APPENDIX 1

Drill Hole Locations

WATERANGA DRILL HOLE LOCATION			AMC Accordance					
Hole	East	North	Hole	East	North	Hole	East	North
111	383200	7197900	137	383400	7198100	236	383600	7199400
112	383100	7197900	138	383400	7197900	237	383400	7199400
113	383200	7197700	139	383600	7197900	238	383250	7199280
114	383100	7197700	140	383800	7197900	239	384000	7199400
115	383400	7197700	141	384000	7197900	240	384200	7199400
116	383600	7197700	151	384200	7198100	241	384200	7199200
117	383800	7197700	152	383800	7198100	291	382700	7197975
118	384000	7197700	153	383600	7198100	294	383100	7198150
119	384200	7197700	229	384200	7198300	295	383100	7198300
135	382600	7197700	230	384000	7198300			
136	383200	7198100	235	383800	7199400			

Assay Results (Heavy Media)

Queensland Industrial Minerals

Batch 5 **1/04/2003**

Sample ID	Depth	2.85sg Float	2.85sg Sink	Total wt	% HM
111	1.0-2.0	360.94	86.07	447.01	19.25
111	2.0-3.0	392.34	79.25	471.59	16.80
111	3.0-4.0	331.00	143.89	474.89	30.30
111	5.0-6.0	329.94	100.09	430.03	23.28
113	6.0-7.0	376.19	113.47	489.66	23.17
114	3.0-4.0	415.14	59.25	474.39	12.49
118	0.0-1.0	370.64	116.71	487.35	23.95
118	1.0-2.0	356.23	65.65	421.88	15.56
118	2.0-3.0	459.45	29.61	489.06	6.05
239	0.0-1.0	367.22	112.20	479.42	23.40
239	1.0-2.0	346.15	101.95	448.1	22.75
239	2.0-3.0	321.95	86.54	408.49	21.19
239	3.0-4.0	335.28	95.35	430.63	22.14
239	4.0-5.0	319.80	129.19	448.99	28.77
239	5.0-6.0	343.78	94.75	438.53	21.61
240	0.0-1.0	370.79	54.53	425.32	12.82
240	1.0-2.0	365.29	88.94	454.23	19.58
240	2.0-3.0	353.20	79.78	432.98	18.43
240	3.0-4.0	366.97	42.69	409.66	10.42
240	4.0-5.0	440.48	56.30	496.78	11.33
240	5.0-6.0	414.52	74.26	488.78	15.19
241	0.0-1.0	422.18	63.77	485.95	13.12
241	1.0-2.0	375.89	43.47	419.36	10.37
241	2.0-3.0	425.45	31.66	457.11	6.93
241	3.0-4.0	398.12	60.90	459.02	13.27

Batch 6 **15/04/2003**

Sample ID	Depth Mtr	2.85sg Float	2.85sg Sink	Total wt	% HM
116	2.0-3.0	341.57	130.48	472.05	27.64
235	0.0-1.0	391.15	74.53	465.68	16.00
235	1.0-2.0	234.91	42.9	277.81	15.44
235	2.0-3.0	427.56	34.04	461.6	7.37
235	3.0-4.0	377.07	29.88	406.95	7.34
236	0.0-1.0	350.21	64.78	414.99	15.61
236	1.0-2.0	288.3	134	422.3	31.73
236	2.0-3.0	383.61	102.57	486.18	21.10
236	3.0-4.0	311.33	170.33	481.66	35.36
236	4.0-5.0	349.01	107.6	456.61	23.56
236	5.0-6.0	363.52	39.54	403.06	9.81

Queensland Industrial Minerals

Batch 7 **16/04/2003**

Sample ID	Depth	2.85sg Float	2.85sg Sink	Total wt	% HM
116	0.0-1.0	345.78	153.4	499.18	30.73
116	1.0-2.0	278.23	129.2	407.43	31.71
116	3.0-4.0	291.99	115.04	407.03	28.26
229	2.0-3.0	388.88	66.11	454.99	14.53
230	4.0-5.0	378.11	100.73	478.84	21.04
230	5.0-6.0	393.1	93.15	486.25	19.16

Queensland Industrial Minerals

Batch 8 **6/05/2003**

Sample ID	Depth	2.85sg Float	2.85sg Sink	Total wt	% HM
113	0.0-1.0	358.7	75.78	434.48	17.44
113	1.0-2.0	308.8	171.56	480.36	35.71
113	2.0-3.0	315.38	98.54	413.92	23.81
113	3.0-4.0	419.42	62.06	481.48	12.89
113	4.0-5.0	372.8	74.17	446.97	16.59
113	5.0-6.0	386.43	63.29	449.72	14.07
229	0.0-1.0	421.94	36.18	458.12	7.90
230	0.0-1.0	435.33	38.79	474.12	8.18
230	1.0-2.0	370.18	44.31	414.49	10.69
230	2.0-3.0	395.46	79.25	474.71	16.69
230	3.0-4.0	406.26	60.73	466.99	13.00
235	5.0-6.0	367.9	46.92	414.82	11.31

Queensland Industrial Minerals

Batch 10 **13/06/2003**

Sample ID	Depth	2.85sg Float	2.85sg Sink	Total wt	% HM
151	0.0-1.0	406.54	32.19	438.73	7.34
151	1.0-2.0	410.68	39.42	450.1	8.76
151	2.0-3.0	359.94	59.8	419.74	14.25
151	3.0-4.0	422.09	82.18	504.27	16.30
152	0.0-1.0	411.61	69.1	480.71	14.37
153	2.0-3.0	341.19	109.77	450.96	24.34

