3 Appendix 3

3.1 Electron microprobe data of feldspars

The setup to analyse feldspars was aided by discussion with John Spratt at the Natural History Museum, London. The Cameca SX 100 electron microprobe is run at 20keV and 20nA. The current was stable and had a variation of <0.1% (up to 20.02nA) over a 12 hour run with a beam size of 20µm.

Wavelength-dispersive electron spectroscopy is analysed using five wavelength-dispersive X-ray crystal configuration outlined in Table 3.1.

Table 3.1: Analytical setup of Cameca SX100 electron microprobe to analyse feldspars.

Spectrometer position	Element and wavelength	Crystal	Dwell time (ms)
Sp4	Na Kα	TAP	1321
Sp4	Al Kα	TAP	1312
Sp4	Si Kα	TAP	1312
Sp4	Mg Kα	TAP	1321
Sp1	Ca Kα	PET	1321
Sp3	K Kα	LPET	1826
Sp3	Ti Kα	LPET	1820
Sp3	Cr Kα	LPET	1820
Sp5	Mn Kα	LLIF	1827
Sp5	Fe Kα	LLIF	1820
Sp3	Sr Lα	LPET	1826
Sp1	Ba Lα	PET	1321

Eleven standards are used to calibrate the electron microprobe counts (Table 3.2). These standards calibrate counts per second to weight percent.

Table 3.2: Standards used for quantification, their composition and the filename of the calibration file located at the NHM, London.

Standard Name	Standard composition	Calibration file name (Element intensity cps/nA):
Na On JAD3 STD048	O: 47.60%, Na: 11.28%, Mg: 0.05%, Al: 13.33%, Si: 27.79%, Ca: 0.08%, Fe: 0.00%	Na: JAD3 STD048_NaSp4_034.calDat (Na: 81.7 cps/nA)
Al On COR4 STD028	Al: 52.9242%, O: 47.0758%	Al: COR4 STD028_AlSp4_017.calDat (Al: 1214.5 cps/nA)

Si, Ca On WOL4 STD097	O: 41.04%, Si: 23.8%, Ca: 34.16%, Fe: 0.6%, Mn: 0.05%	Si, Ca: WOL4 STD097_SiSp4_CaSp1_CaSp3_004.calDat (Si: 584.6 cps/nA, Ca: 419.7 cps/nA)
Mg On FOR STD277	O: 45.48%, Mg: 34.55%, Si: 19.98%	Mg: FOR STD277_MgSp4_018.calDat (Mg: 563.5 cps/nA)
K On KBR3 STD075	K: 32.8551%, Br: 67.1449%	K: KBR3 STD075_K Sp1_K Sp3_021.calDat (K: 778.3 cps/nA)
Ti On RUT STD082	Ti: 59.95%, O: 40.05%	Ti: RUT STD082_TiSp3_051.calDat (Ti: 2100.9 cps/nA)
Cr On CRO2 STDIC	Cr: 68.4195%, O: 31.5805%	Cr: CRO2 STDIC_CrSp3_065.calDat (Cr: 2612.8 cps/nA)
Mn On MNT STDIC	Mn: 36.4219%, Ti: 31.756%, O: 31.8221%	Mn: MNT STDIC_MnSp5_048.calDat (Mn: 430.7 cps/nA)
Fe On FAY STD278	O: 31.4%, Si: 13.78%, Fe: 54.81%	Fe: FAY STD278_SiSp2_FeSp5_077.calDat (Fe: 791.7 cps/nA)
Sr On STO STD088	Sr: 47.7442%, Ti: 26.1007%, O: 26.1551%	Sr: STO STD088_SrSp3_008.calDat (Sr: 113.9 cps/nA)
Ba On BAR2 STDIC	Ba: 58.8415%, S: 13.7367%, O: 27.4218%	Ba: BAR2 STDIC_BaSp1_BaSp3_003.calDat (Ba: 270.7 cps/nA)

All results of feldspars are presented as weight percent oxides (Table 3.3). When an element is below the detection limit, a value of zero is assigned. The images of the analysed feldspars are given in **Error! Reference source not found.** and **Error! Reference source not found.**.

Table 3.3: Results of microprobe analysis of feldspars.

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C12.JL 170	1/1.	F_01	Phenocryst	56.75	26.93	0.00	0.00	0.00	0.00	0.19	0.00	0.00	6.60	0.26	8.85	99.58
C12.JL 170	1/2.	F_01	Phenocryst	56.29	26.22	0.00	0.14	0.00	0.00	0.25	0.19	0.00	6.57	0.36	7.54	97.56
C12.JL 170	1/3.	F_01	Replacement of pheno	61.10	23.49	0.00	0.00	0.00	0.00	0.20	0.00	0.00	8.55	0.44	5.10	98.88
C12.JL 170	1/4.	F_01	Phenocryst	57.83	25.81	0.00	0.00	0.00	0.00	0.19	0.21	0.00	6.98	0.38	7.57	98.97
C12.JL 170	1/5.	F_01	Phenocryst	57.86	26.00	0.00	0.00	0.00	0.00	0.18	0.17	0.00	6.98	0.41	7.90	99.50
C12.JL 170	1/6.	F_01	Phenocryst	58.41	25.61	0.00	0.00	0.00	0.00	0.19	0.24	0.00	7.36	0.46	7.38	99.65
C12.JL 170	1/7.	F_01	Phenocryst	55.90	27.31	0.00	0.00	0.00	0.00	0.21	0.22	0.00	6.22	0.33	9.26	99.45
C12.JL 170	1/8.	F_01	Phenocryst	59.03	25.36	0.00	0.00	0.00	0.00	0.18	0.20	0.00	7.50	0.45	7.05	99.77
C12.JL 170	1/9.	F_01	Phenocryst	57.39	26.25	0.00	0.00	0.00	0.00	0.16	0.17	0.00	6.85	0.35	7.93	99.10
C12.JL 170	1/10.	F_01	Phenocryst	57.95	25.83	0.00	0.00	0.00	0.00	0.17	0.19	0.00	6.92	0.46	7.75	99.27
C12.JL 170	1/1.	F_02	Phenocryst	57.90	25.74	0.00	0.00	0.00	0.00	0.17	0.16	0.00	7.07	0.48	7.50	99.02
C12.JL 170	1/2.	F_02	Phenocryst	57.97	25.77	0.00	0.00	0.00	0.00	0.17	0.20	0.00	7.14	0.46	7.53	99.24
C12.JL 170	1/3.	F_02	Phenocryst	58.05	25.65	0.00	0.00	0.00	0.00	0.17	0.20	0.00	7.01	0.48	7.57	99.13
C12.JL 170	1/1.	F_03	Phenocryst	58.14	25.84	0.00	0.00	0.00	0.00	0.20	0.21	0.00	7.13	0.40	7.71	99.63
C12.JL 170	1/2.	F_03	Phenocryst	58.50	25.70	0.00	0.00	0.00	0.00	0.19	0.22	0.00	7.05	0.44	7.55	99.65
C12.JL 170	1/3.	F_03	Phenocryst	58.46	25.77	0.00	0.00	0.00	0.00	0.18	0.22	0.00	7.09	0.47	7.45	99.64
C12.JL 170	1/4.	F_03	Phenocryst	56.75	26.62	0.00	0.00	0.00	0.00	0.19	0.21	0.00	6.64	0.39	8.68	99.48
C12.JL 170	1/5.	F_03	Phenocryst	57.20	26.42	0.00	0.00	0.00	0.00	0.19	0.20	0.00	6.70	0.38	8.40	99.49
C12.JL 170	1/6.	F_03	Phenocryst	56.78	27.10	0.00	0.00	0.00	0.00	0.18	0.22	0.00	6.44	0.38	8.83	99.93
C12.JL 170	1/7.	F_03	Phenocryst	54.37	28.16	0.00	0.00	0.00	0.00	0.22	0.21	0.00	5.47	0.25	10.69	99.37
C12.JL 170	1/8.	F_03	Phenocryst	57.73	25.96	0.00	0.00	0.00	0.00	0.18	0.20	0.00	6.92	0.40	8.00	99.39
C12.JL 170	1/9.	F_03	Phenocryst	61.52	20.06	0.00	0.24	0.00	0.00	0.16	0.15	0.20	1.88	13.14	0.22	97.57
C12.JL 170	1/10.	F_03	Phenocryst	56.24	26.64	0.00	0.00	0.00	0.00	0.22	0.24	0.00	6.30	0.39	8.84	98.87
C12.JL 170	1/11.	F_03	Phenocryst	56.22	27.21	0.00	0.00	0.00	0.00	0.18	0.20	0.00	6.24	0.29	9.09	99.43

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C12.JL 170	1/12.	F_03	Phenocryst	64.82	21.49	0.00	0.00	0.00	0.00	0.08	0.23	0.17	8.55	3.14	2.32	100.80
C12.JL 170	1/14.	F_03	Phenocryst	56.32	27.00	0.00	0.00	0.00	0.00	0.19	0.23	0.00	6.40	0.33	9.07	99.54
C12.JL 170	1/1.	F_04	Altered phenocryst	61.77	22.52	0.00	0.46	0.00	0.00	0.49	0.15	0.00	8.55	2.38	0.88	97.20
C12.JL 170	1/2.	F_04	Altered phenocryst	57.78	25.73	0.00	0.00	0.00	0.00	0.21	0.21	0.00	6.84	0.50	7.66	98.93
C12.JL 170	1/3.	F_04	Altered phenocryst	57.63	26.37	0.00	0.00	0.00	0.00	0.21	0.18	0.00	6.76	0.42	8.32	99.89
C12.JL 170	1/6.	F_04	Altered phenocryst	62.50	22.53	0.00	0.30	0.00	0.00	0.32	0.25	0.00	9.06	2.11	1.27	98.34
C12.JL 170	1/7.	F_04	Altered phenocryst	49.67	30.82	0.00	1.97	0.00	0.00	0.67	0.00	0.00	0.00	9.88	0.28	93.29
C12.JL 170	1/8.	F_04	Altered phenocryst	67.68	19.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.57	0.00	0.27	99.34
C12.JL 170	1/9.	F_04	Altered phenocryst	67.39	20.20	0.00	0.00	0.00	0.00	0.00	0.15	0.00	11.52	0.00	0.63	99.89
C12.JL 170	1/1.	F_05	Inclusion in biotite	66.95	20.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.34	0.00	0.62	99.13
C12.JL 170	1/2.	F_05	Inclusion in biotite	67.62	19.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.61	0.00	0.31	99.39
C12.JL 170	1/3.	F_05	Inclusion in biotite	66.83	20.25	0.00	0.00	0.00	0.00	0.00	0.15	0.00	11.39	0.09	0.97	99.68
C12.JL 170	1/4.	F_05	Inclusion in biotite	67.21	19.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.43	0.00	0.46	99.03
C12.JL 170	1/5.	F_05	Inclusion in biotite	66.96	19.98	0.00	0.00	0.00	0.00	0.00	0.16	0.00	11.20	0.08	0.58	98.96
C12.JL 170	1/6.	F_05	Inclusion in biotite	66.67	19.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.25	0.08	0.61	98.45
C12.JL 170	1/7.	F_05	Inclusion in biotite	67.07	19.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.28	0.00	0.48	98.78
C12.JL.47	1/1.	F_01	Inclusion in amphibole	63.27	18.20	0.00	0.22	0.00	0.00	0.28	0.00	0.55	0.78	15.82	0.11	99.23
C12.JL.47	1/3.	F_01	Inclusion in amphibole	65.12	23.32	0.00	0.18	0.00	0.00	0.45	0.00	0.00	9.81	0.44	3.74	103.06
C12.JL.47	1/5.	F_01	Inclusion in amphibole	62.50	23.16	0.00	0.00	0.00	0.00	0.23	0.00	0.00	8.75	0.73	4.05	99.42
C12.JL.47	1/8.	F_01	Inclusion in amphibole	65.23	18.66	0.00	0.00	0.00	0.00	0.25	0.00	0.00	1.17	15.54	0.00	100.85
C12.JL.47	1/10.	F_01	Inclusion in amphibole	62.50	20.69	0.00	0.00	0.00	0.00	0.52	0.00	0.36	2.74	11.76	1.67	100.24
C12.JL.47	1/1.	F_02	Inclusion in amphibole	63.66	19.12	0.00	0.00	0.00	0.00	0.21	0.00	1.42	1.68	14.30	0.11	100.50
C12.JL.47	1/2.	F_02	Inclusion in amphibole	62.69	21.87	0.00	0.00	0.00	0.00	0.32	0.00	0.00	9.24	0.55	3.60	98.27
C12.JL.47	1/3.	F_02	Inclusion in amphibole	64.48	18.66	0.00	0.00	0.00	0.00	0.23	0.00	0.19	1.26	15.38	0.00	100.20
C12.JL.47	1/5.	F_02	Inclusion in amphibole	64.55	17.79	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.91	15.12	0.11	98.74

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C12.JL.47	1/6.	F_02	Inclusion in amphibole	61.28	24.29	0.00	0.00	0.00	0.00	0.33	0.17	0.00	8.31	0.62	5.53	100.53
C12.JL.47	1/8.	F_02	Inclusion in amphibole	63.93	18.59	0.07	0.00	0.00	0.00	0.28	0.00	0.22	1.20	15.47	0.14	99.90
C12.JL.47	1/1.	F_03	Phenocryst_core	57.23	26.06	0.00	0.00	0.00	0.00	0.17	0.21	0.00	6.72	0.45	8.03	98.87
C12.JL.47	1/2.	F_03	Phenocryst_core	57.65	26.59	0.00	0.00	0.00	0.00	0.17	0.20	0.00	6.61	0.45	8.26	99.93
C12.JL.47	1/3.	F_03	Phenocryst_core	58.59	26.26	0.00	0.00	0.00	0.00	0.17	0.17	0.00	7.30	0.50	7.78	100.77
C12.JL.47	1/4.	F_03	Phenocryst_core	58.40	26.13	0.00	0.00	0.00	0.00	0.18	0.20	0.00	7.18	0.49	7.81	100.39
C12.JL.47	1/5.	F_03	Phenocryst_core	56.91	26.73	0.00	0.00	0.00	0.00	0.17	0.19	0.00	6.57	0.42	8.73	99.72
C12.JL.47	1/6.	F_03	Phenocryst_core	57.49	26.50	0.00	0.00	0.00	0.00	0.18	0.19	0.00	6.45	0.43	8.49	99.73
C12.JL.47	1/7.	F_03	Phenocryst_core	57.55	26.24	0.00	0.00	0.00	0.00	0.17	0.21	0.00	6.86	0.44	8.19	99.66
C12.JL.47	1/8.	F_03	Phenocryst_core	57.36	26.34	0.00	0.00	0.00	0.00	0.16	0.22	0.00	6.45	0.44	8.29	99.26
C12.JL.47	1/9.	F_03	Phenocryst_core	58.07	26.12	0.00	0.00	0.00	0.00	0.16	0.22	0.00	6.76	0.49	7.86	99.68
C12.JL.47	1/10.	F_03	Phenocryst_core	57.29	26.49	0.00	0.00	0.00	0.00	0.16	0.22	0.00	6.81	0.41	8.38	99.76
C12.JL.47	1/11.	F_03	Phenocryst_core	57.33	26.48	0.00	0.00	0.00	0.00	0.17	0.19	0.00	6.78	0.43	8.36	99.74
C12.JL.47	1/12.	F_03	Phenocryst_core	57.32	26.40	0.00	0.00	0.00	0.00	0.17	0.19	0.00	6.67	0.41	8.23	99.39
C12.JL.47	1/13.	F_03	Phenocryst_core	57.97	26.18	0.00	0.00	0.00	0.00	0.18	0.22	0.00	7.07	0.42	8.01	100.05
C12.JL.47	1/14.	F_03	Phenocryst_core	51.95	29.63	0.00	0.00	0.00	0.00	0.31	0.24	0.00	4.54	0.19	12.31	99.17
C12.JL.47	1/15.	F_03	Phenocryst_core	55.36	27.34	0.00	0.00	0.00	0.00	0.20	0.17	0.00	6.05	0.28	9.80	99.20
C12.JL.47	1/16.	F_03	Phenocryst_rim	61.03	24.35	0.00	0.00	0.00	0.00	0.10	0.00	0.00	8.41	0.39	5.73	100.01
C12.JL.47	1/17.	F_03	Phenocryst_rim	60.81	23.43	0.00	0.00	0.00	0.00	0.20	0.00	0.00	8.51	0.36	5.25	98.56
C12.JL.47	1/18.	F_03	Phenocryst_rim	56.39	27.12	0.00	0.00	0.00	0.00	0.22	0.22	0.00	6.24	0.31	9.14	99.64
C12.JL.47	1/20.	F_03	Phenocryst_rim	55.83	27.09	0.00	0.00	0.00	0.00	0.20	0.20	0.00	6.16	0.28	9.27	99.03
C12.JL.47	1/1.	F_06	Phenocryst	57.42	26.61	0.00	0.00	0.00	0.00	0.20	0.19	0.00	6.58	0.43	8.30	99.73
C12.JL.47	1/2.	F_06	Phenocryst	58.68	25.88	0.00	0.00	0.00	0.00	0.18	0.19	0.00	7.06	0.51	7.66	100.16
C12.JL.47	1/3.	F_06	Phenocryst	57.83	26.03	0.00	0.00	0.00	0.00	0.18	0.20	0.00	6.83	0.42	8.03	99.52
C12.JL.47	1/4.	F_06	Phenocryst	58.05	26.17	0.00	0.00	0.00	0.00	0.18	0.18	0.00	6.89	0.48	7.97	99.92

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C12.JL.47	1/5.	F_06	Phenocryst	55.63	27.75	0.00	0.00	0.00	0.00	0.18	0.21	0.00	6.09	0.34	9.71	99.91
C12.JL.47	1/6.	F_06	Phenocryst	57.41	26.50	0.00	0.00	0.00	0.00	0.16	0.23	0.00	6.61	0.47	8.49	99.87
C12.JL.47	1/7.	F_06	Phenocryst	57.99	26.20	0.00	0.00	0.00	0.00	0.17	0.19	0.00	6.94	0.42	7.93	99.84
C12.JL.47	1/8.	F_06	Phenocryst	58.62	25.54	0.00	0.00	0.00	0.00	0.17	0.22	0.00	7.23	0.56	7.38	99.72
C12.JL.47	1/9.	F_06	Phenocryst	57.26	26.43	0.00	0.00	0.00	0.00	0.16	0.23	0.00	6.58	0.41	8.29	99.36
C12.JL.47	1/10.	F_06	Phenocryst	57.30	26.41	0.00	0.00	0.00	0.00	0.18	0.21	0.00	6.73	0.42	8.35	99.60
C12.JL.47	1/11.	F_06	Phenocryst	57.93	26.05	0.00	0.00	0.00	0.00	0.18	0.24	0.00	6.83	0.49	7.99	99.71
C12.JL.47	1/12.	F_06	Phenocryst	57.01	26.94	0.00	0.00	0.00	0.00	0.18	0.20	0.00	6.41	0.40	8.86	100.00
C12.JL.47	1/13.	F_06	Phenocryst	57.20	26.45	0.00	0.00	0.00	0.00	0.18	0.20	0.00	6.52	0.43	8.52	99.50
C12.JL.47	1/14.	F_06	Phenocryst	57.65	26.51	0.00	0.00	0.00	0.00	0.17	0.19	0.00	6.62	0.41	8.36	99.91
C12.JL.47	1/15.	F_06	Phenocryst	56.81	26.61	0.00	0.00	0.00	0.00	0.17	0.21	0.00	6.25	0.44	8.74	99.23
C12.JL.47	1/16.	F_06	Phenocryst	56.82	26.66	0.00	0.00	0.00	0.00	0.17	0.20	0.00	6.33	0.39	8.78	99.35
C12.JL.47	1/17.	F_06	Phenocryst	57.09	26.28	0.00	0.00	0.00	0.00	0.17	0.19	0.00	6.80	0.45	8.29	99.27
C12.JL.47	1/18.	F_06	Phenocryst	57.45	25.59	0.00	0.00	0.00	0.00	0.17	0.18	0.00	6.75	0.63	7.63	98.40
C12.JL.47	1/19.	F_06	Phenocryst	58.39	25.63	0.00	0.00	0.00	0.00	0.19	0.20	0.00	6.91	0.58	7.56	99.46
C12.JL.47	1/21.	F_06	Phenocryst	52.76	28.69	0.00	0.00	0.00	0.00	0.34	0.27	0.00	4.87	0.21	11.54	98.68
C12.JL.47	1/22.	F_06	Phenocryst	63.70	22.44	0.00	0.00	0.00	0.00	0.31	0.00	0.00	9.46	0.73	3.41	100.05
C12.JL.47	1/1.	F_07	Phenocryst	58.14	25.91	0.00	0.00	0.00	0.00	0.17	0.21	0.00	7.13	0.40	7.72	99.68
C12.JL.47	1/2.	F_07	Phenocryst	57.66	25.93	0.00	0.00	0.00	0.00	0.18	0.21	0.00	7.02	0.39	7.92	99.31
C12.JL.47	1/3.	F_07	Phenocryst	57.40	26.43	0.00	0.00	0.00	0.00	0.18	0.23	0.00	6.78	0.37	8.34	99.73
C12.JL.47	1/4.	F_07	Phenocryst	56.08	26.31	0.00	0.00	0.00	0.00	0.18	0.25	0.00	6.48	0.31	8.52	98.13
C12.JL.47	1/5.	F_07	Phenocryst	57.92	26.28	0.00	0.00	0.00	0.00	0.18	0.17	0.00	7.18	0.34	7.86	99.93
C12.JL.47	1/6.	F_07	Phenocryst	57.63	26.17	0.00	0.00	0.00	0.00	0.19	0.21	0.00	7.12	0.30	7.86	99.48
C12.JL.47	1/7.	F_07	Phenocryst	58.62	25.79	0.00	0.00	0.00	0.00	0.18	0.22	0.00	7.20	0.44	7.44	99.89
C12.JL.47	1/8.	F_07	Phenocryst	56.14	27.36	0.00	0.00	0.00	0.00	0.18	0.22	0.00	6.54	0.30	9.16	99.90

