

measurements. Pyrrhotite (Fe_{1-x}S ; UO) and troilite (FeS ; OSU) were analyzed before and after each unknown glass to correct for any drift in the measured peak position. Analysis of troilite at conducted at University of Oregon relative to the pyrrhotite standard does not indicate a significant shift between the two reduced sulfur standards allowing for a direct comparison between measurements made at UO and OSU. Additionally, pyrite (FeS_2) and anhydrite (CaSO_4) mineral grains were analyzed at the beginning and end of each analytical session.

Beam conditions for sulfur peak shift measurements were similar to that used for glass major-element analysis with a 30 nA beam current, a 15 KeV accelerating voltage, and a 5-7 μm beam diameter. Each spectrometer was moved 0.00005 $\sin \theta$ units for 100 steps with a 5 sec counting time for standards (<9 minutes total time) and 30 sec counting time ($[\text{S}] > 900$ ppm; 50 minutes total time) and 60 sec counting time ($[\text{S}] < 900$ ppm; 100 minutes total time) for unknowns at each step. Each wavelength scan was fitted with a Gaussian curve to determine the peak position of the scan, reported as $\lambda(\text{SK}\alpha)$. Even at increased counting times of 60 sec per step, errors in peak fitting becomes increasing problematic at S concentrations below 300 ppm due to high backgrounds. Wavelength shifts ($\Delta\text{SK}\alpha$) are reported relative to troilite (FeS) in units of angstroms times 1000 (reported as $\text{\AA} * 10^3$). Sulfur peak positions determined at Oregon State University are in units of $\sin \theta * 10^5$ however may be converted to angstroms through the relationship:

$$\lambda(\text{\AA}) = 2d * \sin \theta \quad \text{equation (4)}$$

Where the 2d (interplanar spacing) distance for PET crystals is 8.75 $\text{\AA}$.

Calculation of sulfur speciation once the peak positions have been determined for unknowns and standards is described in detail in Rowe et al (in prep).

Standard glasses and minerals were analyzed for various time intervals to determine if the oxidation effect with prolonged beam time reported by Wallace and Carmichael (1994) could be reproduced in order to create a correction for this phenomenon. During glass analyses it was observed that higher sulfur glasses (higher initial sulfate proportion) generally experienced less oxidation than lower sulfur glasses possibly as a result of the higher initial oxidation state. However, a time series analysis of troilite, anhydrite, and barite mineral standards suggest that sulfur concentration and initial oxidation state may not be the only factor in determining the magnitude of the peak shift as no peak shift was observed during long beam exposure for troilite or barite standards while a significant shift was observed for long times on the anhydrite standard. This may suggest that bond type and strength is also a factor influencing the sulfur oxidation resulting from beam exposure. Na^+ migration has been suggested as a cause of surface oxidation of glasses (Fialin et al., 2004), however, the low S glass (Fig. 9) experiences a greater oxidation with prolonged beam time despite a lower Na_2O wt%.

To avoid an apparent increase in $\lambda(\text{SK}\alpha)$ from exposure to the electron beam, the beam location is moved incrementally at a rate of 1 $\mu\text{m}/\text{minute}$. This requires there to be $\sim 50\mu\text{m}^2$ of “fresh” glass to allow for complete analysis. Care was taken to avoid microprobe beam spots from major element measurements which had already

experienced beam damage. Due to the short time of analysis of reference minerals a stationary stage is acceptable (Rowe et al., in prep).

Over the course of a 24 hour analytical session on the Cameca SX100 at Oregon State University, 24 troilite standard analyses were conducted (Fig. 10) to test the reproducibility of the peak position on the SX 100. The reproducibility of the peak position was $0.08 \text{ \AA} \cdot 10^3$ for two spectrometers (spectrometers 3 and 4) and $0.12 \text{ \AA} \cdot 10^3$ for the third spectrometer (spectrometer 5; reported to 2σ). Repeat analysis of a Galapagos Spreading Center (95.5°W) glass (K 14-3; Christie et al., 1986), using the glass analysis protocol with 30 second/step count times, reproduced the sulfur speciation to $\pm 3.5\%$ (1σ based on 6 repeat analyses). Propagation of error (1σ) associated with the peak fit of a single spectrometer wave scan, and the standard deviation (1σ) of the three spectrometer measurements per analysis, are roughly equivalent to the error estimated by repeat analysis of K 14-3 glass. The peak fitting error is largely dependant on sulfur concentration of the melt inclusion and increases with decreasing sulfur content.

Table A1: Continued

	Elements													
	Si	Ti	Al	Cr	Fe	Ni	Mn	Mg	Ca	Na	K	P	S	Cl
Line	K α	K α	K α	K α	K α	K α	K α	K α	K α	NA	NA	NA	K α	NA
Spec	1	3	1	3	3	3	3	1	2	NA	NA	NA	2	NA
Crystal	TAP	LIF	TAP	LIF	LIF	LIF	LIF	TAP	PET				PET	
Peak (s)	10	10	10	10	10	20	10	10	10				30	10
Bk (s)	5	5	5	5	5	10	5	5	5				15	5
Dect. Lim.(ppm)	18	327	294	844	764	237	256	371	--				23	111
														149
Line	K α	K α	K α	NA	K α	NA	K α	K α	K α		K α	K α	K α	NA
Spec	1	5	1		4		4	2	5	2	5	3	3	NA
Crystal	TAP	PET	TAP		LIF		LIF	LTAP	PET	LTAP	PET	LPET	LPET	LPET
Peak (s)	20	10	10		10		20	20	20	60	60	30	30	50
Bk (s)	10	5	5		5		10	10	10	30	30	15	15	25
Dect. Lim.(ppm)	217	112	159		526		268	78	113	749	527	140	135	105
Line	K α	K α	K α	NA	K α	NA	NA	K α	K α		K α	NA	NA	NA
Spec	1	3	1		4		2	2	3	2	5			NA
Crystal	TAP	LPET	TAP		LIF		LTAP	LPET	LPET	LTAP	PET			NA
Peak (s)	10	20	10		10		20	10	10	10	10			NA
Bk (s)	5	10	5		5		5	5	5	5	5			NA
Dect. Lim.(ppm)	168	164	202		594		1090	194	1401	101				NA
Line	K α	K α	K α	K α	K α	NA	K α	K α	K α		K α	NA	NA	NA
Spec	1	5	1	4	4		4	2	5	2	5			NA
Crystal	TAP	PET	TAP	LIF	LIF		LTAP	LPET	LPET	LTAP	PET			NA
Peak (s)	10	20	10		10		10	10	10	10	10			NA
Bk (s)	5	10	5		5		5	5	5	5	5			NA
Dect. Lim.(ppm)	168	164	202		594		1090	194	1401	101				NA
Line	K α	K α	K α	K α	K α	NA	K α	K α	K α		K α	NA	NA	NA
Spec	1	5	1	4	4		4	2	5	2	5			NA
Crystal	TAP	PET	TAP	LIF	LIF		LIF	LTAP	PET	LTAP	PET			NA
Peak (s)	10	20	10		10		20	10	10	10	10			NA
Bk (s)	5	10	5		5		5	5	5	5	5			NA
Dect. Lim.(ppm)	126	175	1120	168	426		259	1012	99	1044	--			NA

Table A2: Long term reproducibility of glass standards analyzed by electron microprobe.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
Makaopuhi Lava Lake basaltic glass (USNM 113498/1 VG-A99)																
basl.1_1	4/2/2002	51.07	4.05	12.46	0.01	13.45		0.16	5.14	9.32	2.65	0.81	0.43	0.02	0.02	99.60
basl.1_2	4/2/2002	50.85	4.15	12.49	0.00	13.34		0.18	5.19	9.21	2.72	0.79	0.37	0.03	0.03	99.32
basl.1_3	4/2/2002	50.86	4.15	12.42	0.02	13.22		0.15	5.17	9.39	2.61	0.78	0.44	0.03	0.04	99.26
basl.1	4/24/2002	51.10	4.02	12.50	0.00	13.29		0.16	5.22	9.34	2.61	0.78	0.45	0.01	0.03	99.53
basl.2	4/24/2002	51.05	3.95	12.64	0.01	13.31		0.25	5.17	9.42	2.47	0.81	0.47	0.03	0.03	99.60
basl.1	10/18/2002	51.05	4.01	12.38	0.01	13.15		0.18	4.69	9.29	2.25	0.81	0.35	0.02	0.03	98.23
basl.2	10/18/2002	51.17	3.71	12.40	0.01	13.27		0.18	4.48	8.72	2.27	0.77	0.41	0.03	0.03	97.45
basl.1	2/26/2003	50.57	3.96	12.46	0.00	12.56		0.18	5.04	9.20	2.73	0.82	0.42	0.01	0.02	97.97
basl.2	2/26/2003	50.89	3.89	12.44	0.01	12.75		0.18	5.07	9.24	2.63	0.84	0.44	0.02	0.02	98.41
basl.1	3/12/2003	50.52	4.11	12.37	0.00	13.34		0.22	5.13	9.33	2.54	0.78	0.45	0.02	0.02	98.82
basl.2	3/12/2003	50.26	4.12	12.41	0.00	13.52		0.18	5.16	9.46	2.51	0.81	0.41	0.02	0.02	98.89
basl.1	3/27/2003	50.65	4.04	12.40	0.01	13.10		0.15	5.14	9.13	2.60	0.78	0.42	0.02	0.02	98.45
basl.2	3/27/2003	50.95	3.98	12.55	0.00	12.86		0.19	5.10	9.07	2.59	0.78	0.42	0.02	0.02	98.52
basl.1	4/19/2003	50.95	4.08	12.40	0.00	13.18		0.17	5.16	9.37	2.56	0.81	0.46	0.02	0.02	99.17
basl.2	4/19/2003	51.11	3.93	12.65	0.00	13.59		0.23	5.22	8.43	2.51	0.79	0.46	0.02	0.03	98.95
basl.1	4/23/2003	52.01	3.94	12.72	0.04	12.76		0.18	4.94	9.12	2.49	0.82	0.42	0.01	0.02	99.48
basl.2	4/23/2003	52.21	4.07	12.63	0.00	12.47		0.21	4.97	9.28	2.51	0.87	0.44	0.01	0.02	99.69
basl.1	5/16/2003	50.73	4.04	12.14	0.01	13.05		0.22	5.08	9.34	2.62	0.82	0.45	0.01	0.02	98.53
basl.2	5/16/2003	50.57	3.96	12.17	0.00	13.27		0.22	5.11	9.23	2.64	0.80	0.47	0.01	0.02	98.47
basl.1	6/23/2003	50.59	4.07	12.31	0.01	13.42		0.17	4.98	9.28	2.62	0.78	0.44	0.01	0.03	98.70
basl.2	6/23/2003	50.63	4.22	12.35	0.00	13.15		0.14	5.01	9.41	2.66	0.76	0.43	0.02	0.02	98.80
basl.1	7/8/2003	51.03	4.24	12.41	0.00	12.95		0.18	4.92	9.36	2.51	0.74	0.47	0.02	0.02	98.85
basl.2	7/8/2003	50.80	4.02	12.31	0.00	13.32		0.12	4.95	9.27	2.58	0.73	0.40	0.03	0.03	98.56
basl.1	7/31/2003	50.50	4.10	12.33	0.00	13.20		0.18	4.90	9.42	2.56	0.73	0.45	0.02	0.02	98.39
basl.2	7/31/2003	50.58	3.99	12.35	0.00	13.06		0.17	4.95	9.32	2.51	0.73	0.43	0.01	0.02	98.10
basl.1	8/1/2003	50.61	3.91	12.31	0.00	13.00		0.15	4.98	9.33	2.58	0.65	0.43	0.01	0.02	97.99
basl.2	8/1/2003	50.38	3.86	12.29	0.00	12.98		0.17	4.97	9.28	2.50	0.67	0.42	0.01	0.02	97.55
basl.1	8/2/2003	50.61	4.12	12.42	0.02	13.63		0.19	5.17	9.34	2.60	0.80	0.39	0.01	0.02	99.32
basl.2	8/2/2003	50.60	4.10	12.40	0.00	13.23		0.16	5.17	9.40	2.54	0.81	0.46	0.02	0.02	98.91
basl.1	10/2/2003	50.65	4.09	12.60	0.00	13.34		0.20	5.14	9.36	2.56	0.82	0.43	0.00	0.00	99.21
basl.2	10/2/2003	50.63	4.21	12.55	0.03	12.90		0.17	5.14	9.26	2.55	0.84	0.47	0.01	0.01	98.75
basl.1	10/7/2003	50.09	4.13	12.53	0.00	13.42		0.20	5.01	9.28	2.41	0.81	0.48	0.01	0.02	98.42
basl.1	10/25/2003	51.21	4.03	12.41	0.00	13.69		0.12	5.03	9.40	2.53	0.90	0.41	0.01	0.02	99.76
basl.1	10/25/2003	51.23	3.95	12.33	0.00	12.90		0.15	4.93	9.40	2.45	0.80	0.40	0.02	0.03	98.60
basl.2	10/25/2003	51.05	4.04	12.44	0.01	13.62		0.22	5.03	9.27	2.59	0.87	0.42	0.01	0.03	99.61

Table A2: Continued.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
Makaopuhi Lava Lake basaltic glass (USNM 113498/1 VG-A99)																
basl.2	10/25/2003	51.24	4.08	12.51	0.00	13.08		0.20	4.97	9.29	2.47	0.78	0.47	0.02	0.03	99.14
basl.1	10/26/2003	49.96	3.82	12.24	0.01	12.24		0.19	5.02	8.53	2.49	0.79	0.46	0.01	0.02	95.79
basl.1	10/26/2003	51.39	4.16	12.56	0.00	13.62		0.15	5.09	9.34	2.62	0.90	0.49	0.02	0.02	100.35
basl.2	10/26/2003	49.99	3.82	12.19	0.01	12.56		0.17	5.01	8.32	2.52	0.77	0.41	0.03	0.02	95.81
basl.2	10/26/2003	51.29	4.13	12.38	0.00	13.48		0.22	5.05	9.25	2.55	0.85	0.46	0.02	0.03	99.72
basl.1	11/13/2003	51.19	4.01	12.56	0.00	13.07		0.20	5.18	9.32	2.54	0.85	0.45	0.01	0.03	99.41
basl.2	11/13/2003	51.05	4.10	12.47	0.01	13.26		0.15	5.15	9.08	2.61	0.87	0.46	0.02	0.03	99.27
basl.1	11/14/2003	51.02	3.98	12.51	0.00	13.12		0.21	5.13	9.29	2.64	0.87	0.45	0.00	0.03	99.26
basl.1	11/17/2003	51.24	4.07	12.43	0.00	13.06		0.20	5.07	8.33	2.56	0.90	0.46	0.01	0.03	98.36
basl.1	11/17/2003	50.56	4.01	12.24	0.03	12.66		0.17	5.03	8.56	2.57	0.86	0.45	0.02	0.02	97.20
basl.2	11/17/2003	51.32	4.01	12.38	0.02	13.42		0.22	5.09	8.52	2.54	0.88	0.45	0.01	0.03	98.88
basl.2	11/17/2003	49.93	4.15	12.16	0.00	12.86		0.18	5.04	8.61	2.66	0.89	0.49	0.03	0.03	97.02
basl.1	12/3/2003	51.01	3.96	12.46	0.01	13.52		0.17	5.17	9.35	2.54	0.84	0.48	0.01	0.02	99.54
basl.2	12/3/2003	50.73	3.85	12.44	0.00	13.16		0.22	5.18	9.18	2.54	0.85	0.46	0.02	0.03	98.66
basl.1	2/28/2004	51.17	4.04	12.52	0.02	13.36	0.01	0.21	5.28	9.26	2.60	0.86	0.48	0.02	0.02	99.86
basl.2	2/28/2004	50.92	4.06	12.51	0.00	13.06	0.00	0.13	5.29	9.23	2.70	0.86	0.42	0.02	0.03	99.23
basl.1	3/1/2004	50.75	4.02	12.45	0.02	13.51	0.00	0.18	5.32	9.39	2.60	0.89	0.44	0.01	0.03	99.61
basl.2	3/1/2004	50.35	4.07	12.33	0.03	13.08	0.03	0.19	5.19	9.39	2.57	0.87	0.48	0.02	0.02	98.62
basl.3	3/1/2004	50.29	3.87	12.36	0.00	13.60	0.00	0.17	5.21	9.29	2.64	0.86	0.38	0.01	0.04	98.71
basl.1	3/30/2004	51.25	3.83	12.52	0.00	13.30	0.00	0.21	5.27	9.28	2.73	0.86	0.39	0.02	0.02	99.68
basl.2	3/30/2004	50.79	3.95	12.37	0.02	13.11	0.00	0.16	5.13	9.07	2.66	0.87	0.44	0.01	0.03	98.63
basl.1	4/13/2004	49.11	4.19	12.11	0.03	12.78	0.00	0.16	5.13	9.14	2.63	0.83	0.20	0.02	0.02	96.33
basl.2	4/13/2004	48.68	4.19	11.96	0.01	13.16	0.01	0.18	5.15	9.01	2.59	0.87	0.21	0.00	0.02	96.06
basl.3	4/13/2004	51.07	4.08	12.49	0.02	12.98	0.01	0.23	5.13	9.27	2.56	0.89	0.19	0.01	0.02	98.94
basl.1	4/19/2004	50.21	4.14	12.47	0.00	12.92	0.01	0.18	5.15	9.30	2.58	0.88	0.43	0.01	0.03	98.29
basl.2	4/19/2004	50.38	4.17	12.30	0.00	13.03	0.01	0.24	5.19	9.38	2.71	0.88	0.40	0.00	0.02	98.72
basl.3	4/19/2004	50.94	4.15	12.49	0.00	13.04	0.06	0.18	5.26	9.41	2.58	0.86	0.46	0.01	0.02	99.46
basl.4	4/19/2004	50.97	3.90	12.48	0.00	12.91	0.00	0.22	5.15	8.57	2.69	0.86	0.52	0.01	0.03	98.31
basl.1	4/27/2004	51.13	4.00	12.55	0.00	13.23	0.00	0.23	5.24	9.39	2.53	0.90	0.44	0.00	0.03	99.68
basl.1	4/27/2004	50.34	4.03	12.33	0.04	13.19	0.00	0.19	5.23	9.49	2.64	0.84	0.45	0.01	0.02	98.80
basl.2	4/27/2004	51.10	4.04	12.43	0.03	13.19	0.03	0.20	5.20	9.33	2.61	0.89	0.48	0.01	0.03	99.59
basl.2	4/27/2004	49.99	4.14	12.35	0.03	13.03	0.00	0.19	5.20	9.54	2.59	0.83	0.40	0.02	0.03	98.33
basl.3	4/27/2004	51.34	3.97	12.57	0.00	13.25	0.00	0.17	5.21	9.31	2.59	0.80	0.49	0.02	0.02	99.73
basl.4	4/27/2004	51.08	3.95	12.54	0.00	13.20	0.00	0.21	5.20	9.45	2.42	0.80	0.40	0.01	0.02	99.28
basl.5	4/27/2004	51.40	4.07	12.52	0.05	13.27	0.00	0.09	5.24	9.39	2.43	0.84	0.47	0.01	0.05	99.82

Table A2: Continued.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
Makaopuhi Lava Lake basaltic glass (USNM 113498/1 VG-A99)																
basl.1	5/4/2004	50.75	4.15	12.38	0.00	13.58	0.03	0.20	5.30	9.37	2.54	0.85	0.48	0.01	0.02	99.66
basl.1	5/4/2004	50.88	4.01	12.43	0.01	12.56	0.01	0.17	5.11	9.31	2.51	0.83	0.45	0.01	0.02	98.30
basl.2	5/4/2004	50.76	4.25	12.29	0.00	13.48	0.04	0.15	5.21	9.51	2.57	0.84	0.44	0.02	0.03	99.61
basl.2	5/4/2004	50.61	4.00	12.32	0.01	12.80	0.05	0.15	5.16	9.46	2.59	0.85	0.45	0.01	0.03	98.50
basl.1	5/18/2004	50.74	3.92	12.46	0.03	13.38	0.00	0.16	5.26	9.29	2.66	0.82	0.43	0.01	0.02	99.17
basl.1	5/18/2004	50.06	4.08	12.22	0.02	12.42	0.00	0.18	5.15	9.21	2.69	0.85	0.43	0.01	0.02	97.35
basl.1	5/18/2004	50.99	4.16	12.49	0.00	13.14	0.00	0.18	5.31	9.49	2.61	0.87	0.42	0.02	0.02	99.70
basl.2	5/18/2004	50.62	3.98	12.39	0.02	13.18	0.00	0.20	5.35	9.20	2.55	0.82	0.42	0.02	0.02	98.76
basl.2	5/18/2004	49.53	4.17	12.14	0.06	12.59	0.00	0.25	5.16	9.16	2.68	0.84	0.44	0.02	0.03	97.05
basl.3	5/18/2004	50.28	4.00	12.21	0.03	13.00	0.00	0.19	5.21	9.41	2.71	0.86	0.44	0.01	0.02	98.36
basl.4	5/18/2004	50.65	4.15	12.38	0.00	13.21	0.00	0.19	5.26	9.45	2.75	0.84	0.43	0.01	0.02	99.33
basl.5	5/18/2004	51.14	4.25	12.50	0.00	13.16	0.00	0.20	5.36	9.11	2.40	0.85	0.39	0.03	0.02	99.41
basl.1	5/21/2004	50.64	4.06	12.49	0.01	13.10	0.00	0.18	5.26	9.16	2.60	0.86	0.49	0.02	0.03	98.88
basl.1	5/21/2004	51.53	4.14	12.36	0.00	13.50	0.02	0.17	5.10	9.38	2.44	0.85	0.43	0.01	0.03	99.95
basl.2	5/21/2004	51.08	4.11	12.44	0.00	13.47	0.01	0.17	5.18	9.51	2.66	0.88	0.44	0.01	0.02	99.98
basl.2	5/21/2004	51.29	4.14	12.39	0.02	13.42	0.00	0.16	5.03	9.31	2.50	0.84	0.44	0.02	0.03	99.59
basl.3	5/21/2004	50.84	4.06	12.37	0.01	13.33	0.00	0.20	5.23	9.47	2.49	0.84	0.48	0.01	0.02	99.34
basl.1	5/23/2004	51.70	4.04	12.51	0.00	13.71	0.01	0.19	5.08	9.34	2.40	0.83	0.45	0.02	0.02	100.31
basl.2	5/23/2004	51.59	4.10	12.51	0.00	13.61	0.03	0.21	5.16	9.34	2.54	0.86	0.48	0.01	0.03	100.46
basl.1	6/8/2004	50.85	4.09	12.51	0.02	13.10	0.00	0.20	5.23	9.47	2.55	0.82	0.45	0.02	0.03	99.36
basl.2	6/8/2004	51.14	4.06	12.36	0.04	13.59	0.00	0.17	5.13	9.31	2.48	0.81	0.43	0.02	0.02	99.57
basl.1	6/21/2004	51.22	4.00	12.64	0.03	13.10	0.02	0.24	5.20	9.36	2.59	0.81	0.46	0.02	0.03	99.72
basl.1	6/21/2004	52.18	4.17	12.65	0.01	13.82	0.00	0.15	5.23	9.30	1.32	0.86	0.35	0.02	0.03	100.09
basl.2	6/21/2004	50.88	3.91	12.41	0.00	12.91	0.00	0.27	5.14	9.32	2.52	0.85	0.45	0.01	0.02	98.68
basl.2	6/21/2004	52.28	4.12	12.74	0.00	13.63	0.00	0.19	5.22	9.40	1.40	0.85	0.36	0.02	0.02	100.21
basl.1	9/28/2004	50.81	4.11	12.53	0.01	13.45	0.00	0.16	5.23	9.33	2.70	0.86	0.53	0.02	0.02	99.74
basl.2	9/28/2004	50.46	4.10	12.41	0.00	13.51	0.01	0.21	5.22	9.10	2.75	0.85	0.48	0.03	0.03	99.15
basl std	6/2/2005	50.66	4.18	12.69	0.00	13.07	-0.04	0.17	5.18	8.98	2.43	0.84	0.46	0.02	0.02	98.71
basl std	6/2/2005	50.57	4.19	12.92	0.00	13.71	-0.01	0.18	5.18	9.10	2.53	0.83	0.44	0.02	0.02	99.68
basl std	6/2/2005	52.00	4.26	13.12	0.00	13.19	0.02	0.21	5.20	9.06	1.00	0.82	0.44	0.01	0.02	99.37
basl std	7/19/2005	50.95	4.09	12.67	-0.01	13.14	0.00	0.19	5.08	9.06	2.46	0.82	0.46	0.02	0.02	98.96
basl std	7/19/2005	51.05	4.23	12.74	0.01	13.36	0.02	0.23	5.11	9.13	2.48	0.82	0.46	0.01	0.02	99.67
basl std	8/3/2005	51.04	4.12	12.84	0.01	13.29	0.01	-0.18	5.16	9.19	2.28	0.83	0.11	0.02	0.02	98.92
basl std	8/3/2005	51.13	4.16	12.77	0.02	13.38	0.04	0.18	5.14	9.44	2.57	0.84	0.47	0.01	0.02	100.16
basl std.	8/17/2005	50.78	4.08	12.91	-0.02	13.42	-0.02	0.16	5.11	9.42	2.44	0.83	0.49	0.02	0.02	99.69

Table A2: Continued.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
Makaopuhi Lava Lake basaltic glass (USNM 113498/1 VG-A99)																
basl std.	8/17/2005	50.79	3.99	12.81	0.01	13.47	0.02	0.18	5.13	9.37	2.50	0.82	0.50	0.02	0.02	99.61
basl	10/16/2005	51.22	4.01	12.71	0.01	13.31	0.05	0.19	5.02	9.27	2.62	0.81	0.42	0.01	0.02	99.68
basl	10/16/2005	51.16	4.06	12.71	0.02	13.23	0.00	0.19	5.04	9.30	2.64	0.84	0.43	0.01	0.02	99.66
basl std	11/21/2005	51.16	3.97	12.76	0.00	13.30	-0.05	0.21	5.11	9.30	2.61	1.13	0.39	0.02	0.02	99.98
basl std	12/28/2005	51.48	4.09	12.80	-0.01	13.18	-0.02	0.20	5.12	9.21	2.54	0.84	0.46	0.02	0.02	99.95
basl std	12/28/2005	51.21	4.15	12.67	0.01	13.43	0.02	0.20	5.03	9.28	2.59	0.82	0.46	0.02	0.02	99.90
Average		50.86	4.06	12.47	0.01	13.20	0.01	0.18	5.13	9.24	2.53	0.83	0.43	0.02	0.02	98.97
Standard deviation		0.54	0.10	0.18	0.01	0.30	0.02	0.04	0.12	0.25	0.24	0.05	0.06	0.01	0.01	0.92
BCR-2G																
BCR-2G.1	2/28/2004	54.84	2.19	13.53	0.02	12.16	0.00	0.21	3.68	6.90	3.17	1.87	0.35	0.01	0.01	98.93
BCR-2G.2	2/28/2004	54.79	2.18	13.61	0.00	11.96	0.07	0.22	3.73	7.00	3.01	1.86	0.33	0.01	0.01	98.77
BCR-2G.1	3/1/2004	53.64	2.30	13.44	0.00	12.36	0.05	0.16	3.72	7.27	3.03	1.85	0.35	0.00	0.01	98.19
BCR-2G.2	3/1/2004	53.90	2.27	13.29	0.00	12.32	0.06	0.16	3.68	7.32	3.17	1.84	0.34	0.00	0.01	98.35
BCR-2G.1	3/30/2004	55.14	2.20	13.50	0.00	12.42	0.00	0.20	3.70	7.25	3.20	1.83	0.32	0.00	0.01	99.78
BCR-2G.2	3/30/2004	54.83	2.27	13.59	0.01	12.36	0.09	0.21	3.67	7.31	2.94	1.81	0.37	0.01	0.01	99.48
BCR-2G.1	4/13/2004	54.94	2.13	13.73	0.05	12.00	0.00	0.13	3.64	6.70	2.91	1.77	0.14	0.00	0.01	98.15
BCR-2G.2	4/13/2004	54.99	2.17	13.67	0.01	12.18	0.01	0.18	3.64	6.86	2.99	1.79	0.12	0.00	0.01	98.61
BCR-2G.1	4/19/2004	53.85	2.38	13.55	0.00	12.07	0.02	0.15	3.66	7.28	2.95	1.84	0.34	0.00	0.01	98.11
BCR-2G.1	4/19/2004	55.12	2.38	13.70	0.00	12.36	0.03	0.15	3.73	7.25	3.03	1.80	0.40	0.00	0.01	99.94
BCR-2G.2	4/19/2004	54.06	2.35	13.57	0.02	11.95	0.00	0.18	3.65	7.39	3.05	1.84	0.38	0.01	0.01	98.45
BCR-2G.2	4/19/2004	55.02	2.41	13.64	0.02	12.34	0.00	0.18	3.78	7.32	2.81	1.80	0.36	0.00	0.01	99.68
BCR-2G.1	4/27/2004	54.89	2.28	13.66	0.02	12.22	0.00	0.16	3.69	7.33	3.01	1.77	0.36	0.00	0.01	99.40
BCR-2G.1	4/27/2004	53.71	2.24	13.53	0.00	12.37	0.00	0.18	3.69	7.08	2.82	1.74	0.38	0.01	0.01	97.76
BCR-2G.1	4/27/2004	55.18	2.29	13.79	0.01	12.03	0.01	0.21	3.65	7.41	2.87	1.75	0.30	0.00	0.01	99.51
BCR-2G.2	4/27/2004	54.94	2.18	13.53	0.01	12.03	0.01	0.18	3.77	7.28	2.97	1.74	0.41	0.00	0.01	99.05
BCR-2G.2	4/27/2004	54.05	2.23	13.60	0.00	12.34	0.01	0.19	3.60	7.15	3.00	1.72	0.35	0.01	0.01	98.26
BCR-2G.2	4/27/2004	55.21	2.28	13.88	0.01	12.44	0.00	0.19	3.74	7.25	2.94	1.76	0.34	0.00	0.01	100.04
BCR-2G.1	5/4/2004	54.29	2.40	13.39	0.00	12.50	0.00	0.22	3.76	7.39	2.94	1.71	0.34	0.01	0.01	98.95
BCR-2G.1	5/4/2004	54.88	2.25	13.56	0.00	11.85	0.01	0.12	3.80	7.31	2.79	1.80	0.33	0.00	0.01	98.71
BCR-2G.2	5/4/2004	53.34	2.32	13.16	0.00	12.61	0.02	0.17	3.62	7.21	2.90	1.63	0.32	0.00	0.01	97.31
BCR-2G.2	5/4/2004	54.77	2.31	13.50	0.01	12.54	0.02	0.21	3.79	7.17	3.02	1.78	0.34	0.00	0.01	99.50
BCR-2G.3	5/4/2004	54.94	2.30	13.53	0.00	12.21	0.00	0.12	3.78	7.32	2.90	1.77	0.35	0.02	0.01	99.25
BCR-2G.1	5/18/2004	55.21	2.28	13.49	0.00	12.19	0.01	0.22	3.81	7.35	2.95	1.73	0.32	0.01	0.01	99.58
BCR-2G.2	5/18/2004	55.07	2.39	13.65	0.04	12.73	0.00	0.29	3.78	7.36	2.89	1.77	0.37	0.00	0.01	100.35
BCR-2G.3	5/18/2004	55.09	2.44	13.67	0.05	12.44	0.00	0.18	3.82	7.41	2.80	1.84	0.38	0.00	0.01	100.12

Table A2: Continued.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
BCR-2G																
BCR-2G.1	5/21/2004	54.61	2.37	13.39	0.02	12.45	0.03	0.19	3.66	7.45	2.68	1.84	0.36	0.01	0.01	99.06
BCR-2G.1	9/28/2004	53.45	2.29	13.48	0.02	12.19	0.00	0.17	3.77	7.30	2.87	1.85	0.42	0.01	0.01	97.83
BCR-2G.2	9/28/2004	53.22	2.29	13.32	0.00	12.49	0.01	0.25	3.79	7.21	2.95	1.86	0.37	0.00	0.01	97.77
BCR-2G.3	9/28/2004	53.35	2.26	13.28	0.00	12.19	0.02	0.20	3.71	7.37	2.93	1.82	0.41	0.00	0.01	97.53
BCR-2G	6/2/2005	54.61	2.34	13.80	-0.01	12.43	-0.01	0.19	3.65	7.24	2.62	1.78	0.39	0.01	0.01	99.07
BCR-2G	6/2/2005	54.42	2.37	14.01	-0.01	12.67	0.01	0.18	3.66	7.24	2.58	1.79	0.36	0.00	0.01	99.30
BCR-2G-1	7/19/2005	54.73	2.35	13.61	0.01	12.34	-0.01	0.13	3.63	7.14	2.68	1.74	0.38	0.00	0.01	98.76
BCR-2G-2	7/19/2005	54.73	2.34	13.67	0.00	12.15	0.03	0.21	3.62	7.03	2.63	1.77	0.37	0.00	0.01	98.58
BCR-2G-1	8/3/2005	54.35	2.35	14.06	0.01	12.54	0.02	0.22	3.73	7.26	2.85	1.77	0.37	0.00	0.01	99.53
BCR-2G-2	8/17/2005	54.58	2.39	13.94	0.01	12.44	0.01	0.21	3.71	7.26	2.79	1.78	0.37	0.00	0.01	99.50
BCR-2G	8/17/2005	54.60	2.30	14.01	0.00	12.65	0.01	0.19	3.78	7.45	2.71	1.73	0.39	0.00	0.01	99.84
BCR-2G	8/17/2005	54.34	2.28	14.19	0.01	12.56	0.01	0.13	3.73	7.24	2.62	1.75	0.43	0.00	0.01	99.31
BCR-2G	8/18/2005	54.43	2.35	14.14	0.01	12.61	-0.03	0.22	3.82	7.30	2.74	1.71	0.37	0.00	0.01	99.70
BCR-2G	8/18/2005	54.73	2.29	14.16	-0.01	12.39	-0.03	0.18	3.81	7.33	2.68	1.71	0.36	0.00	0.01	99.66
BCR-2G.1	12/28/2005	55.02	2.36	13.87	-0.01	12.54	-0.01	0.16	3.66	7.25	2.92	1.79	0.38	0.01	0.02	99.99
BCR-2G.2	12/28/2005	54.76	2.29	13.92	0.04	12.32	-0.04	0.17	3.70	7.27	2.89	1.80	0.39	0.00	0.01	99.57
BCR-2G	1/3/2006	55.36	2.32	13.81	0.03	12.34	0.03	0.20	3.76	7.16	2.91	1.80	0.40	-0.01	0.01	100.12
BCR-2G	1/3/2006	55.02	2.33	14.01	0.01	12.64	0.02	0.17	3.79	7.17	2.84	1.77	0.36	0.00	0.01	100.15
BCR-2G	1/3/2006	55.07	2.30	13.95	-0.01	12.43	-0.03	0.22	3.75	7.14	2.85	1.79	0.37	0.01	0.01	99.89
BCR-2G	1/3/2006	55.30	2.30	13.93	0.00	12.57	-0.03	0.22	3.74	7.28	2.85	1.78	0.35	0.00	0.01	100.32
BCR-2G	1/3/2006	55.49	2.33	14.22	0.01	12.46	0.01	0.21	3.75	7.21	2.88	1.78	0.34	0.00	0.01	100.70
BCR-2G	1/3/2006	55.10	2.33	14.05	0.01	12.44	0.03	0.19	3.77	7.19	2.87	1.79	0.37	0.00	0.00	100.14
BCR-2G	1/3/2006	55.17	2.33	14.11	0.01	12.21	-0.02	0.20	3.79	7.23	2.84	1.78	0.36	0.00	0.01	100.06
BCR-2G	1/3/2006	55.14	2.30	13.88	0.01	12.31	0.01	0.23	3.77	7.22	2.94	1.79	0.35	0.02	0.14	100.12
BCR-2G	1/3/2006	55.17	2.32	14.06	0.00	12.39	0.03	0.18	3.77	7.10	2.83	1.79	0.36	0.00	0.01	100.01
BCR-2G	1/3/2006	55.27	2.36	13.97	0.01	12.51	0.01	0.20	3.78	7.23	2.83	1.79	0.39	0.00	0.01	100.36
Average		54.67	2.30	13.72	0.01	12.35	0.01	0.19	3.72	7.23	2.88	1.78	0.36	0.00	0.01	99.25
Standard deviation		0.58	0.07	0.27	0.01	0.20	0.02	0.03	0.06	0.14	0.14	0.05	0.05	0.01	0.02	0.84
BHVO-2G																
BHVO-2G.1	2/28/2004	50.10	2.75	13.63	0.00	10.72	0.11	0.14	7.47	11.03	2.31	0.54	0.27	0.00	0.01	99.09
BHVO-2G.2	2/28/2004	50.28	2.67	13.64	0.09	10.70	0.03	0.15	7.43	11.08	2.18	0.56	0.22	0.01	0.02	99.04
BHVO-2G.1	3/1/2004	49.24	2.90	13.40	0.05	11.12	0.00	0.17	7.48	11.64	2.22	0.53	0.22	0.00	0.01	98.98
BHVO-2G.2	3/1/2004	49.51	2.82	13.46	0.02	11.01	0.00	0.10	7.46	11.51	2.20	0.55	0.29	0.00	0.01	98.93
BHVO-2G.1	3/30/2004	50.07	2.59	13.56	0.03	10.95	0.00	0.16	7.62	11.23	2.35	0.53	0.26	0.00	0.01	99.35
BHVO-2G.2	3/30/2004	49.85	2.60	13.50	0.05	10.94	0.01	0.15	7.51	11.21	2.20	0.51	0.29	0.00	0.01	98.84

Table A2: Continued.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
BHVO-2G																
BHVO-2G.1	4/13/2004	49.63	2.54	13.62	0.03	10.73	0.06	0.16	7.07	10.68	2.24	0.52	0.13	0.00	0.01	97.41
BHVO-2G.2	4/13/2004	49.70	2.54	13.59	0.07	10.68	0.02	0.15	7.26	10.57	2.22	0.51	0.10	0.00	0.00	97.41
BHVO-2G.1	4/19/2004	49.98	2.91	13.70	0.05	11.13	0.03	0.15	7.62	11.45	2.20	0.56	0.26	0.01	0.01	100.05
BHVO-2G.1	4/19/2004	49.93	2.85	13.64	0.02	10.95	0.03	0.21	7.29	11.44	2.24	0.54	0.31	0.00	0.01	99.45
BHVO-2G.2	4/19/2004	49.80	2.88	13.71	0.06	10.91	0.08	0.14	7.51	11.59	2.24	0.56	0.24	0.00	0.01	99.71
BHVO-2G.2	4/19/2004	50.47	2.87	13.60	0.05	11.03	0.05	0.13	7.26	11.56	2.17	0.54	0.30	0.00	0.01	100.05
BHVO-2G.1	4/27/2004	50.17	2.75	13.59	0.02	10.86	0.03	0.20	7.55	11.67	2.26	0.53	0.28	0.01	0.01	99.92
BHVO-2G.1	4/27/2004	49.38	2.73	13.61	0.04	10.89	0.04	0.14	7.50	11.58	2.23	0.53	0.21	0.01	0.01	98.90
BHVO-2G.1	4/27/2004	50.66	2.74	13.86	0.05	10.79	0.03	0.18	7.40	11.43	2.20	0.53	0.30	0.00	0.01	100.18
BHVO-2G.2	4/27/2004	50.29	2.66	13.56	0.02	10.68	0.00	0.17	7.51	11.55	2.28	0.54	0.33	0.01	0.01	99.60
BHVO-2G.2	4/27/2004	49.35	2.73	13.62	0.01	10.65	0.00	0.14	7.44	11.44	2.18	0.52	0.29	0.00	0.00	98.37
BHVO-2G.2	4/27/2004	50.43	2.66	13.70	0.05	10.63	0.07	0.20	7.33	11.42	2.10	0.53	0.30	0.01	0.01	99.44
BHVO-2G.1	5/4/2004	49.23	2.80	13.27	0.03	10.77	0.04	0.21	7.36	11.63	2.29	0.52	0.28	0.00	0.01	98.44
BHVO-2G.1	5/4/2004	49.55	2.69	13.35	0.08	10.42	0.00	0.19	7.59	11.38	2.16	0.52	0.28	0.00	0.01	98.21
BHVO-2G.2	5/4/2004	48.85	2.83	13.27	0.03	10.90	0.00	0.16	7.42	11.38	2.13	0.48	0.25	0.01	0.01	97.73
BHVO-2G.2	5/4/2004	49.33	2.75	13.33	0.07	10.35	0.00	0.14	7.45	11.35	2.23	0.53	0.26	0.00	0.01	97.79
BHVO-2G.3	5/4/2004	49.94	2.70	13.67	0.03	10.88	0.01	0.19	7.49	11.33	2.23	0.51	0.30	0.00	0.01	99.30
BHVO-2G.1	5/18/2004	49.26	2.60	13.43	0.03	10.68	0.03	0.19	7.54	11.53	2.25	0.51	0.26	0.00	0.00	98.32
BHVO-2G.2	5/18/2004	50.19	2.78	13.59	0.05	10.93	0.02	0.20	7.66	11.67	2.19	0.52	0.29	0.00	0.01	100.12
BHVO-2G.3	5/18/2004	50.01	2.86	13.58	0.05	10.58	0.05	0.21	7.64	11.54	2.27	0.52	0.21	0.00	0.01	99.53
BHVO-2G.1	5/21/2004	50.13	2.80	13.33	0.04	11.12	0.01	0.13	7.46	11.61	2.19	0.52	0.27	0.01	0.01	99.62
BHVO-2G.1	9/28/2004	49.20	2.74	13.48	0.01	11.18	0.02	0.17	7.64	11.48	2.19	0.52	0.34	0.00	0.02	99.00
BHVO-2G.2	9/28/2004	49.39	2.78	13.45	0.08	10.82	0.01	0.19	7.48	11.45	2.23	0.55	0.30	0.01	0.01	98.75
BHVO-2G.3	9/28/2004	49.13	2.74	13.45	0.04	11.05	0.02	0.17	7.45	11.34	2.30	0.53	0.30	0.01	0.01	98.53
BHVO-2G	6/2/2005	49.98	2.76	13.92	0.04	11.00	0.01	0.22	7.34	11.30	2.12	0.52	0.28	0.00	0.01	99.52
BHVO-2G	6/2/2005	50.06	2.80	13.74	0.01	10.86	0.02	0.18	7.28	11.22	2.18	0.51	0.27	0.00	0.01	99.16
BHVO-2G	8/17/2005	49.85	2.65	13.93	0.04	10.79	0.00	0.21	7.44	11.43	2.19	0.51	0.28	0.00	0.01	99.34
BHVO-2G	8/17/2005	49.40	2.71	13.99	0.05	10.94	0.03	0.14	7.46	11.40	2.19	0.49	0.28	0.00	0.01	99.10
BHVO-2G	8/18/2005	50.00	2.76	13.91	0.09	10.93	0.03	0.15	7.49	11.60	2.15	0.50	0.30	0.00	0.01	99.91
BHVO-2G	8/18/2005	50.23	2.77	13.95	0.07	11.13	0.04	0.13	7.52	11.43	2.22	0.48	0.26	0.00	0.01	100.24
BHVO-2G	8/18/2005	49.79	2.74	13.60	0.04	10.85	0.03	0.17	7.46	11.39	2.21	0.52	0.27	0.00	0.01	99.09
Average		49.79	2.74	13.60	0.04	10.85	0.03	0.17	7.46	11.39	2.21	0.52	0.27	0.00	0.01	99.09
Standard deviation		0.44	0.10	0.19	0.02	0.20	0.02	0.03	0.12	0.24	0.05	0.02	0.05	0.00	0.00	0.77
Loihi basaltic glass LO-02-04																
LO-02-04ii.1	2/28/2004	49.49	2.40	12.17	0.05	10.79	0.04	0.18	8.90	10.77	2.42	0.58	0.26	0.13	0.15	98.33
LO-02-04iidark.1	2/28/2004	50.41	2.40	12.55	0.09	11.10	0.08	0.15	9.07	10.98	1.78	0.34	0.21	0.16	0.18	99.48