E70 QIM

Modal Mineralogy

		114_0_11	128_0_12	147_4_12	148_3_8	159_0_6	160_0_6	163_1_9	164_0_6	168_0_5.5	209_0_9	214_0_6	215_1_5	217_0_6	221_0_5	248_2_5.5	251_0_6	283_0_6
ID	Mineral	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%
1	Ilmenite_Mg	1.82	2.35	0.79	1.19	3.25	2.71	2.91	1.31	1.40	1.26	0.99	0.61	1.21	3.51	3.09	0.32	0.60
2	Ilmenite	4.01	4.04	2.40	2.24	5.59	5.26	7.17	2.58	2.13	3.21	2.49	1.19	3.22	5.05	5.71	0.76	1.41
3	Ti_Magnetite	0.88	0.59	0.00	6.35	0.84	0.36	0.15	0.62	0.26	0.59	0.80	0.14	1.11	0.14	0.17	0.02	0.93
4	Xenotime	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Rutile	0.00	0.02	0.00	0.10	0.00	0.00	0.13	0.00	0.16	0.46	0.02	0.00	0.00	0.04	0.05	0.06	0.10
6	Titanite	0.56	0.37	2.99	0.62	0.34	0.02	0.76	0.12	0.70	0.23	0.57	0.39	0.18	0.29	0.73	0.77	0.16
7	Zircon	0.00	0.00	0.04	0.00	0.02	0.00	0.07	0.02	0.06	0.03	0.12	0.00	0.00	0.00	0.00	0.02	0.03
8	Calcite	0.57	1.63	5.25	0.97	2.63	0.02	0.71	0.00	0.41	0.73	0.60	1.59	1.44	2.26	5.79	0.63	0.47
9	Apatite	0.03	0.01	1.04	0.09	0.31	0.21	0.42	1.11	0.12	0.06	0.30	0.07	0.55	0.13	0.12	0.06	0.17
10	Corundum	0.00	0.02	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.07	0.00	0.00	0.02	0.02
11	Augite	4.95	4.28	5.02	0.42	2.69	6.77	2.45	5.78	1.52	0.97	11.58	8.70	6.23	0.96	6.72	0.41	0.25
12	Hypersthene	4.23	2.28	12.97	0.33	11.47	16.12	4.01	20.86	1.77	1.69	6.63	4.35	7.35	3.72	6.90	0.41	1.32
13	Hornblende	5.81	4.53	3.65	3.55	7.07	6.25	4.81	6.43	4.72	2.40	5.77	14.91	10.15	6.58	5.29	1.67	3.78
14	Muscovite	0.41	1.38	1.57	9.22	0.43	0.17	5.21	0.28	7.13	6.61	0.78	0.49	0.70	0.63	0.13	12.82	4.76
15	Biotite	0.45	0.39	1.38	0.99	0.37	0.11	2.69	0.15	2.70	5.67	0.52	0.20	0.11	0.25	0.04	1.86	1.58
16	Phlogopite	24.66	22.10	9.85	10.98	14.40	8.61	11.83	13.15	7.92	9.29	20.46	21.22	10.35	24.58	5.53	18.38	10.13
17	Feldspar_1	48.30	47.20	40.89	26.12	48.16	52.80	24.11	46.13	15.18	29.26	41.80	42.19	53.93	43.30	55.93	3.81	12.36
18	Feldspar_2	1.64	5.04	6.27	20.72	1.16	0.50	9.95	1.31	17.45	17.11	5.40	3.01	2.57	6.52	2.21	26.23	22.02
19	Quartz	1.66	3.76	5.86	16.09	1.17	0.11	22.61	0.16	36.37	20.44	1.17	0.83	0.81	2.03	1.57	31.74	39.92
Total		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

F09 QIM														
Modal Mineralogy														
	130 0-3	**145 0-3**	**167 0-8**	**183 2-5**	**186 0-9**	**188 0-6**	**208 0-9**	**213 3-10.5**	**249 0-3**	**265 0-6**	**280 0-3**	**281 0-3**	**285 0-6**	**286 0-3**
Mineral	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%
Apatite	0.34%	0.14%	0.25%	0.12%	1.10%	0.02%	0.21%	0.44%	0.78%	3.90%	0.11%	0.04%	1.00%	0.24%
Augite	11.70%	1.20%	1.50%	0.72%	2.20%	5.60%	0.09%	7.70%	3.00%	3%	2.30%	0.08%	0.27%	0.18%
Biotite	0.05%	0.42%	0.58%	2.90%	0.31%	0.40%	9.50%	0.22%	0.16%	0.17%	0.31%	10.10%	1.20%	9.20%
Calcite	0%	0.69%	0.21%	0.07%	0.53%	1.60%	0.30%	1.20%	0.05%	0.10%	0.08%	0%	0.66%	0%
Corundum	0.08%	0.02%	0.13%	0.04%	0.10%	0.21%	0.46%	0.40%	0.78%	0.22%	0.60%	0.03%	0.87%	0.15%
Dolomite	0.01%	0.09%	0.26%	21.00%	0.14%	0.52%	0.32%	0.05%	0.03%	0%	0%	0.53%	0.19%	0.21%
Feldspar_1	51.10%	28.50%	34.80%	7.60%	39.50%	41.00%	5.40%	40.90%	28.70%	30.70%	36.80%	6.10%	28.30%	2.50%
Feldspar_2	1.30%	14.20%	4.60%	26.80%	6.90%	3.20%	21.70%	4.50%	11%	4.40%	12.20%	17.80%	15.70%	26.80%
Horneblende/an	2.10%	23%	3.20%	2%	6.20%	3.30%	0.14%	10.20%	6.80%	4.10%	16.20%	0.73%	6.60%	0.31%
Hypersthene	15.60%	0.26%	6.60%	0.24%	9.20%	7.10%	0.35%	8.70%	11.80%	12.20%	1.90%	0.06%	6.40%	0.30%
Ilmenite	4.80%	1.70%	9.10%	0.57%	8.10%	9.30%	0.77%	5.50%	5.10%	6.40%	2%	0.33%	3.80%	0.33%
Ilmenite_Mg	1.40%	0.63%	3.20%	0.33%	3.40%	3.30%	0.15%	1.40%	1.80%	1.60%	0.86%	0.03%	1.80%	0.17%
Muscovite	0.31%	6.90%	3.30%	7.80%	2%	0.96%	11.90%	0.68%	0.85%	0.34%	2.60%	18.00%	1.40%	15.50%
Phlogopite	9.90%	5.20%	5.80%	20.10%	9.20%	7.80%	4.60%	13.50%	25.60%	26.60%	14.90%	1.30%	23.10%	3.80%
Quartz	0.84%	10.20%	26.10%	9.20%	10.20%	14.70%	44.10%	1.40%	0.28%	0.11%	8.40%	44.30%	6.80%	40.10%
Rutile	0%	0.32%	0.14%	0.04%	0.05%	0.03%	0.03%	0%	0%	0%	0.03%	0.03%	0.14%	0.04%
Ti_Magnetite	0.22%	5.60%	0.20%	0.09%	0.37%	0.12%	0%	2.80%	3.00%	6.00%	0.21%	0.48%	1.00%	0.10%
Titanite	0.31%	1.00%	0.20%	0.41%	0.44%	0.80%	0.11%	0.51%	0.18%	0.18%	0.31%	0%	0.45%	0.03%
Xenotime	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Zircon	0%	0.01%	0%	0%	0.06%	0%	0.03%	0%	0%	0.03%	0%	0.03%	0.27%	0.09%
Total	100.10%	100.10%	100.20%	100.00%	100%	100%	100.20%	100.10%	99.90%	100.00%	99.80%	100%	99.90%	100.00%