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C12.JL.47	1/9.	F_07	Phenocryst	56.37	26.99	0.00	0.00	0.00	0.00	0.20	0.25	0.00	6.22	0.33	9.09	99.45
C12.JL.47	1/11.	F_07	Phenocryst	53.47	28.95	0.00	0.00	0.00	0.00	0.21	0.21	0.00	5.07	0.24	11.39	99.54
C12.JL.47	1/12.	F_07	Phenocryst	56.16	27.21	0.00	0.00	0.00	0.00	0.18	0.21	0.00	6.30	0.29	9.21	99.56
C12.JL.47	1/13.	F_07	Veinlet	64.73	18.74	0.00	0.00	0.00	0.00	0.08	0.00	0.15	2.82	13.06	0.00	99.58
C12.JL.47	1/14.	F_07	Veinlet	64.22	18.89	0.00	0.00	0.00	0.00	0.07	0.00	0.73	1.95	14.21	0.00	100.07
C12.JL.47	1/15.	F_07	Veinlet	64.07	18.73	0.00	0.00	0.00	0.00	0.08	0.00	0.18	1.81	14.73	0.17	99.77
C12.JL.47	1/16.	F_07	Veinlet	63.84	18.37	0.00	0.00	0.00	0.00	0.08	0.00	0.20	1.32	15.35	0.00	99.16
C12.JL.47	1/17.	F_07	Replacement	58.57	26.01	0.00	0.00	0.00	0.00	0.19	0.20	0.00	7.36	0.29	7.42	100.04
C12.JL.47	1/20.	F_07	Replacement	64.16	18.50	0.00	0.00	0.00	0.00	0.10	0.00	0.18	1.04	15.78	0.00	99.76
C12.JL.47	1/21.	F_07	Replacement	55.91	27.55	0.00	0.00	0.00	0.00	0.23	0.21	0.00	6.21	0.25	9.48	99.84
C12.JL.47	1/4.	F_09	Inclusion in biotite	64.45	20.93	0.05	0.00	0.00	0.00	0.43	0.00	0.00	9.48	0.90	2.54	98.78
C12.JL.47	1/1.	F_043	Inclusion in biotite	62.15	22.65	0.00	0.00	0.00	0.00	0.24	0.13	0.00	8.75	0.69	4.16	98.77
C12.JL.47	1/2.	F_043	Inclusion in biotite	63.41	21.73	0.00	0.00	0.00	0.00	0.28	0.00	0.00	9.18	0.71	3.31	98.62
C12.JL.47	1/3.	F_043	Inclusion in biotite	62.84	20.45	0.00	0.00	0.00	0.00	0.20	0.00	0.00	9.64	0.40	2.22	95.75
C12.JL.47	1/5.	F_043	Inclusion in biotite	63.69	18.36	0.00	0.00	0.00	0.00	0.27	0.00	0.48	1.11	15.31	0.00	99.22
C12.JL.47	1/8.	F_043	Inclusion in biotite	64.07	21.83	0.00	0.00	0.00	0.00	0.14	0.00	0.00	9.30	0.69	3.11	99.14
C12.JL.47	1/11.	F_043	Inclusion in biotite	64.24	18.39	0.00	0.00	0.00	0.00	0.13	0.00	0.65	0.66	15.76	0.00	99.83
C12.JL.47	1/12.	F_043	Inclusion in biotite	64.12	18.41	0.00	0.00	0.00	0.00	0.12	0.00	0.72	0.69	15.92	0.00	99.98
C12.JL.47	1/13.	F_043	Inclusion in biotite	62.83	19.03	0.00	0.00	0.00	0.00	0.00	0.00	1.92	0.78	15.33	0.00	99.89
C12.JL.180	1/1.	F_01	Inclusion in amphibole	62.28	22.72	0.00	0.00	0.00	0.00	0.24	0.00	0.00	9.15	0.35	4.20	98.94
C12.JL.180	1/2.	F_01	Inclusion in amphibole	62.96	22.95	0.00	0.00	0.00	0.00	0.31	0.00	0.00	9.23	0.42	4.20	100.07
C12.JL.180	1/3.	F_01	Inclusion in amphibole	62.89	22.03	0.00	0.27	0.00	0.00	0.46	0.00	0.00	8.90	0.41	4.12	99.08
C12.JL.180	1/7.	F_01	Inclusion in amphibole	63.11	22.78	0.00	0.00	0.00	0.00	0.30	0.00	0.00	9.28	0.50	4.05	100.02
C12.JL.180	1/8.	F_01	Inclusion in amphibole	63.67	22.09	0.00	0.00	0.00	0.00	0.20	0.00	0.00	9.56	0.30	3.41	99.23
C12.JL.180	1/9.	F_01	Inclusion in amphibole	66.73	20.64	0.00	0.00	0.00	0.00	0.07	0.00	0.00	11.07	0.21	0.98	99.70

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C12.JL.180	1/13.	F_01	matrix	64.11	18.72	0.00	0.00	0.00	0.00	0.11	0.00	0.40	1.58	14.92	0.00	99.84
C12.JL.180	1/14.	F_01	matrix	62.04	18.68	0.05	0.00	0.00	0.00	0.99	0.00	1.01	1.33	14.65	0.24	98.99
C12.JL.180	1/16.	F_01	Matrix	57.83	26.21	0.00	0.00	0.00	0.00	0.19	0.18	0.00	6.96	0.37	7.87	99.61
C12.JL.180	1/21.	F_01	Matrix	62.21	22.21	0.00	0.00	0.00	0.00	0.15	0.14	0.00	9.17	0.36	3.60	97.84
C12.JL.180	1/24.	F_01	Matrix	63.59	22.47	0.00	0.00	0.00	0.00	0.24	0.00	0.00	9.13	0.20	4.41	100.04
C12.JL.180	1/1.	F_03	Inclusion in biotite	64.50	18.73	0.00	0.00	0.00	0.00	0.20	0.00	0.31	2.88	12.63	0.13	99.38
C12.JL.180	1/2.	F_03	Inclusion in biotite	64.39	18.66	0.00	0.00	0.00	0.00	0.17	0.00	0.43	1.87	14.51	0.00	100.03
C12.JL.180	1/3.	F_03	Inclusion in biotite	64.82	18.61	0.00	0.00	0.00	0.00	0.24	0.00	0.22	3.29	12.21	0.15	99.54
C12.JL.180	1/4.	F_03	Inclusion in biotite	63.69	18.42	0.00	0.00	0.00	0.00	0.25	0.00	0.33	0.99	15.66	0.13	99.47
C12.JL.180	1/5.	F_03	Inclusion in biotite	64.69	18.79	0.00	0.00	0.00	0.00	0.21	0.00	0.41	2.38	13.60	0.00	100.08
C12.JL.180	1/6.	F_03	Inclusion in biotite	61.58	23.68	0.00	0.00	0.00	0.00	0.22	0.14	0.15	8.64	0.66	4.94	100.01
C12.JL.180	1/7.	F_03	Inclusion in biotite	66.99	20.41	0.00	0.00	0.00	0.00	0.21	0.00	0.00	11.62	0.28	0.77	100.28
C12.JL.180	1/8.	F_03	Inclusion in biotite	64.06	18.61	0.08	0.00	0.00	0.00	0.30	0.00	0.40	2.08	13.97	0.00	99.50
C12.JL.180	1/9.	F_03	along cleavage in biotite	64.52	18.73	0.00	0.00	0.00	0.00	0.25	0.00	0.21	2.90	12.96	0.16	99.73
C12.JL.180	1/10.	F_03	along cleavage in biotite	64.28	18.84	0.00	0.00	0.00	0.00	0.21	0.00	0.43	2.22	13.83	0.00	99.81
C12.JL.180	1/11.	F_03	matrix	63.57	18.88	0.00	0.00	0.00	0.00	0.13	0.00	0.53	2.89	13.30	0.35	99.65
C12.JL.180	1/17.	F_03	matrix	64.38	18.81	0.00	0.00	0.00	0.00	0.10	0.00	0.35	2.13	14.29	0.00	100.06
C12.JL.180	1/1.	F_04	Phenocryst_core	57.33	26.04	0.00	0.00	0.00	0.00	0.18	0.21	0.00	6.76	0.46	8.15	99.13
C12.JL.180	1/2.	F_04	Phenocryst	57.73	26.25	0.00	0.00	0.00	0.00	0.18	0.23	0.00	6.73	0.48	8.12	99.72
C12.JL.180	1/3.	F_04	Phenocryst	57.74	26.32	0.00	0.00	0.00	0.00	0.17	0.18	0.00	6.96	0.46	8.13	99.96
C12.JL.180	1/4.	F_04	Phenocryst	55.53	27.81	0.00	0.00	0.00	0.00	0.18	0.21	0.00	5.78	0.32	9.95	99.78
C12.JL.180	1/5.	F_04	Phenocryst	57.55	26.23	0.00	0.00	0.00	0.00	0.20	0.19	0.00	6.75	0.41	8.29	99.62
C12.JL.180	1/6.	F_04	Phenocryst	58.03	25.99	0.00	0.00	0.00	0.00	0.20	0.18	0.00	7.02	0.49	7.82	99.73
C12.JL.180	1/7.	F_04	Phenocryst	57.31	26.43	0.00	0.00	0.00	0.00	0.17	0.19	0.00	6.48	0.40	8.56	99.54
C12.JL.180	1/8.	F_04	Phenocryst	56.75	27.10	0.00	0.00	0.00	0.00	0.18	0.20	0.00	6.42	0.39	9.05	100.09

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C12.JL.180	1/9.	F_04	Phenocryst	55.02	28.96	0.00	0.00	0.00	0.00	0.20	0.19	0.00	5.43	0.27	10.91	100.98
C12.JL.180	1/10.	F_04	Phenocryst	56.95	27.02	0.00	0.00	0.00	0.00	0.21	0.18	0.00	6.44	0.42	8.86	100.08
C12.JL.180	1/11.	F_04	Phenocryst	57.67	26.39	0.00	0.00	0.00	0.00	0.19	0.24	0.00	6.68	0.48	8.35	100.00
C12.JL.180	1/12.	F_04	Phenocryst	57.54	26.48	0.00	0.00	0.00	0.00	0.20	0.22	0.00	6.69	0.44	8.47	100.04
C12.JL.180	1/13.	F_04	Phenocryst	58.27	25.99	0.00	0.00	0.00	0.00	0.18	0.17	0.00	6.90	0.47	7.86	99.84
C12.JL.180	1/14.	F_04	Phenocryst	56.00	27.33	0.00	0.00	0.00	0.00	0.18	0.22	0.00	6.10	0.35	9.53	99.71
C12.JL.180	1/15.	F_04	Phenocryst	57.33	26.41	0.00	0.00	0.00	0.00	0.19	0.24	0.00	6.56	0.47	8.47	99.67
C12.JL.180	1/16.	F_04	Phenocryst	56.70	27.13	0.00	0.00	0.00	0.00	0.17	0.21	0.00	6.57	0.38	9.10	100.26
C12.JL.180	1/17.	F_04	Phenocryst	57.72	26.36	0.00	0.00	0.00	0.00	0.20	0.19	0.00	6.69	0.42	8.27	99.85
C12.JL.180	1/18.	F_04	Phenocryst	58.14	26.36	0.00	0.00	0.00	0.00	0.19	0.18	0.00	7.04	0.46	8.10	100.47
C12.JL.180	1/19.	F_04	Phenocryst	58.39	25.97	0.00	0.00	0.00	0.00	0.19	0.20	0.00	6.90	0.47	7.75	99.87
C12.JL.180	1/20.	F_04	Phenocryst	58.35	26.06	0.00	0.00	0.00	0.00	0.20	0.18	0.00	7.21	0.49	7.81	100.30
C12.JL.180	1/21.	F_04	Phenocryst	57.80	26.34	0.00	0.00	0.00	0.00	0.20	0.21	0.00	6.76	0.46	8.10	99.87
C12.JL.180	1/22.	F_04	Phenocryst	57.54	26.31	0.00	0.00	0.00	0.00	0.20	0.22	0.00	6.76	0.48	8.26	99.77
C12.JL.180	1/23.	F_04	Phenocryst	58.49	25.89	0.00	0.00	0.00	0.00	0.20	0.23	0.00	7.01	0.49	7.57	99.88
C12.JL.180	1/24.	F_04	Phenocryst	57.67	26.61	0.00	0.00	0.00	0.00	0.20	0.17	0.00	6.77	0.45	8.31	100.18
C12.JL.180	1/25.	F_04	Phenocryst	57.36	26.58	0.00	0.00	0.00	0.00	0.17	0.20	0.00	6.55	0.45	8.40	99.71
C12.JL.180	1/26.	F_04	Phenocryst	56.42	27.29	0.00	0.00	0.00	0.00	0.20	0.23	0.00	6.19	0.39	9.33	100.05
C12.JL.180	1/27.	F_04	Phenocryst	56.49	27.16	0.00	0.00	0.00	0.00	0.19	0.21	0.00	6.18	0.38	9.16	99.77
C12.JL.180	1/28.	F_04	Phenocryst	54.52	27.91	0.00	0.00	0.00	0.00	0.20	0.21	0.00	5.59	0.31	10.76	99.50
C12.JL.180	1/29.	F_04	Phenocryst	55.49	27.95	0.00	0.00	0.00	0.00	0.20	0.21	0.00	5.96	0.33	9.90	100.04
C12.JL.180	1/30.	F_04	Phenocryst	55.59	28.00	0.00	0.00	0.00	0.00	0.20	0.20	0.00	5.93	0.33	9.96	100.21
C12.JL.180	1/31.	F_04	Phenocryst	57.54	26.54	0.00	0.00	0.00	0.00	0.20	0.22	0.00	6.85	0.43	8.36	100.14
C12.JL.180	1/32.	F_04	Phenocryst	57.45	26.50	0.00	0.00	0.00	0.00	0.21	0.21	0.00	6.81	0.31	8.38	99.87
C12.JL.180	1/33.	F_04	Phenocryst	56.35	26.67	0.00	0.00	0.00	0.00	0.19	0.20	0.00	6.34	0.38	8.85	98.98

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C12.JL.180	1/34.	F_04	Phenocryst	56.96	26.96	0.00	0.00	0.00	0.00	0.20	0.23	0.00	6.66	0.37	8.75	100.13
C12.JL.180	1/35.	F_04	Phenocryst	56.54	26.94	0.00	0.00	0.00	0.00	0.17	0.20	0.00	6.45	0.38	8.94	99.62
C12.JL.180	1/36.	F_04	Phenocryst	57.92	25.88	0.00	0.00	0.00	0.00	0.21	0.18	0.00	6.95	0.41	7.71	99.26
C12.JL.180	1/37.	F_04	Phenocryst	58.24	25.92	0.00	0.00	0.00	0.00	0.18	0.21	0.00	7.15	0.45	7.69	99.84
C12.JL.180	1/38.	F_04	Phenocryst	57.66	25.95	0.00	0.00	0.00	0.00	0.23	0.21	0.00	6.93	0.45	7.90	99.33
C12.JL.180	1/39.	F_04	Phenocryst	58.25	26.40	0.00	0.00	0.00	0.00	0.19	0.20	0.00	6.96	0.46	7.90	100.36
C12.JL.180	1/40.	F_04	Phenocryst	57.62	26.49	0.00	0.00	0.00	0.00	0.19	0.21	0.00	6.78	0.45	8.36	100.10
C12.JL.180	1/41.	F_04	Phenocryst	58.47	26.07	0.00	0.00	0.00	0.00	0.20	0.20	0.00	7.22	0.43	7.61	100.20
C12.JL.180	1/42.	F_04	Phenocryst	56.49	26.84	0.00	0.00	0.00	0.00	0.22	0.22	0.00	6.07	0.98	8.66	99.48
C12.JL.180	1/43.	F_04	Phenocryst	58.56	25.83	0.00	0.00	0.00	0.00	0.30	0.15	0.00	7.32	0.37	7.47	100.00
C12.JL.180	1/44.	F_04	Phenocryst_rim	58.01	26.26	0.00	0.00	0.00	0.00	0.23	0.19	0.00	7.07	0.41	7.92	100.09
C12.JL.180	1/46.	F_04	Matrix	64.22	22.15	0.00	0.00	0.00	0.00	0.11	0.00	0.00	9.93	0.41	3.02	99.84
C12.JL.180	1/49.	F_04	matrix	62.59	19.76	0.00	0.00	0.00	0.00	0.22	0.00	0.33	4.70	9.86	1.38	98.84
C12.JL.180	1/50.	F_04	matrix	63.76	18.81	0.00	0.00	0.00	0.00	0.11	0.00	0.54	1.82	14.27	0.28	99.59
C12.JL.180	1/52.	F_04	matrix	63.54	18.62	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.71	16.18	0.00	99.56
C12.JL.180	1/54.	F_04	matrix	63.22	18.25	0.00	0.00	0.00	0.00	0.12	0.00	0.61	1.13	15.31	0.00	98.64
C12.JL.180	1/55.	F_04	matrix	64.70	18.60	0.00	0.00	0.00	0.00	0.14	0.00	0.32	1.43	15.19	0.00	100.38
C12.JL.180	1/1.	F_05	Inclusion in amphibole	61.94	23.11	0.00	0.00	0.00	0.00	0.61	0.00	0.00	8.66	0.76	4.24	99.32
C12.JL.180	1/2.	F_05	Inclusion in amphibole	62.49	23.15	0.00	0.00	0.00	0.00	0.29	0.00	0.00	8.84	0.44	4.55	99.76
C12.JL.180	1/3.	F_05	Inclusion in amphibole	63.41	22.60	0.00	0.00	0.00	0.00	0.26	0.00	0.00	8.74	1.64	3.72	100.37
C12.JL.180	1/6.	F_05	Inclusion in amphibole	62.18	23.35	0.00	0.00	0.00	0.00	0.33	0.00	0.00	8.77	0.34	4.86	99.83
C12.JL.180	1/7.	F_05	Inclusion in amphibole	64.45	22.08	0.00	0.00	0.00	0.00	0.31	0.00	0.00	9.42	0.76	3.22	100.24
C12.JL.180	1/10.	F_05	Matrix	64.87	19.34	0.00	0.00	0.00	0.00	0.00	0.00	0.22	4.88	9.72	0.46	99.49
C12.JL.180	1/14.	F_05	Inclusion in amphibole	63.38	18.61	0.00	0.00	0.00	0.00	0.17	0.00	0.70	1.19	15.03	0.09	99.17
C12.JL.180	1/19.	F_05	Inclusion in amphibole	64.77	20.45	0.00	0.00	0.00	0.00	0.15	0.00	0.00	9.04	0.72	2.81	97.94

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C12.JL.180	1/20.	F_05	Matrix	61.35	24.63	0.00	0.00	0.00	0.00	0.18	0.00	0.00	8.45	0.44	5.72	100.77
C12.JL.180	1/21.	F_05	Matrix	63.56	18.44	0.00	0.00	0.00	0.00	0.14	0.00	0.45	1.49	14.86	0.00	98.94
C12.JL.180	1/22.	F_05	Matrix	62.15	23.71	0.00	0.00	0.00	0.00	0.23	0.00	0.00	8.53	0.80	4.99	100.41
C12.JL.180	1/24.	F_05	Matrix	63.42	18.82	0.00	0.00	0.00	0.00	0.11	0.00	0.81	1.79	14.38	0.19	99.52
C12.JL.180	1/25.	F_05	Matrix	63.96	18.86	0.00	0.00	0.00	0.00	0.10	0.00	0.54	1.50	14.69	0.00	99.65
C12.JL.180	1/27.	F_05	Matrix	58.46	25.43	0.00	0.00	0.00	0.00	0.21	0.15	0.00	7.39	0.48	7.26	99.38
C12.JL.180	1/1.	F_06	Phenocryst	56.24	27.33	0.00	0.00	0.00	0.00	0.19	0.23	0.00	6.16	0.34	9.22	99.71
C12.JL.180	1/2.	F_06	Phenocryst	56.50	27.21	0.00	0.00	0.00	0.00	0.19	0.21	0.00	6.34	0.33	9.15	99.93
C12.JL.180	1/3.	F_06	Phenocryst	56.54	27.27	0.00	0.00	0.00	0.00	0.19	0.21	0.00	6.41	0.36	9.13	100.11
C12.JL.180	1/4.	F_06	Phenocryst	57.44	26.60	0.00	0.00	0.00	0.00	0.19	0.17	0.00	6.71	0.43	8.34	99.88
C12.JL.180	1/5.	F_06	Phenocryst	54.70	28.04	0.00	0.00	0.00	0.00	0.22	0.21	0.00	5.63	0.29	10.33	99.42
C12.JL.180	1/6.	F_06	Phenocryst	57.54	26.56	0.00	0.00	0.00	0.00	0.20	0.20	0.00	6.75	0.42	8.44	100.11
C12.JL.180	1/7.	F_06	Phenocryst	58.15	25.96	0.00	0.00	0.00	0.00	0.17	0.19	0.00	7.11	0.43	7.70	99.71
C12.JL.180	1/8.	F_06	Phenocryst	58.39	25.66	0.00	0.00	0.00	0.00	0.22	0.00	0.00	7.16	0.40	7.49	99.32
C12.JL.180	1/12.	F_06	matrix	62.74	18.66	0.00	0.00	0.00	0.00	0.11	0.00	0.52	2.12	13.27	0.41	97.83
C12.JL.180	1/14.	F_06	matrix	62.84	18.80	0.00	0.00	0.00	0.00	0.08	0.00	1.53	0.99	15.21	0.00	99.45
C12.JL.180	1/15.	F_06	matrix	63.42	18.48	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.64	16.24	0.00	99.32
C12.JL.180	1/16.	F_06	matrix	64.99	19.90	0.00	0.00	0.00	0.00	0.00	0.00	0.34	5.47	8.38	0.87	99.95
C12.JL.180	1/17.	F_06	matrix	63.79	18.51	0.00	0.00	0.00	0.00	0.15	0.00	0.23	1.13	15.49	0.00	99.30
C12.JL.180	1/18.	F_06	matrix	63.83	18.67	0.00	0.00	0.00	0.00	0.09	0.00	0.36	1.07	15.54	0.00	99.56
C12.JL.180	1/23.	F_06	Matrix	61.99	23.08	0.00	0.00	0.00	0.00	0.22	0.00	0.00	8.92	0.37	4.57	99.15
C12.JL.180	1/27.	F_06	matrix	63.68	18.51	0.00	0.00	0.00	0.00	0.19	0.00	0.36	2.71	13.25	0.18	98.88
C12.JL.180	1/28.	F_06	matrix	64.62	19.72	0.00	0.00	0.00	0.00	0.00	0.00	0.18	5.75	8.01	0.59	98.87
C11.JL 178	1/1.	F_02	Inclusion in biotite	65.76	19.36	0.00	0.00	0.00	0.00	0.25	0.00	0.52	6.16	8.34	0.12	100.51
C11.JL 178	1/2.	F_02	Inclusion in biotite	64.63	19.02	0.00	0.00	0.00	0.00	0.22	0.00	0.73	3.58	11.89	0.00	100.07

