
0096 GA400283	1.36	620	801	28	X	X	34.4	73.5	X	0.33
0097 GA400284	0.69	308	397	33	0.12	X	36.8	78.7	0.02	0.30
0098 GA400285	0.95	470	607	54	X	X	35.3	75.5	0.01	0.33
0099 GA400286	0.68	699	902	1220	0.15	X	36.9	78.8	0.01	0.22
0100 GA400287	2.26	1137	1469	66	X	X	34.1	73.0	0.01	0.34
0101 GA400288	2.09	890	1149	40	X	X	34.2	73.1	X	0.34
0102 GA400289	2.04	864	1116	36	X	X	34.9	74.6	X	0.34
0103 GA400290	2.95	1229	1587	20	X	X	34.8	74.4	X	0.33
0104 GA400291	2.07	1100	1420	12	X	X	35.8	76.7	X	0.34
0105 GA400292	2.24	1268	1638	52	X	X	33.2	71.1	X	0.32
0106 GA400293	2.17	1063	1373	36	X	X	35.1	75.2	0.02	0.31
0107 GA400294	2.16	922	1191	16	X	X	34.4	73.5	X	0.34
0108 GA400295	2.07	1159	1497	10	X	X	35.0	74.8	0.02	0.27
0109 GA400296	1.92	855	1105	15	X	X	36.9	79.0	0.02	0.27
0110 GA400297	0.54	1504	1942	60	X	X	37.4	79.9	0.01	0.19
0111 GA400298	1.45	908	1173	49	X	X	34.6	74.1	0.02	0.32
0112 GA400299	1.93	1093	1411	22	X	X	35.0	74.8	0.01	0.31
0113 GA400300	2.18	1476	1906	13	X	X	34.9	74.7	0.01	0.33
0114 GA400301	2.28	1176	1519	16	X	X	34.8	74.4	X	0.34
0115 GA400302	2.18	1182	1527	15	X	X	34.3	73.4	X	0.34
0116 GA400303	2.44	1362	1758	16	X	X	34.5	73.8	0.01	0.32
0117 GA400304	2.15	1092	1410	12	X	X	33.8	72.4	X	0.32
0118 GA400305	2.93	1241	1602	19	X	X	34.0	72.7	0.01	0.32
0119 GA400306	2.37	1419	1832	13	X	X	34.6	74.0	0.02	0.33
0120 GA400307	2.37	1519	1961	8	X	X	33.9	72.5	0.02	0.31



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0081 GA400268	0.50	41	52
0082 GA400269	0.54	84	106
0083 GA400270	0.23	1281	1616
0084 GA400271	0.41	1.61%	2.03%
0085 GA400272	0.53	669	844
0086 GA400273	0.54	132	167
0087 GA400274	0.57	78	99
0088 GA400275	0.55	47	59
0089 GA400276	0.56	64	81
0090 GA400277	0.50	42	53
0091 GA400278	0.48	266	336
0092 GA400279	0.53	90	113
0093 GA400280	0.55	48	60
0094 GA400281	0.54	81	102
0095 GA400282	0.55	33	41
0096 GA400283	0.54	88	111
0097 GA400284	0.49	301	379
0098 GA400285	0.56	112	142
0099 GA400286	0.36	2399	3026
0100 GA400287	0.56	203	255
0101 GA400288	0.57	82	104
0102 GA400289	0.56	61	77
0103 GA400290	0.55	40	50
0104 GA400291	0.56	60	75
0105 GA400292	0.53	1733	2185
0106 GA400293	0.52	1206	1520
0107 GA400294	0.56	146	184
0108 GA400295	0.45	143	180
0109 GA400296	0.45	179	226
0110 GA400297	0.32	8382	1.06%
0111 GA400298	0.54	531	670
0112 GA400299	0.51	219	277
0113 GA400300	0.55	71	89
0114 GA400301	0.56	54	68
0115 GA400302	0.57	46	57
0116 GA400303	0.53	229	289
0117 GA400304	0.53	49	61
0118 GA400305	0.54	148	187
0119 GA400306	0.55	125	157
0120 GA400307	0.51	76	96



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0121 GA400308	6.59	12.45	X	10.5	0.3	0.4	166	5.83	8.34	1.68
0122 GA400309	6.19	11.70	X	7.0	0.1	0.2	106	5.04	7.20	1.41
0123 GA400310	6.43	12.15	X	7.1	0.1	X	88	4.60	6.58	1.24
0124 GA400311	5.87	11.10	X	6.7	0.2	0.2	88	4.70	6.72	1.18
0125 GA400312	6.76	12.77	X	6.7	4.0	5.6	4991	25.02	35.77	0.80
0126 GA400313	4.72	8.92	X	13.2	0.1	X	2178	5.09	7.27	0.30
0127 GA400314	6.33	11.96	X	10.7	0.2	0.2	109	5.33	7.62	1.13
0128 GA400315	6.13	11.59	X	9.6	0.2	0.3	152	5.43	7.76	1.47
0129 GA400316	7.68	14.50	X	17.3	0.5	0.7	189	9.02	12.89	2.29
0130 GA400317	7.02	13.26	X	18.4	0.7	0.9	221	7.11	10.16	2.06
0131 GA400318	6.28	11.86	X	8.6	0.3	0.4	107	5.67	8.10	1.86
0132 GA400319	5.99	11.31	X	9.6	0.4	0.5	174	5.54	7.92	1.37
0133 GA400320	5.99	11.31	X	6.5	0.2	0.3	67	4.82	6.89	1.23
0134 GA400321	6.16	11.65	X	9.2	0.1	X	116	4.91	7.02	0.98
0135 GA400322	6.49	12.27	X	5.9	0.1	X	95	4.16	5.95	1.00
0136 GA400323	6.18	11.68	X	12.0	0.2	0.2	70	4.31	6.17	0.49
0137 GA400324	6.02	11.38	X	10.7	0.1	X	131	4.56	6.52	0.94
0138 GA400325	6.09	11.51	X	8.5	0.1	0.2	369	5.57	7.96	1.71
0139 GA400326	6.08	11.49	X	9.8	0.1	X	183	4.84	6.92	1.40
0140 GA400327	6.22	11.75	X	10.5	0.1	X	270	6.41	9.16	1.68
0141 GA400328	5.89	11.13	X	12.2	0.2	0.2	94	4.71	6.73	0.86
0142 GA400329	6.29	11.89	X	14.4	0.1	0.2	171	5.41	7.73	1.81
0143 GA400330	6.35	11.99	X	9.6	0.1	X	108	4.98	7.13	1.34
0144 GA400331	6.43	12.16	X	7.0	0.2	0.3	187	5.20	7.44	1.46
0145 GA400332	6.61	12.49	X	6.4	0.2	0.2	371	4.67	6.67	1.40
0146 GA400333	6.44	12.16	X	8.0	0.1	0.2	226	4.85	6.93	1.02
0147 GA400334	6.27	11.86	X	7.4	0.2	0.2	68	4.96	7.09	1.07
0148 GA400335	6.41	12.10	X	9.2	0.6	0.8	118	4.79	6.85	1.19
0149 GA400336	6.00	11.34	X	17.6	0.1	0.2	176	4.98	7.13	1.00
0150 GA400337	6.39	12.06	X	11.5	0.4	0.5	181	5.17	7.39	1.10
0151 GA400338	6.39	12.06	X	10.9	0.1	0.2	135	4.52	6.46	1.11
0152 GA400339	6.43	12.15	X	6.4	0.1	X	84	4.76	6.80	1.08
0153 GA400340	6.38	12.06	X	8.4	0.2	0.2	50	4.97	7.11	1.08
0154 GA400341	6.59	12.45	X	10.2	0.2	0.3	185	5.09	7.28	1.21
0155 GA400342	6.46	12.21	X	7.1	0.2	0.2	107	4.95	7.08	1.14
0156 GA400343	7.06	13.34	X	9.6	0.2	0.2	79	4.78	6.84	1.21
0157 GA400344	9.85	18.62	X	11.9	1.0	1.4	99	8.42	12.04	1.74
0158 GA400345	9.63	18.19	X	10.5	0.2	0.3	107	6.65	9.50	1.50
0159 GA400346	10.71	20.23	X	16.2	0.5	0.7	268	9.48	13.55	2.17
0160 GA400347	11.74	22.18	X	12.4	0.4	0.5	70	11.25	16.09	2.39



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0121 GA400308	2.78	1672	2159	13	X	X	33.2	71.1	0.02	0.32
0122 GA400309	2.33	1277	1648	12	X	X	33.9	72.6	X	0.33
0123 GA400310	2.06	971	1253	18	X	X	35.1	75.1	X	0.35
0124 GA400311	1.96	1629	2103	98	X	X	34.0	72.7	X	0.30
0125 GA400312	1.33	3491	4508	257	0.69	X	16.5	35.4	0.02	0.16
0126 GA400313	0.50	1858	2399	51	X	X	36.4	77.9	0.02	0.24
0127 GA400314	1.88	1262	1630	9	X	X	33.7	72.2	0.01	0.34
0128 GA400315	2.44	1622	2095	8	X	X	33.9	72.5	0.02	0.32
0129 GA400316	3.79	2635	3402	9	X	X	27.6	59.0	0.03	0.52
0130 GA400317	3.42	2465	3183	7	X	X	29.6	63.4	0.02	0.41
0131 GA400318	3.08	1961	2532	7	X	X	34.8	74.5	0.01	0.35
0132 GA400319	2.28	1522	1966	12	X	X	33.9	72.6	0.01	0.32
0133 GA400320	2.05	1229	1587	6	X	X	34.5	73.7	0.01	0.31
0134 GA400321	1.63	1108	1431	11	X	X	34.1	73.0	0.02	0.33
0135 GA400322	1.66	880	1137	15	X	X	32.3	69.0	X	0.33
0136 GA400323	0.82	224	289	15	X	X	36.1	77.2	0.02	0.33
0137 GA400324	1.56	556	718	19	X	X	35.6	76.2	0.01	0.32
0138 GA400325	2.84	1335	1724	6	X	X	32.7	70.0	X	0.32
0139 GA400326	2.32	1254	1619	8	X	X	33.7	72.1	0.02	0.31
0140 GA400327	2.78	1457	1881	7	X	X	32.8	70.2	0.01	0.33
0141 GA400328	1.43	712	919	10	X	X	35.8	76.6	0.01	0.30
0142 GA400329	3.00	1327	1714	7	X	X	32.5	69.4	X	0.33
0143 GA400330	2.22	1107	1429	5	X	X	33.8	72.2	X	0.33
0144 GA400331	2.43	1249	1613	6	X	X	34.2	73.3	0.02	0.32
0145 GA400332	2.32	1011	1305	4	X	X	35.3	75.6	0.01	0.35
0146 GA400333	1.69	821	1060	5	X	X	32.0	68.4	0.01	0.34
0147 GA400334	1.78	836	1080	8	X	X	34.3	73.3	X	0.33
0148 GA400335	1.98	886	1144	8	X	X	34.4	73.7	X	0.34
0149 GA400336	1.66	921	1190	7	X	X	35.7	76.3	0.02	0.31
0150 GA400337	1.82	1104	1426	5	X	X	34.6	73.9	X	0.33
0151 GA400338	1.85	995	1285	4	X	X	33.9	72.5	0.01	0.33
0152 GA400339	1.80	842	1087	7	X	X	34.9	74.6	X	0.34
0153 GA400340	1.79	1080	1395	3	X	X	35.6	76.1	0.02	0.33
0154 GA400341	2.00	1043	1346	5	X	X	34.7	74.3	0.01	0.33
0155 GA400342	1.90	846	1092	4	X	X	35.3	75.5	0.01	0.34
0156 GA400343	2.01	1055	1363	5	X	X	34.4	73.5	0.01	0.36
0157 GA400344	2.88	1793	2315	3	X	X	26.2	56.0	0.02	0.51
0158 GA400345	2.49	1411	1822	3	X	X	27.9	59.6	0.01	0.46
0159 GA400346	3.59	1867	2410	7	X	X	23.7	50.6	0.02	0.65
0160 GA400347	3.97	2510	3241	3	X	X	21.9	46.8	0.03	0.68



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0121 GA400308	0.53	78	98
0122 GA400309	0.55	46	59
0123 GA400310	0.58	40	51
0124 GA400311	0.50	6743	8504
0125 GA400312	0.27	2.11%	2.66%
0126 GA400313	0.40	1.08%	1.37%
0127 GA400314	0.57	214	270
0128 GA400315	0.54	103	129
0129 GA400316	0.87	119	150
0130 GA400317	0.68	94	119
0131 GA400318	0.59	78	98
0132 GA400319	0.53	70	88
0133 GA400320	0.51	52	66
0134 GA400321	0.55	61	76
0135 GA400322	0.55	56	71
0136 GA400323	0.54	117	148
0137 GA400324	0.53	284	358
0138 GA400325	0.54	50	63
0139 GA400326	0.53	91	115
0140 GA400327	0.56	205	259
0141 GA400328	0.51	69	87
0142 GA400329	0.56	267	337
0143 GA400330	0.56	58	73
0144 GA400331	0.54	69	87
0145 GA400332	0.59	52	66
0146 GA400333	0.56	59	74
0147 GA400334	0.55	137	173
0148 GA400335	0.57	324	408
0149 GA400336	0.51	84	106
0150 GA400337	0.55	59	75
0151 GA400338	0.56	57	72
0152 GA400339	0.56	53	67
0153 GA400340	0.56	47	59
0154 GA400341	0.55	248	313
0155 GA400342	0.56	64	81
0156 GA400343	0.60	68	86
0157 GA400344	0.85	122	154
0158 GA400345	0.76	180	227
0159 GA400346	1.08	197	249
0160 GA400347	1.13	97	122



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0161 GA400348	7.24	13.69	X	5.3	0.2	0.3	147	5.01	7.16	1.26
0162 GA400349	7.70	14.56	X	7.4	0.2	0.3	202	6.45	9.22	1.36
0163 GA400350	6.66	12.58	X	5.8	0.1	0.2	142	4.88	6.98	1.17
0164 GA400351	6.44	12.17	X	6.0	0.1	X	85	4.47	6.40	0.95
0165 GA400352	6.56	12.39	X	6.9	0.2	0.3	212	5.34	7.64	0.79
0166 GA400353	6.51	12.31	X	9.2	0.4	0.5	242	4.80	6.86	1.18
0167 GA400354	2.54	4.81	512	1.1	8.8	12.3	X	6.08	8.70	11.86
0168 GA400355	5.48	10.35	X	20.2	0.3	0.4	1819	3.73	5.33	0.49
0169 GA400356	7.02	13.26	X	12.0	0.2	0.3	352	5.12	7.32	1.33
0170 GA400357	6.56	12.39	X	9.3	0.2	0.3	60	4.92	7.03	0.88
0171 GA400358	5.63	10.63	X	4.8	0.3	0.4	120	4.27	6.11	0.99
0172 GA400359	6.56	12.39	X	4.3	0.2	0.2	316	4.45	6.36	1.24
0173 GA400360	6.45	12.19	61	4.7	0.3	0.4	249	4.38	6.26	1.16
0174 GA400361	5.95	11.25	X	7.4	0.3	0.4	860	4.98	7.12	1.82
0175 GA400362	6.87	12.98	X	6.7	0.2	0.2	30	4.21	6.02	1.40
0176 GA400363	6.60	12.46	X	5.6	0.1	X	85	4.38	6.26	0.93
CHECKS										
0001 GA400206	5.66	10.69	X	321.6	X	X	942	4.31	6.16	0.59
0002 GA400219	3.82	7.22	X	18.5	0.1	0.2	2241	4.63	6.62	0.24
0003 GA400247	6.29	11.88	X	6.5	0.1	X	X	4.00	5.72	1.13
0004 GA400284	5.84	11.03	X	38.7	0.2	0.2	4185	4.13	5.90	0.40
0005 GA400304	6.20	11.72	X	7.8	0.1	X	103	4.87	6.97	1.33
0006 GA400347	11.97	22.62	X	12.0	0.4	0.5	89	11.38	16.28	2.45
STANDARDS										
0001 OREAS 901	7.19	13.58	75	5.4	0.1	0.2	1449	4.17	5.96	0.63
0002 OREAS 24b	7.96	15.04	X	0.8	1.1	1.5	42	4.51	6.44	1.65
0003 OREAS 522	3.90	7.37	507	8.9	3.8	5.3	9115	23.89	34.16	1.13
0004 OREAS 700	5.67	10.71	X	7.3	5.7	8.0	1986	16.24	23.23	1.04
0005 GW-01	4.76	8.99	X	2.4	9.0	12.7	281	3.98	5.69	5.75
0006 OREAS 523	3.15	5.96	694	14.7	3.7	5.2	1.75%	29.59	42.30	1.10
0007 OREAS 701	6.80	12.85	X	6.7	4.0	5.6	5079	25.20	36.03	0.82
BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	0.02	0.03	X
0002 Control Blank	X	X	X	0.5	X	X	X	0.09	0.13	X
0003 Control Blank	X	X	X	0.2	X	X	X	0.02	0.02	X
0004 Control Blank	X	X	X	X	X	X	X	X	X	X
0005 Control Blank	X	X	X	0.1	X	X	X	0.03	0.04	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0161 GA400348	2.08	1039	1341	4	X	2.0	35.4	75.8	X	0.37
0162 GA400349	2.25	1109	1431	7	X	X	32.9	70.3	0.01	0.42
0163 GA400350	1.94	853	1101	5	X	X	35.0	74.8	X	0.35
0164 GA400351	1.57	693	895	4	X	X	34.8	74.6	X	0.34
0165 GA400352	1.31	626	808	4	X	X	36.8	78.6	X	0.34
0166 GA400353	1.96	899	1161	8	X	X	35.3	75.6	X	0.35
0167 GA400354	19.67	1543	1992	5	X	1.0	25.9	55.5	X	0.14
0168 GA400355	0.81	712	919	768	0.11	X	37.0	79.3	0.01	0.26
0169 GA400356	2.20	1096	1415	10	X	X	35.4	75.7	X	0.35
0170 GA400357	1.47	809	1044	14	X	X	35.7	76.3	0.01	0.32
0171 GA400358	1.64	933	1204	6	X	X	38.0	81.2	0.01	0.30
0172 GA400359	2.06	994	1284	27	X	0.5	35.4	75.7	X	0.35
0173 GA400360	1.93	975	1259	13	0.07	1.0	36.3	77.6	0.01	0.34
0174 GA400361	3.02	1066	1377	15	0.05	0.7	35.6	76.2	X	0.31
0175 GA400362	2.32	997	1287	242	X	X	35.2	75.3	X	0.37
0176 GA400363	1.54	776	1002	169	X	X	35.4	75.7	0.01	0.35
CHECKS										
0001 GA400206	0.97	725	937	16	X	X	36.5	78.1	0.03	0.27
0002 GA400219	0.40	2609	3369	62	X	X	37.6	80.4	0.01	0.19
0003 GA400247	1.88	892	1152	26	X	X	30.9	66.1	X	0.33
0004 GA400284	0.67	305	394	38	0.13	X	36.7	78.5	0.02	0.30
0005 GA400304	2.20	1115	1440	16	X	X	31.8	68.0	X	0.33
0006 GA400347	4.06	2545	3286	10	X	X	22.2	47.6	0.03	0.68
STANDARDS										
0001 OREAS 901	1.05	319	413	6	0.05	2.5	33.2	71.0	X	0.36
0002 OREAS 24b	2.73	457	590	4	0.20	0.9	31.4	67.1	X	0.48
0003 OREAS 522	1.88	4124	5326	209	3.06	8.2	15.1	32.4	X	0.38
0004 OREAS 700	1.73	3295	4255	82	0.29	0.6	22.4	47.8	0.02	0.19
0005 GW-01	9.53	893	1153	5	0.24	1.1	27.1	58.0	X	0.10
0006 OREAS 523	1.82	5064	6539	296	4.70	10.7	13.6	29.1	X	0.31
0007 OREAS 701	1.36	3556	4592	264	0.72	X	16.6	35.5	0.02	0.17
BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	X	X	X
0002 Control Blank	X	X	X	6	X	X	X	X	0.02	X
0003 Control Blank	X	X	X	2	X	X	X	X	X	X
0004 Control Blank	X	X	X	3	X	X	X	X	X	X
0005 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

SAMPLE NUMBERS

0161 GA400348	0.61	69	88
0162 GA400349	0.70	53	66
0163 GA400350	0.58	46	59
0164 GA400351	0.57	64	81
0165 GA400352	0.56	95	120
0166 GA400353	0.58	70	88
0167 GA400354	0.23	1185	1495
0168 GA400355	0.44	2324	2931
0169 GA400356	0.59	122	153
0170 GA400357	0.54	90	113
0171 GA400358	0.50	57	72
0172 GA400359	0.59	152	192
0173 GA400360	0.56	121	153
0174 GA400361	0.52	60	76
0175 GA400362	0.61	54	68
0176 GA400363	0.58	117	148

CHECKS

0001 GA400206	0.45	1283	1618
0002 GA400219	0.32	1.64%	2.07%
0003 GA400247	0.56	32	40
0004 GA400284	0.49	271	342
0005 GA400304	0.55	50	63
0006 GA400347	1.14	108	136

STANDARDS

0001 OREAS 901	0.60	5	6
0002 OREAS 24b	0.81	23	29
0003 OREAS 522	0.64	138	174
0004 OREAS 700	0.32	1.06%	1.34%
0005 GW-01	0.17	2762	3484
0006 OREAS 523	0.52	204	258
0007 OREAS 701	0.28	2.25%	2.84%

BLANKS

0001 Control Blank	X	2	2
0002 Control Blank	X	24	31
0003 Control Blank	X	98	123
0004 Control Blank	X	62	78
0005 Control Blank	X	4	5



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
BLANKS										
0006 Control Blank	X	X	X	X	X	X	X	0.02	0.02	X
0007 Control Blank	X	X	X	X	X	X	X	0.02	0.02	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
BLANKS										
0006 Control Blank	X	X	X	1	X	X	X	X	X	X
0007 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
BLANKS			
0006 Control Blank	X	1	X
0007 Control Blank	X	7	8



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
PO Box 517
WEST PERTH, W.A. 6872
AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904904
NO. SAMPLES : 106
NO. ELEMENTS : 23
CLIENT ORDER NO. : GW5340 (Job 1 of 1)
SAMPLE SUBMISSION NO. : GW5340
PROJECT : HATCHES CREEK
SAMPLE TYPE : RC
DATE RECEIVED : 02/04/2019
DATE REPORTED : 23/04/2019
DATE PRINTED : 23/04/2019

REPORT NOTES

TESTED BY

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues) will be stored for 60 days without charge. Following this, samples will be stored at a daily rate until clients' written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing, the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m³ per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m³.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA400370	6.64	12.54	X	28.6	X	X	177	5.11	7.31	0.42
0002 GA400371	7.34	13.87	X	16.4	X	X	192	5.05	7.22	0.63
0003 GA400372	6.70	12.67	X	23.0	X	X	111	5.46	7.81	0.44
0004 GA400373	6.93	13.09	X	22.0	X	X	73	4.58	6.54	0.44
0005 GA400374	6.72	12.69	X	20.4	X	X	148	5.12	7.32	0.54
0006 GA400375	7.08	13.37	X	28.1	0.8	1.1	143	4.38	6.26	0.90
0007 GA400376	6.58	12.43	X	31.0	0.5	0.7	108	5.24	7.49	0.58
0008 GA400377	5.39	10.19	X	32.0	0.4	0.5	198	5.15	7.36	0.38
0009 GA400378	6.79	12.82	X	24.2	0.3	0.5	234	5.02	7.18	0.68
0010 GA400379	6.63	12.53	X	25.2	0.5	0.6	444	4.86	6.95	0.94
0011 GA400380	5.78	10.92	X	17.9	0.2	0.3	493	5.00	7.15	0.82
0012 GA400381	6.44	12.17	X	17.0	X	X	523	5.33	7.61	0.61
0013 GA400382	6.49	12.27	X	16.4	0.1	X	2605	4.36	6.23	5.00
0014 GA400383	6.67	12.61	X	17.7	0.1	X	988	4.81	6.88	1.35
0015 GA400384	6.44	12.18	X	14.6	0.1	X	689	5.24	7.49	1.06
0016 GA400385	6.70	12.66	X	24.9	0.2	0.3	499	5.18	7.40	0.82
0017 GA400386	7.64	14.44	X	37.2	0.3	0.4	340	5.75	8.21	0.77
0018 GA400387	6.49	12.26	X	27.7	0.1	X	240	5.05	7.22	0.89
0019 GA400388	6.50	12.28	X	16.6	0.1	X	321	5.29	7.56	0.85
0020 GA400389	6.52	12.33	X	20.1	0.1	X	361	5.10	7.29	0.68
0021 GA400390	6.80	12.84	X	18.5	0.1	X	252	5.80	8.29	0.55
0022 GA400391	6.73	12.72	X	25.8	X	X	190	5.43	7.76	0.51
0023 GA400392	6.50	12.28	X	19.6	X	X	62	4.54	6.49	0.38
0024 GA400393	6.61	12.49	X	17.4	X	X	45	5.02	7.18	0.34
0025 GA400394	5.97	11.28	X	10.2	X	X	53	4.53	6.47	0.46
0026 GA400395	6.84	12.92	X	10.5	X	X	57	4.80	6.86	0.52
0027 GA400396	6.55	12.38	X	10.7	X	X	42	4.83	6.90	0.52
0028 GA400397	6.56	12.40	X	18.9	0.1	X	68	6.00	8.57	0.53
0029 GA400398	6.84	12.93	X	70.1	X	X	111	5.98	8.56	0.36
0030 GA400399	6.99	13.21	X	17.6	0.1	X	101	4.68	6.69	0.73
0031 GA400400	6.52	12.32	X	11.8	0.1	X	83	5.12	7.32	1.04
0032 GA400401	6.49	12.26	X	11.5	X	X	103	4.41	6.30	1.03
0033 GA400402	6.32	11.95	X	8.3	0.1	X	99	5.04	7.21	1.07
0034 GA400403	6.48	12.24	X	10.9	0.1	X	102	4.95	7.07	0.99
0035 GA400404	6.24	11.79	X	11.9	0.2	0.3	165	4.99	7.14	1.14
0036 GA400405	6.48	12.24	X	11.2	0.1	X	125	4.68	6.69	1.28
0037 GA400406	6.45	12.19	X	11.8	0.1	X	134	5.34	7.63	1.25
0038 GA400407	6.44	12.18	X	12.8	0.2	0.2	133	4.92	7.04	1.26
0039 GA400408	6.36	12.01	X	12.5	0.1	X	159	5.41	7.73	1.51
0040 GA400409	6.19	11.70	X	19.5	0.1	X	1624	7.46	10.67	1.08



