

## Electron Probe Microanalysis

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	ZrO <sub>2</sub> wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	HfO <sub>2</sub> wt%	SUM	G-Class
R-2010-3830 cpx	cpx	54.17	0.05	0.99	0.63	4.48	0.14	0.00	15.93	22.64	0.00	1.32	0.01	0.00	0.01	0.01	100.38	
R-2010-3830 chr	amphibole	44.17	0.80	11.40	0.05	14.44	0.26	0.00	12.42	12.05	0.05	1.18	0.54	0.00	0.05	0.00	97.39	
R-2010-5100 chr	tourmaline	33.50	1.19	34.16	0.02	10.19	0.00	0.00	4.55	1.87	0.17	1.21	0.06	0.00	0.02	0.00	86.94	
R-2010-5100 chr	amphibole	44.40	1.17	8.89	0.07	17.50	0.36	0.00	11.22	11.76	0.03	1.27	1.01	0.00	0.00	0.00	97.70	
R-2010-5100 cpx	cpx	53.74	0.05	1.05	0.28	4.04	0.14	0.03	17.05	23.67	0.00	0.49	0.00	0.00	0.04	0.00	100.59	
R-2010-5100 chr	amphibole	44.82	0.89	8.58	0.00	14.79	0.29	0.00	12.82	12.39	0.04	0.97	0.89	0.00	0.00	0.00	96.48	
R-2010-17703 ecl	garnet	37.63	0.04	22.21	0.08	30.63	1.42	0.00	7.83	1.06	0.00	0.00	0.00	0.00	0.01	0.00	100.90	crustal
R-2010-17703 chr	amphibole	44.07	1.23	8.23	0.00	18.05	0.33	0.00	11.17	11.66	0.04	1.54	1.00	0.02	0.04	0.00	97.36	
R-2010-3113 cpx	cpx	52.57	0.08	2.37	0.61	5.36	0.14	0.01	17.06	20.96	0.00	0.44	0.00	0.02	0.01	0.01	99.63	
R-2010-3113 cpx	epidote	36.37	0.08	21.03	0.00	15.60	0.04	0.00	0.02	23.27	0.07	0.00	0.00	0.00	0.01	0.00	96.48	
R-2010-3113 cpx	epidote	36.57	0.02	22.00	0.01	14.50	0.07	0.00	0.02	23.08	0.11	0.00	0.00	0.04	0.00	0.00	96.40	
R-2010-3113 chr	tourmaline	35.26	0.79	31.17	0.06	5.64	0.00	0.00	8.08	1.76	0.05	1.69	0.05	0.00	0.00	0.00	84.53	
R-2010-3113 gar	garnet	35.97	0.27	19.12	0.00	17.39	17.62	0.00	0.65	7.42	0.00	0.10	0.01	0.00	0.05	0.03	98.64	crustal
R-2010-3113 gar	garnet	36.34	0.00	21.50	0.00	30.26	8.44	0.00	2.89	0.95	0.01	0.00	0.00	0.00	0.03	0.00	100.42	crustal
R-2010-7380 cpx	cpx	52.00	0.03	1.09	1.14	3.72	0.08	0.05	16.24	24.76	0.01	0.45	0.00	0.00	0.03	0.00	99.61	
R-2010-7380 chr	amphibole	41.56	0.91	10.76	0.00	19.12	0.30	0.00	9.45	11.93	0.03	1.24	1.00	0.00	0.00	0.00	96.30	
B-2010-1920-4 cpx	cpx	53.14	0.03	1.12	0.53	3.65	0.09	0.03	16.91	23.55	0.00	0.48	0.00	0.00	0.00	0.01	99.55	
R-2010-5500 cpx	epidote	36.67	0.06	21.97	0.00	13.92	0.11	0.00	0.02	23.49	0.05	0.00	0.00	0.00	0.05	0.00	96.33	
R-2010-5500 cpx	cpx	52.62	0.01	1.10	0.07	8.52	0.34	0.00	12.77	23.11	0.01	0.88	0.00	0.00	0.00	0.00	99.44	
R-2010-5500 chr	tourmaline	34.60	0.43	33.20	0.00	6.96	0.01	0.00	6.45	0.53	0.00	2.13	0.05	0.00	0.04	0.00	84.41	
R-2010-5500 chr	ilmenite	0.00	50.16	0.03	0.06	46.52	0.09	0.05	1.90	0.00	0.75	0.01	0.00	0.00	0.09	0.00	99.66	
R-2010-5500 gar	zircon	33.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.32	0.00	1.15	101.63	
R-2010-5500 gar	garnet	38.99	0.03	22.45	0.01	22.79	0.44	0.00	9.42	6.49	0.01	0.00	0.00	0.01	0.02	0.00	100.65	G3
R-2010-2200 ilm	tourmaline	33.99	0.30	34.93	0.00	14.44	0.39	0.00	0.30	0.12	0.00	1.73	0.04	0.00	0.00	0.00	86.24	
R-2010-2200 cpx	epidote	36.68	0.03	21.97	0.00	14.71	0.06	0.00	0.01	23.22	0.06	0.00	0.00	0.00	0.01	0.00	96.75	
R-2010-2200 gar	garnet	36.61	0.00	20.61	0.00	35.05	0.78	0.00	1.11	7.42	0.00	0.00	0.00	0.01	0.00	0.00	101.59	crustal
R-2010-2200 cpx	cpx	52.62	0.03	1.46	0.06	7.83	0.33	0.00	14.41	22.09	0.01	0.86	0.00	0.00	0.00	0.03	99.73	
R-2010-2200 cpx	cpx	51.27	0.07	1.33	0.22	8.80	0.24	0.00	13.82	22.79	0.03	0.34	0.00	0.00	0.00	0.00	98.92	
R-2010-7380 chr	calcite	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	53.71	0.00	0.04	0.00	0.13	0.00	0.00	53.92	
R-2010-1890-6 ilm	amphibole	42.86	1.04	8.28	0.09	17.05	0.35	0.00	11.74	11.63	0.05	1.55	0.97	0.00	0.00	0.00	95.61	
R-2010-5269 gar	garnet	35.15	0.06	20.49	0.00	32.24	1.57	0.00	0.89	8.67	0.00	0.00	0.00	0.00	0.00	0.00	99.08	crustal
B-2010-7570 chr	amphibole	41.54	0.81	16.38	0.00	11.26	0.02	0.00	5.89	16.52	0.01	3.30	0.91	0.06	0.04	0.00	96.74	
B-2010-3225-C ecl	garnet	36.33	0.27	21.43	0.02	14.47	14.73	0.00	3.68	8.02	0.02	0.00	0.00	0.03	0.04	0.00	99.04	G3
B-2010-3225-C cpx	serpentine	41.34	0.01	1.76	0.05	8.03	0.03	0.06	34.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.19	