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C11.JL 178	1/3.	F_02	Inclusion in biotite	64.19	18.64	0.00	0.00	0.00	0.00	0.22	0.00	0.27	2.89	12.71	0.00	98.92
C11.JL 178	1/4.	F_02	Inclusion in biotite	64.01	19.07	0.00	0.00	0.00	0.00	0.20	0.00	0.27	2.30	13.21	0.14	99.20
C11.JL 178	1/5.	F_02	Inclusion in biotite	63.94	18.35	0.00	0.00	0.00	0.00	0.23	0.00	0.18	1.23	15.27	0.00	99.20
C11.JL 178	1/6.	F_02	Inclusion in biotite	66.56	19.91	0.00	0.06	0.00	0.00	0.20	0.00	0.00	11.42	0.25	0.36	98.76
C11.JL 178	1/9.	F_02	Inclusion in biotite	64.13	18.57	0.00	0.00	0.00	0.00	0.25	0.00	0.45	2.67	12.96	0.00	99.03
C11.JL 178	1/10.	F_02	Inclusion in biotite	66.52	19.36	0.00	0.00	0.00	0.00	0.13	0.00	0.00	8.53	5.08	0.18	99.80
C11.JL 178	1/11.	F_02	Inclusion in biotite	63.97	18.69	0.00	0.00	0.00	0.00	0.08	0.00	0.72	1.89	14.35	0.00	99.70
C11.JL 178	1/12.	F_02	Inclusion in biotite	66.31	19.62	0.00	0.00	0.00	0.00	0.44	0.00	0.00	8.66	5.00	0.41	100.44
C11.JL 178	1/13.	F_02	Inclusion in biotite	63.69	18.57	0.00	0.00	0.00	0.00	0.11	0.00	0.45	2.22	13.96	0.00	99.00
C11.JL 178	1/14.	F_02	Inclusion in biotite	63.17	18.13	0.00	0.00	0.00	0.00	0.14	0.00	0.14	4.19	10.16	0.00	95.93
C11.JL 178	1/15.	F_02	Inclusion in biotite	63.38	18.30	0.00	0.06	0.00	0.00	0.22	0.00	0.00	4.33	10.28	0.00	96.57
C11.JL 178	1/16.	F_02	Inclusion in biotite	65.40	19.20	0.00	0.05	0.00	0.00	0.19	0.00	0.00	9.08	3.18	0.34	97.44
C11.JL 178	1/17.	F_02	Inclusion in biotite	64.97	19.03	0.00	0.00	0.00	0.00	0.17	0.00	0.15	4.99	10.29	0.13	99.73
C11.JL 178	1/18.	F_02	Inclusion in biotite	65.49	17.47	0.00	0.07	0.00	0.00	0.33	0.00	0.00	1.57	12.75	0.00	97.68
C11.JL 178	1/19.	F_02	Inclusion in biotite	65.65	19.05	0.00	0.00	0.00	0.00	0.96	0.00	0.00	6.08	8.15	0.09	99.98
C11.JL 178	1/1.	F_03	Along cleavage in biotite	64.50	18.66	0.00	0.00	0.00	0.00	0.21	0.00	0.67	2.70	13.32	0.00	100.06
C11.JL 178	1/2.	F_03	Along cleavage in biotite	64.61	18.73	0.00	0.00	0.00	0.00	0.21	0.00	0.57	3.22	12.04	0.00	99.38
C11.JL 178	1/3.	F_03	Along cleavage in biotite	65.39	19.15	0.00	0.00	0.00	0.00	0.18	0.00	0.57	5.53	8.82	0.14	99.78
C11.JL 178	1/4.	F_03	Along cleavage in biotite	65.73	19.05	0.00	0.00	0.00	0.00	0.23	0.00	0.70	5.68	8.65	0.13	100.17
C11.JL 178	1/5.	F_03	Along cleavage in biotite	64.62	18.79	0.00	0.00	0.00	0.00	0.22	0.00	0.61	2.93	12.85	0.00	100.02
C11.JL 178	1/6.	F_03	Inclusion in biotite	63.65	18.67	0.00	0.00	0.00	0.00	0.15	0.00	0.55	1.97	14.47	0.00	99.46
C11.JL 178	1/7.	F_03	Inclusion in biotite	64.31	18.62	0.00	0.00	0.00	0.00	0.26	0.00	0.29	3.96	11.92	0.00	99.36
C11.JL 178	1/8.	F_03	Inclusion in biotite	63.77	18.50	0.00	0.00	0.00	0.00	0.21	0.00	0.50	1.56	14.83	0.00	99.37
C11.JL 178	1/9.	F_03	Inclusion in biotite	66.54	20.45	0.00	0.00	0.00	0.00	0.14	0.00	0.00	10.97	0.29	0.95	99.34
C11.JL 178	1/10.	F_03	Inclusion in biotite	67.26	19.96	0.00	0.00	0.00	0.00	0.11	0.00	0.00	11.23	0.38	0.38	99.32

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C11.JL 178	1/11.	F_03	Inclusion in biotite	66.38	19.49	0.00	0.00	0.00	0.00	0.22	0.00	0.00	10.34	1.86	0.43	98.72
C11.JL 178	1/12.	F_03	Inclusion in biotite	66.56	19.62	0.00	0.00	0.00	0.00	0.15	0.00	0.00	11.37	0.31	0.16	98.17
C11.JL 178	1/13.	F_03	Inclusion in biotite	65.31	20.37	0.00	0.00	0.00	0.00	0.12	0.00	0.00	10.65	0.40	1.22	98.07
C11.JL 178	1/14.	F_03	Inclusion in biotite	66.47	20.25	0.00	0.00	0.00	0.00	0.15	0.00	0.00	10.97	0.67	0.85	99.36
C11.JL 178	1/15.	F_03	Inclusion in biotite	64.57	18.54	0.00	0.00	0.00	0.00	0.15	0.00	0.15	2.05	14.05	0.00	99.51
C11.JL 178	1/16.	F_03	Inclusion in biotite	63.84	18.69	0.00	0.00	0.00	0.00	0.11	0.00	0.15	3.18	12.71	0.00	98.68
C11.JL 178	1/17.	F_03	Inclusion in biotite	63.88	18.82	0.00	0.00	0.00	0.00	0.11	0.00	0.00	1.80	14.23	0.00	98.84
C11.JL 178	1/18.	F_03	Inclusion in biotite	64.00	18.63	0.00	0.00	0.00	0.00	0.18	0.00	0.00	1.74	14.61	0.00	99.16
C11.JL 178	1/19.	F_03	Inclusion in biotite	65.36	19.12	0.00	0.00	0.00	0.00	0.14	0.00	0.00	6.15	8.23	0.16	99.16
C11.JL 178	1/20.	F_03	Inclusion in biotite	64.58	19.05	0.00	0.00	0.00	0.00	0.14	0.00	0.00	6.33	8.47	0.19	98.76
C11.JL 178	1/21.	F_03	Inclusion in biotite	64.00	19.00	0.00	0.00	0.00	0.00	0.13	0.00	0.16	2.87	13.07	0.00	99.23
C11.JL 178	1/22.	F_03	Vein crosscutting biotite	64.21	19.15	0.00	0.00	0.00	0.00	0.13	0.00	0.15	2.78	12.87	0.00	99.29
C11.JL 178	1/23.	F_03	Vein crosscutting biotite	65.14	18.75	0.00	0.00	0.00	0.00	0.20	0.00	0.00	10.76	0.45	0.18	95.48
C11.JL 178	1/24.	F_03	Vein crosscutting biotite	65.44	18.83	0.00	0.00	0.00	0.00	0.26	0.00	0.41	5.53	8.90	0.09	99.46
C11.JL 178	1/25.	F_03	Vein crosscutting biotite	65.69	19.06	0.00	0.00	0.00	0.00	0.21	0.00	0.48	6.18	8.20	0.16	99.98
C11.JL 178	1/26.	F_03	Vein crosscutting biotite	64.36	18.72	0.24	0.15	0.00	0.00	0.32	0.00	0.43	2.99	11.45	0.12	98.78
C11.JL 178	1/29.	F_05	Relic phenocryst	64.10	21.23	0.00	0.10	0.00	0.00	0.25	0.00	0.00	9.61	0.89	2.08	98.26
C11.JL 178	1/33.	F_05	Matrix	67.57	19.75	0.00	0.00	0.00	0.00	0.08	0.00	0.00	11.64	0.27	0.23	99.54
C11.JL 178	1/35.	F_05	Vein	64.50	18.37	0.00	0.00	0.00	0.00	0.15	0.00	0.00	1.10	15.55	0.00	99.67
C11.JL 178	1/38.	F_05	Vein	64.80	18.65	0.00	0.00	0.00	0.00	0.17	0.00	0.00	2.11	13.65	0.00	99.38
C11.JL 178	1/39.	F_05	Vein	66.32	20.40	0.00	0.10	0.00	0.00	0.25	0.00	0.00	10.12	2.41	0.48	100.08
C11.JL 178	1/40.	F_05	Vein	66.21	19.31	0.00	0.00	0.00	0.00	0.08	0.00	0.00	9.35	3.77	0.24	98.96
C11.JL 178	1/41.	F_05	Vein	66.23	19.13	0.00	0.00	0.00	0.00	0.11	0.00	0.00	6.71	6.90	0.21	99.29
C11.JL 178	1/42.	F_05	Vein	63.92	18.47	0.00	0.00	0.00	0.00	0.18	0.00	0.00	1.45	15.05	0.00	99.07
C11.JL 178	1/43.	F_05	Vein	66.26	19.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	5.72	0.12	99.09

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C11.JL 178	1/44.	F_05	Vein	63.88	18.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.23	13.75	0.00	98.44
C11.JL 178	1/45.	F_05	Vein	64.00	18.60	0.00	0.00	0.00	0.00	0.14	0.00	0.00	9.96	0.53	0.37	93.60
C11.JL 178	1/46.	F_05	Vein	64.22	18.41	0.00	0.00	0.00	0.00	0.12	0.00	0.00	2.11	13.48	0.00	98.34
C11.JL 178	1/47.	F_05	Vein	64.86	18.69	0.00	0.00	0.00	0.00	0.19	0.00	0.19	2.98	12.87	0.00	99.78
C11.JL 178	1/48.	F_05	Vein	64.24	18.41	0.00	0.00	0.00	0.00	0.09	0.00	0.00	1.28	15.23	0.00	99.25
C11.JL 178	1/51.	F_05	Relic phenocryst	64.19	19.29	0.00	0.00	0.00	0.00	0.11	0.00	0.00	7.22	5.18	0.51	96.50
C11.JL 178	1/52.	F_05	Relic phenocryst	65.71	20.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	11.01	0.41	0.62	97.83
C11.JL 178	1/1.	F_07	Perthitic feldspar	67.68	20.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.34	0.45	0.44	100.00
C11.JL 178	1/2.	F_07	Perthitic feldspar	64.64	18.73	0.00	0.00	0.00	0.00	0.09	0.00	0.00	1.74	14.49	0.00	99.69
C11.JL 178	1/3.	F_07	Perthitic feldspar	67.00	20.10	0.00	0.00	0.00	0.00	0.13	0.00	0.00	11.13	0.41	0.77	99.54
C11.JL 178	1/4.	F_07	Perthitic feldspar	66.50	20.43	0.00	0.00	0.00	0.00	0.09	0.00	0.00	10.88	0.30	1.05	99.25
C11.JL 178	1/5.	F_07	Perthitic feldspar	64.90	18.43	0.00	0.00	0.00	0.00	0.13	0.00	0.00	1.66	14.73	0.00	99.85
C11.JL 178	1/6.	F_07	Perthitic feldspar	65.96	19.72	0.00	0.06	0.00	0.00	0.10	0.00	0.00	10.85	0.31	0.44	97.44
C11.JL 178	1/7.	F_07	Perthitic feldspar	66.56	20.66	0.00	0.00	0.00	0.00	0.22	0.00	0.00	11.11	0.52	1.19	100.26
C11.JL 178	1/9.	F_07	Perthitic feldspar	67.54	19.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.68	0.41	0.22	99.80
C11.JL 178	1/10.	F_07	Perthitic feldspar	67.80	19.93	0.00	0.00	0.00	0.00	0.09	0.00	0.00	11.34	0.59	0.11	99.86
C11.JL 178	1/11.	F_07	Perthitic feldspar	67.65	19.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.59	0.29	0.21	99.50
C11.JL 178	1/12.	F_07	Perthitic feldspar	66.34	20.96	0.00	0.00	0.00	0.00	0.19	0.00	0.00	10.97	0.37	1.33	100.16
C11.JL 178	1/13.	F_07	Perthitic feldspar	66.22	20.39	0.00	0.12	0.00	0.00	0.23	0.16	0.00	10.79	0.33	0.89	99.13
C11.JL 178	1/14.	F_07	Perthitic feldspar	64.44	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.32	2.86	13.64	0.00	100.04
C11.JL 178	1/15.	F_07	Perthitic feldspar	66.66	19.37	0.00	0.00	0.00	0.00	0.07	0.00	0.00	8.52	5.60	0.14	100.36
C11.JL 178	1/16.	F_07	Perthitic feldspar	65.21	18.49	0.00	0.00	0.00	0.00	0.09	0.00	0.00	3.53	12.00	0.00	99.32
C11.JL 178	1/19.	F_07	Perthitic feldspar	61.84	18.91	0.00	1.27	0.00	0.08	2.68	0.00	0.18	1.21	13.85	0.00	100.02
C11.JL 178	1/20.	F_07	Perthitic feldspar	64.93	18.96	0.00	0.24	0.00	0.00	0.54	0.00	0.16	5.69	8.76	0.10	99.38
C11.JL 178	1/21.	F_07	Perthitic feldspar	65.22	19.13	0.00	0.08	0.00	0.00	0.39	0.00	0.16	6.22	7.44	0.15	98.79

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C11.JL 178	1/1.	F_09	Phenocryst_Plag	65.41	20.40	0.00	0.00	0.00	0.00	0.15	0.00	0.00	10.70	0.39	1.43	98.48
C11.JL 178	1/2.	F_09	Phenocryst_Plag	64.72	21.34	0.00	0.00	0.00	0.00	0.12	0.00	0.00	10.34	0.40	2.16	99.08
C11.JL 178	1/5.	F_09	Phenocryst_Plag	63.13	21.68	0.00	0.19	0.00	0.00	0.67	0.13	0.00	8.80	2.47	0.83	97.90
C11.JL 178	1/6.	F_09	Phenocryst_Plag	65.56	20.66	0.00	0.00	0.00	0.00	0.08	0.00	0.00	10.60	0.46	1.45	98.81
C11.JL 178	1/8.	F_09	Phenocryst_Plag	64.88	18.63	0.00	0.00	0.00	0.00	0.13	0.00	0.00	3.24	12.77	0.00	99.65
C11.JL 178	1/10.	F_09	Phenocryst_Plag	67.20	19.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.42	2.97	0.29	99.68
C11.JL 178	1/13.	F_09	Matrix	66.80	17.09	0.00	0.00	0.00	0.00	0.13	0.00	0.00	2.30	11.99	0.00	98.31
C11.JL 178	1/14.	F_09	Matrix	64.20	18.58	0.00	0.00	0.00	0.00	0.14	0.00	0.00	1.98	14.06	0.00	98.96
C11.JL 178	1/15.	F_09	Matrix	62.75	18.13	0.00	0.00	0.00	0.00	0.08	0.00	0.25	2.94	12.70	0.00	96.85
C11.JL 178	1/16.	F_09	Matrix	60.70	18.49	0.07	1.35	0.00	0.00	3.34	0.00	0.00	1.70	11.59	0.12	97.36
C11.JL 178	1/17.	F_09	Matrix	65.46	18.88	0.00	0.00	0.00	0.00	0.07	0.00	0.00	4.58	10.40	0.00	99.39
C11.JL 178	1/18.	F_09	Matrix	65.90	18.85	0.00	0.00	0.00	0.00	0.07	0.00	0.00	5.77	7.41	0.09	98.09
C11.JL 178	1/19.	F_09	Matrix	64.69	18.66	0.00	0.00	0.00	0.00	0.10	0.00	0.00	1.40	15.29	0.00	100.14
C11.JL 178	1/20.	F_09	Phenocryst_Plag	65.23	18.84	0.00	0.00	0.00	0.00	0.07	0.00	0.00	7.74	6.03	0.14	98.05
C11.JL 178	1/21.	F_09	Phenocryst_Plag	66.03	20.92	0.00	0.00	0.00	0.00	0.10	0.00	0.00	10.75	0.31	1.50	99.61
C11.JL 178	1/23.	F_09	Matrix	66.18	19.17	0.00	0.05	0.00	0.00	0.30	0.00	0.00	6.50	8.00	0.14	100.34
C11.JL 178	1/24.	F_09	Matrix	64.90	18.81	0.00	0.00	0.00	0.00	0.10	0.00	0.00	1.74	14.69	0.00	100.24
C11.JL 178	1/26.	F_09	Matrix	64.69	18.64	0.00	0.00	0.00	0.00	0.11	0.00	0.15	1.73	14.69	0.00	100.01
C11.JL 178	1/28.	F_09	Matrix	64.15	18.96	0.00	0.00	0.00	0.00	0.10	0.00	0.26	4.44	12.36	0.21	100.48
C11.JL 178	1/29.	F_09	Matrix	66.02	19.04	0.00	0.00	0.00	0.00	0.08	0.00	0.00	7.91	6.14	0.08	99.27
C11.JL 178	1/31.	F_09	Matrix	63.98	18.48	0.00	0.00	0.00	0.00	0.08	0.00	0.22	2.02	14.15	0.00	98.93
C11.JL 178	1/1.	F_11	Matrix	65.46	18.04	0.00	0.00	0.00	0.00	0.15	0.00	0.15	2.12	13.36	0.00	99.28
C11.JL 178	1/3.	F_11	Matrix	67.03	19.35	0.00	0.00	0.00	0.00	0.08	0.00	0.00	9.08	4.70	0.10	100.34
C11.JL 178	1/4.	F_11	Matrix	65.51	18.80	0.00	0.00	0.00	0.00	0.27	0.00	0.18	3.38	12.60	0.09	100.83
C11.JL 178	1/5.	F_11	Perthitic feldspar	64.68	18.66	0.00	0.00	0.00	0.00	0.14	0.00	0.00	1.63	15.33	0.00	100.44