Table A2: Continued.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
Loihi basaltic glass LO-02-04																
LO-02-04ii.1	3/1/2004	48.77	2.57	12.12	0.10	10.92	0.00	0.16	9.07	11.02	2.27	0.57	0.28	0.12	0.15	98.13
LO-02-04iidark.1	3/1/2004	49.10	2.38	12.34	0.00	10.05	0.00	0.17	10.09	12.59	0.87	0.14	0.28	0.12	0.11	98.23
LO-02-04ii.1	3/30/2004	48.72	2.30	12.04	0.07	11.13	0.00	0.15	9.29	10.95	2.44	0.53	0.26	0.15	0.14	98.18
LO-02-04ii.2	3/30/2004	48.79	2.35	11.94	0.07	10.80	0.05	0.12	9.01	11.04	2.37	0.57	0.25	0.13	0.14	97.64
lo-02-04ii.1	4/13/2004	49.08	2.40	12.17	0.05	10.65	0.06	0.13	8.90	10.12	2.44	0.56	0.14	0.14	0.09	96.95
lo-02-04ii.2	4/13/2004	48.86	2.34	12.21	0.07	10.87	0.05	0.13	8.94	9.97	2.41	0.55	0.13	0.14	0.08	96.80
lo-02-04ii.1	4/19/2004	49.36	2.50	12.05	0.09	10.84	0.02	0.13	9.13	10.60	2.31	0.55	0.24	0.10	0.15	98.07
lo-02-04-ii.1	4/19/2004	47.64	2.50	12.11	0.06	10.64	0.06	0.20	9.10	11.02	2.22	0.58	0.29	0.09	0.14	96.64
lo-02-04ii.2	4/19/2004	49.28	2.52	12.16	0.05	10.79	0.03	0.18	9.16	10.28	2.24	0.56	0.26	0.11	0.15	97.77
lo-02-04-ii.2	4/19/2004	47.66	2.49	12.02	0.02	10.73	0.07	0.18	9.01	10.89	2.39	0.57	0.26	0.09	0.15	96.53
Lo-02-04-ii.1	4/27/2004	48.99	2.34	12.26	0.07	10.44	0.01	0.18	8.74	11.06	2.21	0.56	0.27	0.14	0.14	97.42
Lo-02-04-ii.2	4/27/2004	48.96	2.39	12.33	0.05	10.91	0.08	0.14	8.88	10.99	2.25	0.55	0.27	0.13	0.14	98.07
LO-02-04ii.1	4/27/2004	49.18	2.42	12.07	0.09	10.65	0.00	0.19	9.25	10.91	2.24	0.52	0.25	0.08	0.14	98.01
LO-02-04ii.1	4/27/2004	47.50	2.33	11.94	0.10	10.73	0.04	0.16	8.73	10.82	1.24	0.53	0.29	0.13	0.14	94.68
LO-02-04ii.2	4/27/2004	49.16	2.41	12.16	0.07	10.98	0.01	0.22	9.24	10.78	2.39	0.54	0.28	0.10	0.15	98.49
LO-02-04ii.2	4/27/2004	47.26	2.38	11.86	0.10	10.51	0.00	0.16	8.77	10.86	1.41	0.50	0.29	0.13	0.15	94.37
LO-02-04iiiphen1	4/27/2004	49.97	2.39	12.27	0.06	10.94	0.04	0.15	9.74	11.49	1.16	0.17	0.25	0.07	0.14	98.85
LO-02-04ii.1	5/4/2004	48.16	2.51	11.85	0.08	10.87	0.00	0.20	9.25	10.70	2.36	0.52	0.25	0.14	0.15	97.04
LO-02-04ii.1	5/4/2004	49.64	2.40	12.52	0.06	10.65	0.03	0.13	8.75	10.49	1.63	0.28	0.30	0.15	0.18	97.21
LO-02-04ii.2	5/4/2004	48.01	2.44	11.80	0.05	11.11	0.05	0.15	9.04	10.55	2.25	0.52	0.32	0.14	0.15	96.61
LO-02-04ii.2	5/4/2004	48.11	2.34	11.77	0.06	10.25	0.01	0.16	9.20	10.93	2.34	0.55	0.25	0.15	0.14	96.25
lo-02-04ii.1	5/18/2004	48.86	2.32	12.02	0.10	10.72	0.01	0.14	9.30	11.05	2.39	0.56	0.26	0.13	0.14	97.99
lo-02-04ii.2	5/18/2004	49.25	2.46	12.23	0.10	10.80	0.00	0.21	9.55	11.23	2.41	0.56	0.26	0.14	0.13	99.31
lo-02-04ii.3	5/18/2004	49.25	2.36	12.14	0.08	11.01	0.00	0.20	9.36	11.19	2.44	0.58	0.23	0.14	0.13	99.10
lo-02-04ii.1	5/21/2004	47.84	2.51	11.79	0.05	11.19	0.04	0.13	8.99	11.03	2.21	0.55	0.27	0.13	0.14	96.86
Lo-02-04ii.1	9/28/2004	48.94	2.47	12.10	0.08	10.94	0.03	0.19	9.34	11.10	2.31	0.56	0.31	0.15	0.14	98.65
Lo-02-04ii.2	9/28/2004	48.64	2.45	11.97	0.04	11.07	0.03	0.20	9.30	11.07	2.33	0.57	0.27	0.13	0.14	98.21
Lo-02-04ii.3	9/28/2004	48.80	2.46	12.09	0.05	11.11	0.03	0.21	9.30	11.13	2.47	0.53	0.31	0.12	0.15	98.75
Lo-02-04ii	6/2/2005	48.64	2.41	12.47	0.04	11.10	0.01	0.11	9.14	11.03	2.25	0.54	0.25	0.14	0.15	98.28
Lo-02-04ii	6/2/2005	48.74	2.40	12.48	0.06	10.89	0.01	0.18	9.14	11.08	2.23	0.54	0.28	0.14	0.14	98.34
lo-02-04-ii-1	7/19/2005	48.71	2.41	12.27	0.08	10.66	0.06	0.18	8.95	10.66	2.19	0.54	0.25	0.15	0.15	97.23
lo-02-04-ii-2	7/19/2005	48.76	2.45	12.50	0.07	10.80	0.04	0.16	8.92	10.82	2.24	0.54	0.27	0.13	0.14	97.84
lo-02-04ii	8/3/2005	48.75	2.52	12.41	0.05	10.87	0.01	0.16	9.14	11.14	2.38	0.55	0.30	0.12	0.14	98.54
lo-02-04ii-2	8/3/2005	48.50	2.55	12.50	0.06	10.81	0.04	0.17	9.15	11.07	2.34	0.54	0.26	0.13	0.15	98.28
lo-02-04ii	8/17/2005	48.37	2.29	12.68	0.07	10.79	-0.02	0.17	9.19	11.01	2.29	0.51	0.27	0.12	0.14	97.91

Table A2: Continued.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
Loihi basaltic glass LO-02-04																
lo-02-04ii	8/17/2005	48.47	2.41	12.66	0.06	10.75	0.03	0.18	9.21	10.99	2.27	0.50	0.30	0.12	0.14	98.10
lo-02-04ii	8/18/2005	48.42	2.39	12.72	0.06	10.93	0.03	0.16	9.22	11.07	2.32	0.52	0.26	0.13	0.14	98.37
lo-02-04ii	8/18/2005	48.59	2.41	12.73	0.08	10.91	0.05	0.15	9.23	10.92	2.31	0.52	0.29	0.13	0.14	98.46
lo-02-04ii	12/28/2005	48.87	2.40	12.31	0.04	10.77	-0.02	0.15	9.13	10.91	2.27	0.53	0.28	0.13	0.14	97.92
lo-02-04ii.2	12/28/2005	48.83	2.42	12.35	0.08	10.87	0.06	0.17	9.04	10.93	2.30	0.55	0.27	0.15	0.14	98.15
Average		48.75	2.42	12.22	0.07	10.82	0.03	0.17	9.14	10.94	2.18	0.52	0.26	0.13	0.14	97.76
Standard deviation		0.63	0.07	0.26	0.02	0.23	0.03	0.03	0.26	0.39	0.37	0.10	0.04	0.02	0.02	1.05

Table A3: Long term reproducibility of olivine standard analysis by electron microprobe

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	Total
Springwater meteorite olivine (USNM 2566)												
fo83.1_1	4/2/2002	38.75	0.01	0.08	0.00	16.67	0.01	0.29	43.57	0.02	0.00	99.39
fo83.1_2	4/2/2002	38.94	0.00	0.07	0.04	16.84	0.01	0.27	43.75	0.01	0.00	99.93
fo83.1_3	4/2/2002	38.98	0.03	0.09	0.04	16.88	0.01	0.31	43.86	0.01	0.00	100.22
fo83.1	4/24/2002	38.91	0.00	0.07	0.05	16.38	0.02	0.29	43.20	0.00	0.01	98.95
fo83.2	4/24/2002	39.01	0.02	0.07	0.03	16.42	0.00	0.31	43.38	0.01	0.00	99.27
fo83.1	10/18/2002	39.08	0.02	0.08	0.04	16.58	0.00	0.33	43.36	0.01	0.01	99.51
fo83.2	10/18/2002	38.94	0.00	0.10	0.07	16.54	0.01	0.32	43.22	0.00	0.01	99.21
fo83.1	1/17/2003	38.12	0.01	0.02	0.05	16.49	0.00	0.37	42.48	0.00	0.02	97.55
fo83.2	1/17/2003	36.98	0.00	0.03	0.04	18.78	0.02	0.33	40.98	0.01	0.01	97.19
fo83.3	1/17/2003	37.44	0.00	0.00	0.03	16.50	0.00	0.34	42.39	0.01	0.00	96.72
fo83.1	2/26/2003	38.94	0.00	0.00	0.02	15.72	0.04	0.24	38.94	0.02	0.00	93.92
fo83.2	2/26/2003	38.93	0.01	0.00	0.02	15.99	0.03	0.28	38.71	0.02	0.00	94.01
fo83.1	3/13/2003	37.20	0.01	0.03	0.02	17.31	0.04	0.34	42.45	0.01	0.00	97.40
fo83.2	3/13/2003	37.16	0.03	0.02	0.05	17.12	0.05	0.28	42.25	0.00	0.00	96.95
fo83.1	3/13/2003	38.74	0.00	0.02	0.02	16.67	0.00	0.32	43.63	0.02	0.00	99.43
fo83.2	3/13/2003	38.53	0.00	0.03	0.01	16.48	0.00	0.31	43.73	0.01	0.02	99.11
fo83.1	3/27/2003	38.64	0.02	0.03	0.02	16.35	0.01	0.32	42.21	0.03	0.00	97.62
fo83.2	3/27/2003	38.58	0.00	0.01	0.02	16.55	0.00	0.32	42.42	0.03	0.00	97.93
fo83.1	4/19/2003	39.00	0.01	0.01	0.00	16.65	0.04	0.28	43.69	0.01	0.00	99.69
fo83.2	4/19/2003	38.74	0.01	0.00	0.00	16.76	0.04	0.29	43.63	0.01	0.00	99.48
fo83.1	4/23/2003	38.02	0.02	0.02	0.03	16.88	0.03	0.23	42.72	0.03	0.00	97.97
fo83.2	4/23/2003	38.80	0.00	0.02	0.02	16.02	0.00	0.27	43.72	0.02	0.00	98.87
fo83.1	5/16/2003	37.23	0.03	0.00	0.03	16.93	0.00	0.29	43.49	0.00	0.00	97.99
fo83.2	5/16/2003	37.59	0.03	0.00	0.03	16.86	0.00	0.24	43.54	0.00	0.00	98.30
fo83.1	7/8/2003	39.25	0.02	0.00	0.02	16.41	0.02	0.26	43.72	0.01	0.00	99.72
fo83.2	7/8/2003	39.14	0.00	0.02	0.05	16.39	0.00	0.30	43.80	0.01	0.00	99.72
fo83.1	7/31/2003	38.38	0.01	0.02	0.00	16.48	0.00	0.27	41.13	0.01	0.00	96.31
fo83.2	7/31/2003	38.29	0.00	0.01	0.00	16.82	0.02	0.33	41.47	0.02	0.02	96.97
fo83.1	7/31/2003	39.20	0.00	0.00	0.02	16.33	0.02	0.28	42.62	0.03	0.02	98.52
fo83.2	7/31/2003	39.01	0.00	0.00	0.00	16.13	0.01	0.26	42.70	0.02	0.02	98.16
fo83.1	8/1/2003	38.38	0.01	0.02	0.00	16.48	0.00	0.27	41.13	0.01	0.00	96.31
fo83.2	8/1/2003	38.29	0.00	0.01	0.00	16.82	0.02	0.33	41.47	0.02	0.02	96.97
fo83.1	8/1/2003	39.20	0.00	0.00	0.02	16.33	0.02	0.28	42.62	0.03	0.02	98.52
fo83.2	8/1/2003	39.01	0.00	0.00	0.00	16.13	0.01	0.26	42.70	0.02	0.02	98.16
fo83.1	8/1/2003	39.07	0.02	0.01	0.00	14.82	0.02	0.23	43.42	0.00	0.00	97.59
fo83.2	8/1/2003	39.30	0.01	0.02	0.02	14.80	0.01	0.23	43.15	0.01	0.00	97.55

Table A3: Continued.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	Total
fo83.1	8/1/2003	38.41	0.00	0.04	0.03	16.70	0.00	0.31	42.90	0.01	0.02	98.43
fo83.2	8/1/2003	38.52	0.00	0.03	0.03	16.51	0.00	0.27	42.79	0.01	0.02	98.18
fo83.1	8/3/2003	38.86	0.00	0.02	0.06	16.93	0.00	0.26	43.56	0.01	0.03	99.73
fo83.2	8/3/2003	39.02	0.00	0.02	0.04	16.69	0.00	0.26	43.32	0.01	0.02	99.38
fo83.1	8/3/2003	38.82	0.00	0.04	0.04	16.52	0.00	0.29	43.44	0.00	0.00	99.15
fo83.2	8/3/2003	38.83	0.00	0.02	0.05	16.64	0.00	0.30	43.49	0.01	0.01	99.36
fo83.1	10/2/2003	38.91	0.02	0.05	0.03	16.66	0.00	0.31	43.33	0.01	0.00	99.32
fo83.2	10/2/2003	38.91	0.03	0.02	0.06	16.37	0.00	0.32	42.82	0.00	0.01	98.54
fo83.1	10/18/2003	37.93	0.02	0.01	0.04	16.45	0.00	0.27	42.18	0.00	0.00	96.91
fo83.2	10/18/2003	38.21	0.02	0.03	0.02	16.57	0.00	0.28	42.25	0.01	0.00	97.38
fo83.1	10/25/2003	39.02	0.01	0.03	0.04	16.85	0.00	0.29	43.69	0.01	0.00	99.94
fo83.2	10/25/2003	39.27	0.00	0.02	0.06	16.62	0.00	0.29	43.58	0.00	0.00	99.83
fo83.1	10/25/2003	38.55	0.01	0.02	0.01	16.51	0.00	0.24	43.51	0.01	0.02	98.87
fo83.2	10/25/2003	38.46	0.00	0.02	0.02	16.54	0.00	0.29	43.55	0.00	0.00	98.88
fo83.1	10/26/2003	38.44	0.01	0.00	0.01	16.22	0.03	0.26	43.28	0.00	0.00	98.26
fo83.2	10/26/2003	38.64	0.00	0.00	0.03	16.29	0.01	0.28	43.50	0.02	0.00	98.77
fo83.1	11/13/2003	38.93	0.02	0.01	0.00	16.56	0.01	0.33	43.46	0.01	0.02	99.34
fo83.2	11/13/2003	38.96	0.00	0.01	0.00	16.48	0.00	0.31	43.46	0.00	0.02	99.25
fo83.1	11/14/2003	38.90	0.02	0.00	0.02	16.45	0.00	0.29	43.13	0.00	0.02	98.82
fo83.1	11/17/2003	38.71	0.00	0.00	0.04	16.82	0.01	0.32	43.72	0.01	0.01	99.62
fo83.2	11/17/2003	38.85	0.00	0.04	0.06	16.39	0.00	0.29	43.21	0.02	0.00	98.86
fo83.1	11/17/2003	38.35	0.01	0.03	0.03	16.74	0.00	0.30	43.02	0.02	0.01	98.51
fo83.2	11/17/2003	38.65	0.01	0.00	0.03	16.56	0.00	0.25	43.17	0.01	0.01	98.70
fo83.1	1/15/2004	38.44	0.00	0.02	0.06	17.08	0.00	0.31	43.31	0.00	0.00	99.24
fo83.2	1/15/2004	38.77	0.00	0.01	0.01	16.90	0.00	0.32	43.31	0.00	0.00	99.33
fo83.1	2/28/2004	37.90	0.01	0.03	0.03	16.58	0.00	0.30	42.19	0.00	0.00	97.04
fo83.2	2/28/2004	38.25	0.01	0.01	0.00	16.41	0.00	0.29	42.29	0.00	0.00	97.25
fo83.3	2/28/2004	38.98	0.00	0.00	0.01	16.85	0.00	0.25	43.46	0.02	0.00	99.58
fo83.1	3/1/2004	38.38	0.00	0.04	0.06	16.88	0.00	0.25	43.45	0.01	0.00	99.07
fo83.2	3/1/2004	38.41	0.00	0.02	0.00	16.63	0.01	0.26	43.65	0.00	0.00	98.98
fo83.1	3/30/2004	38.98	0.00	0.00	0.03	16.70	0.00	0.27	43.57	0.01	0.05	99.61
fo83.2	3/30/2004	39.19	0.02	0.01	0.01	17.03	0.00	0.26	43.70	0.02	0.02	100.26
fo83.1	4/13/2004	38.20	0.00	0.03	0.02	16.54	0.01	0.30	42.71	0.01	0.01	97.84
fo83.2	4/13/2004	37.69	0.00	0.04	0.03	16.77	0.01	0.24	43.10	0.01	0.07	97.97
fo83.3	4/13/2004	38.92	0.01	0.04	0.02	16.52	0.00	0.28	43.83	0.01	0.03	99.67
fo83.1	4/19/2004	38.28	0.00	0.04	0.00	16.58	0.02	0.26	43.12	0.00	0.00	98.30
fo83.2	4/19/2004	38.63	0.00	0.04	0.00	16.45	0.03	0.29	43.00	0.00	0.03	98.47

Table A3: Continued.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	Total
fo83.1	4/27/2004	38.51	0.01	0.02	0.06	16.45	0.00	0.28	43.44	0.01	0.01	98.79
fo83.2	4/27/2004	38.66	0.02	0.01	0.02	16.58	0.00	0.28	43.34	0.00	0.01	98.91
fo83.1	4/27/2004	38.76	0.00	0.03	0.01	16.72	0.00	0.36	43.66	0.01	0.01	99.56
fo83.2	4/27/2004	38.70	0.01	0.01	0.04	16.84	0.03	0.25	43.83	0.01	0.05	99.76
fo83.1	5/4/2004	38.77	0.02	0.02	0.03	16.56	0.00	0.27	43.23	0.02	0.01	98.94
fo83.2	5/4/2004	38.95	0.00	0.02	0.07	16.27	0.00	0.27	42.97	0.03	0.03	98.61
fo83.1	5/4/2004	39.23	0.00	0.02	0.01	16.53	0.00	0.27	43.23	0.00	0.00	99.29
fo83.1	5/4/2004	38.83	0.00	0.04	0.02	16.37	0.03	0.26	42.97	0.01	0.01	98.54
fo83.2	5/4/2004	38.62	0.01	0.02	0.03	16.58	0.04	0.27	43.42	0.01	0.02	99.03
fo83.1	5/18/2004	38.62	0.00	0.02	0.04	16.49	0.01	0.35	43.46	0.01	0.02	99.02
fo83.2	5/18/2004	38.71	0.00	0.00	0.01	16.32	0.03	0.29	43.22	0.01	0.01	98.60
fo83.3	5/18/2004	38.63	0.00	0.00	0.01	16.45	0.00	0.27	43.26	0.01	0.00	98.64
fo83.1	5/18/2004	38.78	0.01	0.03	0.01	16.96	0.04	0.26	43.68	0.01	0.00	99.79
fo83.1	5/22/2004	38.60	0.00	0.03	0.01	16.49	0.00	0.32	43.67	0.01	0.00	99.13
fo83.2	5/22/2004	38.60	0.00	0.02	0.00	16.57	0.00	0.27	43.72	0.00	0.01	99.20
fo83.1	5/23/2004	38.60	0.00	0.03	0.01	16.49	0.00	0.32	43.67	0.01	0.00	99.13
fo83.2	5/23/2004	38.60	0.00	0.02	0.00	16.57	0.00	0.27	43.72	0.00	0.01	99.20
fo83.1	5/23/2004	38.30	0.01	0.01	0.05	16.09	0.02	0.24	42.88	0.01	0.00	97.60
fo83.2	5/23/2004	38.21	0.00	0.00	0.04	16.44	0.03	0.30	43.05	0.00	0.00	98.09
fo83.1	6/8/2004	39.13	0.01	0.01	0.01	16.84	0.00	0.31	43.63	0.01	0.00	99.94
fo83.2	6/8/2004	39.21	0.01	0.02	0.00	16.53	0.03	0.28	43.63	0.00	0.00	99.71
fo83.1	9/28/2004	38.07	0.02	0.01	0.00	16.32	0.00	0.33	43.03	0.00	0.00	97.78
fo83.2	9/28/2004	38.82	0.00	0.02	0.01	16.42	0.02	0.37	43.43	0.01	0.00	99.11
fo83	1/10/2005	40.70	0.06	0.02	-0.03	16.32	0.01	0.31	43.38	0.00	0.00	100.82
fo83	1/10/2005	40.44	0.02	0.01	0.06	16.37	-0.01	0.33	43.44	-0.01	0.01	100.69
fo83	1/10/2005	40.33	-0.06	0.01	0.08	16.55	0.02	0.34	43.51	0.00	0.01	100.85
fo83	1/10/2005	40.44	-0.08	0.01	0.00	16.45	-0.04	0.32	43.30	0.00	0.00	100.53
fo83	1/10/2005	40.48	-0.09	0.02	0.03	16.57	0.02	0.35	43.59	0.00	0.01	101.08
fo83	6/2/2005	38.50	0.00	0.01	0.02	16.51	0.00	0.32	43.63	0.00	0.01	99.01
fo83	6/2/2005	38.57	0.01	0.00	0.05	16.52	0.03	0.26	43.70	0.02	0.00	99.15
fo83	6/2/2005	38.61	0.02	0.02	0.04	16.32	-0.01	0.32	43.60	0.00	0.00	98.95
fo83	6/2/2005	38.50	0.00	0.01	0.02	16.51	0.00	0.32	43.63	0.00	0.01	99.01
fo83	6/2/2005	38.57	0.01	0.00	0.05	16.52	0.03	0.26	43.70	0.02	0.00	99.15
fo83	6/2/2005	38.61	0.02	0.02	0.04	16.32	-0.01	0.32	43.60	0.00	0.00	98.95
fo83	7/19/2005	38.98	0.01	0.00	0.04	16.57	0.06	0.27	43.59	0.01	0.00	99.53
fo83.std	7/19/2005	38.89	0.01	0.00	0.01	16.62	0.03	0.30	43.61	0.01	0.01	99.49
fo83	8/3/2005	39.33	0.02	-0.03	0.05	16.35	-0.01	0.32	43.93	0.01	0.00	100.02

Table A3: Continued.

Analysis ID	Date	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	Total
fo83	8/3/2005	39.29	0.01	-0.02	0.03	16.80	0.03	0.31	44.16	0.01	0.00	100.64
fo83 std.	8/17/2005	39.23	0.00	0.00	0.04	16.59	0.00	0.32	43.59	0.01	0.00	99.80
fo83 std.	8/17/2005	38.72	-0.03	0.01	0.04	16.56	0.00	0.30	43.38	0.00	-0.01	99.03
fo83 std	12/28/2005	39.21	0.02	0.01	-0.02	16.68	0.03	0.29	43.68	0.01	0.00	99.95
fo83 std	12/28/2005	39.12	0.01	0.01	0.02	16.45	0.01	0.33	43.28	0.01	0.00	99.23
Average		38.73	0.01	0.02	0.03	16.55	0.01	0.29	43.14	0.01	0.01	98.78
Standard deviation		0.60	0.02	0.02	0.02	0.39	0.01	0.03	0.83	0.01	0.01	1.17

Table A4: Reproducibility and accuracy of BCR-2G and BHVO-2G glass standards by electron microprobe (SX50)

Analysis ID	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
BHVO-2G	50.25	2.62	13.83	0.03	10.83	0.01	0.22	7.51	10.97	2.27	0.54	0.27	0.00	0.01	99.35
BHVO-2G	50.19	2.66	13.90	0.04	10.90	0.00	0.21	7.62	11.08	2.28	0.53	0.31	0.00	0.01	99.73
BHVO-2G	50.26	2.74	13.81	0.05	10.89	0.04	0.20	7.51	11.10	2.30	0.51	0.29	0.00	0.01	99.71
BHVO-2G	50.08	2.67	13.78	0.02	11.03	0.03	0.25	7.57	11.16	2.22	0.55	0.29	0.00	0.01	99.65
BHVO-2G	50.08	2.68	13.84	0.06	11.17	0.02	0.17	7.51	11.19	2.18	0.52	0.26	0.01	0.01	99.70
BHVO-2G	50.02	2.71	13.66	0.02	11.14	0.07	0.17	7.50	11.00	2.32	0.51	0.28	0.01	0.01	99.40
BHVO-2G	50.20	2.71	13.79	0.02	11.02	0.01	0.18	7.51	11.26	2.27	0.52	0.27	0.01	0.01	99.76
BHVO-2G	50.11	2.66	13.71	0.06	11.09	0.00	0.18	7.52	11.22	2.28	0.55	0.28	0.00	0.01	99.66
BHVO-2G	49.96	2.68	13.66	0.07	11.14	0.04	0.19	7.59	11.37	2.26	0.51	0.25	0.00	0.01	99.74
BHVO-2G	49.84	2.73	13.76	0.01	11.10	0.00	0.15	7.54	11.38	2.24	0.53	0.29	0.00	0.01	99.58
BHVO-2G	50.14	2.69	13.78	0.03	11.35	0.01	0.15	7.56	11.28	2.24	0.52	0.27	0.00	0.01	100.02
BHVO-2G	50.03	2.77	13.69	0.06	10.91	0.00	0.17	7.62	11.55	2.29	0.52	0.28	0.00	0.01	99.90
BHVO-2G	50.00	2.59	13.61	0.06	11.21	0.04	0.19	7.53	11.42	2.24	0.50	0.27	0.00	0.01	99.66
BHVO-2G	50.15	2.75	13.71	0.04	10.98	0.06	0.20	7.45	11.42	2.19	0.55	0.32	0.01	0.01	99.83
BHVO-2G	49.82	2.84	13.65	0.08	11.44	0.01	0.17	7.56	11.41	2.28	0.53	0.25	0.00	0.01	100.06
BHVO-2G	49.94	2.67	13.69	0.00	11.02	0.03	0.10	7.54	11.24	2.21	0.52	0.28	0.01	0.01	99.27
BHVO-2G	49.05	2.72	13.69	0.06	10.97	0.03	0.15	7.46	11.29	2.19	0.53	0.29	0.00	0.00	99.47
BHVO-2G	49.85	2.76	13.68	0.05	11.06	0.02	0.17	7.54	11.42	2.29	0.54	0.32	0.01	0.00	99.71
BHVO-2G	49.95	2.69	13.72	0.03	10.89	0.00	0.15	7.46	11.38	2.23	0.53	0.28	0.01	0.01	99.33
BHVO-2G	49.84	2.81	13.65	0.03	11.07	0.00	0.19	7.57	11.46	2.26	0.54	0.27	0.00	0.01	99.70
Average	50.04	2.71	13.73	0.04	11.06	0.02	0.18	7.53	11.28	2.25	0.53	0.28	0.00	0.01	99.66
Std. Dev.	0.14	0.06	0.08	0.02	0.15	0.02	0.03	0.05	0.16	0.04	0.01	0.02	0.00	0.00	0.22
Accepted Totals	49	2.73	13.5	NA	11.05	NA	NA	7.23	11.4	2.22	0.52	NA	NA	NA	NA
Average %															
Deviation from Accepted	102.1	99.1	101.7	NA	100.1	NA	NA	104.2	98.9	101.4	101.5	NA	NA	NA	NA
BCR-2G	54.12	2.23	13.53	0.00	12.42	0.00	0.28	3.71	7.16	3.17	1.82	0.37	0.01	0.01	98.83
BCR-2G	54.45	2.29	13.56	0.03	12.61	0.00	0.22	3.68	7.18	3.07	1.83	0.37	0.01	0.01	99.29
BCR-2G	54.59	2.32	13.65	0.00	12.37	0.00	0.24	3.76	7.27	3.21	1.80	0.38	0.00	0.01	99.60
BCR-2G	54.68	2.40	13.69	0.00	12.40	0.00	0.19	3.76	7.21	3.09	1.78	0.39	0.01	0.01	99.60
BCR-2G	54.18	2.31	13.47	0.01	12.50	0.00	0.13	3.73	7.24	3.15	1.83	0.44	0.01	0.01	99.00
BCR-2G	54.55	2.32	13.69	0.01	12.44	0.01	0.22	3.76	7.14	3.09	1.86	0.36	0.01	0.01	99.45
BCR-2G	54.49	2.31	13.70	0.00	12.43	0.00	0.19	3.69	7.24	3.14	1.83	0.37	0.01	0.01	99.40
BCR-2G	54.39	2.29	13.62	0.00	12.73	0.04	0.24	3.69	7.22	3.14	1.85	0.40	0.00	0.01	99.60
BCR-2G	54.57	2.39	13.73	0.01	12.36	0.09	0.18	3.81	7.11	3.05	1.83	0.40	0.00	0.01	99.56

Table A4: Continued.

Analysis ID	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
BCR-2G	54.55	2.35	13.56	0.00	12.69	0.05	0.23	3.74	7.11	3.10	1.86	0.38	0.00	0.01	99.64
BCR-2G	54.49	2.40	13.67	0.00	12.38	0.00	0.22	3.67	6.90	3.05	1.88	0.36	0.00	0.01	99.03
BCR-2G	54.29	2.33	13.61	0.00	12.50	0.04	0.21	3.76	6.83	3.20	1.84	0.35	0.00	0.01	98.96
BCR-2G	54.71	2.25	13.71	0.00	12.73	0.00	0.22	3.72	6.80	3.28	1.82	0.42	0.00	0.02	99.67
BCR-2G	54.76	2.18	13.70	0.00	12.58	0.02	0.19	3.73	6.81	3.20	1.87	0.40	0.01	0.01	99.44
BCR-2G	54.60	2.13	13.84	0.00	12.74	0.06	0.23	3.78	6.61	3.08	1.83	0.36	0.00	0.01	99.28
BCR-2G	54.68	2.25	13.65	0.00	12.31	0.00	0.19	3.75	6.82	3.18	1.85	0.42	0.01	0.01	99.13
BCR-2G	54.51	2.13	13.73	0.02	12.51	0.00	0.17	3.76	6.87	3.13	1.84	0.33	0.00	0.01	99.02
BCR-2G	54.64	2.12	13.69	0.01	12.44	0.03	0.21	3.79	7.06	3.22	1.89	0.42	0.01	0.01	99.54
BCR-2G	54.61	2.18	13.59	0.00	12.78	0.06	0.22	3.76	7.08	3.16	1.92	0.33	0.01	0.01	99.70
BCR-2G	54.42	2.32	13.70	0.01	12.45	0.01	0.17	3.67	7.14	3.20	1.86	0.36	0.00	0.00	99.32
Average	54.51	2.27	13.65	0.01	12.52	0.02	0.21	3.74	7.04	3.14	1.84	0.38	0.01	0.01	99.35
Std. Dev.	0.17	0.09	0.08	0.01	0.15	0.03	0.03	0.04	0.19	0.06	0.03	0.03	0.00	0.00	0.27
Accepted Totals	54.9	2.28	13.7	NA	12.41	NA	NA	3.63	7.14	3.1	1.79	0.34	NA	NA	
Average %															
Deviation from Accepted	99.3	99.7	99.7	NA	100.9	NA	NA	102.9	98.6	101.4	103.0	111.9	NA	NA	

Table A5: Reproducibility and accuracy of BCR-2G and LO-02-04 glass standards by electron microprobe (SX100)

Date	Analysis ID	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
11/22/2005	BCR-2G	54.71	2.32	14.11	0.00	12.79	0.01	0.21	3.71	7.23	2.55	1.83	0.41	0.00	0.01	99.88
11/22/2005	BCR-2G	54.98	2.33	14.21	0.02	12.87	0.00	0.24	3.72	7.27	2.57	1.77	0.41	0.00	0.01	100.41
11/22/2005	BCR-2G	54.96	2.33	14.22	-0.01	12.71	-0.02	0.21	3.67	7.27	2.55	1.78	0.34	0.00	0.01	100.05
11/22/2005	BCR-2G	54.93	2.34	14.08	-0.01	12.51	-0.01	0.20	3.70	7.23	2.58	1.73	0.37	0.00	0.01	99.68
11/22/2005	BCR-2G	55.12	2.30	14.15	-0.01	12.48	0.00	0.22	3.68	7.32	2.55	1.75	0.34	0.01	0.01	99.93
11/22/2005	BCR-2G	54.98	2.30	14.18	0.01	12.76	0.02	0.15	3.72	7.29	2.56	1.76	0.37	0.00	0.01	100.12
11/22/2005	BCR-2G	54.97	2.31	14.18	0.01	13.24	-0.01	0.20	3.73	7.29	2.61	1.74	0.37	0.01	0.01	100.66
11/22/2005	BCR-2G	55.06	2.30	14.17	0.00	13.07	0.02	0.19	3.69	7.23	2.59	1.81	0.39	0.01	0.01	100.55
11/22/2005	BCR-2G	55.16	2.32	14.20	-0.02	12.76	-0.03	0.17	3.72	7.22	2.54	1.75	0.35	0.00	0.01	100.21
11/22/2005	BCR-2G	55.06	2.37	14.17	0.02	12.90	0.05	0.19	3.71	7.32	2.56	1.74	0.40	0.00	0.01	100.49
Average		54.99	2.32	14.17	0.00	12.81	0.00	0.20	3.71	7.27	2.57	1.77	0.37	0.00	0.01	100.20
Standard Deviation		0.13	0.02	0.04	0.01	0.23	0.02	0.02	0.02	0.04	0.02	0.03	0.03	0.00	0.00	0.32
Accepted Totals		54.9	2.28	13.7	NA	12.41	NA	NA	3.63	7.14	3.1	1.79	0.34	NA	NA	NA
Average % Deviation from Accepted		100.2	101.8	103.4	NA	103.2	NA	NA	102.1	101.8	82.8	98.7	110.2	NA	NA	NA
11/22/2005	LO-02-04	49.12	2.48	12.76	0.08	11.06	0.05	0.18	9.16	10.93	2.22	0.54	0.27	0.12	0.14	99.10
11/22/2005	LO-02-04	49.25	2.42	12.84	0.07	11.25	0.04	0.17	9.09	10.94	2.24	0.54	0.26	0.12	0.15	99.37
11/22/2005	LO-02-04	49.43	2.47	12.79	0.09	10.97	0.06	0.18	8.99	10.98	2.26	0.56	0.27	0.12	0.15	99.32
11/22/2005	LO-02-04	49.48	2.45	12.74	0.08	11.30	0.03	0.19	9.00	10.97	2.22	0.54	0.28	0.14	0.15	99.56
11/22/2005	LO-02-04	49.07	2.51	12.75	0.07	10.86	0.05	0.20	8.89	11.02	2.23	0.56	0.26	0.11	0.15	98.73
11/22/2005	LO-02-04	49.02	2.48	12.73	0.06	11.42	-0.04	0.16	8.93	11.01	2.24	0.58	0.28	0.13	0.15	99.18
11/22/2005	LO-02-04	49.26	2.52	12.82	0.07	11.14	0.07	0.18	9.00	10.81	2.25	0.54	0.25	0.12	0.15	99.17
11/22/2005	LO-02-04	49.27	2.44	12.80	0.06	11.26	0.03	0.15	9.07	10.92	2.17	0.53	0.27	0.13	0.14	99.24
11/22/2005	LO-02-04	49.26	2.44	12.64	0.06	11.20	0.05	0.16	9.20	10.90	2.20	0.53	0.27	0.15	0.14	99.19
11/22/2005	LO-02-04	49.19	2.46	12.69	0.06	11.15	0.01	0.16	9.15	10.86	2.23	0.53	0.26	0.12	0.15	99.01
Average		49.23	2.47	12.76	0.07	11.16	0.04	0.17	9.05	10.93	2.23	0.54	0.27	0.12	0.14	99.19
Standard Deviation		0.15	0.03	0.06	0.01	0.16	0.03	0.01	0.10	0.07	0.02	0.01	0.01	0.01	0.00	0.22
Accepted Totals		49.3	2.24	12.17	0.07	10.84	NA	0.16	9.03	10.53	2.48	0.59	0.3	0.07	0.14	NA
Average % Deviation from Accepted		99.9	110.1	104.8	99.8	103.0	NA	107.2	100.2	103.8	89.8	92.3	89.3	178.5	103.5	103.5

Table A6: Reproducibility and accuracy of repeat analyses olivine standard by electron microprobe

Date	Analysis ID	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	Na ₂ O	Total	Fo #
San Carlos olivine standard (USNM 11312/444)													
12/30/2004	Fo90std25	41.27	0.00	0.05	0.02	9.11	0.40	0.10	48.10	0.09	0.02	99.16	90.4
12/30/2004	Fo90std25	41.49	-0.04	0.05	0.01	9.03	0.41	0.17	48.25	0.09	0.02	99.51	90.5
12/30/2004	Fo90std25	41.53	-0.04	0.04	0.03	9.00	0.40	0.18	48.12	0.09	0.00	99.40	90.5
12/30/2004	Fo90std25	41.31	0.01	0.05	0.01	9.36	0.40	0.20	48.14	0.08	0.01	99.58	90.2
12/30/2004	Fo90std25	41.39	0.04	0.04	-0.03	9.20	0.38	0.18	48.24	0.09	0.01	99.57	90.3
12/30/2004	Fo90std25	41.33	-0.04	0.04	0.01	9.08	0.40	0.12	48.22	0.10	0.01	99.32	90.4
12/30/2004	Fo90std25	41.26	0.05	0.04	0.00	9.15	0.33	0.19	48.25	0.08	0.02	99.37	90.4
12/30/2004	Fo90std25	41.41	-0.08	0.05	0.00	9.22	0.39	0.18	48.16	0.08	0.03	99.51	90.3
12/30/2004	Fo90std25	41.36	-0.02	0.04	0.01	9.18	0.34	0.13	48.20	0.09	0.01	99.37	90.3
12/30/2004	Fo90std25	41.28	0.03	0.05	0.03	9.22	0.39	0.14	48.22	0.10	0.01	99.47	90.3
1/10/2005	fo90	41.35	-0.06	0.04	0.03	8.95	0.38	0.13	47.95	0.10	0.02	98.95	90.5
1/10/2005	fo90	41.44	0.01	0.05	0.04	9.19	0.41	0.16	48.22	0.09	0.02	99.63	90.3
1/10/2005	fo90	41.71	0.03	0.05	0.02	9.01	0.33	0.18	48.19	0.09	0.02	99.63	90.5
1/10/2005	fo90	41.52	-0.02	0.04	0.05	8.97	0.39	0.16	48.15	0.10	0.02	99.40	90.5
1/10/2005	fo90	41.37	0.01	0.04	0.01	9.19	0.35	0.19	48.20	0.11	0.01	99.48	90.3
Average													
Standard Deviation		0.12	-0.01	0.04	0.02	9.12	0.38	0.16	48.17	0.09	0.02	99.42	90.4
Accepted Totals		40.81	NA	NA	NA	9.55	0.37	0.14	49.42	<.05	NA	100.34	90.0
Average % Deviation from Accepted													
Accepted		101.4	NA	NA	NA	95.5	102.7	114.8	97.5	--	NA	99.1	100.4

Table A7: Reproducibility and accuracy of spinel mineral standards by electron microprobe.

Date	Analysis ID	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	NiO	MnO	MgO	CaO	ZnO	V ₂ O ₃	SO ₂	Total
Minas Gervais magnetite (USNM 114887)														
1/2/2005	Magtstd	0.11	0.03	0.05	0.1	85.73	0	0.03	0.09	0.01	-0.04	0.27	0	86.42
1/2/2005	Magtstd	0.09	0.23	0.05	0.13	86.01	0.08	0.1	0.09	0	0.05	0.25	0.01	87.1
1/2/2005	Magtstd	0.09	0.15	0.06	0.15	86.42	0.02	0.09	0.09	0	0.07	0.22	0.02	87.37
1/2/2005	Magtstd	0.06	0.17	0.06	0.1	85.68	-0.02	0.1	0.12	0	0.09	0.24	0.01	86.63
1/2/2005	Magtstd	0.07	0.05	0.04	0.2	85.8	0.07	0.08	0.1	-0.01	0.02	0.17	0.01	86.61
1/2/2005	Magtstd	0.06	0.06	0.06	0.12	86.26	-0.06	0.08	0.1	0	0.02	0.26	0.01	87.03
1/2/2005	Magtstd	0.07	0.2	0.07	0.21	86.1	0.04	0.11	0.1	0	-0.02	0.24	-0.01	87.13
1/2/2005	Magtstd	0.09	0.16	0.04	0.16	86.32	0.01	0.11	0.1	0	-0.12	0.23	0.01	87.22
1/2/2005	Magtstd	0.1	0.15	0.06	0.11	85.64	0.06	0.1	0.12	0	0.06	0.18	0.03	86.6
1/2/2005	Magtstd	0.08	0.25	0.06	0.12	85.69	0.14	0.05	0.09	0	0	0.24	0	86.72
Average		0.08	0.15	0.06	0.14	85.97	0.03	0.09	0.10	0.00	0.01	0.23	0.01	86.88
Standard Deviation		0.02	0.08	0.01	0.04	0.30	0.06	0.03	0.01	0.00	0.06	0.03	0.01	0.32
Accepted Totals		NA	NA	NA	NA	90.94	NA	NA	NA	NA	NA	NA	NA	NA
Average % Deviation from Accepted		NA	NA	NA	NA	94.5	NA	NA	NA	NA	NA	NA	NA	NA
Chromite (USNM 117075)														
1/2/2005	Cromtstd	0.03	0.12	10.39	61.32	12.28	0.19	-0.59	15.41	0.01	0.01	0.11	0.01	99.87
1/2/2005	Cromtstd	0.01	0.03	10.27	61.07	12.26	0.15	-0.74	15.43	0	-0.05	0.02	0.01	99.27
1/2/2005	Cromtstd	0.07	0.11	10.3	61.42	12.48	0.18	-0.6	15.44	0.01	0.03	0.07	0.02	100.12
1/2/2005	Cromtstd	0.01	0.05	10.41	61.23	12.21	0.21	-0.61	15.32	0	0.01	0.14	-0.01	99.59
1/2/2005	Cromtstd	0.02	0.08	10.35	61.42	12.54	0.1	-0.61	15.39	0	0.1	0.07	0	100.07
1/2/2005	Cromtstd	0.01	0.14	10.23	61.03	12.33	0.19	-0.66	15.44	0	0.1	0.08	0.01	99.56
1/2/2005	Cromtstd	0.02	0.1	10.32	61.81	12.19	0.17	-0.65	15.28	0	-0.04	0.12	0.01	100.03
1/2/2005	Cromtstd	0.02	0.06	10.36	61.7	12.44	0.07	-0.56	15.45	0.01	0.1	0.21	-0.01	100.42
1/2/2005	Cromtstd	0.02	0.08	10.32	61.75	12.52	0.09	-0.57	15.38	0	0	0.06	0	100.22
1/2/2005	Cromtstd	0.02	0.14	10.35	61.97	12.54	0.17	-0.62	15.31	0	0.06	0.09	0	100.67
Average		0.02	0.09	10.33	61.47	12.38	0.15	-0.62	15.39	0.00	0.03	0.10	0.00	99.98
Standard Deviation		0.02	0.04	0.05	0.32	0.14	0.05	0.05	0.06	0.00	0.06	0.05	0.01	0.42
Accepted Totals		NA	NA	9.92	60.5	13.04	NA	0.11	15.2	0.12	NA	NA	NA	NA
Average % Deviation from Accepted		NA	NA	104.1	101.6	94.9	NA	--	101.2	--	NA	NA	NA	NA

Table A8: Repeat analyses of rhyolite glass standard (USNM 72854 VG-568) prior to analysis of Mt. St. Helens ash.