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	ZrO <sub>2</sub> wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	HfO <sub>2</sub> wt%	SUM	G-Class
B-2010-3225-C cpx	cpx	52.47	0.34	1.18	0.96	5.44	0.12	0.03	18.03	20.94	0.00	0.40	0.00	0.00	0.00	0.00	99.91	
B-2010-3225-C cpx	cpx	53.40	0.03	1.48	0.80	4.67	0.14	0.02	16.33	22.52	0.01	0.68	0.00	0.00	0.00	0.00	100.10	
B-2010-3225-C chr	amphibole	41.66	1.12	8.61	0.01	17.09	0.38	0.00	11.14	11.71	0.04	1.40	1.02	0.01	0.04	0.00	94.23	
B-2010-3225-C chr	tourmaline	34.29	0.63	32.05	0.00	10.29	0.04	0.00	4.97	0.54	0.00	2.12	0.05	0.00	0.00	0.00	84.99	
R-2010-7625 ecl	garnet	38.35	0.34	19.20	0.07	7.04	0.45	0.00	0.27	34.42	0.03	0.00	0.00	0.00	0.01	0.00	100.20	crystal
R-2010-7625 chr	tourmaline	35.93	0.64	35.05	0.01	6.17	0.00	0.00	6.54	0.32	0.01	2.19	0.04	0.00	0.00	0.00	86.90	
R-2010-7625 ilm	amphibole	50.37	0.48	4.25	0.17	10.92	0.24	0.06	17.37	11.77	0.01	0.95	0.38	0.00	0.06	0.00	97.03	
R-2010-7625 gar	unknown	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	83.23	0.00	0.00	0.00	0.00	0.00	0.00	83.27	
R-2010-7625 gar	zircon	32.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.01	0.00	1.47	101.28	
R-2010-7625 gar	garnet	36.91	0.19	21.28	0.00	32.13	1.06	0.00	3.14	6.52	0.00	0.00	0.00	0.00	0.01	0.00	101.23	crystal
R-2010-7625 chr	tourmaline	35.92	0.32	34.58	0.08	6.77	0.02	0.00	6.07	0.51	0.03	1.66	0.01	0.00	0.00	0.00	85.96	
R-2010-7625 ilm	ilmenite	0.00	46.56	0.01	0.00	49.59	1.32	0.00	1.09	0.00	0.09	0.03	0.00	0.01	0.15	0.00	98.84	
R-2010-7625 chr	amphibole	42.68	1.21	10.87	0.03	16.72	0.27	0.00	11.33	11.69	0.06	1.65	1.39	0.00	0.06	0.00	97.96	
R-2010-7625 cpx	cpx	53.59	0.03	0.96	0.55	4.73	0.18	0.05	17.88	21.18	0.00	0.47	0.00	0.00	0.00	0.02	99.65	
R-2010-7625 cpx	amphibole	41.75	0.00	29.42	0.00	1.83	0.07	0.00	0.25	19.98	0.00	1.32	0.04	0.00	0.02	0.00	94.68	
R-2010-5100 chr	tourmaline	34.46	0.60	30.81	0.02	8.12	0.00	0.00	7.60	1.72	0.02	1.65	0.09	0.02	0.01	0.00	85.12	
R-2010-5100 ecl	garnet	35.47	0.06	20.19	0.00	20.33	22.54	0.00	0.33	0.27	0.00	0.00	0.00	0.00	0.02	0.00	99.20	crystal
R-2010-5100 cpx	quartz	99.46	0.00	0.10	0.00	0.11	0.00	0.00	0.00	0.09	0.00	0.00	0.03	0.00	0.01	0.00	99.79	
R-2010-5470 chr	amphibole	43.19	2.23	11.00	0.20	13.14	0.14	0.00	12.80	11.66	0.07	1.33	1.29	0.00	0.00	0.00	97.05	
R-2010-5470 gar	zircon	32.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.58	0.00	1.29	100.74	
R-2010-1900 ilm	ilmenite	0.03	55.09	0.08	0.00	38.52	0.08	0.00	0.04	0.01	0.42	0.00	0.00	0.00	0.01	0.00	94.28	
R-2010-1900 chr	ilmenite	0.09	59.68	0.16	0.00	30.33	0.07	0.00	0.09	0.07	0.82	0.00	0.00	0.02	0.03	0.00	91.37	
R-2010-1900 chr	calcite	0.00	0.00	0.00	0.00	0.50	0.36	0.00	0.30	47.42	0.00	0.38	0.00	0.08	0.00	0.00	49.05	
R-2010-1900 oli	epidote	36.43	0.05	22.96	0.04	12.92	0.18	0.00	0.02	23.51	0.02	0.00	0.00	0.03	0.02	0.00	96.18	
R-2010-5470 clr	zircon	32.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.91	0.00	1.14	100.95	
R-2010-5470 chr	tourmaline	34.14	1.29	34.88	0.00	8.19	0.00	0.00	5.23	1.63	0.05	1.35	0.08	0.02	0.00	0.00	86.88	
R-2010-7430 ilm	amphibole	40.95	2.04	10.63	0.00	17.41	0.29	0.00	10.51	11.60	0.04	1.58	1.57	0.01	0.06	0.00	96.70	
R-2010-7430 gar	garnet	35.96	0.01	21.36	0.00	35.50	0.25	0.00	1.52	6.33	0.00	0.00	0.00	0.00	0.05	0.00	100.97	crystal
R-2010-7430 gar	zircon	32.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.36	0.00	1.21	100.37	
R-2010-7430 cpx	cpx	53.19	0.02	1.11	0.03	4.56	0.16	0.01	15.67	24.07	0.01	0.49	0.00	0.00	0.00	0.00	99.32	
R-2010-7430 cpx	epidote	37.86	0.17	28.90	0.00	6.89	0.02	0.00	0.11	23.74	0.01	0.00	0.00	0.03	0.07	0.00	97.80	
R-2010-7430 oli	cpx	53.87	0.01	1.15	0.09	5.26	0.17	0.00	16.24	22.78	0.01	0.49	0.00	0.00	0.00	0.00	100.06	
R-2010-5288 ecl	epidote	36.24	0.05	23.45	0.00	12.89	0.12	0.00	0.03	23.64	0.04	0.00	0.00	0.00	0.00	0.01	96.47	
R-2010-5288 chr	amphibole	44.20	0.59	10.30	0.00	16.78	0.22	0.00	11.54	11.95	0.02	1.13	0.44	0.01	0.00	0.00	97.18	
R-2010-8031 cpx	cpx	53.41	0.04	1.13	0.28	5.85	0.22	0.00	15.29	23.35	0.01	0.76	0.00	0.00	0.01	0.00	100.35	
B-2010-1970-6 chr	titanite	28.71	35.09	1.35	0.01	1.83	0.12	0.00	0.04	26.35	0.12	0.02	0.00	0.04	0.32	0.03	94.02	
B-2010-1970-6 chr	rutile	0.00	96.41	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.56	0.29	0.00	98.10	
B-2010-1970-6 chr	ilmenite	0.00	54.71	0.01	0.00	38.73	1.20	0.00	0.06	0.00	0.08	0.00	0.00	0.01	0.03	0.00	94.82	
R-2010-6000 chr	quartz	162.12	0.00	0.21	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.01	0.03	0.06	162.47	
R-2010-6000 ecl	quartz	97.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	97.13	