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C11.JL 178	1/6.	F_11	Perthitic feldspar	63.52	18.43	0.00	0.36	0.00	0.00	0.66	0.00	0.00	2.50	12.30	0.09	97.86
C11.JL 178	1/7.	F_11	Perthitic feldspar	63.78	18.37	0.00	0.00	0.00	0.00	0.11	0.00	0.00	1.97	14.03	0.00	98.26
C11.JL 178	1/8.	F_11	Perthitic feldspar	65.84	19.07	0.00	0.00	0.00	0.00	0.14	0.00	0.00	4.44	10.23	0.29	100.01
C11.JL 178	1/9.	F_11	Matrix	64.69	18.56	0.00	0.00	0.00	0.00	0.61	0.00	0.00	3.74	11.54	0.00	99.14
C11.JL 178	1/10.	F_11	Perthitic feldspar	65.27	18.80	0.00	0.00	0.00	0.00	0.12	0.00	0.00	3.65	12.54	0.00	100.38
C11.JL 178	1/11.	F_11	Perthitic feldspar	65.21	18.77	0.00	0.00	0.00	0.00	0.13	0.00	0.00	3.29	12.72	0.00	100.12
C11.JL 178	1/12.	F_11	Perthitic feldspar	65.70	17.67	0.00	0.07	0.00	0.00	0.25	0.00	0.22	1.20	14.12	0.00	99.23
C11.JL 178	1/14.	F_11	Perthitic feldspar	66.14	18.94	0.00	0.00	0.00	0.00	0.08	0.00	0.00	5.92	9.70	0.00	100.78
C11.JL 178	1/15.	F_11	Matrix	64.91	19.05	0.00	0.06	0.00	0.00	0.23	0.00	0.00	5.25	10.29	0.09	99.88
C11.JL 178	1/16.	F_11	Matrix	64.75	18.89	0.00	0.00	0.00	0.00	0.27	0.00	0.00	6.00	9.02	0.16	99.09
C11.JL 178	1/17.	F_11	Matrix	64.14	18.46	0.00	0.00	0.00	0.00	0.10	0.00	0.15	2.47	13.88	0.00	99.20
C11.JL 178	1/19.	F_11	Microphenocryst	65.06	18.75	0.00	0.00	0.00	0.00	0.12	0.00	0.00	2.62	13.29	0.00	99.84
C11.JL 178	1/20.	F_11	Microphenocryst	66.69	19.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.48	1.05	0.72	98.10
C11.JL 178	1/21.	F_11	Microphenocryst	65.07	18.66	0.00	0.00	0.00	0.00	0.18	0.00	0.00	4.05	11.73	0.00	99.69
C11.JL 178	1/22.	F_11	Perthitic feldspar	65.89	18.90	0.00	0.00	0.00	0.00	0.07	0.00	0.00	3.75	10.04	0.00	98.65
C11.JL 178	1/23.	F_11	Perthitic feldspar	65.00	18.59	0.00	0.00	0.00	0.00	0.11	0.00	0.00	2.02	14.33	0.00	100.05
C11.JL 178	1/24.	F_11	Perthitic feldspar	67.77	19.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.26	0.28	0.32	99.33
C11.JL 178	1/25.	F_11	Perthitic feldspar	66.24	19.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.92	5.69	0.12	99.11
C11.JL 178	1/26.	F_11	Perthitic feldspar	66.35	19.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.61	4.66	0.11	98.96
C11.JL 178	1/27.	F_11	Perthitic feldspar	66.34	19.14	0.00	0.09	0.00	0.00	0.21	0.00	0.14	6.57	7.13	0.19	99.81
C11.JL 178	1/28.	F_11	Perthitic feldspar	63.96	18.39	0.00	0.00	0.00	0.00	0.07	0.00	0.19	0.87	15.88	0.00	99.36
C11.JL 178	1/29.	F_11	Along cleavage in biotite	64.65	18.68	0.00	0.00	0.00	0.00	0.16	0.00	0.25	2.48	13.72	0.00	99.94
C11.JL 178	1/30.	F_11	Along cleavage in biotite	64.06	18.58	0.00	0.00	0.00	0.00	0.12	0.00	0.25	1.26	15.42	0.00	99.69
C11.JL 178	1/31.	F_11	Along cleavage in biotite	63.96	18.53	0.00	0.00	0.00	0.00	0.12	0.00	0.37	1.31	15.42	0.00	99.71
C11.JL 178	1/32.	F_11	Along cleavage in biotite	64.07	18.55	0.00	0.00	0.00	0.00	0.09	0.00	0.35	0.76	15.91	0.00	99.73

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C11.JL 178	1/33.	F_11	Along cleavage in biotite	63.85	18.57	0.00	0.00	0.00	0.00	0.08	0.00	0.23	1.56	14.70	0.00	98.99
C11.JL 178	1/34.	F_11	Within biotite	65.94	19.09	0.00	0.06	0.00	0.00	0.14	0.00	0.00	6.51	7.85	0.00	99.59
C11.JL 178	1/35.	F_11	Within biotite	65.02	18.92	0.00	0.00	0.00	0.00	0.12	0.00	0.21	3.74	11.54	0.21	99.76
C11.JL 178	1/36.	F_11	Within biotite	65.28	19.14	0.00	0.26	0.00	0.00	0.60	0.00	0.00	8.12	4.58	0.24	98.22
C11.JL 178	1/37.	F_11	Within biotite	62.96	18.40	0.00	0.31	0.00	0.00	0.71	0.00	0.17	1.24	14.25	0.00	98.04
C11.JL 178	1/38.	F_11	Within biotite	63.04	18.20	0.15	0.12	0.00	0.00	1.74	0.00	0.00	1.59	13.69	0.00	98.53
C11.JL 178	1/39.	F_11	Within biotite	64.85	18.80	0.00	0.00	0.00	0.00	0.14	0.00	0.24	3.23	11.85	0.00	99.11
C11.JL 178	1/40.	F_11	Within biotite	64.65	18.80	0.00	0.00	0.00	0.00	0.12	0.00	0.29	3.92	11.54	0.14	99.46
C11.JL 178	1/41.	F_11	Within biotite	66.39	20.14	0.00	0.00	0.00	0.00	0.13	0.00	0.00	10.67	0.47	1.01	98.81
C11.JL 178	1/42.	F_11	Within biotite	64.16	18.60	0.00	0.00	0.00	0.00	0.10	0.00	0.25	2.67	13.16	0.00	98.94
C11.JL 178	1/43.	F_11	Matrix	65.14	18.98	0.00	0.00	0.00	0.00	0.12	0.00	0.25	5.75	8.68	0.29	99.21
C11.JL 178	1/44.	F_11	Matrix	64.75	18.50	0.00	0.00	0.00	0.00	0.29	0.00	0.17	1.49	15.07	0.00	100.27
C11.JL 178	1/1.	F_13	Microphenocrysts	64.27	18.54	0.00	0.00	0.00	0.00	0.24	0.00	0.24	1.44	15.27	0.00	100.00
C11.JL 178	1/3.	F_13	Microphenocrysts	65.12	17.99	0.00	0.09	0.00	0.00	0.20	0.00	0.16	2.17	13.33	0.00	99.06
C11.JL 178	1/5.	F_13	Matrix	65.01	18.92	0.07	0.27	0.00	0.00	0.49	0.00	0.00	4.02	10.07	0.11	98.96
C11.JL 178	1/6.	F_13	Matrix	69.03	16.02	0.00	0.06	0.00	0.00	0.34	0.00	0.15	2.23	11.47	0.14	99.44
C11.JL 178	1/7.	F_13	Matrix	64.20	18.44	0.00	0.00	0.00	0.00	0.19	0.00	0.00	2.95	13.18	0.00	98.96
C11.JL 178	1/8.	F_13	Matrix	67.20	15.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.10	3.58	0.15	93.89
C11.JL 178	1/10.	F_13	Matrix	65.38	18.64	0.00	0.00	0.00	0.00	0.12	0.00	0.00	2.41	13.67	0.00	100.22
C11.JL 178	1/11.	F_13	Matrix	64.96	18.87	0.00	0.00	0.00	0.00	0.11	0.00	0.16	2.67	13.08	0.00	99.85
C11.JL 178	1/12.	F_13	Matrix	64.76	18.69	0.00	0.00	0.00	0.00	0.08	0.00	0.00	3.39	12.72	0.00	99.64
C11.JL 178	1/13.	F_13	Perthitic feldspar	63.49	18.35	0.00	0.00	0.00	0.00	0.12	0.00	0.00	1.56	14.64	0.72	98.88
C11.JL 178	1/14.	F_13	Perthitic feldspar	66.84	19.34	0.00	0.00	0.00	0.00	0.08	0.00	0.00	9.45	3.15	0.24	99.10
C11.JL 178	1/15.	F_13	Perthitic feldspar	62.73	17.96	0.00	0.00	0.00	0.00	0.13	0.00	0.00	4.23	10.43	0.10	95.58
C11.JL 178	1/16.	F_13	Perthitic feldspar	64.49	18.39	0.00	0.00	0.00	0.00	0.10	0.00	0.00	1.96	14.53	0.00	99.47

Sample	Spot	Feldspar no.	Location	SiO_2	Al_2O_3	TiO_2	MgO	Cr_2O_3	MnO	FeO	SrO	BaO	Na_2O	K_2O	CaO	Total
C11.JL 178	1/17.	F_13	Perthitic feldspar	64.73	18.73	0.00	0.07	0.00	0.00	0.24	0.00	0.00	4.27	10.39	0.00	98.43
C11.JL 178	1/18.	F_13	Perthitic feldspar	65.01	18.59	0.00	0.00	0.00	0.00	0.13	0.00	0.00	2.09	14.07	0.00	99.89
C11.JL 178	1/19.	F_13	Inclusion in biotite	67.07	19.76	0.00	0.00	0.00	0.00	0.23	0.00	0.00	10.72	1.15	0.49	99.42
C11.JL 178	1/20.	F_13	Inclusion in biotite	67.23	19.47	0.00	0.00	0.00	0.00	0.14	0.00	0.00	10.08	3.43	0.14	100.49
C11.JL 178	1/21.	F_13	Inclusion in biotite	64.35	17.56	0.00	0.09	0.00	0.00	2.25	0.00	0.00	3.06	11.36	0.08	98.75
C11.JL 178	1/22.	F_13	Inclusion in biotite	66.38	19.99	0.00	0.00	0.00	0.00	0.13	0.00	0.00	10.87	0.38	0.72	98.47
C11.JL 178	1/23.	F_13	Inclusion in biotite	65.51	19.11	0.00	0.00	0.00	0.00	0.13	0.00	0.00	6.01	8.29	0.32	99.37
C11.JL 178	1/24.	F_13	Inclusion in biotite	63.64	18.28	0.00	0.00	0.00	0.00	0.15	0.00	0.26	5.12	8.86	0.11	96.42
C11.JL 178	1/25.	F_13	Inclusion in biotite	65.50	18.94	0.00	0.00	0.00	0.00	0.18	0.00	0.42	5.68	8.56	0.14	99.42
C11.JL 178	1/26.	F_13	Inclusion in biotite	64.57	18.74	0.00	0.00	0.00	0.00	0.08	0.00	0.37	2.00	14.08	0.00	99.84
C11.JL 178	1/27.	F_13	Inclusion in biotite	63.36	18.79	0.00	0.00	0.00	0.00	0.07	0.00	0.26	1.82	14.41	0.00	98.71
C11.JL 178	1/28.	F_13	Inclusion in biotite	65.05	18.72	0.00	0.00	0.00	0.00	0.14	0.00	0.27	2.00	14.29	0.00	100.47
C11.JL 178	1/29.	F_13	Inclusion in biotite	65.12	18.51	0.00	0.00	0.00	0.00	0.18	0.00	0.00	2.78	13.50	0.00	100.09
C11.JL 178	1/30.	F_13	Inclusion in biotite	64.24	18.63	0.00	0.00	0.00	0.00	0.09	0.00	0.35	1.76	14.83	0.00	99.90
C11.JL 178	1/31.	F_13	Inclusion in biotite	64.39	18.91	0.00	0.00	0.00	0.00	0.14	0.00	0.24	3.65	11.37	0.19	98.89
C11.JL 178	1/33.	F_13	Microphenocryst	63.91	18.38	0.00	0.00	0.00	0.00	0.12	0.00	0.00	3.12	12.09	0.22	97.84
C11.JL 178	1/35.	F_13	Matrix	63.87	18.70	0.00	0.00	0.00	0.00	0.09	0.00	0.18	1.46	15.02	0.09	99.41
C11.JL 178	1/36.	F_13	Matrix	68.22	16.79	0.00	0.00	0.00	0.00	0.17	0.00	0.15	3.71	11.10	0.00	100.14
C11.JL 178	1/39.	F_13	Matrix	64.49	18.78	0.00	0.00	0.00	0.00	0.11	0.00	0.00	3.75	13.00	0.00	100.13
C11.JL 178	1/40.	F_13	Matrix	63.22	18.13	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.61	16.20	0.00	98.28
C11.JL 178	1/41.	F_13	Matrix	65.91	19.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	6.07	9.46	0.00	100.55

The stoichiometry of feldspars was calculated on the basis of eight oxygen anions per formula unit, as per standard procedure (Deer *et al.* 1992). The results of these calculations are presented in Table 3.4

Table 3.4: Feldspar stoichiometry based on microprobe analysis. Abbreviations: Alb=Albite, And=Andesine, Ano=Anorthoclase, Lab=Labradorite, Oli=Oligoclase, San=Sanidine.

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	Spot	Feld No.	Species	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	Sr	Ba	An. %	Al. %	Or. %	Si+Al(AFU)	Ca+Na+K(AFU)
C12.JL 170	1/1.	F_01	And	2.56	1.43	0.00	0.01	0.00	0.00	0.43	0.58	0.01	0.00	0.00	42	57	1	3.99	1.02
C12.JL 170	1/2.	F_01	high Mg	2.59	1.42	0.00	0.01	0.00	0.01	0.37	0.59	0.02	0.01	0.00	38	60	2	4.01	0.98
C12.JL 170	1/3.	F_01	Oli	2.75	1.24	0.00	0.01	0.00	0.00	0.25	0.75	0.03	0.00	0.00	24	73	2	3.99	1.02
C12.JL 170	1/4.	F_01	And	2.62	1.38	0.00	0.01	0.00	0.00	0.37	0.61	0.02	0.01	0.00	37	61	2	4.00	1.00
C12.JL 170	1/5.	F_01	And	2.61	1.38	0.00	0.01	0.00	0.00	0.38	0.61	0.02	0.00	0.00	38	60	2	3.99	1.02
C12.JL 170	1/6.	F_01	And	2.63	1.36	0.00	0.01	0.00	0.00	0.36	0.64	0.03	0.01	0.00	35	63	3	3.99	1.02
C12.JL 170	1/7.	F_01	And	2.53	1.46	0.00	0.01	0.00	0.00	0.45	0.55	0.02	0.01	0.00	44	54	2	3.99	1.02
C12.JL 170	1/8.	F_01	And	2.65	1.34	0.00	0.01	0.00	0.00	0.34	0.65	0.03	0.01	0.00	33	64	3	3.99	1.02
C12.JL 170	1/9.	F_01	And	2.60	1.40	0.00	0.01	0.00	0.00	0.38	0.60	0.02	0.00	0.00	38	60	2	4.00	1.01
C12.JL 170	1/10.	F_01	And	2.62	1.37	0.00	0.01	0.00	0.00	0.38	0.61	0.03	0.00	0.00	37	60	3	3.99	1.01
C12.JL 170	1/1.	F_02	And	2.62	1.37	0.00	0.01	0.00	0.00	0.36	0.62	0.03	0.00	0.00	36	61	3	3.99	1.01
C12.JL 170	1/2.	F_02	And	2.62	1.37	0.00	0.01	0.00	0.00	0.36	0.63	0.03	0.01	0.00	36	62	3	3.99	1.02
C12.JL 170	1/3.	F_02	And	2.62	1.37	0.00	0.01	0.00	0.00	0.37	0.61	0.03	0.01	0.00	36	61	3	3.99	1.01
C12.JL 170	1/1.	F_03	And	2.62	1.37	0.00	0.01	0.00	0.00	0.37	0.62	0.02	0.01	0.00	37	61	2	3.99	1.02
C12.JL 170	1/2.	F_03	And	2.63	1.36	0.00	0.01	0.00	0.00	0.36	0.61	0.03	0.01	0.00	36	61	3	3.99	1.00
C12.JL 170	1/3.	F_03	And	2.63	1.37	0.00	0.01	0.00	0.00	0.36	0.62	0.03	0.01	0.00	36	62	3	3.99	1.00
C12.JL 170	1/4.	F_03	And	2.57	1.42	0.00	0.01	0.00	0.00	0.42	0.58	0.02	0.01	0.00	41	57	2	3.99	1.03
C12.JL 170	1/5.	F_03	And	2.58	1.41	0.00	0.01	0.00	0.00	0.41	0.59	0.02	0.01	0.00	40	58	2	3.99	1.02
C12.JL 170	1/6.	F_03	And	2.56	1.44	0.00	0.01	0.00	0.00	0.43	0.56	0.02	0.01	0.00	42	56	2	3.99	1.01
C12.JL 170	1/7.	F_03	Lab	2.47	1.51	0.00	0.01	0.00	0.00	0.52	0.48	0.01	0.01	0.00	51	47	1	3.99	1.02
C12.JL 170	1/8.	F_03	And	2.61	1.38	0.00	0.01	0.00	0.00	0.39	0.61	0.02	0.01	0.00	38	60	2	3.99	1.02
C12.JL 170	1/9.	F_03	high Mg	2.90	1.12	0.00	0.01	0.00	0.02	0.01	0.17	0.79	0.00	0.00	1	18	81	4.02	0.97
C12.JL 170	1/10.	F_03	And	2.56	1.43	0.00	0.01	0.00	0.00	0.43	0.56	0.02	0.01	0.00	43	55	2	3.99	1.01
C12.JL 170	1/11.	F_03	And	2.54	1.45	0.00	0.01	0.00	0.00	0.44	0.55	0.02	0.01	0.00	44	54	2	4.00	1.00
C12.JL 170	1/12.	F_03	Ano, high totals	2.87	1.12	0.00	0.00	0.00	0.00	0.11	0.73	0.18	0.01	0.00	11	72	17	3.99	1.02
C12.JL 170	1/14.	F_03	And	2.55	1.44	0.00	0.01	0.00	0.00	0.44	0.56	0.02	0.01	0.00	43	55	2	3.99	1.02
C12.JL 170	1/1.	F_04	high Mg	2.82	1.21	0.00	0.02	0.00	0.03	0.04	0.76	0.14	0.00	0.00	5	81	15	4.03	0.94
C12.JL 170	1/2.	F_04	And	2.62	1.37	0.00	0.01	0.00	0.00	0.37	0.60	0.03	0.01	0.00	37	60	3	3.99	1.00
C12.JL 170	1/3.	F_04	And	2.59	1.40	0.00	0.01	0.00	0.00	0.40	0.59	0.02	0.00	0.00	40	58	2	3.99	1.01
C12.JL 170	1/6.	F_04	high Mg	2.82	1.20	0.00	0.01	0.00	0.02	0.06	0.79	0.12	0.01	0.00	6	81	12	4.02	0.98
C12.JL 170	1/7.	F_04	high Mg	2.42	1.77	0.00	0.03	0.00	0.14	0.01	0.00	0.62	0.00	0.00	2	0	98	4.20	0.63
C12.JL 170	1/8.	F_04	Alb	2.98	1.03	0.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.00	1	99	0	4.00	1.00
C12.JL 170	1/9.	F_04	Alb	2.96	1.04	0.00	0.00	0.00	0.00	0.03	0.98	0.00	0.00	0.00	3	97	0	4.00	1.01
C12.JL 170	1/1.	F_05	Alb	2.95	1.05	0.00	0.00	0.00	0.00	0.03	0.97	0.00	0.00	0.00	3	97	0	4.01	1.00