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA400370	0.69	392	506	20	X	0.6	37.7	80.6	0.02	0.37
0002 GA400371	1.05	512	661	9	0.05	X	37.2	79.7	0.02	0.36
0003 GA400372	0.73	339	438	17	X	X	38.1	81.5	0.02	0.34
0004 GA400373	0.73	343	443	15	0.07	X	38.5	82.4	0.02	0.35
0005 GA400374	0.90	388	500	7	X	X	38.3	81.9	0.02	0.35
0006 GA400375	1.50	459	593	11	X	X	37.1	79.4	0.01	0.36
0007 GA400376	0.96	258	333	75	X	X	36.5	78.2	0.02	0.31
0008 GA400377	0.64	1685	2175	138	X	X	37.0	79.1	0.02	0.25
0009 GA400378	1.13	613	791	49	X	X	36.8	78.8	0.02	0.32
0010 GA400379	1.55	647	835	46	X	X	36.2	77.5	0.02	0.35
0011 GA400380	1.36	755	976	27	X	X	37.6	80.4	0.02	0.29
0012 GA400381	1.00	669	864	11	X	X	37.0	79.2	0.01	0.33
0013 GA400382	8.28	1040	1343	6	X	X	34.3	73.4	X	0.27
0014 GA400383	2.24	585	755	10	X	X	35.8	76.5	0.02	0.33
0015 GA400384	1.75	1015	1311	14	X	X	37.5	80.3	0.02	0.34
0016 GA400385	1.36	772	996	16	X	X	37.1	79.3	0.02	0.34
0017 GA400386	1.27	734	947	14	X	X	35.6	76.1	0.03	0.36
0018 GA400387	1.48	957	1235	15	X	X	36.2	77.5	0.02	0.33
0019 GA400388	1.41	952	1229	8	X	X	35.6	76.1	0.01	0.33
0020 GA400389	1.13	757	977	9	X	X	36.3	77.7	0.02	0.34
0021 GA400390	0.91	766	989	10	X	X	36.6	78.4	0.01	0.36
0022 GA400391	0.84	590	762	10	X	X	35.7	76.4	0.02	0.31
0023 GA400392	0.62	299	386	7	X	X	36.3	77.7	0.02	0.34
0024 GA400393	0.57	306	395	9	X	X	36.7	78.5	0.02	0.33
0025 GA400394	0.75	402	519	10	X	X	31.6	67.5	X	0.32
0026 GA400395	0.86	371	479	8	X	X	34.7	74.2	0.01	0.35
0027 GA400396	0.86	404	522	7	X	X	34.5	73.8	0.01	0.34
0028 GA400397	0.87	540	697	14	X	X	36.5	78.1	0.04	0.33
0029 GA400398	0.59	482	622	47	X	X	35.0	74.9	0.02	0.32
0030 GA400399	1.20	833	1076	27	X	X	35.8	76.6	0.02	0.34
0031 GA400400	1.73	1093	1412	17	X	X	34.2	73.1	0.02	0.33
0032 GA400401	1.70	1034	1336	12	X	X	34.4	73.5	0.03	0.33
0033 GA400402	1.78	1242	1603	10	X	X	33.0	70.6	0.01	0.33
0034 GA400403	1.64	1117	1443	10	X	X	34.5	73.8	0.02	0.32
0035 GA400404	1.88	984	1270	8	X	X	34.2	73.1	0.02	0.31
0036 GA400405	2.12	1013	1308	24	X	X	33.8	72.3	X	0.34
0037 GA400406	2.07	858	1108	13	X	X	35.2	75.4	X	0.34
0038 GA400407	2.10	951	1228	16	X	X	35.1	75.1	X	0.34
0039 GA400408	2.50	1083	1398	23	X	X	35.6	76.2	0.01	0.33
0040 GA400409	1.80	1152	1487	53	X	X	32.9	70.5	0.01	0.33



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA400370	0.62	565	712
0002 GA400371	0.60	263	332
0003 GA400372	0.58	348	439
0004 GA400373	0.58	220	277
0005 GA400374	0.58	201	253
0006 GA400375	0.60	295	372
0007 GA400376	0.52	461	581
0008 GA400377	0.42	1.05%	1.33%
0009 GA400378	0.54	750	945
0010 GA400379	0.58	672	847
0011 GA400380	0.48	589	742
0012 GA400381	0.56	266	335
0013 GA400382	0.45	121	153
0014 GA400383	0.55	176	221
0015 GA400384	0.56	216	273
0016 GA400385	0.56	219	276
0017 GA400386	0.60	303	382
0018 GA400387	0.55	331	418
0019 GA400388	0.56	303	382
0020 GA400389	0.56	285	359
0021 GA400390	0.60	339	427
0022 GA400391	0.52	407	513
0023 GA400392	0.56	275	347
0024 GA400393	0.56	458	577
0025 GA400394	0.53	184	232
0026 GA400395	0.59	172	217
0027 GA400396	0.56	186	235
0028 GA400397	0.54	793	1000
0029 GA400398	0.53	1317	1661
0030 GA400399	0.57	480	605
0031 GA400400	0.55	626	790
0032 GA400401	0.55	337	425
0033 GA400402	0.55	173	218
0034 GA400403	0.53	276	348
0035 GA400404	0.52	281	354
0036 GA400405	0.58	124	157
0037 GA400406	0.57	91	114
0038 GA400407	0.57	114	144
0039 GA400408	0.56	172	216
0040 GA400409	0.54	594	749



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA400410	2.37	4.47	X	54.1	9.1	12.8	X	5.75	8.22	9.12
0042 GA400411	5.87	11.08	X	31.4	0.5	0.7	132	5.43	7.77	0.47
0043 GA400412	6.28	11.86	X	19.3	X	X	1034	4.96	7.10	0.87
0044 GA400413	6.30	11.90	X	80.2	0.1	X	2655	4.88	6.98	0.64
0045 GA400414	6.55	12.37	X	59.7	0.1	X	3584	5.20	7.43	0.68
0046 GA400415	6.57	12.41	X	35.2	0.4	0.5	9100	4.58	6.55	0.56
0047 GA400416	6.34	11.98	X	89.6	X	X	7742	5.46	7.80	0.69
0048 GA400417	5.60	10.57	X	209.7	0.2	0.2	5985	4.96	7.09	0.74
0049 GA400418	6.47	12.22	X	26.6	0.1	0.2	712	4.71	6.73	0.96
0050 GA400419	6.31	11.93	X	72.5	X	X	1034	4.07	5.82	1.06
0051 GA400420	6.15	11.63	X	23.5	0.4	0.5	400	4.29	6.13	0.90
0052 GA400421	5.08	9.60	X	21.0	0.2	0.3	2171	4.06	5.80	0.49
0053 GA400422	6.64	12.55	X	15.2	0.1	X	1810	5.07	7.25	0.83
0054 GA400423	5.75	10.87	X	49.9	0.1	X	3804	4.00	5.72	0.79
0055 GA400424	6.25	11.80	X	12.5	X	X	1128	4.47	6.39	0.80
0056 GA400425	5.67	10.72	X	1269.6	X	X	3.83%	4.62	6.60	0.39
0057 GA400426	6.06	11.46	X	577.9	0.1	X	8701	5.28	7.55	0.55
0058 GA400427	5.93	11.21	X	192.3	0.1	X	6474	5.54	7.91	0.57
0059 GA400428	6.31	11.93	X	48.1	X	X	1602	4.48	6.40	0.66
0060 GA400429	6.18	11.68	X	33.6	X	X	629	4.29	6.14	0.93
0061 GA400430	5.54	10.46	X	44.0	0.2	0.3	1068	5.18	7.40	0.39
0062 GA400431	6.12	11.56	X	14.7	0.1	X	285	4.86	6.94	0.33
0063 GA400432	6.27	11.85	X	16.2	0.1	X	280	5.02	7.17	0.60
0064 GA400433	6.36	12.01	X	52.9	X	X	1246	4.90	7.00	0.68
0065 GA400434	6.06	11.46	X	15.4	X	X	619	5.23	7.48	0.58
0066 GA400435	5.01	9.46	X	91.5	X	X	641	3.86	5.52	0.49
0067 GA400436	6.26	11.82	X	26.7	X	X	1620	4.82	6.90	0.73
0068 GA400437	6.25	11.80	X	18.9	X	X	547	4.32	6.18	0.83
0069 GA400438	5.94	11.22	X	7.3	X	X	345	4.71	6.74	0.67
0070 GA400439	5.99	11.33	X	32.3	X	X	8965	6.00	8.58	0.58
0071 GA400440	6.60	12.48	X	27.7	0.1	X	2227	4.92	7.04	0.57
0072 GA400441	5.01	9.46	X	31.7	0.3	0.5	2991	3.79	5.42	0.48
0073 GA400442	5.54	10.47	X	37.4	0.1	0.2	2229	4.49	6.42	0.67
0074 GA400443	6.07	11.48	X	4.3	X	X	206	4.63	6.62	0.89
0075 GA400444	6.28	11.86	X	6.2	0.1	X	232	4.66	6.66	0.89
0076 GA400445	6.19	11.69	X	21.5	0.1	X	1121	4.91	7.02	0.67
0077 GA400446	6.19	11.69	X	9.7	X	X	674	4.64	6.63	0.78
0078 GA400447	6.22	11.75	X	12.6	X	X	864	4.81	6.88	0.74
0079 GA400448	6.67	12.60	X	17.4	0.2	0.3	407	5.11	7.30	0.78
0080 GA400449	6.27	11.85	X	59.0	0.2	0.2	1343	4.49	6.42	0.76



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA400410	15.12	1274	1645	10	X	0.8	27.3	58.3	X	0.20
0042 GA400411	0.78	536	692	124	X	0.5	34.7	74.2	0.02	0.29
0043 GA400412	1.45	733	946	12	X	X	33.4	71.5	0.01	0.33
0044 GA400413	1.06	457	590	14	X	X	34.4	73.5	X	0.32
0045 GA400414	1.13	574	741	30	0.10	X	34.2	73.1	0.01	0.34
0046 GA400415	0.93	497	642	13	0.20	X	35.8	76.6	0.02	0.31
0047 GA400416	1.14	796	1028	14	0.19	X	34.0	72.7	0.01	0.32
0048 GA400417	1.23	993	1282	20	0.18	X	38.1	81.4	0.01	0.27
0049 GA400418	1.59	860	1111	11	X	X	34.6	74.1	X	0.34
0050 GA400419	1.76	847	1094	12	X	X	33.9	72.5	X	0.33
0051 GA400420	1.50	1155	1491	52	X	X	33.8	72.4	0.01	0.31
0052 GA400421	0.82	704	909	764	0.16	X	36.3	77.7	0.01	0.25
0053 GA400422	1.37	872	1126	35	0.13	X	34.6	74.1	0.02	0.33
0054 GA400423	1.32	880	1136	359	0.17	X	35.5	76.0	0.02	0.28
0055 GA400424	1.33	741	957	19	0.08	X	32.6	69.7	X	0.33
0056 GA400425	0.64	388	501	33	1.50	0.5	34.5	73.9	0.04	0.29
0057 GA400426	0.92	669	864	19	0.46	X	34.7	74.2	0.02	0.31
0058 GA400427	0.95	832	1074	33	0.36	X	33.5	71.6	0.02	0.31
0059 GA400428	1.10	722	933	19	0.10	X	31.5	67.3	0.03	0.32
0060 GA400429	1.54	1052	1359	18	0.05	X	32.7	69.9	0.01	0.32
0061 GA400430	0.65	5180	6689	3578	0.30	X	31.1	66.6	0.01	0.27
0062 GA400431	0.55	350	452	460	0.06	X	34.3	73.4	X	0.31
0063 GA400432	0.99	489	632	37	X	X	33.9	72.5	X	0.32
0064 GA400433	1.12	543	701	28	0.06	X	33.8	72.2	0.01	0.34
0065 GA400434	0.96	438	566	30	X	X	32.2	68.8	X	0.31
0066 GA400435	0.81	419	541	19	X	X	34.8	74.5	0.01	0.23
0067 GA400436	1.21	709	915	11	0.14	X	33.4	71.4	0.02	0.33
0068 GA400437	1.38	723	933	10	X	X	32.7	70.0	X	0.33
0069 GA400438	1.10	707	913	13	X	X	33.3	71.3	0.02	0.31
0070 GA400439	0.96	575	742	10	0.67	X	32.7	70.0	0.01	0.31
0071 GA400440	0.94	763	985	67	0.16	X	34.3	73.4	0.02	0.33
0072 GA400441	0.79	720	929	242	0.15	X	30.3	64.9	0.02	0.24
0073 GA400442	1.10	828	1069	36	0.13	0.5	35.4	75.7	0.01	0.27
0074 GA400443	1.47	841	1085	13	X	X	32.2	68.8	X	0.32
0075 GA400444	1.48	941	1216	10	X	X	32.7	69.9	X	0.33
0076 GA400445	1.12	731	944	15	0.06	X	33.6	71.9	0.02	0.31
0077 GA400446	1.30	757	977	13	X	X	33.8	72.3	0.01	0.32
0078 GA400447	1.22	809	1044	9	0.06	X	32.8	70.2	0.01	0.32
0079 GA400448	1.30	999	1290	11	0.06	0.6	32.3	69.2	0.01	0.33
0080 GA400449	1.27	882	1139	15	0.12	1.3	32.4	69.4	0.01	0.30



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA400410	0.33	460	581
0042 GA400411	0.48	2802	3534
0043 GA400412	0.55	180	227
0044 GA400413	0.54	147	185
0045 GA400414	0.57	194	245
0046 GA400415	0.52	183	231
0047 GA400416	0.54	115	146
0048 GA400417	0.46	1052	1327
0049 GA400418	0.57	170	214
0050 GA400419	0.55	88	111
0051 GA400420	0.51	2348	2961
0052 GA400421	0.41	2187	2758
0053 GA400422	0.55	309	389
0054 GA400423	0.46	1740	2194
0055 GA400424	0.55	169	213
0056 GA400425	0.49	360	453
0057 GA400426	0.52	1075	1356
0058 GA400427	0.51	613	773
0059 GA400428	0.54	282	356
0060 GA400429	0.54	114	144
0061 GA400430	0.46	3.71%	4.68%
0062 GA400431	0.52	1279	1613
0063 GA400432	0.54	316	398
0064 GA400433	0.56	226	285
0065 GA400434	0.52	221	278
0066 GA400435	0.39	411	518
0067 GA400436	0.54	234	295
0068 GA400437	0.55	109	137
0069 GA400438	0.51	93	117
0070 GA400439	0.52	142	180
0071 GA400440	0.55	830	1047
0072 GA400441	0.40	1926	2428
0073 GA400442	0.45	1213	1530
0074 GA400443	0.54	115	145
0075 GA400444	0.55	1072	1352
0076 GA400445	0.52	1710	2156
0077 GA400446	0.54	299	377
0078 GA400447	0.53	97	122
0079 GA400448	0.56	118	149
0080 GA400449	0.50	156	197



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA400450	6.25	11.81	X	35.7	0.1	X	617	4.46	6.38	0.92
0082 GA400451	6.20	11.71	X	41.4	0.1	X	753	4.48	6.40	0.95
0083 GA400452	2.66	5.02	194	1.2	7.5	10.5	X	5.63	8.05	10.53
0084 GA400453	5.80	10.97	X	34.7	0.1	X	2064	4.52	6.46	0.69
0085 GA400454	6.14	11.61	X	7.9	X	X	210	4.61	6.59	0.99
0086 GA400455	6.31	11.93	X	17.4	0.2	0.2	969	5.13	7.33	0.61
0087 GA400456	6.10	11.53	X	11.9	0.1	X	965	4.34	6.20	0.59
0088 GA400457	6.33	11.97	X	41.2	0.2	0.3	1981	4.40	6.29	0.61
0089 GA400458	6.24	11.79	121	23.8	0.1	X	1089	5.26	7.52	0.76
0090 GA400459	5.48	10.36	92	42.9	0.1	X	2514	4.36	6.23	0.61
0091 GA400460	5.88	11.11	X	54.2	0.1	0.2	1677	4.56	6.52	0.61
0092 GA400461	3.89	7.36	X	24.3	0.2	0.2	668	3.42	4.89	0.48
0093 GA400462	6.22	11.75	X	20.8	0.1	X	1750	4.91	7.03	0.71
0094 GA400463	6.49	12.27	X	23.3	X	X	3247	4.64	6.63	0.59
0095 GA400464	5.93	11.20	X	34.2	X	X	3488	5.40	7.73	0.84
0096 GA400465	6.01	11.36	X	21.8	X	X	947	4.32	6.18	0.70
0097 GA400466	4.23	7.99	X	13.9	X	X	481	3.37	4.82	0.49
0098 GA400467	6.41	12.11	X	3.4	0.2	0.3	41	4.59	6.56	0.75
0099 GA400468	6.03	11.40	X	6.4	0.1	X	131	4.68	6.69	0.79
0100 GA400469	6.10	11.52	X	15.9	X	X	1893	5.01	7.17	0.86
0101 GA400470	5.52	10.43	166	3.6	X	X	462	4.30	6.14	0.88
0102 GA400471	5.92	11.19	X	2.6	0.1	X	38	4.47	6.39	0.96
0103 GA400472	6.00	11.34	X	2.9	0.1	X	26	4.48	6.41	0.94
0104 GA400473	5.97	11.28	X	8.9	0.2	0.2	X	4.91	7.02	0.84
0105 GA400474	6.15	11.63	X	7.2	X	X	365	5.88	8.41	0.98
0106 GA400475	6.15	11.62	X	1.9	X	X	197	4.55	6.50	0.91

CHECKS										
0001 GA400383	6.79	12.84	X	18.3	0.1	X	1008	4.87	6.96	1.36
0002 GA400397	6.08	11.48	X	18.4	X	X	60	5.63	8.04	0.50
0003 GA400425	5.46	10.31	X	1227.9	X	X	3.53%	4.40	6.30	0.39

STANDARDS										
0001 GW-01	4.91	9.28	X	2.6	9.3	13.1	272	4.09	5.85	5.91
0002 OREAS 701	6.79	12.82	X	7.1	4.0	5.6	5050	24.74	35.37	0.80
0003 AMIS0401	3.54	6.69	X	285.7	10.8	15.1	1658	18.74	26.79	2.06
0004 OREAS 522	3.99	7.54	534	9.3	3.8	5.4	9179	24.73	35.36	1.16

BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	0.01	X	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA400450	1.53	946	1222	14	0.08	0.6	33.0	70.5	X	0.33
0082 GA400451	1.58	936	1208	16	0.07	X	32.4	69.3	X	0.33
0083 GA400452	17.46	1428	1844	16	X	1.4	23.7	50.7	X	0.15
0084 GA400453	1.15	747	964	20	0.12	X	33.8	72.3	0.01	0.29
0085 GA400454	1.65	1094	1412	12	X	X	32.5	69.4	X	0.33
0086 GA400455	1.00	690	891	14	0.08	4.9	33.1	70.7	0.02	0.32
0087 GA400456	0.97	575	742	12	0.07	X	33.3	71.2	0.02	0.30
0088 GA400457	1.02	803	1037	18	0.12	X	33.4	71.5	0.02	0.30
0089 GA400458	1.26	876	1131	17	0.11	1.3	33.3	71.1	0.01	0.33
0090 GA400459	1.01	727	939	16	0.13	2.1	37.0	79.1	0.01	0.28
0091 GA400460	1.01	582	751	17	0.10	X	35.4	75.8	0.01	0.29
0092 GA400461	0.79	927	1197	223	0.08	X	37.5	80.2	0.01	0.19
0093 GA400462	1.18	910	1175	20	0.16	X	34.2	73.1	0.02	0.32
0094 GA400463	0.98	829	1070	16	0.31	X	32.6	69.8	0.02	0.32
0095 GA400464	1.39	1102	1424	13	0.28	X	32.0	68.4	0.02	0.30
0096 GA400465	1.15	759	981	14	0.09	X	31.1	66.5	0.01	0.31
0097 GA400466	0.81	2969	3834	69	X	X	33.6	72.0	0.01	0.21
0098 GA400467	1.25	736	950	15	X	X	31.9	68.3	0.01	0.31
0099 GA400468	1.31	697	900	17	X	1.1	31.2	66.7	0.02	0.31
0100 GA400469	1.43	899	1161	12	0.11	X	33.1	70.9	0.02	0.31
0101 GA400470	1.46	887	1146	15	0.06	2.8	32.7	69.9	0.02	0.29
0102 GA400471	1.59	889	1148	11	X	5.7	32.3	69.1	0.01	0.31
0103 GA400472	1.55	829	1070	22	X	X	31.3	66.9	0.01	0.32
0104 GA400473	1.40	817	1055	25	X	X	30.1	64.4	0.01	0.31
0105 GA400474	1.63	988	1275	25	X	X	32.4	69.4	0.02	0.32
0106 GA400475	1.52	891	1151	8	X	X	31.9	68.2	X	0.32

CHECKS										
0001 GA400383	2.26	599	774	13	X	X	35.4	75.8	0.02	0.34
0002 GA400397	0.83	504	650	15	X	X	34.2	73.2	0.05	0.30
0003 GA400425	0.64	374	482	33	1.44	1.0	33.2	71.1	0.04	0.28

STANDARDS										
0001 GW-01	9.80	914	1180	12	0.24	1.5	28.0	59.9	X	0.10
0002 OREAS 701	1.32	3414	4408	272	0.71	X	16.4	35.1	0.02	0.16
0003 AMISO401	3.42	2.92%	3.78%	8	8.91	1.0	14.0	29.9	X	0.24
0004 OREAS 522	1.92	4097	5290	208	3.07	8.4	15.5	33.1	X	0.39

BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

SAMPLE NUMBERS			
0081 GA400450	0.55	85	107
0082 GA400451	0.55	68	86
0083 GA400452	0.24	1717	2166
0084 GA400453	0.48	546	688
0085 GA400454	0.54	76	96
0086 GA400455	0.53	175	220
0087 GA400456	0.51	260	328
0088 GA400457	0.50	1319	1664
0089 GA400458	0.54	186	234
0090 GA400459	0.46	304	383
0091 GA400460	0.49	249	314
0092 GA400461	0.32	3834	4835
0093 GA400462	0.53	219	276
0094 GA400463	0.53	184	233
0095 GA400464	0.51	691	871
0096 GA400465	0.51	533	672
0097 GA400466	0.34	1.78%	2.24%
0098 GA400467	0.51	621	783
0099 GA400468	0.51	259	326
0100 GA400469	0.52	289	364
0101 GA400470	0.48	778	981
0102 GA400471	0.52	89	112
0103 GA400472	0.53	119	150
0104 GA400473	0.51	143	180
0105 GA400474	0.53	133	168
0106 GA400475	0.54	60	75

CHECKS			
0001 GA400383	0.56	143	181
0002 GA400397	0.51	635	800
0003 GA400425	0.47	278	350

STANDARDS			
0001 GW-01	0.17	3204	4041
0002 OREAS 701	0.27	2.28%	2.88%
0003 AMIS0401	0.40	756	954
0004 OREAS 522	0.65	156	196

BLANKS			
0001 Control Blank	X	1	X



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
BLANKS										
0002 Control Blank	X	X	X	0.2	X	X	X	X	X	X
0003 Control Blank	X	X	X	0.2	X	X	X	0.03	0.04	X
0004 Control Blank	X	X	X	X	X	X	X	0.04	0.05	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
BLANKS										
0002 Control Blank	X	X	X	5	X	X	X	X	0.01	X
0003 Control Blank	X	X	X	2	X	X	X	X	X	X
0004 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
BLANKS			
0002 Control Blank	X	75	94
0003 Control Blank	X	53	67
0004 Control Blank	X	12	15



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
PO Box 517
WEST PERTH, W.A. 6872
AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904905
NO. SAMPLES : 118
NO. ELEMENTS : 23
CLIENT ORDER NO. : GW5341 (Job 1 of 1)
SAMPLE SUBMISSION NO. : GW5341
PROJECT : HATCHES CREEK
SAMPLE TYPE : RC
DATE RECEIVED : 02/04/2019
DATE REPORTED : 29/04/2019
DATE PRINTED : 29/04/2019

REPORT NOTES

TESTED BY

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues will be stored for 60 days without charge. Following this samples will be stored at a daily rate until clients written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m3 per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m3.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA400476	6.17	11.67	X	27.9	X	X	293	5.59	7.99	0.64
0002 GA400477	6.05	11.44	X	61.5	X	X	426	5.84	8.35	0.57
0003 GA400478	5.71	10.80	X	80.6	X	X	408	5.28	7.55	0.58
0004 GA400479	6.21	11.73	X	42.9	0.2	0.3	361	5.23	7.48	0.54
0005 GA400480	5.96	11.27	X	14.3	X	X	646	6.93	9.90	0.51
0006 GA400481	5.94	11.22	X	10.5	X	X	468	5.58	7.98	0.57
0007 GA400482	5.85	11.05	X	17.3	X	X	361	5.04	7.21	0.65
0008 GA400483	6.09	11.50	X	7.1	X	X	409	6.01	8.60	0.65
0009 GA400484	5.69	10.75	X	12.7	X	X	452	5.87	8.39	0.63
0010 GA400485	6.23	11.78	X	111.2	X	X	298	4.31	6.16	0.53
0011 GA400486	6.44	12.17	X	30.7	0.2	0.3	337	4.81	6.87	0.72
0012 GA400487	6.27	11.85	X	25.8	X	X	497	5.33	7.61	0.81
0013 GA400488	6.38	12.05	58	21.6	X	X	538	4.64	6.64	0.75
0014 GA400489	6.20	11.71	X	16.1	X	X	545	5.28	7.54	0.66
0015 GA400490	6.13	11.58	X	21.4	X	X	1089	5.52	7.89	0.60
0016 GA400491	6.19	11.70	X	56.1	X	X	669	4.87	6.96	0.42
0017 GA400492	5.79	10.94	X	37.9	0.1	X	371	5.61	8.03	0.44
0018 GA400493	5.14	9.71	X	94.2	0.2	0.3	990	7.69	11.00	0.45
0019 GA400494	5.47	10.34	X	36.5	X	X	672	5.81	8.31	0.48
0020 GA400495	6.49	12.26	X	405.8	X	X	1500	5.02	7.18	0.70
0021 GA400496	6.41	12.11	X	51.0	X	X	971	5.53	7.91	0.58
0022 GA400497	3.63	6.85	X	1868.5	X	X	2495	4.79	6.85	0.22
0023 GA400498	1.42	2.68	X	1052.5	X	X	1890	1.85	2.64	0.09
0024 GA400499	2.54	4.80	X	650.7	X	X	1180	2.62	3.74	0.14
0025 GA400500	1.13	2.13	X	127.7	X	X	562	1.82	2.60	0.06
0026 GA400530	4.24	8.00	X	175.4	X	X	890	4.34	6.21	0.27
0027 GA400531	6.17	11.65	X	215.5	X	X	1316	5.11	7.30	0.73
0028 GA400532	6.30	11.91	X	200.1	X	X	2428	5.19	7.42	0.73
0029 GA400533	6.29	11.89	X	162.1	X	X	4073	4.55	6.51	0.62
0030 GA400534	6.35	12.00	X	427.3	X	X	2872	5.11	7.31	0.72
0031 GA400535	6.36	12.02	X	33.2	X	X	2695	4.99	7.14	0.92
0032 GA400536	6.44	12.17	X	264.4	X	X	2949	5.14	7.35	0.62
0033 GA400537	6.39	12.07	X	329.6	X	X	2366	4.10	5.86	0.48
0034 GA400538	6.47	12.23	X	289.8	X	X	4907	4.62	6.60	0.46
0035 GA400539	6.30	11.90	X	515.1	X	X	8034	4.27	6.11	0.49
0036 GA400540	6.14	11.59	X	376.7	X	X	7455	5.25	7.51	0.41
0037 GA400541	6.21	11.74	X	21.4	X	X	1623	5.38	7.69	0.30
0038 GA400542	5.88	11.11	X	38.6	X	X	1510	5.54	7.92	0.34
0039 GA400543	6.34	11.98	X	13.1	0.2	0.2	2340	4.77	6.82	0.44
0040 GA400544	6.52	12.31	X	20.8	0.1	X	2642	4.81	6.87	0.56