Analyzed Sample	SiO ₂	Al ₂ O ₃	TiO ₂	FeO*	MnO	CaO	MgO	K ₂ O	Na ₂ O	P ₂ O ₅	SO ₂	Cl	Total
3-Mar-05 Rhyo	75.5	12.24	0.1	1.02	0	0.37	0.06	4.81	3.14	0	0.01	0.11	98.4
3-Mar-05 Rhyo	75.73	12.22	0.07	1.14	0	0.4	0	5.03	3.28	0.01	0.01	0.11	97.64
3-Mar-05 Rhyo	75.43	12.09	0.1	1.13	0.01	0.37	0.03	4.86	3.38	0	0	0.11	97.6
3-Mar-05 Rhyo	76.02	12.33	0.07	1.22	0.01	0.35	0.03	4.83	3.95	0	0.01	0.11	98.38
6-Mar-05 Rhyo	75.81	12.32	0.08	1.03	0	0.39	0	4.75	3.58	0.01	0	0.12	98.52
6-Mar-05 Rhyo	76.06	12.31	0.08	1.13	0.02	0.41	0.02	4.95	3.68	0.01	0	0.12	98.48
6-Mar-05 Rhyo	75.96	12.48	0.08	1.09	0.03	0.4	0	4.93	3.22	0	0.01	0.11	98.79
9-Mar-05 Rhyo	76.85	12.22	0.1	1.09	0.05	0.4	0.03	5.03	3.37	0.01	0	0.12	100.22
9-Mar-05 Rhyo	77.48	12.48	0.07	1.14	0.04	0.42	0.05	5.03	3.45	0.01	0	0.12	100.03
9-Mar-05 Rhyo	77.3	12.42	0.06	1.16	0.05	0.39	0.03	4.81	3.59	0	0	0.13	99.95
11-Mar-05 Rhyo	77.08	12.69	0.08	1.11	0	0.41	0.06	4.89	3.64	0	0	0.11	99.79
11-Mar-05 Rhyo	76.86	12.56	0.08	1.13	0.05	0.41	0.06	5.24	3.38	0.02	0	0.12	100.42
11-Mar-05 Rhyo	77.37	12.64	0.09	1.13	0	0.38	0.05	4.95	3.69	0.01	0	0.13	100.13
13-Mar-05 Rhyo	77.04	12.62	0.07	1.13	0.05	0.41	0.02	4.79	3.44	0	0	0.12	100.15
13-Mar-05 Rhyo	77.21	12.75	0.08	1.28	0.01	0.41	0.06	4.69	3.66	0.01	0.01	0.12	99.42
10-Apr-05 Rhyo	76.76	12.64	0.07	1.02	0.03	0.39	0.03	4.82	3.3	0.01	0	0.1	99.13
10-Apr-05 Rhyo	76.91	12.53	0.06	1	0.01	0.38	0.02	4.91	3.51	0.01	0	0.12	99.18
Average	76.55	12.44	0.08	1.11	0.02	0.39	0.03	0.13	0.24	0.01	0	0.01	0.92
Standard Deviation	0.7	0.19	0.01	0.07	0.02	0.02	0.02	4.89	3.75	<0.01	NA	NA	99.57
Accepted Totals	76.71	12.06	0.12	1.23	0.03	0.5	<0.1	100.3	93.7	--	NA	NA	99.6
Average % Deviation from Accepted	99.8	103.2	65.7	90.5	70.6	78.7	--						

Table A9: Average analyses of BHVO2-G standard analyzed as an unknown by LA-ICP-MS.

Sample Date	BHVO2-G		BHVO2-G		BHVO2-G		BHVO2-G		Deviation from accepted
	8/3/2003	+/-	10/16/2003	+/-	11/18/2003	+/-	11/18/2003	+/-	
N	5		3		5		5		
Concentration (ppm)									
Sc	32.74	1.51	30.93	0.24	30.43	1.34	30.43	1.34	0.95
Ti	16606.05	180.09	16320.00	0.00	16885.29	125.62	16885.29	125.62	1.04
V	322.16	4.90							
Cr									
Mn									
Ni									
Cu									
Zn									
Rb	9.16	0.44	10.08	0.21	10.69	0.25	10.69	0.25	1.09
Sr	390.19	7.19	392.56	13.69	410.05	7.37	410.05	7.37	1.05
Y	28.22	0.65	25.18	0.71	23.93	0.55	23.93	0.55	0.92
Zr	177.82	3.00	160.65	4.91	157.82	2.60	157.82	2.60	0.92
Nb			19.20	0.56	20.78	0.43	20.78	0.43	1.08
Ba	118.60	3.13	125.77	6.83	136.44	5.64	136.44	5.64	1.06
La	14.61	0.79	14.44	1.07	14.68	0.25	14.68	0.25	0.96
Ce	34.18	0.85	37.15	1.39	39.93	0.86	39.93	0.86	1.05
Pr	4.86	0.15	5.18	0.30	5.34	0.15	5.34	0.15	1.00
Nd	23.13	0.79	22.43	0.75	23.69	0.69	23.69	0.69	0.97
Sm	5.32	0.57	5.71	0.37	6.00	0.23	6.00	0.23	0.99
Eu	1.88	0.17	2.02	0.14	2.06	0.10	2.06	0.10	1.01
Gd	6.04	1.03	6.25	0.49	5.83	0.51	5.83	0.51	0.94
Dy	5.15	0.15	4.98	0.19	4.81	0.26	4.81	0.26	0.91
Er	2.62	0.34	2.33	0.32	2.21	0.13	2.21	0.13	0.87
Yb	1.83	0.24	1.75	0.12	1.92	0.15	1.92	0.15	0.98
Hf	4.37	0.44	4.23	0.17	3.73	0.42	3.73	0.42	0.91
Ta	1.27	0.15	1.34	0.19	1.16	0.04	1.16	0.04	0.97
Pb	1.73	0.23	1.93	0.14	2.10	0.12	2.10	0.12	1.26
Th	1.17	0.18	1.09	0.08	1.24	0.06	1.24	0.06	1.04
U	0.32	0.08	0.45	0.05	0.45	0.04	0.45	0.04	1.08

Table A9: Continued.

Sample	BHVO2-G	+/-	Deviation from	BHVO2-G	+/-	Deviation from	BHVO2-G	+/-	Deviation from
Date	3/28/2003		accepted	7/15/2005		accepted	9/3/2004		accepted
N	10			3			5		
Concentration (ppm)									
Sc	31.07	1.16	0.97	29.58	1.34	0.92	29.33	0.49	0.92
Ti	16275.53	262.98	1.00	16321.38	268.71	1.00	16501.84	48.87	1.01
V							327.96	1.63	1.03
Cr							288.12	1.28	1.03
Mn							1343.79	14.71	1.04
Ni							117.07	3.42	1.05
Cu							153.75	1.41	1.21
Zn							106.57	0.84	1.03
Rb	10.18	0.44	1.04	10.40	0.62	1.06	10.03	0.20	1.02
Sr	414.52	20.00	1.07	414.57	6.64	1.07	413.72	9.40	1.06
Y	26.62	1.56	1.02	26.13	1.22	1.00	24.13	0.64	0.93
Zr	170.22	8.45	0.99	168.43	5.42	0.98	159.15	4.08	0.93
Nb	19.57	0.79	1.02	19.67	0.42	1.02	20.58	0.43	1.07
Ba	130.47	7.11	1.01	139.49	4.81	1.08	143.15	2.85	1.11
La	14.74	0.71	0.96	16.01	0.70	1.05	15.92	0.26	1.04
Ce	37.44	2.38	0.99	40.21	0.68	1.06	41.70	0.83	1.10
Pr	5.23	0.44	0.98	5.47	0.27	1.03	5.68	0.13	1.06
Nd	22.62	1.79	0.93	24.92	1.53	1.02	24.55	0.86	1.01
Sm	5.67	0.62	0.94	6.02	0.32	1.00	6.05	0.17	1.00
Eu	1.93	0.15	0.95				2.10	0.05	1.03
Gd	5.89	0.72	0.94	5.67	1.26	0.91	5.91	0.10	0.95
Dy	4.94	0.60	0.93	5.47	0.55	1.03	4.86	0.12	0.92
Er	2.25	0.25	0.88	2.32	0.10	0.91	2.26	0.10	0.89
Yb	1.65	0.32	0.84	1.66	0.28	0.85	1.85	0.05	0.95
Hf	3.90	0.33	0.95						
Ta	1.18	0.15	0.99	1.30	0.09	1.09			
Pb	1.84	0.25	1.11	2.12	0.05	1.28	1.89	0.04	1.14
Th	1.27	0.15	1.06	1.09	0.16	0.90	1.21	0.07	1.01
U	0.46	0.07	1.11	0.35	0.05	0.85	0.44	0.02	1.07

Table A9: Continued.

Sample	BHVO2-G	+/-	Deviation from	BHVO2-G	+/-	Deviation from	BHVO-2G
Date	2/24/2006		accepted	2/24/2006		accepted	Accepted
N	6			4			
Concentration (ppm)							
Sc	31.18	0.72	0.97	31.36	0.46	0.98	32
Ti	15847.53	238.48	0.97	15471.02	96.67	0.95	16300
V							317
Cr							280
Mn							1290
Ni							112
Cu							127
Zn							103
Rb	9.88	0.36	1.01	10.04	0.09	1.02	9.8
Sr	405.13	10.21	1.04	399.71	2.74	1.03	389
Y	27.52	0.82	1.06	26.62	0.29	1.02	26
Zr	173.39	3.74	1.01	168.11	1.10	0.98	172
Nb	19.09	0.66	0.99	18.67	0.18	0.97	19.2
Ba	128.14	3.10	0.99	128.80	1.22	1.00	129
La	15.43	0.53	1.01	15.16	0.11	0.99	15.2787
Ce	38.01	1.02	1.00	37.83	0.13	1.00	37.9118
Pr	5.38	0.14	1.01	5.36	0.02	1.00	5.33632
Nd	24.44	1.11	1.00	24.66	0.64	1.01	24.3973
Sm	6.05	0.31	1.00	6.15	0.27	1.02	6.03359
Eu	2.06	0.13	1.01	2.04	0.06	1.00	2.03782
Gd	6.25	0.31	1.00	6.30	0.40	1.01	6.23071
Dy	5.55	0.19	1.05	5.39	0.18	1.02	5.30561
Er	2.64	0.14	1.04	2.58	0.09	1.01	2.54754
Yb	2.13	0.29	1.09	2.03	0.12	1.04	1.95646
Hf							4.1
Ta	1.22	0.07	1.02	1.18	0.03	0.99	1.19
Pb	1.95	0.16	1.18	1.86	0.03	1.12	1.66
Th	1.36	0.10	1.13	1.31	0.04	1.09	1.2
U	0.48	0.06	1.15	0.39	0.04	0.96	0.412

Table A10: Average analyses of BCR2-G standard analyzed by LA-ICP-MS

Sample	BCR-2G			BCR-2G			BCR-2G
Date	3/18/2005	+/-	Deviation from accepted	4/14/2004	+/-	Deviation from accepted	Accepted
N	6			4			
Concentration (ppm)							
Li	9.2	0.5	92.8	12.4	1.2	124.7	9.91
Si	252898.8	0.0	100.0	252898.8	0.0	100.0	252898.8
Ca	46545.4	1131.5	91.5	40832.3	1064.0	80.2	50886.2
Ti	15714.7	119.2	116.4	13275.1	394.0	98.3	13500
V	384.1	1.0	92.3	426.5	0.9	102.5	416
Rb	43.7	0.3	91.1	48.2	0.3	100.3	48
Sr	313.5	4.0	90.6	283.1	9.1	81.8	346
Y	30.1	1.6	81.5	23.7	1.2	64.0	37
Zr	155.2	6.6	82.6	124.7	6.3	66.3	188
Nb	12.4	0.3	91.5	11.6	0.4	85.5	13.6
Cs	1.1	0.1	95.3			0.0	1.18
Ba	622.1	8.7	92.3	574.5	22.3	85.2	674
La	23.9	0.4	94.8	20.4	1.1	80.8	25.26
Ce	47.7	0.2	88.7	47.1	1.1	87.7	53.75
Pr	6.2	0.1	90.7	5.6	0.3	81.9	6.88
Nd	27.0	0.8	93.8	23.0	1.5	79.8	28.82
Sm	4.7	0.3	71.1	3.7	0.2	55.9	6.57
Eu	1.9	0.1	97.6	1.7	0.1	87.3	1.95
Pb	9.8	0.2	89.3	11.6	0.2	105.6	11
Th	5.5	0.3	89.4	4.5	0.3	73.3	6.2
U	1.5	0.1	87.7	1.7	0.1	99.8	1.69

APPENDIX B

MICROPROBE DATA

Complete melt inclusion major element data (including S and Cl) corresponding to averages presented in Table 9 are reported in Table B1. The sample label corresponds to sample identification and locations provided in Table 8. Detection limits and standard error for microprobe data is presented in Tables A1, A2, A4 and A5. Olivine-host compositions corresponding to melt inclusion analyses are provided in Table B2 while spinel inclusions are reported in Table B3. Eruption and collection dates for Mount St. Helens samples are provided in Table 11. Major element concentrations for Mount St. Helens glass, feldspar, and mafic phases are reported in Tables B4, B5 and B6, respectively. Mafic phases include amphibole, clinopyroxene, hypersthene, and olivine. An electronic version of this appendix is available upon request. Electron backscatter or reflected light images are available for most analyses.

Table B1: Melt inclusion major element compositions (and S, Cl) measured by electron microprobe.

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)													S	Cl	Total
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅				
MRQV-03-1	04-048-11.1	unheated	62.78	1.46	17.37	0.01	3.43	0.00	0.03	1.24	2.38	4.82	1.55	0.66	0.12	0.15	96.02	
MRQV-03-1	04-048-18.2	unheated	63.25	0.91	14.05	0.01	2.59	0.06	0.02	4.37	4.91	3.42	1.43	0.76	0.16	0.14	96.08	
MRQV-03-1	04-048-19.1	unheated	64.87	0.67	12.97	0.01	2.69	0.03	0.05	2.84	7.72	2.72	1.20	1.26	0.24	0.07	97.34	
MRQV-03-1	04-048-20.1	unheated	64.45	0.81	13.90	0.03	2.05	0.05	0.00	5.37	2.08	3.60	2.52	0.56	0.11	0.12	95.65	
MRQV-03-1	04-044-4.1	1125	50.87	1.02	12.13	0.05	10.78	0.06	0.07	6.32	9.46	2.67	2.76	1.56	0.21	0.10	98.07	
MRQV-03-1	04-044-5.1	1125	53.04	0.91	13.78	0.02	12.83	0.02	0.05	5.23	8.98	3.64	0.47	0.03	0.16	0.07	99.22	
MRQV-03-1	04-044-2.1	1125	48.90	1.57	16.38	0.00	7.34	0.09	0.08	5.06	9.90	3.59	3.59	1.58	0.07	0.01	98.06	
MRQV-03-1	04-044-7.1	1125	52.64	0.62	9.92	0.12	10.03	0.10	0.07	9.47	12.92	2.26	1.60	1.00	0.33	0.08	101.16	
MRQV-03-1	04-044-11.1	1125	50.78	1.18	11.83	0.03	9.17	0.06	0.10	7.17	11.12	2.52	2.59	1.54	0.13	0.08	98.31	
MRQV-03-1	04-045-1.1	1150	50.65	1.25	12.99	0.01	9.27	0.09	0.13	6.36	9.79	3.09	3.40	1.02	0.24	0.10	98.40	
MRQV-03-1	04-045-2.1	1150	54.01	0.77	12.50	0.03	9.27	0.08	0.00	5.61	7.46	3.16	3.78	1.15	0.43	0.10	98.35	
MRQV-03-1	04-045-10.1	1150	58.13	0.72	12.44	0.26	4.93	0.11	0.06	7.72	7.34	2.76	2.71	1.25	0.36	0.11	98.90	
MRQV-03-1	04-045-10.2	1150	46.80	1.60	14.19	0.08	9.62	0.05	0.01	7.23	11.98	2.54	2.76	1.69	0.11	0.09	98.76	
MRQV-03-1	04-045-10.3	1150	47.75	1.56	14.28	0.00	9.08	0.09	0.06	7.41	11.98	2.44	2.93	1.57	0.11	0.08	99.34	
MRQV-03-1	04-045-11.1	1150	54.66	0.73	11.60	0.01	9.48	0.02	0.07	5.77	8.37	2.55	3.24	1.23	0.23	0.11	98.05	
MRQV-03-1	04-045-18.1	1150	50.58	0.95	11.99	0.04	11.80	0.00	0.07	5.92	9.21	2.41	3.02	1.14	0.57	0.10	97.79	
MRQV-03-1	04-046-1.1	1175	61.42	0.71	12.23	0.07	5.61	0.03	0.04	5.93	7.35	2.78	2.90	0.99	0.07	0.11	100.23	
MRQV-03-1	03-027-12.1	1200	36.86	1.10	8.99	0.05	15.32	0.11	0.11	6.63	13.84	2.47	2.02	0.96	0.92	0.09	89.36	
MRQV-03-1	03-027-4.1	1200	43.44	1.20	11.75	0.00	19.45	0.06	0.06	6.02	8.99	2.82	3.15	1.14	0.81	0.12	98.95	
MRQV-03-1	03-027-11.1	1200	44.77	1.00	11.26	0.06	15.80	0.07	0.06	6.09	10.33	2.72	2.99	1.22	0.63	0.12	97.07	
MRQV-03-1	03-027-25.1	1200	42.61	1.45	13.47	0.05	16.15	0.10	0.10	5.10	10.93	3.05	2.81	1.14	0.77	0.14	97.77	
MRQV-03-1	03-027-4.2	1200	41.89	1.34	11.77	0.01	19.87	0.05	0.05	6.43	10.16	2.84	2.54	1.07	0.82	0.11	98.88	
MRQV-03-1	03-027-11.1	1200	46.06	1.11	11.73	0.05	16.73	0.08	0.08	6.26	10.79	2.88	3.14	1.22	0.62	0.11	100.78	
MRQV-03-1	03-038-14.1	1200	44.49	1.49	12.48	0.03	15.80	0.09	0.09	5.55	11.08	3.25	3.35	1.53	0.71	0.13	99.98	
MRQV-03-1	03-042-5.1	1200	59.35	1.59	13.67	0.03	7.55	0.02	0.02	5.63	2.69	4.04	4.49	1.72	0.20	0.11	101.07	
MRQV-03-1	03-043-8.1	1200	50.21	1.14	12.77	0.17	9.17	0.09	0.09	8.19	9.99	2.33	2.59	1.28	0.08	0.08	98.08	
MRQV-03-1	03-043-10.2	1200	43.65	1.42	11.57	0.02	16.61	0.04	0.04	7.49	10.21	2.82	2.97	1.28	0.68	0.11	98.86	
MRQV-03-1	03-043-15.1	1200	43.74	1.34	10.86	0.05	13.64	0.04	0.04	8.50	11.62	3.00	3.25	1.35	0.52	0.14	98.06	
MRQV-03-1	03-050-3.2	1200	42.63	1.29	12.12	0.04	15.64	0.08	0.08	7.35	9.02	2.73	3.17	1.21	0.90	0.10	96.28	
MRQV-03-1	03-050-6.1	1200	46.68	1.22	12.52	0.03	12.81	0.05	0.05	8.53	9.41	2.61	2.90	1.38	0.16	0.08	98.38	
MRQV-03-1	03-050-7.1	1200	45.00	1.16	11.35	0.05	16.00	0.07	0.07	7.19	9.05	2.54	2.68	1.15	0.68	0.08	97.00	
MRQV-03-1	03-050-12.1	1200	43.71	1.37	12.21	0.02	16.12	0.12	0.12	7.68	9.46	2.78	3.17	1.15	0.81	0.11	98.70	
MRQV-03-1	03-050-22.1	1200	48.00	0.88	11.66	0.03	16.90	0.08	0.08	7.63	7.48	2.77	2.60	0.86	0.11	0.08	99.09	
MRQV-03-1	03-051-15.1	1200	45.95	1.29	11.71	0.00	13.29	0.08	0.08	7.81	9.13	2.72	2.99	1.32	0.58	0.11	96.99	
MRQV-03-1	03-052-5.1	1200	43.26	1.11	12.11	0.01	17.00	0.12	0.12	7.58	8.96	2.86	2.66	0.99	0.49	0.07	97.23	
MRQV-03-1	03-052-10.1	1200	43.10	1.05	11.30	0.00	18.59	0.10	0.10	8.14	8.69	2.58	2.74	1.02	0.67	0.09	98.10	
MRQV-03-1	03-053-1.1	1200	50.04	0.90	11.17	0.07	11.09	0.07	0.07	8.24	9.14	2.69	2.87	1.13	0.59	0.09	98.09	
MRQV-03-1	03-053-1.2	1200	48.75	1.35	12.81	0.03	9.74	0.11	0.11	8.51	11.13	3.12	2.59	1.29	0.07	0.08	99.58	
MRQV-03-1	03-053-3.1	1200	44.20	1.25	11.69	0.03	15.39	0.11	0.11	7.21	9.24	2.75	3.50	1.41	0.85	0.11	97.73	
MRQV-03-1	03-060-1.1	1200	45.68	1.01	11.79	0.01	18.37	0.11	0.11	6.42	7.87	2.38	2.95	1.21	0.34	0.11	98.24	
MRQV-03-1	03-062-1.1	1200	53.67	0.85	10.93	0.04	10.20	0.09	0.09	7.86	7.85	1.94	2.84	1.12	0.49	0.12	98.01	
MRQV-03-1	03-062-5.1	1200	45.65	1.24	12.04	0.00	15.21	0.08	0.08	6.94	9.64	2.14	2.80	1.21	0.71	0.11	97.78	
MRQV-03-1	03-062-7.1	1200	51.64	0.92	10.39	0.00	12.26	0.09	0.09	8.53	7.36	2.14	2.91	0.96	0.47	0.09	97.75	
MRQV-03-1	03-063-2.1	1200	43.48	1.21	11.43	0.03	17.03	0.06	0.06	6.13	9.92	2.76	3.06	1.19	0.92	0.11	97.34	
MRQV-03-1	03-063-5.1	1200	48.80	1.25	11.61	0.00	11.39	0.11	0.11	8.34	9.24	2.82	3.10	1.08	0.46	0.10	98.30	
MRQV-03-1	03-064-1.1	1200	44.87	1.17	11.57	0.04	15.31	0.06	0.06	5.30	9.64	2.71	3.06	1.32	0.91	0.12	96.09	
MRQV-03-1	03-064-2.1	1200	47.93	1.12	11.22	0.03	10.38	0.06	0.06	9.42	8.44	2.55	2.72	1.10	0.59	0.10	95.66	
MRQV-03-1	03-064-1.1	1200	44.36	1.15	9.47	0.02	15.77	0.04	0.04	9.56	8.57	2.09	3.56	1.10	0.79	0.12	96.60	

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)																
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total		
MRQV-03-1	03-039-3.1	1200	53.22	1.01	11.06	0.00	9.51		0.05	7.76	7.70	2.67	3.25	1.16	0.56	0.10	98.05		
MRQV-03-1	03-061-3.1	1200	46.75	1.11	11.59	0.01	11.65		0.13	9.26	9.40	2.46	2.70	1.12	0.63	0.11	96.93		
MRQV-03-1	03-086-9.1	1200	45.08	0.96	10.84	0.00	17.94	0.05	0.11	7.09	8.05	2.71	2.79	0.92	0.75	0.10	97.39		
MRQV-03-1	03-086-9.1pt	1200	44.98	0.96	10.84	0.04	18.02	0.08	0.10	7.15	8.71	2.75	2.76	0.96	0.77	0.10	98.23		
MRQV-03-1	03-088-1.1	1200	44.48	0.85	12.18	0.02	17.06	0.11	0.08	6.64	9.95	3.16	2.62	1.18	0.12	0.07	98.53		
MRQV-03-1	03-089-2.1	1200	57.87	0.42	13.25	0.05	7.53	0.00	0.08	4.74	4.53	4.33	5.03	1.06	0.08	0.03	99.00		
MRQV-03-1	03-089-4.1	1200	48.64	0.75	12.02	0.04	12.47	0.07	0.07	6.50	8.72	3.17	3.83	1.42	0.14	0.12	97.94		
MRQV-03-1	04-047-19.1	1225	52.72	0.85	11.17	0.11	10.94	0.09	0.04	8.93	7.52	2.37	2.71	0.97	0.13	0.06	98.61		
MRQV-03-1	04-047-23.1	1225	44.05	1.08	11.35	0.05	17.36	0.10	0.09	8.45	8.29	2.70	2.86	0.99	0.20	0.10	97.67		
MRQV-03-1	04-047-11.1	1225	44.23	1.31	11.93	0.04	16.11	0.06	0.10	8.38	8.69	2.52	2.93	1.12	0.27	0.10	97.77		
MRQV-03-1	04-047-16.1	1225	46.47	0.72	9.17	0.03	19.38	0.08	0.12	7.36	7.70	2.14	2.63	0.92	0.78	0.10	97.60		
MRQV-03-1	04-047-18.1	1225	44.47	1.03	11.04	0.03	17.71	0.12	0.10	8.49	8.52	2.12	2.56	0.87	0.63	0.07	97.77		
MRQV-03-1	04-047-22.1	1225	42.88	1.40	11.72	0.02	16.50	0.07	0.05	7.76	9.27	2.69	3.22	1.28	0.83	0.12	97.81		
MRQV-03-1	04-047-26.1	1225	42.75	1.08	10.52	0.03	21.67	0.06	0.07	7.08	8.15	2.19	2.77	1.08	0.84	0.10	98.38		
MRQV-03-1	04-047-28.1	1225	49.97	1.01	12.08	0.02	9.61	0.02	0.09	9.09	9.97	2.73	2.69	1.18	0.59	0.13	99.17		
Qvsoria	04-032-1.1	unheated	50.43	1.74	16.33	0.00	6.23	0.00	0.10	4.90	10.04	3.77	3.14	1.31	0.24	0.14	98.37		
Qvsoria	04-032-1.2	unheated	50.47	1.72	16.57	0.00	6.17	0.02	0.11	4.61	8.94	4.00	3.47	1.33	0.38	0.17	97.95		
Qvsoria	04-032-1.3	unheated	51.10	1.74	16.68	0.00	6.19	0.01	0.11	4.64	8.96	3.99	3.39	1.28	0.30	0.16	98.53		
Qvsoria	04-032-1.4	unheated	51.12	1.71	16.80	0.00	5.99	0.00	0.07	4.38	8.33	3.95	3.53	1.37	0.29	0.17	97.70		
Qvsoria	04-032-1.5	unheated	51.14	1.73	16.81	0.00	5.83	0.00	0.09	4.29	8.11	4.01	3.69	1.24	0.30	0.16	97.40		
Qvsoria	04-032-2.1	unheated	51.00	1.76	16.75	0.01	6.37	0.00	0.10	4.57	8.30	3.91	3.77	1.34	0.25	0.16	98.30		
Qvsoria	04-032-2.2	unheated	51.20	1.78	16.82	0.00	6.33	0.00	0.12	4.52	8.27	4.00	3.64	1.31	0.28	0.17	98.44		
Qvsoria	04-032-2.3	unheated	50.84	1.75	16.72	0.01	6.19	0.00	0.05	4.54	8.90	3.98	3.41	1.32	0.27	0.16	98.15		
Qvsoria	04-032-2.4	unheated	50.90	1.75	16.44	0.03	6.27	0.00	0.07	4.93	9.31	3.89	3.31	1.29	0.26	0.18	98.63		
Qvsoria	04-032-2.5	unheated	51.16	1.68	16.80	0.02	6.19	0.08	0.14	4.57	9.25	3.98	3.38	1.30	0.25	0.16	98.95		
Qvsoria	04-032-3.1	unheated	51.06	1.72	16.71	0.01	6.32	0.06	0.13	4.76	8.80	3.81	3.23	1.28	0.27	0.15	98.33		
Qvsoria	04-032-3.2	unheated	51.00	1.77	16.55	0.00	6.26	0.06	0.11	4.61	8.94	3.91	2.70	1.33	0.29	0.17	97.69		
Qvsoria	04-032-3.3	unheated	51.36	1.79	17.04	0.01	6.27	0.01	0.16	4.51	8.45	3.89	3.40	1.37	0.27	0.15	98.68		
Qvsoria	04-032-3.4	unheated	51.57	1.77	17.08	0.00	6.21	0.03	0.12	4.40	8.28	3.80	3.54	1.32	0.23	0.16	98.51		
Qvsoria	04-032-3.5	unheated	51.51	1.69	16.95	0.00	6.38	0.01	0.12	4.58	8.00	3.79	3.45	1.31	0.24	0.16	98.18		
MRQV04-3b	04-036-1.1	unheated	50.33	1.65	14.80	0.01	6.30	0.05	0.13	4.59	11.67	2.77	2.38	1.59	0.27	0.18	96.73		
MRQV04-3b	04-036-1.2	unheated	50.89	1.63	14.81	0.03	6.48	0.04	0.08	4.68	11.47	2.62	2.76	1.51	0.26	0.17	97.45		
MRQV04-3b	04-036-1.3	unheated	51.23	1.75	15.08	0.05	6.57	0.00	0.08	4.29	11.09	2.90	2.72	1.50	0.28	0.17	97.72		
MRQV04-3b	04-036-2.1	unheated	51.90	1.38	16.16	0.03	5.09	0.05	0.09	7.96	5.87	2.08	2.78	1.30	0.43	0.16	95.27		
MRQV04-3b	04-036-3.1	unheated	51.97	1.83	16.47	0.01	7.29	0.05	0.06	3.45	10.82	1.82	0.94	1.59	0.46	0.20	96.97		
MRQV04-3b	04-036-4.1	unheated	51.38	1.70	15.25	0.01	6.88	0.03	0.06	4.05	11.83	2.92	0.96	1.40	0.42	0.19	97.07		
MRQV04-3b	04-036-4.2	unheated	51.30	1.65	15.13	0.01	7.18	0.04	0.17	4.86	11.21	2.75	1.92	1.45	0.36	0.18	98.21		
MRQV04-3b	04-036-7.1	unheated	49.78	1.73	15.55	0.01	6.86	0.00	0.09	4.86	10.46	3.57	1.69	1.37	0.43	0.16	96.57		
MRQV04-3b	04-036-9.1	unheated	50.05	1.79	15.55	0.02	6.84	0.06	0.15	5.23	10.72	3.05	1.34	1.52	0.50	0.18	97.02		
MRQV04-3b	04-050-1.1	unheated	50.79	1.69	15.27	0.03	5.95	0.01	0.09	5.09	10.48	1.86	2.66	1.31	0.32	0.15	95.70		
MRQV04-3b	04-050-2.1	unheated	49.50	1.80	15.39	0.00	7.17	0.03	0.15	5.32	10.21	2.08	2.08	1.35	0.49	0.16	95.72		
MRQV04-3b	04-050-3.1	unheated	59.56	1.47	17.15	0.02	4.30	0.03	0.04	2.49	3.82	3.89	2.09	0.42	0.09	0.08	95.45		
MRQV04-3b	04-050-4.1	unheated	49.56	1.80	15.47	0.00	7.10	0.05	0.10	4.50	11.97	1.93	2.14	1.26	0.52	0.16	96.54		
MRQV04-3b	04-050-4.2	unheated	48.77	1.77	15.08	0.00	7.17	0.03	0.10	4.45	12.06	1.43	1.83	1.24	0.59	0.16	94.68		
MRQV04-3b	04-050-4.3	unheated	49.52	1.85	15.65	0.02	6.76	0.00	0.10	3.71	12.92	1.89	1.73	1.31	0.52	0.17	96.17		
MRQV04-3b	04-050-5.1	unheated	50.38	1.86	15.38	0.00	6.61	0.03	0.11	5.12	11.18	1.87	1.54	1.37	0.34	0.16	95.95		
MRQV04-3b	04-050-6.1	unheated	49.18	1.84	15.81	0.01	6.36	0.01	0.12	4.93	10.62	3.60	1.55	1.22	0.60	0.19	96.04		
MRQV04-3b	04-050-14.2	unheated	50.01	1.94	16.06	0.00	6.65	0.02	0.09	4.28	9.00	2.96	1.70	1.31	0.37	0.16	94.55		

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)											S	Cl	Total	
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O				P ₂ O ₅
MRQV04-3b	04-050-17.1	unheated	50.18	1.89	15.67	0.01	6.93	0.00	0.12	5.30	10.09	2.58	1.55	1.37	0.44	0.15	96.29
MRQV04-3b	04-050-18.1	unheated	50.65	1.97	16.39	0.01	6.59	0.06	0.09	4.63	9.65	3.09	2.00	1.36	0.39	0.16	97.05
MRQV04-3b	04-050-19.1	unheated	49.36	1.81	15.02	0.04	6.91	0.05	0.09	5.80	10.93	1.81	2.16	1.31	0.55	0.16	96.00
MRQV04-3b	04-050-20.1	unheated	50.34	1.87	15.35	0.01	7.44	0.05	0.13	5.20	10.15	1.63	1.85	1.31	0.46	0.16	95.95
MRQV04-3b	04-050-20.2	unheated	49.32	1.87	15.25	0.00	7.55	0.03	0.10	4.15	13.25	1.50	1.31	1.36	0.47	0.15	96.31
MRQV04-3b	04-050-21.1	unheated	51.96	1.82	15.56	0.04	6.43	0.02	0.11	5.12	11.77	1.59	2.08	1.38	0.17	0.13	98.16
MRQV04-3b	04-053-1.1	unheated	49.70	1.75	16.27	0.00	5.95	0.04	0.08	4.42	8.53	3.74	1.95	1.38	0.25	0.14	94.20
MRQV04-3b	04-053-2.1	unheated	47.46	1.65	14.60	0.07	6.44	0.03	0.10	5.14	10.89	2.23	2.56	1.47	0.55	0.17	93.35
MRQV04-3b	04-053-4.1	unheated	49.16	1.69	15.66	0.00	6.65	0.00	0.09	5.34	10.12	3.52	2.02	1.36	0.41	0.16	96.19
MRQV04-3b	04-053-5.1	unheated	50.36	1.68	16.45	0.00	6.65	0.02	0.13	4.79	8.73	2.99	2.05	1.38	0.32	0.17	95.71
MRQV04-3b	04-053-6.1	unheated	49.01	1.70	15.03	0.01	6.78	0.00	0.09	5.20	11.73	2.47	1.85	1.36	0.49	0.18	95.90
MRQV04-3b	04-053-6.2	unheated	48.05	1.69	14.82	0.03	6.81	0.01	0.08	5.28	12.14	2.57	1.76	1.58	0.50	0.17	95.47
MRQV04-3b	04-053-7.1	unheated	49.84	1.83	15.76	0.00	7.19	0.03	0.12	3.40	10.57	2.83	2.33	1.58	0.37	0.18	96.03
MRQV04-3b	04-053-9.1	unheated	49.98	1.71	14.59	0.07	6.08	0.02	0.06	5.13	11.26	2.25	2.47	1.65	0.28	0.16	95.68
MRQV04-3b	04-053-9.2	unheated	50.83	1.66	14.84	0.01	6.02	0.03	0.10	5.08	11.03	2.53	2.30	1.53	0.25	0.15	96.37
MRQV04-3b	04-053-10.1	unheated	49.02	1.75	15.38	0.03	6.97	0.02	0.12	4.84	10.69	2.52	2.20	1.46	0.46	0.17	95.64
MRQV04-3b	04-053-12.1	unheated	49.86	1.71	15.07	0.25	5.73	0.05	0.09	4.88	11.10	1.58	2.86	1.54	0.35	0.16	95.24
MRQV04-3b	QV 05-014-1	1112-1119	49.39	1.81	17.10	0.00	6.70	0.01	0.10	4.70	8.60	3.54	4.23	1.42	0.30	0.12	98.00
MRQV04-3b	QV 05-014-3	1112-1119	48.22	1.83	16.17	0.02	7.16	0.09	0.11	7.20	8.10	2.14	3.10	1.27	0.10	0.12	95.64
MRQV04-3b	QV 05-014-6	1112-1119	48.71	1.78	16.83	-0.03	7.25	0.02	0.12	4.68	8.86	3.43	3.86	1.49	0.53	0.13	97.70
MRQV04-3b	QV 05-014-7	1112-1119	49.05	1.82	17.00	-0.02	7.28	0.03	0.13	4.59	8.93	3.50	4.00	1.39	0.34	0.13	98.18
MRQV04-3b	QV 05-014-8	1112-1119	49.37	1.85	16.69	0.00	6.83	0.05	0.10	4.68	9.16	3.38	3.93	1.45	0.40	0.17	98.05
MRQV04-3b	QV 05-014-9	1112-1119	48.82	1.89	17.40	0.00	7.40	0.01	0.10	4.73	9.08	3.49	3.83	1.41	0.32	0.08	98.55
MRCC02-1	03-001-16.1	1199-1200	47.10	1.02	22.97	0.02	7.13	0.11	0.11	6.77	9.98	2.80	0.57	0.22	0.07	0.05	98.82
MRCC02-1	03-001-14.2	1199-1200	50.54	1.06	16.88	0.04	9.25	0.09	0.09	11.48	9.47	2.97	0.56	0.20	0.08	0.05	102.67
MRCC02-1	03-001-15.1	1199-1200	50.62	1.06	17.97	0.07	7.48	0.11	0.11	8.28	10.43	3.12	0.59	0.19	0.10	0.05	100.06
MRCC02-1	03-001-15.2	1199-1200	50.48	1.11	18.05	0.03	7.57	0.05	0.05	8.00	10.56	3.17	0.62	0.20	0.10	0.05	99.98
MRCC02-1	03-001-8.1	1199-1200	50.22	1.18	19.08	0.02	7.75	0.12	0.12	7.53	11.07	3.39	0.63	0.24	0.09	0.05	101.36
MRCC02-1	03-008-1.2	1221-1223	49.80	1.11	17.54	0.06	8.74	0.13	0.13	8.88	10.35	3.19	0.62	0.22	0.10	0.05	100.78
MRCC02-1	03-008-8.1	1221-1223	49.13	1.15	16.82	0.03	11.38	0.17	0.17	8.01	9.23	3.04	0.64	0.26	0.08	0.05	99.99
MRCC02-1	03-008-9.1	1221-1223	50.47	1.08	17.73	0.04	9.28	0.14	0.14	8.53	9.64	3.29	0.67	0.24	0.10	0.06	101.28
MRCC02-1	03-008-10.2	1221-1223	50.67	1.06	18.14	0.04	8.43	0.08	0.08	8.44	10.36	3.16	0.59	0.19	0.07	0.06	101.28
MRCC02-1	03-008-12.1	1221-1223	47.26	1.02	18.35	0.04	9.94	0.11	0.11	8.47	10.07	3.01	0.62	0.21	0.09	0.06	99.26
MRCC02-1	03-008-14.1	1221-1223	49.57	1.09	17.58	0.02	8.02	0.10	0.10	8.81	10.48	3.19	0.56	0.20	0.11	0.06	99.79
MRCC02-1	03-008-15.1	1221-1223	49.22	1.09	16.50	0.08	11.78	0.21	0.21	8.37	9.57	3.11	0.64	0.22	0.08	0.06	100.93
MRCC02-1	03-008-16.1	1221-1223	50.35	1.15	17.55	0.04	9.27	0.15	0.15	10.32	9.57	3.15	0.59	0.21	0.09	0.06	102.50
MRCC02-1	03-008-17.1	1221-1223	50.63	1.01	17.05	0.00	10.99	0.18	0.18	9.63	8.96	3.01	0.57	0.19	0.09	0.05	102.37
MRCC02-1	03-008-17.2	1221-1223	50.04	1.01	17.85	0.05	8.84	0.12	0.12	8.48	9.77	3.10	0.59	0.19	0.09	0.05	100.18
MRCC02-1	03-008-17.3	1221-1223	49.94	1.08	17.78	0.03	9.14	0.16	0.16	8.54	9.91	3.07	0.59	0.20	0.10	0.06	100.60
MRCC02-1	03-008-17.4	1221-1223	49.99	1.01	17.58	0.06	9.08	0.10	0.10	8.52	9.80	3.20	0.56	0.20	0.10	0.06	100.26
MRCC02-1	03-008-19.1	1221-1223	49.45	1.11	18.23	0.00	8.58	0.13	0.13	8.32	9.97	3.26	0.59	0.21	0.09	0.06	100.01
MRCC02-1	03-008-19.2	1221-1223	49.63	1.02	17.61	0.04	8.60	0.13	0.13	9.44	9.85	3.02	0.56	0.21	0.07	0.06	100.25
MRCC02-1	03-015-2.1	1221-1224	50.69	1.04	16.58	0.06	10.25	0.16	0.16	7.84	9.08	3.58	0.70	0.25	0.09	0.04	100.37
MRCC02-1	03-015-5.1	1221-1224	49.31	0.98	17.45	0.04	7.34	0.11	0.11	8.28	9.57	3.35	0.58	0.22	0.09	0.05	97.37
MRCC02-1	03-015-9.1	1221-1224	50.22	1.02	17.11	0.02	7.75	0.17	0.17	9.00	9.37	3.28	0.69	0.20	0.07	0.08	98.98
MRCC02-1	03-015-12.1	1221-1224	50.65	1.00	16.80	0.08	7.46	0.14	0.14	9.21	9.28	3.19	0.59	0.17	0.10	0.05	98.72