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	Spot	Feld No.	Species	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	Sr	Ba	An. %	Al. %	Or. %	Si+Al(AFU)	Ca+Na+K(AFU)
C12.JL 170	1/2.	F_05	Alb	2.97	1.03	0.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.00	1	99	0	4.00	1.00
C12.JL 170	1/3.	F_05	Alb	2.94	1.05	0.00	0.00	0.00	0.00	0.05	0.97	0.01	0.00	0.00	4	95	0	3.99	1.02
C12.JL 170	1/4.	F_05	Alb	2.97	1.04	0.00	0.00	0.00	0.00	0.02	0.98	0.00	0.00	0.00	2	98	0	4.00	1.00
C12.JL 170	1/5.	F_05	Alb	2.96	1.04	0.00	0.00	0.00	0.00	0.03	0.96	0.00	0.00	0.00	3	97	0	4.00	0.99
C12.JL 170	1/6.	F_05	Alb	2.96	1.04	0.00	0.00	0.00	0.00	0.03	0.97	0.00	0.00	0.00	3	97	0	4.00	1.00
C12.JL 170	1/7.	F_05	Alb	2.97	1.04	0.00	0.00	0.00	0.00	0.02	0.97	0.00	0.00	0.00	2	98	0	4.01	0.99
C12.JL.47	1/1.	F_01	high Mg	2.97	1.01	0.00	0.01	0.00	0.02	0.01	0.07	0.95	0.00	0.01	1	7	93	3.98	1.02
C12.JL.47	1/3.	F_01	high Mg	2.80	1.18	0.00	0.02	0.00	0.01	0.17	0.82	0.02	0.00	0.00	17	81	2	3.98	1.02
C12.JL.47	1/5.	F_01	Oli	2.79	1.22	0.00	0.01	0.00	0.00	0.19	0.76	0.04	0.00	0.00	20	76	4	4.00	0.99
C12.JL.47	1/8.	F_01	San, high totals	2.99	1.01	0.00	0.01	0.00	0.00	0.00	0.10	0.91	0.00	0.00	0	10	90	3.99	1.01
C12.JL.47	1/10.	F_01	San	2.87	1.12	0.00	0.02	0.00	0.00	0.08	0.24	0.69	0.00	0.01	8	24	68	3.99	1.02
C12.JL.47	1/1.	F_02	San	2.95	1.04	0.00	0.01	0.00	0.00	0.01	0.15	0.84	0.00	0.03	1	15	84	3.99	1.00
C12.JL.47	1/2.	F_02	Oli	2.83	1.16	0.00	0.01	0.00	0.00	0.17	0.81	0.03	0.00	0.00	17	80	3	3.99	1.01
C12.JL.47	1/3.	F_02	San	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.11	0.91	0.00	0.00	0	11	89	3.99	1.02
C12.JL.47	1/5.	F_02	San	3.01	0.98	0.00	0.01	0.00	0.00	0.01	0.08	0.90	0.00	0.00	1	8	91	3.99	0.99
C12.JL.47	1/6.	F_02	Oli, high totals	2.72	1.27	0.00	0.01	0.00	0.00	0.26	0.72	0.04	0.00	0.00	26	71	3	3.99	1.01
C12.JL.47	1/8.	F_02	San	2.97	1.02	0.00	0.01	0.00	0.00	0.01	0.11	0.92	0.00	0.00	1	10	89	3.98	1.03
C12.JL.47	1/1.	F_03	And	2.60	1.39	0.00	0.01	0.00	0.00	0.39	0.59	0.03	0.01	0.00	39	59	3	3.99	1.01
C12.JL.47	1/2.	F_03	And	2.59	1.41	0.00	0.01	0.00	0.00	0.40	0.58	0.03	0.01	0.00	40	58	3	4.00	1.00
C12.JL.47	1/3.	F_03	And, high totals	2.61	1.38	0.00	0.01	0.00	0.00	0.37	0.63	0.03	0.00	0.00	36	61	3	3.99	1.03
C12.JL.47	1/4.	F_03	And	2.61	1.38	0.00	0.01	0.00	0.00	0.37	0.62	0.03	0.01	0.00	37	61	3	3.99	1.02
C12.JL.47	1/5.	F_03	And	2.57	1.42	0.00	0.01	0.00	0.00	0.42	0.57	0.02	0.00	0.00	41	56	2	3.99	1.02
C12.JL.47	1/6.	F_03	And	2.59	1.41	0.00	0.01	0.00	0.00	0.41	0.56	0.02	0.00	0.00	41	56	2	3.99	1.00
C12.JL.47	1/7.	F_03	And	2.59	1.39	0.00	0.01	0.00	0.00	0.40	0.60	0.03	0.01	0.00	39	59	2	3.99	1.02
C12.JL.47	1/8.	F_03	And	2.59	1.40	0.00	0.01	0.00	0.00	0.40	0.57	0.03	0.01	0.00	40	57	3	4.00	0.99
C12.JL.47	1/9.	F_03	And	2.61	1.38	0.00	0.01	0.00	0.00	0.38	0.59	0.03	0.01	0.00	38	59	3	4.00	1.00
C12.JL.47	1/10.	F_03	And	2.58	1.41	0.00	0.01	0.00	0.00	0.40	0.60	0.02	0.01	0.00	40	58	2	3.99	1.02
C12.JL.47	1/11.	F_03	And	2.58	1.41	0.00	0.01	0.00	0.00	0.40	0.59	0.02	0.00	0.00	40	58	2	3.99	1.02
C12.JL.47	1/12.	F_03	And	2.59	1.41	0.00	0.01	0.00	0.00	0.40	0.58	0.02	0.00	0.00	40	58	2	3.99	1.01
C12.JL.47	1/13.	F_03	And	2.60	1.39	0.00	0.01	0.00	0.00	0.39	0.62	0.02	0.01	0.00	38	60	2	3.99	1.02
C12.JL.47	1/14.	F_03	Lab	2.38	1.60	0.00	0.01	0.00	0.00	0.61	0.40	0.01	0.01	0.00	59	40	1	3.99	1.02
C12.JL.47	1/15.	F_03	And	2.52	1.47	0.00	0.01	0.00	0.00	0.48	0.53	0.02	0.00	0.00	46	52	2	3.98	1.03
C12.JL.47	1/16.	F_03	Oli	2.72	1.28	0.00	0.00	0.00	0.00	0.27	0.73	0.02	0.00	0.00	27	71	2	3.99	1.02
C12.JL.47	1/17.	F_03	Oli	2.74	1.25	0.00	0.01	0.00	0.00	0.25	0.74	0.02	0.00	0.00	25	73	2	3.99	1.02
C12.JL.47	1/18.	F_03	And	2.55	1.44	0.00	0.01	0.00	0.00	0.44	0.55	0.02	0.01	0.00	44	54	2	3.99	1.01
C12.JL.47	1/20.	F_03	And	2.54	1.45	0.00	0.01	0.00	0.00	0.45	0.54	0.02	0.01	0.00	45	54	2	3.99	1.01

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	Spot	Feld No.	Species	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	Sr	Ba	An. %	Al. %	Or. %	Si+Al(AFU)	Ca+Na+K(AFU)
C12.JL.47	1/1.	F_06	And	2.58	1.41	0.00	0.01	0.00	0.00	0.40	0.57	0.02	0.00	0.00	40	57	2	4.00	1.00
C12.JL.47	1/2.	F_06	And	2.63	1.37	0.00	0.01	0.00	0.00	0.37	0.61	0.03	0.00	0.00	36	61	3	3.99	1.01
C12.JL.47	1/3.	F_06	And	2.61	1.38	0.00	0.01	0.00	0.00	0.39	0.60	0.02	0.01	0.00	38	59	2	3.99	1.01
C12.JL.47	1/4.	F_06	And	2.61	1.39	0.00	0.01	0.00	0.00	0.38	0.60	0.03	0.00	0.00	38	59	3	3.99	1.01
C12.JL.47	1/5.	F_06	And	2.51	1.48	0.00	0.01	0.00	0.00	0.47	0.53	0.02	0.01	0.00	46	52	2	3.99	1.02
C12.JL.47	1/6.	F_06	And	2.58	1.41	0.00	0.01	0.00	0.00	0.41	0.58	0.03	0.01	0.00	40	57	3	3.99	1.01
C12.JL.47	1/7.	F_06	And	2.61	1.39	0.00	0.01	0.00	0.00	0.38	0.60	0.02	0.00	0.00	38	60	2	3.99	1.01
C12.JL.47	1/8.	F_06	And	2.64	1.35	0.00	0.01	0.00	0.00	0.36	0.63	0.03	0.01	0.00	35	62	3	3.99	1.02
C12.JL.47	1/9.	F_06	And	2.59	1.41	0.00	0.01	0.00	0.00	0.40	0.58	0.02	0.01	0.00	40	58	2	4.00	1.00
C12.JL.47	1/10.	F_06	And	2.59	1.40	0.00	0.01	0.00	0.00	0.40	0.59	0.02	0.01	0.00	40	58	2	3.99	1.02
C12.JL.47	1/11.	F_06	And	2.61	1.38	0.00	0.01	0.00	0.00	0.39	0.60	0.03	0.01	0.00	38	59	3	3.99	1.01
C12.JL.47	1/12.	F_06	And	2.56	1.43	0.00	0.01	0.00	0.00	0.43	0.56	0.02	0.01	0.00	42	55	2	3.99	1.01
C12.JL.47	1/13.	F_06	And	2.58	1.41	0.00	0.01	0.00	0.00	0.41	0.57	0.02	0.01	0.00	41	57	2	3.99	1.01
C12.JL.47	1/14.	F_06	And	2.59	1.40	0.00	0.01	0.00	0.00	0.40	0.58	0.02	0.00	0.00	40	58	2	3.99	1.00
C12.JL.47	1/15.	F_06	And	2.57	1.42	0.00	0.01	0.00	0.00	0.42	0.55	0.03	0.01	0.00	42	55	3	3.99	1.00
C12.JL.47	1/16.	F_06	And	2.57	1.42	0.00	0.01	0.00	0.00	0.43	0.56	0.02	0.01	0.00	42	55	2	3.99	1.00
C12.JL.47	1/17.	F_06	And	2.59	1.40	0.00	0.01	0.00	0.00	0.40	0.60	0.03	0.00	0.00	39	58	3	3.99	1.03
C12.JL.47	1/18.	F_06	And	2.62	1.37	0.00	0.01	0.00	0.00	0.37	0.60	0.04	0.00	0.00	37	59	4	3.99	1.01
C12.JL.47	1/19.	F_06	And	2.63	1.36	0.00	0.01	0.00	0.00	0.37	0.60	0.03	0.01	0.00	36	60	3	3.99	1.00
C12.JL.47	1/21.	F_06	Lab	2.43	1.56	0.00	0.01	0.00	0.00	0.57	0.43	0.01	0.01	0.00	56	43	1	3.98	1.02
C12.JL.47	1/22.	F_06	Oli	2.82	1.17	0.00	0.01	0.00	0.00	0.16	0.81	0.04	0.00	0.00	16	80	4	3.99	1.02
C12.JL.47	1/1.	F_07	And	2.62	1.37	0.00	0.01	0.00	0.00	0.37	0.62	0.02	0.01	0.00	37	61	2	3.99	1.02
C12.JL.47	1/2.	F_07	And	2.61	1.38	0.00	0.01	0.00	0.00	0.38	0.62	0.02	0.01	0.00	38	60	2	3.99	1.02
C12.JL.47	1/3.	F_07	And	2.59	1.40	0.00	0.01	0.00	0.00	0.40	0.59	0.02	0.01	0.00	40	58	2	3.99	1.02
C12.JL.47	1/4.	F_07	And	2.57	1.42	0.00	0.01	0.00	0.00	0.42	0.58	0.02	0.01	0.00	41	57	2	3.99	1.01
C12.JL.47	1/5.	F_07	And	2.60	1.39	0.00	0.01	0.00	0.00	0.38	0.63	0.02	0.00	0.00	37	61	2	3.99	1.02
C12.JL.47	1/6.	F_07	And	2.60	1.39	0.00	0.01	0.00	0.00	0.38	0.62	0.02	0.01	0.00	37	61	2	3.99	1.02
C12.JL.47	1/7.	F_07	And	2.63	1.36	0.00	0.01	0.00	0.00	0.36	0.63	0.03	0.01	0.00	35	62	2	3.99	1.01
C12.JL.47	1/8.	F_07	And	2.53	1.46	0.00	0.01	0.00	0.00	0.44	0.57	0.02	0.01	0.00	43	55	2	3.99	1.03
C12.JL.47	1/9.	F_07	And	2.55	1.44	0.00	0.01	0.00	0.00	0.44	0.55	0.02	0.01	0.00	44	54	2	3.99	1.01
C12.JL.47	1/11.	F_07	Lab	2.43	1.55	0.00	0.01	0.00	0.00	0.56	0.45	0.01	0.01	0.00	55	44	1	3.99	1.02
C12.JL.47	1/12.	F_07	And	2.54	1.45	0.00	0.01	0.00	0.00	0.45	0.55	0.02	0.01	0.00	44	54	2	3.99	1.02
C12.JL.47	1/13.	F_07	San	2.98	1.02	0.00	0.00	0.00	0.00	0.00	0.25	0.77	0.00	0.00	0	25	75	4.00	1.02
C12.JL.47	1/14.	F_07	San	2.97	1.03	0.00	0.00	0.00	0.00	0.00	0.17	0.84	0.00	0.01	0	17	83	4.00	1.01
C12.JL.47	1/15.	F_07	San	2.97	1.02	0.00	0.00	0.00	0.00	0.01	0.16	0.87	0.00	0.00	1	16	84	3.99	1.04
C12.JL.47	1/16.	F_07	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.12	0.91	0.00	0.00	0	12	88	3.99	1.03

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	Spot	Feld No.	Species	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	Sr	Ba	An. %	Al. %	Or. %	Si+Al(AFU)	Ca+Na+K(AFU)
C12.JL.47	1/17.	F_07	And	2.62	1.37	0.00	0.01	0.00	0.00	0.36	0.64	0.02	0.01	0.00	35	63	2	4.00	1.01
C12.JL.47	1/20.	F_07	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.09	0.93	0.00	0.00	0	9	91	3.99	1.03
C12.JL.47	1/21.	F_07	And	2.52	1.47	0.00	0.01	0.00	0.00	0.46	0.54	0.01	0.01	0.00	45	53	1	3.99	1.02
C12.JL.47	1/4.	F_09	Oli	2.88	1.10	0.00	0.02	0.00	0.00	0.12	0.82	0.05	0.00	0.00	12	83	5	3.99	1.00
C12.JL.47	1/1.	F_043	Oli	2.79	1.20	0.00	0.01	0.00	0.00	0.20	0.76	0.04	0.00	0.00	20	76	4	3.99	1.00
C12.JL.47	1/2.	F_043	Oli	2.84	1.15	0.00	0.01	0.00	0.00	0.16	0.80	0.04	0.00	0.00	16	80	4	3.99	1.00
C12.JL.47	1/3.	F_043	Oli, low totals	2.89	1.11	0.00	0.01	0.00	0.00	0.11	0.86	0.02	0.00	0.00	11	87	2	4.00	0.99
C12.JL.47	1/5.	F_043	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.10	0.91	0.00	0.01	0	10	90	3.99	1.01
C12.JL.47	1/8.	F_043	Oli	2.85	1.15	0.00	0.01	0.00	0.00	0.15	0.80	0.04	0.00	0.00	15	81	4	4.00	0.99
C12.JL.47	1/11.	F_043	San	2.99	1.01	0.00	0.01	0.00	0.00	0.00	0.06	0.93	0.00	0.01	0	6	94	3.99	0.99
C12.JL.47	1/12.	F_043	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.06	0.94	0.00	0.01	0	6	94	3.99	1.01
C12.JL.47	1/13.	F_043	San	2.95	1.05	0.00	0.00	0.00	0.00	0.00	0.07	0.92	0.00	0.04	0	7	93	4.00	0.99
C12.JL.180	1/1.	F_01	Oli	2.79	1.20	0.00	0.01	0.00	0.00	0.20	0.80	0.02	0.00	0.00	20	78	2	3.99	1.02
C12.JL.180	1/2.	F_01	Oli	2.79	1.20	0.00	0.01	0.00	0.00	0.20	0.79	0.02	0.00	0.00	20	78	2	3.99	1.02
C12.JL.180	1/3.	F_01	high Mg	2.81	1.16	0.00	0.02	0.00	0.02	0.20	0.77	0.02	0.00	0.00	20	78	2	3.98	0.99
C12.JL.180	1/7.	F_01	Oli	2.80	1.19	0.00	0.01	0.00	0.00	0.19	0.80	0.03	0.00	0.00	19	78	3	3.99	1.02
C12.JL.180	1/8.	F_01	Oli	2.83	1.16	0.00	0.01	0.00	0.00	0.16	0.83	0.02	0.00	0.00	16	82	2	3.99	1.01
C12.JL.180	1/9.	F_01	Alb	2.93	1.07	0.00	0.00	0.00	0.00	0.05	0.94	0.01	0.00	0.00	5	94	1	4.00	1.00
C12.JL.180	1/13.	F_01	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.14	0.88	0.00	0.01	0	14	86	3.99	1.02
C12.JL.180	1/14.	F_01	San	2.93	1.04	0.00	0.04	0.00	0.00	0.01	0.12	0.88	0.00	0.02	1	12	87	3.97	1.02
C12.JL.180	1/16.	F_01	And	2.60	1.39	0.00	0.01	0.00	0.00	0.38	0.61	0.02	0.00	0.00	38	60	2	3.99	1.01
C12.JL.180	1/21.	F_01	Oli, low totals	2.81	1.18	0.00	0.01	0.00	0.00	0.17	0.80	0.02	0.00	0.00	17	80	2	4.00	1.00
C12.JL.180	1/24.	F_01	Oli	2.81	1.17	0.00	0.01	0.00	0.00	0.21	0.78	0.01	0.00	0.00	21	78	1	3.99	1.00
C12.JL.180	1/1.	F_03	San	2.98	1.02	0.00	0.01	0.00	0.00	0.01	0.26	0.74	0.00	0.01	1	26	74	3.99	1.01
C12.JL.180	1/2.	F_03	San	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.17	0.86	0.00	0.01	0	16	84	3.99	1.02
C12.JL.180	1/3.	F_03	San	2.98	1.01	0.00	0.01	0.00	0.00	0.01	0.29	0.72	0.00	0.00	1	29	70	3.99	1.02
C12.JL.180	1/4.	F_03	San	2.97	1.01	0.00	0.01	0.00	0.00	0.01	0.09	0.93	0.00	0.01	1	9	91	3.99	1.03
C12.JL.180	1/5.	F_03	San	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.21	0.80	0.00	0.01	0	21	79	3.99	1.01
C12.JL.180	1/6.	F_03	Oli	2.75	1.24	0.00	0.01	0.00	0.00	0.24	0.75	0.04	0.00	0.00	23	73	4	3.99	1.02
C12.JL.180	1/7.	F_03	Alb	2.94	1.05	0.00	0.01	0.00	0.00	0.04	0.99	0.02	0.00	0.00	3	95	2	3.99	1.04
C12.JL.180	1/8.	F_03	San	2.97	1.02	0.00	0.01	0.00	0.00	0.00	0.19	0.83	0.00	0.01	0	18	82	3.99	1.01
C12.JL.180	1/9.	F_03	San	2.97	1.02	0.00	0.01	0.00	0.00	0.01	0.26	0.76	0.00	0.00	1	25	74	3.99	1.03
C12.JL.180	1/10.	F_03	San	2.97	1.03	0.00	0.01	0.00	0.00	0.00	0.20	0.82	0.00	0.01	0	20	80	4.00	1.01
C12.JL.180	1/11.	F_03	San	2.95	1.03	0.00	0.01	0.00	0.00	0.02	0.26	0.79	0.00	0.01	2	24	74	3.98	1.06
C12.JL.180	1/17.	F_03	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.19	0.84	0.00	0.01	0	18	82	3.99	1.03
C12.JL.180	1/1.	F_04	And	2.60	1.39	0.00	0.01	0.00	0.00	0.40	0.59	0.03	0.01	0.00	39	58	3	3.99	1.02

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	Spot	Feld No.	Species	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	Sr	Ba	An. %	Al. %	Or. %	Si+Al(AFU)	Ca+Na+K(AFU)
C12.JL.180	1/2.	F_04	And	2.60	1.39	0.00	0.01	0.00	0.00	0.39	0.59	0.03	0.01	0.00	39	58	3	3.99	1.01
C12.JL.180	1/3.	F_04	And	2.59	1.39	0.00	0.01	0.00	0.00	0.39	0.61	0.03	0.00	0.00	38	59	3	3.99	1.02
C12.JL.180	1/4.	F_04	And	2.51	1.48	0.00	0.01	0.00	0.00	0.48	0.51	0.02	0.01	0.00	48	50	2	3.99	1.01
C12.JL.180	1/5.	F_04	And	2.59	1.39	0.00	0.01	0.00	0.00	0.40	0.59	0.02	0.00	0.00	39	58	2	3.99	1.01
C12.JL.180	1/6.	F_04	And	2.61	1.38	0.00	0.01	0.00	0.00	0.38	0.61	0.03	0.00	0.00	37	60	3	3.99	1.02
C12.JL.180	1/7.	F_04	And	2.59	1.41	0.00	0.01	0.00	0.00	0.41	0.57	0.02	0.00	0.00	41	56	2	3.99	1.00
C12.JL.180	1/8.	F_04	And	2.55	1.44	0.00	0.01	0.00	0.00	0.44	0.56	0.02	0.01	0.00	43	55	2	3.99	1.02
C12.JL.180	1/9.	F_04	Lab, high totals	2.46	1.53	0.00	0.01	0.00	0.00	0.52	0.47	0.02	0.00	0.00	52	47	2	3.99	1.01
C12.JL.180	1/10.	F_04	And	2.56	1.43	0.00	0.01	0.00	0.00	0.43	0.56	0.02	0.00	0.00	42	55	2	3.99	1.01
C12.JL.180	1/11.	F_04	And	2.59	1.40	0.00	0.01	0.00	0.00	0.40	0.58	0.03	0.01	0.00	40	58	3	3.99	1.01
C12.JL.180	1/12.	F_04	And	2.59	1.40	0.00	0.01	0.00	0.00	0.41	0.58	0.03	0.01	0.00	40	57	2	3.99	1.02
C12.JL.180	1/13.	F_04	And	2.62	1.38	0.00	0.01	0.00	0.00	0.38	0.60	0.03	0.00	0.00	38	60	3	3.99	1.01
C12.JL.180	1/14.	F_04	And	2.53	1.46	0.00	0.01	0.00	0.00	0.46	0.53	0.02	0.01	0.00	45	53	2	3.99	1.02
C12.JL.180	1/15.	F_04	And	2.59	1.40	0.00	0.01	0.00	0.00	0.41	0.57	0.03	0.01	0.00	41	57	3	3.99	1.01
C12.JL.180	1/16.	F_04	And	2.55	1.44	0.00	0.01	0.00	0.00	0.44	0.57	0.02	0.01	0.00	42	55	2	3.99	1.03
C12.JL.180	1/17.	F_04	And	2.60	1.40	0.00	0.01	0.00	0.00	0.40	0.58	0.02	0.00	0.00	40	58	2	3.99	1.01
C12.JL.180	1/18.	F_04	And	2.60	1.39	0.00	0.01	0.00	0.00	0.39	0.61	0.03	0.00	0.00	38	60	3	3.99	1.02
C12.JL.180	1/19.	F_04	And	2.62	1.37	0.00	0.01	0.00	0.00	0.37	0.60	0.03	0.01	0.00	37	60	3	3.99	1.00
C12.JL.180	1/20.	F_04	And	2.61	1.37	0.00	0.01	0.00	0.00	0.37	0.63	0.03	0.00	0.00	36	61	3	3.99	1.03
C12.JL.180	1/21.	F_04	And	2.60	1.40	0.00	0.01	0.00	0.00	0.39	0.59	0.03	0.01	0.00	39	59	3	3.99	1.01
C12.JL.180	1/22.	F_04	And	2.59	1.40	0.00	0.01	0.00	0.00	0.40	0.59	0.03	0.01	0.00	39	58	3	3.99	1.02
C12.JL.180	1/23.	F_04	And	2.62	1.37	0.00	0.01	0.00	0.00	0.36	0.61	0.03	0.01	0.00	36	61	3	3.99	1.00
C12.JL.180	1/24.	F_04	And	2.59	1.41	0.00	0.01	0.00	0.00	0.40	0.59	0.03	0.00	0.00	39	58	3	3.99	1.01
C12.JL.180	1/25.	F_04	And	2.58	1.41	0.00	0.01	0.00	0.00	0.41	0.57	0.03	0.01	0.00	40	57	3	3.99	1.00
C12.JL.180	1/26.	F_04	And	2.54	1.45	0.00	0.01	0.00	0.00	0.45	0.54	0.02	0.01	0.00	44	53	2	3.99	1.01
C12.JL.180	1/27.	F_04	And	2.55	1.44	0.00	0.01	0.00	0.00	0.44	0.54	0.02	0.01	0.00	44	54	2	3.99	1.01
C12.JL.180	1/28.	F_04	Lab	2.48	1.50	0.00	0.01	0.00	0.00	0.52	0.49	0.02	0.01	0.00	51	48	2	3.98	1.04
C12.JL.180	1/29.	F_04	And	2.50	1.49	0.00	0.01	0.00	0.00	0.48	0.52	0.02	0.01	0.00	47	51	2	3.99	1.02
C12.JL.180	1/30.	F_04	And	2.50	1.49	0.00	0.01	0.00	0.00	0.48	0.52	0.02	0.01	0.00	47	51	2	3.99	1.02
C12.JL.180	1/31.	F_04	And	2.58	1.40	0.00	0.01	0.00	0.00	0.40	0.60	0.02	0.01	0.00	39	58	2	3.99	1.02
C12.JL.180	1/32.	F_04	And	2.58	1.41	0.00	0.01	0.00	0.00	0.40	0.59	0.02	0.01	0.00	40	58	2	3.99	1.02
C12.JL.180	1/33.	F_04	And	2.56	1.43	0.00	0.01	0.00	0.00	0.43	0.56	0.02	0.01	0.00	43	55	2	3.99	1.01
C12.JL.180	1/34.	F_04	And	2.56	1.43	0.00	0.01	0.00	0.00	0.42	0.58	0.02	0.01	0.00	41	57	2	3.99	1.02
C12.JL.180	1/35.	F_04	And	2.55	1.43	0.00	0.01	0.00	0.00	0.43	0.57	0.02	0.01	0.00	42	55	2	3.99	1.02
C12.JL.180	1/36.	F_04	And	2.62	1.38	0.00	0.01	0.00	0.00	0.37	0.61	0.02	0.00	0.00	37	61	2	3.99	1.01
C12.JL.180	1/37.	F_04	And	2.62	1.37	0.00	0.01	0.00	0.00	0.37	0.62	0.03	0.01	0.00	36	61	3	3.99	1.02