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	ZrO <sub>2</sub> wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	HfO <sub>2</sub> wt%	SUM	G-Class
R-2010-7688 ilm	unknown	29.49	0.10	14.87	0.00	31.49	0.39	0.00	11.76	0.56	0.05	0.00	0.01	0.01	0.01	0.00	88.73	
R-2010-7688 chr	amphibole	45.83	0.88	8.06	0.17	13.90	0.21	0.07	14.43	11.33	0.03	1.37	0.75	0.01	0.00	0.00	97.02	
R-2010-7688 ecl	titanite	30.18	35.96	1.59	0.00	1.36	0.09	0.00	0.03	28.13	0.14	0.00	0.00	0.00	0.07	0.00	97.55	
R-2010-7688 cpx	cpx	53.84	0.02	0.78	0.11	5.14	0.20	0.00	15.61	23.53	0.00	0.56	0.00	0.00	0.02	0.00	99.81	
R-2010-7688 cpx	cpx	50.86	0.07	1.34	0.23	6.27	0.21	0.00	15.78	23.17	0.01	0.50	0.00	0.00	0.09	0.00	98.51	
R-2010-7688 cpx	cpx	50.53	0.11	3.07	0.72	4.19	0.12	0.00	16.81	23.39	0.04	0.26	0.00	0.00	0.00	0.01	99.25	
R-2010-3489-C cpx	cpx	52.89	0.03	0.91	0.60	2.71	0.09	0.00	16.67	24.82	0.00	0.72	0.00	0.00	0.04	0.00	99.49	
R-2010-3489-C chr	ilmenite	0.04	56.27	0.16	0.00	34.90	0.70	0.00	0.98	0.04	0.18	0.00	0.00	0.00	0.08	0.00	93.37	
R-2010-3228-C chr	amphibole	43.27	1.43	9.62	0.01	16.23	0.28	0.00	11.82	11.89	0.06	1.52	1.13	0.01	0.00	0.00	97.27	
R-2010-6000 ilm	calcite	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.06	53.34	0.00	0.23	0.00	0.07	0.00	0.00	53.71	
R-2010-1970-6 cpx	cpx	53.26	0.09	1.60	0.30	4.60	0.13	0.01	16.26	23.34	0.00	0.42	0.00	0.00	0.03	0.00	100.03	
R-2010-2390 chr	ilmenite	0.00	50.30	0.01	0.02	47.69	1.30	0.00	0.37	0.00	0.06	0.05	0.00	0.00	0.00	0.00	99.82	
R-2010-2390 ecl	garnet	36.41	0.12	19.68	0.01	16.56	19.11	0.00	1.84	5.73	0.00	0.00	0.00	0.00	0.03	0.00	99.49	crustal
R-2010-6070 ilm	amphibole	43.86	1.35	9.05	0.00	17.19	0.37	0.00	11.33	11.51	0.03	1.54	1.17	0.00	0.00	0.00	97.39	
R-2010-7800 chr	ilmenite	0.00	50.99	0.01	0.00	47.12	1.59	0.00	0.11	0.00	0.11	0.00	0.00	0.00	0.05	0.00	100.00	
R-2010-7800 chr	hematite	0.11	0.11	0.05	0.06	89.97	0.05	0.00	0.05	0.00	0.21	0.01	0.00	0.00	0.12	0.00	90.76	
R-2010-7800 ecl	garnet	37.22	0.11	21.42	0.00	31.39	0.76	0.00	3.66	6.42	0.02	0.00	0.00	0.00	0.00	0.00	100.98	G3
B-2010-2410 gar	zircon	32.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.75	0.00	1.19	99.45	
R-2010-6250 oli	titanite	30.08	36.74	1.54	0.00	0.68	0.07	0.00	0.01	28.10	0.17	0.03	0.00	0.01	0.06	0.00	97.50	
R-2010-5152 ilm	amphibole	42.20	1.35	10.77	0.04	17.30	0.31	0.00	10.66	11.94	0.05	1.27	1.26	0.02	0.01	0.00	97.17	
R-2010-5152 cpx	cpx	53.03	0.02	1.15	0.59	6.41	0.15	0.03	23.26	15.93	0.01	0.25	0.01	0.00	0.00	0.01	100.83	
R-2010-5152 ecl	garnet	35.13	0.05	20.72	0.00	18.63	24.04	0.00	0.46	0.31	0.00	0.00	0.00	0.00	0.00	0.00	99.36	crustal
R-2010-5152 chr	hematite	0.00	0.00	0.00	0.00	94.12	0.03	0.00	0.04	0.00	0.16	0.02	0.00	0.00	0.02	0.00	94.40	
R-2010-3276 chr	tourmaline	34.23	0.91	34.54	0.00	10.76	0.04	0.00	3.57	0.57	0.00	1.91	0.06	0.00	0.03	0.00	86.62	
R-2010-3276 clr	zircon	32.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.04	0.00	1.16	99.98	
R-2010-3276 ecl	epidote	37.34	0.15	27.45	0.00	7.52	0.04	0.00	0.09	23.69	0.01	0.00	0.00	0.00	0.00	0.00	96.31	
R-2010-3276 ilm	amphibole	45.27	0.92	8.66	0.04	16.06	0.34	0.00	12.27	11.72	0.04	1.27	0.86	0.02	0.00	0.00	97.46	
R-2010-3276 cpx	cpx	52.92	0.04	1.12	0.25	6.19	0.20	0.02	15.73	22.69	0.00	0.48	0.00	0.02	0.00	0.00	99.66	
R-2010-7030 chr	ilmenite	0.00	49.16	0.03	0.00	48.83	1.03	0.00	0.09	0.00	0.14	0.00	0.00	0.00	0.06	0.00	99.34	
R-2010-7030 gar	garnet	36.40	0.00	20.90	0.00	36.78	0.16	0.00	0.90	5.90	0.00	0.00	0.00	0.00	0.01	0.00	101.04	crustal
R-2010-7030 cpx	cpx	52.08	0.13	2.14	0.61	5.28	0.17	0.08	15.68	23.30	0.00	0.39	0.00	0.00	0.00	0.00	99.85	
R-2010-8031 ecl	garnet	36.09	0.03	21.00	0.00	22.17	19.56	0.00	1.20	0.40	0.00	0.00	0.00	0.00	0.04	0.00	100.49	crustal
R-2010-8031 cpx	cpx	52.62	0.03	1.03	0.23	6.26	0.19	0.04	16.14	22.13	0.00	0.53	0.00	0.01	0.00	0.00	99.20	
R-2010-8031 cpx	cpx	53.49	0.05	0.69	0.48	4.45	0.15	0.01	15.62	24.56	0.00	0.47	0.00	0.02	0.00	0.00	99.99	
R-2010-8031 ecl	garnet	35.62	0.08	20.95	0.00	22.38	19.42	0.00	0.49	1.08	0.00	0.01	0.00	0.04	0.01	0.00	100.08	crustal
R-2010-8031 chr	amphibole	41.95	2.08	10.89	0.00	19.44	0.31	0.00	8.87	11.24	0.07	1.38	1.11	0.04	0.00	0.00	97.38	
R-2010-8031 chr	tourmaline	34.48	0.34	35.04	0.00	12.37	0.03	0.00	2.40	0.48	0.00	1.67	0.05	0.00	0.05	0.00	86.90	
R-2010-8031 chr	ilmenite	0.00	49.86	0.01	0.00	47.17	2.09	0.00	0.12	0.00	0.08	0.00	0.00	0.01	0.14	0.00	99.49	
R-2010-7220 chr	ilmenite	0.00	47.75	0.01	0.00	50.21	0.95	0.00	0.05	0.00	0.12	0.00	0.00	0.00	0.16	0.00	99.25	
R-2010-7390 chr	ilmenite	0.00	51.00	0.01	0.00	46.97	1.39	0.00	0.51	0.00	0.09	0.00	0.00	0.00	0.09	0.00	100.06	