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA400476	1.06	550	710	17	X	X	35.8	76.7	0.02	0.32
0002 GA400477	0.94	620	800	16	X	X	35.9	76.7	0.01	0.34
0003 GA400478	0.97	594	767	11	X	0.5	34.8	74.5	0.01	0.29
0004 GA400479	0.90	454	586	16	X	0.5	35.2	75.3	0.02	0.31
0005 GA400480	0.85	316	408	44	X	X	32.7	70.1	X	0.31
0006 GA400481	0.94	378	488	22	X	X	33.2	70.9	X	0.31
0007 GA400482	1.08	590	762	45	X	X	34.7	74.2	X	0.31
0008 GA400483	1.07	713	921	20	X	0.7	34.1	72.9	0.01	0.31
0009 GA400484	1.04	1023	1321	16	X	0.7	34.4	73.7	0.01	0.30
0010 GA400485	0.88	523	676	9	X	X	35.2	75.2	0.02	0.31
0011 GA400486	1.19	822	1062	12	X	0.8	35.1	75.2	0.02	0.34
0012 GA400487	1.35	848	1095	18	X	0.6	34.2	73.2	0.02	0.32
0013 GA400488	1.25	776	1002	13	X	0.8	34.4	73.6	X	0.34
0014 GA400489	1.10	685	885	10	X	0.6	34.3	73.4	X	0.33
0015 GA400490	0.99	537	693	18	X	1.0	34.1	72.9	0.01	0.32
0016 GA400491	0.70	431	557	21	X	0.9	34.8	74.5	0.02	0.32
0017 GA400492	0.73	410	529	29	X	0.6	35.9	76.8	0.02	0.28
0018 GA400493	0.75	434	560	77	X	X	35.6	76.2	0.02	0.22
0019 GA400494	0.79	470	607	27	X	X	35.5	76.0	0.01	0.27
0020 GA400495	1.15	638	823	22	X	X	34.9	74.7	0.02	0.32
0021 GA400496	0.96	612	790	37	X	0.7	34.8	74.4	0.01	0.33
0022 GA400497	0.36	1351	1745	179	X	1.9	36.9	78.9	0.01	0.18
0023 GA400498	0.16	880	1136	73	X	0.7	43.9	93.9	0.01	0.07
0024 GA400499	0.23	1062	1371	55	X	X	42.7	91.3	0.02	0.11
0025 GA400500	0.10	358	462	36	X	X	45.5	97.4	X	0.05
0026 GA400530	0.45	1721	2223	42	X	0.6	39.6	84.8	0.01	0.21
0027 GA400531	1.21	755	976	22	X	X	33.7	72.0	0.01	0.32
0028 GA400532	1.21	894	1155	18	X	X	34.0	72.8	0.01	0.32
0029 GA400533	1.03	1199	1548	27	X	X	34.1	73.0	0.02	0.31
0030 GA400534	1.19	910	1176	29	X	X	34.4	73.7	0.02	0.33
0031 GA400535	1.52	1300	1679	12	X	X	34.6	74.0	0.01	0.33
0032 GA400536	1.02	554	715	30	X	0.6	34.7	74.2	0.01	0.32
0033 GA400537	0.80	427	552	36	X	0.7	34.9	74.6	0.02	0.32
0034 GA400538	0.76	470	607	58	X	X	34.4	73.6	0.02	0.32
0035 GA400539	0.81	495	640	50	X	0.7	35.9	76.7	0.02	0.30
0036 GA400540	0.68	553	715	46	X	0.5	35.0	74.8	0.02	0.30
0037 GA400541	0.49	236	304	40	X	0.6	35.6	76.1	0.02	0.32
0038 GA400542	0.56	243	314	38	X	0.7	35.3	75.6	0.01	0.30
0039 GA400543	0.72	327	422	36	X	0.5	35.0	74.9	0.03	0.32
0040 GA400544	0.92	506	653	40	0.07	X	34.9	74.6	0.02	0.33



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA400476	0.54	559	705
0002 GA400477	0.56	294	371
0003 GA400478	0.49	330	416
0004 GA400479	0.51	353	445
0005 GA400480	0.51	469	591
0006 GA400481	0.52	331	417
0007 GA400482	0.52	421	531
0008 GA400483	0.52	224	283
0009 GA400484	0.50	367	463
0010 GA400485	0.51	378	477
0011 GA400486	0.56	298	376
0012 GA400487	0.54	299	377
0013 GA400488	0.57	175	221
0014 GA400489	0.55	275	346
0015 GA400490	0.54	309	390
0016 GA400491	0.53	274	346
0017 GA400492	0.46	398	502
0018 GA400493	0.37	434	547
0019 GA400494	0.45	390	492
0020 GA400495	0.53	420	530
0021 GA400496	0.55	259	326
0022 GA400497	0.30	9748	1.23%
0023 GA400498	0.11	6625	8355
0024 GA400499	0.18	7147	9013
0025 GA400500	0.08	1984	2502
0026 GA400530	0.35	1570	1980
0027 GA400531	0.53	353	446
0028 GA400532	0.54	167	210
0029 GA400533	0.51	3777	4763
0030 GA400534	0.54	144	181
0031 GA400535	0.56	182	229
0032 GA400536	0.54	134	170
0033 GA400537	0.54	127	160
0034 GA400538	0.53	326	411
0035 GA400539	0.50	241	304
0036 GA400540	0.50	385	485
0037 GA400541	0.54	342	431
0038 GA400542	0.51	342	432
0039 GA400543	0.54	203	255
0040 GA400544	0.55	159	200



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA400545	2.71	5.12	181	1.1	8.0	11.1	X	5.85	8.36	10.99
0042 GA400546	4.31	8.14	X	1484.5	X	X	2075	5.30	7.57	0.27
0043 GA400547	6.21	11.73	X	38.8	X	X	2592	4.76	6.80	0.52
0044 GA400548	6.81	12.86	X	41.8	0.2	0.2	1279	4.78	6.83	0.70
0045 GA400549	5.78	10.91	X	40.2	0.2	0.3	1591	5.80	8.29	0.57
0046 GA400550	4.04	7.63	X	39.9	0.2	0.3	2334	4.32	6.18	0.72
0047 GA400551	5.59	10.57	X	58.4	0.1	X	2661	5.54	7.92	1.07
0048 GA400552	6.16	11.64	X	36.5	0.2	0.3	1185	5.61	8.03	1.06
0049 GA400553	6.12	11.56	X	33.7	0.2	0.3	419	5.64	8.06	1.09
0050 GA400554	6.70	12.66	X	27.1	0.2	0.2	302	6.40	9.15	1.42
0051 GA400555	5.48	10.35	X	13.6	0.2	0.3	199	4.24	6.06	2.26
0052 GA400556	5.94	11.22	X	40.2	0.2	0.2	286	5.42	7.75	1.09
0053 GA400557	6.45	12.19	X	26.6	0.1	X	242	5.93	8.48	1.31
0054 GA400558	6.41	12.12	X	24.2	0.1	X	195	5.95	8.51	1.35
0055 GA400559	6.30	11.91	X	25.9	0.2	0.2	194	5.45	7.79	1.16
0056 GA400560	6.17	11.65	X	19.0	0.2	0.2	157	4.98	7.12	1.06
0057 GA400561	6.17	11.65	X	15.9	0.2	0.2	95	5.19	7.42	1.06
0058 GA400562	6.10	11.53	X	14.8	0.1	X	91	5.05	7.23	1.02
0059 GA400563	4.08	7.72	X	18.8	0.2	0.2	117	4.34	6.20	0.70
0060 GA400564	6.12	11.57	X	22.5	0.1	0.2	66	4.93	7.05	0.77
0061 GA400565	6.15	11.62	X	22.5	0.1	X	93	4.26	6.09	0.83
0062 GA400566	6.10	11.52	X	12.1	X	X	216	4.36	6.24	0.88
0063 GA400567	6.07	11.48	X	30.7	X	X	571	4.15	5.93	0.67
0064 GA400568	6.01	11.35	X	33.0	X	X	781	4.45	6.37	0.53
0065 GA400569	5.79	10.94	X	34.6	X	X	644	4.71	6.73	0.53
0066 GA400570	6.21	11.74	X	23.6	X	X	755	4.39	6.27	0.64
0067 GA400571	5.91	11.16	X	86.3	X	X	562	6.04	8.63	0.61
0068 GA400572	5.88	11.12	X	47.9	X	X	603	5.25	7.50	0.49
0069 GA400573	6.11	11.54	X	20.9	0.4	0.6	146	5.84	8.34	0.86
0070 GA400574	5.85	11.05	X	15.1	0.1	X	75	6.07	8.67	0.97
0071 GA400575	6.05	11.42	X	11.6	0.1	X	120	5.38	7.69	1.05
0072 GA400576	5.71	10.79	X	18.0	0.7	1.0	212	4.01	5.73	2.67
0073 GA400577	6.11	11.54	X	8.1	0.2	0.2	122	2.69	3.85	2.76
0074 GA400578	5.73	10.82	X	9.1	0.2	0.2	176	4.20	6.00	1.88
0075 GA400579	6.06	11.44	X	9.0	0.1	X	148	4.62	6.61	1.30
0076 GA400580	6.02	11.38	X	13.3	0.1	X	131	4.77	6.82	1.16
0077 GA400581	5.57	10.53	X	24.9	0.2	0.3	220	5.48	7.84	1.19
0078 GA400582	5.88	11.11	X	10.5	0.1	X	75	4.43	6.34	1.16
0079 GA400583	5.75	10.86	X	15.5	0.2	0.2	59	4.59	6.56	0.91
0080 GA400584	5.97	11.28	X	16.0	0.1	X	85	4.72	6.76	1.06



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA400545	18.22	1505	1943	15	X	1.0	24.8	53.1	X	0.15
0042 GA400546	0.45	1763	2277	151	X	1.6	37.4	80.0	0.02	0.21
0043 GA400547	0.86	805	1040	53	X	X	34.8	74.5	0.02	0.32
0044 GA400548	1.17	762	984	28	X	X	33.6	72.0	0.02	0.31
0045 GA400549	0.94	699	903	31	X	X	34.7	74.2	0.01	0.26
0046 GA400550	1.20	1831	2364	27	X	X	37.0	79.2	0.01	0.19
0047 GA400551	1.77	1740	2247	29	X	X	33.2	71.1	0.02	0.28
0048 GA400552	1.75	1338	1728	20	X	X	34.1	73.0	0.01	0.32
0049 GA400553	1.81	1498	1934	55	X	X	34.6	73.9	0.02	0.29
0050 GA400554	2.35	1235	1594	21	X	X	33.4	71.5	0.02	0.33
0051 GA400555	3.75	1033	1334	8	X	X	34.7	74.2	0.01	0.29
0052 GA400556	1.81	1497	1933	20	X	X	34.0	72.7	0.02	0.31
0053 GA400557	2.17	1519	1962	18	X	X	33.4	71.4	0.02	0.33
0054 GA400558	2.24	1513	1954	16	X	X	33.2	71.0	0.02	0.33
0055 GA400559	1.93	1296	1673	12	X	X	33.9	72.6	0.02	0.32
0056 GA400560	1.75	1093	1412	22	X	X	33.4	71.5	0.01	0.33
0057 GA400561	1.76	1325	1711	11	X	X	33.5	71.6	0.02	0.33
0058 GA400562	1.69	1153	1489	11	X	X	33.1	70.8	0.01	0.32
0059 GA400563	1.15	4592	5929	227	X	X	34.3	73.5	X	0.22
0060 GA400564	1.28	1131	1460	23	X	X	34.7	74.1	0.02	0.31
0061 GA400565	1.37	886	1143	14	X	X	35.0	75.0	0.01	0.31
0062 GA400566	1.46	838	1082	16	X	X	32.6	69.7	0.02	0.32
0063 GA400567	1.11	826	1067	24	X	X	34.7	74.2	0.02	0.31
0064 GA400568	0.88	683	882	21	X	X	35.9	76.8	0.02	0.30
0065 GA400569	0.88	560	723	25	X	X	33.9	72.5	0.02	0.30
0066 GA400570	1.06	663	855	22	X	X	35.1	75.0	0.02	0.33
0067 GA400571	1.01	706	912	38	X	X	34.3	73.4	0.02	0.30
0068 GA400572	0.81	530	685	30	X	X	35.3	75.4	0.02	0.30
0069 GA400573	1.43	965	1246	35	X	X	34.7	74.2	0.02	0.30
0070 GA400574	1.61	983	1269	32	X	0.5	33.8	72.4	0.02	0.31
0071 GA400575	1.74	1058	1366	12	X	X	34.0	72.7	0.02	0.32
0072 GA400576	4.42	894	1154	11	X	X	33.3	71.2	0.02	0.26
0073 GA400577	4.58	563	726	12	X	X	34.0	72.8	X	0.33
0074 GA400578	3.12	877	1132	18	X	X	34.5	73.8	0.01	0.30
0075 GA400579	2.15	1113	1437	31	X	X	32.8	70.2	X	0.32
0076 GA400580	1.92	1149	1484	30	X	X	33.6	71.9	X	0.31
0077 GA400581	1.98	1336	1726	12	X	X	34.5	73.9	0.01	0.27
0078 GA400582	1.93	1020	1317	29	X	X	33.5	71.6	X	0.30
0079 GA400583	1.51	849	1096	18	X	X	33.9	72.5	0.01	0.30
0080 GA400584	1.77	962	1243	14	X	X	33.8	72.3	X	0.32



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA400545	0.25	1662	2095
0042 GA400546	0.35	1.16%	1.47%
0043 GA400547	0.53	3203	4039
0044 GA400548	0.52	320	403
0045 GA400549	0.44	349	440
0046 GA400550	0.32	421	531
0047 GA400551	0.46	312	394
0048 GA400552	0.53	249	314
0049 GA400553	0.48	700	882
0050 GA400554	0.56	285	359
0051 GA400555	0.48	160	202
0052 GA400556	0.52	462	582
0053 GA400557	0.55	230	290
0054 GA400558	0.55	198	250
0055 GA400559	0.53	204	257
0056 GA400560	0.55	157	198
0057 GA400561	0.55	196	247
0058 GA400562	0.54	233	294
0059 GA400563	0.36	2.19%	2.76%
0060 GA400564	0.52	1462	1844
0061 GA400565	0.52	313	395
0062 GA400566	0.53	222	280
0063 GA400567	0.52	349	441
0064 GA400568	0.50	709	894
0065 GA400569	0.50	367	463
0066 GA400570	0.54	262	330
0067 GA400571	0.51	552	696
0068 GA400572	0.50	485	612
0069 GA400573	0.49	492	621
0070 GA400574	0.52	434	548
0071 GA400575	0.53	223	281
0072 GA400576	0.44	308	388
0073 GA400577	0.55	143	181
0074 GA400578	0.50	103	130
0075 GA400579	0.53	82	104
0076 GA400580	0.52	681	859
0077 GA400581	0.46	125	158
0078 GA400582	0.51	111	140
0079 GA400583	0.50	135	171
0080 GA400584	0.54	121	152



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA400585	5.74	10.85	X	22.5	0.1	X	44	3.92	5.61	0.43
0082 GA400586	6.27	11.85	X	12.4	0.2	0.2	50	4.37	6.24	0.58
0083 GA400587	10.16	19.19	65	6.3	3.4	4.8	94	3.24	4.64	3.53
0084 GA400588	4.53	8.55	X	178.1	X	X	789	4.19	5.99	0.29
0085 GA400589	6.10	11.53	X	12.3	0.1	X	66	4.44	6.34	0.71
0086 GA400590	5.44	10.27	X	16.2	0.2	0.3	119	4.47	6.39	0.74
0087 GA400591	5.91	11.17	X	19.0	0.2	0.3	87	5.05	7.22	0.66
0088 GA400592	5.87	11.10	X	14.5	0.1	X	35	4.49	6.42	0.83
0089 GA400593	6.06	11.45	X	11.7	0.1	X	X	4.26	6.09	0.81
0090 GA400594	5.70	10.77	X	14.8	0.2	0.3	73	4.56	6.52	0.88
0091 GA400595	5.81	10.98	X	5.8	0.1	X	X	4.35	6.22	0.88
0092 GA400596	6.08	11.49	X	18.3	0.1	X	92	4.89	7.00	0.89
0093 GA400597	5.31	10.03	X	17.1	0.2	0.3	447	6.25	8.94	1.42
0094 GA400598	6.20	11.71	X	17.3	0.4	0.6	157	5.10	7.29	1.15
0095 GA400599	5.93	11.20	X	9.1	0.1	X	94	4.24	6.06	1.20
0096 GA400600	5.72	10.82	X	6.9	0.1	X	41	4.25	6.08	0.92
0097 GA400601	5.63	10.64	X	12.9	0.1	X	51	4.67	6.67	0.99
0098 GA400602	6.05	11.43	X	13.4	0.2	0.2	406	4.76	6.80	0.74
0099 GA400603	6.09	11.51	X	15.9	0.2	0.2	1184	4.77	6.82	0.86
0100 GA400604	5.75	10.86	X	19.7	X	X	1218	4.37	6.25	0.78
0101 GA400605	6.06	11.45	X	9.2	0.1	X	432	4.37	6.24	0.79
0102 GA400606	6.00	11.34	X	16.7	0.1	X	1049	4.56	6.53	0.67
0103 GA400607	5.69	10.76	X	39.9	X	X	2001	5.21	7.46	0.34
0104 GA400608	5.56	10.51	X	25.1	X	X	1591	4.94	7.06	0.40
0105 GA400609	5.55	10.48	X	39.9	X	X	2662	5.07	7.25	0.23
0106 GA400610	5.89	11.13	X	31.5	X	X	1383	5.25	7.50	0.48
0107 GA400611	5.78	10.93	X	16.2	0.1	X	826	4.67	6.68	0.74
0108 GA400612	5.78	10.93	X	8.9	0.1	X	382	4.47	6.39	0.82
0109 GA400613	6.13	11.59	X	8.2	0.3	0.4	185	4.87	6.96	0.82
0110 GA400614	5.97	11.27	X	2.6	0.2	0.3	39	4.75	6.79	1.00
0111 GA400615	6.28	11.86	X	4.8	0.2	0.3	65	4.98	7.12	1.18
0112 GA400616	6.00	11.35	X	5.3	0.2	0.2	73	4.53	6.48	1.20
0113 GA400617	5.74	10.85	X	8.3	0.2	0.2	188	4.55	6.51	1.15
0114 GA400618	6.54	12.36	X	16.1	0.2	0.3	447	5.39	7.71	1.31
0115 GA400619	5.81	10.98	X	17.2	0.2	0.2	584	5.15	7.36	1.45
0116 GA400620	5.57	10.53	X	12.5	0.1	X	146	4.95	7.07	0.96
0117 GA400621	5.16	9.74	X	10.8	0.3	0.5	113	4.39	6.28	0.92
0118 GA400622	5.68	10.72	X	6.2	0.1	X	39	4.80	6.86	1.21



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA400585	0.72	343	443	16	X	X	33.4	71.5	0.07	0.29
0082 GA400586	0.95	452	583	18	X	X	34.5	73.7	0.01	0.34
0083 GA400587	5.86	938	1211	131	2.06	30.8	21.3	45.5	X	0.17
0084 GA400588	0.48	1436	1855	47	X	0.6	37.1	79.4	0.01	0.22
0085 GA400589	1.17	549	708	12	X	X	33.6	71.9	0.02	0.32
0086 GA400590	1.22	656	847	14	X	X	32.9	70.4	0.02	0.28
0087 GA400591	1.09	620	800	20	X	X	32.3	69.0	0.02	0.31
0088 GA400592	1.37	874	1129	19	X	X	32.0	68.4	0.01	0.31
0089 GA400593	1.34	819	1058	14	X	X	32.4	69.4	0.02	0.32
0090 GA400594	1.45	803	1037	20	X	X	33.6	71.8	X	0.30
0091 GA400595	1.47	814	1051	11	X	X	31.3	67.1	X	0.31
0092 GA400596	1.47	785	1013	12	X	X	32.7	69.9	0.04	0.31
0093 GA400597	2.36	1299	1677	12	X	X	33.2	71.0	0.13	0.28
0094 GA400598	1.90	1130	1460	9	X	X	33.8	72.3	0.02	0.32
0095 GA400599	1.99	1036	1337	9	X	X	32.1	68.7	X	0.32
0096 GA400600	1.53	995	1285	9	X	X	31.7	67.8	0.01	0.30
0097 GA400601	1.64	1031	1331	7	X	X	32.6	69.7	0.01	0.28
0098 GA400602	1.22	649	838	13	X	X	32.8	70.2	0.01	0.31
0099 GA400603	1.42	883	1140	7	0.05	X	33.1	70.8	X	0.32
0100 GA400604	1.30	753	972	11	X	X	32.9	70.4	X	0.30
0101 GA400605	1.31	674	870	8	X	X	33.2	71.0	X	0.32
0102 GA400606	1.11	568	734	9	X	X	33.6	72.0	0.01	0.31
0103 GA400607	0.57	270	349	18	0.08	X	33.2	71.0	0.01	0.30
0104 GA400608	0.66	365	471	15	0.07	X	32.8	70.1	X	0.29
0105 GA400609	0.38	218	282	27	0.09	X	32.8	70.1	0.01	0.29
0106 GA400610	0.80	376	486	20	0.05	X	33.2	70.9	0.02	0.32
0107 GA400611	1.23	617	797	11	X	X	32.3	69.2	X	0.31
0108 GA400612	1.36	828	1069	9	X	X	31.8	68.0	0.02	0.30
0109 GA400613	1.36	753	972	7	X	X	32.2	68.9	0.01	0.32
0110 GA400614	1.66	857	1106	9	X	0.5	32.0	68.5	X	0.32
0111 GA400615	1.96	952	1230	9	X	X	34.6	74.0	X	0.33
0112 GA400616	2.00	959	1238	10	X	1.0	32.7	69.9	X	0.32
0113 GA400617	1.91	948	1224	5	X	X	33.1	70.9	0.01	0.29
0114 GA400618	2.18	1131	1461	6	X	X	31.6	67.5	0.02	0.31
0115 GA400619	2.40	1122	1449	8	X	X	32.0	68.4	0.01	0.31
0116 GA400620	1.58	1018	1315	16	X	X	31.8	68.1	0.02	0.28
0117 GA400621	1.52	933	1205	8	X	X	32.9	70.4	0.01	0.25
0118 GA400622	2.01	1120	1446	7	X	X	30.6	65.4	X	0.30



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0081 GA400585	0.48	235	297
0082 GA400586	0.57	141	178
0083 GA400587	0.29	2.87%	3.61%
0084 GA400588	0.37	1085	1368
0085 GA400589	0.54	186	234
0086 GA400590	0.46	232	293
0087 GA400591	0.52	208	262
0088 GA400592	0.52	114	143
0089 GA400593	0.53	133	167
0090 GA400594	0.50	774	976
0091 GA400595	0.52	89	112
0092 GA400596	0.52	147	185
0093 GA400597	0.46	390	491
0094 GA400598	0.53	224	282
0095 GA400599	0.53	166	209
0096 GA400600	0.50	112	142
0097 GA400601	0.47	116	146
0098 GA400602	0.52	152	192
0099 GA400603	0.54	74	94
0100 GA400604	0.51	93	117
0101 GA400605	0.54	78	98
0102 GA400606	0.52	101	127
0103 GA400607	0.50	189	238
0104 GA400608	0.49	353	445
0105 GA400609	0.48	339	428
0106 GA400610	0.53	153	193
0107 GA400611	0.51	115	145
0108 GA400612	0.51	90	114
0109 GA400613	0.53	87	110
0110 GA400614	0.54	50	63
0111 GA400615	0.55	130	163
0112 GA400616	0.53	72	91
0113 GA400617	0.48	90	113
0114 GA400618	0.52	146	184
0115 GA400619	0.52	128	161
0116 GA400620	0.47	135	170
0117 GA400621	0.42	96	120
0118 GA400622	0.51	54	68



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
0001 GA400477	5.89	11.14	X	60.0	X	X	417	5.71	8.16	0.55
0002 GA400547	6.15	11.62	X	39.3	X	X	2521	4.70	6.72	0.50
0003 GA400562	5.87	11.09	X	15.3	0.1	X	86	4.84	6.92	0.98
0004 GA400591	5.93	11.21	X	19.0	0.2	0.3	88	5.04	7.21	0.66

STANDARDS

0001 OREAS 24b	7.76	14.66	X	0.8	1.1	1.5	34	4.41	6.30	1.63
0002 OREAS 700	5.72	10.80	X	6.9	5.9	8.3	2065	16.57	23.69	1.05
0003 GW-01	4.57	8.63	X	2.2	8.8	12.3	257	3.76	5.38	5.46
0004 OREAS 701	6.33	11.96	X	6.8	3.7	5.2	4854	23.46	33.54	0.75
0005 OREAS 522	3.85	7.27	521	9.1	3.8	5.3	9167	24.11	34.47	1.11

BLANKS

0001 Control Blank	X	X	X	0.3	X	X	X	X	X	X
0002 Control Blank	X	X	X	0.1	X	X	X	X	X	X
0003 Control Blank	X	X	X	0.2	X	X	X	0.16	0.22	X
0004 Control Blank	X	X	X	0.1	X	X	X	0.02	0.03	X
0005 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
CHECKS										
0001 GA400477	0.91	600	775	14	X	X	35.0	75.0	0.01	0.33
0002 GA400547	0.84	806	1040	53	X	X	34.3	73.4	0.02	0.31
0003 GA400562	1.63	1102	1423	11	X	X	32.6	69.6	0.01	0.31
0004 GA400591	1.09	618	798	19	X	X	33.1	70.9	0.02	0.31

STANDARDS

0001 OREAS 24b	2.70	450	581	4	0.20	1.4	31.0	66.3	X	0.47
0002 OREAS 700	1.73	3346	4321	80	0.31	0.5	23.1	49.4	0.02	0.20
0003 GW-01	9.06	837	1081	7	0.23	0.9	26.5	56.7	X	0.09
0004 OREAS 701	1.24	3304	4267	253	0.67	X	15.6	33.3	0.02	0.16
0005 OREAS 522	1.84	4088	5278	211	3.00	9.6	15.2	32.4	X	0.38

BLANKS

0001 Control Blank	X	X	X	X	X	0.8	X	X	X	X
0002 Control Blank	X	X	X	5	X	0.9	X	X	0.01	X
0003 Control Blank	X	X	X	5	X	0.9	X	X	0.02	X
0004 Control Blank	X	X	X	2	X	X	X	X	X	X
0005 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
CHECKS			
0001 GA400477	0.55	311	392
0002 GA400547	0.53	3125	3940
0003 GA400562	0.52	158	199
0004 GA400591	0.51	169	213

STANDARDS

0001 OREAS 24b	0.79	14	18
0002 OREAS 700	0.33	1.09%	1.37%
0003 GW-01	0.16	2876	3626
0004 OREAS 701	0.26	1.97%	2.48%
0005 OREAS 522	0.63	159	201

BLANKS

0001 Control Blank	X	8	9
0002 Control Blank	X	67	85
0003 Control Blank	X	50	63
0004 Control Blank	X	39	49
0005 Control Blank	X	32	41