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	Spot	Feld No.	Species	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	Sr	Ba	An. %	Al. %	Or. %	Si+Al(AFU)	Ca+Na+K(AFU)
C12.JL.180	1/38.	F_04	And	2.61	1.38	0.00	0.01	0.00	0.00	0.38	0.61	0.03	0.01	0.00	38	60	3	3.99	1.02
C12.JL.180	1/39.	F_04	And	2.60	1.39	0.00	0.01	0.00	0.00	0.38	0.60	0.03	0.01	0.00	38	60	3	4.00	1.01
C12.JL.180	1/40.	F_04	And	2.59	1.40	0.00	0.01	0.00	0.00	0.40	0.59	0.03	0.01	0.00	39	58	3	3.99	1.02
C12.JL.180	1/41.	F_04	And	2.62	1.38	0.00	0.01	0.00	0.00	0.36	0.63	0.02	0.01	0.00	36	62	2	3.99	1.02
C12.JL.180	1/42.	F_04	And	2.56	1.43	0.00	0.01	0.00	0.00	0.42	0.53	0.06	0.01	0.00	42	53	6	3.99	1.01
C12.JL.180	1/43.	F_04	And	2.63	1.36	0.00	0.01	0.00	0.00	0.36	0.64	0.02	0.00	0.00	35	63	2	3.99	1.02
C12.JL.180	1/44.	F_04	And	2.60	1.39	0.00	0.01	0.00	0.00	0.38	0.61	0.02	0.00	0.00	37	60	2	3.99	1.02
C12.JL.180	1/46.	F_04	Oli	2.84	1.16	0.00	0.00	0.00	0.00	0.14	0.85	0.02	0.00	0.00	14	84	2	4.00	1.02
C12.JL.180	1/49.	F_04	San	2.90	1.08	0.00	0.01	0.00	0.00	0.07	0.42	0.58	0.00	0.01	6	39	54	3.98	1.07
C12.JL.180	1/50.	F_04	San	2.96	1.03	0.00	0.00	0.00	0.00	0.01	0.16	0.85	0.00	0.01	1	16	83	3.99	1.02
C12.JL.180	1/52.	F_04	San	2.97	1.03	0.00	0.00	0.00	0.00	0.00	0.06	0.96	0.00	0.01	0	6	94	3.99	1.03
C12.JL.180	1/54.	F_04	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.10	0.92	0.00	0.01	0	10	90	3.99	1.02
C12.JL.180	1/55.	F_04	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.13	0.89	0.00	0.01	0	13	87	3.99	1.02
C12.JL.180	1/1.	F_05	Oli	2.77	1.22	0.00	0.02	0.00	0.00	0.20	0.75	0.04	0.00	0.00	20	75	4	3.99	1.00
C12.JL.180	1/2.	F_05	Oli	2.78	1.21	0.00	0.01	0.00	0.00	0.22	0.76	0.02	0.00	0.00	22	76	2	3.99	1.00
C12.JL.180	1/3.	F_05	Oli	2.81	1.18	0.00	0.01	0.00	0.00	0.18	0.75	0.09	0.00	0.00	17	74	9	3.99	1.02
C12.JL.180	1/6.	F_05	Oli	2.77	1.22	0.00	0.01	0.00	0.00	0.23	0.76	0.02	0.00	0.00	23	75	2	3.99	1.01
C12.JL.180	1/7.	F_05	Oli	2.84	1.15	0.00	0.01	0.00	0.00	0.15	0.81	0.04	0.00	0.00	15	81	4	3.99	1.00
C12.JL.180	1/10.	F_05	San	2.96	1.04	0.00	0.00	0.00	0.00	0.02	0.43	0.57	0.00	0.00	2	42	55	4.00	1.02
C12.JL.180	1/14.	F_05	San	2.97	1.03	0.00	0.01	0.00	0.00	0.00	0.11	0.90	0.00	0.01	0	11	89	3.99	1.01
C12.JL.180	1/19.	F_05	Oli, low totals	2.91	1.08	0.00	0.01	0.00	0.00	0.14	0.79	0.04	0.00	0.00	14	82	4	3.99	0.96
C12.JL.180	1/20.	F_05	Oli, high totals	2.71	1.28	0.00	0.01	0.00	0.00	0.27	0.72	0.02	0.00	0.00	27	71	2	3.99	1.02
C12.JL.180	1/21.	F_05	San	2.97	1.02	0.00	0.01	0.00	0.00	0.00	0.14	0.89	0.00	0.01	0	13	87	3.99	1.02
C12.JL.180	1/22.	F_05	Oli	2.75	1.24	0.00	0.01	0.00	0.00	0.24	0.73	0.05	0.00	0.00	23	72	4	3.99	1.02
C12.JL.180	1/24.	F_05	San	2.96	1.03	0.00	0.00	0.00	0.00	0.01	0.16	0.86	0.00	0.01	1	16	83	3.99	1.03
C12.JL.180	1/25.	F_05	San	2.97	1.03	0.00	0.00	0.00	0.00	0.00	0.13	0.87	0.00	0.01	0	13	87	4.00	1.00
C12.JL.180	1/27.	F_05	And	2.64	1.35	0.00	0.01	0.00	0.00	0.35	0.65	0.03	0.00	0.00	34	63	3	3.99	1.02
C12.JL.180	1/1.	F_06	And	2.54	1.45	0.00	0.01	0.00	0.00	0.45	0.54	0.02	0.01	0.00	44	54	2	3.99	1.01
C12.JL.180	1/2.	F_06	And	2.55	1.44	0.00	0.01	0.00	0.00	0.44	0.55	0.02	0.01	0.00	44	55	2	3.99	1.01
C12.JL.180	1/3.	F_06	And	2.54	1.45	0.00	0.01	0.00	0.00	0.44	0.56	0.02	0.01	0.00	43	55	2	3.99	1.02
C12.JL.180	1/4.	F_06	And	2.58	1.41	0.00	0.01	0.00	0.00	0.40	0.59	0.02	0.00	0.00	40	58	2	3.99	1.01
C12.JL.180	1/5.	F_06	Lab	2.49	1.50	0.00	0.01	0.00	0.00	0.50	0.50	0.02	0.01	0.00	50	49	2	3.99	1.02
C12.JL.180	1/6.	F_06	And	2.58	1.41	0.00	0.01	0.00	0.00	0.41	0.59	0.02	0.01	0.00	40	58	2	3.99	1.02
C12.JL.180	1/7.	F_06	And	2.62	1.38	0.00	0.01	0.00	0.00	0.37	0.62	0.02	0.00	0.00	37	61	2	3.99	1.02
C12.JL.180	1/8.	F_06	And	2.63	1.36	0.00	0.01	0.00	0.00	0.36	0.63	0.02	0.00	0.00	36	62	2	3.99	1.01
C12.JL.180	1/12.	F_06	San, low totals	2.96	1.04	0.00	0.00	0.00	0.00	0.02	0.19	0.80	0.00	0.01	2	19	79	3.99	1.01

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	Spot	Feld No.	Species	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	Sr	Ba	An. %	Al. %	Or. %	Si+Al(AFU)	Ca+Na+K(AFU)
C12.JL.180	1/14.	F_06	San	2.95	1.04	0.00	0.00	0.00	0.00	0.00	0.09	0.91	0.00	0.03	0	9	91	3.99	1.00
C12.JL.180	1/15.	F_06	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.06	0.97	0.00	0.01	0	6	94	3.99	1.03
C12.JL.180	1/16.	F_06	San	2.94	1.06	0.00	0.00	0.00	0.00	0.04	0.48	0.48	0.00	0.01	4	48	48	4.00	1.01
C12.JL.180	1/17.	F_06	San	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.10	0.92	0.00	0.00	0	10	90	3.99	1.02
C12.JL.180	1/18.	F_06	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.10	0.92	0.00	0.01	0	9	91	4.00	1.02
C12.JL.180	1/23.	F_06	Oli	2.77	1.22	0.00	0.01	0.00	0.00	0.22	0.77	0.02	0.00	0.00	22	76	2	3.99	1.01
C12.JL.180	1/27.	F_06	San	2.97	1.02	0.00	0.01	0.00	0.00	0.01	0.24	0.79	0.00	0.01	1	24	76	3.98	1.04
C12.JL.180	1/28.	F_06	San	2.95	1.06	0.00	0.00	0.00	0.00	0.03	0.51	0.47	0.00	0.00	3	51	46	4.01	1.00
C11.JL 178	1/1.	F_02	San, high totals	2.96	1.03	0.00	0.01	0.00	0.00	0.01	0.54	0.48	0.00	0.01	1	53	47	3.99	1.02
C11.JL 178	1/2.	F_02	San	2.96	1.03	0.00	0.01	0.00	0.00	0.00	0.32	0.70	0.00	0.01	0	31	69	3.99	1.01
C11.JL 178	1/3.	F_02	San	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.26	0.75	0.00	0.00	0	26	74	4.00	1.01
C11.JL 178	1/4.	F_02	San	2.96	1.04	0.00	0.01	0.00	0.00	0.01	0.21	0.78	0.00	0.00	1	21	79	4.00	0.99
C11.JL 178	1/5.	F_02	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.11	0.91	0.00	0.00	0	11	89	3.99	1.02
C11.JL 178	1/6.	F_02	high Mg	2.96	1.04	0.00	0.01	0.00	0.00	0.02	0.98	0.01	0.00	0.00	2	97	1	4.00	1.01
C11.JL 178	1/9.	F_02	San	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.24	0.77	0.00	0.01	0	24	76	3.99	1.01
C11.JL 178	1/10.	F_02	Ano	2.97	1.02	0.00	0.00	0.00	0.00	0.01	0.74	0.29	0.00	0.00	1	71	28	3.99	1.04
C11.JL 178	1/11.	F_02	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.17	0.85	0.00	0.01	0	17	83	3.99	1.02
C11.JL 178	1/12.	F_02	Ano	2.95	1.03	0.00	0.02	0.00	0.00	0.02	0.75	0.28	0.00	0.00	2	71	27	3.98	1.05
C11.JL 178	1/13.	F_02	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.20	0.83	0.00	0.01	0	19	81	3.99	1.03
C11.JL 178	1/14.	F_02	San, low totals	2.99	1.01	0.00	0.01	0.00	0.00	0.00	0.38	0.61	0.00	0.00	0	39	61	4.00	1.00
C11.JL 178	1/15.	F_02	high Mg	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.39	0.62	0.00	0.00	0	39	61	3.99	1.01
C11.JL 178	1/16.	F_02	high Mg	2.97	1.03	0.00	0.01	0.00	0.00	0.02	0.80	0.18	0.00	0.00	2	80	18	4.00	1.00
C11.JL 178	1/17.	F_02	San	2.96	1.02	0.00	0.01	0.00	0.00	0.01	0.44	0.60	0.00	0.00	1	42	57	3.99	1.05
C11.JL 178	1/18.	F_02	high Mg	3.05	0.96	0.00	0.01	0.00	0.00	0.00	0.14	0.76	0.00	0.00	0	16	84	4.01	0.90
C11.JL 178	1/19.	F_02	San	2.97	1.01	0.00	0.04	0.00	0.00	0.00	0.53	0.47	0.00	0.00	0	53	47	3.98	1.01
C11.JL 178	1/1.	F_03	San	2.97	1.01	0.00	0.01	0.00	0.00	0.00	0.24	0.78	0.00	0.01	0	24	76	3.99	1.02
C11.JL 178	1/2.	F_03	San	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.29	0.71	0.00	0.01	0	29	71	4.00	1.00
C11.JL 178	1/3.	F_03	San	2.97	1.03	0.00	0.01	0.00	0.00	0.01	0.49	0.51	0.00	0.01	1	48	51	3.99	1.00
C11.JL 178	1/4.	F_03	San	2.97	1.02	0.00	0.01	0.00	0.00	0.01	0.50	0.50	0.00	0.01	1	50	50	3.99	1.00
C11.JL 178	1/5.	F_03	San	2.97	1.02	0.00	0.01	0.00	0.00	0.00	0.26	0.75	0.00	0.01	0	26	74	3.99	1.02
C11.JL 178	1/6.	F_03	San	2.96	1.02	0.00	0.01	0.00	0.00	0.00	0.18	0.86	0.00	0.01	0	17	83	3.99	1.04
C11.JL 178	1/7.	F_03	San	2.97	1.01	0.00	0.01	0.00	0.00	0.00	0.35	0.70	0.00	0.01	0	34	66	3.98	1.06
C11.JL 178	1/8.	F_03	San	2.97	1.02	0.00	0.01	0.00	0.00	0.00	0.14	0.88	0.00	0.01	0	14	86	3.99	1.02
C11.JL 178	1/9.	F_03	Alb	2.94	1.06	0.00	0.01	0.00	0.00	0.04	0.94	0.02	0.00	0.00	4	94	2	4.00	1.00
C11.JL 178	1/10.	F_03	Alb	2.97	1.04	0.00	0.00	0.00	0.00	0.02	0.96	0.02	0.00	0.00	2	96	2	4.00	1.00
C11.JL 178	1/11.	F_03	Ano	2.97	1.03	0.00	0.01	0.00	0.00	0.02	0.90	0.11	0.00	0.00	2	88	10	3.99	1.02

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	Spot	Feld No.	Species	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	Sr	Ba	An. %	Al. %	Or. %	Si+Al(AFU)	Ca+Na+K(AFU)
C11.JL 178	1/12.	F_03	Alb	2.97	1.03	0.00	0.01	0.00	0.00	0.01	0.98	0.02	0.00	0.00	1	97	2	4.00	1.01
C11.JL 178	1/13.	F_03	Alb	2.93	1.08	0.00	0.00	0.00	0.00	0.06	0.92	0.02	0.00	0.00	6	92	2	4.00	1.01
C11.JL 178	1/14.	F_03	Alb	2.94	1.06	0.00	0.01	0.00	0.00	0.04	0.94	0.04	0.00	0.00	4	92	4	4.00	1.02
C11.JL 178	1/15.	F_03	San	2.99	1.01	0.00	0.01	0.00	0.00	0.00	0.18	0.83	0.00	0.00	0	18	82	4.00	1.01
C11.JL 178	1/16.	F_03	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.29	0.75	0.00	0.00	0	28	72	3.99	1.04
C11.JL 178	1/17.	F_03	San	2.97	1.03	0.00	0.00	0.00	0.00	0.00	0.16	0.84	0.00	0.00	0	16	84	4.00	1.01
C11.JL 178	1/18.	F_03	San	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.16	0.87	0.00	0.00	0	15	85	4.00	1.02
C11.JL 178	1/19.	F_03	San	2.97	1.02	0.00	0.01	0.00	0.00	0.01	0.54	0.48	0.00	0.00	1	53	46	3.99	1.03
C11.JL 178	1/20.	F_03	San	2.96	1.03	0.00	0.01	0.00	0.00	0.01	0.56	0.49	0.00	0.00	1	53	46	3.99	1.07
C11.JL 178	1/21.	F_03	San	2.96	1.04	0.00	0.01	0.00	0.00	0.00	0.26	0.77	0.00	0.00	0	25	75	4.00	1.03
C11.JL 178	1/22.	F_03	San	2.96	1.04	0.00	0.01	0.00	0.00	0.00	0.25	0.76	0.00	0.00	0	25	75	4.00	1.01
C11.JL 178	1/23.	F_03	Alb, low totals	2.99	1.01	0.00	0.01	0.00	0.00	0.01	0.96	0.03	0.00	0.00	1	96	3	4.00	0.99
C11.JL 178	1/24.	F_03	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.49	0.52	0.00	0.01	0	48	51	3.99	1.01
C11.JL 178	1/25.	F_03	San	2.97	1.02	0.00	0.01	0.00	0.00	0.01	0.54	0.47	0.00	0.01	1	53	46	3.99	1.02
C11.JL 178	1/26.	F_03	high Mg	2.97	1.02	0.01	0.01	0.00	0.01	0.01	0.27	0.67	0.00	0.01	1	28	71	3.99	0.95
C11.JL 178	1/29.	F_05	high Mg	2.88	1.12	0.00	0.01	0.00	0.01	0.10	0.84	0.05	0.00	0.00	10	85	5	4.00	0.99
C11.JL 178	1/33.	F_05	Alb	2.97	1.02	0.00	0.00	0.00	0.00	0.01	0.99	0.02	0.00	0.00	1	97	1	4.00	1.02
C11.JL 178	1/35.	F_05	San	2.99	1.00	0.00	0.01	0.00	0.00	0.00	0.10	0.92	0.00	0.00	0	10	90	3.99	1.02
C11.JL 178	1/38.	F_05	San	2.99	1.01	0.00	0.01	0.00	0.00	0.00	0.19	0.80	0.00	0.00	0	19	81	4.00	0.99
C11.JL 178	1/39.	F_05	high Mg	2.93	1.06	0.00	0.01	0.00	0.01	0.02	0.87	0.14	0.00	0.00	2	85	13	4.00	1.03
C11.JL 178	1/40.	F_05	Ano	2.97	1.02	0.00	0.00	0.00	0.00	0.01	0.81	0.22	0.00	0.00	1	78	21	3.99	1.04
C11.JL 178	1/41.	F_05	San	2.98	1.02	0.00	0.00	0.00	0.00	0.01	0.59	0.40	0.00	0.00	1	59	40	4.00	0.99
C11.JL 178	1/42.	F_05	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.13	0.89	0.00	0.00	0	13	87	3.99	1.03
C11.JL 178	1/43.	F_05	Ano	2.98	1.02	0.00	0.00	0.00	0.00	0.01	0.67	0.33	0.00	0.00	1	67	33	4.00	1.00
C11.JL 178	1/44.	F_05	San	2.98	1.02	0.00	0.00	0.00	0.00	0.00	0.20	0.82	0.00	0.00	0	20	80	4.00	1.02
C11.JL 178	1/45.	F_05	Alb, low totals	2.99	1.02	0.00	0.01	0.00	0.00	0.02	0.90	0.03	0.00	0.00	2	95	3	4.01	0.95
C11.JL 178	1/46.	F_05	San	2.99	1.01	0.00	0.00	0.00	0.00	0.00	0.19	0.80	0.00	0.00	0	19	81	4.00	0.99
C11.JL 178	1/47.	F_05	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.27	0.75	0.00	0.00	0	26	74	3.99	1.02
C11.JL 178	1/48.	F_05	San	2.99	1.01	0.00	0.00	0.00	0.00	0.00	0.12	0.90	0.00	0.00	0	11	89	4.00	1.02
C11.JL 178	1/51.	F_05	Ano, low totals	2.96	1.05	0.00	0.00	0.00	0.00	0.03	0.65	0.30	0.00	0.00	3	66	31	4.01	0.98
C11.JL 178	1/52.	F_05	Alb, low totals	2.95	1.06	0.00	0.00	0.00	0.00	0.03	0.96	0.02	0.00	0.00	3	95	2	4.00	1.01
C11.JL 178	1/1.	F_07	Alb	2.96	1.04	0.00	0.00	0.00	0.00	0.02	0.96	0.03	0.00	0.00	2	95	2	4.00	1.01
C11.JL 178	1/2.	F_07	San	2.98	1.02	0.00	0.00	0.00	0.00	0.00	0.16	0.85	0.00	0.00	0	15	85	4.00	1.01
C11.JL 178	1/3.	F_07	Alb	2.95	1.04	0.00	0.00	0.00	0.00	0.04	0.95	0.02	0.00	0.00	4	94	2	4.00	1.01
C11.JL 178	1/4.	F_07	Alb	2.94	1.06	0.00	0.00	0.00	0.00	0.05	0.93	0.02	0.00	0.00	5	93	2	4.00	1.00
C11.JL 178	1/5.	F_07	San	2.99	1.00	0.00	0.01	0.00	0.00	0.00	0.15	0.87	0.00	0.00	0	15	85	3.99	1.01