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)																
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total		
MRCO2-1	03-015-13.1	1221-1224	50.42	1.05	17.57	0.07	7.69		0.07	8.97	9.86	3.07	0.61	0.17	0.07	0.06	99.69		
MRCO2-1	03-015-16.1	1221-1224	49.92	1.05	17.25	0.07	8.01		0.10	8.99	9.58	3.35	0.58	0.15	0.10	0.05	99.20		
MRCO2-1	03-015-22.1	1221-1224	50.35	1.02	17.75	0.07	8.44		0.06	8.63	9.92	3.14	0.58	0.19	0.10	0.05	100.30		
MRCO2-1	03-015-26.1	1221-1224	50.87	1.04	17.43	0.00	7.94		0.11	8.74	9.38	3.21	0.66	0.21	0.09	0.07	99.75		
MRCO2-1	03-015-34.1	1221-1224	50.99	1.04	18.18	0.04	7.80		0.14	8.52	10.12	3.19	0.59	0.21	0.10	0.05	100.95		
MRCO2-1	03-015-38.1	1221-1224	51.38	1.05	18.15	0.06	8.15		0.19	8.70	10.01	3.26	0.60	0.22	0.10	0.06	101.91		
MRCO2-1	03-015-42.1	1221-1224	50.94	1.04	18.17	0.05	7.65		0.07	8.27	10.40	3.27	0.63	0.21	0.10	0.06	100.87		
MRCO2-1	03-015-46.1	1221-1224	49.93	1.12	16.86	0.05	10.46		0.10	8.10	9.52	3.22	0.68	0.27	0.10	0.05	100.45		
MRCO2-1	03-015-47.1	1221-1224	51.14	1.06	17.76	0.00	8.04		0.13	8.90	10.06	3.27	0.60	0.19	0.11	0.05	101.32		
MRCO2-1	03-015-49.1	1221-1224	49.88	0.99	16.82	0.00	9.73		0.21	9.00	9.45	3.20	0.61	0.21	0.09	0.05	100.24		
MRCO2-1	03-015-62.1	1221-1224	51.31	1.07	18.28	0.07	8.12		0.13	8.36	9.77	3.09	0.68	0.23	0.12	0.05	101.28		
MRCO2-1	03-015-73.1	1221-1224	50.54	1.11	17.97	0.03	8.59		0.15	8.28	9.64	3.49	0.68	0.21	0.10	0.06	100.85		
MRCO2-1	03-015-77.1	1221-1224	51.06	1.03	17.34	0.04	7.29		0.13	9.41	10.10	3.16	0.59	0.17	0.10	0.05	100.48		
MRCO2-1	03-015-78.1	1221-1224	50.81	1.04	18.23	0.05	7.74		0.14	9.36	10.19	3.24	0.58	0.18	0.08	0.05	101.70		
MRCO2-1	03-015-78.2	1221-1224	50.97	1.07	17.95	0.00	8.11		0.15	8.46	9.57	3.36	0.69	0.21	0.09	0.05	100.69		
MRCO2-1	03-015-79.1	1221-1224	51.67	1.14	17.14	0.00	8.48		0.07	8.93	9.57	3.20	0.66	0.23	0.09	0.05	101.24		
MRCO2-1	03-015-80.1	1221-1224	50.61	1.05	18.03	0.04	7.63		0.14	8.60	10.85	3.33	0.56	0.17	0.10	0.06	101.17		
MRCO2-1	03-015-81.1	1221-1224	51.48	1.10	18.33	0.03	7.84		0.12	8.69	10.04	3.46	0.59	0.23	0.11	0.05	102.06		
MRCO2-1	03-015-83.1	1221-1224	50.53	1.08	17.47	0.04	7.95		0.14	8.92	10.20	3.33	0.57	0.19	0.11	0.05	100.59		
MRCO2-1	03-015-88.1	1221-1224	51.19	1.06	17.46	0.07	9.01		0.17	8.54	9.65	3.33	0.62	0.21	0.10	0.05	101.46		
MRCO2-1	03-041-8.1	1218-1219	49.66	0.98	17.70	0.04	8.51	0.05	0.15	8.03	9.65	3.20	0.65	0.22	0.11	0.06	98.95		
MRCO2-1	03-041-9.1	1218-1219	50.13	1.04	18.25	0.04	7.71	0.03	0.10	8.24	9.92	3.14	0.59	0.23	0.09	0.06	99.53		
MRCO2-1	03-041-9.2	1218-1219	50.97	1.05	18.78	0.02	7.58	0.03	0.07	8.21	10.19	3.39	0.60	0.20	0.08	0.06	101.22		
MRCO2-1	03-041-12.1	1218-1219	51.04	1.03	17.67	0.04	8.37	0.04	0.09	8.56	9.05	3.44	0.70	0.21	0.11	0.05	100.37		
MRCO2-1	03-041-13.1	1218-1219	50.41	1.01	17.63	0.05	7.70	0.04	0.13	8.66	9.80	3.14	0.59	0.25	0.11	0.06	99.53		
MRCO2-1	03-041-17.1	1218-1219	50.42	1.05	17.91	0.04	8.68	0.03	0.10	8.42	9.85	3.30	0.60	0.17	0.10	0.05	100.70		
MRCO2-2	03-002-6.1	1199-1201	49.04	1.24	18.57	0.02	6.23		0.11	8.49	10.36	3.43	1.81	0.46	0.25	0.07	100.07		
MRCO2-2	03-002-10.1	1199-1201	49.99	1.15	18.39	0.02	6.18		0.04	7.11	11.72	3.44	2.03	0.49	0.31	0.08	100.94		
MRCO2-2	03-002-12.1	1199-1201	48.78	1.46	14.82	0.05	9.72		0.15	9.75	11.49	2.89	1.65	0.38	0.11	0.11	101.35		
MRCO2-2	03-007-4.1	1218-1219	47.20	1.33	17.63	0.03	5.71		0.08	8.31	13.18	3.24	1.96	0.47	0.48	0.10	99.71		
MRCO2-2	03-007-6.1	1218-1219	47.90	1.29	18.90	0.03	6.78		0.06	8.28	11.93	3.09	1.78	0.40	0.10	0.07	100.62		
MRCO2-2	03-007-10.1	1218-1219	52.07	0.87	16.81	0.07	6.99		0.09	9.92	8.60	3.39	1.84	0.47	0.07	0.07	101.25		
MRCO2-2	03-007-14.1	1218-1219	48.79	1.28	17.84	0.06	7.38		0.09	7.97	11.35	3.45	1.84	0.43	0.20	0.08	100.76		
MRCO2-2	03-007-15.1	1218-1219	48.10	1.33	18.93	0.02	8.01		0.13	7.96	10.99	2.96	1.65	0.43	0.08	0.05	100.65		
MRCO2-2	03-007-20.2	1218-1219	48.56	1.34	17.82	0.02	6.46		0.12	7.69	11.87	3.45	2.19	0.60	0.10	0.10	100.33		
MRCO2-2	03-007-22.1	1218-1219	49.03	1.30	18.10	0.03	6.96		0.07	8.19	11.25	3.20	2.04	0.48	0.24	0.07	100.97		
MRCO2-2	03-007-23.1	1218-1219	49.29	1.31	17.30	0.02	10.25		0.18	9.08	9.87	2.20	1.10	0.44	0.09	0.01	101.14		
MRCO2-2	03-007-24.1	1218-1219	49.45	1.34	17.79	0.06	6.72		0.07	8.34	11.34	3.34	2.09	0.53	0.09	0.08	101.25		
MRCO2-2	03-007-25.2	1218-1219	48.73	1.39	18.13	0.02	6.61		0.07	7.89	12.06	3.37	2.03	0.49	0.12	0.08	100.99		
MRCO2-2	03-013-4.2	1211-1214	49.29	1.42	19.59	0.07	8.11		0.10	8.07	11.71	2.66	1.45	0.45	0.09	0.05	103.06		
MRCO2-2	03-013-5.1	1211-1214	49.85	1.26	17.25	0.07	6.84		0.07	11.07	11.63	2.93	1.88	0.50	0.21	0.08	103.63		
MRCO2-2	03-013-11.1	1211-1214	47.70	1.30	18.68	0.01	7.64		0.09	9.73	11.44	1.96	2.90	0.40	0.08	0.10	102.04		
MRCO2-2	03-013-15.2	1211-1214	50.37	1.31	18.03	0.00	6.57		0.11	8.66	10.84	3.50	1.89	0.40	0.23	0.07	101.98		
MRCO2-2	03-013-17.1	1211-1214	49.60	1.40	18.87	0.06	7.29		0.11	7.82	10.24	3.37	1.86	0.47	0.13	0.08	101.30		
MRCO2-2	03-013-19.2	1211-1214	49.71	1.37	18.91	0.00	8.66		0.11	9.49	10.72	2.32	1.47	0.46	0.08	0.06	103.36		
MRCO2-2	03-013-20.1	1211-1214	48.38	1.36	18.98	0.00	7.35		0.09	8.37	12.88	2.15	1.97	0.45	0.09	0.06	102.13		
MRCO2-2	03-013-20.2	1211-1214	51.12	1.20	17.93	0.05	7.03		0.09	7.18	11.40	3.14	2.32	0.58	0.09	0.09	102.23		

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)												S	Cl	Total
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅			
MRCM02-2	03-013-20.3	1211-1214	48.57	1.41	19.86	0.02	7.79		0.08	8.55	12.63	2.05	1.47	0.47	0.08	0.06	103.04
MRCM02-2	03-013-20.4	1211-1214	48.40	1.19	17.56	0.04	7.75		0.09	10.55	13.05	1.91	1.23	0.35	0.10	0.05	102.28
MRCM02-2	03-013-21.1	1211-1214	49.37	1.47	19.47	0.01	8.34		0.11	8.35	11.86	2.19	1.41	0.47	0.09	0.06	103.21
MRCM02-2	03-013-28.1	1211-1214	50.92	1.32	18.62	0.00	7.63		0.10	7.77	10.73	3.23	1.91	0.46	0.12	0.07	102.88
MRCM02-2	03-013-29.1	1211-1214	49.57	1.35	18.25	0.06	7.12		0.12	8.40	10.95	2.98	1.70	0.48	0.15	0.08	101.88
MRCM02-2	03-013-31.1	1211-1214	48.36	1.34	18.75	0.02	7.08		0.09	9.91	11.29	2.98	1.85	0.48	0.15	0.07	102.21
MRCM02-2	03-013-33.1	1211-1214	49.72	1.43	18.53	0.04	6.09		0.08	7.71	11.65	3.47	2.17	0.59	0.09	0.10	101.66
MRCM02-2	03-013-37.1	1211-1214	49.74	1.36	19.00	0.04	6.57		0.08	7.91	11.01	3.32	1.90	0.47	0.13	0.07	101.60
MRCM02-2	03-013-37.2	1211-1214	49.11	1.43	19.12	0.03	6.50		0.09	8.23	11.96	2.85	1.89	0.50	0.11	0.08	101.90
MRCM02-2	03-013-41.1	1211-1214	50.51	1.34	18.75	0.04	6.89		0.05	7.55	10.92	3.45	2.00	0.47	0.10	0.08	102.16
MRCM02-2	03-013-41.2	1211-1214	50.39	1.38	18.84	0.02	6.35		0.08	7.55	11.05	3.54	2.04	0.52	0.10	0.07	101.94
MRCM02-2	03-013-42.1	1211-1214	48.49	1.35	19.18	0.04	7.78		0.12	9.31	11.38	3.16	1.48	0.43	0.08	0.05	102.86
MRCM02-2	03-013-45.1	1211-1214	47.01	1.34	17.24	0.03	9.54		0.11	6.79	10.51	2.97	4.37	0.91	0.31	0.11	101.23
MRCM02-2	03-013-46.1	1211-1214	49.62	1.20	18.58	0.04	6.68		0.09	7.97	12.79	2.67	2.23	0.48	0.12	0.10	102.56
MRCM02-2	03-013-47.1	1211-1214	48.55	1.39	19.54	0.01	7.61		0.11	8.23	11.55	2.71	1.70	0.47	0.11	0.07	102.05
MRCM02-2	03-013-48.1	1211-1214	50.02	1.39	19.49	0.00	5.82		0.11	7.73	11.00	3.35	1.98	0.53	0.21	0.07	101.69
MRCM02-2	03-013-50.1	1211-1214	49.05	0.68	18.13	0.01	8.61		0.11	7.57	11.62	2.46	3.07	0.42	0.13	0.10	101.97
MRCM02-2	03-013-51.2	1211-1214	51.50	1.06	17.08	0.06	8.46		0.08	7.64	10.91	3.38	1.89	0.49	0.13	0.07	102.76
MRCM02-2	03-013-56.1	1211-1214	50.46	1.29	18.39	0.04	6.85		0.12	7.63	10.89	3.54	1.98	0.47	0.18	0.08	101.92
MRCM02-2	03-013-58.1	1211-1214	50.78	1.36	18.53	0.01	6.77		0.08	7.76	11.26	3.43	1.97	0.49	0.29	0.08	102.79
MRCM02-2	03-013-59.1	1211-1214	50.38	1.38	18.83	0.04	6.12		0.09	7.51	12.26	3.32	2.13	0.53	0.09	0.09	102.77
MRCM02-2	03-013-62.1	1211-1214	50.08	1.37	19.00	0.00	8.24		0.13	8.08	11.04	2.50	1.83	0.44	0.10	0.06	102.87
MRCM02-2	03-013-62.1	1211-1214	50.08	1.37	19.00	0.00	8.24		0.13	8.08	11.04	2.50	1.83	0.44	0.10	0.06	102.87
MRCM02-2	03-013-63.1	1211-1214	49.49	1.31	18.63	0.02	6.59		0.08	8.27	11.26	3.34	1.92	0.45	0.32	0.08	101.75
MRCM02-2	03-013-66.1	1211-1214	49.13	1.38	19.08	0.00	8.62		0.11	7.99	11.34	3.06	1.77	0.44	0.11	0.08	103.11
MRCM02-2	03-013-67.1	1211-1214	51.02	1.24	17.05	0.00	8.19		0.11	7.67	10.83	3.40	1.91	0.49	0.12	0.07	102.10
MRCM02-2	03-013-68.1	1211-1214	50.47	1.25	18.38	0.05	6.13		0.11	7.41	11.48	2.88	2.75	0.49	0.08	0.09	101.56
MRCM02-2	03-013-68.2	1211-1214	49.68	1.07	17.85	0.06	6.17		0.08	7.58	12.10	2.87	3.18	0.67	0.30	0.11	101.73
MRCM02-2	03-013-72.1	1211-1214	50.26	1.29	19.15	0.03	7.21		0.09	8.04	11.34	3.24	1.88	0.50	0.10	0.07	103.20
MRCM02-2	03-013-73.1	1211-1214	45.41	1.38	16.99	0.01	9.30		0.13	8.19	10.55	3.09	1.82	0.62	0.34	0.07	97.91
MRCM02-2	03-013-73.2	1211-1214	49.91	1.23	15.61	0.06	10.95		0.14	7.71	10.22	3.34	2.06	0.58	0.15	0.08	102.05
MRCM02-2	03-0136-5.1	1211-1214	43.60	1.36	17.96	0.00	7.87		0.10	8.77	14.22	1.58	1.00	0.40	0.07	0.04	96.99
MRCM02-2	03-0136-7.1	1211-1214	46.44	1.39	17.66	0.00	8.29		0.10	7.92	11.89	2.72	1.49	0.38	0.11	0.06	98.45
MRCM02-2	03-0136-9.1	1211-1214	47.91	1.37	17.61	0.05	5.78		0.08	7.96	11.67	3.37	1.90	0.48	0.20	0.07	98.44
MRCM02-2	03-0136-15.1	1211-1214	47.90	1.25	17.47	0.04	6.35		0.10	7.68	11.60	3.36	2.02	0.48	0.22	0.09	98.58
MRCM02-2	03-0136-19.1	1211-1214	47.67	1.40	17.66	0.04	6.94		0.11	8.29	10.64	2.70	1.71	0.50	0.07	0.06	97.80
MRCM02-2	03-0136-20.1	1211-1214	47.64	1.31	17.07	0.04	6.52		0.16	7.77	11.41	3.70	1.89	0.48	0.11	0.07	98.17
MRCM02-2	03-0136-21.1	1211-1214	48.62	1.37	17.55	0.01	5.19		0.14	7.48	11.60	3.55	1.91	0.51	0.28	0.07	98.28
MRCM02-2	03-0136-22.2	1211-1214	46.37	1.36	18.27	0.00	7.06		0.10	8.37	12.39	2.84	1.47	0.48	0.11	0.06	98.89
MRCM02-2	03-0136-23.1	1211-1214	47.12	1.24	17.20	0.00	7.61		0.11	7.98	11.38	3.33	1.75	0.46	0.16	0.07	98.39
MRCM02-2	03-0136-20.1	1211-1214	49.52	1.32	17.94	0.08	7.14		0.06	7.96	12.14	3.54	1.90	0.47	0.11	0.08	102.27
MRCM02-2	03-0136-21.1	1211-1214	50.20	1.39	18.36	0.01	5.89		0.09	7.69	12.29	3.50	1.96	0.52	0.30	0.07	102.27
MRCM02-2	03-039-2.1	1209-1211	48.73	1.19	16.17	0.01	9.46		0.07	8.46	12.22	3.31	2.24	0.44	0.13	0.06	102.49
MRCM02-2	03-039-10.1	1209-1211	49.88	1.30	17.81	0.03	9.40		0.13	7.87	11.11	3.08	1.69	0.45	0.10	0.06	102.91
MRCM02-2	03-057-5.1	1211-1216	48.85	1.27	17.91	0.02	6.60		0.07	8.33	10.93	3.06	1.86	0.44	0.20	0.07	99.60
MRCM02-2	03-057-9.1	1211-1216	47.83	1.19	17.99	0.04	7.61		0.11	8.34	10.81	3.20	1.70	0.40	0.12	0.06	99.39
MRCM02-2	03-057-11.1	1211-1216	48.36	1.25	17.23	0.04	6.54		0.11	8.01	11.03	3.08	1.83	0.42	0.17	0.08	98.16
MRCM02-2	03-058-5.1	1211-1216	49.18	1.27	17.77	0.00	5.94		0.04	7.89	10.64	3.17	2.07	0.47	0.39	0.08	98.91

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)																
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total		
MRCM02-2	03-058-6.1	1211-1216	48.79	1.26	17.75	0.01	5.03		0.05	7.91	11.13	3.36	1.93	0.43	0.36	0.07	98.07		
MRCM02-2	03-058-6.2	1211-1216	48.59	1.17	17.13	0.02	5.64		0.00	8.11	11.20	3.15	1.94	0.54	0.41	0.08	97.97		
MRCM02-2	03-058-7.1	1211-1216	46.48	1.27	18.79	0.05	8.86		0.12	8.54	11.09	2.59	1.20	0.42	0.12	0.05	99.59		
MRCM02-2	03-058-9.1	1211-1216	48.98	1.19	17.93	0.03	5.98		0.03	8.17	11.27	3.29	2.00	0.47	0.13	0.07	99.53		
MRCM02-2	03-058-10.1	1211-1216	48.72	0.90	16.96	0.00	6.05		0.07	7.86	11.53	2.61	3.00	0.60	0.48	0.12	98.90		
MRCM02-2	03-058-11.1	1211-1216	49.68	1.18	17.67	0.00	5.86		0.07	8.02	10.84	3.30	1.92	0.45	0.35	0.08	99.43		
MRCM02-2	03-058-14.1	1211-1216	48.90	1.21	17.74	0.04	6.92		0.09	8.29	10.71	3.01	1.81	0.41	0.40	0.08	99.61		
MRCM02-2	03-058-15.1	1211-1216	49.46	1.22	17.82	0.02	5.94		0.08	8.00	10.98	3.39	1.98	0.45	0.36	0.07	99.78		
MRCM02-1	03-003-3.1	1199-1200	50.57	1.77	18.75	0.04	7.01		0.08	8.77	10.98	3.61	0.53	0.47	0.14	0.13	102.85		
MRCM02-1	03-014-5.1	1221-1223	48.93	1.77	19.51	0.03	8.24		0.10	9.36	10.26	3.32	0.48	0.43	0.07	0.13	102.63		
MRCM02-1	03-014-11.1	1221-1223	49.88	1.81	18.47	0.02	7.90		0.13	8.60	10.84	3.49	0.52	0.50	0.13	0.13	102.42		
MRCM02-1	03-014-12.1	1221-1223	50.16	1.85	18.85	0.01	7.69		0.11	8.69	10.63	3.52	0.52	0.45	0.08	0.13	102.70		
MRCM02-1	03-014-13.1	1221-1223	47.47	2.04	18.42	0.00	9.26		0.13	9.18	12.26	2.48	0.41	0.54	0.13	0.10	102.43		
MRCM02-1	03-014-15.2	1221-1223	49.81	2.02	18.90	0.03	7.19		0.10	8.61	10.70	3.79	0.58	0.56	0.16	0.17	102.62		
MRCM02-1	03-014-21.1	1221-1223	49.55	1.88	19.03	0.06	7.38		0.10	8.58	10.55	3.56	0.51	0.45	0.08	0.14	101.88		
MRCM02-1	03-014-23.1	1221-1223	50.21	1.88	19.06	0.01	7.58		0.09	8.51	10.51	3.38	0.51	0.47	0.09	0.13	102.44		
MRCM02-1	03-014b-1.1	1221-1223	47.26	1.73	17.02	0.03	7.26		0.12	8.73	10.97	3.77	0.49	0.52	0.12	0.13	98.14		
MRCM02-1	03-014b-6.1	1221-1223	47.02	1.70	17.32	0.00	6.85		0.07	8.42	11.43	3.58	0.51	0.44	0.17	0.14	97.66		
MRCM02-1	03-014b-9.1	1221-1223	43.48	2.02	16.21	0.00	9.41		0.12	8.76	13.05	2.62	0.36	0.45	0.07	0.08	96.63		
MRCM02-1	03-014b-11.1	1221-1223	47.80	1.74	17.37	0.00	7.50		0.10	8.60	11.42	3.58	0.45	0.49	0.12	0.13	99.30		
MRCM02-1	03-014b-12.1	1221-1223	47.32	1.86	17.17	0.02	7.62		0.14	8.34	10.57	3.69	0.48	0.53	0.12	0.13	98.00		
MRCM02-1	03-014b-13.1	1221-1223	47.10	1.94	16.92	0.05	6.84		0.12	8.36	10.60	3.87	0.54	0.54	0.10	0.16	97.14		
MRCM02-1	03-014b-13.2	1221-1223	47.00	1.93	17.14	0.04	7.21		0.11	8.38	10.56	3.63	0.54	0.50	0.09	0.16	97.29		
MRCM02-1	03-014b-14.1	1221-1223	46.51	1.78	17.04	0.03	6.99		0.12	8.05	11.11	3.48	0.48	0.47	0.10	0.13	96.28		
MRCM02-1	03-014b-16.1	1221-1223	46.59	1.64	17.11	0.04	6.31		0.10	8.74	11.66	3.67	0.59	0.50	0.23	0.37	97.54		
MRCM02-1	03-014b-17.1	1221-1223	46.76	1.63	17.36	0.03	7.24		0.07	8.66	11.08	3.48	0.48	0.52	0.09	0.13	97.54		
MRCM02-1	03-014b-17.2	1221-1223	46.99	1.66	18.29	0.33	7.26		0.11	8.76	11.13	3.38	0.46	0.51	0.11	0.13	99.11		
MRCM02-1	WF 05-011-1	1199-1205	49.37	1.73	18.09	0.04	7.44	0.04	0.18	8.31	10.35	3.52	0.51	0.49	0.11	0.13	100.32		
MRCM02-1	WF 05-011-3	1199-1205	49.64	1.74	17.67	0.02	6.55	0.09	0.11	8.35	10.95	3.47	0.52	0.50	0.20	0.14	99.93		
MRCM02-1	WF 05-011-4	1199-1205	48.80	1.73	18.62	0.02	7.01	0.02	0.12	8.30	10.74	3.42	0.53	0.48	0.16	0.13	100.07		
MRCM02-1	WF 05-011-5	1199-1205	49.64	1.66	17.03	0.01	8.31	0.02	0.11	7.84	10.47	3.31	0.50	0.52	0.11	0.13	99.67		
MRCM02-1	WF 05-011-6	1199-1205	49.31	1.87	18.71	0.01	6.37	0.09	0.07	8.37	10.63	3.49	0.53	0.50	0.19	0.13	100.25		
MRCM02-1	WF 05-011-7	1199-1205	48.78	1.77	17.81	0.01	6.87	0.07	0.11	8.28	10.57	3.40	0.52	0.49	0.22	0.13	99.04		
MRCM02-1	WF 05-011-9	1199-1205	46.82	2.15	17.73	0.06	7.67	0.07	0.11	9.08	12.94	1.73	0.34	0.40	0.11	0.09	99.31		
MRCM02-1	WF 05-011-10	1199-1205	45.88	2.41	16.72	0.03	10.09	0.05	0.14	8.83	12.63	2.16	0.41	0.45	0.18	0.08	100.05		
MRCM02-1	WF 05-011-11	1199-1205	48.63	1.78	17.49	0.05	8.52	0.04	0.13	8.10	10.37	3.41	0.51	0.47	0.13	0.12	99.75		
MRCM02-1	03-016-4.1	1221-1222	44.29	1.24	22.45	0.03	10.92		0.16	7.64	8.64	2.33	0.51	0.35	0.09	0.03	98.67		
MRCM02-1	03-016-6.1	1221-1222	49.06	1.37	17.79	0.04	10.55		0.15	8.49	9.43	3.26	0.59	0.40	0.11	0.03	101.28		
MRCM02-1	03-016-6.2	1221-1222	46.45	1.40	20.80	0.03	10.40		0.17	7.69	9.03	2.92	0.60	0.25	0.12	0.04	99.89		
MRCM02-1	03-016-9.1	1221-1222	49.14	1.39	17.59	0.02	11.50		0.09	8.42	9.27	3.42	0.56	0.29	0.09	0.03	101.81		
MRCM02-1	03-016-16.1	1221-1222	48.10	1.40	19.80	0.01	10.36		0.14	7.92	9.51	3.38	0.55	0.38	0.11	0.03	101.69		
MRCM02-1	03-016-23.1	1221-1222	49.29	1.37	17.46	0.04	10.96		0.16	8.67	9.21	3.32	0.59	0.28	0.09	0.03	101.46		
MRCM02-1	03-016-28.1	1221-1222	48.80	1.42	17.73	0.04	10.52		0.15	8.85	9.35	3.36	0.58	0.38	0.08	0.03	101.29		
MRCM02-1	03-016-33.1	1221-1222	48.91	1.37	17.95	0.03	9.42		0.14	9.00	9.60	3.26	0.49	0.35	0.07	0.03	100.63		
MRCM02-1	03-016-35.2	1221-1222	48.87	1.36	16.92	0.02	10.81		0.13	10.95	8.99	3.27	0.54	0.25	0.08	0.03	102.22		
MRCM02-1	03-016-37.1	1221-1222	48.73	1.43	17.93	0.03	11.55		0.17	8.55	9.72	3.14	0.55	0.33	0.10	0.03	102.27		

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)													S	Cl	Total
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅				
MRBC02-1	03-016-39.1	1221-1222	48.67	1.36	17.69	0.00	10.52		0.17	8.84	9.71	3.32	0.54	0.25	0.12	0.03	101.21	
MRBC02-1	03-016-45.1	1221-1222	48.73	1.37	17.48	0.04	11.30		0.14	8.47	9.26	3.42	0.52	0.34	0.09	0.03	101.20	
MRBC02-1	03-016-55.2	1221-1222	48.64	1.44	17.30	0.05	11.30		0.13	8.83	9.45	3.21	0.53	0.25	0.08	0.03	101.24	
MRBC02-1	03-016-59.1	1221-1222	50.50	1.69	17.26	0.04	11.70		0.18	8.44	6.68	4.53	0.46	0.37	0.13	0.03	102.00	
MRBC02-1	03-016-63.1	1221-1222	49.62	1.30	18.25	0.04	10.18		0.14	8.87	9.74	3.43	0.45	0.23	0.10	0.03	102.38	
MRBC02-1	03-016-65.1	1221-1222	50.05	1.14	17.98	0.03	11.18		0.14	8.87	8.75	2.69	0.43	0.28	0.08	0.03	101.66	
MRBC02-1	03-016-66.1	1221-1222	49.98	1.21	17.38	0.04	11.63		0.14	8.93	8.81	3.44	0.58	0.26	0.10	0.03	102.51	
MRBC02-1	03-016-67.1 ^{1p1}	1221-1222	49.84	1.34	17.00	0.01	10.87		0.16	9.03	9.12	3.25	0.60	0.25	0.07	0.03	101.57	
MRBC02-1	03-016-41.1	1221-1222	49.78	1.45	17.56	0.06	10.16		0.14	8.21	9.79	3.15	0.52	0.28	0.09	0.02	101.22	
MRBC02-1	03-016-58.2	1221-1222	47.46	1.36	16.07	0.06	11.78		0.15	8.10	9.34	3.20	0.57	0.30	0.09	0.03	98.51	
MRBC02-1	04-012-1.1	1215-1220	48.36	1.23	17.20	0.06	10.31	0.00	0.10	7.99	9.25	3.17	0.60	0.27	0.10	0.03	98.67	
MRBC02-1	04-012-3.1	1215-1220	49.28	1.25	16.80	0.02	11.26	0.06	0.15	8.11	9.12	2.41	0.59	0.30	0.10	0.03	99.46	
MRBC02-1	04-012-5.1	1215-1220	48.96	1.35	16.93	0.00	10.72	0.00	0.15	8.51	9.57	2.80	0.53	0.30	0.07	0.03	99.93	
MRBC02-1	04-012-6.1	1215-1220	50.84	1.03	16.76	0.08	10.57	0.07	0.15	7.92	8.62	2.92	0.51	0.33	0.09	0.03	99.90	
MRBC02-1	04-012-14.1	1215-1220	49.43	1.33	17.68	0.03	9.11	0.02	0.16	8.19	9.41	3.35	0.58	0.27	0.10	0.03	99.69	
MRBC02-1	04-012-16.1	1215-1220	47.68	1.40	16.45	0.04	12.21	0.00	0.16	7.91	9.00	3.22	0.57	0.31	0.11	0.03	99.09	
MRBC02-1	04-012-17.2	1215-1220	48.61	1.27	17.01	0.08	10.66	0.01	0.08	7.66	8.89	3.30	0.61	0.35	0.12	0.03	98.68	
MRBC02-1	04-012-18.1	1215-1220	47.83	1.44	16.12	0.02	11.70	0.00	0.20	8.48	8.62	3.17	0.48	0.27	0.07	0.03	98.45	
MRBC02-1	04-012-18.2	1215-1220	48.00	1.41	16.74	0.00	12.13	0.08	0.19	7.71	8.75	3.33	0.53	0.33	0.10	0.03	99.33	
MRBC02-1	04-012-20.1	1215-1220	48.99	1.30	17.05	0.00	11.16	0.00	0.16	7.73	8.67	3.44	0.62	0.33	0.09	0.03	99.56	
MRBC02-1	04-012-28.1	1215-1220	49.70	1.28	16.75	0.02	9.35	0.03	0.15	8.50	9.13	3.34	0.58	0.28	0.10	0.03	99.22	
MRBC02-1	04-012-32.1	1215-1220	48.77	1.27	16.22	0.02	12.27	0.00	0.12	7.78	8.60	3.00	0.67	0.26	0.09	0.03	99.10	
MRBC02-1	04-012-33.1	1215-1220	48.44	1.30	17.27	0.05	9.54	0.03	0.14	8.07	9.27	3.42	0.52	0.34	0.11	0.03	99.53	
MRBC02-1	04-012-36.1	1215-1220	49.65	1.30	17.24	0.01	10.02	0.00	0.10	7.79	9.01	3.39	0.69	0.36	0.11	0.03	99.70	
MRFLR03-1	03-040-2.1	1219-1223	47.23	1.87	17.36	0.00	11.99		0.15	9.29	11.39	1.86	0.37	0.30	0.09	0.02	101.92	
MRFLR03-1	03-040-5.1	1219-1223	51.61	1.20	16.53	0.00	11.87		0.16	8.45	9.71	3.12	0.65	0.22	0.08	0.05	103.66	
MRFLR03-1	03-040-7.1	1219-1223	50.17	1.61	17.07	0.06	9.42		0.18	8.55	10.75	3.44	0.50	0.43	0.10	0.03	102.33	
MRFLR03-1	03-040-10.1	1219-1223	48.33	1.69	16.66	0.01	11.47		0.18	10.06	9.57	3.13	0.50	0.31	0.12	0.04	102.06	
MRFLR03-1	03-040-12.2	1219-1223	49.68	1.72	17.02	0.04	9.90		0.09	8.42	10.52	3.49	0.51	0.40	0.10	0.04	101.91	
MRFLR03-1	03-040-14.1	1219-1223	49.25	1.64	16.97	0.04	11.38		0.15	8.58	10.31	3.37	0.48	0.33	0.13	0.03	102.68	
MRFLR03-1	03-040-22.1	1219-1223	44.91	1.76	16.44	0.02	12.20		0.14	11.75	10.70	1.81	0.32	0.25	0.11	0.02	100.40	
MRFLR03-1	04-017-4.1	1207-1215	49.45	1.62	17.77	0.04	8.99	0.01	0.14	7.86	9.81	3.26	0.56	0.40	0.09	0.03	100.07	
MRFLR03-1	04-017-5.1	1207-1215	47.75	1.71	18.90	0.05	9.59	0.02	0.16	9.46	10.01	1.81	0.39	0.22	0.11	0.02	100.21	
MRFLR03-1	04-017-14.1	1207-1215	43.21	2.43	17.37	0.04	11.40	0.02	0.18	9.57	13.75	0.59	0.09	0.22	0.12	0.00	98.99	
MRFLR03-1	04-017-15.1	1207-1215	48.92	1.53	17.48	0.01	10.18	0.00	0.16	7.20	10.33	3.17	0.51	0.35	0.11	0.03	100.01	
MRFLR03-1	04-017-15.2	1207-1215	49.40	1.50	16.82	0.02	10.77	0.05	0.17	5.91	9.81	3.47	0.63	0.55	0.12	0.03	99.26	
MRFLR03-1	04-017-17.1	1207-1215	49.00	1.66	17.49	0.04	9.69	0.00	0.17	7.94	9.81	3.26	0.49	0.37	0.10	0.04	100.06	
MRFLR03-1	04-017-20.1	1207-1215	48.76	1.84	18.72	0.00	9.74	0.04	0.24	7.56	10.80	1.95	0.41	0.35	0.09	0.02	100.53	
MRFLR03-1	04-017-23.1	1207-1215	43.53	1.81	16.93	0.06	12.37	0.05	0.20	10.25	9.80	1.62	0.34	0.42	0.11	0.02	97.50	
MRFLR03-1	04-017-22.1	1207-1215	49.11	1.40	19.11	0.85	7.99	0.02	0.05	5.86	9.37	2.49	0.45	0.33	0.15	0.03	97.20	
MRFLR03-1	04-017-23.1	1207-1215	43.65	1.81	17.03	0.03	12.83	0.07	0.13	10.12	9.88	1.59	0.30	0.31	0.12	0.02	97.88	
MRFLR03-1	04-016-6.1	1207-1215	48.83	1.57	17.71	0.06	8.64	0.02	0.12	8.37	9.99	3.26	0.55	0.43	0.10	0.04	99.68	
MRFLR03-1	04-016-8.1	1207-1215	47.00	1.91	17.73	0.03	10.00	0.05	0.13	8.89	11.77	1.42	0.29	0.32	0.10	0.02	99.65	
MRFLR03-1	04-016-9.1	1207-1215	49.31	1.50	16.36	0.04	11.02	0.02	0.15	7.74	8.94	2.63	0.62	0.45	0.14	0.04	98.97	
MRFLR03-1	04-016-9.2	1207-1215	48.32	1.52	16.90	0.00	11.31	0.00	0.17	7.24	9.48	2.92	0.53	0.43	0.16	0.04	99.02	
MRFLR03-1	05-017-12 (7/1)	1200-1206	48.78	1.67	17.68	0.03	8.77	0.06	0.17	8.32	9.78	2.63	0.49	0.53	0.30	0.04	98.86	
MRFLR03-1	05-017-20 (9/1)	1200-1206	44.15	2.86	15.55	0.02	13.85	0.02	0.19	8.06	12.10	1.34	0.21	0.34	0.07	0.02	98.78	

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)																	
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total			
MRHL03-1	03-044-6.1	1209-1214	48.54	2.10	16.61	0.01	9.44		0.10	8.17	10.81	3.90	0.76	0.40	0.11	0.10	101.05			
MRHL03-1	03-044-7.1	1209-1214	48.64	1.88	16.29	0.03	8.35		0.10	8.07	12.14	4.32	0.78	0.40	0.08	0.08	101.18			
MRHL03-1	03-044-10.1	1209-1214	49.28	2.05	17.42	0.06	7.84		0.09	7.70	10.56	4.10	0.75	0.40	0.08	0.11	100.44			
MRHL03-1	03-045-3.2	1209-1214	39.69	1.74	25.25	0.45	11.49		0.19	5.90	10.64	2.72	0.61	0.48	0.24	0.09	99.51			
MRHL03-1	03-045-6.1	1209-1214	49.07	2.04	16.13	0.07	8.57		0.06	8.07	10.84	4.04	0.76	0.39	0.09	0.09	100.19			
MRHL03-1	03-045-7.1	1209-1214	43.63	2.38	16.14	0.05	12.56		0.20	9.00	12.34	2.16	0.39	0.25	0.12	0.05	101.27			
MRHL03-1	03-045-9.1	1209-1214	49.79	1.68	14.32	0.34	8.71		0.11	7.86	12.16	3.89	0.76	0.40	0.09	0.09	100.20			
MRHL03-1	03-045-19.1	1209-1214	47.04	1.97	16.28	0.03	7.81		0.10	7.98	12.06	4.01	0.78	0.41	0.09	0.08	98.63			
MRLL02-2	03-047-1.1	1216-1218	45.80	1.56	15.60	0.05	17.72		0.13	6.09	10.39	3.09	0.62	0.30	0.18	0.07	101.61			
MRLL02-2	03-047-18.1	1216-1218	48.38	1.59	16.55	0.00	12.16		0.12	7.57	10.96	3.57	0.70	0.40	0.14	0.08	102.20			
MRLL02-2	03-047-23.1	1216-1218	47.12	1.78	17.34	0.03	11.16		0.08	8.26	11.22	3.43	0.71	0.39	0.14	0.06	101.73			
MRLL02-2	03-047-27rpt.1	1216-1218	50.24	1.55	17.63	0.02	9.47		0.09	7.60	10.97	3.68	0.78	0.38	0.11	0.07	102.59			
MRLL02-2	04-018-1.1	1216-1221	48.45	1.34	16.51	0.08	10.86	0.05	0.17	8.45	9.40	2.82	0.68	0.51	0.13	0.06	99.53			
MRLL02-2	04-018-2.1	1216-1221	49.89	1.42	17.22	0.05	8.34	0.04	0.11	8.24	9.68	3.55	0.85	0.39	0.10	0.06	99.93			
MRLL02-2	04-018-2.2	1216-1221	48.93	1.47	17.58	0.09	8.34	0.05	0.10	8.05	9.92	3.32	0.82	0.40	0.10	0.06	99.23			
MRLL02-2	04-018-10.1	1216-1221	48.63	1.50	16.07	0.06	11.03	0.02	0.12	7.11	10.18	2.78	0.70	0.52	0.14	0.07	98.93			
MRLL02-2	04-019-2.1	1216-1221	49.06	1.39	15.82	0.05	10.17	0.06	0.17	8.36	9.46	3.41	0.72	0.34	0.12	0.06	99.19			
MRLL02-2	04-019-3.1	1216-1221	51.91	0.91	15.61	0.07	10.36	0.01	0.12	7.54	8.71	2.96	0.65	0.34	0.11	0.06	99.36			
MRLL02-2	04-019-6.1	1216-1221	47.61	1.42	16.71	0.06	9.97	0.00	0.15	7.93	10.11	3.32	0.72	0.39	0.13	0.06	98.60			
MRLL02-2	04-019-10.1	1216-1221	47.56	1.36	16.41	0.00	11.10	0.07	0.17	7.06	9.22	2.78	1.66	0.80	0.10	0.05	98.34			
MRLL02-2	04-019-11.1	1216-1221	48.73	1.45	16.54	0.04	8.65	0.03	0.13	8.76	9.68	3.63	0.82	0.42	0.19	0.08	99.13			
MRLL02-2	04-019-17.1	1216-1221	46.65	1.34	15.62	0.08	12.16	0.04	0.15	8.63	9.14	3.30	0.76	0.33	0.17	0.08	98.44			
MRDB04-1	DB 04-054-1	unheated	50.63	1.45	18.15	0.03	9.59	0.04	0.15	6.49	9.96	2.64	0.51	0.31	0.10	0.04	100.10			
MRDB04-1	DB 04-054-2	unheated	50.15	1.46	18.03	0.03	9.55	0.00	0.16	5.99	9.38	3.36	0.61	0.33	0.08	0.03	99.15			
MRDB04-1	DB 04-054-3	unheated	51.67	1.46	19.38	0.01	8.10	0.01	0.15	5.45	9.90	3.04	0.53	0.30	0.11	0.04	100.14			
MRDB04-1	DB 04-054-4	unheated	50.46	1.41	18.80	0.02	8.46	0.04	0.13	6.59	9.94	3.01	0.51	0.31	0.11	0.03	99.83			
MRDB04-1	DB 04-054-5	unheated	50.55	1.46	18.19	0.02	9.56	0.06	0.13	5.64	10.07	2.80	0.54	0.31	0.10	0.04	99.47			
MRDB04-1	DB 04-054-6	unheated	50.37	1.57	18.05	0.02	10.19	0.07	0.20	5.15	9.82	2.56	0.60	0.29	0.08	0.04	99.00			
MRDB04-1	DB 04-054-7	unheated	50.83	1.40	18.68	0.02	8.10	0.00	0.12	5.76	9.71	3.12	0.58	0.29	0.11	0.04	98.74			
MRDB04-1	DB 04-054-8	unheated	50.54	1.38	18.56	0.02	8.06	0.08	0.16	6.13	9.91	3.29	0.58	0.27	0.10	0.03	99.13			
MRDB04-1	DB 04-054-9	unheated	50.40	1.41	18.16	0.03	8.52	0.00	0.16	6.49	9.53	3.07	0.63	0.29	0.10	0.03	98.83			
MRDB04-1	DB 04-054-10	unheated	51.02	1.48	18.33	0.04	9.60	0.02	0.17	5.76	9.95	3.03	0.55	0.30	0.06	0.03	100.34			
MRDB04-1	DB 04-054-11	unheated	51.61	1.54	18.29	0.02	8.40	0.05	0.13	5.90	9.41	3.32	0.59	0.32	0.01	0.03	98.64			
MRDB04-1	DB 04-054-12	unheated	50.92	1.38	18.16	0.01	8.42	0.05	0.14	6.90	9.36	3.20	0.57	0.31	0.09	0.03	99.55			
MRELK02-1	elk.hom.o1.3.A.2 (02-022)	1204-1205	50.76	1.45	17.11	0.01	10.25		0.15	7.01	9.09	3.55	0.86	0.53	0.09	0.04	100.89			
MRELK02-1	elk.hom.o1.3.D.1 (02-022)	1204-1205	49.76	1.29	19.66	0.00	8.20		0.15	7.48	10.84	3.47	0.46	0.27	0.09	0.03	101.70			
MRELK02-1	elk.hom.o1.3.G.1 (02-022)	1204-1205	51.15	1.71	17.17	0.05	10.72		0.24	7.18	8.88	3.41	0.86	0.36	0.10	0.07	101.91			
MRELK02-1	elk.hom.o1.4.C.1 (02-023)	1204-1205	50.90	1.53	15.79	0.03	11.85		0.17	8.27	7.87	3.49	0.97	0.43	0.12	0.05	101.48			
MRELK02-1	elk.hom.o1.4.B.1 (02-023)	1204-1205	49.41	1.54	15.62	0.04	13.50		0.22	7.00	9.40	3.96	0.72	0.42	0.13	0.04	102.00			
MRELK02-1	ELK-hom-012.2 (02-012)	1186-1188	49.19	1.38	18.97	0.03	9.67		0.13	7.95	10.75	3.27	0.43	0.24	0.09	0.03	102.13			
MRELK02-1	ELK-hom-012.G.1	1186-1188	49.16	1.60	15.59	0.01	13.66		0.23	7.83	8.63	2.85	0.92	0.51	0.16	0.05	101.18			
MRELK02-1	ELK-hom-02-11.J.1	1186-1188	47.14	1.94	17.94	0.00	12.77		0.19	7.63	10.20	3.32	0.67	0.32	0.16	0.03	102.29			
MRTB02-1	02-113.G1	1199-1202	49.40	1.33	16.57	0.02	10.95		0.12	6.88	9.29	2.86	0.41	0.36	0.07	0.06	98.32			