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	ZrO <sub>2</sub> wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	HfO <sub>2</sub> wt%	SUM	G-Class
R-2010-7390 chr	ilmenite	0.00	49.40	0.01	0.00	46.82	2.95	0.00	0.16	0.00	0.10	0.00	0.00	0.02	0.04	0.00	99.50	
R-2010-7390 chr	amphibole	41.93	1.11	11.26	0.00	17.88	0.28	0.00	10.54	11.97	0.04	1.37	1.42	0.04	0.00	0.00	97.85	
R-2010-7390 cpx	cpx	52.40	0.05	1.19	0.08	6.34	0.24	0.00	14.20	23.93	0.02	0.56	0.00	0.00	0.01	0.00	99.02	
R-2010-3479 chr	tourmaline	35.03	0.38	33.38	0.00	9.07	0.01	0.00	6.17	0.76	0.00	2.02	0.05	0.00	0.00	0.00	86.88	
B-2010-4190-6 chr	ilmenite	0.00	45.42	0.01	0.05	51.42	1.66	0.00	0.16	0.00	0.18	0.00	0.00	0.00	0.11	0.00	99.01	
B-2010-4190-6 chr	rutile	0.00	97.83	0.13	0.00	0.33	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.11	0.39	0.00	99.09	
B-2010-4190-6 ecl	garnet	38.43	0.15	22.68	0.04	23.03	1.01	0.00	8.31	7.44	0.02	0.00	0.00	0.00	0.02	0.00	101.13	G3
R-2010-1860-7 chr	ilmenite	0.00	49.74	0.01	0.00	48.43	0.97	0.00	0.22	0.00	0.10	0.00	0.00	0.00	0.05	0.00	99.53	
R-2010-1860-7 cpx	amphibole	43.81	0.00	31.03	0.00	4.71	0.05	0.00	4.95	0.01	0.00	0.09	8.08	0.00	0.00	0.00	92.74	
R-2010-1860-7 chr	ilmenite	0.00	49.07	0.05	0.00	45.48	4.40	0.00	0.06	0.01	0.11	0.00	0.00	0.00	0.15	0.00	99.33	
R-2010-1860-7 cpx	cpx	52.65	0.09	1.47	0.21	7.35	0.20	0.00	13.94	21.48	0.01	2.28	0.00	0.00	0.00	0.00	99.67	
R-2010-1860-7 oli	epidote	37.69	0.03	27.89	0.00	8.12	0.05	0.00	0.01	24.00	0.09	0.00	0.00	0.01	0.11	0.01	98.02	
R-2010-1860-7 cpx	cpx	53.01	0.04	1.05	0.22	7.42	0.23	0.00	14.89	22.11	0.02	0.55	0.00	0.00	0.01	0.02	99.59	
R-2010-6170 gar	garnet	35.04	0.04	20.55	0.00	24.72	16.54	0.00	0.71	0.38	0.00	0.03	0.00	0.01	0.08	0.00	98.09	crystal
R-2010-3589-C ilm	amphibole	48.76	0.60	6.21	0.24	11.71	0.24	0.03	15.68	12.11	0.03	1.12	0.58	0.00	0.00	0.00	97.33	
R-2010-3589-C chr	hematite	0.28	0.13	0.29	0.00	89.10	0.01	0.00	0.07	0.07	0.48	0.01	0.01	0.00	0.09	0.00	90.54	
R-2010-3589-C oli	epidote	37.14	0.08	23.86	0.02	12.79	0.18	0.00	0.02	22.88	0.05	0.00	0.00	0.00	0.00	0.00	97.01	
R-2010-3589-C cpx	cpx	53.15	0.03	1.29	0.08	5.50	0.13	0.01	15.96	22.83	0.00	0.45	0.00	0.00	0.04	0.01	99.47	
R-2010-3589-C cpx	amphibole	41.68	0.01	30.08	0.00	1.79	0.18	0.00	0.22	19.91	0.00	1.52	0.12	0.02	0.00	0.00	95.53	
R-2010-8070 chr	ilmenite	0.00	48.32	0.05	0.00	49.15	0.96	0.00	0.53	0.00	0.12	0.00	0.00	0.00	0.04	0.00	99.17	
R-2010-8070 chr	ilmenite	0.00	48.09	0.01	0.00	49.70	0.64	0.00	0.49	0.00	0.13	0.00	0.00	0.03	0.16	0.00	99.25	
R-2010-8070 chr	ilmenite	0.00	47.28	0.00	0.00	43.28	7.91	0.00	0.05	0.00	0.10	0.00	0.00	0.00	0.47	0.00	99.09	
R-2010-8070 cpx	quartz	98.41	0.00	0.48	0.00	0.58	0.00	0.00	0.43	0.04	0.00	0.00	0.00	0.00	0.13	0.00	100.07	
R-2010-8070 cpx	cpx	52.11	0.01	0.57	0.10	5.16	0.22	0.00	16.11	24.81	0.00	0.31	0.00	0.00	0.00	0.00	99.40	
R-2010-8070 ecl	garnet	36.09	0.05	20.78	0.02	21.79	11.16	0.00	1.79	8.48	0.01	0.00	0.00	0.00	0.07	0.00	100.22	crystal
R-2010-8070 cpx	cpx	52.58	0.01	1.36	0.15	4.73	0.13	0.03	16.80	22.70	0.00	0.47	0.00	0.00	0.01	0.00	98.96	
R-2010-8070 cpx	cpx	53.07	0.03	1.94	0.08	5.43	0.15	0.00	14.86	22.67	0.00	1.09	0.00	0.00	0.00	0.01	99.32	
R-2010-3420 chr	ilmenite	0.00	48.36	0.00	0.00	48.27	1.24	0.00	0.49	0.00	0.62	0.00	0.00	0.00	0.03	0.00	99.01	
R-2010-3420 chr	ilmenite	0.00	47.97	0.00	0.00	44.07	6.38	0.00	0.13	0.00	0.16	0.00	0.00	0.03	0.06	0.00	98.79	
R-2010-3420 ecl	garnet	37.81	0.15	22.46	0.00	22.15	0.48	0.00	6.87	10.03	0.04	0.00	0.00	0.05	0.00	0.00	100.05	G3
R-2010-3420 cpx	cpx	52.57	0.10	1.61	0.48	6.11	0.19	0.00	14.80	22.76	0.00	0.54	0.00	0.00	0.00	0.01	99.18	

Samples listed below were EDS analyzed

R-2010-8272 clr	quartz
R-2010-8272 clr	quartz
R-2010-8272 ecl	quartz
R-2010-1980 clr	quartz
R-2010-1980 clr	quartz
R-2010-5100 ckr	apatite

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	ZrO <sub>2</sub> wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	HfO <sub>2</sub> wt%	SUM	G-Class
R-2010-17703	clr quartz																	
C-2010-2839	clr quartz																	
R-2010-31113	clr apatite																	
R-2010-31113	clr apatite																	
R-2010-31113	clr apatite																	
R-2010-31113	clr apatite																	
R-2010-31113	wht sillimanite																	
R-2010-7380	clr apatite																	
B-2010-1920-4	clr quartz																	
B-2010-1920-4	clr quartz																	
R-2010-2340	clr quartz																	
R-2010-5500	clr quartz																	
R-2010-5500	clr apatite																	
C-2010-5600	oli quartz																	
R-2010-2200	clr quartz																	
R-2010-7380	clr apatite																	
R-2010-7380	ilm apatite																	
R-2010-7380	oli apatite																	
R-2010-7380	oli apatite																	
R-2010-7380	clr quartz																	
R-2010-5172	clr quartz																	
C-2010-2839	clr quartz																	
B-2010-3225-C	clr quartz																	
B-2010-3225-C	clr quartz																	
B-2010-3225-C	oli quartz																	
B-2010-3225-C	clr quartz																	
B-2010-3225-C	clr quartz																	
R-2010-7625	oli quartz																	
R-2010-7625	clr apatite																	
R-2010-7625	clr apatite																	
R-2010-5100	clr quartz																	
R-2010-5100	clr quartz																	
R-2010-5100	clr quartz																	
R-2010-5100	clr quartz																	
R-2010-5100	clr quartz																	
R-2010-5100	clr quartz																	
R-2010-5470	clr quartz																	
R-2010-5470	clr sillimanite																	
R-2010-5470	cpx quartz																	
R-2010-1900	clr quartz																	

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	ZrO <sub>2</sub> wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	HfO <sub>2</sub> wt%	SUM	G-Class
R-2010-5470 clr	quartz																	
R-2010-7430 clr	quartz																	
R-2010-7430 clr	apatite																	
R-2010-7688 clr	quartz																	
R-2010-7688 clr	apatite																	
R-2010-7688 clr	apatite																	
R-2010-6150 oli	quartz																	
R-2010-6150 clr	quartz																	
R-2010-6070 clr	quartz																	
R-2010-7800 clr	quartz																	
R-2010-7800 clr	quartz																	
R-2010-6070 clr	quartz																	
R-2010-6250 clr	quartz																	
R-2010-5152 clr	quartz																	
R-2010-6130 clr	quartz																	
R-2010-3276 clr	quartz																	
R-2010-2370 clr	quartz																	
R-2010-2370 clr	quartz																	
R-2010-6610 clr	quartz																	
R-2010-6610 clr	quartz																	
R-2010-3400 clr	quartz																	
R-2010-3400 clr	quartz																	
R-2010-3400 clr	quartz																	
R-2010-3400 clr	quartz																	
R-2010-3400 clr	quartz																	
R-2010-8031 clr	apatite																	
R-2010-8031 clr	sillimanite																	
R-2010-8031 clr	quartz																	
R-2010-7390 clr	apatite																	
R-2010-7390 clr	apatite																	
R-2010-3479 clr	apatite																	
R-2010-3479 clr	quartz																	
R-2010-3479 clr	plagioclase																	
R-2010-1860-7 clr	apatite																	
R-2010-3589-C clr	quartz																	
R-2010-3589-C clr	sillimanite																	
R-2010-3589-C clr	apatite																	
R-2010-4250 clr	quartz																	
R-2010-8070 clr	quartz																	
R-2010-8070 clr	quartz																	
R-2010-8070 clr	quartz																	

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	ZrO <sub>2</sub> wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	HfO <sub>2</sub> wt%	SUM	G-Class
R-2010-3420 clr	quartz																	
R-2010-3420 clr	quartz																	

Samples listed below were lost during polishing

R-2010-5100 ecl	lost
R-2010-7380 cpx	lost
R-2010-2200 cpx	lost
R-2010-7380 cpx	lost
R-2010-6150 clr	lost
R-2010-7800 cpx	lost
R-2010-3276 clr	lost
R-2010-3276 gar	lost
R-2010-2370 cpx	lost
R-2010-8031 cpx	lost
R-2010-8031 cpx	lost
R-2010-8031 cpx	lost
R-2010-8031 gar	lost
R-2010-7390 ecl	lost
R-2010-7200 cpx	lost
R-2010-8070 cpx	lost

Debut Diamonds Inc.