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003 Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004 Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
 PO Box 517
 WEST PERTH, W.A. 6872
 AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904906
 NO. SAMPLES : 106
 NO. ELEMENTS : 23
 CLIENT ORDER NO. : GW5342 (Job 1 of 1)
 SAMPLE SUBMISSION NO. : GW5342
 PROJECT : HATCHES CREEK
 SAMPLE TYPE : RC
 DATE RECEIVED : 02/04/2019
 DATE REPORTED : 29/04/2019
 DATE PRINTED : 29/04/2019

REPORT NOTES

TESTED BY

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues will be stored for 60 days without charge. Following this samples will be stored at a daily rate until clients written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m³ per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m³.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND

X	= Less than Detection Limit	NA	= Not Analysed
SNR	= Sample Not Received	UA	= Unable to Assay
*	= Result Checked	>	= Value beyond Limit of Method
DTF	= Result still to come	+	= Extra Sample Received Not Listed
IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA400623	4.42	8.36	X	105.3	X	X	202	4.04	5.78	0.35
0002 GA400624	6.54	12.35	X	11.3	X	X	768	4.54	6.50	0.49
0003 GA400625	5.43	10.27	X	12.6	X	X	837	5.47	7.82	0.35
0004 GA400626	5.57	10.52	X	11.3	X	X	1153	5.66	8.09	0.46
0005 GA400627	5.57	10.53	X	12.4	X	X	792	5.56	7.95	0.58
0006 GA400628	5.42	10.24	X	11.1	X	X	759	4.92	7.03	0.70
0007 GA400629	5.66	10.69	X	14.3	X	X	450	4.49	6.42	0.55
0008 GA400630	5.54	10.46	X	10.8	X	X	605	4.10	5.86	0.56
0009 GA400631	5.81	10.99	X	13.5	X	X	737	3.85	5.51	0.52
0010 GA400632	5.63	10.63	X	17.5	X	X	900	4.02	5.75	0.57
0011 GA400633	5.27	9.95	X	17.2	X	X	553	4.18	5.97	0.51
0012 GA400634	5.65	10.68	X	18.4	X	X	410	4.36	6.24	0.55
0013 GA400635	5.64	10.65	X	8.9	X	X	606	4.36	6.23	0.71
0014 GA400636	5.64	10.65	X	11.1	X	X	417	4.15	5.93	0.50
0015 GA400637	2.78	5.25	X	9.8	X	X	315	2.47	3.53	0.23
0016 GA400638	5.85	11.05	X	20.2	0.1	X	457	4.32	6.18	0.54
0017 GA400639	5.02	9.49	X	14.4	X	X	230	4.52	6.47	0.66
0018 GA400640	5.69	10.75	X	18.7	0.1	X	627	4.01	5.74	0.83
0019 GA400641	5.59	10.56	X	14.5	X	X	322	4.01	5.73	0.83
0020 GA400642	4.88	9.21	X	16.7	X	X	725	3.34	4.78	1.91
0021 GA400643	4.60	8.69	X	20.4	X	X	811	3.86	5.51	0.56
0022 GA400644	5.62	10.62	X	27.2	0.1	X	1034	4.39	6.27	0.65
0023 GA400645	5.31	10.02	87	26.5	0.1	X	711	4.43	6.33	0.85
0024 GA400646	5.13	9.70	X	19.2	0.1	X	1072	4.41	6.31	0.96
0025 GA400647	5.80	10.96	54	12.6	X	X	255	4.36	6.23	0.98
0026 GA400648	5.44	10.27	X	26.1	0.1	X	144	5.15	7.37	0.96
0027 GA400649	5.34	10.09	X	12.9	X	X	237	4.95	7.08	0.74
0028 GA400650	5.65	10.68	X	13.4	0.1	X	548	4.73	6.77	0.74
0029 GA400651	5.72	10.81	X	14.9	0.1	X	582	4.28	6.12	0.71
0030 GA400652	5.76	10.89	X	11.3	0.1	X	92	3.71	5.31	0.92
0031 GA400653	5.87	11.09	X	9.6	0.1	X	82	4.21	6.02	1.26
0032 GA400654	5.97	11.28	X	10.7	0.1	X	64	4.38	6.26	1.15
0033 GA400655	5.99	11.31	X	16.5	0.1	X	897	4.94	7.06	0.89
0034 GA400656	5.58	10.54	X	20.4	0.1	X	2393	5.21	7.45	0.43
0035 GA400657	5.58	10.54	64	14.2	X	X	3180	5.00	7.15	0.50
0036 GA400658	5.77	10.90	X	22.5	X	X	7809	3.93	5.62	0.48
0037 GA400659	5.91	11.16	X	8.6	X	X	1973	4.14	5.91	0.74
0038 GA400660	5.93	11.21	X	9.2	0.1	X	4223	4.44	6.35	0.52
0039 GA400661	5.97	11.28	X	12.0	X	X	3025	4.61	6.59	0.49
0040 GA400662	5.78	10.92	X	10.8	X	X	5411	4.57	6.53	0.63



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA400623	0.59	962	1242	19	X	0.7	35.1	75.2	0.01	0.25
0002 GA400624	0.82	542	700	8	X	X	32.7	70.0	0.02	0.33
0003 GA400625	0.59	367	474	22	X	X	33.1	70.9	0.02	0.28
0004 GA400626	0.77	595	768	20	X	X	33.2	71.1	0.02	0.29
0005 GA400627	0.96	594	767	19	X	0.9	32.4	69.2	0.01	0.30
0006 GA400628	1.15	646	834	13	X	X	33.0	70.5	0.01	0.30
0007 GA400629	0.91	313	404	9	X	X	32.1	68.6	0.01	0.31
0008 GA400630	0.92	368	475	6	X	X	32.5	69.5	X	0.30
0009 GA400631	0.86	424	548	6	X	X	33.0	70.6	X	0.31
0010 GA400632	0.95	844	1089	9	X	0.5	31.6	67.5	X	0.30
0011 GA400633	0.85	736	951	14	X	X	33.6	71.8	0.01	0.28
0012 GA400634	0.92	558	721	9	X	X	33.0	70.5	0.02	0.31
0013 GA400635	1.19	888	1146	8	X	X	33.6	71.8	X	0.30
0014 GA400636	0.83	620	801	10	X	X	32.7	69.9	X	0.31
0015 GA400637	0.39	496	641	23	X	0.5	40.2	85.9	0.02	0.15
0016 GA400638	0.89	990	1278	11	X	X	33.2	71.1	0.02	0.30
0017 GA400639	1.10	792	1022	6	X	X	35.4	75.7	0.01	0.27
0018 GA400640	1.37	680	877	6	X	X	33.8	72.2	0.01	0.30
0019 GA400641	1.38	573	740	9	X	0.5	32.0	68.4	X	0.30
0020 GA400642	3.17	650	840	5	X	X	34.9	74.6	0.02	0.26
0021 GA400643	0.93	694	896	10	X	X	35.7	76.4	0.03	0.24
0022 GA400644	1.09	1265	1633	10	X	X	34.2	73.2	0.02	0.29
0023 GA400645	1.41	1254	1619	8	X	0.8	33.7	72.1	0.02	0.28
0024 GA400646	1.58	1107	1430	8	X	X	32.0	68.4	0.02	0.27
0025 GA400647	1.63	957	1236	8	X	X	32.8	70.2	X	0.31
0026 GA400648	1.59	871	1125	10	X	X	32.5	69.5	0.01	0.29
0027 GA400649	1.24	647	835	10	X	X	33.5	71.6	X	0.29
0028 GA400650	1.22	653	843	11	X	X	31.9	68.2	X	0.30
0029 GA400651	1.17	562	725	20	X	X	33.3	71.2	0.02	0.29
0030 GA400652	1.53	860	1111	7	X	X	28.1	60.1	X	0.31
0031 GA400653	2.09	961	1241	7	X	X	32.8	70.2	X	0.32
0032 GA400654	1.91	893	1153	9	X	X	33.0	70.6	X	0.33
0033 GA400655	1.48	780	1008	9	X	X	33.9	72.6	X	0.33
0034 GA400656	0.71	297	384	27	X	X	34.6	74.0	0.01	0.29
0035 GA400657	0.82	744	961	18	X	X	34.5	73.9	0.01	0.30
0036 GA400658	0.79	580	749	22	0.15	X	35.7	76.4	0.02	0.29
0037 GA400659	1.23	525	677	9	X	X	33.8	72.3	X	0.32
0038 GA400660	0.86	346	447	11	0.09	X	34.7	74.2	0.01	0.31
0039 GA400661	0.82	361	466	9	0.06	X	31.9	68.2	X	0.31
0040 GA400662	1.05	485	627	9	0.11	X	32.7	70.0	0.01	0.30



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA400623	0.42	1281	1616
0002 GA400624	0.55	160	201
0003 GA400625	0.46	189	238
0004 GA400626	0.48	133	167
0005 GA400627	0.51	116	146
0006 GA400628	0.50	140	177
0007 GA400629	0.52	139	176
0008 GA400630	0.50	99	125
0009 GA400631	0.52	164	207
0010 GA400632	0.50	212	268
0011 GA400633	0.47	155	196
0012 GA400634	0.51	153	193
0013 GA400635	0.50	110	139
0014 GA400636	0.51	117	147
0015 GA400637	0.25	629	794
0016 GA400638	0.49	228	288
0017 GA400639	0.44	217	274
0018 GA400640	0.50	209	263
0019 GA400641	0.51	131	165
0020 GA400642	0.44	184	232
0021 GA400643	0.39	552	696
0022 GA400644	0.48	569	718
0023 GA400645	0.46	298	376
0024 GA400646	0.45	222	279
0025 GA400647	0.52	139	175
0026 GA400648	0.49	189	239
0027 GA400649	0.48	190	240
0028 GA400650	0.51	136	171
0029 GA400651	0.49	179	226
0030 GA400652	0.51	64	81
0031 GA400653	0.53	58	74
0032 GA400654	0.54	72	90
0033 GA400655	0.54	164	207
0034 GA400656	0.49	308	389
0035 GA400657	0.49	2963	3736
0036 GA400658	0.48	2248	2835
0037 GA400659	0.53	129	163
0038 GA400660	0.52	156	197
0039 GA400661	0.52	284	359
0040 GA400662	0.51	727	916



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA400663	6.51	12.30	X	7.0	3.8	5.3	4972	24.44	34.94	0.77
0042 GA400664	4.31	8.15	X	14.5	X	X	688	2.80	4.00	1.45
0043 GA400665	6.05	11.43	X	7.1	0.1	X	3149	3.79	5.43	0.69
0044 GA400666	6.76	12.78	X	14.0	X	X	6721	4.10	5.86	0.66
0045 GA400667	5.84	11.04	X	12.6	X	X	5693	5.32	7.60	0.71
0046 GA400668	5.30	10.01	X	17.8	X	X	2.01%	4.96	7.09	0.42
0047 GA400669	5.18	9.78	81	12.4	X	X	9585	3.95	5.65	0.42
0048 GA400670	5.68	10.73	X	12.6	X	X	4071	4.41	6.30	0.46
0049 GA400671	5.79	10.94	X	11.2	X	X	4108	5.43	7.76	0.66
0050 GA400672	5.89	11.12	X	10.7	X	X	3474	4.87	6.96	0.54
0051 GA400673	5.49	10.37	X	13.0	X	X	9108	4.61	6.58	0.47
0052 GA400674	6.07	11.47	X	13.7	X	X	2327	4.64	6.63	0.57
0053 GA400675	6.02	11.38	X	11.4	0.1	X	2029	4.74	6.77	0.62
0054 GA400676	4.87	9.19	X	47.9	0.1	X	942	5.67	8.10	0.77
0055 GA400677	5.88	11.10	X	14.2	0.1	X	260	4.80	6.87	1.07
0056 GA400678	5.83	11.01	X	11.6	0.1	X	92	4.91	7.02	0.89
0057 GA400679	5.72	10.81	X	10.7	0.1	X	115	4.04	5.78	1.00
0058 GA400680	6.16	11.65	X	8.0	0.1	X	159	4.37	6.25	1.15
0059 GA400681	6.10	11.52	X	8.9	0.1	X	77	4.44	6.35	1.10
0060 GA400682	6.03	11.39	X	8.7	0.1	0.2	154	4.21	6.02	1.25
0061 GA400683	6.17	11.65	X	10.9	0.1	X	128	4.34	6.21	1.27
0062 GA400684	6.15	11.62	X	9.3	0.1	X	155	4.74	6.77	1.28
0063 GA400685	5.88	11.11	X	11.6	0.7	1.0	155	5.46	7.81	0.96
0064 GA400686	5.86	11.06	X	12.6	0.1	X	130	5.44	7.77	0.83
0065 GA400687	6.08	11.49	X	11.1	0.1	X	169	4.56	6.52	0.96
0066 GA400688	6.14	11.59	X	13.7	0.1	X	138	4.43	6.34	1.19
0067 GA400689	6.28	11.86	X	19.3	0.2	0.3	694	4.58	6.55	1.28
0068 GA400690	5.93	11.21	X	14.4	0.2	0.3	758	4.69	6.71	1.46
0069 GA400691	5.84	11.03	X	12.7	0.1	X	381	5.22	7.46	1.09
0070 GA400692	6.00	11.34	X	10.9	0.2	0.3	351	4.74	6.78	1.16
0071 GA400693	6.12	11.56	X	10.3	0.1	X	205	4.56	6.52	1.14
0072 GA400694	6.19	11.69	X	11.0	0.1	X	168	4.69	6.71	1.10
0073 GA400695	6.02	11.38	X	11.2	0.2	0.3	300	5.03	7.19	0.87
0074 GA400696	6.31	11.93	X	11.7	0.1	X	229	4.50	6.43	0.83
0075 GA400697	5.97	11.28	X	9.9	0.1	X	90	4.59	6.56	0.74
0076 GA400698	6.29	11.88	X	10.9	0.2	0.3	142	5.16	7.38	0.76
0077 GA400699	5.99	11.32	X	12.9	0.2	0.2	239	4.77	6.82	0.86
0078 GA400700	5.20	9.83	X	13.1	0.1	X	158	4.62	6.60	0.68
0079 GA400701	6.13	11.59	X	16.6	0.1	X	51	4.60	6.58	0.47
0080 GA400702	6.12	11.56	X	12.6	0.1	X	66	5.31	7.59	0.60



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA400663	1.28	3443	4446	274	0.69	X	16.1	34.5	0.02	0.16
0042 GA400664	2.41	585	755	7	X	X	35.5	76.0	0.02	0.23
0043 GA400665	1.15	516	666	10	0.07	X	34.3	73.5	0.01	0.32
0044 GA400666	1.09	448	579	24	0.15	X	32.7	69.9	0.01	0.32
0045 GA400667	1.18	508	656	8	0.13	X	27.5	58.9	0.01	0.30
0046 GA400668	0.70	396	511	34	0.47	0.6	34.7	74.2	0.01	0.28
0047 GA400669	0.69	441	570	8	0.23	0.5	32.8	70.1	0.01	0.27
0048 GA400670	0.76	398	514	9	0.10	X	33.4	71.5	X	0.31
0049 GA400671	1.09	543	701	11	0.10	X	33.7	72.2	X	0.30
0050 GA400672	0.90	532	687	10	0.08	X	30.7	65.8	0.01	0.32
0051 GA400673	0.78	560	724	27	0.22	X	31.8	68.1	0.01	0.28
0052 GA400674	0.95	473	611	15	0.06	X	33.4	71.4	X	0.33
0053 GA400675	1.02	570	736	17	X	X	33.5	71.6	0.01	0.32
0054 GA400676	1.28	755	975	30	X	X	30.0	64.1	0.01	0.26
0055 GA400677	1.78	904	1167	15	X	X	32.3	69.1	X	0.32
0056 GA400678	1.47	870	1123	14	X	X	33.9	72.5	0.01	0.31
0057 GA400679	1.66	916	1183	19	X	X	31.9	68.2	X	0.31
0058 GA400680	1.91	965	1246	7	X	X	32.8	70.3	X	0.33
0059 GA400681	1.82	1140	1472	6	X	X	33.6	71.8	0.01	0.32
0060 GA400682	2.07	1180	1523	5	X	X	33.3	71.2	0.01	0.32
0061 GA400683	2.11	1096	1415	5	X	X	32.6	69.7	X	0.32
0062 GA400684	2.12	1065	1375	7	X	X	34.2	73.1	X	0.33
0063 GA400685	1.59	804	1038	9	X	X	34.1	72.9	0.01	0.31
0064 GA400686	1.38	786	1014	12	X	X	33.7	72.1	0.01	0.31
0065 GA400687	1.59	785	1014	12	X	X	33.8	72.4	X	0.33
0066 GA400688	1.98	1035	1336	8	X	X	33.4	71.5	X	0.33
0067 GA400689	2.13	1017	1313	7	X	X	34.3	73.3	0.01	0.32
0068 GA400690	2.42	1155	1491	7	X	X	32.7	69.9	X	0.32
0069 GA400691	1.81	1017	1313	7	X	X	33.0	70.5	0.01	0.32
0070 GA400692	1.93	985	1272	7	X	X	34.8	74.4	X	0.33
0071 GA400693	1.89	879	1135	8	X	X	34.3	73.4	0.01	0.33
0072 GA400694	1.83	811	1047	8	X	X	33.6	72.0	X	0.33
0073 GA400695	1.44	701	906	5	X	X	34.8	74.5	X	0.32
0074 GA400696	1.38	1328	1714	141	X	X	33.2	71.1	0.02	0.32
0075 GA400697	1.22	691	892	7	X	X	33.6	71.9	0.01	0.32
0076 GA400698	1.26	752	970	14	X	X	33.3	71.2	0.02	0.31
0077 GA400699	1.43	836	1080	9	X	1.0	33.8	72.4	0.01	0.33
0078 GA400700	1.12	711	918	52	X	X	35.4	75.6	0.01	0.28
0079 GA400701	0.78	415	535	17	X	X	33.4	71.4	0.01	0.31
0080 GA400702	0.99	529	682	9	X	X	35.0	74.8	X	0.33



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA400663	0.27	2.38%	3.00%
0042 GA400664	0.38	395	498
0043 GA400665	0.54	166	210
0044 GA400666	0.54	1907	2405
0045 GA400667	0.51	208	263
0046 GA400668	0.47	1565	1973
0047 GA400669	0.45	939	1184
0048 GA400670	0.51	342	431
0049 GA400671	0.50	220	278
0050 GA400672	0.53	172	216
0051 GA400673	0.47	1137	1434
0052 GA400674	0.55	277	349
0053 GA400675	0.53	235	296
0054 GA400676	0.43	413	521
0055 GA400677	0.53	168	212
0056 GA400678	0.52	1313	1656
0057 GA400679	0.51	2058	2596
0058 GA400680	0.54	358	452
0059 GA400681	0.54	154	194
0060 GA400682	0.53	93	118
0061 GA400683	0.53	67	85
0062 GA400684	0.55	83	105
0063 GA400685	0.51	133	168
0064 GA400686	0.52	155	196
0065 GA400687	0.54	99	125
0066 GA400688	0.55	102	129
0067 GA400689	0.54	128	161
0068 GA400690	0.54	115	145
0069 GA400691	0.53	133	168
0070 GA400692	0.55	146	184
0071 GA400693	0.55	168	212
0072 GA400694	0.55	127	160
0073 GA400695	0.54	142	179
0074 GA400696	0.54	7540	9509
0075 GA400697	0.54	173	218
0076 GA400698	0.52	192	243
0077 GA400699	0.54	194	244
0078 GA400700	0.46	1034	1303
0079 GA400701	0.52	159	201
0080 GA400702	0.55	118	149



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA400703	5.81	10.98	X	9.7	0.2	0.2	50	5.28	7.55	0.75
0082 GA400704	5.93	11.21	X	7.6	0.1	X	43	4.34	6.20	0.83
0083 GA400705	2.29	4.32	X	35.9	9.0	12.6	X	5.64	8.06	8.90
0084 GA400706	6.03	11.39	X	8.2	X	X	1559	4.10	5.87	0.71
0085 GA400707	5.89	11.14	X	10.5	0.1	X	48	4.83	6.90	1.08
0086 GA400708	5.88	11.11	X	10.4	0.1	X	38	4.49	6.42	0.84
0087 GA400709	5.99	11.31	X	12.1	0.1	X	230	4.14	5.92	0.96
0088 GA400710	6.12	11.57	X	10.2	0.1	X	106	4.25	6.08	1.12
0089 GA400711	5.25	9.93	X	9.3	0.2	0.2	96	4.51	6.45	1.02
0090 GA400712	5.40	10.21	X	10.6	0.1	X	279	4.11	5.88	1.11
0091 GA400713	6.14	11.60	X	11.2	0.2	0.3	142	4.71	6.74	1.25
0092 GA400714	5.88	11.11	X	11.6	0.1	X	173	5.03	7.19	1.11
0093 GA400715	6.02	11.38	X	7.2	0.1	X	96	4.82	6.89	1.04
0094 GA400716	6.02	11.38	X	8.3	0.1	X	111	4.67	6.68	0.90
0095 GA400717	5.17	9.77	X	8.5	0.1	X	152	6.04	8.63	1.82
0096 GA400718	6.13	11.58	X	8.6	0.1	X	97	4.85	6.93	0.99
0097 GA400719	5.60	10.59	X	7.2	0.1	X	155	4.24	6.06	1.34
0098 GA400720	5.85	11.05	X	6.1	0.1	X	109	4.08	5.83	1.14
0099 GA400721	5.76	10.87	X	6.2	0.1	X	117	5.18	7.41	1.51
0100 GA400722	6.08	11.50	X	3.7	0.1	X	81	5.32	7.60	1.94
0101 GA400723	5.90	11.14	X	4.5	0.1	X	146	4.88	6.97	1.69
0102 GA400724	4.99	9.43	X	6.4	0.1	X	209	3.43	4.90	1.00
0103 GA400725	5.67	10.72	X	9.5	0.2	0.3	154	3.95	5.65	1.19
0104 GA400726	5.85	11.04	X	5.7	0.1	X	125	4.06	5.81	1.21
0105 GA400727	5.98	11.30	X	6.1	0.1	X	101	4.11	5.88	1.21
0106 GA400728	6.86	12.96	X	6.6	0.4	0.5	132	4.39	6.28	1.17

CHECKS										
0001 GA400625	5.51	10.42	X	12.7	X	X	878	5.48	7.83	0.40
0002 GA400657	5.63	10.63	X	13.8	0.1	X	3094	5.04	7.21	0.49
0003 GA400690	5.89	11.13	X	14.1	0.2	0.2	756	4.67	6.67	1.46

STANDARDS										
0001 OREAS 524	2.73	5.16	665	18.2	3.3	4.7	2.46%	28.29	40.45	0.99
0002 OREAS 700	5.45	10.30	X	7.3	5.6	7.9	1919	15.88	22.71	1.00
0003 OREAS 24b	7.74	14.63	X	0.7	1.1	1.5	28	4.44	6.34	1.61
0004 OREAS 901	7.10	13.41	84	5.8	0.1	X	1447	4.04	5.77	0.60

BLANKS										
0001 Control Blank	X	X	X	0.1	X	X	X	X	X	0.10



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA400703	1.24	613	792	7	X	X	32.7	69.9	0.01	0.30
0082 GA400704	1.38	696	899	9	X	X	33.3	71.2	X	0.32
0083 GA400705	14.76	1269	1638	10	X	1.0	26.7	57.2	X	0.20
0084 GA400706	1.17	501	647	7	X	X	34.4	73.6	X	0.33
0085 GA400707	1.79	1057	1365	5	X	X	34.2	73.2	X	0.32
0086 GA400708	1.39	791	1021	9	X	X	34.0	72.8	0.01	0.32
0087 GA400709	1.59	834	1076	10	X	X	34.1	72.9	0.01	0.32
0088 GA400710	1.86	1017	1313	7	X	X	33.5	71.8	X	0.33
0089 GA400711	1.70	820	1058	14	X	X	36.5	78.1	X	0.28
0090 GA400712	1.83	854	1103	10	X	X	35.1	75.1	X	0.28
0091 GA400713	2.07	972	1255	6	X	0.6	34.2	73.2	0.01	0.32
0092 GA400714	1.85	910	1175	6	X	X	34.4	73.7	X	0.32
0093 GA400715	1.72	819	1058	6	X	X	34.9	74.7	0.01	0.33
0094 GA400716	1.50	642	829	21	X	X	33.8	72.3	0.01	0.32
0095 GA400717	3.02	1336	1725	5	X	0.5	31.3	67.0	X	0.28
0096 GA400718	1.63	974	1257	5	X	X	35.9	76.9	0.01	0.34
0097 GA400719	2.21	975	1258	7	X	X	32.0	68.5	X	0.30
0098 GA400720	1.89	932	1204	5	X	X	34.5	73.9	0.01	0.31
0099 GA400721	2.51	1223	1580	24	X	X	33.5	71.8	X	0.31
0100 GA400722	3.22	1184	1529	8	X	0.5	31.9	68.3	X	0.32
0101 GA400723	2.81	1144	1477	10	X	X	34.1	72.9	X	0.32
0102 GA400724	1.65	723	934	17	X	X	35.8	76.7	X	0.27
0103 GA400725	1.97	927	1197	9	X	X	35.0	74.9	X	0.30
0104 GA400726	2.00	970	1252	7	X	X	33.1	70.8	X	0.32
0105 GA400727	2.01	1017	1313	7	X	X	34.0	72.8	X	0.32
0106 GA400728	1.94	1189	1535	4	X	X	32.4	69.3	0.02	0.32

CHECKS										
0001 GA400625	0.67	367	473	19	X	X	33.8	72.4	0.01	0.28
0002 GA400657	0.82	763	985	15	X	X	32.5	69.4	0.01	0.30
0003 GA400690	2.41	1138	1470	7	X	X	32.8	70.1	X	0.32

STANDARDS										
0001 OREAS 524	1.63	4693	6060	393	5.31	12.4	12.1	25.9	X	0.28
0002 OREAS 700	1.65	3200	4132	86	0.28	X	22.0	47.1	0.02	0.19
0003 OREAS 24b	2.67	459	593	4	0.19	1.3	31.0	66.3	X	0.48
0004 OREAS 901	1.00	292	377	5	X	3.2	33.2	71.1	0.01	0.36

BLANKS										
0001 Control Blank	0.17	X	X	2	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

SAMPLE NUMBERS

0081 GA400703	0.51	137	173
0082 GA400704	0.54	109	137
0083 GA400705	0.33	503	634
0084 GA400706	0.54	83	105
0085 GA400707	0.53	118	148
0086 GA400708	0.53	150	189
0087 GA400709	0.54	101	128
0088 GA400710	0.55	125	157
0089 GA400711	0.47	97	123
0090 GA400712	0.47	116	146
0091 GA400713	0.54	150	189
0092 GA400714	0.53	117	147
0093 GA400715	0.55	103	130
0094 GA400716	0.53	115	145
0095 GA400717	0.48	79	99
0096 GA400718	0.56	95	120
0097 GA400719	0.50	72	91
0098 GA400720	0.52	194	244
0099 GA400721	0.51	159	200
0100 GA400722	0.53	111	140
0101 GA400723	0.53	70	89
0102 GA400724	0.45	84	106
0103 GA400725	0.50	67	84
0104 GA400726	0.53	86	109
0105 GA400727	0.54	51	65
0106 GA400728	0.53	91	114