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)																	
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total			
MRTB02-1	03-012-2.1	1211-1213	49.70	1.19	19.31	0.03	7.41		0.11	8.63	11.86	2.71	0.45	0.25	0.09	0.04	101.77			
MRTB02-1	03-012-2.2	1211-1213	47.86	1.82	19.00	0.02	8.47		0.09	9.01	11.91	2.71	0.41	0.45	0.08	0.03	101.88			
MRTB02-1	03-012-3.1	1211-1213	50.26	1.52	18.54	0.01	6.99		0.16	8.28	10.35	2.98	0.87	0.32	0.08	0.03	100.38			
MRTB02-1	03-012-3.2	1211-1213	50.56	1.69	18.49	0.04	7.26		0.13	8.35	9.86	2.92	0.87	0.33	0.07	0.03	100.60			
MRTB02-1	03-012-8.1	1211-1213	49.81	1.94	18.17	0.03	6.91		0.10	8.50	10.19	3.36	0.61	0.52	0.09	0.04	100.27			
MRTB02-1	03-012-16.1	1211-1213	48.72	1.86	17.18	0.02	8.21		0.07	8.35	9.69	2.98	1.00	0.41	0.10	0.06	98.65			
MRTB02-1	03-012-19.1	1211-1213	48.43	1.77	18.13	0.03	8.05		0.13	8.74	10.49	2.94	0.33	0.69	0.08	0.16	99.97			
MRTB02-1	03-012-20.1	1211-1213	50.73	1.65	18.06	0.03	7.22		0.07	8.07	10.01	3.03	0.86	0.31	0.12	0.06	100.22			
MRTB02-1	03-012-24.1	1211-1213	47.13	1.25	17.93	0.01	9.46		0.11	8.69	12.47	2.49	0.34	0.16	0.08	0.04	100.15			
MRTB02-1	03-012-27.1	1211-1213	48.77	1.67	17.65	0.04	8.67		0.10	8.40	9.42	3.22	0.57	0.34	0.12	0.05	99.02			
MRTB03-1	03-076-4.1	1204-1207	50.56	1.02	18.58	0.04	6.61		0.09	7.84	9.86	3.29	0.52	0.17	0.08	0.03	98.68			
MRTB03-1	03-076-5.2	1204-1207	49.33	1.18	18.43	0.02	6.87		0.11	7.98	10.40	2.98	0.61	0.18	0.09	0.05	98.22			
MRTB03-1	03-076-7.1	1204-1207	49.42	1.18	18.54	0.05	7.07		0.05	8.19	9.85	3.17	0.50	0.15	0.09	0.04	98.30			
MRTB03-1	03-076-12.1	1204-1207	51.38	1.08	18.64	0.06	6.11		0.11	7.54	9.12	3.61	0.74	0.16	0.08	0.05	98.67			
MRTB03-1	03-076-13.2	1204-1207	49.52	0.96	18.18	0.02	7.11		0.10	8.04	10.78	3.07	0.59	0.15	0.10	0.04	98.65			
MRTB03-1	03-076-18.1	1204-1207	49.71	1.48	16.51	0.03	9.22		0.10	8.02	9.45	2.89	0.56	0.30	0.10	0.04	98.40			
MRTB03-1	03-076-20.1	1204-1207	49.39	1.36	18.63	0.03	6.93		0.09	7.92	10.12	3.15	0.56	0.15	0.09	0.04	98.44			
MRTB03-1	03-076-21.1	1204-1207	50.37	0.99	18.38	0.05	6.77		0.08	7.79	10.12	3.18	0.58	0.19	0.07	0.04	98.60			
MRTB03-1	03-076-26.1	1204-1207	49.31	1.16	18.32	0.04	6.58		0.06	8.42	10.14	2.89	0.53	0.30	0.10	0.05	97.90			
MRTB03-1	04-028-2.1	1199-1202	48.37	2.17	17.29	0.08	8.43	0.02	0.14	8.28	10.41	2.63	0.57	0.28	0.09	0.05	98.79			
MRTB03-1	04-028-3.1	1199-1202	50.50	0.98	18.47	0.03	6.53	0.05	0.05	8.01	10.15	2.94	0.55	0.13	0.06	0.04	98.50			
MRTB03-1	04-028-4.1	1199-1202	50.84	1.12	18.50	0.01	6.42	0.03	0.07	7.58	9.49	3.30	0.60	0.17	0.07	0.05	98.22			
MRTB03-1	04-028-5.1	1199-1202	48.68	1.64	17.95	0.00	7.60	0.05	0.11	7.90	10.26	2.78	0.37	0.15	0.07	0.04	97.59			
MRTB03-1	04-028-7.1	1199-1202	46.41	2.28	17.14	0.01	8.28	0.04	0.10	9.22	10.17	2.44	0.54	1.38	0.10	0.03	98.15			
MRTB03-1	04-028-9.1	1199-1202	50.54	0.88	18.62	0.02	7.15	0.02	0.10	7.94	9.53	3.23	0.58	0.15	0.08	0.04	98.89			
MRTB03-1	04-028-13.2	1199-1202	50.98	0.92	18.18	0.04	7.68	0.00	0.09	7.88	10.13	3.35	0.62	0.17	0.06	0.04	100.15			
MRTB03-1	04-028-14.1	1199-1202	49.28	1.67	17.18	0.05	9.00	0.05	0.08	8.40	9.27	3.07	0.40	0.27	0.09	0.03	98.84			
MRTB03-1	04-028-14.2	1199-1202	46.83	2.83	16.75	0.14	8.33	0.02	0.12	8.57	11.48	2.15	0.48	0.31	0.10	0.03	98.13			
MRTB03-1	04-028-14.3	1199-1202	48.37	0.96	18.13	0.01	8.37	0.04	0.09	8.50	11.24	2.57	0.36	0.16	0.07	0.03	98.92			
MRTB03-1	04-028-17.1	1199-1202	50.08	1.24	17.99	0.03	7.36	0.06	0.07	8.64	9.63	3.03	0.58	0.25	0.12	0.03	99.11			
MRTB03-1	04-028-18.1	1199-1202	48.43	2.15	16.80	0.04	9.92	0.02	0.10	7.87	9.48	3.05	0.82	0.34	0.14	0.06	99.22			
MRTB03-1	04-028-19.1	1199-1202	51.36	1.05	18.86	0.03	7.04	0.04	0.12	7.82	9.37	3.27	0.61	0.16	0.08	0.05	99.86			
MRTB03-1	04-029-2.1	1199-1202	47.61	1.51	18.11	0.02	8.07	0.09	0.08	8.01	10.37	2.72	0.56	0.28	0.12	0.05	97.61			
MRTB03-1	04-029-4.1	1199-1202	50.77	1.50	17.38	0.03	7.63	0.06	0.12	8.43	8.73	3.09	0.60	0.19	0.06	0.05	98.63			
MRTB03-1	04-029-13.1	1199-1202	52.97	1.31	16.47	0.02	8.50	0.07	0.13	7.85	8.12	3.33	0.69	0.44	0.08	0.04	100.01			
MRTB03-1	04-029-15.1	1199-1202	51.06	0.94	18.10	0.03	6.89	0.04	0.09	8.13	9.26	3.41	0.65	0.19	0.06	0.05	98.89			
MRTB03-1	04-029-15.2	1199-1202	52.46	1.05	18.32	0.06	7.66	0.03	0.11	8.12	9.04	3.13	0.63	0.20	0.07	0.03	100.90			
MRSIC02-1	03-011-7.1	1211-1213	48.26	1.46	18.29	0.06	7.86		0.13	8.71	11.60	2.85	0.35	0.13	0.09	0.03	99.83			
MRSIC02-1	03-011-12.1	1211-1213	50.07	1.26	15.20	0.03	11.67		0.23	7.63	8.76	2.85	0.34	0.19	0.10	0.03	98.36			
MRSIC02-1	03-011-13.1	1211-1213	48.99	1.35	18.63	0.02	6.85		0.09	8.25	10.21	3.31	0.41	0.16	0.09	0.03	98.50			
MRSIC02-1	03-011-34.1	1211-1213	51.16	1.33	19.63	0.00	6.83		0.08	8.47	10.77	3.35	0.41	0.20	0.08	0.03	102.35			
MRSIC02-1	03-011-38.1	1211-1213	48.62	1.42	17.63	0.00	8.34		0.15	8.75	10.73	3.08	0.35	0.34	0.19	0.03	99.63			
MRSIC02-1	03-011-39.1	1211-1213	48.07	1.29	19.12	0.01	6.60		0.14	8.71	10.96	3.05	0.41	0.16	0.07	0.03	98.63			
MRSIC02-1	03-011-44.1	1211-1213	49.03	1.44	16.28	0.00	8.35		0.12	8.78	10.16	3.10	0.41	1.12	0.10	0.03	98.91			
MRSIC02-1	03-011-44.2	1211-1213	50.20	1.16	16.28	0.10	9.08		0.16	8.90	9.28	2.82	0.35	0.18	0.09	0.03	98.62			
MRSIC02-1	03-011-45.1	1211-1213	49.97	1.28	19.19	0.05	6.56		0.08	8.33	10.50	3.23	0.42	0.16	0.07	0.03	99.88			
MRSIC02-1	03-011-47.1	1211-1213	50.70	1.33	19.30	0.01	6.60		0.14	8.22	10.47	3.47	0.47	0.26	0.08	0.03	101.09			

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)												S	Cl	Total
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅			
MRSIC02-1	03-011-53.1	1211-1213	49.50	1.32	18.80	0.04	7.17		0.12	8.37	10.91	3.25	0.42	0.18	0.18	0.07	100.18
MRSIC02-1	03-011-68.1	1211-1213	48.23	1.24	16.84	0.01	10.91		0.15	8.23	9.15	2.85	0.35	0.19	0.11	0.03	98.31
MRSIC02-1	03-011-68.1	1211-1213	48.23	1.24	16.84	0.01	10.91		0.18	8.23	9.15	2.85	0.35	0.19	0.11	0.03	98.31
MRSIC02-1	02-114.C1	1199-1200	47.47	1.48	14.30	0.03	15.59		0.24	7.60	9.02	2.06	0.34	0.13	0.12	0.03	98.42
MRSIC02-1	02-114.E1	1199-1200	49.37	1.24	18.71	0.03	6.86		0.14	7.33	10.30	2.89	0.42	0.17	0.07	0.03	97.56
MRSIC02-1	02-114.F2	1199-1200	49.84	1.26	18.85	0.03	7.54		0.12	7.22	10.74	2.75	0.36	0.16	0.07	0.03	98.98
MRSIC02-1	02-115.B2	1199-1200	50.22	1.32	19.13	0.05	7.05		0.10	7.05	10.74	2.84	0.42	0.16	0.07	0.04	99.19
MRSIC02-1	02-115.H9	1199-1200	49.90	1.38	18.73	0.03	8.90		0.16	7.01	9.72	2.74	0.48	0.15	0.09	0.07	99.37
MRSIC02-1	02-115.H10	1199-1200	48.83	1.25	18.35	0.02	9.36		0.14	6.99	9.86	2.63	0.39	0.16	0.09	0.03	99.10
MRSIC02-1	03-075-1.1	1202-1207	48.74	1.38	18.57	0.00	7.48		0.08	8.15	11.27	3.17	0.41	0.23	0.09	0.04	99.60
MRSIC02-1	03-075-1.2	1202-1207	48.86	1.40	18.49	0.02	7.67		0.16	8.15	11.14	3.22	0.37	0.25	0.09	0.03	99.86
MRSIC02-1	03-075-2.1	1202-1207	49.44	1.24	18.53	0.05	7.17		0.10	7.97	10.61	3.33	0.43	0.18	0.07	0.03	99.15
MRSIC02-1	03-075-5.1	1202-1207	49.04	1.28	19.08	0.01	6.33		0.13	8.06	10.75	3.24	0.49	0.25	0.09	0.03	98.77
MRBLW03-1	03-048-1.1	1209-1214	48.04	1.57	17.68	0.04	9.30		0.16	8.40	10.95	3.06	0.43	0.29	0.10	0.03	100.05
MRBLW03-1	03-048-5.1	1209-1214	47.84	1.78	17.72	0.04	9.16		0.15	8.32	10.71	2.99	0.50	0.38	0.10	0.03	99.73
MRBLW03-1	03-048-8.1	1209-1214	47.72	1.75	17.73	0.00	9.17		0.14	8.44	10.65	2.92	0.54	0.41	0.11	0.03	99.61
MRBLW03-1	03-048-10.2	1209-1214	47.26	1.56	16.52	0.07	10.20		0.16	9.07	10.63	3.58	0.53	0.38	0.09	0.03	100.07
MRBLW03-1	03-048-11.1	1209-1214	47.72	1.56	17.68	0.03	9.33		0.20	8.72	10.76	3.01	0.41	0.37	0.11	0.02	99.90
MRBLW03-1	03-048-13.1	1209-1214	48.03	1.58	17.46	0.02	9.29		0.15	8.65	10.90	2.95	0.45	0.35	0.10	0.02	99.95
MRBLW03-1	03-048-16.1	1209-1214	48.80	1.80	17.81	0.07	10.62		0.14	8.65	10.57	2.86	0.52	0.50	0.10	0.03	100.48
MRBLW03-1	03-048-18.1	1209-1214	48.94	1.68	17.61	0.02	8.86		0.18	8.14	10.30	3.46	0.44	0.37	0.13	0.03	98.17
MRBLW03-1	03-048-23.1	1209-1214	47.95	1.58	17.06	0.01	10.17		0.09	10.03	9.86	2.80	0.49	0.32	0.11	0.03	100.50
MRBLW03-1	03-048-24.1	1209-1214	47.86	1.74	17.88	0.03	9.02		0.14	8.31	10.58	3.36	0.54	0.39	0.11	0.03	99.98
MRBLW03-1	03-048-25.1	1209-1214	46.40	1.77	17.70	0.07	9.33		0.16	8.71	11.10	3.11	0.47	0.45	0.10	0.03	99.37
MRBLW03-1	03-048-29.1	1209-1214	47.00	1.79	17.92	0.04	9.89		0.16	8.67	10.28	3.16	0.53	0.47	0.07	0.03	100.01
MRBLW03-1	03-048-31.1	1209-1214	48.43	1.65	17.95	0.04	9.48		0.20	8.05	10.09	3.43	0.58	0.43	0.12	0.03	100.47
MRBLW03-1	03-048-33.1	1209-1214	47.36	1.75	17.60	0.01	9.53		0.16	8.19	10.60	3.44	0.55	0.36	0.11	0.03	99.68
MRBLW03-1	03-048-35.1	1209-1214	48.10	1.64	17.58	0.06	9.83		0.12	8.17	10.32	3.27	0.55	0.36	0.11	0.04	100.15
MRBLW03-1	03-048-39.1	1209-1214	47.59	1.62	17.75	0.04	9.59		0.13	8.31	10.49	3.34	0.53	0.32	0.11	0.03	99.84
MRBLW03-1	03-048-41.1	1209-1214	47.59	1.57	17.00	0.04	10.07		0.17	9.66	10.18	2.74	0.49	0.34	0.10	0.03	99.99
MRBLW03-1	03-048-43.1	1209-1214	48.05	1.57	17.20	0.03	10.69		0.20	9.06	9.80	2.89	0.52	0.37	0.09	0.02	100.49
MRBLW03-1	03-048-49.1	1209-1214	47.66	1.64	17.38	0.06	9.40		0.15	8.58	10.41	3.34	0.53	0.34	0.12	0.03	99.65
MRBLW03-1	03-048-49.2	1209-1214	52.22	1.48	17.36	0.02	8.20		0.11	7.55	8.92	2.08	1.01	0.39	0.09	0.02	99.44
MRBLW03-1	03-048-51.1	1209-1214	47.90	1.71	17.82	0.03	8.94		0.19	8.34	10.79	3.16	0.55	0.38	0.11	0.04	99.96
MRBLW03-1	03-048-53.1	1209-1214	47.44	1.65	17.32	0.05	10.08		0.14	8.15	10.29	3.32	0.57	0.35	0.11	0.03	98.50
MRBLW03-1	03-048-55.1	1209-1214	47.11	1.47	16.17	0.05	10.89		0.13	11.05	9.40	3.20	0.50	0.28	0.10	0.03	100.37
MRBLW03-1	03-048-61.1	1209-1214	46.85	1.64	17.07	0.02	9.90		0.17	8.40	10.98	3.63	0.54	0.38	0.11	0.02	99.71
MRBLW03-1	03-048-62.1	1209-1214	47.65	1.59	17.65	0.04	9.34		0.10	8.36	10.55	3.44	0.56	0.37	0.10	0.03	99.77
MRBLW03-1	03-048-65.2	1209-1214	48.04	1.56	17.61	0.05	9.57		0.18	8.35	10.54	3.47	0.53	0.37	0.10	0.04	100.42
MRBLW03-1	03-048-67.1	1209-1214	47.95	1.60	17.32	0.00	9.53		0.10	8.34	10.56	3.54	0.54	0.33	0.10	0.03	99.93
MRBLW03-1	03-048-69.1	1209-1214	47.69	1.65	17.32	0.01	9.49		0.15	8.36	10.34	3.38	0.55	0.36	0.10	0.03	99.44
MRBLW03-1	03-048-70.1	1209-1214	47.70	1.63	17.30	0.06	9.87		0.19	8.25	10.46	3.44	0.57	0.37	0.10	0.04	99.98
MRBLW03-1	03-048-71.1	1209-1214	47.97	1.65	17.75	0.03	8.98		0.14	8.26	10.59	3.55	0.57	0.41	0.08	0.03	100.01
MRBLW03-1	03-048-72.1	1209-1214	48.15	1.79	17.67	0.00	8.93		0.20	9.29	10.53	3.40	0.48	0.36	0.09	0.03	100.91
MRBLW03-1	03-048-78.1	1209-1214	46.91	1.62	17.46	0.08	9.11		0.21	8.08	10.75	3.33	0.48	0.38	0.10	0.03	98.50
MRBLW03-1	03-048-78.2	1209-1214	48.01	1.67	17.43	0.01	8.63		0.20	8.81	10.72	3.36	0.53	0.35	0.10	0.03	99.87
MRBLW03-1	03-048-79.1	1209-1214	47.99	1.73	17.82	0.04	8.54		0.10	8.26	10.68	3.42	0.57	0.33	0.11	0.02	99.61

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)													Total	
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S		Cl
MRBLW03-1	03-048-79.2	1209-1214	47.39	1.76	17.92	0.00	8.98		0.10	8.19	10.78	3.48	0.52	0.37	0.10	0.02	99.61
MRBLW03-1	03-048-81.1	1209-1214	49.33	1.79	15.44	0.05	10.84		0.14	8.26	9.49	3.32	0.52	0.44	0.08	0.02	99.69
MRBLW03-1	03-072-1.1	1202-1207	45.58	3.56	16.10	0.00	9.85		0.16	8.26	9.90	3.57	0.35	0.55	0.24	0.01	98.13
MRBLW03-1	03-072-5.1	1202-1207	47.53	1.58	17.47	0.02	9.39		0.20	8.09	10.63	3.30	0.60	0.38	0.12	0.04	99.34
MRBLW03-1	03-072-7.1	1202-1207	47.61	1.67	17.36	0.03	9.43		0.14	8.36	10.40	3.20	0.60	0.35	0.10	0.04	99.29
MRBLW03-1	03-072-8.1	1202-1207	47.48	1.22	17.50	0.02	9.16		0.14	8.40	11.58	2.82	0.21	0.21	0.13	0.01	98.89
MRBLW03-1	03-072-14.1	1202-1207	47.40	1.55	18.00	0.00	8.34		0.13	8.02	10.29	3.40	0.60	0.40	0.13	0.04	98.31
MRBLW03-1	03-072-19.1	1202-1207	46.57	1.08	16.34	0.07	12.86		0.24	7.87	11.04	2.82	0.26	0.20	0.12	0.03	99.49
MRBLW03-1	03-072-19.2	1202-1207	46.21	1.31	15.56	0.04	12.52		0.19	8.38	11.18	2.40	0.28	0.22	0.11	0.01	98.40
MRBR02-2	03-049-2.1	1209-1214	48.92	1.17	16.46	0.00	9.45		0.14	11.05	9.01	2.98	0.37	0.24	0.10	0.03	99.91
MRBR02-2	03-049-3.1	1209-1214	48.99	1.36	17.01	0.03	8.78		0.10	9.11	9.88	3.00	0.49	0.21	0.08	0.03	99.08
MRBR02-2	03-049-9.1	1209-1214	49.32	1.35	17.63	0.00	7.56		0.09	9.23	10.24	3.16	0.42	0.23	0.11	0.03	99.36
MRBR02-2	03-049-11.2	1209-1214	48.87	1.33	16.30	0.00	10.36		0.18	9.31	9.79	2.97	0.42	0.27	0.09	0.03	99.92
MRBR02-2	03-049-11.3	1209-1214	48.54	1.32	16.30	0.00	10.78		0.14	8.92	9.67	2.93	0.42	0.25	0.09	0.03	99.38
MRBR02-2	03-049-11.4	1209-1214	48.06	1.29	16.03	0.03	10.18		0.17	9.68	9.62	3.16	0.45	0.27	0.09	0.03	99.07
MRBR02-2	03-049-11.5	1209-1214	48.69	1.42	16.54	0.00	11.32		0.21	8.69	10.03	2.76	0.38	0.25	0.08	0.03	100.39
MRBR02-2	03-049-12.1	1209-1214	50.39	1.30	16.75	0.04	8.55		0.18	8.91	9.30	3.25	0.60	0.28	0.06	0.03	99.65
MRBR02-2	03-049-14.1	1209-1214	49.54	1.31	17.03	0.03	8.46		0.11	9.51	9.73	3.22	0.47	0.25	0.09	0.03	99.79
MRBR02-2	03-071-1.1	1202-1207	47.70	1.27	17.09	0.04	8.20		0.13	8.39	9.11	3.14	0.52	0.26	0.11	0.03	95.98
MRBR02-2	03-071-2.1	1202-1207	47.56	1.37	16.79	0.00	9.09		0.18	7.99	10.45	2.80	0.45	0.25	0.12	0.03	97.07
MRBR02-2	03-071-5.1	1202-1207	47.99	1.17	16.55	0.02	8.14		0.12	8.70	9.17	2.96	0.50	0.21	0.08	0.04	95.67
MRBR02-2	03-071-8.1	1202-1207	50.79	1.20	16.31	0.01	8.76		0.17	8.29	9.17	2.74	0.52	0.24	0.09	0.04	98.32
MRBR02-2	03-071-9.1	1202-1207	49.06	1.14	16.23	0.07	9.75		0.24	8.30	9.18	2.98	0.56	0.23	0.08	0.05	97.86
MRBR02-2	03-071-10.1	1202-1207	48.34	1.32	17.33	0.03	8.62		0.06	8.04	9.67	3.15	0.50	0.22	0.09	0.03	97.42
MRBR02-2	04-021-1.1	1202-1207	47.97	1.33	17.30	0.03	8.32	0.06	0.13	8.58	10.37	3.22	0.52	0.24	0.10	0.04	98.22
MRBR02-2	04-021-2.1	1202-1207	47.84	1.31	16.92	0.02	9.66	0.07	0.18	7.97	10.02	2.71	0.51	0.17	0.07	0.03	97.47
MRBR02-2	04-021-4.1	1202-1207	48.41	1.36	16.94	0.04	10.07	0.07	0.16	8.19	10.14	2.86	0.48	0.21	0.10	0.03	99.04
MRBR02-2	04-021-5.1	1202-1207	48.11	1.30	17.40	0.05	9.15	0.05	0.12	7.67	10.70	3.18	0.47	0.26	0.10	0.03	98.59
MRBR02-2	04-021-7.1	1202-1207	48.52	1.24	16.65	0.01	9.16	0.06	0.18	8.65	10.17	2.94	0.45	0.24	0.10	0.04	98.40
MRBB03-1	03-065-2.1	1209-1219	49.22	1.48	16.76	0.00	11.72		0.19	7.84	8.43	3.03	0.63	0.43	0.12	0.04	99.89
MRBB03-1	03-065-3.2	1209-1219	50.32	1.72	16.29	0.01	9.66		0.16	8.49	8.97	3.33	0.60	0.48	0.10	0.04	100.16
MRBB03-1	03-065-3.3	1209-1219	47.80	1.58	13.70	0.05	13.95		0.19	10.47	8.01	2.87	0.47	0.71	0.14	0.04	99.99
MRBB03-1	03-065-4.1	1209-1219	49.99	1.63	14.59	0.01	11.99		0.16	7.73	8.53	3.49	0.74	0.24	0.19	0.05	99.85
MRBB03-1	03-065-8.1	1209-1219	49.93	2.52	14.54	0.12	14.44		0.18	6.72	6.31	3.16	1.27	0.51	0.15	0.06	99.92
MRBB03-1	03-065-11.1	1209-1219	49.22	1.34	13.68	0.00	15.40		0.20	7.35	8.20	3.15	0.65	0.28	0.13	0.04	99.65
MRBB03-1	03-065-13.1	1209-1219	50.37	1.74	15.43	0.10	10.81		0.20	7.48	9.03	3.33	0.75	0.51	0.14	0.05	99.94
MRBB03-1	03-065-14.1	1209-1219	49.78	1.57	16.82	0.00	10.55		0.15	7.81	9.11	3.11	0.70	0.39	0.12	0.06	100.18
MRBB03-1	03-065-16.1	1209-1219	49.66	1.74	15.51	0.04	10.67		0.16	7.98	9.32	3.42	0.57	0.39	0.15	0.03	99.66
MRBB03-1	03-065-16.2	1209-1219	51.32	1.53	15.87	0.02	9.54		0.16	7.89	8.36	3.50	0.94	0.24	0.10	0.04	99.52
MRBB03-1	04-025-7.1	1201-1208	48.17	1.39	17.83	0.05	9.79	0.02	0.17	8.06	9.95	3.51	0.51	0.24	0.10	0.03	99.84
MRBB03-1	04-030-1.1	1198-1200	53.60	1.21	15.75	0.04	8.84	0.05	0.12	7.63	8.01	3.17	0.58	0.56	0.09	0.04	99.68
MRBB03-1	04-030-3.1	1198-1200	47.83	1.24	17.44	0.04	10.22	0.06	0.17	7.80	9.51	3.37	0.50	0.26	0.06	0.03	98.53
MRBB03-1	04-030-6.1	1198-1200	49.42	1.40	18.83	0.02	7.86	0.05	0.08	7.93	10.36	3.56	0.43	0.25	0.08	0.03	100.31
MRBB03-1	04-030-8.1	1198-1200	51.15	1.49	17.78	0.02	8.10	0.02	0.09	7.32	9.44	3.60	0.57	0.23	0.08	0.05	99.94
MRBB03-1	04-031-2.1	1198-1200	50.10	1.80	15.90	0.01	11.09	0.04	0.20	7.69	8.70	3.09	0.94	0.52	0.12	0.05	100.26
MRBB03-1	04-031-6.1	1198-1200	51.98	1.25	17.57	0.01	7.97	0.02	0.09	7.06	9.01	3.50	0.92	0.36	0.07	0.04	99.85

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)											S	Cl	Total
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅		
MRBB03-1	04-031-6.2	1198-1200	51.61	1.29	17.44	0.01	7.92	0.06	0.09	7.29	8.93	3.54	0.99	0.41	0.06	99.69
MRBB03-1	04-031-7.1	1198-1200	50.46	1.51	16.77	0.02	9.61	0.05	0.17	7.51	8.95	3.41	0.92	0.38	0.10	99.87
MRBB03-1	04-031-8.1	1198-1200	49.43	1.77	15.32	0.02	10.50	0.04	0.13	7.62	9.22	3.62	0.68	0.53	0.12	99.04
MRBB03-1	04-031-11.1	1198-1200	49.77	1.82	16.51	0.00	9.75	0.05	0.16	7.32	8.65	3.46	0.80	0.50	0.11	98.94
MRBB03-1	04-031-14.1	1198-1200	50.20	1.79	16.24	0.02	9.37	0.01	0.13	7.75	8.31	3.59	0.70	0.66	0.11	98.92
MRNMB03-1	03-066-13.1	1212-1217	49.64	1.56	16.74	0.02	8.75		0.10	8.44	10.36	3.42	0.60	0.27	0.09	100.02
MRNMB03-1	03-066-24.1	1212-1217	48.81	1.60	16.63	0.00	9.65		0.15	8.66	10.40	2.97	0.47	0.40	0.08	99.85
MRNMB03-1	04-024-5.1	1199-1203	43.21	2.59	14.89	0.01	10.77	0.01	0.17	9.83	12.39	2.80	0.06	2.02	0.14	98.92
MRNMB03-1	04-024-5.2	1199-1203	43.19	2.67	14.87	0.03	11.04	0.06	0.18	9.65	12.39	2.67	0.02	2.31	0.13	99.24
MRNMB03-1	04-024-8.1	1199-1203	49.14	1.76	17.61	0.06	6.86	0.02	0.06	8.39	11.35	3.54	0.62	0.27	0.08	99.79
MRNMB03-1	04-026-3.1	1198-1202	46.84	1.71	17.28	0.02	9.19	0.05	0.18	8.55	11.18	2.75	0.54	0.28	0.08	98.66
MRNMB03-1	04-026-8.1	1198-1202	49.12	1.67	17.13	0.05	8.39	0.07	0.14	7.99	11.37	3.44	0.63	0.28	0.08	100.40
MRKWB03-1	03-067-1.1	1211-1216	52.57	1.50	16.19	0.00	9.88		0.19	7.29	7.13	3.95	1.00	0.43	0.11	100.28
MRKWB03-1	03-067-2.1	1211-1216	51.56	1.15	17.54	0.00	7.67		0.14	8.25	8.91	3.41	0.73	0.18	0.09	99.69
MRKWB03-1	03-067-3.1	1211-1216	51.95	1.38	15.89	0.00	10.22		0.16	7.71	8.28	3.60	0.64	0.48	0.08	100.43
MRKWB03-1	03-067-4.1	1211-1216	51.14	1.56	15.88	0.02	9.47		0.12	8.08	8.06	3.77	0.88	0.72	0.12	99.87
MRKWB03-1	03-067-6.1	1211-1216	51.91	1.13	16.43	0.06	9.74		0.15	7.67	8.25	3.62	0.73	0.27	0.12	100.13
MRKWB03-1	03-067-7.1	1211-1216	52.45	1.49	15.17	0.01	11.99		0.26	7.00	6.37	4.27	1.01	0.44	0.14	100.66
MRKWB03-1	03-067-8.2	1211-1216	52.11	1.55	16.00	0.00	9.26		0.14	7.86	7.78	3.60	0.93	0.46	0.10	99.84
MRKWB03-1	03-067-9.1	1211-1216	51.23	1.64	14.34	0.03	12.07		0.17	7.26	6.92	3.22	1.39	0.38	0.13	98.83
MRKWB03-1	03-067-11.1	1211-1216	53.07	1.53	16.04	0.01	8.47		0.13	7.55	6.66	3.99	1.01	0.41	0.10	99.02
MRKWB03-1	03-067-12.1	1211-1216	52.26	1.12	16.97	0.00	8.68		0.16	7.77	8.26	3.71	0.71	0.23	0.10	99.99
MRKWB03-1	03-067-13.1	1211-1216	51.02	1.45	15.33	0.04	10.16		0.18	8.05	7.79	3.56	0.83	0.41	0.11	98.99
MRKWB03-1	03-067-16.1	1211-1216	52.64	1.07	15.37	0.02	11.79		0.16	7.33	6.40	3.64	0.83	0.27	0.10	99.67
MRKWB03-1	03-067-17.1	1211-1216	50.78	1.46	17.27	0.03	8.21		0.11	8.58	8.88	3.33	0.63	0.73	0.09	100.13
MRKWB03-1	03-067-19.1	1211-1216	52.85	1.13	16.58	0.01	9.48		0.07	7.58	7.95	3.78	0.75	0.18	0.10	100.54
MRKWB03-1	03-067-22.1	1211-1216	52.13	1.41	16.22	0.02	9.21		0.10	7.87	8.10	3.64	0.86	0.40	0.11	100.12
MRKWB03-1	03-067-24.1	1211-1216	52.00	1.18	17.87	0.00	7.50		0.08	8.02	9.10	3.57	0.72	0.26	0.08	100.43
MRKWB03-1	03-067-27.1	1211-1216	51.55	1.20	16.49	0.00	8.85		0.14	7.83	8.28	3.74	0.85	0.31	0.10	99.39
MRAIC02-1	03-073-3.3	1202-1208	48.98	1.42	18.33	0.01	8.08		0.10	8.17	10.21	3.44	0.51	0.28	0.09	99.64
MRAIC02-1	03-073-5.1	1202-1208	49.26	1.35	18.62	0.06	7.35		0.08	8.12	10.29	3.34	0.53	0.37	0.10	99.49
MRAIC02-1	03-073-6.1	1202-1208	48.02	1.33	17.95	0.04	8.37		0.13	8.22	10.42	3.21	0.54	0.37	0.08	98.68
MRAIC02-1	03-073-8.1	1202-1208	49.53	1.37	18.52	0.02	7.31		0.12	8.13	10.08	3.34	0.54	0.29	0.09	98.37
MRAIC02-1	03-073-9.1	1202-1208	49.07	1.31	18.53	0.05	7.38		0.13	8.10	10.18	3.27	0.53	0.24	0.09	98.91
MRAIC02-1	03-073-9.2	1202-1208	49.03	1.32	18.62	0.02	7.13		0.11	8.22	10.28	3.34	0.52	0.31	0.09	98.96
MRAIC02-1	03-073-10.1	1202-1208	49.09	1.32	18.37	0.00	7.86		0.13	8.25	10.37	3.09	0.49	0.32	0.08	99.39
MRAIC02-1	03-073-11.1	1202-1208	49.58	1.29	18.55	0.01	7.06		0.11	8.20	10.28	3.34	0.54	0.28	0.09	99.38
MRAIC02-1	03-073-11.2	1202-1208	48.79	1.36	18.32	0.05	7.36		0.10	8.12	10.01	3.41	0.51	0.30	0.28	98.67
MRAIC02-1	03-073-20.1	1202-1208	49.14	1.36	18.79	0.01	7.53		0.15	8.00	9.88	3.34	0.52	0.28	0.11	99.13
MRAIC02-1	03-073-21.1	1202-1208	47.98	1.44	17.89	0.00	7.96		0.10	8.13	10.04	3.19	0.45	0.30	0.09	97.60
MRAIC02-1	04-020-1.1	1198-1202	48.62	1.31	16.54	0.04	8.20	0.02	0.09	8.55	10.13	3.20	0.46	0.27	0.11	97.54
MRAIC02-1	04-020-2.1	1198-1202	49.12	1.40	17.51	0.00	8.14	0.05	0.12	8.71	10.28	3.22	0.46	0.30	0.11	99.45
MRAIC02-1	04-020-2.2	1198-1202	49.88	1.42	16.95	0.00	8.66	0.03	0.15	8.28	9.99	3.19	0.45	0.34	0.09	99.44
MRAIC02-1	04-020-2.3	1198-1202	49.98	1.42	16.61	0.00	8.25	0.02	0.09	8.21	10.15	3.18	0.43	0.30	0.09	98.75
MRAIC02-1	04-020-3.1	1198-1202	51.26	1.29	16.19	0.01	8.49	0.05	0.11	8.15	10.09	3.12	0.45	0.26	0.09	99.59

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)											S	Cl	Total
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅		
MRAIC02-1	04-020-5.1	1198-1202	48.43	1.54	16.47	0.00	8.51	0.01	0.11	8.75	11.04	2.55	0.39	0.27	0.09	98.19
MRAIC02-1	04-020-7.1	1198-1202	48.96	1.34	16.92	0.00	8.96	0.01	0.09	8.50	10.09	3.14	0.47	0.29	0.09	98.89
MRAIC02-1	04-020-8.1	1198-1202	51.48	1.28	15.62	0.03	9.13	0.02	0.10	8.29	9.89	3.11	0.43	0.31	0.10	99.83
MRAIC02-1	04-020-8.2	1198-1202	49.28	1.29	16.13	0.03	8.42	0.04	0.10	8.72	10.00	3.12	0.47	0.32	0.18	98.13
MRAIC02-1	04-020-10.1	1198-1202	49.02	1.35	16.99	0.03	8.31	0.02	0.06	8.61	10.13	3.16	0.49	0.28	0.08	98.57
MRAIC02-1	04-020-11.1	1198-1202	48.32	1.33	16.73	0.04	8.59	0.06	0.08	8.70	10.25	3.37	0.48	0.30	0.13	98.41
MRAIC02-1	04-020-14.1	1198-1202	49.96	1.35	16.87	0.01	8.48	0.00	0.10	8.37	9.90	3.23	0.48	0.31	0.12	99.31
MRAIC02-1	04-020-15.1	1198-1202	48.83	1.35	16.89	0.01	8.64	0.00	0.10	8.62	9.94	3.28	0.45	0.27	0.24	98.64
MRAIC02-1	04-020-15.2	1198-1202	49.57	1.53	16.27	0.00	8.69	0.06	0.15	8.16	9.53	3.25	0.60	0.27	0.21	98.31
MRAIC02-1	04-020-17.1	1198-1202	49.62	1.38	17.21	0.00	8.05	0.01	0.12	8.41	10.17	3.27	0.49	0.25	0.08	99.09
MRLTB02-2	03-074-1.1	1202-1208	49.92	1.23	17.91	0.04	8.08		0.13	8.32	9.61	3.30	0.57	0.28	0.08	99.50
MRLTB02-2	03-074-2.1	1202-1208	50.42	1.23	18.19	0.01	8.12		0.15	7.91	9.78	3.42	0.63	0.29	0.10	100.27
MRLTB02-2	03-074-3.1	1202-1208	49.94	1.19	18.23	0.00	8.16		0.13	7.96	9.57	3.39	0.59	0.36	0.09	99.66
MRLTB02-2	03-074-7.1	1202-1208	49.54	1.26	17.79	0.01	8.44		0.12	8.10	10.16	3.39	0.53	0.27	0.11	99.74
MRLTB02-2	03-074-7.2	1202-1208	48.47	1.42	17.42	0.00	8.99		0.13	7.98	9.72	3.14	0.54	0.24	0.11	98.20
MRLTB02-2	03-074-7.3	1202-1208	49.57	1.26	17.95	0.02	8.49		0.10	8.00	9.95	3.38	0.56	0.28	0.10	99.70
MRLTB02-2	03-074-8.1	1202-1208	48.83	1.28	18.40	0.06	7.87		0.09	8.05	9.69	3.40	0.61	0.32	0.10	99.73
MRLTB02-2	03-074-11.1	1202-1208	50.00	1.18	18.21	0.01	8.29		0.15	7.81	9.75	3.38	0.59	0.28	0.09	99.77
MRLTB02-2	03-074-14.1	1202-1208	49.59	1.15	17.82	0.02	8.77		0.13	7.84	9.56	3.50	0.57	0.35	0.09	99.42
MRLTB02-2	03-074-15.1	1202-1208	49.82	1.32	18.26	0.03	8.04		0.16	7.90	10.06	3.48	0.57	0.29	0.09	100.05
MRLTB02-2	03-074-17.1	1202-1208	48.40	1.27	17.82	0.02	9.93		0.17	7.80	9.75	3.45	0.62	0.41	0.10	99.77
MRLTB02-2	03-074-18.1	1202-1208	51.91	1.14	17.26	0.13	8.55		0.11	7.92	9.21	3.34	0.55	0.27	0.09	100.50
MRLTB02-2	03-074-20.1	1202-1208	50.08	1.21	18.23	0.02	8.38		0.13	7.97	9.84	3.36	0.57	0.29	0.09	100.20
MRLTB02-2	03-074-21.1	1202-1208	50.29	1.28	18.28	0.00	8.16		0.16	7.97	9.82	3.55	0.61	0.29	0.09	100.52
MRLTB02-2	03-074-21.2	1202-1208	50.12	1.38	18.39	0.01	8.09		0.16	8.11	10.04	3.37	0.56	0.28	0.08	100.62
MRLTB02-2	04-022-2.1	1198-1202	48.17	1.20	19.36	0.03	7.41	0.02	0.10	7.31	9.56	3.37	0.57	0.34	0.10	97.58
MRLTB02-2	04-022-8.1	1198-1202	50.07	1.25	18.16	0.00	7.99	0.06	0.07	7.92	10.06	3.64	0.59	0.37	0.09	100.29
MRLTB02-2	04-022-11.1	1198-1202	49.51	1.29	17.86	0.00	7.74	0.05	0.11	7.82	9.95	3.57	0.56	0.26	0.09	98.83
MRLTB02-2	04-023-2.1	1198-1202	50.00	1.24	17.03	0.04	8.96	0.07	0.13	7.93	9.64	3.35	0.56	0.28	0.10	99.36
MRLTB02-2	04-023-3.1	1198-1202	49.11	1.37	17.53	0.01	7.72	0.03	0.10	7.84	9.73	3.59	0.55	0.33	0.10	98.05
MRLTB02-2	04-023-3.2	1198-1202	48.55	1.34	17.51	0.04	7.90	0.03	0.14	7.99	10.00	3.54	0.58	0.30	0.09	98.04
MRLTB02-2	04-023-5.1	1198-1202	48.54	1.35	17.82	0.00	7.43	0.02	0.12	7.80	9.89	3.53	0.56	0.27	0.10	97.47
MRLTB02-2	04-023-5.2	1198-1202	48.97	1.35	17.66	0.01	7.81	0.05	0.08	7.98	9.76	3.62	0.52	0.43	0.09	98.35
MRLTB02-2	04-023-7.1	1198-1202	48.12	1.35	17.83	0.02	8.75	0.06	0.12	8.51	10.17	2.84	0.48	0.37	0.08	98.73
MRLTB02-2	04-023-9.1	1198-1202	48.89	1.29	17.69	0.04	8.27	0.04	0.16	7.75	9.76	3.58	0.59	0.31	0.08	98.50
MRLTB02-2	04-023-12.1	1198-1202	49.12	1.36	18.35	0.00	7.74	0.06	0.12	7.81	9.83	3.48	0.57	0.31	0.09	98.87
MRLTB02-2	04-023-13.1	1198-1202	49.39	1.23	16.68	0.03	9.42	0.04	0.13	7.61	9.27	3.51	0.57	0.29	0.11	98.31
MRLTB02-2	04-023-15.1	1198-1202	49.20	1.28	17.26	0.02	9.02	0.06	0.10	7.73	9.61	3.41	0.56	0.34	0.10	98.72
MRLTB02-2	04-023-17.1	1198-1202	51.84	0.97	15.62	0.01	9.29	0.00	0.18	9.04	7.96	2.87	0.47	0.24	0.08	98.61
MRLTB02-2	04-023-20.1	1198-1202	48.40	1.41	17.34	0.01	8.91	0.00	0.13	7.95	9.52	3.62	0.53	0.31	0.10	98.26
MRLTB02-2	04-023-24.1	1198-1202	49.34	1.30	18.05	0.00	7.43	0.00	0.09	7.97	9.92	3.59	0.55	0.29	0.10	98.67
MRLTB02-2	04-023-25.1	1198-1202	49.33	1.28	17.74	0.02	9.13	0.04	0.10	8.17	9.94	3.16	0.52	0.35	0.07	99.89
MRLTB02-2	04-023-26.1	1198-1202	48.83	1.16	17.19	0.03	9.31	0.02	0.13	7.96	9.41	3.35	0.50	0.32	0.09	98.33
MRBY002-1	04-027-3.1	1198-1202	48.32	2.00	16.47	0.03	12.06	0.02	0.19	7.52	9.41	3.85	0.53	0.36	0.15	100.93
MRBY002-1	04-027-7.1	1198-1202	48.04	1.77	15.99	0.00	12.62	0.02	0.18	7.23	8.98	3.60	0.53	0.33	0.14	99.46
MRBY002-1	04-027-9.1	1198-1202	48.27	1.96	16.67	0.02	11.52	0.01	0.19	7.68	9.55	3.78	0.55	0.32	0.14	100.66

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)														S	Cl	Total
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅					
MRBYC02-1	04-027-11.1	1198-1202	48.34	1.83	16.63	0.01	11.69	0.02	0.16	7.71	9.44	3.40	0.52	0.41	0.13	0.03	100.32		
MRBYC02-1	04-027-12.1	1198-1202	46.40	1.95	15.74	0.04	14.62	0.00	0.24	8.10	9.05	2.18	0.51	0.31	0.11	0.02	99.26		
MRBYC02-1	04-027-14.1	1198-1202	45.56	1.65	20.87	0.01	12.78	0.00	0.18	6.93	8.08	3.18	0.51	0.33	0.13	0.03	100.23		
MRBYC02-1	04-027-23.2	1198-1202	48.26	1.90	16.18	0.00	12.73	0.01	0.22	7.42	9.01	3.58	0.51	0.31	0.14	0.02	100.29		
NEF03-1	NEF 05-013-3	1202-1207	48.74	1.92	17.04	0.03	9.49	0.02	0.18	8.14	10.15	3.34	0.47	0.34	0.14	0.03	100.02		
NEF03-1	NEF 05-013-7	1202-1207	48.15	1.95	17.14	0.00	10.04	-0.01	0.17	8.29	10.12	3.24	0.44	0.35	0.18	0.03	100.11		
NEF03-1	NEF 05-013-8	1202-1207	48.60	1.87	16.61	0.05	10.65	0.02	0.16	8.23	10.05	3.34	0.47	0.33	0.14	0.03	100.55		
NEF03-1	NEF 05-013-10	1202-1207	48.25	1.93	17.10	0.01	9.38	-0.01	0.15	8.26	9.80	3.35	0.51	0.35	0.14	0.03	99.25		
NEF03-1	NEF 05-013-12	1202-1207	48.57	1.90	16.82	-0.01	10.06	0.02	0.16	8.08	9.96	3.38	0.51	0.38	0.14	0.03	100.01		
NEF03-1	NEF 05-013-14	1202-1207	48.21	1.96	16.52	0.00	10.87	0.01	0.17	8.24	10.09	3.22	0.46	0.37	0.20	0.03	100.37		
NEF03-1	NEF 05-013-16	1202-1207	48.54	2.03	16.47	0.03	10.30	0.01	0.16	8.22	9.95	3.38	0.48	0.36	0.14	0.03	100.10		
NEF03-1	NEF 05-013-17	1202-1207	48.89	1.88	16.58	0.04	10.34	0.03	0.19	8.02	9.87	3.31	0.53	0.35	0.13	0.03	100.18		
NEF03-1	NEF 05-013-19	1202-1207	48.02	1.87	16.45	0.00	11.01	0.08	0.23	8.06	10.10	3.30	0.46	0.38	0.14	0.03	100.14		
NEF03-1	NEF 05-013-22	1202-1207	48.96	1.92	16.97	0.02	9.36	0.02	0.18	8.15	9.85	3.37	0.53	0.35	0.13	0.03	99.85		
NEF03-1	NEF 05-013-26	1202-1207	50.51	2.06	15.85	0.01	9.78	0.05	0.18	7.76	8.90	3.58	0.83	0.52	0.13	0.04	100.20		
NEF03-1	NEF 05-013-29	1202-1207	48.33	1.92	16.27	0.02	10.88	0.02	0.17	8.03	9.47	3.28	0.57	0.35	0.13	0.04	99.48		
NEF03-1	NEF 05-013-30	1202-1207	48.64	1.92	16.79	-0.01	9.98	0.04	0.15	8.06	9.62	3.31	0.53	0.35	0.13	0.03	99.54		
NEF03-1	NEF 05-013-34	1202-1207	46.02	1.86	14.45	0.00	11.99	0.06	0.21	8.88	9.54	3.30	0.47	0.35	0.13	0.03	97.29		
NEF03-1	NEF 05-013-35	1202-1207	48.87	2.10	15.76	0.02	10.98	0.01	0.19	8.25	10.07	3.23	0.65	0.44	0.12	0.04	100.73		
NEF03-1	NEF 05-013-37	1202-1207	47.26	2.05	15.81	0.01	12.34	-0.02	0.17	7.98	9.95	2.98	0.52	0.35	0.14	0.03	99.58		
NEF03-1	NEF 05-013-38	1202-1207	50.25	1.50	14.28	0.07	10.40	0.03	0.17	7.98	11.66	2.93	0.45	0.30	0.11	0.04	100.17		
NEF03-1	NEF 05-013-42	1202-1207	48.63	1.86	16.59	0.03	10.28	0.04	0.15	8.12	10.08	3.32	0.45	0.36	0.13	0.03	100.07		
31-7b	gm.3	unheated	52.04	1.65	15.52		11.34		0.19	5.64	10.50	3.17	0.42	0.23	0.029	0.084	100.84		
31-7b	25a	unheated	49.40	1.27	16.93		10.24		0.18	6.18	11.53	2.56	0.31	0.23	0.119	0.061	98.99		
31-7b	28a	unheated	49.78	1.40	17.21		10.05		0.16	5.54	11.29	2.65	0.34	0.21	0.098	0.072	98.81		
31-7b	1	unheated	50.43	1.50	16.25		10.51		0.17	5.29	11.68	2.44	0.34	0.22	0.109	0.076	99.02		
31-7b	15	unheated	49.08	1.19	18.47		9.40		0.16	6.28	12.11	2.55	0.28	0.18	0.167	0.054	99.92		
31-7b	26	unheated	49.33	1.23	18.23		9.22		0.14	5.66	12.25	2.41	0.27	0.20	0.156	0.058	99.15		
31-7b	10-3-1	1143	48.34	1.12	16.68		9.65		0.17	7.53	11.61	2.42	0.28	0.23	0.172	0.056	98.26		
31-7b	10-4-1b	1143	49.49	1.29	16.18		10.70		0.17	7.22	10.50	2.65	0.34	0.19	0.115	0.070	98.97		
31-7b	10-6-1	1143	48.49	1.12	17.33		8.64		0.19	7.64	11.61	2.41	0.27	0.17	0.162	0.054	98.16		
31-7b	1W-4-2e	1133	49.45	1.31	16.67		10.40		0.18	6.87	11.07	2.64	0.33	0.20	0.133	0.067	99.36		
31-7b	1W-6-1e	1133	48.04	1.13	17.92		8.55		0.18	6.82	11.82	2.94	0.29	0.19	0.122	0.060	98.18		
31-7b	1W-1-1e	1133	49.05	1.42	17.45		9.72		0.18	7.29	10.98	2.62	0.30	0.25	0.158	0.067	99.53		
31-7b	20-1-2b	1143	48.10	1.27	15.68		11.99		0.23	6.88	11.07	2.53	0.32	0.21	0.113	0.066	98.47		
31-7b	20-3-1	1143	48.45	1.04	17.62		9.04		0.16	7.64	11.65	2.41	0.29	0.19	0.177	0.062	98.75		
31-7b	20-6-1	1143	47.88	1.09	17.25		8.99		0.17	7.75	11.61	2.40	0.26	0.14	0.172	0.057	97.79		
31-7b	30-2-1a	1143	49.02	1.23	16.05		9.80		0.17	7.51	10.69	2.49	0.31	0.21	0.086	0.067	97.68		
31-7b	30-6-1	1143	48.46	1.20	18.22		8.86		0.13	7.27	11.17	2.72	0.30	0.24	0.122	0.062	99.88		
31-7b	30-1-1	1143	48.61	1.27	15.01		10.94		0.23	7.20	10.42	2.67	0.35	0.19	0.056	0.070	97.03		
31-7b	1.1	1177	48.09	1.07	15.45		12.31		0.18	8.70	10.25	2.40	0.28	0.18	0.137	0.054	99.10		
31-7b	1.2	1177	47.89	1.09	16.20		10.68		0.22	8.92	10.82	2.34	0.27	0.19	0.130	0.055	98.84		
31-7b	2.1	1177	48.47	1.13	16.07		11.30		0.20	8.81	10.87	2.35	0.24	0.18	0.141	0.055	99.82		
31-7b	1.2	1206	48.39	1.16	14.90		13.36		0.22	9.46	9.91	2.50	0.29	0.22	0.062	0.061	100.51		
31-7b	2.1	1206	48.07	1.02	15.03		13.84		0.19	9.35	9.95	2.32	0.26	0.18	0.112	0.049	100.36		
31-7b	3.1	1206	47.09	1.01	14.35		13.21		0.18	9.99	9.62	2.12	0.26	0.17	0.142	0.047	98.19		

Table B1: Continued

Label	Plug/Inclusion	Temp (°C)	Major element oxides and volatiles (wt%)														
			SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	S	Cl	Total
31-7b	3.1	1231	47.82	1.02	14.60		12.10		0.21	10.93	9.40	2.25	0.27	0.14	0.074	0.054	98.87
LO-02-04	lo-02-04ii	unheated	49.30	2.24	12.17		10.84		0.16	9.03	10.53	2.48	0.59	0.30	0.140	0.140	99.52
LO-02-02	1	unheated	47.55	3.16	12.44		10.76		0.21	6.45	12.89	1.99	0.58	0.26	0.100	0.035	96.43
LO-02-02	2	unheated	47.92	3.14	12.42		10.79		0.18	8.56	12.54	1.87	0.37	0.23	0.149	0.042	98.21
LO-02-02	3	unheated	48.41	2.87	12.38		10.61		0.14	9.41	11.25	1.88	0.60	0.26	0.136	0.039	97.99
LO-02-02	15xglass-A-1	1200	48.47	2.13	11.49		9.69		0.14	12.34	9.70	1.86	0.55	0.29	0.139	0.046	97.84
LO-02-02	15xcystal-A-3	1200	47.49	2.79	11.66		11.37		0.17	9.76	11.79	1.96	0.37	0.26	0.290	0.096	99.09
LO-02-02	15xcystal-B-2	1200	47.56	2.20	10.48		9.71		0.14	11.91	9.98	2.16	0.43	0.27	0.123	0.023	96.40
LO-02-02	30x-A-1	1200	48.58	2.59	11.65		10.64		0.15	10.05	10.75	1.85	0.46	0.24	0.147	0.046	97.80
LO-02-02	30x-B-1	1200	47.73	2.71	11.24		12.02		0.17	11.65	10.19	1.70	0.38	0.28	0.173	0.040	98.91
LO-02-02	30x-C-2	1200	46.32	2.61	11.39		11.28		0.15	11.08	11.70	1.84	0.33	0.32	0.179	0.077	97.92

Table B2: Olivine major element compositions measured by electron microprobe.