F27 QIM														
Modal Mineralogy														
	195 0-6	**196 0-4**	**210 3-7**	**211 0-2**	**225 0-2**	**234 0-6**	**243 0-2**	**249 0-3**	**250 0-10**	**253 0-6**	**288 0-2**	**289 0-3**	**290 0-2**	**293 0-6**
Mineral														
Apatite	1.80%	0.11%	0.31%	0.22%	0.05%	0.37%	0%	1.20%	0.14%	2.30%	0%	0.15%	0.60%	0.04%
Augite	3.80%	6.70%	0.61%	0.30%	2.10%	7.90%	8.90%	4.00%	2.90%	0.15%	16.20%	11%	16.10%	1.70%
Biotite	0.11%	0.13%	2.60%	3.90%	0.61%	0.22%	0.13%	0.27%	0.11%	0.23%	0.06%	0.14%	0.21%	1.80%
Calcite	0.24%	1.70%	0.04%	0.09%	0%	0.11%	2.30%	0.02%	1.40%	0.09%	0.92%	0.23%	0.02%	1.50%
Corundum	0.66%	0.17%	0.73%	0.35%	0.55%	0.28%	1.80%	0.48%	0.75%	0%	0.16%	0.25%	0.27%	0.24%
Dolomite	0%	1.10%	0%	0.22%	0%	0.08%	0.11%	0.03%	0.48%	0.82%	0.07%	0.29%	0.03%	0.25%
Feldspar	44.40%	44.50%	37.70%	30.20%	32.40%	36.70%	51.60%	38.90%	47.40%	42.40%	38.40%	48.70%	38.10%	48.80%
Horneblende	3.60%	4.50%	2%	1.70%	3.70%	27%	5.40%	6.80%	11.70%	9.10%	11.40%	4.70%	4.90%	2.40%
Hypersthene	19.40%	13.20%	3%	2.00%	3.50%	2.30%	3.50%	12.80%	7.40%	10.70%	5.90%	8.80%	6.30%	0.69%
Ilmenite	8.50%	1.77%	3.96%	1.33%	5.50%	2.04%	3.50%	5.80%	8.10%	5.66%	3.34%	4.80%	10.30%	1.70%
Muscovite	0.97%	1.70%	4.10%	10.50%	8%	3.10%	2.90%	0.56%	0.42%	3.80%	0.29%	0.38%	0.38%	8.50%
Phlogopite	14.80%	15.20%	30.10%	11.80%	25.80%	16.70%	17.80%	26%	16.80%	19.60%	21.90%	18.00%	19.20%	15.50%
Quartz	0.93%	8.50%	13.90%	35.00%	16.60%	1.90%	0.36%	0.23%	1.10%	3.80%	0.67%	1.90%	1.90%	15.40%
Rutile	0%	0%	0.03%	0.07%	0.02%	0.04%	0%	0%	0%	0%	0%	0%	0.02%	0.08%
Ti_Magnetite	0.48%	0.19%	0.60%	1.90%	0.38%	0.84%	1.30%	2.80%	0.88%	0.96%	0.27%	0.43%	1.40%	0.27%
Titanite	0.20%	0.75%	0.17%	0.08%	0.89%	0.42%	0.33%	0.31%	0.45%	0.36%	0.41%	0.43%	0.35%	1.10%
Zircon	0.02%	0.03%	0.23%	0.16%	0.03%	0%	0%	0%	0.06%	0%	0%	0%	0%	0%

E58 QIM												
Modal Mineralogy												
Mineral	**32 0-4**	**45 0-3**	**94 0-9**	**99 0-9**	**112 0-3**	**146 0-11**	**152 0-3**	**155/+1**	**164 0-6**	**172 0-9**	**177 0-3**	**245 0-4**
Ilmenite_Mg	2.68	1.55	1.98	1.18	1.68	1.63	0.67	1.81	3.49	3.07	0.92	2.19
Ilmenite	4.57	2.41	3.59	1.66	2.67	1.95	0.81	2.22	4.61	7.71	1.05	1.60
Ti_Magnetite	0.23	0.47	0.21	1.31	1.49	0.10	0.11	0.34	0.35	0.18	0.00	0.17
Xenotime	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rutile	0.08	0.00	0.03	0.00	0.02	0.03	0.00	0.00	0.00	0.01	0.02	0.00
Titanite	0.21	0.54	0.22	0.03	0.06	0.59	0.03	0.29	0.15	0.06	0.20	0.13
Zircon	0.04	0.00	0.14	0.05	0.00	0.09	0.00	0.27	0.02	0.05	0.00	0.00
Calcite	1.36	2.52	0.62	0.29	0.68	0.61	0.47	0.00	0.03	0.43	0.72	1.03
Apatite	0.17	0.00	0.75	0.13	0.08	0.11	0.00	1.45	1.66	0.71	0.03	0.00
Corundum	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.04	0.00	0.00	0.00	0.00
Augite	12.49	13.35	1.30	2.48	4.16	1.36	9.30	1.93	3.24	3.25	15.85	13.72
Hypersthene	7.40	2.90	9.68	11.81	16.13	1.53	9.75	16.76	14.03	16.20	6.56	2.25
Hornblende	7.72	12.09	4.58	5.80	3.61	1.53	8.90	5.99	5.63	6.05	11.52	8.13
Muscovite	0.30	0.55	2.32	4.15	0.63	5.27	0.34	1.80	0.46	0.31	0.34	0.23
Biotite	0.99	1.15	6.27	2.03	0.47	4.38	0.49	1.50	0.58	0.85	0.49	0.24
Phlogopite	15.38	17.51	9.57	8.61	8.28	18.20	14.41	13.33	11.70	10.80	15.96	10.38
Feldspar_1	38.90	38.74	39.35	28.52	56.45	30.92	53.39	31.48	51.62	47.92	43.29	54.85
Feldspar_2	1.94	4.79	5.64	7.77	1.05	16.30	1.04	18.27	1.95	1.42	2.20	4.07
Quartz	5.53	1.44	13.75	24.19	2.55	15.37	0.29	2.51	0.49	0.97	0.85	1.02
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