CHECKS

0001 GA400625	0.47	189	239
0002 GA400657	0.50	3195	4029
0003 GA400690	0.53	112	142

STANDARDS

0001 OREAS 524	0.47	190	239
0002 OREAS 700	0.31	1.13%	1.42%
0003 OREAS 24b	0.80	16	20
0004 OREAS 901	0.61	81	102

BLANKS

0001 Control Blank	X	26	32
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ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
BLANKS										
0002 Control Blank	X	X	X	X	X	X	X	0.01	0.02	X
0003 Control Blank	X	X	X	X	X	X	X	X	X	X
0004 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
BLANKS										
0002 Control Blank	X	X	X	X	X	X	X	X	X	X
0003 Control Blank	X	X	X	X	X	X	X	X	X	X
0004 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
BLANKS			
0002 Control Blank	X	31	39
0003 Control Blank	X	41	52
0004 Control Blank	X	14	18



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
PO Box 517
WEST PERTH, W.A. 6872
AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904908
NO. SAMPLES : 137
NO. ELEMENTS : 23
CLIENT ORDER NO. : GW5343 (Job 1 of 1)
SAMPLE SUBMISSION NO. : GW5343
PROJECT : HATCHES CREEK
SAMPLE TYPE : RC
DATE RECEIVED : 02/04/2019
DATE REPORTED : 29/04/2019
DATE PRINTED : 29/04/2019

REPORT NOTES

1. Please note:
 1. The following sample was received as Empty Packet:
GA400812

TESTED BY

Intertek
15 Davison Street, Maddington 6109, Western Australia
PO Box 144, Gosnells 6990, Western Australia
Tel: +61 8 9251 8100
Email: min.aus.per@intertek.com

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues will be stored for 60 days without charge. Following this samples will be stored at a daily rate until clients written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m3 per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m3.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice fo return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA400729	5.76	10.88	X	37.4	X	X	228	8.23	11.77	0.26
0002 GA400730	5.75	10.86	X	37.3	X	X	233	6.17	8.82	0.27
0003 GA400731	6.21	11.73	X	37.9	X	X	291	7.02	10.03	0.32
0004 GA400732	6.66	12.59	X	252.2	X	X	441	8.22	11.76	0.30
0005 GA400733	7.49	14.15	X	28.2	X	X	259	6.74	9.64	0.27
0006 GA400734	7.05	13.32	X	125.2	X	X	133	6.48	9.27	0.34
0007 GA400735	6.73	12.71	X	165.8	X	X	123	6.18	8.84	0.41
0008 GA400736	6.84	12.93	X	17.8	X	X	185	5.46	7.80	0.56
0009 GA400737	6.93	13.10	X	27.9	X	X	181	5.94	8.49	0.52
0010 GA400738	6.17	11.65	X	133.6	X	X	241	6.25	8.94	0.51
0011 GA400739	6.85	12.94	X	28.0	X	X	381	5.93	8.48	0.57
0012 GA400740	5.06	9.56	X	40.2	X	X	355	5.40	7.71	0.47
0013 GA400741	6.08	11.49	X	47.5	X	X	431	6.14	8.78	0.62
0014 GA400742	6.06	11.46	X	27.5	X	X	403	5.66	8.10	0.64
0015 GA400743	6.25	11.81	X	32.7	X	X	604	6.66	9.52	0.53
0016 GA400744	5.16	9.75	X	53.8	X	X	658	7.90	11.29	0.37
0017 GA400745	5.83	11.02	X	45.9	X	X	893	8.31	11.87	0.51
0018 GA400746	6.85	12.95	X	25.5	X	X	614	6.93	9.91	0.73
0019 GA400747	6.34	11.98	X	37.9	X	X	470	5.88	8.40	0.85
0020 GA400748	6.87	12.98	X	47.3	X	X	556	5.81	8.31	0.73
0021 GA400749	6.39	12.07	X	96.0	X	X	870	5.82	8.31	0.72
0022 GA400750	7.36	13.90	X	277.3	X	X	1698	5.68	8.13	0.66
0023 GA400751	6.16	11.65	X	134.3	X	X	2360	5.97	8.54	0.73
0024 GA400752	6.21	11.74	X	104.5	X	X	3003	5.67	8.10	0.81
0025 GA400753	6.17	11.66	X	91.4	X	X	3934	6.22	8.89	0.81
0026 GA400754	6.29	11.89	X	16.7	X	X	3678	5.05	7.22	0.98
0027 GA400755	6.38	12.06	X	11.1	X	X	2543	4.84	6.92	0.99
0028 GA400756	6.17	11.65	X	11.3	X	X	2961	5.24	7.50	1.01
0029 GA400757	6.19	11.69	X	15.5	X	X	2081	5.73	8.19	0.82
0030 GA400758	5.89	11.12	X	24.4	X	X	1118	7.72	11.03	0.59
0031 GA400759	5.48	10.36	X	31.8	X	X	1412	9.87	14.12	0.56
0032 GA400760	6.20	11.71	X	22.2	X	X	1098	6.60	9.43	0.56
0033 GA400761	5.92	11.19	X	48.1	X	X	602	6.33	9.04	0.50
0034 GA400762	6.20	11.72	X	38.0	X	X	956	6.38	9.12	0.67
0035 GA400763	6.16	11.65	X	24.5	X	X	1693	5.31	7.59	0.67
0036 GA400764	5.17	9.76	X	53.7	X	X	2657	6.94	9.93	0.57
0037 GA400765	5.16	9.75	X	45.1	X	X	775	5.62	8.04	0.61
0038 GA400766	5.78	10.93	X	13.9	0.1	X	806	5.01	7.17	0.90
0039 GA400767	5.45	10.30	X	21.6	0.1	X	707	4.58	6.54	0.75
0040 GA400768	6.12	11.57	X	7.1	0.1	X	293	4.29	6.13	0.76



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA400729	0.44	273	353	19	X	X	35.3	75.6	0.01	0.33
0002 GA400730	0.44	278	359	26	X	X	38.9	83.1	0.02	0.26
0003 GA400731	0.53	294	380	28	X	0.6	36.2	77.4	0.02	0.27
0004 GA400732	0.50	277	358	40	X	X	35.8	76.6	0.02	0.34
0005 GA400733	0.45	195	252	32	X	X	36.4	78.0	0.02	0.34
0006 GA400734	0.56	237	307	28	X	X	36.6	78.2	0.02	0.36
0007 GA400735	0.67	257	331	28	X	X	35.0	74.9	0.02	0.34
0008 GA400736	0.93	378	489	23	X	X	36.2	77.4	0.02	0.35
0009 GA400737	0.86	404	522	35	X	X	36.1	77.3	0.01	0.37
0010 GA400738	0.85	576	744	122	X	X	35.4	75.8	0.01	0.31
0011 GA400739	0.94	431	557	46	X	X	36.1	77.2	0.02	0.34
0012 GA400740	0.77	490	633	16	X	X	38.8	83.1	0.01	0.28
0013 GA400741	1.03	1001	1292	17	X	X	35.5	76.0	0.02	0.32
0014 GA400742	1.06	890	1149	11	X	X	33.3	71.3	0.02	0.32
0015 GA400743	0.88	680	878	18	X	X	36.0	76.9	0.02	0.33
0016 GA400744	0.61	547	707	31	X	X	35.8	76.7	0.03	0.22
0017 GA400745	0.85	647	835	39	X	X	35.5	75.8	0.02	0.28
0018 GA400746	1.22	1000	1292	19	X	X	34.8	74.4	0.02	0.34
0019 GA400747	1.41	1138	1469	12	X	X	36.6	78.2	0.02	0.33
0020 GA400748	1.21	904	1167	17	X	X	35.5	75.9	0.02	0.32
0021 GA400749	1.19	849	1096	17	X	X	36.4	77.9	0.02	0.32
0022 GA400750	1.10	818	1056	25	X	X	34.4	73.6	0.04	0.31
0023 GA400751	1.20	1075	1388	16	X	X	34.7	74.1	0.02	0.32
0024 GA400752	1.34	984	1270	18	X	0.8	35.2	75.3	0.01	0.32
0025 GA400753	1.34	1263	1631	24	X	X	35.1	75.2	0.02	0.31
0026 GA400754	1.63	868	1121	7	X	X	34.3	73.4	X	0.35
0027 GA400755	1.63	935	1207	7	X	X	33.8	72.4	X	0.35
0028 GA400756	1.67	979	1264	9	X	X	33.8	72.3	X	0.34
0029 GA400757	1.37	801	1034	12	X	X	33.8	72.3	0.01	0.34
0030 GA400758	0.98	875	1130	20	X	X	33.8	72.3	0.01	0.31
0031 GA400759	0.93	1201	1551	32	X	X	32.5	69.4	X	0.30
0032 GA400760	0.93	1036	1338	21	X	X	33.6	71.9	0.01	0.32
0033 GA400761	0.84	646	834	35	X	X	33.4	71.4	0.02	0.30
0034 GA400762	1.11	1027	1326	30	X	X	33.1	70.8	0.02	0.33
0035 GA400763	1.12	774	1000	19	X	X	34.0	72.8	0.01	0.33
0036 GA400764	0.94	1217	1571	81	X	0.5	34.6	73.9	0.03	0.27
0037 GA400765	1.01	963	1243	43	X	X	35.8	76.6	0.03	0.23
0038 GA400766	1.49	1097	1416	15	X	X	34.3	73.4	0.02	0.30
0039 GA400767	1.24	1579	2039	70	X	X	35.1	75.2	0.01	0.28
0040 GA400768	1.26	919	1186	10	X	X	34.0	72.8	X	0.34



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA400729	0.55	573	722
0002 GA400730	0.44	836	1054
0003 GA400731	0.45	1141	1439
0004 GA400732	0.57	683	861
0005 GA400733	0.57	430	543
0006 GA400734	0.60	355	448
0007 GA400735	0.56	617	778
0008 GA400736	0.58	335	423
0009 GA400737	0.61	415	523
0010 GA400738	0.52	2728	3440
0011 GA400739	0.57	920	1160
0012 GA400740	0.46	1057	1333
0013 GA400741	0.53	546	689
0014 GA400742	0.54	487	614
0015 GA400743	0.55	885	1116
0016 GA400744	0.37	1320	1665
0017 GA400745	0.47	1344	1694
0018 GA400746	0.56	520	655
0019 GA400747	0.54	951	1200
0020 GA400748	0.53	1316	1660
0021 GA400749	0.53	429	541
0022 GA400750	0.52	565	712
0023 GA400751	0.54	240	302
0024 GA400752	0.54	269	339
0025 GA400753	0.51	2719	3429
0026 GA400754	0.58	92	116
0027 GA400755	0.59	108	136
0028 GA400756	0.56	181	228
0029 GA400757	0.57	191	241
0030 GA400758	0.52	457	576
0031 GA400759	0.50	600	756
0032 GA400760	0.53	413	521
0033 GA400761	0.51	595	751
0034 GA400762	0.54	550	694
0035 GA400763	0.55	784	989
0036 GA400764	0.45	996	1256
0037 GA400765	0.38	647	816
0038 GA400766	0.50	833	1051
0039 GA400767	0.47	4890	6166
0040 GA400768	0.56	221	279



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA400769	2.67	5.04	202	1.3	7.7	10.8	X	5.94	8.49	10.57
0042 GA400770	5.44	10.27	X	21.4	0.1	X	770	4.56	6.52	0.72
0043 GA400771	6.67	12.60	X	21.4	0.3	0.4	111	5.85	8.36	0.71
0044 GA400772	6.01	11.36	X	18.6	0.1	X	89	4.86	6.94	0.99
0045 GA400773	5.92	11.19	X	17.2	0.1	0.2	73	5.16	7.38	0.96
0046 GA400774	5.67	10.70	X	28.5	0.1	X	401	4.99	7.14	0.73
0047 GA400775	6.08	11.49	X	23.3	0.2	0.2	861	4.99	7.13	0.74
0048 GA400776	6.17	11.65	X	18.3	0.1	X	545	4.96	7.09	0.85
0049 GA400777	6.23	11.78	X	14.6	X	X	1018	5.10	7.29	0.69
0050 GA400778	5.94	11.22	X	29.9	0.1	X	1368	4.82	6.89	0.76
0051 GA400779	6.19	11.69	X	33.3	X	X	1820	5.57	7.97	0.68
0052 GA400780	6.32	11.95	X	10.9	X	X	969	5.01	7.17	0.69
0053 GA400781	6.13	11.59	X	16.0	0.1	X	1253	5.20	7.43	0.78
0054 GA400782	5.92	11.18	X	11.2	0.2	0.2	1239	4.94	7.07	1.04
0055 GA400783	5.87	11.09	X	14.0	0.1	X	1744	5.18	7.40	0.88
0056 GA400784	6.22	11.76	X	17.2	0.1	X	1703	5.67	8.11	0.82
0057 GA400785	6.14	11.61	X	9.5	0.1	X	1201	4.80	6.86	0.90
0058 GA400786	6.18	11.68	X	13.4	X	X	2543	4.93	7.04	0.68
0059 GA400787	6.20	11.72	X	24.1	0.1	X	3016	4.87	6.97	0.54
0060 GA400788	6.21	11.73	X	9.1	0.1	X	1012	4.60	6.58	0.81
0061 GA400789	6.09	11.50	X	19.3	X	X	2199	4.80	6.87	0.83
0062 GA400790	6.04	11.42	X	14.4	0.1	X	2143	4.70	6.72	0.90
0063 GA400791	6.10	11.53	X	21.9	0.1	X	1276	5.39	7.71	0.63
0064 GA400792	6.37	12.04	X	11.1	0.1	X	528	5.51	7.87	0.80
0065 GA400793	6.03	11.39	X	17.6	0.1	X	933	5.19	7.42	0.87
0066 GA400794	5.29	9.99	X	34.7	0.1	X	2106	5.28	7.55	0.60
0067 GA400795	5.10	9.64	X	32.6	0.1	X	1066	4.37	6.25	0.65
0068 GA400796	6.06	11.44	X	355.8	0.1	X	1225	5.44	7.78	0.75
0069 GA400797	4.68	8.84	X	936.9	X	X	6359	4.90	7.00	0.34
0070 GA400798	5.36	10.12	X	223.2	X	X	7509	4.63	6.62	0.36
0071 GA400799	4.90	9.26	X	217.1	X	X	5039	4.47	6.40	0.43
0072 GA400800	5.84	11.03	X	76.8	X	X	498	4.73	6.76	0.41
0073 GA400801	5.38	10.16	X	850.0	X	X	9935	3.79	5.41	0.38
0074 GA400802	6.46	12.21	X	493.9	0.1	X	3176	4.44	6.35	0.62
0075 GA400803	6.26	11.82	X	43.4	X	X	901	5.65	8.08	0.63
0076 GA400804	6.00	11.34	X	33.8	X	X	2360	5.30	7.57	0.42
0077 GA400805	5.54	10.46	X	1122.7	X	X	9577	3.68	5.26	0.45
0078 GA400806	5.12	9.67	X	3022.3	X	X	2.82%	3.98	5.69	0.38
0079 GA400807	5.80	10.96	X	436.0	X	X	4802	4.92	7.03	0.60
0080 GA400808	5.98	11.30	X	107.6	X	X	3396	5.06	7.23	0.43



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA400769	17.53	1467	1894	17	X	1.0	24.2	51.9	X	0.15
0042 GA400770	1.19	1462	1888	71	X	X	35.9	76.8	0.01	0.28
0043 GA400771	1.17	1288	1663	36	X	X	33.9	72.5	0.02	0.32
0044 GA400772	1.64	877	1133	10	X	X	33.7	72.0	0.01	0.32
0045 GA400773	1.60	1162	1500	11	X	X	34.4	73.6	0.02	0.31
0046 GA400774	1.21	1032	1333	35	X	X	34.4	73.7	0.02	0.28
0047 GA400775	1.24	1224	1581	61	X	X	33.5	71.7	0.02	0.30
0048 GA400776	1.40	1114	1439	12	X	X	33.7	72.0	0.02	0.32
0049 GA400777	1.14	898	1160	10	X	X	33.8	72.4	0.02	0.33
0050 GA400778	1.26	969	1251	12	X	X	33.1	70.8	0.01	0.31
0051 GA400779	1.12	742	958	10	X	X	33.1	70.8	0.02	0.32
0052 GA400780	1.15	740	955	10	X	X	33.4	71.4	0.01	0.33
0053 GA400781	1.29	870	1124	11	X	X	32.9	70.4	0.01	0.33
0054 GA400782	1.73	1000	1292	17	X	X	33.3	71.2	0.02	0.32
0055 GA400783	1.47	2329	3008	11	X	X	32.4	69.3	0.01	0.31
0056 GA400784	1.35	1405	1815	13	X	X	33.8	72.3	0.01	0.34
0057 GA400785	1.49	1389	1793	62	X	X	33.3	71.3	0.01	0.34
0058 GA400786	1.13	709	916	20	X	X	34.6	74.0	0.01	0.33
0059 GA400787	0.89	589	760	30	X	X	35.4	75.8	0.01	0.32
0060 GA400788	1.34	831	1073	10	X	X	32.8	70.2	X	0.34
0061 GA400789	1.37	974	1258	10	X	X	33.4	71.4	0.01	0.33
0062 GA400790	1.50	1114	1438	8	X	X	33.5	71.6	0.01	0.32
0063 GA400791	1.05	976	1260	8	X	X	33.9	72.5	0.02	0.33
0064 GA400792	1.32	958	1237	9	X	X	33.2	71.1	0.02	0.33
0065 GA400793	1.44	905	1169	11	X	X	32.7	69.9	0.02	0.32
0066 GA400794	1.00	883	1140	16	X	X	35.2	75.3	0.01	0.27
0067 GA400795	1.08	682	881	10	X	X	36.0	77.1	0.01	0.27
0068 GA400796	1.24	791	1021	28	X	X	33.2	71.1	0.02	0.32
0069 GA400797	0.56	640	826	39	0.07	X	29.3	62.6	0.02	0.24
0070 GA400798	0.60	234	302	32	0.14	X	34.9	74.7	0.02	0.27
0071 GA400799	0.72	244	315	63	0.11	0.6	36.1	77.3	0.01	0.25
0072 GA400800	0.67	400	516	164	X	0.6	33.8	72.3	0.01	0.32
0073 GA400801	0.62	393	507	182	0.28	0.9	33.7	72.2	0.01	0.28
0074 GA400802	1.02	523	676	39	0.07	0.5	33.8	72.4	0.02	0.30
0075 GA400803	1.04	456	588	35	X	X	34.7	74.2	X	0.34
0076 GA400804	0.69	256	331	25	0.08	X	35.0	74.9	0.01	0.32
0077 GA400805	0.75	362	467	60	0.32	0.8	34.9	74.6	0.02	0.28
0078 GA400806	0.63	397	512	48	0.98	1.7	34.2	73.1	0.03	0.27
0079 GA400807	0.99	538	695	23	0.15	X	34.5	73.9	0.02	0.30
0080 GA400808	0.71	342	442	22	0.15	X	35.6	76.1	0.01	0.32



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA400769	0.26	1770	2232
0042 GA400770	0.46	4657	5873
0043 GA400771	0.54	3008	3794
0044 GA400772	0.53	311	393
0045 GA400773	0.52	326	411
0046 GA400774	0.47	1458	1838
0047 GA400775	0.51	2678	3378
0048 GA400776	0.53	357	451
0049 GA400777	0.54	155	195
0050 GA400778	0.51	161	203
0051 GA400779	0.53	180	228
0052 GA400780	0.56	140	177
0053 GA400781	0.54	157	198
0054 GA400782	0.54	269	339
0055 GA400783	0.52	297	375
0056 GA400784	0.56	243	307
0057 GA400785	0.56	150	189
0058 GA400786	0.54	217	274
0059 GA400787	0.53	325	410
0060 GA400788	0.57	233	294
0061 GA400789	0.55	117	148
0062 GA400790	0.54	92	116
0063 GA400791	0.55	214	270
0064 GA400792	0.55	139	175
0065 GA400793	0.54	182	230
0066 GA400794	0.46	1246	1572
0067 GA400795	0.45	314	396
0068 GA400796	0.53	179	225
0069 GA400797	0.41	5061	6383
0070 GA400798	0.45	484	611
0071 GA400799	0.41	234	295
0072 GA400800	0.53	2265	2857
0073 GA400801	0.47	2176	2744
0074 GA400802	0.49	570	719
0075 GA400803	0.57	162	205
0076 GA400804	0.53	309	390
0077 GA400805	0.47	726	915
0078 GA400806	0.45	1641	2070
0079 GA400807	0.50	331	418
0080 GA400808	0.54	279	352



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA400809	5.18	9.79	X	223.3	X	X	1856	5.10	7.28	0.26
0082 GA400810	6.02	11.37	X	32.0	X	X	422	5.30	7.58	0.54
0083 GA400811	2.17	4.11	X	30.5	8.6	12.1	X	5.47	7.82	8.49
0084 GA400813	6.02	11.38	X	81.3	X	X	1527	5.34	7.63	0.48
0085 GA400814	5.86	11.08	X	54.6	X	X	1021	5.48	7.84	0.56
0086 GA400815	5.75	10.86	X	126.7	X	X	4447	5.09	7.28	0.64
0087 GA400816	5.56	10.51	X	67.1	X	X	7967	4.88	6.98	0.67
0088 GA400817	6.12	11.56	X	25.5	0.1	X	2416	5.33	7.63	0.76
0089 GA400818	6.04	11.42	X	91.7	0.1	X	4101	4.85	6.93	0.72
0090 GA400819	4.81	9.09	X	415.4	X	X	3597	5.04	7.21	0.31
0091 GA400820	6.02	11.37	X	168.0	X	X	3566	4.73	6.77	0.51
0092 GA400821	6.02	11.38	X	59.3	0.1	X	3069	4.85	6.93	0.57
0093 GA400822	5.94	11.22	X	27.5	X	X	2471	5.54	7.92	0.70
0094 GA400823	5.84	11.03	X	29.8	X	X	2200	5.41	7.74	0.80
0095 GA400824	5.52	10.43	X	8.6	0.1	X	634	7.21	10.31	1.34
0096 GA400825	6.22	11.75	X	20.0	0.1	X	1877	4.96	7.10	0.77
0097 GA400826	5.96	11.26	X	31.7	0.1	X	4131	4.48	6.41	0.45
0098 GA400827	5.58	10.54	X	25.4	0.1	X	2047	4.22	6.03	0.43
0099 GA400828	6.11	11.54	X	37.5	0.1	X	1642	5.25	7.51	0.62
0100 GA400829	5.64	10.65	X	4.1	0.1	X	245	4.76	6.80	0.96
0101 GA400830	5.96	11.26	X	2.6	0.1	X	192	4.64	6.64	0.85
0102 GA400831	5.88	11.11	X	4.4	0.1	X	482	4.74	6.78	0.99
0103 GA400832	5.40	10.20	X	3.8	0.1	X	434	4.13	5.90	0.84
0104 GA400833	6.14	11.61	X	49.5	0.1	X	2007	5.46	7.81	0.86
0105 GA400834	5.95	11.24	X	73.6	X	X	3665	4.35	6.23	0.66
0106 GA400835	6.02	11.38	X	11.3	0.1	X	2460	4.40	6.29	0.51
0107 GA400836	5.82	10.99	X	13.5	X	X	3563	4.35	6.22	0.67
0108 GA400837	5.80	10.96	X	19.6	0.1	X	4476	4.90	7.01	0.57
0109 GA400838	5.64	10.66	X	21.4	0.1	X	4368	4.55	6.51	0.44
0110 GA400839	5.65	10.68	X	14.0	0.1	X	2138	4.48	6.41	0.79
0111 GA400840	5.05	9.54	X	18.4	0.2	0.2	1551	4.32	6.18	0.63
0112 GA400841	5.89	11.13	X	23.9	0.1	0.2	1348	5.55	7.93	1.07
0113 GA400842	6.43	12.16	X	32.0	0.2	0.2	870	6.29	8.99	1.56
0114 GA400843	4.78	9.04	X	13.4	0.2	0.3	146	4.23	6.05	1.24
0115 GA400844	5.59	10.56	X	14.8	0.2	0.3	202	4.95	7.07	1.59
0116 GA400845	5.13	9.70	X	21.5	0.1	0.2	221	3.98	5.69	0.78
0117 GA400846	5.79	10.93	X	17.4	0.1	X	111	4.91	7.02	1.00
0118 GA400847	5.90	11.14	X	11.5	0.1	X	120	5.00	7.15	1.22
0119 GA400848	5.99	11.32	X	13.3	0.1	X	122	5.97	8.54	1.39
0120 GA400849	5.46	10.31	X	14.0	0.2	0.2	162	5.17	7.39	1.07



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA400809	0.44	296	383	34	0.08	X	37.0	79.2	0.01	0.27
0082 GA400810	0.90	403	521	26	X	X	33.0	70.7	X	0.33
0083 GA400811	14.08	1212	1566	8	X	0.9	25.2	54.0	X	0.19
0084 GA400813	0.79	427	551	11	0.10	X	33.8	72.4	0.01	0.32
0085 GA400814	0.92	561	724	12	0.07	X	31.9	68.1	0.02	0.31
0086 GA400815	1.07	633	817	11	0.22	X	33.4	71.4	0.01	0.32
0087 GA400816	1.12	960	1240	12	0.42	X	32.6	69.7	0.02	0.29
0088 GA400817	1.26	932	1203	9	0.19	X	33.7	72.1	0.02	0.33
0089 GA400818	1.19	809	1044	19	0.27	X	34.1	73.0	0.02	0.32
0090 GA400819	0.52	371	479	28	0.26	0.8	33.8	72.4	0.03	0.25
0091 GA400820	0.85	531	686	16	0.29	0.8	34.4	73.7	0.02	0.32
0092 GA400821	0.95	714	922	8	0.22	X	33.7	72.2	0.02	0.33
0093 GA400822	1.16	758	979	8	0.22	X	34.1	73.0	0.02	0.31
0094 GA400823	1.33	944	1219	6	0.17	X	32.1	68.7	0.02	0.31
0095 GA400824	2.22	1256	1622	18	0.06	X	30.5	65.3	X	0.29
0096 GA400825	1.27	720	929	23	0.19	X	34.6	74.0	0.01	0.34
0097 GA400826	0.74	548	708	9	0.26	X	37.1	79.4	0.02	0.28
0098 GA400827	0.71	378	488	11	0.14	X	35.9	76.8	0.01	0.29
0099 GA400828	1.03	509	658	6	0.09	X	35.5	75.9	0.02	0.33
0100 GA400829	1.59	807	1042	18	X	X	32.1	68.7	X	0.31
0101 GA400830	1.42	634	818	5	X	X	32.6	69.7	X	0.33
0102 GA400831	1.65	839	1083	10	0.06	X	33.0	70.5	X	0.33
0103 GA400832	1.40	745	962	35	0.07	X	31.2	66.8	X	0.30
0104 GA400833	1.42	927	1198	7	0.13	X	32.4	69.4	0.02	0.33
0105 GA400834	1.10	780	1007	10	0.12	X	32.6	69.7	0.02	0.31
0106 GA400835	0.84	561	725	13	0.08	X	34.1	72.9	0.02	0.32
0107 GA400836	1.12	751	970	9	0.11	X	32.5	69.6	0.02	0.31
0108 GA400837	0.95	685	885	17	0.13	X	34.3	73.4	0.02	0.31
0109 GA400838	0.73	454	587	22	0.13	X	32.3	69.0	0.01	0.31
0110 GA400839	1.32	670	866	45	0.08	X	31.3	67.0	X	0.31
0111 GA400840	1.05	644	831	88	0.05	X	34.4	73.5	0.01	0.27
0112 GA400841	1.78	1023	1321	8	X	X	32.9	70.4	0.01	0.32
0113 GA400842	2.58	1246	1610	9	X	X	34.5	73.9	0.02	0.34
0114 GA400843	2.05	942	1217	8	X	X	35.2	75.4	0.01	0.26
0115 GA400844	2.63	1261	1628	13	X	X	33.2	71.0	0.01	0.30
0116 GA400845	1.30	525	678	52	X	X	34.6	74.1	0.01	0.27
0117 GA400846	1.66	830	1072	23	X	X	32.3	69.1	0.01	0.31
0118 GA400847	2.02	1224	1581	11	X	X	32.0	68.4	0.01	0.32
0119 GA400848	2.31	1938	2503	13	X	X	33.3	71.3	0.01	0.32
0120 GA400849	1.78	1381	1783	1046	0.09	X	32.6	69.7	0.02	0.26