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
QV03-1	04-048-11.1	40.37	0.00	0.03	0.03	8.85	0.50	0.14	50.18	0.15	0.02	100.27	91.0
QV03-1	04-048-18.2	40.27	0.00	0.06	0.05	8.84	0.69	0.12	50.09	0.15	0.04	100.30	91.0
QV03-1	04-048-19.1	39.42	0.00	0.05	0.00	10.42	0.31	0.12	49.36	0.15	0.03	99.86	89.4
QV03-1	04-048-20.1	40.03	0.00	0.04	0.03	8.74	0.63	0.09	48.96	0.14	0.02	98.67	90.9
QV03-1	04-044-4.1	40.44	0.00	0.01	0.00	9.32	0.49	0.13	49.89	0.16	0.03	100.46	90.5
QV03-1	04-044-5.1	39.54	0.01	0.00	0.01	10.79	0.31	0.14	48.35	0.16	0.01	99.31	88.9
QV03-1	04-044-20.1	40.22	0.07	0.73	0.01	7.66	0.33	0.22	50.66	0.46	0.14	100.48	92.2
QV03-1	04-044-1.1	40.57	0.00	0.09	0.07	9.50	0.73	0.14	49.13	0.12	0.00	100.34	90.2
QV03-1	04-044-2.1	40.62	0.00	0.01	0.05	9.27	0.69	0.09	47.90	0.16	0.00	98.79	90.2
QV03-1	04-044-8.1	41.85	0.01	0.01	0.21	6.63	0.41	0.17	50.00	0.17	0.00	99.45	93.1
QV03-1	04-044-7.1	40.70	0.00	0.01	0.04	9.41	0.58	0.12	48.13	0.14	0.00	99.13	90.1
QV03-1	04-044-11.1	40.20	0.00	0.02	0.04	8.86	0.59	0.14	48.21	0.16	0.00	98.20	90.7
QV03-1	04-044-12.1	40.30	0.00	0.04	0.05	8.45	0.60	0.08	48.41	0.12	0.00	98.05	91.1
QV03-1	04-044-14.1	40.82	0.01	0.00	0.04	8.81	0.42	0.17	48.08	0.16	0.00	98.50	90.7
QV03-1	04-044-15.1	40.64	0.00	0.01	0.04	9.48	0.72	0.10	47.55	0.13	0.00	98.69	89.9
QV03-1	04-044-15.2	40.73	0.00	0.01	0.06	8.96	0.67	0.16	48.23	0.12	0.00	98.94	90.6
QV03-1	04-044-18.1	39.74	0.00	0.00	0.06	9.29	0.40	0.10	48.66	0.17	0.00	98.42	90.3
QV03-1	04-044-19.1	40.89	0.00	0.03	0.08	8.30	0.73	0.10	48.26	0.13	0.00	98.51	91.2
QV03-1	04-044-20.1	40.63	0.04	0.48	0.05	7.66	0.33	0.20	50.16	0.39	0.05	99.99	92.1
QV03-1	04-044-21.1	40.23	0.01	0.01	0.04	10.80	0.42	0.14	47.01	0.16	0.00	98.84	88.6
QV03-1	04-045-1.1	39.86	0.00	0.00	0.00	9.60	0.52	0.13	49.06	0.13	0.00	99.30	90.1
QV03-1	04-045-2.1	40.11	0.00	0.01	0.06	8.60	0.78	0.11	50.45	0.14	0.02	100.28	91.3
QV03-1	04-045-6.1	40.54	0.00	0.00	0.02	8.56	0.43	0.13	50.36	0.15	0.02	100.23	91.3
QV03-1	04-045-5.1	40.61	0.02	0.00	0.06	9.32	0.60	0.13	47.60	0.14	0.00	98.48	90.1
QV03-1	04-045-7.1	40.74	0.00	0.03	0.08	9.05	0.51	0.10	48.19	0.16	0.00	98.86	90.5
QV03-1	04-045-10.1	40.70	0.00	0.01	0.09	8.53	0.73	0.11	48.87	0.14	0.00	99.18	91.1
QV03-1	04-045-10.2	41.03	0.00	0.01	0.03	7.60	0.60	0.11	50.29	0.18	0.00	99.84	92.2
QV03-1	04-045-10.3	40.80	0.00	0.01	0.02	8.00	0.66	0.10	49.39	0.14	0.00	99.12	91.7
QV03-1	04-045-11.1	40.45	0.00	0.02	0.08	9.34	0.71	0.11	48.25	0.14	0.00	99.11	90.2
QV03-1	04-045-11.2	40.37	0.01	0.01	0.05	8.82	0.71	0.11	47.95	0.13	0.00	98.16	90.6
QV03-1	04-045-13.1	40.99	0.02	0.01	0.08	9.86	0.49	0.12	47.42	0.15	0.00	99.13	89.6
QV03-1	04-045-14.1	41.12	0.00	0.02	0.09	6.65	0.38	0.17	49.95	0.18	0.00	98.56	93.0
QV03-1	04-045-16.1	41.13	0.00	0.01	0.03	8.26	0.52	0.15	48.79	0.14	0.00	99.04	91.3
QV03-1	04-045-17.1	40.60	0.00	0.01	0.04	8.16	0.67	0.13	48.70	0.13	0.00	98.44	91.4
QV03-1	04-045-18.1	40.50	0.00	0.01	0.05	9.51	0.66	0.11	47.47	0.13	0.00	98.44	89.9
QV03-1	04-045-19.1	40.18	0.00	0.00	0.07	8.88	0.64	0.12	48.99	0.15	0.00	99.04	90.8
QV03-1	04-046-2.1	40.34	0.00	0.00	0.06	8.59	0.57	0.13	49.36	0.11	0.02	99.18	91.1

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
QV03-1	04-046-6.1	40.25	0.01	0.00	0.02	9.15	0.39	0.17	48.78	0.15	0.02	98.93	90.5
QV03-1	04-046-14.1	40.44	0.00	0.00	0.00	9.12	0.61	0.11	49.49	0.14	0.03	99.96	90.6
QV03-1	04-046-1.1	40.55	0.00	0.00	0.07	8.87	0.67	0.10	48.58	0.13	0.00	98.98	90.7
QV03-1	04-046-5.1	40.28	0.00	0.01	0.03	8.89	0.60	0.11	48.34	0.17	0.00	98.43	90.6
QV03-1	04-046-7.1	40.46	0.00	0.03	0.07	9.21	0.66	0.12	48.43	0.15	0.00	99.13	90.4
QV03-1	04-046-8.1	40.90	0.02	0.02	0.05	8.33	0.81	0.11	48.20	0.14	0.00	98.58	91.2
QV03-1	04-046-11.1	39.97	0.00	0.02	0.07	8.03	0.67	0.11	49.76	0.15	0.00	98.78	91.7
QV03-1	04-046-13.1	40.72	0.00	0.00	0.06	8.70	0.35	0.17	47.91	0.20	0.00	98.11	90.8
QV03-1	04-046-14.2	40.24	0.01	0.02	0.03	9.21	0.46	0.15	47.83	0.16	0.00	98.09	90.3
QV03-1	04-046-15.1	40.62	0.00	0.02	0.02	9.51	0.50	0.15	47.33	0.14	0.00	98.29	89.9
QV03-1	04-046-15.2	40.21	0.00	0.03	0.04	8.97	0.57	0.13	48.36	0.14	0.00	98.47	90.6
QV03-1	04-046-17.1	40.70	0.02	0.00	0.06	8.30	0.50	0.12	48.93	0.14	0.00	98.76	91.3
QV03-1	04-046-18.1	40.23	0.00	0.01	0.07	9.23	0.44	0.15	48.78	0.17	0.00	99.08	90.4
QV03-1	04-046-19.1	40.58	0.01	0.02	0.02	9.28	0.40	0.12	47.19	0.16	0.00	97.79	90.1
QV03-1	04-046-19.2	40.67	0.00	0.04	0.04	8.91	0.35	0.14	48.43	0.19	0.00	98.78	90.6
QV03-1	03-027-12.1	39.96	0.01	0.01	0.00	8.25	0.58	0.10	49.81	0.14	0.00	98.87	91.5
QV03-1	03-027-4.1	40.25	0.02	0.02	0.00	9.47	0.38	0.13	49.38	0.15	0.00	99.80	90.3
QV03-1	03-027-11.1	40.38	0.01	0.00	0.00	9.03	0.60	0.10	49.38	0.12	0.00	99.63	90.7
QV03-1	03-027-25.1	40.94	0.00	0.04	0.00	8.24	0.40	0.14	50.01	0.14	0.00	99.90	91.5
QV03-1	03-027-4.2	40.25	0.02	0.02	0.00	9.47	0.38	0.13	49.38	0.15	0.00	99.80	90.3
QV03-1	03-027-11.1	40.38	0.01	0.00	0.00	9.03	0.60	0.10	49.38	0.12	0.00	99.63	90.7
QV03-1	03-038-14.1	40.04	0.00	0.03	0.02	9.02	0.66	0.10	50.15	0.13	0.00	100.15	90.8
QV03-1	03-042-5.1	40.25	0.00	0.02	0.02	9.92	0.54	0.11	48.26	0.13	0.04	99.27	89.7
QV03-1	03-043-8.1	40.21	0.00	0.05	0.08	9.74	0.66	0.11	48.84	0.15	0.03	99.86	89.9
QV03-1	03-043-10.2	40.12	0.00	0.04	0.09	9.24	0.69	0.12	48.23	0.13	0.03	98.68	90.3
QV03-1	03-043-15.1	39.98	0.00	0.06	0.03	9.15	0.67	0.10	48.58	0.11	0.02	98.71	90.4
QV03-1	03-050-3.2	40.93	0.02	0.02	0.08	9.02	0.65	0.13	48.63	0.12	0.00	99.60	90.6
QV03-1	03-050-6.1	40.59	0.02	0.04	0.04	9.00	0.64	0.07	48.88	0.09	0.00	99.37	90.6
QV03-1	03-050-7.1	40.14	0.00	0.03	0.03	9.53	0.51	0.12	48.36	0.13	0.00	98.85	90.0
QV03-1	03-050-12.1	40.68	0.03	0.04	0.06	9.16	0.63	0.12	49.16	0.13	0.00	100.02	90.5
QV03-1	03-050-22.1	40.41	0.02	0.02	0.01	9.71	0.44	0.14	48.42	0.12	0.01	99.30	89.9
QV03-1	03-051-15.1	40.22	0.03	0.03	0.04	8.49	0.63	0.10	48.64	0.13	0.00	98.30	91.1
QV03-1	03-052-5.1	39.93	0.02	0.04	0.03	9.25	0.53	0.11	48.32	0.12	0.00	98.35	90.3
QV03-1	03-052-10.1	40.11	0.00	0.02	0.01	9.83	0.36	0.10	47.72	0.13	0.00	98.28	89.6
QV03-1	03-053-1.1	40.52	0.00	0.01	0.02	8.44	0.50	0.12	49.67	0.14	0.02	99.44	91.3
QV03-1	03-053-1.2	40.42	0.02	0.02	0.05	9.00	0.55	0.12	49.33	0.14	0.00	99.65	90.7
QV03-1	03-053-3.1	40.53	0.02	0.02	0.07	9.03	0.70	0.11	49.67	0.11	0.01	100.28	90.7

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
QV03-1	03-060-1.1	40.69	0.00	0.02	0.05	8.92	0.61	0.09	49.49	0.14	0.01	100.03	90.8
QV03-1	03-062-1.1	40.75	0.00	0.01	0.05	9.71	0.53	0.10	48.73	0.13	0.01	100.01	89.9
QV03-1	03-062-5.1	40.60	0.00	0.03	0.06	9.22	0.61	0.09	49.01	0.14	0.00	99.77	90.5
QV03-1	03-062-7.1	40.37	0.00	0.04	0.05	9.84	0.54	0.11	49.29	0.14	0.01	100.39	89.9
QV03-1	03-063-2.1	39.76	0.00	0.01	0.04	9.38	0.48	0.07	49.95	0.13	0.00	99.81	90.5
QV03-1	03-063-5.1	39.97	0.00	0.00	0.05	9.97	0.39	0.11	49.72	0.16	0.00	100.37	89.9
QV03-1	03-064-1.1	39.68	0.00	0.03	0.05	8.67	0.58	0.10	48.97	0.13	0.01	98.24	91.0
QV03-1	03-064-2.1	40.25	0.00	0.02	0.04	8.20	0.54	0.10	50.36	0.15	0.00	99.66	91.6
QV03-1	03-064-1.1	39.68	0.00	0.03	0.05	8.67	0.58	0.10	48.97	0.13	0.01	98.24	91.0
QV03-1	03-059-3.1	39.54	0.00	0.01	0.01	9.49	0.58	0.12	49.03	0.13	0.00	98.91	90.2
QV03-1	03-061-3.1	39.49	0.01	0.00	0.01	8.35	0.59	0.12	50.13	0.15	0.00	98.85	91.5
QV03-1	03-086-9.1	40.32	0.00	0.02	0.01	9.66	0.41	0.19	49.77	0.16	0.02	100.56	90.2
QV03-1	03-086-9.1rpt	40.32	0.00	0.02	0.01	9.66	0.41	0.19	49.77	0.16	0.02	100.56	90.2
QV03-1	03-088-1.1	40.21	0.02	0.04	0.02	9.72	0.45	0.09	49.63	0.15	0.01	100.34	90.1
QV03-1	03-089-2.1	40.22	0.00	0.01	0.04	9.32	0.67	0.11	49.99	0.12	0.00	100.47	90.5
QV03-1	03-089-4.1	39.61	0.00	0.03	0.05	8.82	0.75	0.11	49.72	0.12	0.00	99.22	90.9
QV03-1	04-047-19.1	40.09	0.01	0.01	0.02	9.59	0.68	0.13	49.47	0.12	0.02	100.14	90.2
QV03-1	04-047-21.1	40.18	0.00	0.00	0.02	7.57	0.72	0.19	50.98	0.14	0.02	99.82	92.3
QV03-1	04-047-23.1	39.37	0.00	0.01	0.02	8.88	0.54	0.14	49.28	0.14	0.02	98.39	90.8
QV03-1	04-047-2.1	40.45	0.02	0.02	0.03	7.45	0.60	0.14	50.21	0.18	0.00	99.10	92.3
QV03-1	04-047-3.1	40.74	0.01	0.01	0.05	9.04	0.43	0.15	48.43	0.15	0.00	99.01	90.5
QV03-1	04-047-4.1	40.82	0.00	0.01	0.09	8.09	0.70	0.13	48.75	0.14	0.00	98.74	91.5
QV03-1	04-047-6.1	40.84	0.01	0.01	0.11	7.45	0.53	0.11	50.24	0.14	0.00	99.43	92.3
QV03-1	04-047-10.1	40.60	0.00	0.00	0.06	7.50	0.57	0.14	49.73	0.18	0.00	98.79	92.2
QV03-1	04-047-11.1	40.49	0.02	0.03	0.04	8.55	0.44	0.12	49.22	0.19	0.00	99.10	91.1
QV03-1	04-047-16.1	40.70	0.00	0.05	0.03	9.09	0.62	0.11	48.29	0.13	0.00	99.01	90.4
QV03-1	04-047-17.1	40.94	0.02	0.02	0.07	7.96	0.74	0.09	49.41	0.16	0.00	99.42	91.7
QV03-1	04-047-18.1	40.57	0.00	0.07	0.16	9.28	0.64	0.11	49.04	0.18	0.00	100.05	90.4
QV03-1	04-047-22.1	40.40	0.00	0.01	0.07	8.62	0.76	0.09	48.76	0.12	0.00	98.83	91.0
QV03-1	04-047-26.1	40.64	0.01	0.02	0.03	10.27	0.41	0.12	47.40	0.18	0.00	99.08	89.2
QV03-1	04-047-28.1	40.71	0.00	0.01	0.04	8.33	0.69	0.10	49.49	0.14	0.00	99.50	91.4
MRQV04-3b	04-036-1.1	39.57	0.02	0.01	0.02	10.71	0.45	0.14	47.68	0.07	0.01	98.68	88.8
MRQV04-3b	04-036-1.2	39.48	0.02	0.00	0.04	10.58	0.36	0.20	47.76	0.10	0.00	98.55	88.9
MRQV04-3b	04-036-1.3	39.49	0.00	0.00	0.05	10.93	0.38	0.17	48.11	0.09	0.00	99.22	88.7
MRQV04-3b	04-036-2.1	38.82	0.01	0.28	0.04	10.87	0.41	0.15	47.87	0.19	0.02	98.66	88.7
MRQV04-3b	04-036-3.1	38.94	0.00	0.02	0.01	10.59	0.45	0.14	47.97	0.16	0.02	98.31	89.0
MRQV04-3b	04-036-4.1	38.86	0.00	0.03	0.01	10.87	0.39	0.14	47.68	0.15	0.02	98.15	88.7

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRQV04-3b	04-036-4.2	38.74	0.02	0.04	0.01	10.67	0.42	0.11	47.99	0.17	0.01	98.18	88.9
MRQV04-3b	04-036-7.1	39.17	0.00	0.01	0.02	10.97	0.33	0.14	48.04	0.21	0.01	98.90	88.6
MRQV04-3b	04-036-9.1	40.59	0.00	0.04	0.05	10.72	0.30	0.14	48.74	0.11	0.01	100.71	89.0
MRQV04-3b	04-050-1.1	39.82	0.00	0.01	0.01	9.63	0.58	0.12	48.25	0.15	0.01	98.58	89.9
MRQV04-3b	04-050-2.1	39.66	0.02	0.00	0.02	10.54	0.31	0.17	48.30	0.19	0.00	99.21	89.1
MRQV04-3b	04-050-3.1	39.78	0.00	0.02	0.02	9.50	0.55	0.11	48.98	0.14	0.02	99.11	90.2
MRQV04-3b	04-050-4.1	39.53	0.00	0.01	0.02	11.31	0.25	0.18	47.43	0.20	0.00	98.95	88.2
MRQV04-3b	04-050-4.2	39.86	0.00	0.02	0.05	10.09	0.36	0.12	48.14	0.18	0.02	98.83	89.5
MRQV04-3b	04-050-4.3	39.83	0.01	0.03	0.02	10.15	0.35	0.16	48.56	0.18	0.02	99.32	89.5
MRQV04-3b	04-050-5.1	39.57	0.00	0.01	0.03	10.35	0.50	0.11	49.61	0.14	0.05	100.36	89.5
MRQV04-3b	04-050-6.1	39.20	0.00	0.03	0.02	10.61	0.29	0.16	49.65	0.20	0.02	100.19	89.3
MRQV04-3b	04-050-14.2	39.62	0.00	0.01	0.01	10.58	0.35	0.18	48.87	0.21	0.01	99.83	89.2
MRQV04-3b	04-050-17.1	39.02	0.02	0.00	0.02	13.53	0.31	0.18	47.04	0.16	0.02	100.29	86.1
MRQV04-3b	04-050-18.1	39.77	0.00	0.01	0.01	10.62	0.30	0.12	48.43	0.21	0.01	99.48	89.0
MRQV04-3b	04-050-19.1	39.89	0.02	0.02	0.00	10.15	0.47	0.13	48.96	0.15	0.02	99.80	89.6
MRQV04-3b	04-050-20.1	40.35	0.00	0.00	0.03	10.11	0.52	0.14	48.66	0.16	0.01	99.98	89.6
MRQV04-3b	04-050-20.2	40.09	0.01	0.01	0.02	10.22	0.55	0.11	49.10	0.15	0.01	100.26	89.5
MRQV04-3b	04-050-21.1	39.99	0.01	0.05	0.04	9.74	0.62	0.13	49.10	0.13	0.00	99.82	90.0
MRQV04-3b	04-053-1.1	40.28	0.00	0.02	0.06	9.19	0.70	0.09	49.06	0.14	0.00	99.55	90.5
MRQV04-3b	04-053-2.1	39.79	0.02	0.02	0.06	10.26	0.56	0.15	48.99	0.15	0.00	100.00	89.5
MRQV04-3b	04-053-4.1	39.93	0.02	0.03	0.05	11.22	0.23	0.17	48.77	0.24	0.00	100.65	88.6
MRQV04-3b	04-053-5.1	40.37	0.00	0.02	0.03	11.00	0.22	0.14	48.51	0.24	0.01	100.54	88.7
MRQV04-3b	04-053-6.1	39.96	0.00	0.05	0.10	10.80	0.26	0.17	48.32	0.21	0.00	99.87	88.9
MRQV04-3b	04-053-6.2	40.35	0.02	0.05	0.04	10.21	0.29	0.11	49.00	0.19	0.01	100.26	89.5
MRQV04-3b	04-053-7.1	40.52	0.01	0.05	0.01	10.04	0.35	0.14	48.74	0.18	0.00	100.04	89.6
MRQV04-3b	04-053-9.1	40.13	0.01	0.03	0.05	9.88	0.61	0.10	48.72	0.14	0.02	99.69	89.8
MRQV04-3b	04-053-9.2	40.34	0.02	0.03	0.08	9.84	0.65	0.12	48.94	0.14	0.00	100.17	89.9
MRQV04-3b	04-053-10.1	40.43	0.02	0.03	0.05	10.13	0.38	0.15	48.76	0.18	0.00	100.14	89.6
MRQV04-3b	04-053-12.1	39.91	0.01	0.02	0.15	9.88	0.66	0.13	49.32	0.13	0.00	100.20	89.9
MRQV04-3b	05-014-1	41.93	0.56	4.48	0.03	9.26	0.18	0.20	36.67	3.29	0.72	97.72	87.6
MRQV04-3b	05-014-3	40.17	0.00	0.05	0.01	9.47	0.76	0.13	47.90	0.14	0.01	98.68	90.0
MRQV04-3b	05-014-6	40.43	0.01	0.01	0.03	10.49	0.21	0.15	47.06	0.22	0.01	98.65	88.9
MRQV04-3b	05-014-7	40.33	0.02	0.00	0.06	10.38	0.23	0.14	47.36	0.20	0.00	98.76	89.0
MRQV04-3b	05-014-8	40.77	0.01	0.02	0.04	9.73	0.37	0.17	47.27	0.19	0.01	98.61	89.6
MRQV04-3b	05-014-9	40.36	-0.01	0.01	0.01	10.43	0.29	0.15	47.19	0.20	0.00	98.66	89.0
MRCC02-1	03-001.-16.1	39.65	0.00	0.03	0.06	12.01	0.24	0.17	47.19	0.18	0.00	99.54	87.5

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRCC02-1	03-001.-14.2	39.73	0.00	0.04	0.07	12.75	0.26	0.16	46.73	0.19	0.00	99.92	86.7
MRCC02-1	03-001.-15.1	39.56	0.00	0.06	0.06	11.31	0.28	0.14	47.10	0.17	0.00	98.67	88.1
MRCC02-1	03-001.-15.1	39.56	0.00	0.06	0.06	11.31	0.28	0.14	47.10	0.17	0.00	98.67	88.1
MRCC02-1	03-001.-15.2	39.66	0.00	0.06	0.07	11.39	0.31	0.18	47.17	0.15	0.00	98.98	88.1
MRCC02-1	03-001.-8.1	39.69	0.00	0.06	0.07	12.35	0.34	0.19	47.64	0.18	0.00	100.53	87.3
MRCC02-1	03-008-1.2	39.72	0.00	0.04	0.06	12.33	0.25	0.15	47.60	0.18	0.01	100.34	87.3
MRCC02-1	03-008-8.1	38.83	0.00	0.03	0.05	17.10	0.30	0.25	43.63	0.18	0.00	100.36	82.0
MRCC02-1	03-008-9.1	39.64	0.00	0.04	0.04	12.49	0.24	0.17	47.09	0.17	0.00	99.90	87.0
MRCC02-1	03-008-10.2	39.79	0.00	0.05	0.10	12.62	0.34	0.18	46.69	0.17	0.00	99.94	86.8
MRCC02-1	03-008-12.1	39.01	0.00	0.03	0.05	12.59	0.29	0.19	46.69	0.17	0.01	99.02	86.9
MRCC02-1	03-008-14.1	39.90	0.00	0.05	0.05	11.43	0.30	0.15	47.94	0.18	0.00	99.99	88.2
MRCC02-1	03-008-15.1	38.93	0.01	0.04	0.03	15.46	0.12	0.23	44.53	0.21	0.00	99.57	83.7
MRCC02-1	03-008-16.1	39.80	0.00	0.02	0.08	12.34	0.27	0.17	46.95	0.17	0.00	99.81	87.1
MRCC02-1	03-008-17.1	39.49	0.00	0.04	0.05	14.25	0.14	0.20	45.13	0.18	0.00	99.49	84.9
MRCC02-1	03-008-17.2	39.28	0.00	0.04	0.02	12.63	0.25	0.17	46.63	0.18	0.01	99.22	86.8
MRCC02-1	03-008-17.3	39.33	0.00	0.04	0.05	12.72	0.19	0.18	46.39	0.18	0.00	99.07	86.7
MRCC02-1	03-008-17.4	39.45	0.00	0.04	0.03	12.47	0.23	0.17	46.36	0.19	0.00	98.94	86.9
MRCC02-1	03-008-19.1	39.76	0.00	0.04	0.07	11.53	0.30	0.17	47.48	0.19	0.00	99.53	88.0
MRCC02-1	03-008-19.2	39.80	0.00	0.05	0.06	11.53	0.32	0.15	47.85	0.19	0.00	99.95	88.1
MRCC02-1	03-015-2.1	39.26	0.01	0.08	0.03	14.21	0.16	0.15	44.47	0.23	0.00	98.61	84.8
MRCC02-1	03-015-5.1	38.94	0.00	0.06	0.03	11.24	0.19	0.11	45.69	0.16	0.00	96.43	87.9
MRCC02-1	03-015-9.1	38.83	0.00	0.04	0.03	11.86	0.28	0.12	46.17	0.16	0.00	97.50	87.4
MRCC02-1	03-015-12.1	39.11	0.00	0.06	0.03	11.64	0.25	0.09	46.01	0.17	0.00	97.37	87.6
MRCC02-1	03-015-13.1	39.49	0.01	0.04	0.05	11.11	0.31	0.12	46.70	0.19	0.00	98.04	88.2
MRCC02-1	03-015-16.1	39.26	0.00	0.04	0.05	11.71	0.29	0.14	46.30	0.17	0.02	97.98	87.6
MRCC02-1	03-015-22.1	39.64	0.00	0.03	0.08	11.77	0.29	0.11	46.33	0.18	0.00	98.43	87.5
MRCC02-1	03-015-26.1	39.75	0.00	0.08	0.04	12.60	0.25	0.13	46.27	0.18	0.01	99.32	86.7
MRCC02-1	03-015-34.1	39.71	0.01	0.05	0.01	12.00	0.21	0.12	46.91	0.20	0.00	99.21	87.4
MRCC02-1	03-015-38.1	40.23	0.00	0.04	0.03	12.29	0.28	0.10	47.18	0.19	0.01	100.36	87.2
MRCC02-1	03-015-42.1	39.86	0.00	0.03	0.06	12.24	0.29	0.12	46.21	0.19	0.00	99.01	87.1
MRCC02-1	03-015-46.1	39.25	0.01	0.05	0.06	14.88	0.14	0.17	44.05	0.22	0.01	98.85	84.1
MRCC02-1	03-015-47.1	40.12	0.01	0.03	0.05	12.41	0.27	0.14	47.12	0.20	0.00	100.35	87.1
MRCC02-1	03-015-49.1	38.86	0.00	0.04	0.05	14.11	0.18	0.16	46.71	0.21	0.00	100.33	85.5
MRCC02-1	03-015-62.1	39.64	0.00	0.05	0.04	12.23	0.24	0.12	45.81	0.17	0.00	98.29	87.0
MRCC02-1	03-015-73.1	39.58	0.01	0.04	0.02	12.06	0.29	0.14	46.01	0.18	0.01	98.32	87.2
MRCC02-1	03-015-77.1	40.09	0.00	0.04	0.01	11.52	0.28	0.13	47.89	0.20	0.00	100.16	88.1
MRCC02-1	03-015-78.1	40.14	0.00	0.07	0.05	11.24	0.29	0.13	47.70	0.20	0.00	99.81	88.3

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRCO2-1	03-015-78.2	39.83	0.00	0.05	0.03	13.18	0.24	0.16	46.19	0.17	0.00	99.87	86.2
MRCO2-1	03-015-79.1	39.99	0.01	0.04	0.06	12.48	0.30	0.17	47.22	0.17	0.00	100.44	87.1
MRCO2-1	03-015-80.1	39.73	0.00	0.06	0.02	11.93	0.29	0.10	47.39	0.18	0.00	99.69	87.6
MRCO2-1	03-015-81.1	40.10	0.00	0.04	0.05	11.89	0.31	0.12	47.89	0.19	0.01	100.61	87.8
MRCO2-1	03-015-83.1	39.73	0.00	0.03	0.03	11.46	0.30	0.13	47.53	0.18	0.00	99.40	88.1
MRCO2-1	03-015-88.1	39.44	0.00	0.04	0.03	13.87	0.22	0.19	45.62	0.20	0.00	99.61	85.4
MRCO2-1	03-041-8.1	40.45	0.01	0.02	0.02	13.12	0.23	0.18	45.68	0.18	0.00	99.90	86.1
MRCO2-1	03-041-9.1	40.88	0.00	0.05	0.03	12.00	0.31	0.16	46.85	0.19	0.01	100.49	87.4
MRCO2-1	03-041-9.2	39.85	0.00	0.03	0.05	12.13	0.30	0.14	47.56	0.18	0.01	100.25	87.5
MRCO2-1	03-041-12.1	39.87	0.00	0.03	0.06	12.77	0.31	0.17	47.13	0.17	0.00	100.52	86.8
MRCO2-1	03-041-13.1	39.91	0.00	0.02	0.06	12.00	0.27	0.12	46.53	0.17	0.01	99.09	87.4
MRCO2-1	03-041-17.1	39.93	0.01	0.03	0.06	12.75	0.25	0.18	47.23	0.18	0.00	100.61	86.8
MRCM02-2	03-002-6.1	40.05	0.01	0.04	0.05	11.17	0.37	0.17	47.95	0.17	0.00	99.97	88.4
MRCM02-2	03-002-10.1	39.85	0.00	0.03	0.06	11.37	0.35	0.12	47.52	0.17	0.02	99.48	88.2
MRCM02-2	03-002-12.1	39.90	0.00	0.04	0.02	12.19	0.37	0.15	47.55	0.17	0.01	100.40	87.4
MRCM02-2	03-007-4.1	39.68	0.01	0.06	0.03	9.77	0.37	0.12	48.48	0.23	0.01	98.76	89.8
MRCM02-2	03-007-6.1	39.36	0.00	0.06	0.04	11.57	0.27	0.13	47.35	0.22	0.02	99.03	87.9
MRCM02-2	03-007-6.2	39.72	0.01	0.04	0.01	11.59	0.30	0.16	47.27	0.22	0.00	99.32	87.9
MRCM02-2	03-007-10.1	39.65	0.01	0.06	0.03	10.82	0.35	0.11	46.77	0.15	0.01	97.97	88.5
MRCM02-2	03-007-14.1	39.69	0.00	0.03	0.03	11.84	0.30	0.16	46.74	0.21	0.00	99.01	87.6
MRCM02-2	03-007-14.2	39.39	0.01	0.06	0.02	12.12	0.23	0.17	46.37	0.20	0.01	98.58	87.2
MRCM02-2	03-007-15.1	39.50	0.00	0.03	0.03	11.09	0.28	0.13	47.17	0.21	0.02	98.46	88.3
MRCM02-2	03-007-20.2	39.34	0.01	0.05	0.03	10.23	0.37	0.12	48.39	0.24	0.00	98.79	89.4
MRCM02-2	03-007-22.1	39.29	0.00	0.06	0.05	11.60	0.32	0.16	47.00	0.19	0.02	98.69	87.8
MRCM02-2	03-007-23.1	39.35	0.01	0.04	0.06	13.62	0.22	0.19	45.21	0.21	0.00	98.93	85.5
MRCM02-2	03-007-24.1	39.81	0.00	0.04	0.04	11.45	0.32	0.11	47.92	0.21	0.01	99.90	88.2
MRCM02-2	03-007-25.2	39.60	0.01	0.04	0.03	11.37	0.33	0.17	47.41	0.21	0.01	99.17	88.1
MRCM02-2	03-013-4.2	39.61	0.00	0.05	0.02	11.38	0.35	0.11	46.84	0.20	0.00	98.56	88.0
MRCM02-2	03-013-5.1	40.06	0.00	0.06	0.03	10.85	0.33	0.12	47.39	0.20	0.00	99.04	88.6
MRCM02-2	03-013-11.1	39.65	0.00	0.04	0.04	11.84	0.34	0.16	46.69	0.19	0.00	98.94	87.5
MRCM02-2	03-013-15.2	39.66	0.00	0.06	0.02	12.13	0.34	0.16	46.73	0.24	0.00	99.34	87.3
MRCM02-2	03-013-17.1	39.51	0.01	0.05	0.02	13.58	0.24	0.24	44.45	0.23	0.00	98.34	85.4
MRCM02-2	03-013-19.2	39.93	0.00	0.03	0.03	11.28	0.46	0.17	46.68	0.22	0.00	98.79	88.1
MRCM02-2	03-013-20.1	39.81	0.00	0.08	0.03	10.46	0.41	0.15	47.35	0.21	0.00	98.51	89.0
MRCM02-2	03-013-20.2	40.12	0.00	0.06	0.05	10.30	0.42	0.15	47.47	0.20	0.00	98.77	89.1
MRCM02-2	03-013-20.3	39.83	0.00	0.06	0.08	10.93	0.34	0.11	46.57	0.22	0.00	98.16	88.4

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRCM02-2	03-013-20.4	39.39	0.01	0.04	0.03	11.68	0.34	0.18	46.79	0.21	0.00	98.67	87.7
MRCM02-2	03-013-21.1	39.88	0.01	0.05	0.01	11.21	0.36	0.17	46.74	0.23	0.00	98.65	88.1
MRCM02-2	03-013-28.1	39.54	0.00	0.05	0.05	12.79	0.22	0.22	45.20	0.24	0.00	98.31	86.3
MRCM02-2	03-013-29.1	39.28	0.01	0.08	0.01	12.49	0.25	0.22	45.61	0.22	0.00	98.17	86.7
MRCM02-2	03-013-31.1	39.79	0.00	0.06	0.05	11.49	0.36	0.16	47.31	0.20	0.00	99.43	88.0
MRCM02-2	03-013-33.1	39.29	0.00	0.04	0.05	10.19	0.36	0.14	48.11	0.21	0.00	98.40	89.4
MRCM02-2	03-013-37.1	39.45	0.00	0.05	0.03	11.06	0.36	0.14	46.42	0.20	0.00	97.71	88.2
MRCM02-2	03-013-37.2	39.66	0.02	0.05	0.04	10.54	0.28	0.13	47.48	0.23	0.00	98.43	88.9
MRCM02-2	03-013-41.1	39.25	0.00	0.05	0.02	12.50	0.29	0.17	45.32	0.24	0.00	97.84	86.6
MRCM02-2	03-013-41.2	39.57	0.00	0.04	0.02	11.48	0.31	0.17	46.78	0.24	0.00	98.62	87.9
MRCM02-2	03-013-42.1	40.03	0.01	0.05	0.10	11.58	0.35	0.15	46.71	0.21	0.00	99.19	87.8
MRCM02-2	03-013-45.1	39.43	0.01	0.05	0.00	13.70	0.26	0.24	44.37	0.25	0.00	98.31	85.2
MRCM02-2	03-013-46.1	40.35	0.00	0.07	0.01	9.68	0.37	0.14	47.92	0.26	0.00	98.80	89.8
MRCM02-2	03-013-47.1	39.48	0.01	0.03	0.02	12.31	0.32	0.17	46.35	0.22	0.00	98.91	87.0
MRCM02-2	03-013-48.1	39.44	0.00	0.05	0.00	11.07	0.35	0.19	46.35	0.21	0.00	97.67	88.2
MRCM02-2	03-013-50.1	39.01	0.00	0.04	0.01	13.37	0.28	0.19	45.01	0.21	0.00	98.12	85.7
MRCM02-2	03-013-51.2	39.43	0.02	0.05	0.08	12.26	0.22	0.21	45.94	0.28	0.00	98.49	87.0
MRCM02-2	03-013-56.1	39.51	0.00	0.07	0.01	11.71	0.32	0.18	45.84	0.20	0.00	97.85	87.5
MRCM02-2	03-013-58.1	39.85	0.00	0.04	0.01	11.39	0.32	0.17	47.24	0.20	0.00	99.23	88.1
MRCM02-2	03-013-59.1	39.45	0.00	0.06	0.01	11.11	0.34	0.16	47.05	0.26	0.00	98.43	88.3
MRCM02-2	03-013-62.1	39.33	0.01	0.05	0.02	12.39	0.27	0.19	45.63	0.22	0.01	98.12	86.8
MRCM02-2	03-013-62.1	39.33	0.01	0.05	0.02	12.39	0.27	0.19	45.63	0.22	0.01	98.12	86.8
MRCM02-2	03-013-63.1	39.70	0.00	0.12	0.04	10.96	0.39	0.17	47.00	0.21	0.00	98.58	88.4
MRCM02-2	03-013-66.1	39.26	0.00	0.06	0.01	13.77	0.24	0.23	44.53	0.26	0.00	98.35	85.2
MRCM02-2	03-013-67.1	38.96	0.02	0.03	0.02	14.00	0.18	0.23	44.40	0.26	0.00	98.11	85.0
MRCM02-2	03-013-68.1	39.73	0.01	0.04	0.05	10.27	0.38	0.20	47.34	0.22	0.00	98.23	89.2
MRCM02-2	03-013-68.2	39.62	0.00	0.04	0.03	10.68	0.35	0.15	46.80	0.22	0.00	97.89	88.7
MRCM02-2	03-013-72.1	39.88	0.01	0.08	0.03	11.33	0.42	0.14	47.31	0.23	0.01	99.43	88.2
MRCM02-2	03-013-73.1	38.62	0.01	0.01	0.00	15.42	0.23	0.28	44.44	0.26	0.00	99.28	83.7
MRCM02-2	03-013-73.2	38.81	0.00	0.04	0.04	15.63	0.22	0.29	44.02	0.24	0.00	99.30	83.4
MRCM02-2	03-013b-5.1	39.92	0.00	0.12	0.05	11.00	0.38	0.16	48.40	0.24	0.02	100.30	88.7
MRCM02-2	03-013b-7.1	39.70	0.00	0.05	0.06	11.78	0.32	0.15	47.08	0.17	0.01	99.31	87.7
MRCM02-2	03-013b-9.1	39.61	0.00	0.04	0.06	10.92	0.38	0.13	47.86	0.20	0.01	99.22	88.7
MRCM02-2	03-013b-15.1	40.02	0.01	0.04	0.05	11.42	0.38	0.15	48.36	0.18	0.02	100.64	88.3
MRCM02-2	03-013b-19.1	40.13	0.00	0.04	0.05	11.14	0.38	0.13	48.71	0.17	0.01	100.75	88.6
MRCM02-2	03-013b-20.1	39.80	0.02	0.04	0.05	11.56	0.35	0.12	47.71	0.15	0.02	99.81	88.0
MRCM02-2	03-013b-21.1	40.11	0.01	0.05	0.05	11.16	0.33	0.11	48.57	0.19	0.01	100.60	88.6