Chris Meraw

No. of Samples: 155 WDS, 8 EDS

SRC Advanced Microanalysis Centre

125 - 15 Innovation Blvd, Saskatoon, SK, S7N 2X8

Tel: 306.933.7893 Fax: 306.933.5656 Email: microlab@src.sk.ca

Group No.: AMC-11-11

Date of Report: 12/15/2011

Electron Probe Microanalysis

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	SUM wt%	SubClass
M-2010-0120 chr	amphibole	42.741	1.699	10.996	0.052	20.556	0.343	0.009	8.311	11.662	0.054	1.394	1.109	b.d.	98.924	
M-2010-0120 chr	ilmenite	b.d.	49.403	b.d.	b.d.	46.079	3.875	b.d.	0.011	b.d.	0.072	0.008	b.d.	0.064	99.513	
M-2010-0120 cpx	cpx	53.243	0.026	0.742	0.486	4.598	0.149	0.025	15.743	24.036	0.022	0.726	b.d.	0.034	99.830	
M-2010-0120 cpx	cpx	55.644	b.d.	1.160	0.596	3.120	0.143	0.124	23.132	12.254	b.d.	0.221	0.088	0.022	96.504	
M-2010-0120 ecl	garnet	36.064	0.105	21.646	b.d.	27.407	8.218	b.d.	2.142	5.324	b.d.	b.d.	b.d.	0.001	100.906	crystal
M-2010-0291 chr	tourmaline	35.605	0.511	34.766	b.d.	9.390	0.007	b.d.	4.358	0.417	b.d.	1.876	0.038	0.003	86.971	
M-2010-0291 chr	amphibole	46.244	0.918	9.379	0.068	16.585	0.341	0.043	11.571	11.707	0.032	1.072	0.883	0.004	98.847	
M-2010-0291 ecl	garnet	36.699	b.d.	22.103	0.034	34.481	1.294	b.d.	4.896	1.255	b.d.	b.d.	b.d.	0.039	100.799	crystal
M-2010-0291 opx	cpx	52.933	0.107	1.290	0.494	4.658	0.150	0.024	17.067	22.462	0.006	0.380	b.d.	0.028	99.601	
M-2010-0291 chr	tourmaline	35.955	0.446	35.520	b.d.	8.205	0.023	b.d.	4.644	0.583	b.d.	1.658	0.040	b.d.	87.074	
M-2010-0291 cpx	cpx	53.703	0.128	0.502	0.803	3.026	0.075	0.095	16.539	23.738	b.d.	0.737	b.d.	b.d.	99.346	
M-2010-0291 cpx	cpx	53.070	0.050	1.486	1.046	3.305	0.083	0.166	16.337	22.960	b.d.	0.553	0.006	b.d.	99.061	
M-2010-0291 ilm	ilmenite	0.169	58.720	0.401	b.d.	31.552	0.455	b.d.	0.338	0.071	0.259	0.004	b.d.	b.d.	91.969	
M-2010-0980 chr	tourmaline	36.386	1.018	33.895	0.041	5.088	b.d.	b.d.	7.670	1.027	0.022	1.952	0.063	b.d.	87.164	
M-2010-0980 chr	tourmaline	36.142	0.824	34.651	b.d.	6.311	0.039	b.d.	6.361	0.733	b.d.	1.774	0.056	b.d.	86.892	
M-2010-0980 cpx	cpx	55.197	0.127	0.420	1.973	2.845	0.067	b.d.	16.142	21.923	0.056	1.627	0.010	b.d.	100.387	
M-2010-1540 chr	amphibole	45.095	0.910	8.532	0.022	19.314	0.414	b.d.	10.293	11.614	0.037	1.319	1.014	0.020	98.584	
M-2010-1540 ecl	garnet	37.909	0.471	18.772	0.027	6.557	0.283	b.d.	0.175	35.545	0.044	b.d.	0.003	b.d.	99.787	crystal
M-2010-1540 chr	tourmaline	36.197	0.828	34.348	0.041	5.505	0.007	b.d.	6.893	0.922	0.044	1.675	0.040	0.067	86.568	
M-2010-1540 cpx	cpx	51.164	0.029	1.249	0.688	4.388	0.118	0.118	15.720	20.674	b.d.	0.474	b.d.	0.050	94.672	
M-2010-1540 cpx	cpx	54.621	0.026	0.860	0.328	4.423	0.178	0.011	15.882	23.686	0.010	0.567	0.002	0.055	100.650	
M-2010-1540 ecl	staurolite	27.011	0.559	54.336	0.015	13.393	b.d.	b.d.	2.236	b.d.	b.d.	b.d.	b.d.	0.005	97.556	
M-2010-1540 oli	calcite	0.106	b.d.	b.d.	b.d.	b.d.	0.041	b.d.	b.d.	52.419	b.d.	0.050	b.d.	0.027	52.644	
M-2010-0950 ecl	garnet	38.465	0.354	14.503	b.d.	12.134	1.203	b.d.	0.058	33.529	0.094	b.d.	b.d.	0.002	100.342	crystal
M-2010-0950 chr	amphibole	43.018	1.427	11.441	0.035	17.606	0.272	0.009	10.272	11.740	0.046	1.416	1.394	0.033	98.709	
M-2010-0950 chr	ilmenite	b.d.	49.383	0.110	3.073	35.125	0.343	0.119	10.741	0.004	0.277	0.034	b.d.	0.071	99.280	
M-2010-0950 cpx	cpx	53.025	0.006	0.624	0.321	4.492	0.149	0.019	15.949	23.864	b.d.	0.604	0.005	0.027	99.085	
M-2010-0950 ilm	amphibole	45.629	1.515	9.870	0.067	15.422	0.293	0.014	11.594	12.030	0.044	0.970	0.964	b.d.	98.412	
M-2010-0950 ilm	amphibole	42.221	1.568	10.666	b.d.	21.634	0.312	b.d.	7.974	11.500	0.086	1.388	1.383	0.017	98.749	
M-2010-2990 chr	tourmaline	36.018	0.627	35.031	0.009	5.940	0.025	b.d.	6.482	0.881	0.026	1.636	0.042	0.012	86.730	
M-2010-2990 chr	amphibole	41.209	0.991	14.094	b.d.	18.021	0.395	b.d.	9.552	11.529	0.079	1.880	0.945	0.066	98.761	
M-2010-2990 chr	tourmaline	35.717	0.741	33.938	0.019	7.421	0.011	b.d.	5.969	0.851	0.011	1.789	0.041	0.049	86.555	
M-2010-2990 chr	cpx	50.274	0.511	6.223	0.216	11.688	0.283	0.036	15.435	12.105	0.007	1.018	0.586	0.063	98.445	
M-2010-2990 cpx	cpx	51.522	0.040	1.961	0.562	6.505	0.210	0.086	16.555	20.967	b.d.	0.581	b.d.	b.d.	98.989	



Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	SUM wt%	SubClass
M-2010-2990 cpx	cpx	52.894	0.045	1.126	0.280	8.176	0.172	0.061	17.499	19.045	0.018	0.533	b.d.	b.d.	99.849	
M-2010-2990 ecl	staurolite	27.915	0.588	54.044	0.020	12.497	0.105	b.d.	2.505	b.d.	b.d.	0.012	b.d.	0.042	97.728	
M-2010-2980 chr	tourmaline	35.810	0.718	33.858	0.009	6.538	b.d.	b.d.	6.441	0.758	0.014	1.931	0.036	b.d.	86.112	
M-2010-2980 chr	chromite	b.d.	0.367	14.644	52.696	19.577	0.192	0.089	12.776	b.d.	0.138	b.d.	b.d.	0.108	100.587	ultramafic
M-2010-2980 chr	hematite	b.d.	0.015	b.d.	b.d.	95.423	0.092	b.d.	b.d.	b.d.	0.112	0.014	b.d.	b.d.	95.657	
M-2010-2980 cpx	cpx	54.676	0.016	1.076	0.469	4.071	0.170	0.053	16.274	23.177	b.d.	0.579	0.002	0.050	100.613	
M-2010-2980 cpx	epidote	36.825	b.d.	21.474	0.004	14.685	0.118	b.d.	b.d.	22.976	0.127	b.d.	b.d.	0.042	96.253	
M-2010-2980 ecl	garnet	35.768	0.036	21.464	b.d.	33.968	0.233	b.d.	2.242	6.413	b.d.	b.d.	b.d.	0.040	100.162	crustal
M-2010-2980 ecl	garnet	37.539	0.184	18.713	b.d.	7.601	0.362	b.d.	0.194	34.350	0.045	b.d.	0.003	0.066	99.056	crustal
M-2010-2980 ilm	chromite	b.d.	1.742	3.577	62.562	19.341	0.281	0.110	12.367	b.d.	0.100	0.012	b.d.	0.054	100.145	diamond incl.
M-2010-2980 ilm	tourmaline	35.909	0.468	32.787	b.d.	9.651	0.042	b.d.	5.469	0.494	0.008	2.089	0.043	0.019	86.980	
M-2010-2980 opx	dolomite	b.d.	b.d.	b.d.	b.d.	0.027	b.d.	b.d.	20.441	31.940	b.d.	b.d.	b.d.	b.d.	52.407	
M-2010-1550 chr	ilmenite	b.d.	48.180	b.d.	b.d.	46.487	4.480	b.d.	0.011	b.d.	0.073	0.013	b.d.	0.054	99.298	
M-2010-1550 ecl	garnet	36.397	b.d.	21.911	0.046	35.214	2.502	b.d.	4.216	0.953	b.d.	b.d.	b.d.	0.035	101.275	crustal
M-2010-1550 ilm	Ti-magnetite	b.d.	10.439	0.088	b.d.	82.399	0.562	b.d.	b.d.	0.050	0.390	b.d.	b.d.	b.d.	93.927	
M-2010-1550 opx	dolomite	b.d.	b.d.	b.d.	b.d.	0.012	b.d.	b.d.	20.542	31.052	b.d.	b.d.	b.d.	b.d.	51.606	
M-2010-1550 chr	calcite	b.d.	b.d.	b.d.	b.d.	0.587	0.432	b.d.	0.160	48.540	b.d.	0.441	b.d.	0.005	50.166	
M-2010-1550 chr	amphibole	42.680	1.099	10.329	0.022	19.742	0.436	b.d.	9.208	11.567	0.051	1.138	1.167	0.038	97.476	
M-2010-1550 chr	titanite	29.328	36.063	2.021	b.d.	2.719	0.052	b.d.	0.073	27.098	0.359	b.d.	b.d.	0.060	97.773	
M-2010-1550 chr	amphibole	45.526	1.113	8.813	0.072	16.226	0.390	0.013	12.140	11.418	0.032	1.359	0.948	b.d.	98.047	
M-2010-1550 cpx	cpx	53.907	0.015	0.613	0.494	5.074	0.129	0.010	15.145	24.149	0.014	0.583	b.d.	0.025	100.155	
M-2010-1550 cpx	epidote	37.154	0.069	23.522	b.d.	12.779	0.253	b.d.	b.d.	23.155	0.026	b.d.	b.d.	b.d.	96.958	
M-2010-1550 cpx	epidote	35.708	b.d.	16.715	b.d.	20.288	0.011	b.d.	b.d.	22.243	0.071	b.d.	b.d.	0.025	95.060	
M-2010-1550 ecl	epidote	37.279	0.028	30.965	b.d.	3.847	0.400	b.d.	0.061	23.099	b.d.	b.d.	0.020	b.d.	95.698	
M-2010-1550 ecl	unknown	56.969	0.297	39.937	b.d.	11.008	0.185	b.d.	1.423	b.d.	b.d.	b.d.	b.d.	0.028	109.846	
M-2010-1550 ilm	amphibole	43.315	1.272	9.923	0.023	20.151	0.342	b.d.	9.086	11.642	0.067	1.336	1.193	b.d.	98.350	
M-2010-1550 ilm	amphibole	45.029	1.309	8.632	0.043	17.533	0.300	0.011	11.008	11.756	0.038	1.066	0.981	0.087	97.792	
M-2010-1550 oli	epidote	37.071	0.039	22.259	0.011	14.258	0.068	b.d.	b.d.	23.062	0.074	b.d.	b.d.	b.d.	96.841	
KC-715 cpx	cpx	53.401	0.022	1.936	0.394	5.844	0.163	0.056	15.524	22.450	b.d.	0.692	0.003	0.040	100.525	
KC-715 cpx	cpx	52.523	0.061	0.909	0.122	9.745	0.577	0.010	12.360	22.619	0.012	0.660	b.d.	0.023	99.621	
KC-715 ecl	staurolite	27.338	0.622	55.875	0.046	14.247	0.125	0.012	1.779	b.d.	0.019	b.d.	b.d.	b.d.	100.063	
KC-715 ecl	staurolite	26.788	0.493	56.569	0.011	13.723	0.117	b.d.	2.003	b.d.	0.007	b.d.	b.d.	b.d.	99.710	
KC-715 ilm	unknown	0.671	70.086	1.821	0.150	16.178	0.308	b.d.	0.399	0.246	0.490	0.014	b.d.	b.d.	90.363	
KC-716 chr	chromite	b.d.	0.196	6.011	42.904	47.554	0.881	0.062	0.727	b.d.	0.200	0.029	b.d.	b.d.	98.564	basaltic
KC-716 cpx	cpx	53.997	0.029	1.222	0.869	2.798	0.065	0.101	16.617	23.190	0.008	0.477	b.d.	b.d.	99.371	
KC-716 cpx	cpx	53.118	0.044	1.981	0.342	5.203	0.160	0.032	15.401	22.849	0.009	0.439	b.d.	0.009	99.588	
KC-716 ecl	garnet	35.808	0.037	21.763	b.d.	15.788	26.498	b.d.	b.d.	0.580	b.d.	0.020	b.d.	0.020	100.513	crustal
KC-717 chr	tourmaline	35.541	0.616	34.216	0.015	8.523	0.056	b.d.	5.564	0.293	b.d.	2.340	0.055	0.038	87.258	
KC-718 chr	amphibole	48.155	0.603	8.055	0.129	12.689	0.245	0.028	14.208	11.960	b.d.	0.842	0.503	0.004	97.421	
KC-718 cpx	cpx	53.097	0.071	0.766	b.d.	7.456	0.227	0.012	14.396	22.006	b.d.	0.749	b.d.	b.d.	98.781	