F15 QIM

Modal Mineralogy

	126 0-12	131 0-6	132 0-9	143 0-6	149 0-3	161 0-7	162 0-9	173 0-4	180 0-4	181 0-9	184 0-12	
Mineral	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	
Apatite	0.03%	0%	0.02%	0.28%	0.02%	0.89%	0.69%	0.04%	1.90%	0.26%	0.08%	
Augite	1.00%	0.20%	1.10%	0.80%	1.70%	10.80%	2.10%	1.20%	1.90%	5.10%	1.70%	
Biotite	1.80%	0.97%	0.96%	0.25%	0.26%	0.06%	3.20%	4.80%	0.72%	2.50%	1.70%	
Calcite	0.92%	1.20%	2%	1.00%	0.68%	0.01%	0.21%	0.37%	0.08%	1.60%	1.70%	
Corundum	0.23%	0.40%	0.13%	0.09%	0.43%	0.18%	0.05%	0.19%	0.12%	0.09%	0.26%	
Dolomite	4.80%	1.60%	0.97%	1.50%	0.12%	0.01%	0.46%	2.20%	0.34%	20.20%	6.40%	
Feldspar	33.10%	36.40%	37.80%	44.80%	46.80%	32.60%	32.20%	28.80%	41.30%	23.80%	38.10%	
Horneblende	3.70%	1.10%	1.90%	4.80%	4.10%	9.70%	8.10%	7.70%	3.90%	10.00%	7.20%	
Hypersthene	0.16%	0.06%	0.37%	8.20%	7.80%	21.80%	9%	0.62%	13.20%	1.60%	1.80%	
Ilmenite	0.53%	1.30%	1.40%	4.80%	2.40%	8%	2.50%	1.70%	4.30%	1.50%	2.70%	
Ilmenite_Mg	0.38%	0.52%	0.64%	1.50%	1.20%	2.40%	0.75%	0.89%	1.60%	0.67%	1.20%	
Muscovite	10.30%	12.30%	8.70%	1.00%	1.80%	0.17%	10%	10.70%	1.40%	4.30%	4.50%	5.92%
Phlogopite	19.30%	15.20%	20.40%	26.20%	30.00%	10.80%	13.00%	11.60%	20.70%	12.50%	22.20%	
Quartz	22.80%	28.10%	22.30%	3.90%	2%	1.90%	17.10%	28.40%	6.90%	13.90%	9.60%	
Rutile	0.04%	0.11%	0.06%	0.01%	0.02%	0%	0.11%	0.08%	0.10%	0.07%	0.02%	
Ti_Magnetite	0.16%	0.08%	0.29%	0.15%	0.67%	0.71%	0.31%	0.39%	1.00%	0.49%	0.07%	
Titanite	0.84%	0.34%	0.87%	0.62%	0.16%	0.09%	0.18%	0.32%	0.36%	1.40%	0.85%	
Xenotime	0%	0.02%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Zircon	0.02%	0.02%	0.03%	0.04%	0%	0.06%	0.03%	0%	0.15%	0.04%	0.02%	

QIM X-Mod results 17/07/03

Modal Mineralogy (mass %)

Mineral	86 0-15	150 0-4	155 0-16	170 0-6	190 0-3
Ilmenite	29.44	5.42	8.75	7.36	3.32
Ti_Magnetite	1.72	0.37	0.27	0.25	0.04
Rutile	0	0.04	0	0	0
Titanite	0.08	0.5	0.26	0.36	0.37
Zircon	0.04	0	0.1	0.13	0
Calcite	0.49	4.4	0	0	0.04
Apatite	1.3	0	1.79	1.76	0.1
Pyroxene	24.06	6.81	19.23	19.06	7.97
Amphibole	25.7	1.67	4.5	4.99	4.93
Muscovite	0.48	0.56	1.51	1.68	1.35
Biotite	12.9	5.95	23.4	24.04	11.98
Feldspar	3.32	73.23	38.26	35.09	69.62
Quartz	0.48	1.05	1.91	5.27	0.28

Comparison of MLA calculated assay with chemical assay

	86 0-15		150 0-4		155 0-16		170 0-6		190 0-3	
Element	**MLA**	**Assay**	**MLA**	**Assay**	**MLA**	**Assay**	**MLA**	**Assay**	**MLA**	**Assay**
Al	4.04	2.8	11.62	11.44	7.76	7.1	7.51	6.34	11.85	11.1
C	0.06		0.55		0		0		0.01	
Ca	5.38	4.3	8.15	8.16	3.79	3.7	4.43	4.4	6.3	6.1
Cr	0.01		0		0		0		0	
Fe	21.62	20.5	4.66	3.73	13.36	12.39	12.53	12.32	5.15	4.94
H	0		0		0.01		0.01		0.01	
K	0.53	0.2	0.17	0.15	0.6	0.34	0.74	0.44	0.35	0.2
Mg	5.83	4.5	1.23	1.29	3.46	2.02	3.57	1.9	1.97	1.98
Mn	0.2	0.35	0.02	0	0.06		0.05	0.26	0.02	0.08
Na	0.71	0.62	3.27	2.1	2.41	1.9	1.99	1.56	3.47	2.2
O	34.69		44.86		41.4		41.98		44.08	
P	0.27	0.18	0	0.01	0.37	0.5	0.37	0.69	0.02	0
Si	16.21	14.6	23.29	22.88	22.99	21.7	23.42	22.9	25.14	23.77
Ti	10.43	9.36	2.17	1.46	3.74	3.11	3.33	2.3	1.65	1.16
Zr	0.02	0.04	0	0	0.05	0.13	0.07	0.09	0	0

Sample		SiO_2	Fe_2O_3	Al_2O_3	CaO	K_2O	MgO	Na_2O	P_2O_5	SO_3	TiO_2	MnO	BaO	SrO	ZrO_2	V_2O_5	LOI_{1000}	Sc
UNITS		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm
C/0156	43 0-2	83.1	3.33	7.8	0.26	0.97	0.29	0.76	0.024	0.02	0.49	0.02	0.03	-0.01	0.01	0.011	2.51	7
C/0157	133 0-3	49.1	11.8	16.9	9.07	0.15	5.46	2.81	0.131	-0.01	3.86	0.23	0.05	0.04	-0.01	0.048	0.6	37
C/0158	167 0-8	57.3	11.7	13	4.63	0.53	1.7	2.8	0.116	-0.01	7.61	0.3	0.12	0.03	0.05	0.056	0.46	15
C/0159	169 0-5.5	80.9	3.3	8.6	0.72	1.73	0.85	1.73	0.067	0.02	0.82	0.08	0.05	0.01	0.03	0.012	1.25	8
C/0160	206 0-6	61.4	8.76	12.4	3.99	1.35	2.78	2.96	0.172	-0.01	2.04	0.27	0.09	0.03	0.04	0.028	3.07	19
C/0161	207 6-9	53.8	12.9	15.2	4.81	0.8	3.69	3.89	0.374	-0.01	2.06	0.31	0.04	0.03	0.08	0.019	1.81	28
C/0161 Rpt	207 6-9	53.6	12.9	15.2	4.83	0.8	3.71	3.9	0.379	-0.01	2.08	0.32	0.04	0.03	0.08	0.021	1.84	29
C/0162	208 0-9	73.4	4.24	11.6	1.4	2.03	1.53	2.51	0.109	0.01	0.76	0.15	0.05	0.02	0.02	0.011	1.88	11
C/0163	213 3-10.5	47.4	14.5	15.8	7.92	0.33	3.72	3.67	0.19	-0.01	4.47	0.23	0.13	0.04	0.02	0.112	1.59	37
C/0164	218 0-6	45	14	17.4	6.74	0.15	2.46	3.76	0.087	-0.01	8.13	0.24	0.13	0.04	0.02	0.071	1.22	15
C/0165	219 0-6	48.2	11.9	18.2	8.52	0.21	2.94	3.9	0.065	-0.01	1.84	0.18	0.06	0.05	-0.01	0.028	3.7	8
C/0166	220 0-4	48.3	12	17.1	7.57	0.22	3.64	3.42	0.179	0.01	5.54	0.21	0.09	0.04	0.01	0.064	1.16	28
C/0167	265 0-6	40.7	22.1	13	7.42	0.17	2.63	2.97	2	0.01	5.02	0.4	0.16	0.04	0.03	0.049	2.64	39
C/0168	280 0-3	56.6	8.42	15.8	5.98	0.54	4.18	3.83	0.086	0.01	2.13	0.2	0.1	0.03	0.04	0.036	1.7	33
C/0169	282 0-3	52.9	11	15.3	7.55	0.73	5.55	3.14	0.159	0.01	2.59	0.22	0.05	0.03	0.01	0.042	1.07	33
C/0170	285 0-6	49.6	15.6	14.3	5.46	0.51	2.42	3.81	0.569	0.01	4.13	0.29	0.17	0.03	0.3	0.041	2.12	33
SARM-1		75.7	2	12.1	0.78	4.99	0.06	3.36	0.005	0.07	0.09	0.02	0.01		0.04			
STD 1.1		75.8	2	12.1	0.79	5	0.07	3.31	0.006	0.04	0.1	0.02	-0.01	-0.01	0.03	-0.001		
ASCRM-010	Coal Ash																	46
STD 1.2																		45
C/0171	285 6-9	47.3	17.3	13.6	7.39	0.6	3.75	3.53	0.617	0.02	3.13	0.33	0.16	0.03	0.12	0.059	1.7	43
C/0171 Rpt	285 6-9	47.4	17.2	13.5	7.36	0.6	3.74	3.52	0.615	0.01	3.13	0.33	0.16	0.03	0.11	0.057	1.7	43
SARM-2		63.6	1.4	17.3	0.68	15.3	0.46	0.43	0.12	0.04	0.04	0.01	0.27	<0.01	<0.01	0.002		
STD 2.1		63.8	1.4	17.2	0.68	15.4	0.47	0.45	0.117	0.04	0.05	0.01	0.27	0.01	-0.01	0.004		
SY-4																		1
STD 2.2																		-1
BCS 381 Basic Slag		8.78	19	0.67	49	0.05	1.03	0.35	15.7	0.48	0.35	3.16	0.05		0.1	0.94		
STD 3.1		8.67	19.1	0.64	49.1	0.06	1.06	0.43	15.7	0.48	0.35	3.21	0.06	0.05	0.11	0.941		
Laterite 610-1																		54
STD 3.2																		56