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	Spot	Feld No.	Species	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	Sr	Ba	An. %	Al. %	Or. %	Si+Al(AFU)	Ca+Na+K(AFU)
C11.JL 178	1/6.	F_07	high Mg	2.96	1.04	0.00	0.00	0.00	0.00	0.02	0.94	0.02	0.00	0.00	2	96	2	4.01	0.98
C11.JL 178	1/7.	F_07	Alb	2.92	1.07	0.00	0.01	0.00	0.00	0.06	0.95	0.03	0.00	0.00	5	92	3	3.99	1.03
C11.JL 178	1/9.	F_07	Alb	2.97	1.03	0.00	0.00	0.00	0.00	0.01	0.99	0.02	0.00	0.00	1	97	2	4.00	1.03
C11.JL 178	1/10.	F_07	Alb	2.97	1.03	0.00	0.00	0.00	0.00	0.01	0.96	0.03	0.00	0.00	1	96	3	4.00	1.00
C11.JL 178	1/11.	F_07	Alb	2.98	1.02	0.00	0.00	0.00	0.00	0.01	0.99	0.02	0.00	0.00	1	97	2	4.00	1.01
C11.JL 178	1/12.	F_07	Alb	2.91	1.08	0.00	0.01	0.00	0.00	0.06	0.93	0.02	0.00	0.00	6	92	2	4.00	1.02
C11.JL 178	1/13.	F_07	high Mg	2.93	1.06	0.00	0.01	0.00	0.01	0.04	0.93	0.02	0.00	0.00	4	94	2	4.00	0.99
C11.JL 178	1/14.	F_07	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.26	0.80	0.00	0.01	0	24	76	3.99	1.06
C11.JL 178	1/15.	F_07	Ano	2.97	1.02	0.00	0.00	0.00	0.00	0.01	0.74	0.32	0.00	0.00	1	69	30	3.99	1.06
C11.JL 178	1/16.	F_07	San	2.99	1.00	0.00	0.00	0.00	0.00	0.00	0.31	0.70	0.00	0.00	0	31	69	3.99	1.02
C11.JL 178	1/19.	F_07	high Mg	2.89	1.04	0.00	0.10	0.00	0.09	0.00	0.11	0.82	0.00	0.00	0	12	88	3.93	0.93
C11.JL 178	1/20.	F_07	high Mg	2.96	1.02	0.00	0.02	0.00	0.02	0.00	0.50	0.51	0.00	0.00	0	49	50	3.98	1.02
C11.JL 178	1/21.	F_07	high Mg	2.97	1.03	0.00	0.01	0.00	0.01	0.01	0.55	0.43	0.00	0.00	1	56	44	4.00	0.99
C11.JL 178	1/1.	F_09	Alb	2.92	1.07	0.00	0.01	0.00	0.00	0.07	0.93	0.02	0.00	0.00	7	91	2	3.99	1.02
C11.JL 178	1/2.	F_09	Oli	2.88	1.12	0.00	0.00	0.00	0.00	0.10	0.89	0.02	0.00	0.00	10	88	2	4.00	1.02
C11.JL 178	1/5.	F_09	high Mg	2.86	1.16	0.00	0.03	0.00	0.01	0.04	0.77	0.14	0.00	0.00	4	81	15	4.02	0.96
C11.JL 178	1/6.	F_09	Alb	2.92	1.08	0.00	0.00	0.00	0.00	0.07	0.91	0.03	0.00	0.00	7	91	3	4.00	1.01
C11.JL 178	1/8.	F_09	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.29	0.75	0.00	0.00	0	28	72	3.99	1.04
C11.JL 178	1/10.	F_09	Ano	2.97	1.03	0.00	0.00	0.00	0.00	0.01	0.81	0.17	0.00	0.00	1	82	17	4.01	0.99
C11.JL 178	1/13.	F_09	San	3.07	0.93	0.00	0.01	0.00	0.00	0.00	0.21	0.70	0.00	0.00	0	23	77	4.00	0.91
C11.JL 178	1/14.	F_09	San	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.18	0.83	0.00	0.00	0	18	82	4.00	1.01
C11.JL 178	1/15.	F_09	San, low totals	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.27	0.77	0.00	0.00	0	26	74	3.99	1.04
C11.JL 178	1/16.	F_09	high Mg	2.89	1.04	0.00	0.13	0.00	0.10	0.01	0.16	0.70	0.00	0.00	1	18	81	3.92	0.87
C11.JL 178	1/17.	F_09	San	2.99	1.01	0.00	0.00	0.00	0.00	0.00	0.40	0.61	0.00	0.00	0	40	60	4.00	1.01
C11.JL 178	1/18.	F_09	San	3.00	1.01	0.00	0.00	0.00	0.00	0.00	0.51	0.43	0.00	0.00	0	54	46	4.01	0.94
C11.JL 178	1/19.	F_09	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.13	0.90	0.00	0.00	0	12	88	4.00	1.02
C11.JL 178	1/20.	F_09	Ano	2.98	1.01	0.00	0.00	0.00	0.00	0.01	0.68	0.35	0.00	0.00	1	66	34	3.99	1.04
C11.JL 178	1/21.	F_09	Alb	2.91	1.09	0.00	0.00	0.00	0.00	0.07	0.92	0.02	0.00	0.00	7	91	2	4.00	1.01
C11.JL 178	1/23.	F_09	high Mg	2.97	1.01	0.00	0.01	0.00	0.00	0.01	0.57	0.46	0.00	0.00	1	55	44	3.99	1.03
C11.JL 178	1/24.	F_09	San	2.98	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.86	0.00	0.00	0	15	85	4.00	1.02
C11.JL 178	1/26.	F_09	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.15	0.86	0.00	0.00	0	15	85	4.00	1.02
C11.JL 178	1/28.	F_09	San	2.94	1.02	0.00	0.00	0.00	0.00	0.01	0.39	0.72	0.00	0.00	1	35	64	3.97	1.13
C11.JL 178	1/29.	F_09	Ano	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.69	0.35	0.00	0.00	0	66	34	3.99	1.05
C11.JL 178	1/31.	F_09	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.18	0.84	0.00	0.00	0	18	82	3.99	1.02
C11.JL 178	1/1.	F_11	San	3.02	0.98	0.00	0.01	0.00	0.00	0.00	0.19	0.79	0.00	0.00	0	19	81	4.00	0.97
C11.JL 178	1/3.	F_11	Ano	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.78	0.27	0.00	0.00	0	74	25	3.99	1.05

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	**Spot**	**Feld No.**	**Species**	**Si**	**Al**	**Ti**	**Fe**	**Mn**	**Mg**	**Ca**	**Na**	**K**	**Sr**	**Ba**	**An. %**	**Al. %**	**Or. %**	**Si+Al(AFU)**	**Ca+Na+K(AFU)**
C11.JL 178	1/4.	F_11	San, high totals	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.30	0.73	0.00	0.00	0	29	71	3.99	1.03
C11.JL 178	1/5.	F_11	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.15	0.90	0.00	0.00	0	14	86	3.99	1.05
C11.JL 178	1/6.	F_11	high Mg	2.97	1.02	0.00	0.03	0.00	0.03	0.00	0.23	0.73	0.00	0.00	0	23	76	3.99	0.96
C11.JL 178	1/7.	F_11	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.18	0.84	0.00	0.00	0	18	82	4.00	1.02
C11.JL 178	1/8.	F_11	San	2.98	1.02	0.00	0.01	0.00	0.00	0.01	0.39	0.59	0.00	0.00	1	39	59	4.00	0.99
C11.JL 178	1/9.	F_11	San	2.98	1.01	0.00	0.02	0.00	0.00	0.00	0.33	0.68	0.00	0.00	0	33	67	3.99	1.01
C11.JL 178	1/10.	F_11	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.32	0.73	0.00	0.00	0	31	69	3.99	1.05
C11.JL 178	1/11.	F_11	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.29	0.74	0.00	0.00	0	28	72	3.99	1.03
C11.JL 178	1/12.	F_11	high Mg	3.03	0.96	0.00	0.01	0.00	0.00	0.00	0.11	0.83	0.00	0.00	0	11	89	4.00	0.94
C11.JL 178	1/14.	F_11	San, high totals	2.98	1.00	0.00	0.00	0.00	0.00	0.00	0.52	0.56	0.00	0.00	0	48	52	3.98	1.07
C11.JL 178	1/15.	F_11	high Mg	2.96	1.02	0.00	0.01	0.00	0.00	0.00	0.46	0.60	0.00	0.00	0	43	56	3.98	1.07
C11.JL 178	1/16.	F_11	San	2.96	1.02	0.00	0.01	0.00	0.00	0.01	0.53	0.53	0.00	0.00	1	50	49	3.98	1.07
C11.JL 178	1/17.	F_11	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.22	0.82	0.00	0.00	0	21	79	3.99	1.04
C11.JL 178	1/19.	F_11	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.23	0.78	0.00	0.00	0	23	77	4.00	1.01
C11.JL 178	1/20.	F_11	Alb	2.98	1.01	0.00	0.00	0.00	0.00	0.03	0.91	0.06	0.00	0.00	3	91	6	3.99	1.00
C11.JL 178	1/21.	F_11	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.36	0.69	0.00	0.00	0	34	66	3.99	1.04
C11.JL 178	1/22.	F_11	San	3.01	1.02	0.00	0.00	0.00	0.00	0.00	0.33	0.58	0.00	0.00	0	36	64	4.02	0.92
C11.JL 178	1/23.	F_11	San	2.99	1.01	0.00	0.00	0.00	0.00	0.00	0.18	0.84	0.00	0.00	0	18	82	3.99	1.02
C11.JL 178	1/24.	F_11	Alb	2.98	1.02	0.00	0.00	0.00	0.00	0.02	0.96	0.02	0.00	0.00	2	97	2	4.00	0.99
C11.JL 178	1/25.	F_11	Ano	2.98	1.02	0.00	0.00	0.00	0.00	0.01	0.69	0.33	0.00	0.00	1	68	32	4.00	1.02
C11.JL 178	1/26.	F_11	Ano	2.98	1.02	0.00	0.00	0.00	0.00	0.01	0.75	0.27	0.00	0.00	1	73	26	4.00	1.02
C11.JL 178	1/27.	F_11	high Mg	2.98	1.01	0.00	0.01	0.00	0.01	0.01	0.57	0.41	0.00	0.00	1	58	41	4.00	0.99
C11.JL 178	1/28.	F_11	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.08	0.94	0.00	0.00	0	8	92	3.99	1.02
C11.JL 178	1/29.	F_11	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.22	0.81	0.00	0.00	0	22	78	3.99	1.03
C11.JL 178	1/30.	F_11	San	2.98	1.02	0.00	0.00	0.00	0.00	0.00	0.11	0.91	0.00	0.00	0	11	89	3.99	1.03
C11.JL 178	1/31.	F_11	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.12	0.91	0.00	0.01	0	11	89	3.99	1.03
C11.JL 178	1/32.	F_11	San	2.98	1.02	0.00	0.00	0.00	0.00	0.00	0.07	0.94	0.00	0.01	0	7	93	4.00	1.01
C11.JL 178	1/33.	F_11	San	2.98	1.02	0.00	0.00	0.00	0.00	0.00	0.14	0.87	0.00	0.00	0	14	86	4.00	1.02
C11.JL 178	1/34.	F_11	high Mg	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.57	0.45	0.00	0.00	0	56	44	3.99	1.02
C11.JL 178	1/35.	F_11	San	2.97	1.02	0.00	0.00	0.00	0.00	0.01	0.33	0.67	0.00	0.00	1	33	66	3.99	1.02
C11.JL 178	1/36.	F_11	high Mg	2.96	1.02	0.00	0.02	0.00	0.02	0.01	0.71	0.27	0.00	0.00	1	72	27	3.99	0.99
C11.JL 178	1/37.	F_11	high Mg	2.97	1.02	0.00	0.03	0.00	0.02	0.00	0.11	0.86	0.00	0.00	0	12	88	3.99	0.97
C11.JL 178	1/38.	F_11	high Mg	2.96	1.01	0.01	0.07	0.00	0.01	0.00	0.14	0.82	0.00	0.00	0	15	85	3.97	0.96
C11.JL 178	1/39.	F_11	San	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.29	0.70	0.00	0.00	0	29	71	4.00	0.98
C11.JL 178	1/40.	F_11	San	2.97	1.02	0.00	0.00	0.00	0.00	0.01	0.35	0.68	0.00	0.01	1	34	66	3.99	1.03
C11.JL 178	1/41.	F_11	Alb	2.95	1.05	0.00	0.00	0.00	0.00	0.05	0.92	0.03	0.00	0.00	5	92	3	4.00	0.99

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	Spot	Feld No.	Species	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	Sr	Ba	An. %	Al. %	Or. %	Si+Al(AFU)	Ca+Na+K(AFU)
C11.JL 178	1/42.	F_11	San	2.98	1.02	0.00	0.00	0.00	0.00	0.00	0.24	0.78	0.00	0.00	0	24	76	4.00	1.02
C11.JL 178	1/43.	F_11	San	2.97	1.02	0.00	0.00	0.00	0.00	0.01	0.51	0.50	0.00	0.00	1	49	49	3.99	1.03
C11.JL 178	1/44.	F_11	San	2.98	1.00	0.00	0.01	0.00	0.00	0.00	0.13	0.89	0.00	0.00	0	13	87	3.99	1.02
C11.JL 178	1/1.	F_13	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.13	0.90	0.00	0.00	0	13	87	3.99	1.03
C11.JL 178	1/3.	F_13	high Mg	3.01	0.98	0.00	0.01	0.00	0.01	0.00	0.19	0.79	0.00	0.00	0	20	80	3.99	0.98
C11.JL 178	1/5.	F_13	high Mg	2.97	1.02	0.00	0.02	0.00	0.02	0.01	0.36	0.59	0.00	0.00	1	38	62	4.00	0.95
C11.JL 178	1/6.	F_13	high Mg	3.13	0.86	0.00	0.01	0.00	0.00	0.01	0.20	0.66	0.00	0.00	1	23	77	3.99	0.87
C11.JL 178	1/7.	F_13	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.27	0.78	0.00	0.00	0	25	75	3.99	1.05
C11.JL 178	1/8.	F_13	Ano, low totals	3.13	0.87	0.00	0.00	0.00	0.00	0.01	0.64	0.21	0.00	0.00	1	74	25	4.00	0.86
C11.JL 178	1/10.	F_13	San	2.99	1.01	0.00	0.00	0.00	0.00	0.00	0.21	0.80	0.00	0.00	0	21	79	4.00	1.01
C11.JL 178	1/11.	F_13	San	2.98	1.02	0.00	0.00	0.00	0.00	0.00	0.24	0.77	0.00	0.00	0	24	76	4.00	1.00
C11.JL 178	1/12.	F_13	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.30	0.75	0.00	0.00	0	29	71	3.99	1.05
C11.JL 178	1/13.	F_13	San	2.97	1.01	0.00	0.00	0.00	0.00	0.04	0.14	0.87	0.00	0.00	3	13	83	3.98	1.05
C11.JL 178	1/14.	F_13	Ano	2.98	1.02	0.00	0.00	0.00	0.00	0.01	0.82	0.18	0.00	0.00	1	81	18	4.00	1.01
C11.JL 178	1/15.	F_13	San, low totals	2.98	1.01	0.00	0.01	0.00	0.00	0.01	0.39	0.63	0.00	0.00	0	38	62	3.99	1.03
C11.JL 178	1/16.	F_13	San	2.99	1.00	0.00	0.00	0.00	0.00	0.00	0.18	0.86	0.00	0.00	0	17	83	3.99	1.03
C11.JL 178	1/17.	F_13	high Mg	2.98	1.02	0.00	0.01	0.00	0.00	0.00	0.38	0.61	0.00	0.00	0	38	62	4.00	0.99
C11.JL 178	1/18.	F_13	San	2.99	1.01	0.00	0.00	0.00	0.00	0.00	0.19	0.83	0.00	0.00	0	18	82	4.00	1.01
C11.JL 178	1/19.	F_13	Alb	2.97	1.03	0.00	0.01	0.00	0.00	0.02	0.92	0.06	0.00	0.00	2	91	6	4.00	1.01
C11.JL 178	1/20.	F_13	Ano	2.97	1.01	0.00	0.01	0.00	0.00	0.01	0.86	0.19	0.00	0.00	1	81	18	3.98	1.06
C11.JL 178	1/21.	F_13	high Mg	2.99	0.96	0.00	0.09	0.00	0.01	0.00	0.28	0.67	0.00	0.00	0	29	71	3.95	0.95
C11.JL 178	1/22.	F_13	Alb	2.95	1.05	0.00	0.00	0.00	0.00	0.03	0.94	0.02	0.00	0.00	3	94	2	4.00	0.99
C11.JL 178	1/23.	F_13	San	2.97	1.02	0.00	0.00	0.00	0.00	0.02	0.53	0.48	0.00	0.00	2	52	47	3.99	1.02
C11.JL 178	1/24.	F_13	San, low totals	2.99	1.01	0.00	0.01	0.00	0.00	0.01	0.47	0.53	0.00	0.00	1	47	53	4.00	1.00
C11.JL 178	1/25.	F_13	San	2.98	1.02	0.00	0.01	0.00	0.00	0.01	0.50	0.50	0.00	0.01	1	50	49	3.99	1.00
C11.JL 178	1/26.	F_13	San	2.98	1.02	0.00	0.00	0.00	0.00	0.00	0.18	0.83	0.00	0.01	0	18	82	4.00	1.01
C11.JL 178	1/27.	F_13	San	2.96	1.04	0.00	0.00	0.00	0.00	0.00	0.17	0.86	0.00	0.00	0	16	84	4.00	1.02
C11.JL 178	1/28.	F_13	San	2.98	1.01	0.00	0.01	0.00	0.00	0.00	0.18	0.84	0.00	0.00	0	18	82	3.99	1.01
C11.JL 178	1/29.	F_13	San	2.99	1.00	0.00	0.01	0.00	0.00	0.00	0.25	0.79	0.00	0.00	0	24	76	3.99	1.04
C11.JL 178	1/30.	F_13	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.16	0.88	0.00	0.01	0	15	85	3.99	1.03
C11.JL 178	1/31.	F_13	San	2.97	1.03	0.00	0.01	0.00	0.00	0.01	0.33	0.67	0.00	0.00	1	32	67	4.00	1.01
C11.JL 178	1/33.	F_13	San, low totals	2.98	1.01	0.00	0.00	0.00	0.00	0.01	0.28	0.72	0.00	0.00	1	28	71	3.99	1.01
C11.JL 178	1/35.	F_13	San	2.97	1.02	0.00	0.00	0.00	0.00	0.00	0.13	0.89	0.00	0.00	0	13	87	3.99	1.03
C11.JL 178	1/36.	F_13	San	3.08	0.89	0.00	0.01	0.00	0.00	0.00	0.33	0.64	0.00	0.00	0	34	66	3.98	0.97
C11.JL 178	1/39.	F_13	San	2.96	1.02	0.00	0.00	0.00	0.00	0.00	0.33	0.76	0.00	0.00	0	30	70	3.98	1.10
C11.JL 178	1/40.	F_13	San	2.98	1.01	0.00	0.00	0.00	0.00	0.00	0.06	0.98	0.00	0.00	0	5	95	3.99	1.03

Mineral info.				T-site						M-site					Proportions			Formula unit	
Sample	**Spot**	**Feld No.**	**Species**	**Si**	**Al**	**Ti**	**Fe**	**Mn**	**Mg**	**Ca**	**Na**	**K**	**Sr**	**Ba**	**An. %**	**Al. %**	**Or. %**	**Si+Al(AFU)**	**Ca+Na+K(AFU)**
C11.JL 178	1/41.	F_13	San, high totals	2.97	1.01	0.00	0.00	0.00	0.00	0.00	0.53	0.54	0.00	0.00	0	49	51	3.98	1.07

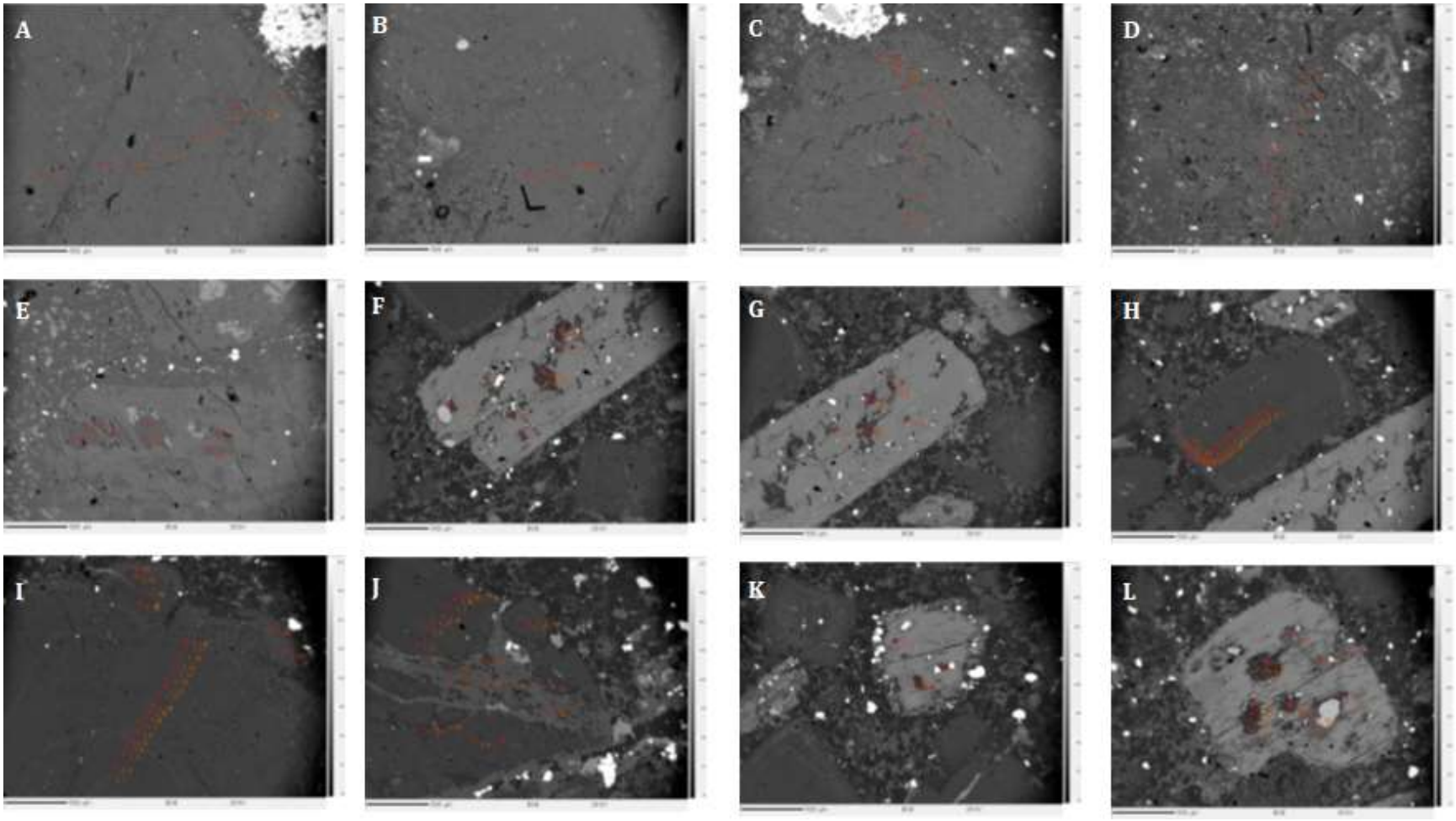


Figure 3.1 Location of microprobe analysis of feldspar A) C12.JL 170 F01, B) C12.JL 170 F02, C) C12.JL 170 F03, D) C12.JL 170 F04, E) C12.JL 170 F05, F) C12.JL.47 F01, G) C12.JL.47 F_02, H) C12.JL.47 F_03, I) C12.JL.47 F_06, J) C12.JL.47 F_07, K) C12.JL.47 F_09 and, L) C12.JL.47 F_043.