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	SUM wt%	SubClass
KC-718 cpx	cpx	53.863	0.027	0.761	0.176	5.450	0.271	0.008	14.631	23.601	0.010	0.507	b.d.	b.d.	99.306	
KC-718 ecl	staurolite	26.885	0.699	55.819	0.017	13.684	0.163	b.d.	1.825	b.d.	0.007	0.010	b.d.	0.002	99.111	
KC-718 oli	titanite	30.915	35.675	1.832	b.d.	1.222	0.082	b.d.	b.d.	27.824	0.195	b.d.	b.d.	0.002	97.746	
KC-719 chr	ilmenite	b.d.	51.117	b.d.	b.d.	47.970	0.157	b.d.	0.431	b.d.	0.183	b.d.	b.d.	0.109	99.967	
KC-719 cpx	cpx	54.498	0.212	1.496	2.640	2.757	0.075	0.031	15.364	19.790	0.049	2.350	0.013	0.004	99.279	
KC-719 cpx	cpx	52.809	0.312	1.581	1.729	5.578	0.127	0.078	17.984	18.278	b.d.	0.612	0.005	0.017	99.110	
KC-719 ecl	garnet	39.636	0.150	21.134	b.d.	5.005	0.278	b.d.	0.050	34.839	0.024	b.d.	0.002	0.024	101.144	crustal
KC-719 ilm	amphibole	43.794	0.912	10.517	b.d.	17.521	0.313	b.d.	10.709	11.157	0.043	1.450	0.672	0.069	97.158	
KC-719 oli	cpx	53.996	0.014	0.656	0.005	4.051	0.470	b.d.	16.577	23.083	b.d.	0.253	b.d.	0.002	99.105	
KC-720 chr	amphibole	44.104	0.597	10.479	0.023	17.329	0.351	b.d.	10.943	11.696	0.038	1.089	0.675	b.d.	97.325	
KC-720 chr	amphibole	44.133	0.756	10.493	0.019	17.767	0.316	b.d.	10.530	11.827	0.039	1.112	0.770	b.d.	97.763	
KC-720 cpx	cpx	53.511	0.007	1.143	0.228	5.402	0.184	b.d.	15.311	22.940	b.d.	0.535	b.d.	0.074	99.335	
KC-720 ecl	garnet	36.781	0.087	22.425	0.024	30.611	2.312	b.d.	1.454	8.253	0.027	b.d.	b.d.	0.029	102.004	crustal
KC-720 ilm	amphibole	45.221	0.902	9.413	0.038	14.376	0.308	0.026	12.588	11.684	0.036	1.289	0.625	0.009	96.516	
KC-721 chr	amphibole	42.515	1.102	10.750	0.009	18.708	0.316	b.d.	9.948	11.652	0.034	1.323	1.322	b.d.	97.680	
KC-721 chr	chromite	b.d.	0.414	14.756	51.585	27.722	0.288	0.048	7.545	b.d.	0.161	b.d.	b.d.	0.054	102.574	basaltic
KC-721 ilm	amphibole	44.641	1.030	11.007	b.d.	11.065	0.164	b.d.	14.462	12.099	0.062	1.513	1.023	0.011	97.078	
KC-722 chr	amphibole	40.635	0.989	15.401	b.d.	17.725	0.179	b.d.	8.695	10.824	0.040	1.598	0.830	b.d.	96.916	
KC-722 chr	unknown	0.243	63.281	0.702	0.052	25.080	0.472	b.d.	0.941	0.093	0.327	b.d.	b.d.	b.d.	91.192	
KC-722 cpx	cpx	53.306	0.026	1.381	0.483	5.168	0.160	0.065	15.624	22.315	b.d.	0.509	b.d.	0.047	99.084	
KC-722 cpx	cpx	53.095	0.015	0.530	0.091	5.403	0.225	0.017	15.057	23.948	b.d.	0.356	b.d.	0.027	98.763	
KC-722 cpx	cpx	52.773	0.010	0.817	0.076	6.753	0.260	b.d.	15.181	21.882	b.d.	0.587	b.d.	0.082	98.421	
KC-722 ilm	tourmaline	34.197	1.015	36.483	0.098	8.431	b.d.	b.d.	4.644	1.221	0.076	1.346	0.058	b.d.	87.570	
KC-724 chr	tourmaline	35.285	0.734	34.915	0.075	4.814	b.d.	b.d.	7.481	0.974	0.016	1.910	0.027	b.d.	86.232	
KC-724 chr	amphibole	44.527	0.795	8.661	0.082	17.876	0.285	0.016	10.743	11.666	0.016	1.234	0.809	0.030	96.739	
KC-724 cpx	cpx	51.136	0.233	3.175	1.295	5.222	0.138	0.034	17.690	19.493	0.019	0.186	b.d.	b.d.	98.621	
KC-724 ecl	staurolite	26.530	0.664	55.826	0.025	13.530	0.070	b.d.	1.744	b.d.	0.015	b.d.	0.002	0.066	98.472	
KC-724 ilm	chromite	b.d.	0.450	15.919	49.965	27.592	0.331	0.066	8.151	b.d.	0.181	0.005	b.d.	b.d.	102.660	basaltic
KC-726 ecl	garnet	37.871	0.057	22.173	b.d.	27.299	0.906	b.d.	5.440	6.766	0.064	b.d.	b.d.	0.029	100.604	G3
KC-726 oli	epidote	36.613	0.030	22.485	b.d.	14.772	0.079	b.d.	b.d.	22.860	0.022	b.d.	b.d.	b.d.	96.861	
KC-726 oli	epidote	36.757	0.057	24.533	b.d.	12.298	0.248	b.d.	0.010	22.612	0.012	b.d.	b.d.	b.d.	96.527	
KC-726 oli	epidote	36.497	0.045	23.815	0.056	13.138	0.109	b.d.	b.d.	22.855	0.043	b.d.	b.d.	0.052	96.611	
KC-727 chr	tourmaline	35.245	1.181	33.982	0.076	6.236	b.d.	b.d.	6.876	0.509	0.053	1.987	0.010	0.031	86.186	
KC-727 cpx	cpx	54.505	b.d.	1.410	0.732	8.270	0.180	0.057	18.207	12.863	0.016	0.117	0.024	b.d.	96.379	
KC-727 cpx	cpx	53.043	0.048	0.978	0.266	4.941	0.137	0.022	15.882	22.651	b.d.	0.568	b.d.	0.039	98.574	
KC-727 ecl	staurolite	26.286	0.531	55.696	0.017	14.069	0.008	b.d.	1.876	b.d.	0.018	b.d.	b.d.	0.046	98.546	
KC-728 chr	amphibole	42.617	1.699	10.689	0.017	14.066	0.122	b.d.	12.561	11.511	0.062	1.380	1.606	0.034	96.362	
KC-728 chr	tourmaline	35.247	0.925	35.401	0.016	6.512	b.d.	b.d.	6.124	0.798	0.017	1.827	0.033	0.046	86.947	
KC-728 chr	amphibole	41.975	0.478	12.993	0.034	18.683	0.159	0.021	9.105	11.432	0.061	1.283	0.642	b.d.	96.867	
KC-728 cpx	cpx	52.815	0.029	0.657	0.087	4.717	0.134	0.024	15.593	23.886	b.d.	0.418	b.d.	0.010	98.371	