Sample Preparation

The samples have been sorted and dried.

The whole sample has been pulverised in a ring pulveriser equipped with a Tungsten Carbide bowl. A barren flush has been inserted between each sample.

Analytical Methods

The samples have been cast using a 12:22 flux to form a glass bead which has been analysed by XRF.

SiO2, Al2O3, CaO, Fe2O3, K2O, MgO, Na2O, P2O5, SO3, TiO2, MnO, BaO, SrO, ZrO2
V2O5
have been determined by X-Ray Fluorescence Spectrometry

Loss on Ignition has been determined between 105 and 1000 degrees celsius.

Results are reported on a dry sample basis.

LOI 1000
has been determined Gravimetrically

Sample		SiO_2	Al_2O_3	CaO	Fe_2O_3	K_2O	MgO	Na_2O	P_2O_5	SO_3	TiO_2	MnO	BaO	SrO	V_2O_5	ZrO_2	LOI_{1000}	Li	Sc
UNITS		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm
B/9680	QIM Feldspar Head	58.8	25	9.69	0.53	0.41	0.26	4.3	0.048	0.03	0.08	-0.01	0.03	0.05	0.005	-0.01	0.72	-2	1
B/9681	QIM Feldspar A	58.9	25.3	9.75	0.39	0.39	0.2	4.33	0.035	0.03	0.07	-0.01	0.03	0.05	0.003	-0.01	0.55	-2	-0.5
B/9682	QIM Feldspar B	58.9	25.2	9.79	0.35	0.39	0.2	4.36	0.037	0.03	0.06	-0.01	0.03	0.05	0.004	-0.01	0.54	-2	-0.5
B/9683	QIM Feldspar C	59.4	25.4	9.56	0.36	0.4	0.1	4.39	0.034	0.03	0.06	-0.01	0.02	0.05	0.003	-0.01	0.22	-2	-0.5
B/9684	QIM Feldspar D	59.5	25.4	9.53	0.35	0.41	0.08	4.39	0.028	0.03	0.06	-0.01	0.03	0.05	0.003	-0.01	0.15	-2	-0.5
B/9685	QIM Feldspar E	59.1	25.3	9.77	0.25	0.39	0.15	4.37	0.035	0.03	0.06	-0.01	0.03	0.05	0.003	-0.01	0.38	-2	-0.5
SARM-2		63.6	17.3	0.68	1.4	15.3	0.46	0.43	0.12	0.04	0.04	0.01	0.27	<0.01	0.002	<0.01			
STD 1.1		63.5	17.4	0.67	1.4	15.3	0.45	0.4	0.116	0.04	0.05	0.01	0.27	0.01	0.006	-0.01			
ASCRM-010	Coal Ash																	94	46
STD 1.2																		92	45
B/9686	QIM Feldspar 31 0-3	46.3	15.4	9.15	13.1	0.15	5.37	2.39	0.257	0.04	5.51	0.28	0.07	0.04	0.063	0.02	1.85	4	33
B/9687	QIM Feldspar 32 0-4	46.5	15.2	8.54	13.3	0.14	4.8	2.3	0.112	0.03	6.06	0.37	0.09	0.04	0.063	0.02	2.46	4	31.5
B/9688	QIM Feldspar 144 0-3	59.8	12.1	3.32	12.6	0.57	4.09	2.02	0.215	0.07	1.93	0.43	0.11	0.03	0.037	0.04	2.84	14	26
B/9689	QIM Feldspar 145 0-3	54	15.5	5.72	10.6	0.55	4.48	3.68	0.237	0.04	2.79	0.2	0.05	0.04	0.035	0.03	2.1	24	23.5
B/9690	QIM Feldspar 158 0-6	45.5	14.2	7.52	17.1	0.2	4.64	3.05	0.608	0.04	6.44	0.32	0.1	0.04	0.106	0.05	0.37	4	35.5
B/9691	QIM Feldspar 166 0-3	52	17.6	9.44	8.29	0.26	5.48	3.06	0.25	0.04	1.65	0.17	0.05	0.04	0.03	0.01	1.99	4	28.5
B/9692	QIM Feldspar 99 0-4	73.3	9.81	3.09	5.63	1.04	1.23	1.95	0.059	0.04	1.65	0.2	0.08	0.02	0.024	0.04	1.6	6	11
B/9692 Rpt	QIM Feldspar 99 0-4	73.6	9.81	3.09	5.6	1.04	1.22	1.96	0.059	0.04	1.64	0.2	0.08	0.02	0.022	0.04	1.61	6	11.5
B/9693	QIM Feldspar 99 4-9	55	15.3	5.82	10.6	0.34	5.67	3.24	0.132	0.04	1.62	0.23	0.08	0.04	0.033	0.04	1.73	8	27.5
B/9694	QIM Feldspar 79 0-3.9	57.7	15.6	3.37	10.9	1.22	1.94	3.59	0.162	0.04	1.87	0.21	0.4	0.03	0.026	0.12	2.73		21
B/9695	QIM Feldspar 80 0-5.3	71.1	13.8	1.24	3.94	2.49	1.33	3.04	0.113	0.04	0.58	0.09	0.09	0.03	0.014	0.02	1.94		10.5
B/9696	QIM Feldspar 83 0-4	62	12.4	5.3	5.55	0.6	3.45	2.53	0.086	0.04	1.24	0.2	0.05	0.03	0.022	0.01	6.68		16.5
B/9697	QIM Feldspar 152 0-3	50	20.4	10	7.99	0.1	4.85	2.92	0.015	0.04	1.16	0.12	0.03	0.04	0.026	-0.01	2.63		16
B/9698	QIM Feldspar 203 0-9	61	13.4	3.67	8.22	1.02	2.74	2.94	0.092	0.04	2.08	0.25	0.07	0.03	0.024	0.05	4.4		18
B/9699	QIM Feldspar 205 0-4	65.5	11.1	3.2	8.61	0.55	1.49	2.58	0.119	0.04	4.64	0.32	0.11	0.03	0.039	0.09	1.53		14
B/9700	QIM Feldspar 234 0-6	50.1	15.1	7.87	12.5	0.51	5.96	3.19	0.167	0.04	2.7	0.22	0.07	0.03	0.053	0.03	1.85		37
B/9701	QIM Feldspar 237 0-3	50.7	21.9	11	5.83	0.12	4.62	3.19	0.016	0.04	0.92	0.12	0.03	0.04	0.023	-0.01	1.68		18.5
B/9701 Rpt	QIM Feldspar 237 0-3	50.8	21.9	11	5.82	0.12	4.6	3.21	0.016	0.04	0.93	0.12	0.03	0.04	0.022	-0.01	1.67		19
B/9702	QIM Feldspar 238 0-3	49.1	19.6	11	7.18	0.21	4.66	3.34	0.023	0.04	1.96	0.14	0.05	0.05	0.034	-0.01	2.99		23
B/9703	QIM Feldspar 256 0-3	50.9	18.6	9.16	8.4	0.16	5.91	3.01	0.018	0.04	1.74	0.15	0.03	0.04	0.034	-0.01	2.09		23.5
B/9704	QIM Feldspar 272 0-4	47.1	22.1	14.2	4.59	0.2	2.43	2.35	0.195	0.04	1.44	0.09	0.03	0.05	0.023	-0.01	5.35		12
SARM-1		75.7	12.1	0.78	2	4.99	0.06	3.36	0.005	0.07	0.09	0.02	0.01						
STD 2.1		75.8	12.1	0.76	1.95	4.96	0.06	3.26	0.005	0.05	0.09	0.02	0.02	-0.01	-0.001	0.04			
SY-4																		38	1
STD 2.2																		36	0.5