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRCM02-2	03-013b-22.2	39.62	0.01	0.05	0.09	11.12	0.33	0.11	48.06	0.18	0.01	99.59	88.5
MRCM02-2	03-013b-23.1	39.57	0.01	0.05	0.07	11.99	0.32	0.16	47.27	0.18	0.02	99.64	87.5
MRCM02-2	03-013b-20.1	39.80	0.02	0.04	0.05	11.56	0.35	0.12	47.71	0.15	0.02	99.81	88.0
MRCM02-2	03-013b-21.1	40.11	0.01	0.05	0.05	11.16	0.33	0.11	48.57	0.19	0.01	100.60	88.6
MRCM02-2	03-039-2.1	39.94	0.00	0.01	0.02	12.80	0.24	0.21	46.11	0.20	0.00	99.53	86.5
MRCM02-2	03-039-10.1	39.46	0.01	0.02	0.00	15.02	0.15	0.24	45.20	0.25	0.00	100.35	84.3
MRCM02-2	03-057-5.1	38.17	0.02	0.03	0.03	11.65	0.32	0.18	46.48	0.17	0.00	97.05	87.7
MRCM02-2	03-057-9.1	39.18	0.03	0.03	0.05	11.36	0.31	0.15	47.74	0.17	0.00	99.03	88.2
MRCM02-2	03-057-11.1	38.60	0.00	0.04	0.05	10.69	0.29	0.15	47.62	0.20	0.00	97.65	88.8
MRCM02-2	03-058-5.1	39.71	0.03	0.04	0.03	10.73	0.40	0.13	47.70	0.19	0.00	98.96	88.8
MRCM02-2	03-058-6.1	38.61	0.02	0.04	0.03	10.90	0.31	0.14	46.97	0.16	0.01	97.18	88.5
MRCM02-2	03-058-6.2	39.44	0.03	0.06	0.07	11.12	0.34	0.13	47.24	0.19	0.02	98.63	88.3
MRCM02-2	03-058-7.1	39.42	0.03	0.05	0.04	11.96	0.27	0.19	46.72	0.18	0.00	98.85	87.4
MRCM02-2	03-058-9.1	39.89	0.00	0.03	0.02	10.89	0.36	0.16	47.83	0.18	0.01	99.38	88.7
MRCM02-2	03-058-10.1	39.41	0.01	0.04	0.01	11.39	0.30	0.15	46.97	0.17	0.00	98.47	88.0
MRCM02-2	03-058-11.1	39.41	0.03	0.03	0.05	11.04	0.38	0.13	47.92	0.21	0.00	99.19	88.6
MRCM02-2	03-058-14.1	39.62	0.03	0.03	0.03	12.58	0.25	0.20	46.33	0.20	0.00	99.26	86.8
MRCM02-2	03-058-15.1	39.52	0.01	0.05	0.02	11.37	0.37	0.16	47.66	0.20	0.01	99.35	88.2
MRWF02-1	03-003-3.1	39.62	0.00	0.05	0.05	12.15	0.38	0.14	46.42	0.15	0.02	98.98	87.2
MRWF02-1	03-014-5.1	39.25	0.01	0.07	0.03	12.70	0.37	0.15	45.88	0.17	0.00	98.64	86.6
MRWF02-1	03-014-11.1	39.12	0.01	0.05	0.05	12.79	0.38	0.20	45.62	0.18	0.00	98.40	86.4
MRWF02-1	03-014-12.1	39.56	0.00	0.04	0.03	11.95	0.43	0.13	46.11	0.16	0.00	98.42	87.3
MRWF02-1	03-014-13.1	38.92	0.00	0.06	0.02	12.93	0.31	0.16	44.29	0.24	0.00	96.93	85.9
MRWF02-1	03-014-15.2	39.61	0.01	0.04	0.01	11.98	0.42	0.20	46.09	0.16	0.00	98.52	87.3
MRWF02-1	03-014-21.1	39.47	0.01	0.05	0.02	12.28	0.38	0.16	45.72	0.18	0.00	98.27	86.9
MRWF02-1	03-014-23.1	39.48	0.01	0.06	0.05	12.15	0.42	0.18	45.48	0.17	0.00	98.00	87.0
MRWF02-1	03-014b-1.1	39.36	0.00	0.05	0.07	12.91	0.35	0.17	46.50	0.14	0.02	99.57	86.5
MRWF02-1	03-014b-6.1	39.61	0.00	0.06	0.07	12.54	0.41	0.13	46.72	0.18	0.03	99.73	86.9
MRWF02-1	03-014b-9.1	39.34	0.02	0.05	0.06	14.00	0.39	0.15	45.90	0.18	0.01	100.10	85.4
MRWF02-1	03-014b-11.1	39.42	0.01	0.05	0.06	12.62	0.38	0.17	46.66	0.17	0.01	99.56	86.8
MRWF02-1	03-014b-12.1	39.64	0.02	0.04	0.06	12.76	0.35	0.15	47.10	0.16	0.03	100.31	86.8
MRWF02-1	03-014b-13.1	39.45	0.01	0.05	0.04	12.57	0.48	0.17	46.87	0.17	0.01	99.81	86.9
MRWF02-1	03-014b-13.2	39.33	0.00	0.05	0.07	12.36	0.43	0.14	47.07	0.15	0.01	99.60	87.2
MRWF02-1	03-014b-14.1	39.89	0.01	0.05	0.04	12.94	0.42	0.15	46.64	0.17	0.01	100.31	86.5
MRWF02-1	03-014b-16.1	39.78	0.01	0.05	0.07	11.07	0.45	0.12	48.07	0.14	0.03	99.79	86.6
MRWF02-1	03-014b-17.1	39.88	0.00	0.06	0.08	12.78	0.39	0.14	47.03	0.19	0.02	100.57	86.8

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRWF02-1	03-014b-17.2	39.34	0.01	0.05	0.03	12.68	0.39	0.16	45.77	0.15	0.02	98.60	86.5
MRWF02-1	05-011-1	39.06	0.02	0.04	0.03	12.96	0.43	0.19	46.78	0.18	0.01	99.72	86.5
MRWF02-1	05-011-3	39.94	0.01	0.03	0.09	12.57	0.47	0.16	46.26	0.16	0.00	99.72	86.8
MRWF02-1	05-011-4	40.13	0.01	0.05	0.02	12.83	0.48	0.18	46.11	0.18	-0.01	100.00	86.5
MRWF02-1	05-011-5	39.29	0.02	0.08	0.02	12.81	0.42	0.17	46.13	0.18	0.01	99.13	86.5
MRWF02-1	05-011-6	39.79	0.03	0.05	0.07	12.63	0.55	0.21	46.47	0.20	0.02	100.06	86.8
MRWF02-1	05-011-7	39.57	0.00	0.05	0.02	13.06	0.50	0.18	45.94	0.20	0.01	99.54	86.2
MRWF02-1	05-011-9	39.40	0.01	0.05	0.06	12.26	0.49	0.20	45.94	0.19	0.01	98.75	87.0
MRWF02-1	05-011-10	39.66	0.03	0.04	0.00	14.90	0.26	0.18	44.43	0.20	0.00	99.72	84.2
MRWF02-1	05-011-11	39.26	0.01	0.11	0.00	13.65	0.40	0.17	45.47	0.19	0.02	99.31	85.6
MRBC02-1	03-016-4.1	39.51	0.00	0.09	0.00	14.43	0.30	0.21	45.19	0.21	0.00	99.95	84.8
MRBC02-1	03-016-6.1	39.62	0.02	0.06	0.00	14.37	0.28	0.18	45.02	0.18	0.00	99.73	84.8
MRBC02-1	03-016-6.2	39.29	0.00	0.04	0.00	14.22	0.31	0.18	45.39	0.19	0.00	99.63	85.1
MRBC02-1	03-016-9.1	39.71	0.01	0.03	0.00	14.00	0.26	0.23	45.29	0.20	0.01	99.73	85.2
MRBC02-1	03-016-16.1	39.64	0.00	0.05	0.00	14.00	0.26	0.21	45.72	0.19	0.00	100.08	85.3
MRBC02-1	03-016-23.1	39.68	0.01	0.03	0.00	13.96	0.28	0.22	44.98	0.17	0.00	99.34	85.2
MRBC02-1	03-016-28.1	39.21	0.01	0.05	0.00	14.07	0.32	0.20	45.51	0.21	0.00	99.58	85.2
MRBC02-1	03-016-33.1	39.59	0.01	0.03	0.00	13.35	0.37	0.16	45.55	0.20	0.00	99.25	85.9
MRBC02-1	03-016-35.2	39.58	0.02	0.07	0.00	14.02	0.30	0.16	45.65	0.18	0.00	99.98	85.3
MRBC02-1	03-016-37.1	39.27	0.02	0.05	0.00	13.90	0.27	0.14	45.20	0.22	0.00	99.07	85.3
MRBC02-1	03-016-39.1	39.61	0.01	0.04	0.01	13.81	0.30	0.17	45.25	0.21	0.00	99.40	85.4
MRBC02-1	03-016-45.1	39.55	0.01	0.05	0.00	14.58	0.28	0.19	44.95	0.19	0.00	99.79	84.6
MRBC02-1	03-016-55.2	39.39	0.00	0.07	0.00	14.82	0.28	0.17	44.85	0.20	0.01	99.79	84.4
MRBC02-1	03-016-59.1	39.12	0.02	0.08	0.02	17.44	0.26	0.22	43.06	0.17	0.00	100.38	81.5
MRBC02-1	03-016-63.1	39.77	0.00	0.05	0.00	12.97	0.36	0.17	46.45	0.19	0.00	99.95	86.5
MRBC02-1	03-016-65.1	39.65	0.01	0.06	0.00	13.06	0.36	0.15	46.21	0.21	0.00	99.71	86.3
MRBC02-1	03-016-66.1	39.48	0.00	0.03	0.00	14.69	0.31	0.21	45.10	0.19	0.00	99.99	84.5
MRBC02-1	03-016-67.1rpt1	39.42	0.01	0.02	0.04	14.54	0.29	0.23	44.84	0.20	0.00	99.57	84.6
MRBC02-1	03-016-41.1	39.73	0.00	0.05	0.01	14.12	0.35	0.16	45.53	0.19	0.00	100.14	85.2
MRBC02-1	03-016-58.2	38.37	0.01	0.06	0.00	16.64	0.23	0.22	43.78	0.23	0.02	99.56	82.4
MRBC02-1	04-012-1.1	39.13	0.02	0.06	0.08	15.48	0.26	0.24	44.84	0.09	0.02	100.21	83.8
MRBC02-1	04-012-3.1	39.25	0.01	0.07	0.05	14.76	0.23	0.25	45.17	0.09	0.01	99.89	84.5
MRBC02-1	04-012-5.1	39.59	0.01	0.07	0.06	14.23	0.27	0.23	45.84	0.10	0.02	100.42	85.2
MRBC02-1	04-012-6.1	39.11	0.02	0.04	0.06	14.82	0.26	0.23	44.91	0.10	0.02	99.57	84.4
MRBC02-1	04-012-14.1	39.28	0.02	0.14	0.06	15.12	0.27	0.23	44.84	0.11	0.02	100.10	84.1
MRBC02-1	04-012-16.1	38.17	0.08	1.24	0.11	17.07	0.21	0.21	42.33	0.24	0.12	99.78	81.6

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRBC02-1	04-012-17.2	38.67	0.04	0.10	0.01	14.57	0.29	0.24	45.14	0.11	0.03	99.20	84.7
MRBC02-1	04-012-18.1	38.60	0.02	0.10	0.02	15.49	0.23	0.23	44.59	0.11	0.01	99.41	83.7
MRBC02-1	04-012-18.2	38.57	0.03	0.08	0.08	16.00	0.23	0.24	44.23	0.12	0.00	99.57	83.1
MRBC02-1	04-012-20.1	38.45	0.02	0.28	0.04	15.56	0.22	0.24	44.44	0.09	0.01	99.35	83.6
MRBC02-1	04-012-28.1	38.71	0.03	0.09	0.06	14.36	0.24	0.23	44.85	0.12	0.00	98.69	84.8
MRBC02-1	04-012-32.1	38.36	0.01	0.04	0.08	15.53	0.20	0.20	44.26	0.10	0.00	98.77	83.6
MRBC02-1	04-012-33.1	38.50	0.04	0.06	0.02	14.69	0.27	0.21	45.09	0.10	0.01	98.98	84.5
MRBC02-1	04-012-36.1	38.69	0.02	0.05	0.05	15.38	0.18	0.23	45.16	0.10	0.00	99.85	84.0
MRFLR03-1	03-040-2.1	39.48	0.01	0.07	0.02	14.64	0.26	0.20	44.70	0.23	0.01	99.63	84.5
MRFLR03-1	03-040-5.1	39.58	0.00	0.06	0.04	15.53	0.13	0.20	44.24	0.22	0.00	100.00	83.5
MRFLR03-1	03-040-7.1	39.54	0.01	0.06	0.00	14.05	0.23	0.21	45.47	0.24	0.03	99.85	85.2
MRFLR03-1	03-040-10.1	39.36	0.00	0.10	0.02	14.30	0.30	0.19	45.74	0.18	0.00	100.20	85.1
MRFLR03-1	03-040-12.2	39.51	0.01	0.07	0.03	14.35	0.26	0.19	45.55	0.19	0.01	100.17	85.0
MRFLR03-1	03-040-14.1	39.46	0.01	0.12	0.03	15.10	0.24	0.20	44.41	0.21	0.00	99.77	84.0
MRFLR03-1	03-040-22.1	39.57	0.00	0.05	0.04	14.11	0.30	0.18	46.10	0.21	0.00	100.58	85.3
MRFLR03-1	04-017-4.1	39.07	0.00	0.04	0.01	14.95	0.31	0.21	45.64	0.10	0.01	100.35	84.5
MRFLR03-1	04-017-5.1	38.94	0.00	0.04	0.04	15.24	0.29	0.23	45.36	0.09	0.03	100.27	84.1
MRFLR03-1	04-017-14.1	39.65	0.00	0.08	0.04	13.95	0.34	0.23	46.25	0.09	0.00	100.62	85.5
MRFLR03-1	04-017-15.1	38.95	0.00	0.05	0.03	15.46	0.27	0.21	45.02	0.10	0.01	100.10	83.8
MRFLR03-1	04-017-15.2	38.74	0.00	0.05	0.03	16.89	0.23	0.26	44.10	0.09	0.01	100.40	82.3
MRFLR03-1	04-017-17.1	39.27	0.00	0.06	0.06	15.57	0.31	0.26	45.34	0.11	0.01	100.99	83.8
MRFLR03-1	04-017-20.1	38.98	0.00	0.06	0.02	14.74	0.35	0.20	45.77	0.10	0.00	100.23	84.7
MRFLR03-1	04-017-22.1	39.49	0.05	0.15	0.13	16.00	0.34	0.20	44.63	0.11	0.00	101.09	83.3
MRFLR03-1	04-017-23.1	38.95	0.00	0.10	0.03	16.07	0.30	0.18	44.86	0.12	0.00	100.60	83.3
MRFLR03-1	04-016-6.1	39.12	0.01	0.06	0.03	14.44	0.29	0.19	45.67	0.09	0.02	99.92	84.9
MRFLR03-1	04-016-8.1	39.07	0.03	0.06	0.02	14.06	0.28	0.19	45.95	0.10	0.01	99.77	85.3
MRFLR03-1	04-016-9.1	38.56	0.03	0.04	0.05	17.44	0.17	0.26	43.43	0.12	0.02	100.11	81.6
MRFLR03-1	04-016-9.2	38.41	0.03	0.04	0.06	16.96	0.19	0.28	43.75	0.12	0.00	99.83	82.1
MRFLR03-1	05-017-12 (7/1)	39.04	0.05	0.04	0.01	14.48	0.34	0.19	44.36	0.25	0.01	98.79	84.5
MRFLR03-1	05-017-20 (9/1)	39.30	0.02	0.04	0.04	13.58	0.28	0.19	45.37	0.32	0.01	99.17	85.6
MRHL03-1	03-044-6.1	38.28	0.02	0.05	0.05	16.21	0.17	0.27	43.20	0.23	0.03	98.50	82.6
MRHL03-1	03-044-7.1	38.94	0.01	0.03	0.05	13.44	0.31	0.17	45.53	0.19	0.02	98.71	85.8
MRHL03-1	03-044-8.1	39.11	0.02	0.04	0.06	14.91	0.15	0.20	44.02	0.18	0.01	98.71	84.0

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRHL03-1	03-044-10.1	39.00	0.00	0.03	0.05	13.77	0.29	0.17	44.79	0.19	0.02	98.30	85.3
MRHL03-1	03-045-3.2	38.10	0.04	0.06	0.04	18.06	0.24	0.25	42.00	0.18	0.01	98.99	80.6
MRHL03-1	03-045-6.1	39.10	0.00	0.05	0.05	13.36	0.32	0.18	45.80	0.19	0.02	99.07	85.9
MRHL03-1	03-045-7.1	38.72	0.00	0.04	0.04	16.35	0.18	0.24	44.03	0.18	0.02	99.81	82.8
MRHL03-1	03-045-8.1	39.21	0.00	0.06	0.05	14.71	0.30	0.18	45.12	0.18	0.02	99.83	84.5
MRHL03-1	03-045-9.1	39.24	0.01	0.04	0.07	12.83	0.31	0.14	46.39	0.16	0.01	99.20	86.6
MRHL03-1	03-045-19.1	39.16	0.01	0.05	0.03	14.03	0.27	0.21	45.10	0.19	0.02	99.07	85.1
MRLL02-2	03-047-1.1	39.96	0.01	0.03	0.05	13.17	0.23	0.18	44.56	0.20	0.03	98.42	85.8
MRLL02-2	03-047-18.1	39.86	0.00	0.02	0.02	12.99	0.34	0.18	46.30	0.20	0.02	99.92	86.4
MRLL02-2	03-047-23.1	39.88	0.03	0.06	0.02	12.16	0.32	0.15	46.21	0.22	0.02	99.07	87.1
MRLL02-2	03-047-27rpt.1	40.44	0.00	0.04	0.04	11.76	0.35	0.11	47.53	0.16	0.01	100.43	87.8
MRLL02-2	04-018-1.1	38.86	0.02	0.04	0.02	13.72	0.35	0.18	45.16	0.19	0.01	98.55	85.4
MRLL02-2	04-018-2.1	39.77	0.03	0.05	0.03	12.76	0.35	0.18	45.76	0.17	0.04	99.14	86.5
MRLL02-2	04-018-2.2	39.01	0.02	0.05	0.04	12.61	0.36	0.17	45.65	0.20	0.03	98.15	86.6
MRLL02-2	04-018-10.1	38.91	0.03	0.05	0.04	14.09	0.33	0.21	44.86	0.20	0.02	98.74	85.0
MRLL02-2	04-019-2.1	38.65	0.02	0.04	0.09	13.71	0.34	0.16	45.31	0.16	0.00	98.46	85.5
MRLL02-2	04-019-3.1	39.21	0.01	0.03	0.01	13.71	0.31	0.15	45.70	0.17	0.00	99.30	85.6
MRLL02-2	04-019-6.1	38.68	0.01	0.03	0.05	14.52	0.26	0.23	45.28	0.21	0.02	99.28	84.8
MRLL02-2	04-019-9.1	38.16	0.02	0.07	0.04	13.49	0.33	0.20	45.57	0.19	0.02	98.10	85.8
MRLL02-2	04-019-10.1	38.75	0.01	0.03	0.02	14.53	0.22	0.18	45.12	0.20	0.00	99.06	84.7
MRLL02-2	04-019-11.1	38.93	0.02	0.04	0.06	13.07	0.37	0.19	45.67	0.21	0.03	98.60	86.2
MRLL02-2	04-019-17.1	39.39	0.00	0.03	0.00	14.22	0.28	0.16	45.82	0.16	0.01	100.08	85.2
DB04-1	04-054-1	39.64	0.02	0.05	0.01	14.59	0.26	0.22	44.18	0.20	0.01	99.20	84.4
DB04-1	04-054-2	39.58	0.02	0.04	0.04	15.03	0.26	0.21	43.98	0.21	0.01	99.41	83.9
DB04-1	04-054-3	40.11	0.00	0.05	0.03	14.22	0.33	0.18	44.40	0.20	0.00	99.61	84.8
DB04-1	04-054-4	39.67	-0.01	0.05	0.06	13.81	0.28	0.18	45.16	0.21	0.00	99.52	85.4
DB04-1	04-054-5	39.39	0.02	0.05	0.01	14.44	0.30	0.24	44.16	0.20	0.01	98.84	84.5
DB04-1	04-054-6	39.62	-0.01	0.06	0.05	13.76	0.42	0.19	45.37	0.19	0.01	99.72	85.5
DB04-1	04-054-7	39.43	0.03	0.05	0.04	13.97	0.37	0.21	45.05	0.18	0.00	99.35	85.2
DB04-1	04-054-8	39.49	-0.01	0.05	0.00	13.93	0.36	0.19	45.13	0.20	0.01	99.39	85.2
DB04-1	04-054-9	39.36	0.01	0.05	0.03	13.79	0.36	0.22	44.92	0.18	0.01	98.94	85.3
DB04-1	04-054-10	40.03	0.00	0.06	0.03	15.02	0.26	0.20	43.87	0.19	0.00	99.67	83.9
DB04-1	04-054-11	39.37	0.01	0.06	0.02	14.58	0.33	0.19	44.41	0.17	0.00	99.16	84.4
DB04-1	04-054-12	39.45	0.03	0.04	0.01	14.70	0.31	0.28	44.45	0.18	0.00	99.49	84.3

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRELK02-1	elk.hom.ol.3.A.2 (02-022)	37.89	0.00	0.02	0.04	16.89	0.15	0.24	42.50	0.16	0.00	97.74	81.8
MRELK02-1	elk.hom.ol.3.D.1 (02-022)	38.93	0.01	0.07	0.05	12.93	0.28	0.18	45.89	0.20	0.01	98.26	86.3
MRELK02-1	elk.hom.ol.3.G.1(02-022)	38.49	0.02	0.03	0.04	18.07	0.15	0.31	42.12	0.18	0.00	99.26	80.6
MRELK02-1	elk.hom.ol.4.C.1(02-023)	38.51	0.01	0.03	0.02	17.83	0.14	0.29	42.32	0.21	0.02	99.24	80.9
MRELK02-1	elk.hom.ol.4.B.1(02-023)	38.35	0.03	0.02	0.04	18.18	0.10	0.26	42.58	0.22	0.01	99.69	80.7
MRELK02-1	ELK-hom-012.2 (02-012)	39.42	0.01	0.16	0.03	14.05	0.24	0.21	45.27	0.26	0.01	99.42	85.2
MRELK02-1	ELK-hom-012.G.1	38.28	0.00	0.07	0.03	18.33	0.12	0.29	42.30	0.19	0.01	99.50	80.4
MRELK02-1	ELK-hom-02-11.J.1	38.30	0.02	0.03	0.00	17.47	0.11	0.26	42.71	0.17	0.01	98.98	81.3
MRTB02-1	02-113.G1	39.06	0.01	0.03	0.04	15.11	0.19	0.22	44.70	0.18	0.04	99.39	84.1
MRTB02-1	03-012-2.1	40.79	0.00	0.04	0.00	11.17	0.43	0.10	48.43	0.17	0.01	100.72	88.5
MRTB02-1	03-012-2.2	40.96	0.00	0.10	0.04	11.20	0.35	0.13	48.09	0.21	0.00	100.73	88.4
MRTB02-1	03-012-3.1	40.65	0.00	0.07	0.03	11.01	0.44	0.13	47.86	0.20	0.00	99.95	88.6
MRTB02-1	03-012-3.2	40.39	0.00	0.04	0.02	10.96	0.45	0.12	47.82	0.18	0.00	99.53	88.6
MRTB02-1	03-012-8.1	39.47	0.00	0.06	0.05	10.82	0.45	0.12	47.44	0.15	0.01	98.12	88.7
MRTB02-1	03-012-16.1	39.29	0.00	0.07	0.03	10.97	0.41	0.07	46.79	0.18	0.00	97.38	88.4
MRTB02-1	03-012-19.1	40.00	0.01	0.05	0.03	10.95	0.45	0.11	47.03	0.18	0.01	98.37	88.4
MRTB02-1	03-012-20.1	39.76	0.01	0.04	0.01	11.89	0.28	0.14	46.51	0.18	0.01	98.55	87.5
MRTB02-1	03-012-24.1	39.75	0.01	0.05	0.00	12.32	0.29	0.14	46.29	0.23	0.01	98.79	87.0
MRTB02-1	03-012-27.1	39.73	0.02	0.05	0.00	13.04	0.16	0.17	45.77	0.16	0.00	98.94	86.2
MRTB03-1	03-076-4.1	39.64	0.00	0.06	0.05	11.81	0.44	0.14	47.47	0.18	0.01	99.80	87.8
MRTB03-1	03-076-5.2	39.30	0.01	0.06	0.06	11.94	0.43	0.17	47.70	0.19	0.00	99.85	87.7
MRTB03-1	03-076-7.1	38.97	0.02	0.41	0.04	12.11	0.45	0.13	47.53	0.18	0.01	99.85	87.5
MRTB03-1	03-076-12.1	39.31	0.01	0.03	0.06	12.45	0.46	0.17	47.43	0.17	0.01	100.08	87.2
MRTB03-1	03-076-13.2	39.42	0.02	0.05	0.06	12.85	0.31	0.16	46.58	0.25	0.01	99.69	86.6
MRTB03-1	03-076-18.1	38.96	0.01	0.05	0.06	15.52	0.26	0.23	44.98	0.18	0.02	100.27	83.8
MRTB03-1	03-076-20.1	39.37	0.01	0.06	0.07	12.04	0.43	0.15	47.58	0.17	0.02	99.89	87.6
MRTB03-1	03-076-21.1	39.28	0.01	0.05	0.04	12.04	0.42	0.19	47.61	0.18	0.02	99.84	87.6
MRTB03-1	03-076-26.1	39.49	0.02	0.05	0.04	11.89	0.43	0.14	47.61	0.20	0.00	99.87	87.7
MRTB03-1	04-028-2.1	40.19	0.01	0.06	0.04	12.98	0.36	0.15	47.14	0.16	0.01	101.10	86.6
MRTB03-1	04-028-3.1	40.31	0.01	0.03	0.02	11.77	0.51	0.15	47.44	0.17	0.00	100.40	87.8
MRTB03-1	04-028-4.1	40.24	0.00	0.05	0.04	11.71	0.48	0.16	47.76	0.18	0.04	100.66	87.9
MRTB03-1	04-028-5.1	40.22	0.01	0.07	0.01	11.57	0.50	0.17	47.49	0.17	0.01	100.22	88.0
MRTB03-1	04-028-7.1	40.27	0.01	0.04	0.03	11.79	0.40	0.14	47.66	0.17	0.01	100.53	87.8
MRTB03-1	04-028-9.1	40.19	0.00	0.03	0.00	11.64	0.45	0.12	47.42	0.16	0.00	100.01	87.9
MRTB03-1	04-028-13.2	40.51	0.00	0.05	0.03	11.51	0.54	0.14	47.85	0.17	0.01	100.82	88.1
MRTB03-1	04-028-14.1	39.98	0.00	0.06	0.04	11.43	0.50	0.20	47.68	0.16	0.02	100.08	88.1

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRTB03-1	04-028-14.2	40.02	0.01	0.07	0.03	12.71	0.29	0.12	47.00	0.20	0.01	100.47	86.8
MRTB03-1	04-028-14.3	40.15	0.00	0.05	0.03	12.22	0.38	0.14	47.03	0.19	0.02	100.21	87.3
MRTB03-1	04-028-17.1	40.35	0.01	0.05	0.05	11.64	0.51	0.16	47.68	0.17	0.03	100.65	88.0
MRTB03-1	04-028-18.1	39.69	0.02	0.12	0.01	14.95	0.17	0.23	45.45	0.19	0.01	100.85	84.4
MRTB03-1	04-028-19.1	40.19	0.00	0.06	0.02	11.67	0.45	0.16	47.64	0.15	0.03	100.38	87.9
MRTB03-1	04-029-2.1	39.80	0.00	0.07	0.01	11.13	0.42	0.15	47.16	0.17	0.01	98.93	88.3
MRTB03-1	04-029-4.1	40.18	0.01	0.07	0.05	11.80	0.47	0.14	47.96	0.16	0.03	100.88	87.9
MRTB03-1	04-029-13.1	39.70	0.01	0.04	0.00	15.66	0.33	0.19	45.00	0.15	0.02	101.10	83.7
MRTB03-1	04-029-15.1	39.80	0.00	0.07	0.03	11.48	0.48	0.12	48.50	0.17	0.02	100.67	88.3
MRTB03-1	04-029-15.2	40.41	0.01	0.03	0.04	11.71	0.44	0.15	47.86	0.15	0.00	100.79	87.9
MRSIC02-1	03-011-7.1	39.23	0.00	0.05	0.07	13.27	0.24	0.21	46.07	0.21	0.01	99.12	86.1
MRSIC02-1	03-011-12.1	38.00	0.02	0.03	0.04	18.31	0.15	0.29	41.46	0.16	0.01	98.31	80.1
MRSIC02-1	03-011-13.1	38.92	0.00	0.06	0.05	11.86	0.26	0.15	46.94	0.20	0.02	98.19	87.6
MRSIC02-1	03-011-34.1	39.77	0.01	0.06	0.06	12.23	0.25	0.14	47.51	0.23	0.01	100.02	87.4
MRSIC02-1	03-011-38.1	39.16	0.01	0.05	0.04	14.83	0.18	0.25	44.90	0.22	0.01	99.48	84.4
MRSIC02-1	03-011-39.1	39.30	0.00	0.04	0.04	11.60	0.30	0.16	47.00	0.21	0.02	98.37	87.8
MRSIC02-1	03-011-44.1	38.81	0.04	0.05	0.05	15.63	0.13	0.24	44.45	0.24	0.01	99.50	83.5
MRSIC02-1	03-011-44.2	39.05	0.01	0.04	0.05	14.88	0.18	0.25	44.31	0.21	0.01	98.81	84.1
MRSIC02-1	03-011-45.1	39.66	0.02	0.08	0.06	11.93	0.32	0.16	46.56	0.21	0.01	98.68	87.4
MRSIC02-1	03-011-47.1	39.30	0.01	0.06	0.06	12.41	0.26	0.18	46.66	0.21	0.02	98.92	87.0
MRSIC02-1	03-011-53.1	39.51	0.01	0.07	0.06	12.72	0.26	0.15	46.66	0.20	0.02	99.39	86.7
MRSIC02-1	03-011-68.1	38.21	0.03	0.05	0.05	19.62	0.09	0.33	40.26	0.16	0.01	98.72	78.5
MRSIC02-1	03-011-68.1	38.21	0.03	0.05	0.05	19.62	0.09	0.33	40.26	0.16	0.01	98.72	78.5
MRSIC02-1	02-114.C1	37.88	0.02	0.05	0.07	18.47	0.14	0.31	41.19	0.23	0.01	98.24	79.9
MRSIC02-1	02-114.E1	38.67	0.00	0.05	0.05	11.45	0.34	0.14	47.57	0.21	0.01	98.15	88.1
MRSIC02-1	02-114.F2	39.27	0.02	0.05	0.05	11.80	0.32	0.15	47.52	0.21	0.01	99.08	87.8
MRSIC02-1	02-115.B2	39.86	0.02	0.05	0.04	12.21	0.34	0.18	47.11	0.21	0.02	99.70	87.3
MRSIC02-1	02-115.H9	39.43	0.01	0.03	0.03	13.24	0.23	0.22	46.44	0.23	0.00	99.64	86.2
MRSIC02-1	02-115.H10	39.43	0.01	0.03	0.03	13.24	0.23	0.22	46.44	0.23	0.00	99.64	86.2
MRSIC02-1	03-075-1.1	39.70	0.02	0.03	0.01	13.26	0.33	0.21	46.39	0.21	0.02	100.17	86.2
MRSIC02-1	03-075-1.2	39.70	0.01	0.05	0.00	13.01	0.30	0.21	46.70	0.20	0.01	100.18	86.5
MRSIC02-1	03-075-2.1	39.91	0.01	0.05	0.03	11.95	0.34	0.17	47.09	0.21	0.02	99.79	87.5
MRSIC02-1	03-075-5.1	39.53	0.02	0.02	0.01	12.42	0.32	0.17	46.95	0.22	0.00	99.67	87.1
MRBLW03-1	03-048-1.1	40.03	0.01	0.04	0.04	11.66	0.28	0.12	46.87	0.23	0.00	99.00	87.7
MRBLW03-1	03-048-5.1	40.12	0.00	0.06	0.05	12.43	0.27	0.16	45.80	0.23	0.00	98.84	86.8

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRBLW03-1	03-048-8.1	40.07	0.01	0.06	0.03	12.26	0.24	0.15	46.33	0.23	0.00	99.13	87.1
MRBLW03-1	03-048-10.2	39.98	0.01	0.06	0.03	12.53	0.26	0.16	46.17	0.24	0.00	99.19	86.8
MRBLW03-1	03-048-11.1	40.42	0.00	0.06	0.01	11.76	0.23	0.11	46.50	0.23	0.00	99.10	87.6
MRBLW03-1	03-048-13.1	40.07	0.02	0.04	0.04	12.27	0.23	0.17	46.30	0.26	0.01	99.19	87.1
MRBLW03-1	03-048-16.1	40.10	0.01	0.04	0.02	12.52	0.27	0.14	46.14	0.22	0.00	99.18	86.8
MRBLW03-1	03-048-18.1	39.95	0.04	0.05	0.01	13.02	0.25	0.13	45.73	0.26	0.00	99.20	86.2
MRBLW03-1	03-048-23.1	40.07	0.03	0.05	0.05	12.75	0.21	0.15	45.87	0.25	0.01	99.25	86.5
MRBLW03-1	03-048-24.1	40.01	0.00	0.07	0.03	12.81	0.24	0.16	45.99	0.22	0.00	99.29	86.5
MRBLW03-1	03-048-25.1	39.97	0.01	0.05	0.01	12.37	0.27	0.18	46.13	0.25	0.00	98.97	86.9
MRBLW03-1	03-048-29.1	40.22	0.02	0.06	0.00	12.40	0.21	0.15	46.07	0.25	0.01	99.18	86.9
MRBLW03-1	03-048-31.1	39.95	0.02	0.08	0.08	12.43	0.22	0.13	45.72	0.24	0.00	98.65	86.8
MRBLW03-1	03-048-33.1	39.91	0.02	0.03	0.04	12.75	0.20	0.15	45.61	0.24	0.01	98.75	86.4
MRBLW03-1	03-048-35.1	40.10	0.02	0.06	0.03	12.51	0.22	0.17	45.43	0.23	0.01	98.57	86.6
MRBLW03-1	03-048-39.1	40.05	0.02	0.05	0.05	12.36	0.22	0.14	45.84	0.23	0.00	98.75	86.9
MRBLW03-1	03-048-41.1	39.88	0.01	0.04	0.02	12.27	0.25	0.16	45.97	0.25	0.00	98.59	87.0
MRBLW03-1	03-048-43.1	39.79	0.02	0.04	0.05	13.55	0.20	0.17	45.00	0.28	0.00	98.90	85.6
MRBLW03-1	03-048-49.1	39.75	0.02	0.04	0.02	12.57	0.21	0.19	45.47	0.23	0.00	98.29	86.6
MRBLW03-1	03-048-49.2	39.73	0.02	0.07	0.04	12.72	0.22	0.15	45.87	0.21	0.01	98.82	86.5
MRBLW03-1	03-048-51.1	39.98	0.01	0.07	0.01	12.15	0.22	0.14	46.09	0.23	0.01	98.69	87.1
MRBLW03-1	03-048-53.1	39.98	0.01	0.04	0.02	13.51	0.20	0.17	45.09	0.25	0.00	99.07	85.6
MRBLW03-1	03-048-55.1	39.97	0.01	0.05	0.01	13.24	0.19	0.18	44.54	0.25	0.00	98.26	85.7
MRBLW03-1	03-048-61.1	40.02	0.01	0.05	0.05	12.06	0.24	0.13	46.28	0.23	0.00	98.82	87.2
MRBLW03-1	03-048-62.1	40.00	0.02	0.04	0.03	12.32	0.26	0.16	46.06	0.24	0.01	98.88	86.9
MRBLW03-1	03-048-65.2	39.91	0.02	0.05	0.04	12.74	0.21	0.18	46.06	0.23	0.00	99.22	86.6
MRBLW03-1	03-048-67.1	40.03	0.02	0.06	0.02	12.16	0.23	0.14	45.92	0.25	0.00	98.60	87.1
MRBLW03-1	03-048-69.1	40.08	0.02	0.03	0.02	12.68	0.21	0.14	45.58	0.23	0.00	98.79	86.5
MRBLW03-1	03-048-70.1	39.65	0.02	0.05	0.02	12.91	0.21	0.20	45.21	0.24	0.03	98.32	86.2
MRBLW03-1	03-048-71.1	40.11	0.00	0.07	0.05	12.57	0.27	0.18	46.28	0.23	0.01	99.49	86.8
MRBLW03-1	03-048-72.1	40.42	0.02	0.06	0.03	11.74	0.24	0.17	46.15	0.23	0.00	98.82	87.5
MRBLW03-1	03-048-78.1	40.27	0.01	0.06	0.01	12.18	0.29	0.12	46.48	0.23	0.00	99.37	87.2
MRBLW03-1	03-048-78.2	40.07	0.02	0.03	0.02	12.13	0.23	0.15	46.49	0.26	0.00	99.18	87.2
MRBLW03-1	03-048-79.1	39.81	0.02	0.06	0.03	12.56	0.24	0.18	46.16	0.23	0.00	99.05	86.8
MRBLW03-1	03-048-79.2	40.07	0.01	0.06	0.07	12.06	0.25	0.14	46.53	0.23	0.00	99.17	87.3
MRBLW03-1	03-048-81.1	39.76	0.03	0.05	0.03	12.18	0.22	0.11	45.97	0.24	0.00	98.39	87.1
MRBLW03-1	03-072-1.1	38.94	0.03	0.09	0.01	13.83	0.24	0.20	45.29	0.27	0.01	98.91	85.4
MRBLW03-1	03-072-5.1	39.12	0.02	0.07	0.03	14.87	0.22	0.23	45.21	0.27	0.02	100.06	84.4
MRBLW03-1	03-072-7.1	39.10	0.01	0.07	0.04	14.75	0.24	0.23	45.44	0.25	0.00	100.14	84.6

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRBLW03-1	03-072-8.1	39.50	0.00	0.07	0.01	13.17	0.20	0.20	46.21	0.25	0.01	99.64	86.2
MRBLW03-1	03-072-14.1	39.30	0.02	0.08	0.03	13.40	0.25	0.23	45.89	0.26	0.02	99.48	85.9
MRBLW03-1	03-072-19.1	38.35	0.04	0.07	0.00	18.54	0.20	0.28	41.80	0.28	0.00	99.57	80.1
MRBLW03-1	03-072-19.2	38.39	0.03	0.06	0.01	18.42	0.18	0.27	41.98	0.31	0.02	99.68	80.2
MRBR02-2	03-049-2.1	40.19	0.00	0.05	0.03	11.52	0.26	0.15	46.70	0.21	0.01	98.89	87.8
MRBR02-2	03-049-3.1	39.76	0.01	0.04	0.06	11.11	0.27	0.15	47.29	0.22	0.01	98.65	88.3
MRBR02-2	03-049-9.1	40.40	0.01	0.03	0.03	10.59	0.30	0.10	47.61	0.21	0.00	98.97	88.9
MRBR02-2	03-049-11.2	40.58	0.01	0.04	0.07	12.55	0.23	0.17	45.91	0.21	0.00	99.54	86.7
MRBR02-2	03-049-11.3	40.08	0.03	0.03	0.01	13.00	0.22	0.19	45.78	0.20	0.00	99.32	86.3
MRBR02-2	03-049-11.4	40.04	0.02	0.04	0.02	13.08	0.21	0.21	45.53	0.21	0.00	99.16	86.1
MRBR02-2	03-049-11.5	40.22	0.04	0.04	0.01	12.73	0.19	0.17	45.42	0.21	0.00	98.84	86.4
MRBR02-2	03-049-12.1	40.72	0.01	0.02	0.01	10.63	0.26	0.13	48.04	0.22	0.01	99.78	89.0
MRBR02-2	03-049-14.1	40.32	0.03	0.04	0.02	11.93	0.27	0.10	47.17	0.20	0.00	99.81	87.6
MRBR02-2	03-071-1.1	39.34	0.01	0.06	0.03	13.60	0.25	0.18	46.22	0.22	0.00	99.91	85.8
MRBR02-2	03-071-2.1	39.23	0.02	0.04	0.05	14.03	0.22	0.22	45.51	0.27	0.01	99.58	85.3
MRBR02-2	03-071-5.1	38.47	0.00	0.07	0.02	12.38	0.25	0.19	45.28	0.22	0.02	96.91	86.7
MRBR02-2	03-071-8.1	38.97	0.03	0.26	0.00	13.47	0.18	0.19	46.58	0.23	0.02	99.93	86.0
MRBR02-2	03-071-9.1	38.77	0.02	0.06	0.01	15.30	0.21	0.25	44.21	0.21	0.03	99.08	83.7
MRBR02-2	03-071-10.1	39.30	0.01	0.08	0.00	12.75	0.26	0.19	46.39	0.21	0.03	99.22	86.6
MRBR02-2	04-021-1.1	39.53	0.01	0.04	0.03	13.37	0.32	0.17	46.95	0.20	0.01	100.63	86.2
MRBR02-2	04-021-2.1	38.91	0.03	0.04	0.05	13.06	0.35	0.19	46.68	0.21	0.01	99.52	86.4
MRBR02-2	04-021-3.4	39.04	0.01	0.04	0.03	15.72	0.22	0.22	44.56	0.22	0.02	100.07	83.5
MRBR02-2	04-021-4.1	38.97	0.01	0.05	0.04	15.04	0.26	0.18	44.74	0.22	0.03	99.52	84.1
MRBR02-2	04-021-5.1	39.36	0.02	0.05	0.04	13.12	0.32	0.17	46.65	0.22	0.01	99.95	86.4
MRBR02-2	04-021-7.1	38.91	0.01	0.04	0.04	13.57	0.34	0.18	46.05	0.22	0.01	99.39	85.8
MRBB03-1	03-065-2.1	38.19	0.01	0.03	0.01	15.56	0.26	0.18	44.36	0.16	0.00	98.51	83.6
MRBB03-1	03-065-3.2	37.82	0.03	0.01	0.00	18.27	0.17	0.30	42.46	0.21	0.00	99.09	80.6
MRBB03-1	03-065-3.3	38.12	0.01	0.01	0.02	18.23	0.16	0.24	42.59	0.19	0.00	99.42	80.6
MRBB03-1	03-065-4.1	37.45	0.03	0.03	0.01	19.00	0.12	0.28	41.51	0.23	0.00	98.54	79.6
MRBB03-1	03-065-8.1	38.56	0.02	0.03	0.02	17.00	0.20	0.25	43.72	0.19	0.00	99.79	82.1
MRBB03-1	03-065-11.1	37.85	0.02	0.04	0.01	18.75	0.15	0.24	41.73	0.21	0.00	98.85	79.9
MRBB03-1	03-065-13.1	37.77	0.02	0.04	0.04	17.89	0.17	0.27	42.92	0.20	0.00	99.15	81.0
MRBB03-1	03-065-14.1	37.97	0.02	0.04	0.03	15.80	0.21	0.22	44.22	0.16	0.00	98.46	83.3
MRBB03-1	03-065-16.1	37.50	0.03	0.03	0.03	18.26	0.18	0.29	42.11	0.25	0.00	98.51	80.4
MRBB03-1	03-065-16.2	37.50	0.02	0.03	0.02	18.08	0.18	0.22	41.72	0.21	0.00	97.80	80.4