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0081 GA400809	0.44	890	1123
0082 GA400810	0.55	183	231
0083 GA400811	0.32	446	562
0084 GA400813	0.54	173	218
0085 GA400814	0.52	131	165
0086 GA400815	0.53	93	117
0087 GA400816	0.49	286	361
0088 GA400817	0.55	354	447
0089 GA400818	0.53	100	126
0090 GA400819	0.41	1655	2087
0091 GA400820	0.53	386	487
0092 GA400821	0.54	557	703
0093 GA400822	0.52	216	272
0094 GA400823	0.52	87	109
0095 GA400824	0.48	560	706
0096 GA400825	0.57	75	95
0097 GA400826	0.46	1838	2317
0098 GA400827	0.49	203	256
0099 GA400828	0.55	217	274
0100 GA400829	0.52	231	291
0101 GA400830	0.55	91	114
0102 GA400831	0.54	36	46
0103 GA400832	0.49	113	142
0104 GA400833	0.55	78	99
0105 GA400834	0.52	66	83
0106 GA400835	0.54	161	203
0107 GA400836	0.52	156	196
0108 GA400837	0.52	229	289
0109 GA400838	0.51	126	159
0110 GA400839	0.52	52	66
0111 GA400840	0.45	697	879
0112 GA400841	0.53	104	131
0113 GA400842	0.57	164	206
0114 GA400843	0.43	45	57
0115 GA400844	0.50	66	84
0116 GA400845	0.45	1378	1737
0117 GA400846	0.52	245	308
0118 GA400847	0.53	71	90
0119 GA400848	0.54	46	59
0120 GA400849	0.44	54	68



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0121 GA400850	5.58	10.55	X	24.0	0.1	X	286	5.39	7.71	0.84
0122 GA400851	5.73	10.82	X	18.7	0.2	0.2	198	4.82	6.89	1.17
0123 GA400852	4.59	8.68	X	14.0	0.3	0.4	186	3.97	5.67	1.84
0124 GA400853	10.46	19.76	59	7.8	3.5	4.9	94	3.40	4.87	3.60
0125 GA400854	4.81	9.09	X	216.1	X	X	1748	4.39	6.28	0.24
0126 GA400855	5.24	9.90	X	57.7	0.1	X	3025	5.40	7.72	0.81
0127 GA400856	5.58	10.55	X	73.5	X	X	4414	5.23	7.48	0.47
0128 GA400857	4.91	9.27	X	49.5	X	X	2316	4.78	6.84	0.40
0129 GA400858	5.80	10.97	X	28.1	X	X	1359	4.33	6.19	0.65
0130 GA400859	6.26	11.83	X	44.9	X	X	4008	4.76	6.81	0.68
0131 GA400860	4.16	7.86	X	32.9	X	X	1784	3.34	4.77	0.43
0132 GA400861	6.16	11.64	X	74.8	X	X	4088	4.89	6.99	0.61
0133 GA400862	6.09	11.52	X	43.4	0.1	X	2638	4.29	6.13	0.63
0134 GA400863	5.22	9.87	X	22.5	0.1	X	1437	4.11	5.88	0.59
0135 GA400864	5.67	10.71	X	17.2	X	X	668	4.70	6.72	0.74
0136 GA400865	6.22	11.76	X	47.2	X	X	2105	5.31	7.59	0.66
0137 GA400866	6.11	11.55	X	38.0	X	X	1011	5.38	7.69	0.52
CHECKS										
0001 GA400734	6.65	12.56	X	124.5	X	X	122	6.07	8.68	0.32
0002 GA400771	6.35	11.99	X	21.1	0.3	0.4	107	5.69	8.13	0.68
0003 GA400807	5.94	11.22	X	451.0	X	X	4926	5.00	7.14	0.61
0004 GA400813	5.78	10.92	X	81.9	X	X	1894	5.18	7.40	0.45
0005 GA400854	5.07	9.59	X	214.4	X	X	1822	4.53	6.47	0.26
STANDARDS										
0001 OREAS 523	3.23	6.10	725	14.3	3.9	5.4	1.89%	31.19	44.59	1.12
0002 GW-01	4.48	8.46	X	2.7	8.6	12.0	230	3.96	5.66	5.34
0003 OREAS 700	5.39	10.19	X	7.3	5.6	7.8	1934	16.06	22.96	0.98
0004 AMIS0401	3.42	6.46	X	293.3	10.6	14.8	1578	18.88	26.99	2.01
0005 OREAS 901	6.98	13.20	70	4.9	X	X	1375	4.10	5.86	0.61
0006 OREAS 522	4.05	7.65	539	9.5	4.0	5.6	9492	26.13	37.36	1.17
BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	0.04	0.06	X
0002 Control Blank	X	X	X	0.1	X	X	X	0.03	0.04	X
0003 Control Blank	X	X	X	0.5	X	X	24	0.03	0.04	X
0004 Control Blank	X	X	X	X	X	X	X	0.01	X	X
0005 Control Blank	X	X	X	X	X	X	X	0.02	0.03	X
0006 Control Blank	X	X	X	X	X	X	X	0.01	0.02	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0121 GA400850	1.40	1559	2013	2437	0.15	X	31.3	66.9	0.02	0.28
0122 GA400851	1.94	1141	1474	87	X	X	33.6	71.9	0.01	0.31
0123 GA400852	3.05	1350	1744	13	X	X	32.2	68.9	0.01	0.21
0124 GA400853	5.98	947	1223	139	2.11	33.9	21.9	46.8	X	0.18
0125 GA400854	0.40	252	326	36	0.08	X	34.7	74.3	0.01	0.25
0126 GA400855	1.34	1230	1588	18	0.11	X	31.8	68.0	0.17	0.27
0127 GA400856	0.78	375	485	127	0.15	X	32.8	70.2	0.02	0.29
0128 GA400857	0.66	384	496	3706	0.30	X	34.4	73.7	0.01	0.26
0129 GA400858	1.08	696	898	249	0.08	X	34.6	74.0	0.01	0.30
0130 GA400859	1.13	620	801	45	0.12	X	34.7	74.3	0.03	0.33
0131 GA400860	0.71	580	749	198	0.07	X	36.9	78.8	0.01	0.21
0132 GA400861	1.02	637	822	37	0.12	X	34.4	73.7	0.02	0.33
0133 GA400862	1.04	547	707	23	0.08	X	33.7	72.2	0.01	0.32
0134 GA400863	0.98	1332	1720	49	0.05	X	33.1	70.8	0.01	0.27
0135 GA400864	1.22	746	963	39	X	X	33.7	72.0	0.01	0.31
0136 GA400865	1.10	479	619	20	0.09	X	34.7	74.2	0.02	0.33
0137 GA400866	0.86	460	594	22	0.08	X	33.4	71.4	0.01	0.33
CHECKS										
0001 GA400734	0.53	225	291	28	X	0.5	34.5	73.9	0.03	0.34
0002 GA400771	1.12	1243	1605	36	X	X	32.1	68.8	0.02	0.31
0003 GA400807	1.01	541	699	23	0.16	X	35.2	75.4	0.02	0.31
0004 GA400813	0.75	407	526	13	0.09	X	32.4	69.4	0.01	0.31
0005 GA400854	0.44	258	333	35	0.09	X	36.4	77.8	0.01	0.26
STANDARDS										
0001 OREAS 523	1.85	5243	6770	315	4.47	11.0	14.1	30.1	X	0.33
0002 GW-01	8.86	830	1071	6	0.20	0.9	25.9	55.5	X	0.09
0003 OREAS 700	1.62	3136	4050	92	0.32	0.7	21.7	46.4	0.02	0.19
0004 AMIS0401	3.34	2.91%	3.76%	9	8.59	0.7	13.9	29.7	X	0.24
0005 OREAS 901	1.01	300	387	2	X	2.5	32.7	70.0	X	0.36
0006 OREAS 522	1.94	4286	5534	208	3.16	8.5	16.0	34.2	X	0.41
BLANKS										
0001 Control Blank	X	X	X	X	X	X	X	X	X	X
0002 Control Blank	X	X	X	X	X	X	X	X	X	X
0003 Control Blank	X	X	X	20	X	X	X	X	X	X
0004 Control Blank	X	X	X	X	X	X	X	X	X	X
0005 Control Blank	X	X	X	X	X	X	X	X	X	X
0006 Control Blank	X	X	X	X	X	X	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0121 GA400850	0.46	161	203
0122 GA400851	0.51	84	105
0123 GA400852	0.35	86	108
0124 GA400853	0.30	2.86%	3.61%
0125 GA400854	0.42	863	1089
0126 GA400855	0.45	262	331
0127 GA400856	0.48	381	481
0128 GA400857	0.43	1450	1828
0129 GA400858	0.51	1057	1333
0130 GA400859	0.55	141	178
0131 GA400860	0.35	1610	2030
0132 GA400861	0.55	191	240
0133 GA400862	0.54	127	160
0134 GA400863	0.45	7238	9128
0135 GA400864	0.52	1937	2442
0136 GA400865	0.55	424	535
0137 GA400866	0.54	212	267

CHECKS			
0001 GA400734	0.57	331	418
0002 GA400771	0.51	2919	3682
0003 GA400807	0.52	326	411
0004 GA400813	0.52	133	168
0005 GA400854	0.43	741	934

STANDARDS			
0001 OREAS 523	0.55	184	232
0002 GW-01	0.16	2919	3682
0003 OREAS 700	0.31	1.10%	1.39%
0004 AMIS0401	0.40	774	977
0005 OREAS 901	0.60	12	15
0006 OREAS 522	0.68	161	203

BLANKS			
0001 Control Blank	X	35	44
0002 Control Blank	X	41	52
0003 Control Blank	X	125	158
0004 Control Blank	X	17	21
0005 Control Blank	X	2	2
0006 Control Blank	X	11	14



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE

EMPTY PACKETS: GA400812



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE

EMPTY PACKETS: GA400812



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC

EMPTY PACKETS: GA400812



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
 PO Box 517
 WEST PERTH, W.A. 6872
 AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904910
 NO. SAMPLES : 80
 NO. ELEMENTS : 23
 CLIENT ORDER NO. : GW5344 (Job 1 of 1)
 SAMPLE SUBMISSION NO. : GW5344
 PROJECT : HATCHES CREEK
 SAMPLE TYPE : RC
 DATE RECEIVED : 02/04/2019
 DATE REPORTED : 30/04/2019
 DATE PRINTED : 30/04/2019

REPORT NOTES

TESTED BY

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues will be stored for 60 days without charge. Following this samples will be stored at a daily rate until clients written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m3 per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m3.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA400867	3.55	6.71	X	64.9	X	X	459	13.43	19.20	0.15
0002 GA400868	6.78	12.81	X	26.2	0.2	0.3	173	7.91	11.31	0.29
0003 GA400869	6.69	12.65	X	13.6	2.2	3.1	200	6.83	9.76	0.36
0004 GA400870	6.79	12.83	X	11.9	1.2	1.6	343	5.32	7.61	0.72
0005 GA400871	6.58	12.43	X	14.9	0.4	0.6	178	5.15	7.36	0.52
0006 GA400872	6.45	12.18	X	21.9	0.8	1.1	260	5.82	8.32	0.67
0007 GA400873	4.90	9.25	X	47.0	X	X	360	5.28	7.55	0.29
0008 GA400874	5.92	11.19	X	22.1	X	X	259	4.93	7.05	0.32
0009 GA400875	6.49	12.26	X	38.6	X	X	113	5.40	7.73	0.32
0010 GA400876	6.09	11.51	X	30.7	X	X	97	5.45	7.79	0.47
0011 GA400877	4.74	8.95	X	31.8	X	X	136	4.35	6.22	0.29
0012 GA400878	6.09	11.50	X	20.9	X	X	82	4.27	6.10	0.53
0013 GA400879	6.46	12.22	X	28.0	X	X	49	4.87	6.96	0.34
0014 GA400880	6.51	12.31	X	28.1	X	X	62	4.76	6.80	0.35
0015 GA400881	6.02	11.37	X	50.6	X	X	247	5.66	8.09	0.52
0016 GA400882	6.23	11.77	X	29.1	X	X	235	5.50	7.86	0.72
0017 GA400883	5.73	10.83	X	29.6	X	X	217	4.62	6.60	0.50
0018 GA400884	5.99	11.32	X	22.1	X	X	302	4.57	6.54	0.66
0019 GA400885	5.12	9.67	X	32.9	X	X	335	4.89	6.99	0.45
0020 GA400886	6.15	11.62	X	38.3	X	X	368	6.06	8.67	0.68
0021 GA400887	5.78	10.92	X	49.3	X	X	583	8.15	11.65	0.51
0022 GA400888	6.03	11.40	X	42.8	X	X	506	5.49	7.86	0.73
0023 GA400889	5.88	11.11	X	29.2	X	X	521	5.16	7.38	0.83
0024 GA400890	6.02	11.37	X	23.7	X	X	1032	4.71	6.73	0.85
0025 GA400891	7.97	15.06	X	45.4	X	X	1659	5.60	8.00	0.78
0026 GA400892	6.13	11.58	X	30.4	X	X	1219	4.78	6.84	0.78
0027 GA400893	6.05	11.43	X	25.7	X	X	1375	4.37	6.25	0.81
0028 GA400894	6.17	11.67	X	51.7	X	X	953	4.41	6.31	0.54
0029 GA400895	5.71	10.78	X	105.3	X	X	416	4.20	6.00	0.29
0030 GA400896	6.39	12.08	X	48.1	X	X	909	6.18	8.84	0.65
0031 GA400897	6.27	11.84	X	78.4	X	X	831	4.02	5.75	0.50
0032 GA400898	6.21	11.73	X	94.0	X	X	810	4.69	6.71	0.51
0033 GA400899	6.27	11.84	X	81.0	X	X	535	5.34	7.64	0.55
0034 GA400900	5.97	11.28	X	43.2	X	X	495	4.62	6.61	0.71
0035 GA400901	6.01	11.36	X	44.2	X	X	577	4.55	6.50	0.70
0036 GA400902	5.65	10.68	X	76.3	X	X	2847	3.56	5.08	0.60
0037 GA400903	5.93	11.20	X	23.6	X	X	1025	4.55	6.51	0.84
0038 GA400904	5.95	11.25	X	19.6	X	X	884	4.66	6.67	0.85
0039 GA400905	6.02	11.37	X	14.2	X	X	553	4.60	6.58	0.75
0040 GA400906	5.86	11.07	X	15.1	X	X	964	4.83	6.91	0.89



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA400867	0.26	293	378	40	X	0.7	32.3	69.1	0.02	0.15
0002 GA400868	0.48	109	141	15	X	X	32.4	69.2	X	0.36
0003 GA400869	0.59	120	156	19	X	X	30.0	64.2	X	0.33
0004 GA400870	1.20	288	372	6	X	0.5	31.5	67.3	X	0.36
0005 GA400871	0.87	297	384	10	X	0.5	34.2	73.2	0.02	0.35
0006 GA400872	1.11	340	439	9	X	0.8	32.8	70.2	X	0.35
0007 GA400873	0.48	196	253	21	X	1.7	36.6	78.3	0.04	0.24
0008 GA400874	0.53	299	386	16	X	1.0	36.5	78.1	0.06	0.29
0009 GA400875	0.53	197	255	12	X	2.4	35.0	74.9	0.01	0.34
0010 GA400876	0.78	407	526	13	X	2.3	34.8	74.3	0.02	0.33
0011 GA400877	0.48	397	512	24	X	2.4	37.4	80.1	0.02	0.23
0012 GA400878	0.87	485	626	20	X	1.7	33.6	71.9	0.02	0.33
0013 GA400879	0.57	295	381	69	X	1.8	35.4	75.8	0.02	0.33
0014 GA400880	0.57	251	324	68	0.06	1.8	35.4	75.7	0.03	0.34
0015 GA400881	0.86	343	443	63	X	1.5	35.2	75.3	0.06	0.29
0016 GA400882	1.19	645	833	18	X	0.8	35.5	76.1	0.02	0.35
0017 GA400883	0.84	418	540	26	X	0.6	35.1	75.1	0.02	0.31
0018 GA400884	1.10	520	672	25	X	0.7	35.3	75.6	0.01	0.31
0019 GA400885	0.74	567	733	31	X	0.7	36.8	78.7	0.02	0.23
0020 GA400886	1.13	897	1159	21	X	1.2	33.5	71.7	0.03	0.30
0021 GA400887	0.84	694	896	63	X	0.6	33.4	71.4	0.02	0.30
0022 GA400888	1.20	1117	1443	42	X	X	34.6	74.1	0.01	0.30
0023 GA400889	1.37	996	1287	12	X	X	32.5	69.6	X	0.32
0024 GA400890	1.42	912	1178	20	X	X	34.3	73.4	X	0.33
0025 GA400891	1.30	776	1001	57	X	X	29.1	62.3	0.02	0.36
0026 GA400892	1.29	700	904	10	X	X	35.4	75.7	X	0.33
0027 GA400893	1.35	709	915	7	X	X	33.9	72.4	X	0.33
0028 GA400894	0.89	601	776	12	X	0.6	35.0	74.9	0.02	0.32
0029 GA400895	0.48	495	639	24	X	X	35.2	75.4	0.02	0.29
0030 GA400896	1.07	679	877	11	X	0.5	35.3	75.5	X	0.36
0031 GA400897	0.84	574	741	10	X	X	35.8	76.5	0.02	0.33
0032 GA400898	0.85	556	717	23	X	X	35.3	75.5	0.04	0.32
0033 GA400899	0.91	555	716	19	X	X	33.7	72.0	0.02	0.33
0034 GA400900	1.17	581	750	13	X	X	32.6	69.8	X	0.33
0035 GA400901	1.17	598	772	9	X	X	33.8	72.4	X	0.33
0036 GA400902	1.00	524	677	17	X	X	35.5	76.0	0.02	0.29
0037 GA400903	1.40	817	1055	8	X	0.7	33.3	71.3	X	0.33
0038 GA400904	1.41	1053	1359	12	X	X	34.4	73.6	0.01	0.32
0039 GA400905	1.24	1074	1387	6	X	X	34.9	74.6	0.02	0.30
0040 GA400906	1.47	1299	1677	7	X	X	34.1	72.9	0.02	0.32



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA400867	0.25	1828	2306
0002 GA400868	0.59	248	312
0003 GA400869	0.55	126	158
0004 GA400870	0.60	111	140
0005 GA400871	0.58	137	173
0006 GA400872	0.59	248	313
0007 GA400873	0.40	837	1056
0008 GA400874	0.49	1035	1305
0009 GA400875	0.56	608	766
0010 GA400876	0.55	617	778
0011 GA400877	0.39	2196	2770
0012 GA400878	0.56	618	779
0013 GA400879	0.56	740	933
0014 GA400880	0.58	877	1106
0015 GA400881	0.48	974	1229
0016 GA400882	0.58	551	695
0017 GA400883	0.51	559	706
0018 GA400884	0.51	373	470
0019 GA400885	0.38	1177	1484
0020 GA400886	0.50	482	608
0021 GA400887	0.50	658	830
0022 GA400888	0.50	1837	2317
0023 GA400889	0.53	261	330
0024 GA400890	0.55	183	230
0025 GA400891	0.61	294	371
0026 GA400892	0.55	231	291
0027 GA400893	0.55	76	96
0028 GA400894	0.54	176	222
0029 GA400895	0.49	334	421
0030 GA400896	0.61	240	302
0031 GA400897	0.55	305	384
0032 GA400898	0.54	256	323
0033 GA400899	0.55	284	358
0034 GA400900	0.55	199	251
0035 GA400901	0.55	133	167
0036 GA400902	0.49	94	118
0037 GA400903	0.55	101	127
0038 GA400904	0.54	556	701
0039 GA400905	0.50	169	214
0040 GA400906	0.53	156	196



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA400907	2.69	5.09	198	10.6	8.0	11.3	X	5.79	8.28	11.01
0042 GA400908	4.26	8.04	X	32.4	X	X	126	4.85	6.94	0.24
0043 GA400909	6.17	11.66	X	35.5	X	X	1075	4.96	7.09	0.80
0044 GA400910	6.27	11.85	X	37.8	X	X	610	5.40	7.71	0.86
0045 GA400911	6.19	11.70	X	45.5	X	X	1495	4.95	7.08	0.86
0046 GA400912	6.41	12.12	X	26.8	X	X	1490	5.02	7.17	0.91
0047 GA400913	7.12	13.45	X	20.8	0.2	0.3	1397	4.62	6.60	0.85
0048 GA400914	6.38	12.06	X	17.4	X	X	3017	5.24	7.49	1.15
0049 GA400915	6.12	11.56	X	23.3	X	X	2992	5.63	8.04	1.20
0050 GA400916	6.22	11.75	X	30.4	X	X	953	5.09	7.28	0.86
0051 GA400917	6.08	11.48	X	137.6	X	X	3019	5.10	7.30	0.59
0052 GA400918	6.27	11.84	X	83.9	X	X	4721	6.55	9.37	0.70
0053 GA400919	5.07	9.58	X	536.2	X	X	3.05%	8.31	11.88	0.73
0054 GA400920	6.20	11.72	X	257.8	0.1	X	9991	5.10	7.29	0.60
0055 GA400921	5.92	11.19	X	27.8	X	X	740	4.64	6.63	0.93
0056 GA400922	6.52	12.33	X	27.0	0.1	X	185	5.29	7.56	1.11
0057 GA400923	6.08	11.49	X	25.4	0.1	X	171	5.25	7.50	1.29
0058 GA400924	6.18	11.68	X	54.8	0.1	X	139	5.26	7.52	1.18
0059 GA400925	6.14	11.60	X	29.4	0.1	X	136	4.98	7.12	1.11
0060 GA400926	6.09	11.50	X	36.6	0.1	X	259	4.91	7.02	1.09
0061 GA400927	6.12	11.57	X	32.7	0.1	X	108	5.17	7.39	1.17
0062 GA400928	6.14	11.60	X	53.0	0.1	X	81	4.97	7.11	1.18
0063 GA400929	6.22	11.75	X	55.5	0.1	X	344	5.16	7.38	1.23
0064 GA400930	6.33	11.96	X	26.2	0.1	X	418	4.96	7.09	1.39
0065 GA400931	6.08	11.50	X	39.7	0.1	X	192	5.74	8.21	1.25
0066 GA400932	5.76	10.88	X	32.6	0.1	X	155	4.62	6.60	1.14
0067 GA400933	6.27	11.84	X	17.7	0.1	X	273	4.59	6.57	1.45
0068 GA400934	7.36	13.91	X	43.2	0.2	0.3	608	6.05	8.65	2.39
0069 GA400935	7.06	13.34	X	58.3	0.3	0.5	288	5.78	8.26	1.39
0070 GA400936	6.42	12.13	X	21.7	0.1	X	117	6.01	8.59	1.55
0071 GA400937	6.32	11.95	X	19.7	0.1	X	72	5.07	7.24	1.22
0072 GA400938	6.09	11.51	X	19.1	0.1	0.2	79	5.43	7.77	1.04
0073 GA400939	6.12	11.57	X	17.1	0.2	0.2	99	5.53	7.91	1.13
0074 GA400940	6.21	11.74	X	25.5	X	X	169	5.88	8.41	1.05
0075 GA400941	5.75	10.87	X	30.4	X	X	413	4.47	6.39	0.76
0076 GA400942	6.29	11.89	X	30.8	X	X	1119	4.90	7.00	0.71
0077 GA400943	6.43	12.15	X	51.6	X	X	2984	4.23	6.05	0.49
0078 GA400944	6.20	11.71	X	19.5	X	X	519	4.99	7.13	0.84
0079 GA400945	6.29	11.89	X	14.0	0.2	0.2	120	5.64	8.06	1.00
0080 GA400946	6.21	11.73	X	8.9	0.2	0.2	44	4.99	7.14	0.98



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA400907	18.26	1482	1914	14	X	1.2	24.9	53.4	X	0.16
0042 GA400908	0.40	313	404	24	X	3.3	38.6	82.7	0.02	0.22
0043 GA400909	1.33	1165	1504	9	X	X	34.5	73.7	0.01	0.32
0044 GA400910	1.43	1247	1610	19	X	X	34.3	73.3	0.02	0.33
0045 GA400911	1.42	772	996	14	X	X	34.2	73.2	0.02	0.32
0046 GA400912	1.51	792	1022	14	X	0.5	34.9	74.7	X	0.35
0047 GA400913	1.41	924	1193	10	X	X	35.3	75.4	0.02	0.32
0048 GA400914	1.91	1819	2349	7	X	0.6	35.6	76.1	0.01	0.36
0049 GA400915	1.99	1156	1492	9	X	X	33.9	72.6	X	0.35
0050 GA400916	1.43	1100	1420	7	X	X	34.6	74.1	0.01	0.34
0051 GA400917	0.97	742	958	20	X	X	34.0	72.7	0.03	0.32
0052 GA400918	1.15	1159	1496	30	X	0.8	34.6	74.1	0.02	0.33
0053 GA400919	1.21	1572	2029	334	X	1.8	31.4	67.2	0.10	0.24
0054 GA400920	1.00	551	712	46	X	1.0	34.6	73.9	0.06	0.25
0055 GA400921	1.55	833	1076	11	X	0.5	34.9	74.7	X	0.32
0056 GA400922	1.84	1041	1344	14	X	0.5	33.1	70.9	0.01	0.32
0057 GA400923	2.13	1134	1464	9	X	0.6	34.0	72.8	X	0.34
0058 GA400924	1.95	1167	1507	10	X	X	34.2	73.1	0.01	0.34
0059 GA400925	1.84	1033	1334	11	X	X	34.8	74.4	X	0.34
0060 GA400926	1.81	999	1290	11	X	0.7	34.2	73.3	X	0.34
0061 GA400927	1.93	1053	1360	11	X	X	34.0	72.7	X	0.34
0062 GA400928	1.95	1082	1397	10	X	X	34.2	73.1	0.01	0.33
0063 GA400929	2.04	1001	1293	14	X	X	35.5	76.0	0.01	0.33
0064 GA400930	2.31	1133	1464	8	X	X	34.5	73.8	X	0.35
0065 GA400931	2.07	1161	1499	10	X	0.7	33.7	72.2	X	0.34
0066 GA400932	1.89	1005	1298	11	X	X	31.9	68.2	X	0.32
0067 GA400933	2.41	1214	1567	7	X	X	34.9	74.7	X	0.35
0068 GA400934	3.96	1828	2360	33	X	X	30.2	64.5	0.02	0.36
0069 GA400935	2.31	1433	1851	31	X	X	33.1	70.7	0.02	0.34
0070 GA400936	2.57	1336	1725	17	X	0.5	32.7	70.0	X	0.36
0071 GA400937	2.03	1107	1429	10	X	X	33.9	72.5	X	0.34
0072 GA400938	1.72	1157	1493	7	X	X	34.0	72.7	0.02	0.33
0073 GA400939	1.87	1241	1603	10	X	X	33.8	72.2	0.01	0.33
0074 GA400940	1.75	1199	1548	17	X	X	33.6	71.9	0.02	0.33
0075 GA400941	1.26	1190	1537	30	X	X	34.4	73.7	X	0.30
0076 GA400942	1.18	783	1011	16	X	X	34.8	74.5	0.02	0.34
0077 GA400943	0.82	465	600	17	0.08	X	35.8	76.7	0.02	0.32
0078 GA400944	1.39	714	922	8	X	X	34.9	74.6	X	0.34
0079 GA400945	1.66	700	904	5	X	X	34.5	73.9	0.01	0.34
0080 GA400946	1.63	651	841	14	X	X	34.4	73.5	X	0.35