Sample Preparation

The samples have been sorted and dried.

The whole sample has been pulverised in a ring pulveriser equipped with a Tungsten Carbide bowl. A barren flush has been inserted between each sample.

Analytical Methods

The samples have been cast using a 12:22 flux to form a glass bead which has been analysed by XRF.

SiO2, Al2O3, CaO, Fe2O3, K2O, MgO, Na2O, P2O5, SO3, TiO2, MnO, BaO, SrO, ZrO2
V2O5
have been determined by X-Ray Fluorescence Spectrometry

Loss on Ignition has been determined between 105 and 1000 degrees celsius.
Results are reported on a dry sample basis.

LOI 1000
has been determined Gravimetrically

Sample		Ag	As	Bi	Co	Cu	Fe_2O_3	Mo	P_2O_5	Re	Sc	Te	TiO_2	V_2O_5	ZrO_2
UNITS		ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
ASCRM-010	Coal Ash	<0.5	18	2.5	46	140	12.8	9	9100		46	0.6	1.75	350	570
STD 5.1		-0.5	18.5	2.6	46	130	12.8	9	9400	-0.1	46	0.8	1.7	400	540
B/9754	QIM 44 0-3	-0.5	2	-0.1	36	48	9.62	-0.2	700	-0.1	21	-0.2	1.73	350	50
B/9754 Rpt	QIM 44 0-3	-0.5	2.5	-0.1	38	46	9.68	-0.2	700	-0.1	21	-0.2	1.72	350	50
B/9755	QIM 92 0-5.2	-0.5	3.5	0.2	36	26	8.79	-0.2	300	-0.1	17	-0.2	4.07	400	590
B/9756	QIM 93 0-8	-0.5	4	0.1	30	22	8.31	-0.2	900	-0.1	24	-0.2	2.47	400	530
B/9757	QIM 95 0-2.2	-0.5	5	-0.1	42	38	13.4	0.2	2300	-0.1	52	-0.2	3.22	700	700
B/9758	QIM 171 0-4	-0.5	3.5	-0.1	34	58	8.94	-0.2	1300	-0.1	26	-0.2	2.25	350	630
B/9758 Rpt	QIM 171 0-4	-0.5	4	-0.1	32	58	8.75	-0.2	1400	-0.1	26	-0.2	2.32	350	640
SY-4		<0.5	<0.5	<0.1	<2	<2	6.21	2	1400		<1	<0.2	0.28	<50	700
STD 1.1		-0.5	2	-0.1	4	6	6.19	0.4	1300	-0.1	-1	-0.2	0.29	-50	730
Laterite 610-1			5		760	30	68	2	100		54		0.02	200	
STD 4.1		-0.5	4	-0.1	750	28	67.2	1.8	200	-0.1	55	-0.2	0.03	250	30
B/9759	QIM 188 0-5	-0.5	3	-0.1	50	16	13.6	-0.2	200	-0.1	23	-0.2	9.21	1250	200
B/9760	QIM 188 5-6	-0.5	2	-0.1	36	34	11.8	-0.2	500	-0.1	40	-0.2	4	800	160
B/9761	QIM 192 0-3	-0.5	2.5	-0.1	36	56	9.05	-0.2	700	-0.1	17	-0.2	1.57	300	60
B/9762	QIM 231 4-8	-0.5	2.5	-0.1	38	26	8.21	-0.2	400	-0.1	17	-0.2	2.94	500	90
B/9762 Rpt	QIM 231 4-8	-0.5	2	-0.1	38	28	8.15	-0.2	300	-0.1	17	-0.2	2.9	450	90
B/9763	QIM 244 0-4	-0.5	1.5	-0.1	32	16	8.42	-0.2	700	-0.1	10	-0.2	3.07	400	120
B/9764	QIM 247 0-3	-0.5	1.5	-0.1	36	32	6.69	-0.2	300	-0.1	18	-0.2	2.24	300	140
B/9765	QIM 249 0-3	-0.5	4.5	-0.1	36	52	19.4	-0.2	3900	-0.1	48	-0.2	4.99	800	220
Sarm-4	Norite	<0.5	1	<0.1	60	10	9.1	1.2			40	0.4	0.19	400	30
STD 2.1		-0.5	1.5	-0.1	60	12	9.29	1.2	200	-0.1	42	0.4	0.21	400	30
B/9766	QIM 259 0-2	-0.5	3.5	-0.1	34	42	11.5	-0.2	1600	-0.1	30	-0.2	5.07	750	220
B/9766 Rpt	QIM 259 0-2	-0.5	3	-0.1	34	42	11.3	-0.2	1600	-0.1	29	-0.2	5.09	750	220
B/9767	QIM 262 0-3	-0.5	2	-0.1	26	34	7.99	-0.2	400	-0.1	27	-0.2	2.84	450	120
B/9768	QIM 269 0-2	-0.5	6	-0.1	42	28	18.6	-0.2	700	-0.1	42	-0.2	13.1	1900	140
B/9769	QIM 270 0-5	-0.5	5.5	-0.1	50	10	11.9	-0.2	500	-0.1	16	-0.2	9.32	1250	300
B/9769 Rpt	QIM 270 0-5	-0.5	6	-0.1	48	8	11.8	-0.2	500	-0.1	16	-0.2	9.24	1300	300
B/9770	QIM 278 0-5.5	-0.5	4	-0.1	38	24	13.6	-0.2	1400	-0.1	26	-0.2	4.72	750	130
		<0.5	1	<0.1	60	10		1.2			40	0.4			
STD 3.1		-0.5	760	0.6	162	128		-0.2		-0.1	34	0.2			
Gannet BM-20							17.2						0.42	150	
STD 3.2							17		200				0.43	200	290