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRBB03-1	04-025-7.1	38.64	0.02	0.06	0.06	16.64	0.33	0.23	44.85	0.25	0.01	100.77	82.8
MRBB03-1	04-030-1.1	38.85	0.01	0.05	0.03	18.98	0.15	0.26	42.81	0.20	0.03	101.37	80.1
MRBB03-1	04-030-3.1	38.78	0.00	0.04	0.03	16.59	0.28	0.23	43.58	0.22	0.03	99.80	82.4
MRBB03-1	04-030-5.1	38.66	0.03	0.05	0.04	20.18	0.14	0.24	41.35	0.22	0.00	100.92	78.5
MRBB03-1	04-030-6.1	39.56	0.01	0.05	0.00	15.28	0.27	0.21	45.09	0.22	0.01	100.69	84.0
MRBB03-1	04-030-8.1	39.25	0.00	0.07	0.01	15.74	0.20	0.24	45.01	0.19	0.02	100.71	83.6
MRBB03-1	04-031-2.1	38.70	0.01	0.04	0.01	18.85	0.14	0.27	42.44	0.20	0.02	100.68	80.1
MRBB03-1	04-031-6.1	39.23	0.01	0.05	0.02	16.28	0.19	0.24	43.95	0.18	0.00	100.15	82.8
MRBB03-1	04-031-6.2	39.13	0.02	0.04	0.04	16.51	0.21	0.25	44.05	0.19	0.02	100.47	82.6
MRBB03-1	04-031-7.1	38.76	0.01	0.04	0.01	18.20	0.14	0.27	42.84	0.20	0.01	100.49	80.8
MRBB03-1	04-031-8.1	38.70	0.01	0.04	0.03	18.68	0.08	0.29	42.14	0.24	0.02	100.23	80.1
MRBB03-1	04-031-11.1	38.95	0.02	0.09	0.02	17.97	0.17	0.27	42.53	0.20	0.00	100.22	80.8
MRBB03-1	04-031-14.1	39.06	0.01	0.07	0.06	17.96	0.18	0.29	42.66	0.20	0.01	100.50	80.9
MRNMB03-1	03-066-13.1	38.35	0.01	0.05	0.05	15.70	0.22	0.19	44.24	0.26	0.00	98.86	83.4
MRNMB03-1	03-066-24.1	38.22	0.01	0.03	0.01	16.09	0.17	0.21	44.26	0.28	0.00	99.11	83.1
MRNMB03-1	04-024-5.1	38.69	0.03	0.05	0.06	15.96	0.19	0.23	43.62	0.30	0.02	98.95	83.0
MRNMB03-1	04-024-5.2	38.61	0.02	0.05	0.03	16.36	0.21	0.29	43.51	0.32	0.00	99.19	82.6
MRNMB03-1	04-024-8.1	39.03	0.00	0.06	0.08	13.22	0.32	0.21	46.02	0.24	0.01	98.86	86.1
MRNMB03-1	04-024-5.1	38.69	0.03	0.05	0.06	15.96	0.19	0.23	43.62	0.30	0.02	98.95	83.0
MRNMB03-1	04-024-5.2	38.61	0.02	0.05	0.03	16.36	0.21	0.29	43.51	0.32	0.00	99.19	82.6
MRNMB03-1	04-026-3.1	39.42	0.01	0.07	0.07	15.85	0.32	0.26	44.95	0.27	0.00	100.90	83.5
MRNMB03-1	04-026-8.1	39.27	0.02	0.06	0.03	16.18	0.27	0.25	45.49	0.28	0.00	101.56	83.4
MRKWB03-1	03-067-1.1	38.50	0.04	0.04	0.06	17.01	0.24	0.23	42.89	0.18	0.02	98.96	81.8
MRKWB03-1	03-067-2.1	38.64	0.04	0.04	0.05	15.43	0.18	0.20	44.86	0.16	0.00	99.42	83.8
MRKWB03-1	03-067-3.1	38.50	0.02	0.04	0.04	16.88	0.13	0.26	44.07	0.18	0.00	99.98	82.3
MRKWB03-1	03-067-4.1	37.85	0.03	0.02	0.03	16.69	0.13	0.27	44.07	0.19	0.00	99.14	82.5
MRKWB03-1	03-067-6.1	38.28	0.01	0.03	0.00	15.97	0.10	0.22	43.54	0.19	0.01	98.24	82.9
MRKWB03-1	03-067-7.1	37.11	0.05	0.05	0.01	21.86	0.19	0.36	39.30	0.17	0.00	98.91	76.2
MRKWB03-1	03-067-8.2	38.40	0.04	0.02	0.03	15.77	0.11	0.21	44.30	0.19	0.00	98.96	83.4
MRKWB03-1	03-067-9.1	36.64	0.06	0.02	0.03	20.50	0.12	0.29	40.62	0.17	0.00	98.32	77.9
MRKWB03-1	03-067-11.1	37.98	0.04	0.02	0.02	17.92	0.16	0.29	42.36	0.15	0.00	98.77	80.8
MRKWB03-1	03-067-12.1	38.45	0.02	0.02	0.04	16.40	0.10	0.24	43.83	0.17	0.00	99.17	82.6
MRKWB03-1	03-067-13.1	37.77	0.03	0.02	0.04	16.32	0.13	0.21	44.92	0.19	0.03	99.53	83.1
MRKWB03-1	03-067-16.1	37.55	0.04	0.03	0.02	20.79	0.10	0.31	39.74	0.16	0.00	98.65	77.3
MRKWB03-1	03-067-17.1	38.61	0.04	0.06	0.05	14.51	0.16	0.24	45.21	0.18	0.00	98.89	84.7

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRKWB03-1	03-067-19.1	38.71	0.03	0.02	0.05	15.85	0.17	0.19	43.74	0.16	0.01	98.77	83.1
MRKWB03-1	03-067-22.1	38.15	0.02	0.04	0.04	16.19	0.14	0.20	44.31	0.16	0.00	99.11	83.0
MRKWB03-1	03-067-24.1	38.73	0.02	0.05	0.04	14.63	0.19	0.23	45.35	0.16	0.00	99.20	84.7
MRKWB03-1	03-067-27.1	38.32	0.03	0.02	0.03	16.02	0.10	0.22	43.86	0.16	0.01	98.67	83.0
MRAIC02-1	03-073-3.3	39.30	0.01	0.06	0.04	13.55	0.30	0.16	45.95	0.20	0.01	99.57	85.8
MRAIC02-1	03-073-5.1	39.76	0.01	0.06	0.02	13.34	0.29	0.19	45.86	0.20	0.02	99.75	86.0
MRAIC02-1	03-073-6.1	39.50	0.03	0.07	0.03	13.34	0.32	0.17	45.79	0.24	0.00	99.49	85.9
MRAIC02-1	03-073-8.1	39.06	0.01	0.05	0.03	13.15	0.26	0.17	45.44	0.21	0.02	98.39	86.0
MRAIC02-1	03-073-9.1	39.21	0.01	0.07	0.04	13.70	0.26	0.26	46.68	0.22	0.00	100.46	85.9
MRAIC02-1	03-073-9.2	38.52	0.00	0.05	0.01	13.26	0.28	0.17	45.78	0.20	0.00	98.27	86.0
MRAIC02-1	03-073-10.1	39.11	0.01	0.04	0.04	13.59	0.27	0.18	45.58	0.20	0.03	99.03	85.7
MRAIC02-1	03-073-11.1	39.51	0.01	0.05	0.01	13.58	0.27	0.18	45.83	0.21	0.01	99.66	85.7
MRAIC02-1	03-073-11.2	39.32	0.02	0.04	0.02	13.92	0.26	0.20	45.69	0.21	0.01	99.70	85.4
MRAIC02-1	03-073-20.1	38.75	0.01	0.06	0.02	13.60	0.30	0.20	45.43	0.18	0.01	98.56	85.6
MRAIC02-1	03-073-21.1	38.82	0.00	0.05	0.01	13.74	0.29	0.19	45.48	0.19	0.00	98.78	85.5
MRAIC02-1	04-020-1.1	39.23	0.00	0.07	0.00	13.58	0.25	0.18	44.77	0.21	0.00	98.29	85.5
MRAIC02-1	04-020-2.1	39.26	0.00	0.06	0.00	13.07	0.32	0.18	45.82	0.22	0.00	98.92	86.2
MRAIC02-1	04-020-2.2	38.93	0.03	0.08	0.02	13.36	0.34	0.20	44.98	0.23	0.03	98.19	85.7
MRAIC02-1	04-020-2.3	39.28	0.00	0.02	0.01	13.20	0.29	0.18	45.17	0.20	0.00	98.35	85.9
MRAIC02-1	04-020-3.1	39.26	0.03	0.05	0.06	14.12	0.27	0.18	44.17	0.21	0.01	98.37	84.8
MRAIC02-1	04-020-5.1	39.29	0.00	0.04	0.00	13.70	0.25	0.17	44.94	0.19	0.00	98.58	85.4
MRAIC02-1	04-020-7.1	39.23	0.04	0.08	0.03	13.94	0.30	0.20	44.84	0.23	0.01	98.89	85.2
MRAIC02-1	04-020-8.1	38.78	0.02	0.04	0.05	13.85	0.26	0.19	44.82	0.23	0.01	98.26	85.2
MRAIC02-1	04-020-8.2	39.05	0.01	0.04	0.02	13.56	0.25	0.17	45.44	0.21	0.00	98.75	85.7
MRAIC02-1	04-020-10.1	39.33	0.00	0.07	0.00	14.00	0.27	0.16	44.87	0.20	0.00	98.89	85.1
MRAIC02-1	04-020-11.1	39.27	0.00	0.04	0.00	13.66	0.30	0.20	45.45	0.22	0.00	99.15	85.6
MRAIC02-1	04-020-14.1	39.34	0.01	0.03	0.04	13.44	0.30	0.16	45.14	0.21	0.00	98.68	85.7
MRAIC02-1	04-020-15.1	39.66	0.02	0.02	0.05	14.48	0.28	0.18	44.97	0.22	0.00	99.87	84.7
MRAIC02-1	04-020-15.2	38.97	0.00	0.01	0.00	14.82	0.24	0.15	44.72	0.21	0.00	99.13	84.3
MRAIC02-1	04-020-17.1	39.12	0.01	0.03	0.01	12.67	0.25	0.22	45.73	0.27	0.01	98.33	86.5
MRLTB02-2	03-074-1.1	39.84	0.02	0.05	0.03	14.28	0.26	0.17	46.13	0.20	0.01	100.99	85.2
MRLTB02-2	03-074-2.1	39.86	0.01	0.02	0.01	14.68	0.23	0.22	45.32	0.19	0.00	100.54	84.6
MRLTB02-2	03-074-3.1	39.66	0.02	0.05	0.01	14.55	0.28	0.24	46.48	0.18	0.00	101.47	85.1
MRLTB02-2	03-074-7.1	39.62	0.01	0.03	0.03	14.29	0.28	0.24	45.84	0.22	0.02	100.57	85.1
MRLTB02-2	03-074-7.2	39.59	0.02	0.03	0.00	14.20	0.29	0.24	45.45	0.22	0.01	100.04	85.1

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRLTB02-2	03-074-7.3	39.69	0.01	0.06	0.01	14.33	0.30	0.19	45.25	0.22	0.00	100.07	84.9
MRLTB02-2	03-074-8.1	39.88	0.02	0.05	0.02	14.52	0.29	0.15	45.85	0.18	0.02	100.98	84.9
MRLTB02-2	03-074-11.1	40.46	0.02	0.09	0.02	13.99	0.28	0.19	45.17	0.17	0.00	100.39	85.2
MRLTB02-2	03-074-14.1	39.41	0.01	0.02	0.02	14.25	0.33	0.17	45.07	0.19	0.00	99.49	84.9
MRLTB02-2	03-074-15.1	39.58	0.02	0.04	0.01	14.77	0.28	0.16	45.17	0.19	0.00	100.22	84.5
MRLTB02-2	03-074-17.1	39.51	0.02	0.20	0.03	14.30	0.27	0.19	45.33	0.18	0.01	100.04	85.0
MRLTB02-2	03-074-18.1	39.68	0.01	0.04	0.05	14.08	0.24	0.16	45.36	0.18	0.02	99.82	85.2
MRLTB02-2	03-074-20.1	39.57	0.01	0.03	0.01	14.32	0.26	0.17	45.43	0.20	0.00	100.00	85.0
MRLTB02-2	03-074-21.1	39.94	0.00	0.03	0.01	14.12	0.30	0.19	45.39	0.17	0.01	100.16	85.1
MRLTB02-2	03-074-21.2	39.90	0.01	0.05	0.00	13.54	0.36	0.18	46.19	0.21	0.01	100.44	85.9
MRLTB02-2	04-022-2.1	38.79	0.02	0.03	0.05	14.26	0.28	0.19	45.00	0.18	0.01	98.81	84.9
MRLTB02-2	04-022-8.1	39.61	0.01	0.05	0.03	14.40	0.37	0.20	46.02	0.21	0.00	100.90	85.1
MRLTB02-2	04-022-10.1	39.32	0.02	0.05	0.02	14.46	0.30	0.22	45.60	0.20	0.01	100.21	84.9
MRLTB02-2	04-022-11.1	39.32	0.00	0.05	0.02	14.63	0.28	0.19	45.51	0.19	0.03	100.23	84.7
MRLTB02-2	04-023-2.1	39.32	0.00	0.06	0.05	14.57	0.33	0.23	46.21	0.19	0.01	100.98	85.0
MRLTB02-2	04-023-3.1	38.77	0.02	0.05	0.02	14.26	0.30	0.24	45.63	0.21	0.02	99.53	85.1
MRLTB02-2	04-023-3.2	39.45	0.00	0.05	0.04	14.66	0.32	0.20	46.16	0.19	0.00	101.08	84.9
MRLTB02-2	04-023-5.1	38.50	0.03	0.13	0.02	14.21	0.34	0.22	45.23	0.20	0.00	98.89	85.0
MRLTB02-2	04-023-5.2	38.71	0.00	0.04	0.05	14.21	0.38	0.19	45.52	0.21	0.01	99.33	85.1
MRLTB02-2	04-023-7.1	39.45	0.02	0.04	0.02	13.83	0.34	0.20	46.01	0.20	0.02	100.14	85.6
MRLTB02-2	04-023-9.1	39.21	0.01	0.06	0.01	14.27	0.31	0.21	45.67	0.20	0.00	99.96	85.1
MRLTB02-2	04-023-12.1	39.07	0.02	0.23	0.03	14.68	0.33	0.17	45.36	0.19	0.01	100.10	84.6
MRLTB02-2	04-023-13.1	39.25	0.00	0.04	0.03	14.85	0.27	0.21	45.11	0.22	0.01	99.99	84.4
MRLTB02-2	04-023-15.1	39.26	0.00	0.06	0.01	14.61	0.30	0.21	45.72	0.23	0.01	100.40	84.8
MRLTB02-2	04-023-17.1	39.43	0.00	0.05	0.03	14.33	0.29	0.18	45.64	0.20	0.00	100.15	85.0
MRLTB02-2	04-023-20.1	38.94	0.00	0.02	0.01	14.56	0.29	0.17	45.89	0.23	0.01	100.13	84.9
MRLTB02-2	04-023-24.1	39.31	0.01	0.05	0.03	13.79	0.37	0.21	46.33	0.20	0.02	100.32	85.7
MRLTB02-2	04-023-25.1	39.56	0.01	0.04	0.02	14.68	0.30	0.21	45.50	0.20	0.00	100.54	84.7
MRLTB02-2	04-023-26.1	39.05	0.01	0.04	0.03	14.42	0.31	0.20	45.30	0.20	0.00	99.57	84.8
MRBYC02-1	04-027-3.1	38.67	0.04	0.08	0.02	20.90	0.14	0.30	42.03	0.23	0.00	102.41	78.2
MRBYC02-1	04-027-7.1	37.80	0.01	0.06	0.01	19.07	0.14	0.30	41.94	0.25	0.00	99.57	79.7
MRBYC02-1	04-027-9.1	38.33	0.03	0.06	0.04	20.00	0.14	0.31	41.73	0.23	0.01	100.87	78.8
MRBYC02-1	04-027-11.1	38.74	0.02	0.04	0.02	19.00	0.16	0.26	42.29	0.24	0.00	100.79	79.9
MRBYC02-1	04-027-12.1	38.28	0.02	0.06	0.02	19.54	0.17	0.29	42.09	0.25	0.00	100.71	79.3
MRBYC02-1	04-027-14.1	38.54	0.01	0.06	0.01	18.73	0.14	0.31	42.11	0.21	0.01	100.12	80.0
MRBYC02-1	04-027-16.1	37.64	0.05	0.10	0.06	23.08	0.12	0.30	39.08	0.27	0.00	100.70	75.1

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
MRBYC02-1	04-027-23.2	38.89	0.02	0.06	0.03	18.47	0.13	0.18	42.08	0.21	0.00	100.07	80.2
MRNEF03-1	05-013-3	39.17	0.00	0.05	0.03	15.77	0.14	0.29	43.33	0.25	0.01	99.09	83.0
MRNEF03-1	05-013-7	39.79	0.04	0.05	0.06	16.56	0.21	0.25	43.08	0.29	0.01	100.35	82.3
MRNEF03-1	05-013-8	39.14	0.03	0.05	0.02	16.87	0.13	0.28	42.80	0.31	0.00	99.66	81.9
MRNEF03-1	05-013-10	38.62	0.00	0.04	0.04	15.99	0.21	0.25	43.52	0.27	0.01	99.02	82.9
MRNEF03-1	05-013-12	38.89	0.03	0.04	0.02	16.45	0.18	0.27	42.87	0.28	0.01	99.08	82.3
MRNEF03-1	05-013-14	39.41	0.02	0.04	0.06	16.36	0.17	0.22	43.19	0.27	0.01	99.79	82.5
MRNEF03-1	05-013-16	39.58	0.01	0.05	0.01	16.93	0.19	0.29	42.94	0.30	0.00	100.32	81.9
MRNEF03-1	05-013-17	39.94	0.02	0.06	0.04	16.59	0.19	0.25	43.12	0.27	0.00	100.49	82.3
MRNEF03-1	05-013-19	39.65	0.02	0.03	0.04	17.26	0.13	0.30	41.91	0.28	0.01	99.67	81.2
MRNEF03-1	05-013-22	38.92	0.00	0.06	0.03	16.67	0.20	0.25	42.79	0.27	0.00	99.21	82.1
MRNEF03-1	05-013-26	39.81	0.03	0.03	0.01	17.52	0.18	0.26	41.88	0.28	0.01	100.04	81.0
MRNEF03-1	05-013-29	38.21	0.00	0.02	0.02	17.39	0.28	0.28	42.39	0.29	0.00	98.91	81.3
MRNEF03-1	05-013-30	38.40	0.02	0.06	0.03	16.58	0.20	0.26	42.94	0.26	0.00	98.81	82.2
MRNEF03-1	05-013-31	41.48	0.08	0.58	0.03	15.98	0.16	0.18	40.71	0.70	0.13	100.04	82.0
MRNEF03-1	05-013-34	39.17	0.02	0.03	0.03	17.19	0.18	0.23	41.84	0.30	0.02	99.03	81.3
MRNEF03-1	05-013-35	39.64	0.02	0.02	0.00	16.85	0.16	0.29	42.84	0.29	0.01	100.20	81.9
MRNEF03-1	05-013-37	39.82	0.02	0.03	0.00	17.15	0.21	0.29	42.70	0.26	0.01	100.50	81.6
MRNEF03-1	05-013-38	39.80	-0.02	0.05	0.01	16.90	0.14	0.24	42.68	0.28	0.00	100.12	81.8
MRNEF03-1	05-013-42	39.42	0.00	0.04	0.00	16.96	0.22	0.22	42.77	0.30	0.00	99.95	81.8
31-7b	10-3-1	39.02	0.01	0.13	0.05	16.01	0.17	0.26	42.98	0.26	0.00	98.90	82.7
31-7b	10-4-1b	39.06	0.01	0.05	0.03	15.99	0.18	0.28	43.03	0.24	0.00	98.88	82.8
31-7b	10-6-1	39.33	0.01	0.03	0.04	14.94	0.22	0.20	44.02	0.23	0.00	99.03	84.0
31-7b	IW-4-2	39.06	0.00	0.02	0.00	18.06	0.15	0.26	41.77	0.24	0.00	99.56	80.5
31-7b	IW-6-1	38.97	0.01	0.04	0.04	15.01	0.24	0.28	43.64	0.23	0.00	98.48	83.8
31-7b	IW-1-1	39.50	0.03	0.05	0.03	16.38	0.21	0.23	42.65	0.22	0.00	99.31	82.3
31-7b	20-1-2b	38.42	0.03	0.04	0.00	17.74	0.11	0.25	41.89	0.25	-0.01	98.73	80.8
31-7b	20-3-1	39.59	0.03	0.04	0.02	14.97	0.29	0.20	43.89	0.25	0.01	99.29	83.9
31-7b	20-6-1	38.83	0.01	0.05	0.03	15.47	0.22	0.27	43.54	0.25	0.00	98.70	83.4
31-7b	30-2-1a	38.76	0.01	0.04	-0.01	16.53	0.14	0.25	42.31	0.22	0.00	98.27	82.0
31-7b	30-6-1	39.81	0.01	0.04	0.06	13.93	0.26	0.19	44.52	0.21	0.00	99.03	85.1
31-7b	30-1-1	38.18	0.01	0.03	-0.03	17.50	0.08	0.30	41.24	0.27	0.00	97.62	80.8
31-7b	31-7b1177-1	38.28	-0.01	0.05	0.08	17.77	0.13	0.30	41.84	0.25	0.01	98.71	80.75
31-7b	31-7b1177-1	38.96	-0.01	0.04	0.07	16.46	0.19	0.22	43.65	0.24	0.01	99.83	82.53
31-7b	31-7b1177-2	38.77	-0.02	0.02	0.03	17.28	0.13	0.29	43.10	0.26	0.00	99.89	81.6

Table B2: Continued

Label	Plug/Olivine	Major element oxides (wt%)										Total	Fo#
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	Na ₂ O		
31-7b	31-7b1206-1	39.14	0.01	0.03	0.01	17.15	0.18	0.30	43.72	0.26	0.02	100.82	82.0
31-7b	31-7b1206-2	39.51	0.00	0.04	0.01	16.79	0.18	0.28	43.39	0.25	0.01	100.47	82.2
31-7b	31-7b1206-3rpt	38.86	0.01	0.03	0.02	16.04	0.15	0.27	42.46	0.23	0.00	98.09	82.5
31-7b	31-7b1231-3	39.30	0.02	0.04	0.04	16.55	0.18	0.28	43.17	0.24	0.00	99.84	82.3
31-7b	31-7b-28a	39.01	0.01	0.05	0.02	17.54	0.09	0.30	42.86	0.24	0.00	100.12	81.3
31-7b	31-7b-25a	39.30	0.01	0.03	0.11	17.16	0.14	0.30	42.50	0.24	0.00	99.80	81.5
31-7b	31-7b-26	39.07	-0.01	0.05	0.03	16.09	0.20	0.23	43.16	0.24	-0.01	99.07	82.7
31-7b	31-7B-1	39.32	0.01	0.06	0.03	17.36	0.08	0.23	43.56	0.18	0.01	100.84	81.7
31-7b	31-7B-15	39.78	0.00	0.05	-0.04	16.88	0.14	0.23	43.84	0.17	-0.01	101.10	82.2
LO-02-02	1	39.44	0.03	0.07	0.04	12.15	0.34	0.14	46.02	0.00	0.00	98.25	87.1
LO-02-02	2	39.62	0.01	0.09	0.08	12.23	0.40	0.17	47.05	0.01	0.00	99.67	87.3
LO-02-02	3	39.77	-0.03	0.06	0.09	12.12	0.36	0.13	47.32	0.01	0.04	99.89	87.4
LO-02-02	15Xglass-A-1	39.56	0.02	0.04	0.08	12.21	0.37	0.16	46.17	0.28	0.00	98.91	87.1
LO-02-02	15Xglass-B-1	39.45	0.04	0.11	0.03	12.40	0.30	0.11	46.16	0.35	0.01	98.98	86.9
LO-02-02	15XcrystalA-5	39.64	0.02	0.04	0.08	11.95	0.40	0.14	46.10	0.26	0.01	98.67	87.3
LO-02-02	15XcrystalA-3	39.81	0.02	0.05	0.05	12.06	0.33	0.12	46.50	0.31	0.00	99.28	87.3
LO-02-02	15XcrystalB-2	39.50	0.03	0.07	0.05	11.92	0.28	0.15	46.03	0.32	0.01	98.35	87.3
LO-02-02	30X-A-2	38.99	0.03	0.15	0.06	11.13	0.37	0.17	45.88	0.28	0.01	97.08	88.0
LO-02-02	30X-A-1	39.04	0.02	0.05	0.06	11.61	0.41	0.14	45.88	0.25	0.00	97.45	87.6
LO-02-02	30X-B-1	39.71	0.03	0.05	0.06	12.89	0.36	0.18	45.80	0.28	0.01	99.36	86.4
LO-02-02	30X-C-2	39.54	0.02	0.06	0.06	12.25	0.39	0.15	45.73	0.34	0.01	98.57	86.9
LO-02-02	30X-C-3	39.75	0.03	0.07	0.03	12.44	0.40	0.14	46.07	0.28	0.01	99.22	86.8

Table B3: Spinel major element compositions measured by electron microprobe.

Label	Plug/Spinel	Major element oxides (wt%)										Total	
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	ZnO		V ₂ O ₃
WF02-1	03-14b-9sp.1	0.14	1.09	25.41	33.44	23.85	0.28	0.19	14.52	0.00	0.15	0.15	99.22
WF02-1	03-14b-9sp.3	0.23	0.79	27.06	31.13	23.25	0.30	0.21	16.10	0.02	0.08	0.13	99.31
WF02-1	03-14b-16sp.1	0.43	0.68	37.69	27.22	18.69	0.42	0.15	17.26	0.09	0.17	0.12	102.92
WF02-1	03-14b-16sp.1	0.55	0.54	37.30	27.35	18.42	0.43	0.17	17.40	0.11	0.21	0.14	102.60
WF02-1	WF 05-011	0.10	1.20	26.55	33.75	23.45	0.22	0.18	14.84	0.01	0.05	0.15	100.49
WF02-1	WF 05-011	0.11	1.13	26.52	32.84	23.71	0.26	0.21	14.88	0.00	0.10	0.16	99.91
WF02-1	WF 05-011	0.19	1.45	31.81	27.87	22.45	0.36	0.22	16.14	0.00	0.08	0.17	100.74
WF02-1	WF 05-011	0.96	1.03	25.33	30.51	25.04	0.26	0.35	14.45	0.09	0.16	0.13	98.31
WF02-1	WF 05-011	0.36	1.25	27.74	32.22	25.29	0.25	0.22	13.38	0.03	0.16	0.11	101.01
WF02-1	WF 05-011	0.11	1.17	26.98	33.48	24.90	0.31	0.22	14.23	0.00	0.21	0.11	101.71
WF02-1	WF 05-011	0.10	1.29	26.92	32.64	23.97	0.24	0.23	15.08	0.02	0.13	0.08	100.69
CC02-1	03-41-3sp.1	0.17	0.53	29.51	33.28	19.61	0.23	0.17	16.45	0.04	0.23	0.18	100.40
CC02-1	03-41-3sp.2	0.14	0.48	30.42	33.15	19.00	0.23	0.17	16.46	0.03	0.17	0.18	100.43
CC02-1	03-41-3sp.3	0.14	0.49	29.99	33.29	19.20	0.23	0.21	16.41	0.01	0.10	0.18	100.25
CC02-1	03-41-8sp.1	0.26	0.99	25.02	34.05	23.08	0.17	0.25	15.55	0.01	0.17	0.21	99.75
CC02-1	03-41-13sp.1	0.30	0.48	28.80	34.27	16.70	0.21	0.19	19.00	0.00	0.08	0.26	100.28
CC02-1	03-41-13sp.2	0.52	0.55	29.47	34.54	13.53	0.25	0.16	18.78	0.06	0.12	0.21	98.18
CC02-1	03-41-23sp.1	0.25	0.50	28.33	34.53	19.06	0.26	0.17	15.42	0.00	0.11	0.17	98.80
CC02-1	03-41-12sp.1	0.26	0.56	26.39	34.41	21.52	0.15	0.23	15.68	0.00	0.16	0.18	99.54
HL03-1	03-045sp.1	0.24	0.93	30.48	29.61	23.63	0.24	0.17	14.99	0.00	0.13	0.19	100.61
HL03-1	03-045sp.2	0.16	1.06	28.35	27.92	29.36	0.17	0.26	12.50	0.02	0.28	0.17	100.24
HL03-1	03-045sp.3	0.39	3.59	16.76	24.86	39.97	0.23	0.26	11.14	0.08	0.07	0.24	97.59
HL03-1	03-045sp.4	0.24	1.05	30.00	29.70	21.61	0.19	0.20	17.12	0.04	0.15	0.23	100.52
HL03-1	03-045sp.7	0.16	1.30	31.40	28.95	23.70	0.22	0.24	14.96	0.01	0.30	0.17	101.40
HL03-1	03-045sp.9	0.54	1.18	30.12	28.60	26.86	0.17	0.22	14.49	0.08	0.29	0.20	102.76
HL03-1	03-045sp.10	0.20	0.93	31.01	29.59	22.36	0.26	0.21	15.85	0.00	0.16	0.20	100.76
HL03-1	03-045sp.12	0.16	1.25	26.99	29.00	30.48	0.16	0.27	12.17	0.01	0.30	0.22	101.01
HL03-1	03-045sp.13	0.13	1.20	25.25	28.34	33.05	0.15	0.26	12.51	0.00	0.25	0.18	101.32
HL03-1	03-045sp.14	0.17	1.30	31.28	29.03	22.50	0.25	0.21	15.71	0.03	0.19	0.19	100.86
HL03-1	03-045sp.15	0.74	1.41	31.34	27.63	20.83	0.25	0.23	18.59	0.19	0.04	0.18	101.43
FLR03-1	03-040sp.1	0.21	1.21	34.65	27.61	20.99	0.17	0.26	15.91	0.05	0.18	0.22	101.46
FLR03-1	03-040sp.3	0.18	1.28	31.89	26.49	24.49	0.18	0.27	15.00	0.01	0.09	0.21	100.09
FLR03-1	03-040sp.4	0.18	1.52	31.51	27.33	24.57	0.14	0.25	14.51	0.02	0.12	0.25	100.41

Table B3: Continued.

Label	Plug/Spinel	Major element oxides (wt%)											Total
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	ZnO	V ₂ O ₃	
FLR03-1	03-040sp.5	0.17	0.96	35.67	26.83	20.26	0.21	0.17	16.24	0.01	0.08	0.14	100.75
FLR03-1	03-040sp.6	0.15	0.86	34.76	27.20	17.59	0.25	0.20	18.79	0.01	0.06	0.20	100.05
FLR03-1	03-040sp.7	0.19	0.71	34.98	26.40	20.53	0.25	0.11	16.69	0.01	0.02	0.15	100.04
FLR03-1	03-040sp.8	0.23	2.99	18.85	31.05	32.61	0.10	0.30	13.10	0.09	0.13	0.49	99.93
FLR03-1	03-040sp.9	0.24	0.95	33.72	26.20	22.30	0.22	0.19	15.81	0.03	0.02	0.17	99.85
FLR03-1	03-040sp.10	0.14	1.09	37.26	26.07	19.01	0.30	0.17	16.92	0.05	0.00	0.21	101.23
FLR03-1	03-040sp.11	0.18	0.94	39.68	23.72	19.28	0.32	0.20	17.35	0.04	0.22	0.25	102.19
FLR03-1	03-040sp.12	0.15	0.82	33.71	27.82	20.83	0.22	0.13	17.22	0.00	0.13	0.18	101.22
CM02-2	03-013sp.4	0.43	0.63	30.72	27.90	22.61	0.28	0.20	16.64	0.05	0.17	0.14	99.77
CM02-2	CM 03-058	0.22	1.03	25.97	29.76	26.89	0.24	0.29	15.04	0.01	0.17	0.08	99.70
CM02-2	CM 03-058	0.20	0.73	26.68	29.29	26.41	0.21	0.23	15.19	0.01	0.14	0.07	99.16
CM02-2	CM 03-058	0.21	1.08	37.20	20.14	21.41	0.21	0.22	18.52	0.05	0.20	0.12	99.37
CM02-2	CM 03-058	0.27	0.53	29.27	29.98	23.86	0.24	0.22	16.03	0.01	0.02	0.08	100.51
CM02-2	CM 03-058	0.64	0.75	27.20	29.00	26.79	0.25	0.26	14.99	0.04	0.02	0.11	100.06
CM02-2	CM 03-058	0.19	0.92	29.24	28.50	26.67	0.22	0.25	14.88	0.02	0.17	0.07	101.14
CM02-2	CM 03-058	0.13	0.71	29.50	28.91	24.66	0.28	0.24	16.01	0.01	0.13	0.13	100.69
CM02-2	CM 03-058	0.20	0.40	31.08	29.65	23.21	0.26	0.20	15.15	0.00	0.17	0.09	100.41
CM02-2	CM 03-058	0.39	0.60	29.47	27.90	27.43	0.34	0.28	14.24	0.02	0.22	0.10	100.98
CM02-2	CM 03-058	0.33	0.57	33.20	28.49	21.66	0.39	0.21	15.93	0.03	0.08	0.12	101.02
CM02-2	CM 03-058	0.42	0.61	31.79	29.05	22.80	0.27	0.17	15.94	0.02	0.10	0.10	101.27
TB03-1	TB 04-029	0.37	0.55	34.13	30.08	20.49	0.51	0.17	15.07	0.07	0.13	0.18	101.75
TB03-1	TB 04-029	0.36	0.53	32.97	30.53	20.49	0.41	0.19	15.71	0.09	0.17	0.12	101.56
TB03-1	TB 04-029	0.35	0.45	33.59	30.60	18.01	0.42	0.17	16.72	0.04	0.04	0.13	100.52
TB03-1	TB 04-029	0.25	1.48	34.04	28.90	19.21	0.41	0.16	17.13	0.00	0.15	0.19	101.93
TB03-1	TB 04-029	0.33	0.54	36.08	29.17	16.65	0.44	0.12	18.52	0.02	0.05	0.12	102.05
TB03-1	TB 04-029	0.33	0.50	35.46	29.54	17.83	0.45	0.15	17.46	0.07	0.08	0.11	101.99
TB03-1	TB 04-029	0.30	0.62	35.99	29.23	18.00	0.46	0.14	17.34	0.01	0.01	0.16	102.27
TB03-1	TB 04-029	0.27	0.50	31.44	33.94	19.10	0.41	0.18	16.15	0.00	0.09	0.15	102.23
NEF03-1	NEF 05-013	0.09	2.42	22.67	28.88	28.40	0.12	0.28	13.29	0.01	0.17	0.39	96.72
NEF03-1	NEF 05-013	0.18	1.94	27.36	27.68	27.28	0.15	0.22	13.45	0.02	0.03	0.25	98.56
BLW03-1	BLW 04-006	0.45	0.70	40.36	22.98	19.41	0.26	0.19	16.59	0.00	0.04	0.12	101.10
BLW03-1	BLW 04-006	0.17	0.83	38.88	23.43	20.51	0.25	0.19	16.20	0.00	0.11	0.15	100.72

Table B3: Continued.

Label	Plug/Spinel	Major element oxides (wt%)											Total
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	ZnO	V ₂ O ₅	
BLW03-1	BLW 04-006	0.47	0.66	42.01	20.23	17.82	0.32	0.17	16.84	0.02	0.03	0.17	98.74
BLW03-1	BLW 04-006	0.15	0.60	41.90	21.88	19.28	0.36	0.19	16.75	0.02	-0.15	0.10	101.08
BLW03-1	BLW 04-006	0.16	0.68	39.70	21.66	19.19	0.35	0.13	16.09	0.00	0.10	0.10	98.16
BLW03-1	BLW 04-006	0.16	0.61	41.06	21.73	19.77	0.34	0.13	15.81	0.01	-0.02	0.15	99.76
BLW03-1	BLW 04-006	0.14	0.73	41.15	22.47	19.26	0.24	0.13	16.36	0.00	0.08	0.15	100.71
QV04-3b	04-36-1sp.1	0.40	1.29	13.39	44.50	25.48	0.32	0.23	13.11	0.02	0.22	0.08	99.03
QV04-3b	03-36-1sp.2	0.31	1.41	13.20	45.84	25.44	0.33	0.22	13.37	0.00	0.24	0.08	100.44
QV04-3b	04-36-7sp.1	0.40	1.06	12.00	48.75	23.33	0.23	0.23	13.06	0.00	0.16	0.04	99.26
QV04-3b	03-36-9sp.1	0.23	1.25	13.20	46.33	25.20	0.29	0.23	13.08	0.02	0.12	0.12	100.17
QV04-3b	04-36-9sp.2	0.41	1.55	13.74	45.78	25.43	0.26	0.20	14.18	0.02	0.13	0.12	101.81
QV04-3b	03-36-9sp.3	0.19	1.42	11.83	44.29	27.35	0.16	0.23	12.38	0.00	0.06	0.07	97.99
QV03-1	03-053sp.2	0.09	0.76	6.76	26.37	48.76	0.63	0.15	11.13	0.00	0.07	0.07	94.79
QV03-1	03-053sp.3	0.53	0.54	6.18	36.96	38.43	0.68	0.18	12.79	0.05	0.16	0.01	96.51
QV03-1	03-053sp.4	0.04	0.38	6.04	45.16	32.47	0.47	0.24	13.01	0.01	0.09	0.01	97.92
QV03-1	03-053sp.5	0.62	0.84	8.74	34.74	39.64	0.54	0.17	12.66	0.00	0.15	0.03	98.13
QV03-1	03-053sp.6	0.83	0.93	10.08	39.06	33.08	0.51	0.21	13.68	0.01	0.19	0.07	98.65
QV03-1	03-053sp.7	0.02	0.66	6.27	42.85	35.57	0.40	0.17	12.49	0.02	0.10	0.02	98.56
QV03-1	03-053sp.8	0.25	0.82	6.99	28.78	47.02	0.76	0.15	11.17	0.00	0.08	0.03	96.06
QV03-1	03-053sp.9	0.03	0.58	7.29	44.69	32.51	0.36	0.21	13.13	0.01	0.22	0.05	99.08
QV03-1	03-053sp.10	0.06	0.59	7.19	42.31	34.24	0.44	0.22	12.91	0.00	0.07	0.05	98.08
QV03-1	03-053sp.13	0.81	2.13	4.50	15.49	63.23	0.54	0.19	7.74	0.11	0.16	0.00	94.91
QV03-1	03-053sp.14	0.07	0.80	8.37	47.08	25.94	0.32	0.30	15.70	0.02	0.19	0.05	98.85
QV03-1	03-053sp.18	0.39	1.07	10.42	34.39	39.25	0.36	0.27	12.50	0.10	0.13	0.05	98.96
QV03-1	03-053sp.19	0.49	2.59	6.19	18.35	57.35	0.58	0.25	11.18	0.12	0.10	0.00	97.20
QV03-1	03-013sp.1	0.26	5.16	8.78	11.71	62.39	0.23	0.32	7.49	0.02	0.00	0.21	96.57
QV03-1	03-053sp.11	0.06	0.57	7.62	46.23	30.60	0.33	0.21	13.16	0.00	0.11	0.03	98.92
QV03-1	03-053sp.12	0.11	0.27	1.43	38.46	48.37	0.34	0.14	7.63	0.02	0.00	0.00	96.76
QV03-1	03-053sp.16	0.17	0.47	6.94	44.09	31.77	0.41	0.13	13.96	0.06	0.08	0.01	98.09
QV03-1	03-053sp.17	0.15	0.59	7.64	41.50	33.64	0.47	0.17	13.65	0.04	0.17	0.08	98.10
QV03-1	03-053sp.20	0.23	1.06	5.09	27.61	48.36	0.55	0.28	13.05	0.04	0.18	0.03	96.47
QV03-1	04-048-3.2	0.31	1.13	7.93	29.48	46.15	0.61	-0.21	11.38	0.04	0.23	0.07	97.34
QV03-1	04-048-2.1	0.17	0.62	8.12	41.11	35.98	0.38	-0.30	12.29	0.00	0.33	0.03	99.05
QV03-1	04-048-2.2	0.16	0.68	8.39	40.58	36.86	0.47	-0.24	12.67	0.01	0.22	0.08	100.12
QV03-1	04-048-4.1	0.14	0.73	9.15	42.88	32.87	0.39	-0.38	13.18	0.01	0.07	0.09	99.50
QV03-1	04-048-6.1	0.18	0.60	8.01	49.14	28.83	0.28	-0.44	12.05	0.00	0.11	0.07	99.27

Table B3: Continued.

Label	Plug/Spinel	Major element oxides (wt%)											Total
		SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO*	NiO	MnO	MgO	CaO	ZnO	V ₂ O ₅	
QV03-1	04-048-7.1	0.15	0.65	6.93	34.59	43.23	0.62	-0.17	11.53	0.00	0.11	-0.03	97.81
QV03-1	04-048-7.2	0.14	0.87	10.19	42.11	32.02	0.47	-0.32	13.85	0.01	0.19	0.06	99.95
QV03-1	04-048-7.3	0.15	0.86	9.62	40.91	33.72	0.48	-0.27	13.64	-0.01	0.15	0.08	99.61
QV03-1	04-048-7.4	0.15	0.79	8.32	33.35	42.34	0.61	-0.10	12.15	0.01	0.25	0.03	98.00
QV03-1	04-048-8.1	0.16	0.55	6.50	25.63	51.22	0.65	-0.16	10.57	0.00	0.08	0.02	95.38
QV03-1	04-048-9.1	0.15	0.62	8.26	44.96	32.18	0.31	-0.30	12.81	0.00	0.32	0.10	99.72
QV03-1	04-048-10.1	0.19	0.81	8.91	36.76	38.08	0.54	-0.24	11.92	0.01	0.15	0.04	97.41
QV03-1	04-048-11.1	0.20	0.91	8.99	33.51	40.93	0.55	-0.24	11.93	0.00	0.14	0.06	97.21
QV03-1	04-048-11.2	0.19	0.76	8.79	37.78	37.16	0.60	-0.28	12.24	0.00	0.10	-0.01	97.62
QV03-1	04-048-12.1	0.17	0.76	8.02	31.97	44.11	0.70	-0.21	11.38	0.01	0.24	0.11	97.48
QV03-1	04-048-13.1	0.18	0.94	10.11	32.69	41.39	0.55	-0.22	12.56	-0.01	0.32	0.06	98.80
QV03-1	04-048-14.1	0.15	0.54	3.42	29.78	48.12	0.68	-0.14	11.32	0.00	0.12	-0.01	94.13
QV03-1	04-048-16.1	0.17	0.72	8.64	34.93	40.57	0.50	-0.30	12.13	0.00	0.18	0.08	97.92
QV03-1	04-048-16.2	0.16	0.69	7.99	35.10	41.61	0.49	-0.24	12.18	0.00	0.29	0.08	98.60
QV03-1	04-048-16.3	1.11	0.77	7.92	28.83	45.27	0.62	-0.14	11.43	0.06	0.04	0.05	96.10
QV03-1	04-048-17.1	0.20	0.90	7.41	30.64	45.88	0.81	-0.24	10.65	0.00	0.08	0.01	96.57
QV03-1	04-048-18.1	0.18	0.54	7.77	35.30	41.18	0.47	-0.17	12.06	0.02	0.15	0.03	97.71
QV03-1	04-048-19.1	0.15	0.65	8.81	47.14	29.62	0.31	-0.42	12.83	0.00	0.16	0.11	99.78
QV03-1	04-048-21.1	0.14	0.66	9.59	45.31	30.25	0.26	-0.28	13.39	0.00	0.15	0.07	99.82
QV03-1	4-048-22.1	0.14	0.48	7.56	45.91	31.19	0.49	-0.31	12.51	0.01	0.15	0.08	98.52
QV03-1	4-048-22.2	0.12	0.75	8.06	40.54	36.61	0.49	-0.41	12.09	0.01	0.14	0.06	98.87
QV03-1	4-048-23.1	0.15	0.60	6.51	29.98	45.92	0.77	-0.19	10.39	0.00	0.14	0.03	94.50
QV03-1	4-048-24.1	0.14	0.70	9.58	44.37	30.61	0.46	-0.36	13.23	0.00	0.26	0.04	99.40
QV03-1	4-048-24.2	0.14	0.54	8.15	46.49	30.91	0.41	-0.44	12.67	0.00	0.21	-0.01	99.51
QV03-1	4-048-24.3	0.37	0.53	9.10	45.81	30.34	0.38	-0.45	13.03	0.01	0.12	0.08	99.79
QV03-1	4-048-25.1	0.11	0.53	2.39	37.89	43.19	0.45	-0.25	11.68	0.01	0.19	0.00	96.45
QV03-1	4-048-26.1	0.73	0.59	7.66	37.07	38.35	0.46	-0.30	10.90	0.02	0.16	0.05	96.01
QV03-1	4-048-26.2	0.14	0.46	6.68	43.87	34.72	0.49	-0.34	11.70	0.01	0.21	-0.08	98.31
QV03-1	4-048-26.3	0.15	0.58	7.55	37.01	38.52	0.68	-0.31	11.93	0.00	0.12	0.06	96.60
QV03-1	4-048-27.1	0.16	0.65	6.87	33.82	41.88	0.69	-0.24	10.89	0.01	0.09	0.00	95.07
QV03-1	4-048-29.4	0.14	0.57	5.74	24.29	52.30	0.80	-0.13	10.01	0.00	0.09	0.04	93.99
QV03-1	4-048-31-2	0.12	0.93	7.10	31.68	45.43	0.53	-0.24	10.75	0.02	0.12	0.03	96.72
QV03-1	4-048-32.1	0.12	0.63	8.64	44.44	32.00	0.37	-0.32	12.41	0.02	0.12	0.09	98.85
QV03-1	4-048-33-1	0.13	1.00	6.06	31.83	45.17	0.63	-0.22	11.15	0.01	0.07	0.06	96.10
QV03-1	4-048-33-2	0.36	0.57	7.95	42.64	33.46	0.37	-0.40	12.06	0.01	0.21	0.06	97.69
QV03-1	4-048-34-1	0.15	0.62	6.20	27.57	49.44	0.76	-0.20	10.65	-0.02	0.12	0.01	95.53