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA400907	0.26	1917	2418
0042 GA400908	0.37	1739	2193
0043 GA400909	0.53	291	366
0044 GA400910	0.54	201	254
0045 GA400911	0.53	197	249
0046 GA400912	0.59	174	220
0047 GA400913	0.53	199	251
0048 GA400914	0.60	218	275
0049 GA400915	0.58	106	134
0050 GA400916	0.56	124	156
0051 GA400917	0.53	334	421
0052 GA400918	0.55	1005	1268
0053 GA400919	0.41	1.71%	2.16%
0054 GA400920	0.41	1812	2285
0055 GA400921	0.54	230	291
0056 GA400922	0.54	286	360
0057 GA400923	0.56	195	246
0058 GA400924	0.56	191	241
0059 GA400925	0.57	145	183
0060 GA400926	0.57	185	233
0061 GA400927	0.56	276	348
0062 GA400928	0.55	198	249
0063 GA400929	0.55	336	424
0064 GA400930	0.58	160	202
0065 GA400931	0.57	280	353
0066 GA400932	0.54	242	305
0067 GA400933	0.59	111	140
0068 GA400934	0.60	1689	2130
0069 GA400935	0.57	641	808
0070 GA400936	0.60	174	220
0071 GA400937	0.56	240	303
0072 GA400938	0.54	171	216
0073 GA400939	0.56	175	221
0074 GA400940	0.55	284	358
0075 GA400941	0.50	3424	4317
0076 GA400942	0.56	317	400
0077 GA400943	0.54	218	274
0078 GA400944	0.57	219	276
0079 GA400945	0.56	271	342
0080 GA400946	0.58	114	143



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
0001 GA400891	8.15	15.41	X	46.4	X	X	1687	5.63	8.05	0.80
0002 GA400912	6.39	12.07	X	26.3	X	X	1483	4.90	7.00	0.90

STANDARDS

0001 OREAS 701	6.35	12.00	X	7.0	3.9	5.4	4857	23.36	33.39	0.78
0002 OREAS 901	7.33	13.85	82	5.3	X	X	1533	4.21	6.02	0.65
0003 AMIS0401	3.44	6.50	X	290.9	10.9	15.2	1661	18.43	26.34	2.08

BLANKS

0001 Control Blank	X	X	X	X	X	X	X	X	X	X
0002 Control Blank	X	X	X	0.2	X	X	X	X	X	X
0003 Control Blank	X	X	X	0.3	X	X	143	0.01	0.02	X



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
CHECKS										
0001 GA400891	1.33	793	1024	60	X	X	29.9	63.9	0.02	0.37
0002 GA400912	1.49	791	1022	14	X	0.9	34.9	74.7	X	0.35

STANDARDS

0001 OREAS 701	1.29	3284	4241	269	0.68	0.7	16.0	34.3	0.02	0.16
0002 OREAS 901	1.07	306	395	5	X	3.1	35.1	75.1	X	0.38
0003 AMIS0401	3.44	2.91%	3.75%	7	8.43	1.1	14.3	30.5	X	0.24

BLANKS

0001 Control Blank	X	X	X	X	X	X	X	X	X	X
0002 Control Blank	X	X	X	X	X	X	X	X	X	X
0003 Control Blank	X	X	X	X	X	0.5	X	X	X	X



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
CHECKS			
0001 GA400891	0.62	240	303
0002 GA400912	0.59	200	252

STANDARDS			
0001 OREAS 701	0.27	2.44%	3.08%
0002 OREAS 901	0.64	67	85
0003 AMIS0401	0.41	825	1040

BLANKS			
0001 Control Blank	X	54	68
0002 Control Blank	X	59	75
0003 Control Blank	X	39	49



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	
	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.	
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.	
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004
	Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.	

MINERALS TEST REPORT

CLIENT

Mick WILSON
GWR GROUP LTD
PO Box 517
WEST PERTH, W.A. 6872
AUSTRALIA

JOB INFORMATION

JOB CODE : 1012.1/1904911
NO. SAMPLES : 175
NO. ELEMENTS : 23
CLIENT ORDER NO. : GW5345 (Job 1 of 1)
SAMPLE SUBMISSION NO. : GW5345
PROJECT : HATCHES CREEK
SAMPLE TYPE : RC
DATE RECEIVED : 02/04/2019
DATE REPORTED : 06/05/2019
DATE PRINTED : 06/05/2019

REPORT NOTES

1. Please note:
 1. The following sample was NOT received with this consignment:
GA400968

TESTED BY

Intertek
15 Davison Street, Maddington 6109, Western Australia
PO Box 144, Gosnells 6990, Western Australia
Tel: +61 8 9251 8100
Email: min.aus.per@intertek.com

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SIGNIFICANT FIGURES

It is common practice to report data derived from analytical instrumentation to a maximum of two or three significant figures. Some data reported herein may show more figures than this. The reporting of more than two or three figures in no way implies that figures beyond the least significant digit have significance.

For more information on the uncertainty on individual reported values, please contact the laboratory.

SAMPLE STORAGE

All solid samples (assay pulps, bulk pulps and residues will be stored for 60 days without charge. Following this samples will be stored at a daily rate until clients written advice regarding return, collection or disposal is received. If storage information is not supplied on the submission, or arranged with the laboratory in writing the default will be to store the samples with the applicable charges. Storage is charged at \$4.00 per m³ per day, expenses related to the return or disposal of samples will be charged at cost. Current disposal cost is charged at \$150.00 per m³.

Samples received as liquids, waters or solutions will be held for 60 days free of charge then disposed of, unless written advice for return or collection is received.

LEGEND	X	= Less than Detection Limit	NA	= Not Analysed
	SNR	= Sample Not Received	UA	= Unable to Assay
	*	= Result Checked	>	= Value beyond Limit of Method
	DTF	= Result still to come	+	= Extra Sample Received Not Listed
	IS	= Insufficient Sample for Analysis		



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0001 GA400947	3.62	6.84	X	82.3	X	X	190	3.48	4.98	0.39
0002 GA400948	5.22	9.86	X	25.9	X	X	271	4.32	6.18	0.42
0003 GA400949	5.49	10.37	X	18.9	X	X	453	4.71	6.73	0.55
0004 GA400950	6.26	11.83	X	13.8	X	X	587	4.73	6.76	0.77
0005 GA400951	6.39	12.07	X	14.0	X	X	935	5.42	7.75	0.69
0006 GA400952	6.07	11.47	X	14.9	X	X	1365	5.26	7.53	0.61
0007 GA400953	5.94	11.23	X	22.5	X	X	578	4.82	6.89	0.60
0008 GA400954	6.42	12.13	X	26.9	X	X	1268	5.02	7.18	0.73
0009 GA400955	6.23	11.77	X	24.2	X	X	945	6.07	8.68	0.80
0010 GA400956	6.18	11.68	X	24.7	X	X	1749	5.22	7.46	0.71
0011 GA400957	6.21	11.74	X	34.6	X	X	2560	4.56	6.52	0.61
0012 GA400958	6.23	11.78	X	22.5	X	X	1876	4.58	6.54	0.75
0013 GA400959	6.28	11.87	X	32.5	X	X	1868	4.70	6.73	0.76
0014 GA400960	5.98	11.29	X	77.4	X	X	4402	4.67	6.67	0.53
0015 GA400961	6.48	12.24	X	106.2	X	X	6650	4.30	6.15	0.49
0016 GA400962	6.08	11.49	X	40.1	X	X	2153	4.58	6.54	0.77
0017 GA400963	6.14	11.59	X	25.7	X	X	1216	4.51	6.45	0.91
0018 GA400964	6.17	11.66	X	31.3	X	X	1904	4.81	6.88	0.44
0019 GA400965	6.17	11.66	X	31.8	X	X	2317	4.19	5.99	0.72
0020 GA400966	6.42	12.13	X	53.7	X	X	3227	4.84	6.92	0.65
0021 GA400967	7.16	13.53	X	132.0	X	X	7801	4.29	6.14	0.60
0022 GA400969	5.13	9.70	X	49.0	X	X	6224	4.33	6.19	0.23
0023 GA400970	5.99	11.33	X	46.1	X	X	4336	4.45	6.36	0.35
0024 GA400971	5.83	11.02	X	8.8	X	X	1326	4.99	7.13	0.39
0025 GA400972	5.99	11.33	X	19.8	X	X	2793	4.75	6.80	0.73
0026 GA400973	6.21	11.74	X	39.0	X	X	5658	4.85	6.93	0.82
0027 GA400974	6.07	11.48	X	71.2	X	X	8558	4.90	7.00	0.58
0028 GA400975	6.12	11.56	X	31.9	X	X	3307	4.69	6.70	0.66
0029 GA400976	5.94	11.23	X	28.3	0.1	X	2928	4.77	6.82	0.70
0030 GA400977	6.92	13.08	X	9.4	0.2	0.2	706	5.24	7.49	0.88
0031 GA400978	7.42	14.02	X	50.3	0.2	0.3	2195	5.78	8.26	0.64
0032 GA400979	5.99	11.31	X	22.9	0.1	X	2530	4.78	6.83	0.85
0033 GA400980	5.85	11.06	X	10.9	0.1	X	862	4.08	5.84	0.78
0034 GA400981	5.46	10.33	X	11.7	0.1	X	1807	5.42	7.75	1.04
0035 GA400982	5.67	10.71	X	8.0	0.1	X	308	4.73	6.76	0.99
0036 GA400983	7.38	13.95	X	13.1	0.2	0.2	139	5.48	7.83	1.27
0037 GA400984	7.71	14.57	X	12.9	0.3	0.4	65	5.02	7.18	1.12
0038 GA400985	6.99	13.21	X	23.9	0.4	0.5	140	6.33	9.05	1.85
0039 GA400986	5.72	10.81	X	17.6	0.2	0.3	203	5.23	7.48	1.74
0040 GA400987	10.42	19.69	53	7.7	3.5	5.0	95	3.39	4.84	3.63



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0001 GA400947	0.65	453	585	26	X	X	38.4	82.2	0.01	0.23
0002 GA400948	0.70	361	466	19	X	0.6	36.7	78.5	0.01	0.29
0003 GA400949	0.92	305	393	12	X	X	35.7	76.3	0.01	0.30
0004 GA400950	1.28	697	900	12	X	X	34.0	72.8	X	0.35
0005 GA400951	1.14	548	708	19	X	X	36.6	78.4	0.01	0.35
0006 GA400952	1.01	683	881	11	X	X	35.1	75.1	0.02	0.32
0007 GA400953	1.00	488	630	14	X	X	35.6	76.1	0.01	0.31
0008 GA400954	1.22	741	956	17	X	X	35.2	75.4	0.02	0.32
0009 GA400955	1.32	1077	1391	8	X	X	35.9	76.7	0.02	0.32
0010 GA400956	1.18	785	1014	14	X	X	34.1	72.9	0.01	0.33
0011 GA400957	1.01	670	866	10	X	X	34.6	74.0	0.01	0.33
0012 GA400958	1.25	638	824	9	X	X	34.4	73.5	0.01	0.33
0013 GA400959	1.27	678	876	9	X	X	34.4	73.7	0.01	0.33
0014 GA400960	0.88	678	875	17	X	X	35.1	75.1	0.03	0.31
0015 GA400961	0.81	565	730	10	X	X	35.5	75.9	0.02	0.33
0016 GA400962	1.27	823	1063	11	X	X	35.1	75.1	0.01	0.32
0017 GA400963	1.50	687	887	6	X	X	32.7	69.9	X	0.33
0018 GA400964	0.73	1387	1791	16	X	X	36.0	77.1	0.02	0.32
0019 GA400965	1.19	631	815	8	X	X	34.3	73.4	X	0.33
0020 GA400966	1.08	638	824	20	X	X	34.8	74.4	0.02	0.33
0021 GA400967	0.99	567	732	15	0.07	X	33.6	71.8	0.03	0.34
0022 GA400969	0.39	563	728	35	0.05	X	36.2	77.5	0.02	0.27
0023 GA400970	0.58	451	582	22	X	0.6	36.1	77.2	0.02	0.31
0024 GA400971	0.64	487	628	16	X	X	34.4	73.5	X	0.32
0025 GA400972	1.22	620	801	10	X	X	34.4	73.6	X	0.32
0026 GA400973	1.36	725	936	10	0.06	X	35.6	76.2	0.01	0.33
0027 GA400974	0.96	546	706	18	0.09	X	35.7	76.3	0.02	0.33
0028 GA400975	1.09	692	893	18	X	X	33.5	71.6	0.01	0.32
0029 GA400976	1.16	740	955	21	X	X	36.0	77.1	0.01	0.31
0030 GA400977	1.46	940	1213	9	X	X	34.4	73.5	0.01	0.34
0031 GA400978	1.07	614	793	36	X	X	33.8	72.3	0.02	0.31
0032 GA400979	1.41	808	1044	10	0.05	X	33.8	72.4	0.02	0.31
0033 GA400980	1.30	864	1115	17	X	X	30.0	64.1	0.01	0.31
0034 GA400981	1.72	1566	2022	24	X	X	34.4	73.6	X	0.28
0035 GA400982	1.64	1228	1586	22	X	X	33.7	72.0	X	0.31
0036 GA400983	2.11	997	1287	30	X	X	30.4	65.1	0.02	0.39
0037 GA400984	1.85	698	901	27	X	X	30.0	64.1	0.01	0.47
0038 GA400985	3.07	1075	1388	17	X	X	30.4	65.0	0.01	0.78
0039 GA400986	2.89	966	1247	17	X	X	31.2	66.8	0.01	0.61
0040 GA400987	6.01	944	1219	132	2.14	33.6	21.6	46.2	X	0.18



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0001 GA400947	0.38	628	791
0002 GA400948	0.48	311	393
0003 GA400949	0.50	240	302
0004 GA400950	0.58	154	194
0005 GA400951	0.58	232	293
0006 GA400952	0.53	302	381
0007 GA400953	0.52	318	400
0008 GA400954	0.54	452	570
0009 GA400955	0.53	292	368
0010 GA400956	0.55	188	237
0011 GA400957	0.55	380	480
0012 GA400958	0.55	166	210
0013 GA400959	0.55	162	205
0014 GA400960	0.52	512	646
0015 GA400961	0.56	367	463
0016 GA400962	0.54	180	227
0017 GA400963	0.55	142	179
0018 GA400964	0.53	419	528
0019 GA400965	0.54	166	209
0020 GA400966	0.55	272	344
0021 GA400967	0.57	230	290
0022 GA400969	0.45	2217	2796
0023 GA400970	0.51	501	631
0024 GA400971	0.53	250	315
0025 GA400972	0.53	140	177
0026 GA400973	0.55	125	157
0027 GA400974	0.55	177	223
0028 GA400975	0.53	210	265
0029 GA400976	0.51	379	478
0030 GA400977	0.57	188	237
0031 GA400978	0.52	339	427
0032 GA400979	0.53	328	414
0033 GA400980	0.52	198	249
0034 GA400981	0.47	281	355
0035 GA400982	0.51	339	428
0036 GA400983	0.66	196	247
0037 GA400984	0.78	262	330
0038 GA400985	1.30	279	352
0039 GA400986	1.02	358	451
0040 GA400987	0.30	2.71%	3.42%



ELEMENTS	Al	Al ₂ O ₃	As	Bi	Ca	CaO	Cu	Fe	Fe ₂ O ₃	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0041 GA400988	5.76	10.89	X	14.7	X	X	1291	4.90	7.00	0.57
0042 GA400989	6.37	12.04	X	22.6	0.3	0.5	225	6.02	8.61	2.28
0043 GA400990	6.11	11.55	X	20.5	0.3	0.4	601	6.48	9.26	2.65
0044 GA400991	6.98	13.19	X	17.9	0.3	0.4	711	5.90	8.43	1.99
0045 GA400992	5.72	10.81	X	14.3	0.3	0.4	605	7.01	10.02	2.16
0046 GA400993	6.88	13.00	X	26.3	0.4	0.5	974	10.18	14.55	4.28
0047 GA400994	5.78	10.92	X	61.2	0.5	0.8	549	9.47	13.53	1.58
0048 GA400995	5.31	10.03	X	13.9	0.3	0.4	139	6.04	8.64	1.65
0049 GA400996	5.98	11.31	X	15.4	0.2	0.3	239	6.58	9.41	1.63
0050 GA400997	5.98	11.31	X	15.4	0.2	0.3	243	6.52	9.32	1.74
0051 GA400998	6.31	11.92	X	11.6	0.3	0.4	91	6.55	9.37	2.49
0052 GA400999	6.71	12.69	X	10.1	0.3	0.4	68	7.02	10.04	2.86
0053 GA401000	6.38	12.06	X	7.4	0.3	0.4	X	6.21	8.88	2.44
0054 GA403501	6.34	11.98	X	8.1	0.3	0.4	55	6.66	9.53	2.35
0055 GA403502	6.62	12.51	X	6.9	0.5	0.7	35	7.13	10.19	2.56
0056 GA403503	6.62	12.52	X	10.1	0.5	0.7	59	6.67	9.54	2.68
0057 GA403504	6.42	12.13	X	9.6	0.3	0.4	45	6.48	9.27	2.53
0058 GA403505	6.20	11.71	X	12.7	0.3	0.4	149	7.16	10.24	2.50
0059 GA403506	6.07	11.47	X	15.8	0.3	0.4	176	7.65	10.94	2.63
0060 GA403507	5.72	10.80	X	58.6	0.4	0.5	212	7.06	10.09	2.39
0061 GA403508	5.94	11.23	X	37.6	0.3	0.4	1596	6.77	9.69	1.77
0062 GA403509	6.01	11.35	X	26.1	0.3	0.4	6966	6.82	9.75	1.21
0063 GA403510	5.90	11.16	X	19.3	0.3	0.4	3831	6.63	9.49	1.83
0064 GA403511	6.35	12.00	X	11.1	0.3	0.4	187	6.64	9.50	2.26
0065 GA403512	3.12	5.90	X	10.7	0.2	0.2	252	3.65	5.21	1.32
0066 GA403513	6.44	12.17	X	12.2	0.3	0.4	1043	6.65	9.50	2.88
0067 GA403514	5.85	11.05	X	28.4	0.2	0.3	2.63%	7.25	10.36	1.89
0068 GA403515	6.44	12.18	X	29.5	0.2	0.3	968	8.60	12.29	2.78
0069 GA403516	5.92	11.18	X	53.4	0.3	0.4	413	15.91	22.75	3.15
0070 GA403517	6.29	11.89	X	55.7	0.3	0.4	817	12.56	17.96	3.48
0071 GA403518	6.66	12.59	X	29.4	0.3	0.4	209	7.32	10.46	2.48
0072 GA403519	6.53	12.34	X	13.0	0.3	0.4	213	7.69	10.99	2.97
0073 GA403520	6.40	12.09	X	15.4	0.3	0.4	263	7.89	11.28	2.85
0074 GA403521	5.52	10.43	X	18.4	0.3	0.4	341	6.42	9.18	2.31
0075 GA403522	6.26	11.82	X	19.7	0.3	0.4	782	9.54	13.63	3.63
0076 GA403523	6.06	11.46	X	13.4	0.3	0.4	163	7.12	10.18	2.99
0077 GA403524	6.26	11.82	X	15.2	0.3	0.4	489	8.57	12.25	3.66
0078 GA403525	6.35	12.00	X	13.4	0.3	0.4	163	6.51	9.30	2.66
0079 GA403526	6.26	11.82	X	9.7	0.3	0.4	235	6.04	8.63	2.34
0080 GA403527	5.87	11.08	X	4.9	0.1	0.2	112	3.11	4.44	1.23



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0041 GA400988	0.94	695	897	12	X	X	34.5	73.8	0.02	0.30
0042 GA400989	3.78	1606	2074	9	X	X	31.9	68.3	0.01	0.64
0043 GA400990	4.40	1466	1893	8	X	X	30.0	64.2	X	0.64
0044 GA400991	3.30	994	1284	13	X	X	30.7	65.7	0.01	0.73
0045 GA400992	3.58	1506	1944	18	X	X	30.7	65.7	X	0.57
0046 GA400993	7.09	2511	3243	10	X	X	26.9	57.5	0.02	0.66
0047 GA400994	2.63	1182	1527	39	X	0.6	30.3	64.9	0.11	0.59
0048 GA400995	2.73	1408	1818	13	X	X	33.2	70.9	0.01	0.50
0049 GA400996	2.71	1313	1696	27	X	X	29.5	63.1	0.02	0.60
0050 GA400997	2.89	1314	1696	28	X	X	30.6	65.4	0.01	0.61
0051 GA400998	4.13	1903	2457	21	X	X	29.7	63.5	0.01	0.66
0052 GA400999	4.74	1829	2361	36	X	X	30.2	64.7	X	0.72
0053 GA401000	4.05	1676	2164	42	X	X	30.9	66.1	X	0.70
0054 GA403501	3.89	1765	2279	41	X	X	30.0	64.2	X	0.68
0055 GA403502	4.25	1915	2472	40	X	X	30.1	64.5	X	0.70
0056 GA403503	4.45	1843	2380	46	X	X	29.4	62.9	X	0.69
0057 GA403504	4.19	1626	2099	61	X	X	30.6	65.4	X	0.71
0058 GA403505	4.14	1995	2577	13	X	X	30.0	64.1	0.01	0.67
0059 GA403506	4.36	2194	2833	8	X	X	29.5	63.2	X	0.67
0060 GA403507	3.96	2020	2608	8	X	X	31.5	67.3	0.01	0.57
0061 GA403508	2.94	1134	1465	13	0.05	X	30.2	64.6	0.01	0.68
0062 GA403509	2.00	711	918	24	0.18	X	30.7	65.7	X	0.67
0063 GA403510	3.03	1154	1491	11	0.11	X	29.9	63.9	X	0.66
0064 GA403511	3.76	1507	1946	24	X	X	29.2	62.6	X	0.73
0065 GA403512	2.19	846	1093	39	X	X	31.5	67.4	X	0.33
0066 GA403513	4.77	1665	2149	33	X	X	29.7	63.5	X	0.73
0067 GA403514	3.13	1319	1703	45	0.66	X	29.4	62.9	X	0.67
0068 GA403515	4.61	1821	2352	309	0.05	X	27.2	58.2	0.01	0.74
0069 GA403516	5.23	1579	2039	134	X	X	22.7	48.5	0.01	0.66
0070 GA403517	5.77	1815	2344	86	X	X	25.8	55.2	0.01	0.76
0071 GA403518	4.10	1420	1833	51	X	X	30.5	65.2	0.01	0.77
0072 GA403519	4.93	1690	2182	22	X	X	28.7	61.3	X	0.82
0073 GA403520	4.73	1604	2071	17	X	0.9	29.6	63.4	X	0.81
0074 GA403521	3.83	1385	1789	28	X	X	30.7	65.8	X	0.70
0075 GA403522	6.02	2146	2771	61	X	X	27.5	58.7	X	0.79
0076 GA403523	4.95	1750	2260	34	X	X	29.8	63.8	0.02	0.76
0077 GA403524	6.07	2140	2764	35	X	X	28.9	61.8	X	0.77
0078 GA403525	4.41	1472	1900	59	X	X	30.7	65.6	X	0.77
0079 GA403526	3.88	1387	1791	60	X	X	29.7	63.5	X	0.67
0080 GA403527	2.04	823	1063	47	X	X	35.0	74.9	X	0.21



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0041 GA400988	0.50	380	479
0042 GA400989	1.06	477	602
0043 GA400990	1.07	229	289
0044 GA400991	1.21	310	390
0045 GA400992	0.95	187	236
0046 GA400993	1.09	262	330
0047 GA400994	0.98	739	932
0048 GA400995	0.84	252	318
0049 GA400996	1.01	289	364
0050 GA400997	1.01	294	370
0051 GA400998	1.09	163	206
0052 GA400999	1.20	68	85
0053 GA401000	1.17	53	67
0054 GA403501	1.13	61	77
0055 GA403502	1.17	77	97
0056 GA403503	1.15	66	83
0057 GA403504	1.18	237	298
0058 GA403505	1.11	101	128
0059 GA403506	1.11	99	125
0060 GA403507	0.95	293	369
0061 GA403508	1.14	220	277
0062 GA403509	1.12	292	368
0063 GA403510	1.10	158	199
0064 GA403511	1.21	433	546
0065 GA403512	0.55	1139	1436
0066 GA403513	1.22	103	129
0067 GA403514	1.12	130	164
0068 GA403515	1.24	227	286
0069 GA403516	1.09	847	1069
0070 GA403517	1.27	417	526
0071 GA403518	1.28	263	331
0072 GA403519	1.37	111	140
0073 GA403520	1.35	73	92
0074 GA403521	1.17	92	115
0075 GA403522	1.32	148	186
0076 GA403523	1.27	72	91
0077 GA403524	1.28	114	144
0078 GA403525	1.29	123	155
0079 GA403526	1.12	74	94
0080 GA403527	0.34	39	49