Sample Preparation

The samples have been sorted and dried. The whole sample has been pulverised in a ring pulveriser.

Analytical Methods

The samples have been fused with Sodium Peroxide and subsequently the melt has been dissolved in dilute Hydrochloric acid for analysis. Because of the high furnace temperatures, volatile elements are lost. This procedure is particularly efficient for determination of Major element composition (Including Silica) in

Sample		Ag	As	Bi	Co	Cu	Fe_2O_3	Mo	P_2O_5	Re	Sc	Te	TiO_2	V_2O_5	ZrO_2
UNITS		ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
B/9866	118 0-3	-0.5	1.5	-0.1	20	18	8.62	1.4	-100	-0.1	12	-0.2	3.8	650	60
B/9867	147 4-12	-0.5	3.5	-0.1	26	30	13.2	0.6	5500	-0.1	30	-0.2	4.57	450	530
ASCRM-010	Coal Ash	<0.5	18	2.5	46	140	12.8	9	9100		46	0.6	1.75	350	550
STD 1.1		-0.5	17.5	2.5	44	124	13.2	9	9200	-0.1	45	0.6	1.75	350	530
B/9868	154 0-6	-0.5	4.5	-0.1	36	38	16	1.2	9200	-0.1	30	-0.2	6.04	700	1300
B/9868 Rpt	154 0-6	-0.5	5	-0.1	34	36	16.2	1	9200	-0.1	31	-0.2	6.05	700	1390
B/9869	156 0-3	-0.5	3.5	-0.1	44	18	8.91	0.8	1100	-0.1	13	-0.2	4.44	300	1030
B/9870	157 0-7	-0.5	4	0.1	20	22	7.25	0.8	900	-0.1	11	-0.2	3.34	300	820
B/9871	191 0-2	-0.5	2	-0.1	44	42	12.8	-0.2	200	-0.1	42	-0.2	7.02	1100	150
SY-4		<0.5	<0.5	<0.1	<2	<2	6.21	2	1400		<1	<0.2	0.28	<50	700
STD 2.1		-0.5	2	-0.1	2	8	6.46	0.4	1400	-0.1	-1	-0.2	0.29	-50	740
Laterite 610-1			5		760	30	68	2	100		54		0.02	200	
STD 3.1		-0.5	4.5	-0.1	720	28	66.8	1.8	-100	-0.1	52	-0.2	0.03	-50	-10
B/9872	201 0-6	-0.5	2.5	-0.1	40	46	14.9	0.4	900	-0.1	16	-0.2	6.59	600	200
B/9872 Rpt	201 0-6	-0.5	2.5	-0.1	38	44	14.7	0.2	900	-0.1	16	-0.2	6.52	600	200
B/9873	202 0-12	-0.5	16	-0.1	34	34	16	0.8	7300	-0.1	25	-0.2	6.34	900	760
B/9874	204 0-4	-0.5	2	-0.1	26	22	15.6	0.8	1600	-0.1	23	-0.2	9.39	700	2450
B/9875	207 3-6	-0.5	4	-0.1	26	34	12.7	0.6	2100	-0.1	27	-0.2	5.27	550	760
B/9876	230 0-6	-0.5	2	-0.1	28	16	5.98	0.2	-100	-0.1	16	-0.2	2	250	160
B/9877	170/+1 0-6	-0.5	2	-0.1	22	28	14.9	0.4	9400	-0.1	40	-0.2	2.54	400	970
B/9877 Rpt	170/+1 0-6	-0.5	2.5	-0.1	20	28	15.3	0.6	9600	-0.1	39	-0.2	2.52	450	1010
Sarm-4	Norite	<0.5	1	<0.1	60	10	9.1	1.2			40	0.4	0.19	400	30
STD 4.1		-0.5	1.5	-0.1	54	12	8.77	1	-100	-0.1	40	0.2	0.2	400	30
Gannet BM-20		12	186	4.2	64	2910	17.2	3.2					0.42	150	120
STD 5.1		12.5	208	4.2	68	3000	16.6	3	500	-0.1	15	0.4	0.43	50	260

Sample Preparation

The samples have been sorted and dried. The whole sample has been pulverised in a ring pulveriser.

Analytical Methods

The samples have been fused with Sodium Peroxide and subsequently the melt has been dissolved in dilute Hydrochloric acid for analysis. Because of the high furnace temperatures, volatile elements are lost. This procedure is particularly efficient for determination of Major element composition (Including Silica) in the samples or for the determination of refactory mineral species.

TiO2, Fe2O3, V2O5, ZrO2 have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.