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	SUM wt%	SubClass
KC-728 opx	serpentine	42.713	b.d.	26.372	b.d.	0.126	0.031	b.d.	b.d.	26.205	b.d.	b.d.	0.012	b.d.	95.458	
KC-729 cpx	cpx	52.838	0.012	0.887	0.186	7.793	0.243	0.016	14.864	21.381	0.010	0.564	0.003	b.d.	98.797	
KC-729 ilm	chromite	b.d.	0.407	15.534	50.150	29.439	0.296	0.035	6.459	b.d.	0.139	0.006	b.d.	0.025	102.490	basaltic
KC-729 opx	epidote	38.582	b.d.	35.382	b.d.	0.127	b.d.	b.d.	b.d.	24.453	b.d.	b.d.	0.102	0.026	98.673	
KC-730 chr	chromite	b.d.	0.272	18.224	49.638	20.088	0.223	0.158	12.209	b.d.	0.114	b.d.	b.d.	b.d.	100.927	basaltic
KC-730 chr	amphibole	43.595	0.808	10.755	0.067	16.064	0.289	b.d.	11.317	11.579	0.027	1.275	0.781	0.010	96.569	
KC-730 chr	ilmenite	b.d.	48.064	b.d.	b.d.	49.422	1.058	b.d.	b.d.	b.d.	0.171	0.004	b.d.	0.005	98.724	
KC-730 cpx	cpx	52.268	0.297	1.375	1.371	5.532	0.129	0.067	17.408	19.341	0.012	0.565	0.004	0.002	98.370	
KC-730 cpx	cpx	53.405	0.011	2.483	0.868	3.421	0.168	0.049	21.936	11.793	b.d.	0.861	0.305	b.d.	95.300	
KC-730 ecl	cpx	52.993	0.025	1.155	0.337	5.111	0.201	0.038	15.538	22.743	0.018	0.472	b.d.	0.066	98.698	
KC-731 chr	amphibole	44.566	0.762	10.391	0.054	14.852	0.264	0.014	12.090	11.741	0.034	1.173	0.502	0.002	96.446	
KC-731 cpx	cpx	53.550	0.005	0.442	0.271	4.794	0.139	0.030	15.028	23.898	b.d.	0.655	b.d.	0.050	98.862	
KC-732 chr	amphibole	41.471	1.916	10.659	b.d.	19.207	0.379	b.d.	9.433	11.178	0.045	1.489	1.379	0.010	97.167	
KC-732 cpx	cpx	50.279	0.470	3.378	0.483	6.146	0.128	0.030	16.097	21.007	0.037	0.181	b.d.	b.d.	98.236	
KC-732 cpx	cpx	52.471	0.029	1.500	0.128	5.602	0.210	b.d.	14.986	22.386	b.d.	1.129	b.d.	0.023	98.463	
KC-732 ecl	garnet	36.711	0.096	22.611	0.009	9.894	20.609	b.d.	3.015	7.229	0.015	b.d.	b.d.	b.d.	100.190	G3
KC-733 cpx	cpx	52.661	0.024	1.220	0.628	5.776	0.260	0.017	14.282	23.386	0.009	0.625	b.d.	b.d.	98.887	
KC-733 cpx	cpx	51.928	0.015	0.451	0.423	4.226	0.166	0.009	16.036	23.491	b.d.	0.459	0.002	0.037	97.244	
KC-734 chr	tourmaline	35.041	0.603	36.545	b.d.	6.865	0.093	b.d.	5.174	0.380	b.d.	1.794	0.037	0.025	86.557	
KC-734 cpx	cpx	54.153	0.018	0.938	0.478	2.839	0.084	0.031	16.675	23.362	b.d.	0.414	b.d.	0.003	98.996	
KC-734 ecl	titanite	30.370	37.209	1.120	b.d.	0.611	0.034	0.008	b.d.	27.949	0.150	b.d.	b.d.	0.095	97.545	
KC-735 cpx	cpx	52.239	0.038	1.452	0.299	5.857	0.139	0.062	15.165	22.625	0.014	0.615	b.d.	b.d.	98.505	
KC-735 cpx	cpx	52.969	0.004	0.624	0.116	6.104	0.235	0.021	14.342	23.120	0.010	0.993	b.d.	b.d.	98.538	
KC-735 ecl	staurolite	25.481	0.514	55.421	b.d.	13.449	0.115	0.011	2.131	b.d.	0.021	b.d.	b.d.	0.056	97.200	
KC-736 chr	tourmaline	34.251	0.373	35.388	0.099	5.825	0.017	b.d.	6.714	1.489	0.043	1.661	0.065	b.d.	85.924	
KC-736 ecl	garnet	38.331	0.196	21.659	b.d.	5.226	0.898	b.d.	0.079	33.654	0.013	b.d.	b.d.	0.067	100.123	crustal
KC-736 ecl	garnet	37.985	0.270	19.520	b.d.	7.884	0.670	b.d.	0.081	33.577	0.022	b.d.	b.d.	b.d.	100.008	crustal
KC-736 gar	epidote	36.596	0.103	25.741	b.d.	10.102	0.127	b.d.	0.027	23.307	0.030	b.d.	b.d.	0.025	96.058	
KC-736 ilm	tourmaline	34.457	0.604	35.118	b.d.	8.287	0.042	b.d.	5.156	0.453	b.d.	2.017	0.046	0.081	86.260	
KC-739 chr	tourmaline	34.920	0.515	35.670	0.059	5.704	b.d.	0.013	6.586	0.809	0.039	1.863	0.035	b.d.	86.214	
KC-739 chr	amphibole	44.650	0.538	10.089	0.014	14.722	0.260	b.d.	12.662	11.672	0.030	1.079	0.257	0.062	96.035	
KC-739 cpx	cpx	52.014	0.014	1.015	0.055	6.729	0.304	0.013	14.425	22.929	b.d.	0.570	b.d.	0.075	98.144	
KC-739 ecl	garnet	39.209	0.142	24.072	0.045	14.718	0.271	b.d.	11.267	10.482	b.d.	0.005	b.d.	b.d.	100.212	G3
KC-739 ecl	garnet	36.525	0.091	22.580	0.008	11.000	19.860	b.d.	3.563	6.196	0.009	b.d.	b.d.	0.065	99.897	G3
KC-740 chr	tourmaline	35.476	0.368	32.842	0.042	5.503	b.d.	b.d.	8.815	1.914	0.014	1.637	0.119	0.009	86.738	
KC-740 ecl	garnet	39.073	0.307	20.797	0.019	6.230	0.426	0.029	0.137	33.788	0.021	b.d.	0.003	0.054	100.883	crustal
KC-741 chr	tourmaline	34.663	0.660	34.574	0.030	8.407	0.063	b.d.	5.398	0.568	0.012	1.862	0.017	0.004	86.256	
KC-741 chr	tourmaline	35.128	0.411	35.613	0.009	7.213	0.013	b.d.	5.967	0.686	0.020	1.811	0.047	0.011	86.929	
KC-741 cpx	cpx	51.966	0.403	1.228	0.711	6.137	0.153	0.045	16.768	20.116	0.009	0.368	0.002	b.d.	97.905	
KC-741 ecl	staurolite	26.025	0.450	55.995	b.d.	14.034	0.140	b.d.	1.533	b.d.	b.d.	0.008	b.d.	0.061	98.245	

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	SUM wt%	SubClass
KC-741 ecl	garnet	35.607	0.010	22.045	0.017	38.256	0.558	b.d.	0.798	4.265	b.d.	b.d.	b.d.	0.053	101.611	crustal

EDS

M-2010-0120 clr	sillimanite
M-2010-0291 oli	apatite
M-2010-0950 oli	apatite
M-2010-2980 oli	apatite
M-2010-1550 cpx	monazite
KC-716 oli	apatite
KC-721 clr	apatite
KC-723 clr	apatite

Missing from vial

KC-740 cpx  
 KC-722 oli  
 KC-729 ?

Lost in polishing

M-2010-0120 wht  
 M-2010-0120 wht  
 M-2010-0120 oli  
 M-2010-0291 cpx  
 M-2010-0291 cpx  
 M-2010-0291 oli  
 M-2010-0291 oli  
 M-2010-0291 oli  
 M-2010-0291 oli  
 M-2010-0980 chr  
 M-2010-0980 cpx  
 M-2010-0980 cpx  
 M-2010-1540 cpx  
 M-2010-0950 ecl  
 M-2010-0950 chr  
 M-2010-0950 chr  
 M-2010-0950 cpx  
 M-2010-0950 oli  
 M-2010-2990 cpx  
 M-2010-2990 cpx

Sample	Mineral	SiO <sub>2</sub> wt%	TiO <sub>2</sub> wt%	Al <sub>2</sub> O <sub>3</sub> wt%	Cr <sub>2</sub> O <sub>3</sub> wt%	FeO wt%	MnO wt%	NiO wt%	MgO wt%	CaO wt%	V <sub>2</sub> O <sub>3</sub> wt%	Na <sub>2</sub> O wt%	K <sub>2</sub> O wt%	Nb <sub>2</sub> O <sub>5</sub> wt%	SUM wt%	SubClass
M-2010-2990	chr															
M-2010-2980	oli															
M-2010-2980	oli															
M-2010-2980	cpx															
M-2010-1550	clr															
M-2010-1550	oli															
M-2010-1550	oli															
M-2010-1550	oli															
M-2010-1550	oli															
M-2010-1550	ecl															
KC-717	ecl															
KC-718	chr															
KC-720	cpx															
KC-721	ecl															
KC-722	ecl															
KC-722	cpx															
KC-722	chr															
KC-723	cpx															
KC-726	gar															
KC-727	chr															
KC-728	cpx															
KC-729	cpx															
KC-729	cpx															
KC-731	cpx															
KC-731	ecl															
KC-732	chr															
KC-732	chr															
KC-733	cpx															
KC-733	chr															
KC-733	chr															
KC-734	cpx															
KC-735	oli															
KC-736	oli															
KC-736	gar															
KC-736	cpx															
KC-736	chr															
KC-736	cpx															
KC-740	ilm															
KC-741	cpx															
KC-742	cpx															