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0081 GA403528	5.35	10.11	X	6.7	0.2	0.2	79	2.51	3.58	0.89
0082 GA403529	2.72	5.15	187	1.2	8.0	11.1	X	6.04	8.63	10.99
0083 GA403530	1.33	2.52	X	144.0	X	X	1.62%	1.69	2.41	0.08
0084 GA403531	5.87	11.09	X	8.6	0.2	0.3	58	2.52	3.61	0.92
0085 GA403532	5.64	10.66	X	10.2	0.2	0.3	83	2.51	3.59	0.87
0086 GA403533	7.00	13.23	X	8.9	0.1	X	80	3.15	4.50	1.03
0087 GA403534	7.23	13.66	X	8.6	0.2	0.3	79	3.22	4.60	1.14
0088 GA403535	5.73	10.83	X	4.0	0.1	X	50	2.40	3.44	0.89
0089 GA403536	6.23	11.78	X	3.3	0.2	0.2	155	3.32	4.74	1.25
0090 GA403537	9.13	17.26	X	10.2	0.2	0.2	214	4.13	5.91	1.35
0091 GA403538	5.56	10.50	X	11.0	0.2	0.3	126	2.56	3.66	0.84
0092 GA403539	5.47	10.33	X	14.7	0.2	0.3	98	2.25	3.22	0.89
0093 GA403540	4.92	9.30	X	4.2	0.2	0.3	50	1.48	2.12	0.78
0094 GA403541	5.26	9.94	X	4.2	0.1	0.2	80	1.68	2.40	0.91
0095 GA403542	5.67	10.71	X	3.2	0.1	X	37	1.37	1.95	0.61
0096 GA403543	4.92	9.29	X	4.6	0.1	X	58	1.74	2.49	0.62
0097 GA403544	5.57	10.53	X	6.1	0.1	X	314	2.46	3.51	1.28
0098 GA403545	5.52	10.42	X	16.7	0.1	X	88	1.85	2.64	0.51
0099 GA403546	4.61	8.71	X	5.8	X	X	X	1.45	2.08	0.30
0100 GA403547	4.61	8.70	X	10.3	X	X	26	1.82	2.60	0.28
0101 GA403548	4.47	8.44	X	8.6	0.1	X	55	2.26	3.24	0.29
0102 GA403549	5.56	10.51	X	8.8	0.1	X	75	1.85	2.64	0.36
0103 GA403550	4.11	7.77	X	6.3	X	X	1871	1.81	2.59	0.35
0104 GA403551	4.97	9.39	X	8.0	X	X	825	2.03	2.91	0.57
0105 GA403552	6.14	11.60	X	11.3	0.1	X	3250	2.01	2.87	0.48
0106 GA403553	5.85	11.06	X	16.7	X	X	1385	2.42	3.46	0.42
0107 GA403554	5.57	10.52	X	10.1	X	X	829	2.02	2.89	0.53
0108 GA403555	5.44	10.27	X	14.4	X	X	235	2.76	3.94	0.54
0109 GA403556	5.16	9.75	X	20.7	X	X	874	2.72	3.89	0.36
0110 GA403557	5.35	10.10	X	51.2	X	X	4994	1.95	2.79	0.33
0111 GA403558	5.33	10.08	X	79.6	X	X	4818	1.89	2.71	0.32
0112 GA403559	4.07	7.68	X	34.7	X	X	5853	1.50	2.15	0.23
0113 GA403560	3.20	6.05	X	43.2	X	X	4112	1.90	2.72	0.23
0114 GA403561	3.65	6.90	X	11.2	0.2	0.2	429	2.43	3.47	0.48
0115 GA403562	3.01	5.70	X	10.6	0.2	0.3	110	2.06	2.94	0.50
0116 GA403563	4.89	9.23	X	19.8	0.2	0.2	201	2.76	3.94	0.48
0117 GA403564	4.21	7.96	X	65.2	X	X	1080	1.85	2.64	0.23
0118 GA403565	2.67	5.05	X	13.6	X	X	250	1.55	2.22	0.18
0119 GA403566	3.06	5.79	X	8.3	X	X	86	1.46	2.09	0.41
0120 GA403567	2.97	5.61	X	6.3	X	X	162	1.78	2.55	0.59



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0081 GA403528	1.48	543	701	16	X	X	35.4	75.8	X	0.20
0082 GA403529	18.23	1525	1969	15	X	1.4	24.6	52.7	X	0.15
0083 GA403530	0.14	913	1179	152	0.23	X	43.1	92.1	0.02	0.04
0084 GA403531	1.53	551	711	15	X	X	35.6	76.1	X	0.28
0085 GA403532	1.43	437	564	34	X	X	36.5	78.0	X	0.23
0086 GA403533	1.71	547	706	35	X	X	35.2	75.3	0.01	0.22
0087 GA403534	1.89	608	785	42	X	X	33.4	71.4	X	0.44
0088 GA403535	1.47	528	682	15	X	X	35.6	76.1	X	0.18
0089 GA403536	2.07	760	981	8	X	X	35.5	75.9	X	0.25
0090 GA403537	2.23	705	910	19	X	X	30.6	65.6	X	0.41
0091 GA403538	1.39	429	554	43	X	X	37.3	79.8	X	0.38
0092 GA403539	1.48	420	543	9	X	X	39.2	84.0	X	0.47
0093 GA403540	1.30	391	504	5	X	X	39.5	84.5	X	0.19
0094 GA403541	1.51	513	662	15	X	X	35.2	75.2	X	0.15
0095 GA403542	1.02	337	435	20	X	X	37.2	79.6	X	0.17
0096 GA403543	1.03	386	498	13	X	X	38.6	82.6	X	0.16
0097 GA403544	2.11	759	980	10	X	X	35.8	76.6	X	0.16
0098 GA403545	0.85	328	424	83	X	X	35.6	76.1	X	0.28
0099 GA403546	0.49	189	244	23	X	X	39.2	83.8	X	0.16
0100 GA403547	0.47	168	216	66	X	X	40.1	85.7	X	0.21
0101 GA403548	0.48	182	235	58	X	X	35.9	76.7	X	0.19
0102 GA403549	0.59	175	226	32	X	X	37.8	80.8	X	0.28
0103 GA403550	0.58	197	254	27	0.06	X	36.9	78.9	X	0.22
0104 GA403551	0.94	328	423	24	X	X	35.1	75.1	X	0.26
0105 GA403552	0.80	253	326	21	0.10	X	35.9	76.8	0.01	0.28
0106 GA403553	0.69	223	288	21	0.06	X	33.8	72.3	X	0.24
0107 GA403554	0.88	305	393	17	X	X	33.8	72.3	X	0.19
0108 GA403555	0.89	288	372	17	X	X	33.8	72.4	X	0.24
0109 GA403556	0.59	227	294	21	X	X	36.8	78.7	X	0.24
0110 GA403557	0.55	170	219	19	0.15	X	37.0	79.2	0.01	0.27
0111 GA403558	0.52	161	208	27	0.18	X	38.3	82.0	0.01	0.29
0112 GA403559	0.39	143	185	16	0.17	X	39.9	85.3	X	0.26
0113 GA403560	0.38	143	184	18	0.12	X	40.4	86.4	X	0.27
0114 GA403561	0.80	289	373	9	X	X	39.8	85.1	X	0.27
0115 GA403562	0.82	248	321	17	X	X	39.7	85.0	X	0.20
0116 GA403563	0.79	237	306	18	X	X	36.9	78.9	X	0.31
0117 GA403564	0.37	137	177	49	X	X	40.3	86.2	X	0.30
0118 GA403565	0.30	134	174	27	X	X	41.4	88.6	X	0.26
0119 GA403566	0.68	203	262	7	X	X	40.3	86.2	X	0.18
0120 GA403567	0.99	250	322	8	X	X	40.8	87.3	X	0.16



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0081 GA403528	0.34	54	68
0082 GA403529	0.25	1670	2106
0083 GA403530	0.06	8424	1.06%
0084 GA403531	0.47	83	105
0085 GA403532	0.38	80	100
0086 GA403533	0.36	521	657
0087 GA403534	0.73	90	114
0088 GA403535	0.29	58	73
0089 GA403536	0.41	60	75
0090 GA403537	0.68	96	122
0091 GA403538	0.64	66	83
0092 GA403539	0.79	77	98
0093 GA403540	0.31	41	51
0094 GA403541	0.25	35	44
0095 GA403542	0.29	38	48
0096 GA403543	0.27	131	165
0097 GA403544	0.28	87	110
0098 GA403545	0.47	87	110
0099 GA403546	0.27	74	94
0100 GA403547	0.35	142	179
0101 GA403548	0.32	167	211
0102 GA403549	0.46	149	188
0103 GA403550	0.37	137	173
0104 GA403551	0.44	74	93
0105 GA403552	0.47	88	111
0106 GA403553	0.41	94	119
0107 GA403554	0.32	83	105
0108 GA403555	0.41	114	144
0109 GA403556	0.40	423	534
0110 GA403557	0.46	179	226
0111 GA403558	0.48	175	221
0112 GA403559	0.44	155	195
0113 GA403560	0.46	162	204
0114 GA403561	0.45	94	118
0115 GA403562	0.34	106	134
0116 GA403563	0.52	155	195
0117 GA403564	0.50	157	198
0118 GA403565	0.43	87	110
0119 GA403566	0.30	54	69
0120 GA403567	0.26	92	116



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0121 GA403568	2.23	4.21	X	18.7	0.5	0.7	48	1.89	2.70	0.32
0122 GA403569	4.23	7.99	X	53.9	1.7	2.3	84	2.12	3.02	0.47
0123 GA403570	2.52	4.77	X	30.7	0.2	0.2	48	1.83	2.62	0.23
0124 GA403571	2.33	4.41	X	34.9	9.2	12.9	63	5.82	8.32	9.10
0125 GA403572	3.70	7.00	X	13.9	0.2	0.3	306	4.10	5.87	1.55
0126 GA403573	2.61	4.94	X	29.3	0.1	X	136	1.98	2.83	0.30
0127 GA403574	4.03	7.61	X	63.6	0.6	0.8	123	2.02	2.89	0.41
0128 GA403575	3.94	7.44	X	38.3	0.3	0.4	71	1.71	2.44	0.44
0129 GA403576	2.04	3.86	X	14.7	X	X	42	1.31	1.88	0.17
0130 GA403577	1.98	3.75	X	24.1	0.4	0.6	71	1.56	2.23	0.17
0131 GA403578	4.37	8.26	X	12.8	0.1	X	39	1.94	2.78	0.36
0132 GA403579	4.58	8.65	X	10.7	0.1	X	48	2.20	3.15	0.60
0133 GA403580	4.52	8.55	X	27.2	0.2	0.3	72	2.68	3.83	0.49
0134 GA403581	3.72	7.03	X	41.6	0.3	0.4	60	2.56	3.66	0.25
0135 GA403582	2.24	4.24	X	11.6	X	X	47	1.14	1.63	0.17
0136 GA403583	3.20	6.05	X	9.0	X	X	45	1.24	1.77	0.46
0137 GA403584	2.39	4.52	X	5.1	0.1	X	X	1.09	1.56	0.17
0138 GA403585	2.13	4.02	X	8.8	X	X	73	1.12	1.60	0.37
0139 GA403586	2.70	5.10	X	18.5	0.2	0.3	110	1.62	2.32	0.38
0140 GA403587	4.29	8.10	X	13.2	0.2	0.3	47	1.93	2.76	0.50
0141 GA403588	2.56	4.84	59	9.0	0.1	X	38	1.54	2.20	0.49
0142 GA403589	1.76	3.33	X	6.7	0.2	0.3	50	1.32	1.89	0.37
0143 GA403590	2.54	4.80	82	8.9	0.1	X	59	1.52	2.18	0.33
0144 GA403591	1.51	2.85	X	21.8	X	X	47	1.44	2.06	0.21
0145 GA403592	2.81	5.30	X	12.2	0.1	X	35	1.76	2.52	0.31
0146 GA403593	2.86	5.40	X	11.5	0.1	X	37	1.71	2.44	0.27
0147 GA403594	2.42	4.57	X	19.5	X	X	29	1.34	1.92	0.17
0148 GA403595	2.46	4.65	X	30.6	0.4	0.6	236	1.37	1.96	0.23
0149 GA403596	3.88	7.33	X	11.9	0.2	0.2	693	1.46	2.09	0.30
0150 GA403597	1.18	2.22	X	6.6	0.7	1.0	46	1.00	1.44	0.11
0151 GA403598	3.14	5.93	X	8.3	X	X	76	1.62	2.31	0.38
0152 GA403599	4.40	8.32	X	8.1	0.1	X	53	1.50	2.14	0.37
0153 GA403600	4.00	7.56	X	11.0	0.3	0.5	37	1.42	2.02	0.26
0154 GA403601	3.41	6.44	X	12.7	0.1	X	32	1.41	2.01	0.22
0155 GA403602	2.79	5.27	56	5.6	X	X	42	1.09	1.55	0.21
0156 GA403603	1.64	3.11	X	6.7	0.1	X	69	1.22	1.75	0.14
0157 GA403604	2.44	4.62	X	7.0	0.2	0.3	68	1.33	1.90	0.26
0158 GA403605	3.63	6.85	51	18.8	0.2	0.3	40	1.69	2.42	0.36
0159 GA403606	5.65	10.67	X	8.3	0.2	0.3	316	2.03	2.90	0.52
0160 GA403607	4.78	9.04	X	10.2	0.2	0.2	37	2.17	3.10	0.59



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0121 GA403568	0.53	233	300	9	X	X	40.3	86.2	X	0.15
0122 GA403569	0.78	341	441	14	X	0.5	38.2	81.7	0.01	0.17
0123 GA403570	0.37	154	199	15	X	X	43.2	92.3	0.01	0.15
0124 GA403571	15.09	1324	1710	13	X	0.8	26.7	57.1	X	0.20
0125 GA403572	2.57	955	1233	30	X	X	38.3	82.0	X	0.39
0126 GA403573	0.50	141	182	10	X	X	41.5	88.9	0.01	0.15
0127 GA403574	0.67	231	298	11	X	X	40.6	86.9	0.04	0.20
0128 GA403575	0.73	250	322	10	X	X	39.5	84.5	0.03	0.14
0129 GA403576	0.29	120	155	11	X	X	44.4	95.1	0.01	0.15
0130 GA403577	0.29	145	187	11	X	X	42.6	91.1	0.02	0.14
0131 GA403578	0.60	210	271	14	X	X	40.8	87.4	0.02	0.25
0132 GA403579	0.99	333	430	6	X	X	39.1	83.6	0.01	0.26
0133 GA403580	0.81	368	475	40	X	X	38.9	83.3	0.03	0.25
0134 GA403581	0.42	1359	1755	234	X	X	39.1	83.6	0.02	0.18
0135 GA403582	0.28	106	137	14	X	X	42.8	91.5	0.01	0.14
0136 GA403583	0.76	171	221	13	0.16	X	42.8	91.6	0.01	0.25
0137 GA403584	0.28	132	171	12	X	X	40.2	85.9	0.01	0.15
0138 GA403585	0.62	181	233	14	X	X	43.9	94.0	0.02	0.18
0139 GA403586	0.62	194	251	17	X	X	42.7	91.3	0.02	0.16
0140 GA403587	0.84	254	329	9	X	X	38.6	82.7	0.02	0.30
0141 GA403588	0.81	238	307	15	X	X	42.3	90.5	0.02	0.27
0142 GA403589	0.62	206	266	10	X	X	42.7	91.2	0.02	0.14
0143 GA403590	0.54	255	329	13	X	0.6	41.2	88.1	0.02	0.20
0144 GA403591	0.34	166	215	13	X	X	45.1	96.5	0.01	0.15
0145 GA403592	0.52	336	434	63	X	X	42.6	91.2	0.01	0.22
0146 GA403593	0.44	228	294	32	X	X	42.6	91.2	0.01	0.20
0147 GA403594	0.28	123	159	32	X	X	42.8	91.7	0.02	0.22
0148 GA403595	0.39	319	413	356	X	0.5	43.2	92.5	0.04	0.15
0149 GA403596	0.50	209	270	47	X	X	40.6	86.9	0.02	0.19
0150 GA403597	0.18	212	273	22	X	X	44.5	95.2	0.01	0.03
0151 GA403598	0.63	276	356	14	X	X	39.7	85.0	0.02	0.15
0152 GA403599	0.62	214	277	13	X	X	40.5	86.7	0.02	0.21
0153 GA403600	0.43	173	224	24	X	X	39.7	84.9	0.02	0.17
0154 GA403601	0.36	156	202	21	X	X	40.2	86.0	0.01	0.14
0155 GA403602	0.34	162	209	10	X	0.5	41.8	89.5	0.04	0.12
0156 GA403603	0.23	148	191	16	X	X	42.8	91.5	0.03	0.07
0157 GA403604	0.44	206	265	17	X	X	43.2	92.5	0.02	0.11
0158 GA403605	0.60	277	357	12	X	X	39.9	85.4	0.02	0.20
0159 GA403606	0.86	296	382	16	X	X	37.4	80.0	0.03	0.30
0160 GA403607	0.98	363	469	15	X	X	37.0	79.1	0.02	0.29



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0121 GA403568	0.24	80	101
0122 GA403569	0.29	169	214
0123 GA403570	0.25	126	159
0124 GA403571	0.34	462	582
0125 GA403572	0.65	793	1000
0126 GA403573	0.26	179	225
0127 GA403574	0.34	160	201
0128 GA403575	0.23	98	124
0129 GA403576	0.26	108	136
0130 GA403577	0.24	163	206
0131 GA403578	0.41	199	251
0132 GA403579	0.43	94	118
0133 GA403580	0.42	2171	2737
0134 GA403581	0.31	1.87%	2.36%
0135 GA403582	0.24	377	475
0136 GA403583	0.42	101	127
0137 GA403584	0.26	260	328
0138 GA403585	0.30	138	174
0139 GA403586	0.26	171	216
0140 GA403587	0.50	124	156
0141 GA403588	0.45	157	197
0142 GA403589	0.24	113	143
0143 GA403590	0.33	710	896
0144 GA403591	0.25	274	346
0145 GA403592	0.36	2816	3552
0146 GA403593	0.34	637	803
0147 GA403594	0.36	179	226
0148 GA403595	0.24	4940	6229
0149 GA403596	0.32	531	670
0150 GA403597	0.04	216	272
0151 GA403598	0.25	107	135
0152 GA403599	0.35	147	185
0153 GA403600	0.29	150	190
0154 GA403601	0.23	111	140
0155 GA403602	0.20	122	154
0156 GA403603	0.12	153	192
0157 GA403604	0.18	84	106
0158 GA403605	0.33	149	188
0159 GA403606	0.49	84	106
0160 GA403607	0.48	88	111



ELEMENTS	Al	Al2O3	As	Bi	Ca	CaO	Cu	Fe	Fe2O3	Mg
UNITS	%	%	ppm	ppm	%	%	ppm	%	%	%
DETECTION LIMIT	0.01	0.02	50	0.1	0.1	0.2	20	0.01	0.02	0.01
DIGEST	FP1/		FP1/	FP1/	FP1/		FP1/	FP1/		FP1/
ANALYTICAL FINISH	OE	/CALC	OE	MS	OE	/CALC	OE	OE	/CALC	OE
SAMPLE NUMBERS										
0161 GA403608	6.06	11.45	X	8.0	0.2	0.2	28	2.28	3.26	0.71
0162 GA403609	4.41	8.34	56	7.6	0.1	X	39	2.15	3.07	0.55
0163 GA403610	4.61	8.72	X	17.3	0.2	0.2	86	2.31	3.31	0.57
0164 GA403611	4.29	8.10	X	8.6	0.1	X	42	1.84	2.63	0.53
0165 GA403612	5.56	10.50	X	10.7	0.5	0.7	104	2.11	3.01	0.76
0166 GA403613	3.49	6.59	X	31.1	8.9	12.4	X	4.75	6.79	7.77
0167 GA403614	2.55	4.83	X	35.4	0.2	0.2	58	2.04	2.91	0.23
0168 GA403615	5.29	9.99	X	7.6	0.2	0.3	58	1.96	2.80	0.66
0169 GA403616	3.38	6.38	X	4.7	0.1	X	24	1.69	2.41	0.48
0170 GA403617	2.56	4.83	X	7.0	X	X	54	1.64	2.35	0.37
0171 GA403618	1.67	3.16	X	7.1	0.2	0.2	34	1.42	2.02	0.29
0172 GA403619	1.94	3.67	X	8.0	X	X	33	1.39	1.99	0.24
0173 GA403620	1.91	3.61	X	8.1	X	X	36	1.63	2.33	0.27
0174 GA403621	1.88	3.55	X	2.9	X	X	35	1.33	1.91	0.34
0175 GA403622	2.70	5.11	X	4.0	X	X	45	1.50	2.14	0.42

CHECKS										
0001 GA400955	5.95	11.24	X	23.5	X	X	918	5.72	8.18	0.76
0002 GA400990	6.17	11.66	X	19.7	0.3	0.4	606	6.52	9.33	2.66
0003 GA403519	6.73	12.71	X	14.3	0.3	0.5	249	7.91	11.31	3.06
0004 GA403541	5.12	9.68	X	3.5	0.1	0.2	297	1.62	2.32	0.87
0005 GA403605	3.54	6.70	X	18.5	0.2	0.3	32	1.71	2.44	0.37

STANDARDS										
0001 AMISO401	3.61	6.82	X	290.5	11.1	15.5	1664	19.36	27.68	2.12
0002 OREAS 522	3.94	7.44	530	9.5	3.9	5.5	9272	24.45	34.96	1.16
0003 OREAS 523	3.07	5.81	722	14.3	3.7	5.1	1.73%	28.89	41.30	1.08
0004 GW-01	4.53	8.56	X	2.2	8.7	12.1	238	3.76	5.37	5.41
0005 OREAS 24b	8.11	15.32	X	0.9	1.2	1.6	34	4.54	6.49	1.65
0006 OREAS 700	5.45	10.31	X	7.0	5.6	7.9	2473	15.99	22.86	0.99

BLANKS										
0001 Control Blank	X	X	X	0.1	X	X	X	0.02	0.02	X
0002 Control Blank	X	X	X	X	X	X	X	0.05	0.07	X
0003 Control Blank	X	X	X	X	X	X	X	0.02	0.03	X
0004 Control Blank	X	X	X	X	X	X	X	0.03	0.05	X
0005 Control Blank	X	X	X	X	X	X	X	0.09	0.12	X
0006 Control Blank	X	X	65	0.5	X	X	X	0.05	0.07	X
0007 Control Blank	X	X	64	0.2	X	X	X	0.05	0.07	X

MISSING SAMPLES: GA400968



ELEMENTS	MgO	Mn	MnO	Mo	S	Sb	Si	SiO2	Sn	Ti
UNITS	%	ppm	ppm	ppm	%	ppm	%	%	%	%
DETECTION LIMIT	0.02	20	40	1	0.05	0.5	0.1	0.3	0.01	0.01
DIGEST		FP1/		FP1/	FP1/	FP1/	FP1/		FP1/	FP1/
ANALYTICAL FINISH	/CALC	OE	/CALC	MS	OE	MS	OE	/CALC	MS	OE
SAMPLE NUMBERS										
0161 GA403608	1.17	390	504	15	X	X	35.4	75.7	0.02	0.33
0162 GA403609	0.91	330	427	9	0.06	0.6	38.4	82.1	0.02	0.22
0163 GA403610	0.95	307	396	10	X	X	38.2	81.7	0.01	0.24
0164 GA403611	0.88	310	400	7	X	X	38.9	83.2	0.01	0.27
0165 GA403612	1.27	389	503	10	X	X	36.2	77.4	0.02	0.27
0166 GA403613	12.88	1120	1447	6	X	X	22.7	48.6	X	0.13
0167 GA403614	0.38	163	211	16	X	X	40.7	87.0	0.02	0.14
0168 GA403615	1.09	356	460	7	X	X	35.4	75.7	0.01	0.28
0169 GA403616	0.79	280	361	11	X	X	38.1	81.5	0.01	0.19
0170 GA403617	0.62	252	325	8	X	X	39.1	83.7	0.01	0.18
0171 GA403618	0.47	275	355	8	X	X	41.3	88.3	0.01	0.08
0172 GA403619	0.40	172	222	12	X	X	42.5	90.9	0.01	0.11
0173 GA403620	0.45	226	292	16	X	X	42.5	90.9	0.01	0.11
0174 GA403621	0.56	234	303	9	X	X	42.2	90.4	X	0.12
0175 GA403622	0.69	243	313	9	X	X	40.2	86.1	0.01	0.17

CHECKS										
0001 GA400955	1.26	1032	1332	8	X	X	34.0	72.8	0.02	0.30
0002 GA400990	4.41	1458	1883	8	X	X	30.9	66.1	0.02	0.65
0003 GA403519	5.07	1738	2244	22	X	X	29.3	62.6	X	0.85
0004 GA403541	1.45	498	643	16	X	X	34.7	74.3	X	0.15
0005 GA403605	0.61	278	358	13	X	X	40.2	86.1	0.02	0.19

STANDARDS										
0001 AMISO401	3.52	3.03%	3.92%	8	9.00	1.2	14.4	30.9	X	0.25
0002 OREAS 522	1.92	4150	5358	207	3.06	8.2	15.5	33.2	X	0.39
0003 OREAS 523	1.78	5031	6496	321	4.67	10.8	13.3	28.4	X	0.31
0004 GW-01	8.97	842	1087	6	0.21	1.1	25.8	55.3	X	0.09
0005 OREAS 24b	2.73	475	613	8	0.20	1.1	31.3	67.0	X	0.50
0006 OREAS 700	1.64	3169	4091	84	0.35	0.7	21.9	46.8	0.02	0.19

BLANKS										
0001 Control Blank	X	X	X	1	X	X	X	X	X	X
0002 Control Blank	X	X	X	2	X	X	X	X	X	X
0003 Control Blank	X	X	X	X	X	X	X	X	X	X
0004 Control Blank	X	X	X	8	X	X	X	X	X	X
0005 Control Blank	X	27	X	X	X	X	X	X	X	X
0006 Control Blank	X	26	X	8	X	X	X	X	0.04	X
0007 Control Blank	X	25	X	8	X	X	X	X	0.04	X

MISSING SAMPLES: GA400968



ELEMENTS	TiO2	W	WO3
UNITS	%	ppm	ppm
DETECTION LIMIT	0.02	1	2
DIGEST		FP1/	
ANALYTICAL FINISH	/CALC	MS	/CALC
SAMPLE NUMBERS			
0161 GA403608	0.55	91	115
0162 GA403609	0.37	79	100
0163 GA403610	0.40	190	239
0164 GA403611	0.45	109	137
0165 GA403612	0.46	111	140
0166 GA403613	0.22	9369	1.18%
0167 GA403614	0.24	249	314
0168 GA403615	0.48	117	148
0169 GA403616	0.32	90	114
0170 GA403617	0.30	99	125
0171 GA403618	0.13	85	107
0172 GA403619	0.18	82	103
0173 GA403620	0.18	323	408
0174 GA403621	0.20	71	89
0175 GA403622	0.29	73	92

CHECKS

0001 GA400955	0.51	317	400
0002 GA400990	1.08	183	231
0003 GA403519	1.41	94	118
0004 GA403541	0.24	65	82
0005 GA403605	0.32	119	150

STANDARDS

0001 AMISO401	0.41	758	956
0002 OREAS 522	0.65	169	213
0003 OREAS 523	0.52	191	240
0004 GW-01	0.16	2958	3730
0005 OREAS 24b	0.84	82	103
0006 OREAS 700	0.31	1.11%	1.39%

BLANKS

0001 Control Blank	X	24	30
0002 Control Blank	X	36	45
0003 Control Blank	X	19	24
0004 Control Blank	X	13	17
0005 Control Blank	X	33	42
0006 Control Blank	X	49	62
0007 Control Blank	X	54	68

MISSING SAMPLES: GA400968



METHOD CODE DESCRIPTION

Method Code	Analysing Laboratory NATA Laboratory Accreditation	NATA Scope of Accreditation
/CALC	Intertek Genalysis Perth 3244 3237	No digestion or other pre-treatment undertaken. Results Determined by calculation from other reported data.
FP1/MS	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, MS : ICP_W003 Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Mass Spectrometry.
FP1/OE	Intertek Genalysis Perth 3244 3237	FP1/ : MPL_W011, OE : ICP_W004 Sodium peroxide fusion (Zirconia crucibles) and Hydrochloric acid to dissolve the melt. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.