The sample(s) have been digested with a mixture of Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids. This digest approaches a Total digest

Sample		SiO_2	Al_2O_3	CaO	Fe_2O_3	K_2O	MgO	Na_2O	P_2O_5	SO_3	TiO_2	MnO	BaO	SrO	Cr_2O_3	LOI_{1000}	Sc
UNITS		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm
C/0147	42 0-1 -1mm	93.8	1.25	0.1	1.76	0.099	0.08	0.066	0.019	0.02	1.214	0.03	-0.01	-0.01	0.024	0.51	3
SARM-1		75.7	12.1	0.78	2	4.99	0.06	3.36	0.005	0.07	0.09	0.02	0.01		0.001		
STD 1.1		75.5	12.2	0.78	1.85	4.95	0.03	3.263	0.009	0.04	0.091	0.02	0.01	-0.01	0.01		
ASCRM-010	Coal Ash																46
STD 1.2																	45
C/0148	144 0-3 +1mm	59.6	12.5	4.36	11.7	0.38	5.62	2.268	0.207	0.01	1.578	0.38	0.04	0.03	0.025	0.88	27
C/0149	200 1-3 -1mm	49.6	18.7	8.21	10.7	0.143	4.61	3.473	0.096	-0.01	1.522	0.2	0.01	0.04	0.012	2.46	11
C/0149 Rpt	200 1-3 -1mm	49.5	18.7	8.2	10.7	0.145	4.54	3.469	0.096	-0.01	1.512	0.2	0.01	0.04	0.011	2.4	11
C/0150	216 0-3 -1mm	50.7	20	8.7	8.82	0.186	3.87	3.821	0.119	-0.01	2.178	0.15	0.02	0.04	0.003	0.94	19
C/0151	272 0-4 +1mm	41.5	19.6	18.21	4.28	0.171	3.29	1.864	0.161	0.01	0.699	0.08	-0.01	0.04	0.012	9.85	13
C/0152	285 0-6 +1mm	45.5	13.7	11.58	11.8	0.431	2.34	3.598	0.571	0.05	2.223	0.24	0.18	0.03	0.001	6.98	29
C/0153	286 0-3 -1mm	71.3	13.1	1.13	3.95	2.35	1.58	2.77	0.133	0.01	0.663	0.1	0.07	0.02	0.007	1.88	11
SARM-2		63.6	17.3	0.68	1.4	15.3	0.46	0.43	0.12	0.04	0.044	0.01	0.27	<0.01	0.002		
STD 2.1		63.6	17.3	0.69	1.33	15.3	0.45	0.435	0.12	0.02	0.043	0.01	0.29	0.01	-0.001		
SY-4																	1
STD 2.2																	-1
Syanite SY-3		59.7	11.8	8.3	6.4	4.2	2.7	4.2	0.55	0.15	0.15	0.32	0.05	0.04	<.001		
STD 3.1		59.2	11.5	8.3	6.4	4.11	2.7	4.2	0.552	0.16	0.15	0.33	0.04	0.04			

Sample Preparation

The samples have been sorted and dried.

The whole sample has been pulverised in a ring pulveriser equipped with a Tungsten Carbide bowl. A barren flush has been inserted between each sample.

Analytical Methods

The samples have been cast using a 12:22 flux to form a glass bead which has been analysed by XRF.

SiO2, Al2O3, CaO, Fe2O3, K2O, MgO, Na2O, P2O5, SO3, TiO2, MnO, BaO, SrO, Cr2O3 have been determined by X-Ray Fluorescence Spectrometry

Loss on Ignition has been determined between 105 and 1000 degrees celsius.

Results are reported on a dry sample basis.

LOI 1000 has been determined Gravimetrically

The sample(s) have been digested with a mixture of Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids. This digest approaches a Total digest for many elements however some refractory oxides are not completely attacked.

Sc has been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.

Sample		SiO_2	Al_2O_3	CaO	Fe_2O_3	K_2O	MgO	Na_2O	P_2O_5	SO_3	TiO_2	MnO	BaO	SrO	Cr_2O_3	ZrO_2	LOI_{1000}	Sc
UNITS		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm
C/0147	42 0-1 -1mm	93.8	1.25	0.1	1.76	0.099	0.08	0.066	0.019	0.02	1.214	0.03	-0.01	-0.01	0.024	0.04	0.51	3
SARM-1		75.7	12.1	0.78	2	4.99	0.06	3.36	0.005	0.07	0.09	0.02	0.01		0.001	0.04		
STD 1.1		75.5	12.2	0.78	1.85	4.95	0.03	3.263	0.009	0.04	0.091	0.02	0.01	-0.01	0.01	0.04		
ASCRM-010	Coal Ash																	46
STD 1.2																		45
C/0148	144 0-3 +1mm	59.6	12.5	4.36	11.7	0.38	5.62	2.268	0.207	0.01	1.578	0.38	0.04	0.03	0.025	0.02	0.88	27
C/0149	200 1-3 -1mm	49.6	18.7	8.21	10.7	0.143	4.61	3.473	0.096	-0.01	1.522	0.2	0.01	0.04	0.012	-0.01	2.46	11
C/0149 Rpt	200 1-3 -1mm	49.5	18.7	8.2	10.7	0.145	4.54	3.469	0.096	-0.01	1.512	0.2	0.01	0.04	0.011	-0.01	2.4	11
C/0150	216 0-3 -1mm	50.7	20	8.7	8.82	0.186	3.87	3.821	0.119	-0.01	2.178	0.15	0.02	0.04	0.003	0.02	0.94	19
C/0151	272 0-4 +1mm	41.5	19.6	18.21	4.28	0.171	3.29	1.864	0.161	0.01	0.699	0.08	-0.01	0.04	0.012	-0.01	9.85	13
C/0152	285 0-6 +1mm	45.5	13.7	11.58	11.8	0.431	2.34	3.598	0.571	0.05	2.223	0.24	0.18	0.03	0.001	0.13	6.98	29
C/0153	286 0-3 -1mm	71.3	13.1	1.13	3.95	2.35	1.58	2.77	0.133	0.01	0.663	0.1	0.07	0.02	0.007	0.02	1.88	11
SARM-2		63.6	17.3	0.68	1.4	15.3	0.46	0.43	0.12	0.04	0.044	0.01	0.27	<0.01	0.002	<0.01		
STD 2.1		63.6	17.3	0.69	1.33	15.3	0.45	0.435	0.12	0.02	0.043	0.01	0.29	0.01	-0.001	-0.01		
SY-4																		1
STD 2.2																		-1
Syanite SY-3		59.7	11.8	8.3	6.4	4.2	2.7	4.2	0.55	0.15	0.15	0.32	0.05	0.04	<.001	0.04		
STD 3.1		59.2	11.5	8.3	6.4	4.11	2.7	4.2	0.552	0.16	0.15	0.33	0.04	0.04		0.04		

Sample Preparation

The samples have been sorted and dried.

The whole sample has been pulverised in a ring pulveriser equipped with a Tungsten Carbide bowl. A barren flush has been inserted between each sample.

Analytical Methods

The samples have been cast using a 12:22 flux to form a glass bead which has been analysed by XRF.

SiO2, Al2O3, CaO, Fe2O3, K2O, MgO, Na2O, P2O5, SO3, TiO2, MnO, BaO, SrO, ZrO2
Cr2O3
have been determined by X-Ray Fluorescence Spectrometry

Loss on Ignition has been determined between 105 and 1000 degrees celsius.

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The sample(s) have been digested with a mixture of Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids. This digest approaches a Total digest for many elements however some refractory oxides are not completely attacked.

Sc
has been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.

Special Messages

Note: ZrO2 added as requested.