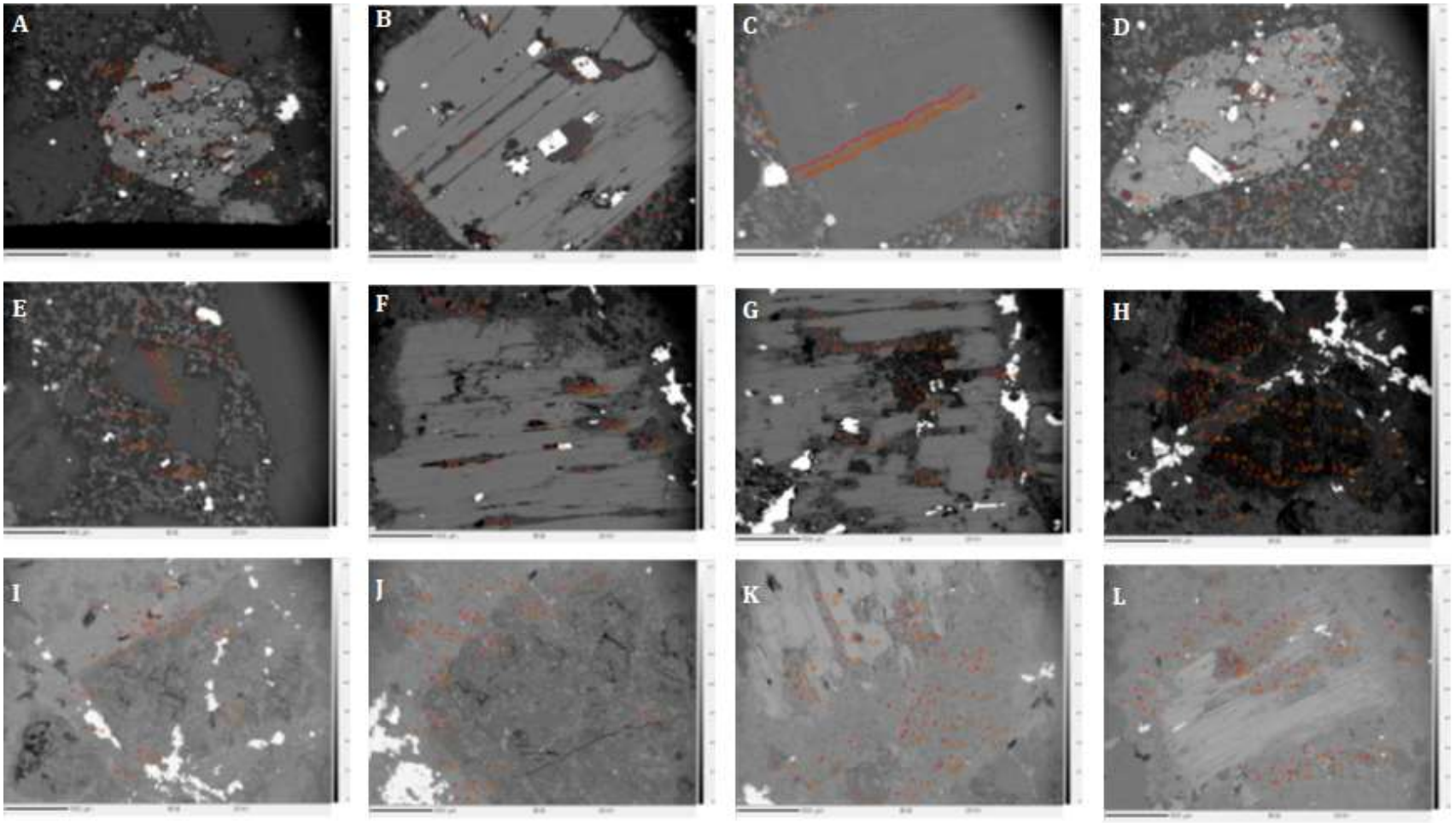


Figure 3.2: Location of microprobe analysis of feldspar: A) C12.JL.180 F01, B) C12.JL.180 F03, C) C12.JL.180 F04, D) C12.JL.180 F05, E) C12.JL.180 F06, F) C11.JL.178 F02, G) C11.JL.178 F03, H) C11.JL.178 F05, I) C11.JL.178 F07, J) C11.JL.178 F09, K) C11.JL.178 F11 and, L) C11.JL.178 F13.

3.2 Electron microprobe data of amphiboles

The setup to analyse amphiboles was aided by discussion with John Spratt at the Natural History Museum, London. The Cameca SX 100 electron microprobe was run at 20keV and 20nA. The current was stable and had a variation of <0.75% (up to 20.15nA) over a 12 hour run. A beam size of 20μm was used for analysis as fluorine is known to migrate with decreasing spot size and current.

Wavelength-dispersive electron spectroscopy is analysed using five wavelength-dispersive X-ray crystal configuration outlined in Table 3.5.

Table 3.5: Analytical setup of Cameca SX100 electron microprobe of amphiboles.

Spectrometer position	Element and wavelength	Crystal	Dwell time (ms)
Sp2	F Kα	LPC0	1510
Sp4	Na Kα	TAP	1320
Sp4	Mg Kα	TAP	1320
Sp4	Al Kα	TAP	1320
Sp4	Si Kα	TAP	1320
Sp1	Cl Kα	PET	1330
Sp3	K Kα	LPET	1828
Sp3	Ca Kα	LPET	1828
Sp1	Ti Kα	PET	1330
Sp3	Cr Kα	LPET	1880
Sp5	Mn Kα	LLIF	1825

Thirteen standards are used to calibrate the electron microprobe counts (Table 3.6). These standards calibrate counts per second to weight percent.

Table 3.6: Standards used for quantification, their composition and the calibration files.

Standard Name	Standard composition	Calibration file name (Element intensity cps/nA):
F On TOP2 STD093	O: 34.50%, F: 20.70%, Al: 29.80%, Si: 15.00%	F: TOP2 STD093_F Sp2_041.calDat (F: 75.5 cps/nA)
Na On JAD3 STD048	O: 47.60%, Na: 11.28%, Mg: 0.05%, Al: 13.33%, Si: 27.79%, Ca: 0.08%, Fe: 0.00%	Na: JAD3 STD048_NaSp4_026.calDat (Na: 83.5 cps/nA)
Mg On FOR STD277	O: 45.48%, Mg: 34.55%, Si: 19.98%	Mg: FOR STD277_MgSp4_006.calDat (Mg: 568.9 cps/nA)

Al On COR4 STD028	Al: 52.9242%, O: 47.0758%	Al: COR4 STD028_AlSp4_007.calDat (Al: 1231.2 cps/nA)
Si, Fe On FAY STD278	O: 31.40%, Si: 13.78%, Fe: 54.81%	Si: FAY STD278_SiSp4_FeSp5_030.calDat (Si: 265.2 cps/nA)
Cl On HAL2 STD042	Na: 39.3373%, Cl: 60.6627%	Cl: HAL2 STD042_ClSp1_001.calDat (Cl: 315.3 cps/nA)
K On ORT3 STD067	O: 46.13%, Na: 2.19%, Al: 9.73%, Si: 30.26%, K: 10.38%, Ca: 0.31%	K: ORT3 STD067_K Sp3_002.calDat (K: 225.8 cps/nA)
Ca On WOL4 STD097	O: 41.04%, Si: 23.8%, Ca: 34.16%, Fe: 0.6%, Mn: 0.05%	Ca: WOL4 STD097_CaSp3_003.calDat (Ca: 1057.4 cps/nA)
Ti On RUT STD082	Ti: 59.95%, O: 40.05%	Ti: RUT STD082_TiSp1_003.calDat (Ti: 786.0 cps/nA)
Cr On CRO2 STDIC	Cr: 68.4195%, O: 31.5805%	Cr: CRO2 STDIC_CrSp3_055.calDat (Cr: 2855.1 cps/nA)
Mn On MNT STDIC	Mn: 36.4219%, Ti: 31.756%, O: 31.8221%	Mn: MNT STDIC_TiSp1_MnSp5_005.calDat (Mn: 429.9 cps/nA)
P On MON STD216	O: 26.83%, Si: 1.12%, P: 11.91%, Ca: 0.68%, Fe: 0.1%, Y: 0.17%, Lα: 11.1%, Ce: 23.03%, Pr: 2.46%, Nd: 8.32%, Sm: 1.14%, Gd: 0.74%, Pb: 0.31%, Th: 11.65%, U: 0.25%	P: MON STD216_P Sp3_005.calDat (P: 84.9 cps/nA)
V On VAN STDIC	O: 13.55%, Cl: 2.55%, V: 10.78%, Pb: 73.12%	V: VAN STDIC_V Sp5_040.calDat (V: 91.9 cps/nA)

The results presented exceed the detection limits. If the results are below detection limit, a value of 0 is assigned. The results are of amphibole analysis are presented in weight percent (Table 3.7). Locations of amphibole analysis are seen in Figure 3.3,, Figure 3.4 and Figure 3.5.

Mineral stoichiometry and nomenclature is calculated using .xls spreadsheet created by Locock (2014). This spreadsheet is based on the most recent advances in amphibole classification (Hawthorne et al. 2012). The results of which are given in

Table 3.7: Results of electron microprobe analysis of amphibole.

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.47	AMP_01	Rim	1/1.	47.09	1.17	8.26	0.00	0.00	0.00	0.50	12.85	15.07	9.82	1.51	0.42	3.05	0.00	0.00	99.74
C12.JL.47	AMP_01	Rim	1/2.	47.89	1.18	7.75	0.00	0.00	0.00	0.50	12.54	14.68	10.43	1.58	0.44	2.74	0.00	0.09	99.82
C12.JL.47	AMP_01	Rim	1/3.	48.10	1.20	7.68	0.05	0.00	0.00	0.52	12.84	14.66	10.27	1.50	0.42	2.58	0.00	0.08	99.90
C12.JL.47	AMP_01	Rim	1/4.	47.57	1.20	7.89	0.06	0.00	0.00	0.52	13.19	14.52	10.38	1.62	0.45	2.37	0.00	0.09	99.86
C12.JL.47	AMP_01	Core	1/5.	46.84	1.25	8.40	0.04	0.00	0.00	0.51	13.53	13.96	10.47	1.80	0.56	2.41	0.00	0.09	99.86
C12.JL.47	AMP_01	Core	1/6.	47.22	1.20	8.00	0.04	0.00	0.00	0.52	13.12	13.93	10.44	1.64	0.58	3.11	0.00	0.10	99.90
C12.JL.47	AMP_01	Core	1/7.	46.71	1.19	8.49	0.05	0.00	0.00	0.49	13.57	13.79	10.50	1.66	0.63	2.68	0.00	0.10	99.86
C12.JL.47	AMP_01	Rim	1/8.	46.64	1.22	8.53	0.04	0.00	0.00	0.51	13.59	13.89	10.54	1.57	0.59	2.66	0.00	0.10	99.88
C12.JL.47	AMP_01	Rim	1/9.	46.70	1.30	8.47	0.04	0.00	0.00	0.50	13.59	13.96	10.59	1.49	0.58	2.54	0.00	0.11	99.87
C12.JL.47	AMP_01	Core	1/10.	48.04	1.06	7.33	0.04	0.00	0.00	0.53	12.94	14.59	10.56	1.60	0.46	2.65	0.00	0.08	99.88
C12.JL.47	AMP_01	Core	1/11.	47.01	1.19	8.24	0.05	0.00	0.00	0.52	13.69	14.00	10.59	1.51	0.60	2.37	0.00	0.11	99.88
C12.JL.47	AMP_01	Core	1/12.	47.16	1.19	8.12	0.05	0.00	0.00	0.52	13.66	13.85	10.66	1.51	0.56	2.51	0.00	0.10	99.89
C12.JL.47	AMP_01	Core	1/13.	46.51	1.24	8.45	0.05	0.00	0.00	0.48	13.50	13.85	10.61	1.65	0.63	2.79	0.00	0.10	99.86
C12.JL.47	AMP_02_01	Rim	1/1.	46.64	1.39	8.39	0.04	0.00	0.00	0.56	13.15	14.08	10.77	1.57	0.62	2.54	0.00	0.10	99.85
C12.JL.47	AMP_02_01	Rim	1/2.	45.57	1.39	9.17	0.05	0.00	0.00	0.53	13.53	13.42	10.44	1.83	0.71	3.09	0.00	0.13	99.86
C12.JL.47	AMP_02_01	Rim	1/3.	45.47	1.43	9.32	0.05	0.00	0.00	0.53	13.57	13.27	10.64	1.83	0.76	2.88	0.00	0.13	99.88
C12.JL.47	AMP_02_01	Rim	1/4.	45.82	1.36	8.73	0.05	0.00	0.00	0.54	13.27	13.73	10.55	1.74	0.61	3.32	0.00	0.12	99.84
C12.JL.47	AMP_02_01	Rim	1/5.	45.27	1.33	9.63	0.05	0.00	0.00	0.51	13.97	12.95	10.69	2.02	0.82	2.50	0.00	0.15	99.89
C12.JL.47	AMP_02_01	Rim	1/6.	45.48	1.31	9.17	0.06	0.00	0.00	0.54	14.85	12.54	10.50	1.93	0.75	2.61	0.00	0.14	99.88
C12.JL.47	AMP_02_01	Core	1/7.	48.23	1.06	7.18	0.04	0.00	0.00	0.56	14.00	13.90	10.31	1.63	0.41	2.50	0.00	0.00	99.82
C12.JL.47	AMP_02_01	Core	1/8.	48.09	1.07	7.27	0.00	0.00	0.00	0.59	13.97	14.07	10.58	1.62	0.42	2.06	0.00	0.08	99.82
C12.JL.47	AMP_02_01	Core	1/9.	46.12	1.26	8.77	0.05	0.00	0.00	0.57	14.56	13.19	10.78	1.76	0.68	2.08	0.00	0.11	99.93
C12.JL.47	AMP_02_01	Core	1/10.	48.31	1.07	7.32	0.04	0.00	0.00	0.58	13.88	13.98	10.50	1.44	0.46	2.22	0.00	0.00	99.80
C12.JL.47	AMP_02_01	Core	1/11.	46.69	1.18	8.37	0.04	0.13	0.00	0.57	14.63	13.14	10.55	1.69	0.58	2.28	0.00	0.10	99.95
C12.JL.47	AMP_02_01	Core	1/12.	45.85	1.29	8.94	0.05	0.00	0.00	0.57	14.86	12.94	10.59	1.79	0.68	2.23	0.00	0.12	99.91

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.47	AMP_02_01	Core	1/13.	47.37	1.14	7.83	0.05	0.00	0.00	0.54	13.84	13.85	10.68	1.81	0.55	2.11	0.00	0.10	99.87
C12.JL.47	AMP_02_01	Core	1/14.	47.48	1.09	7.88	0.04	0.00	0.00	0.56	14.14	13.74	10.64	1.59	0.55	2.10	0.00	0.09	99.90
C12.JL.47	AMP_02_01	Core	1/15.	46.64	1.15	8.15	0.04	0.00	0.00	0.55	14.30	13.25	10.48	1.79	0.58	2.83	0.00	0.10	99.86
C12.JL.47	AMP_02_01	Core	1/16.	46.38	1.25	8.69	0.00	0.00	0.00	0.53	14.35	13.17	10.75	1.98	0.65	1.94	0.00	0.13	99.82
C12.JL.47	AMP_02_01	Core	1/17.	46.95	1.18	8.14	0.04	0.00	0.00	0.57	14.43	13.42	10.47	1.70	0.54	2.31	0.00	0.10	99.85
C12.JL.47	AMP_02_01	Core	1/18.	47.77	1.07	7.48	0.00	0.00	0.00	0.59	14.11	13.80	10.52	1.51	0.49	2.42	0.00	0.11	99.87
C12.JL.47	AMP_02_01	Core	1/19.	47.83	1.06	7.56	0.04	0.00	0.00	0.58	14.00	13.89	10.75	1.47	0.55	2.07	0.00	0.00	99.80
C12.JL.47	AMP_02	Rim	1/1.	45.65	1.32	9.45	0.00	0.00	0.00	0.55	13.93	13.11	10.85	2.03	0.78	2.03	0.00	0.14	99.84
C12.JL.47	AMP_02	Rim	1/2.	47.60	1.18	7.68	0.00	0.00	0.00	0.56	12.04	14.95	10.86	1.56	0.57	2.70	0.14	0.11	99.95
C12.JL.47	AMP_02	Rim	1/3.	47.74	1.03	7.49	0.04	0.00	0.00	0.61	13.54	13.94	10.36	1.69	0.47	2.83	0.17	0.00	99.91
C12.JL.47	AMP_02	Rim	1/5.	45.43	1.31	9.20	0.05	0.00	0.00	0.55	14.74	12.52	10.63	1.90	0.78	2.63	0.00	0.14	99.88
C12.JL.47	AMP_02	Rim	1/6.	46.29	1.24	8.67	0.04	0.00	0.00	0.53	14.56	12.94	10.72	1.64	0.64	2.51	0.00	0.12	99.90
C12.JL.47	AMP_02	Core	1/7.	47.05	1.16	8.16	0.04	0.00	0.00	0.55	14.09	13.63	10.57	1.74	0.57	2.20	0.00	0.11	99.87
C12.JL.47	AMP_02	Core	1/8.	48.07	1.08	7.31	0.04	0.00	0.00	0.58	14.02	13.88	10.48	1.63	0.47	2.20	0.14	0.08	99.98
C12.JL.47	AMP_02	Core	1/9.	46.22	1.17	8.47	0.05	0.00	0.00	0.57	14.74	12.87	10.67	1.81	0.69	2.50	0.00	0.12	99.88
C12.JL.47	AMP_02	Core	1/10.	46.39	1.24	8.52	0.04	0.00	0.00	0.57	14.74	12.97	10.59	1.90	0.62	2.16	0.00	0.12	99.86
C12.JL.47	AMP_02	Core	1/11.	45.96	1.25	8.92	0.04	0.00	0.00	0.59	14.66	12.84	10.43	1.74	0.67	2.66	0.00	0.13	99.89
C12.JL.47	AMP_02	Core	1/12.	45.33	1.31	9.20	0.05	0.00	0.00	0.54	14.98	12.45	10.55	1.90	0.72	2.73	0.00	0.14	99.90
C12.JL.47	AMP_02	Core	1/13.	47.84	1.10	7.66	0.04	0.00	0.00	0.57	13.69	13.67	10.30	1.68	0.55	2.66	0.00	0.11	99.87
C12.JL.47	AMP_02	Core	1/14.	46.34	1.23	8.64	0.04	0.00	0.00	0.58	14.59	12.92	10.46	1.84	0.66	2.47	0.00	0.12	99.89
C12.JL.47	AMP_02	Core	1/15.	47.72	1.09	7.42	0.00	0.00	0.00	0.59	13.40	13.97	10.39	1.61	0.50	3.04	0.00	0.09	99.82
C12.JL.47	AMP_03	Rim	1/1.	44.10	1.33	10.64	0.05	0.00	0.00	0.53	15.04	11.98	10.76	2.00	0.99	2.25	0.00	0.18	99.85
C12.JL.47	AMP_03	Rim	1/2.	44.22	1.35	10.37	0.05	0.00	0.00	0.55	14.74	12.44	10.77	1.85	1.00	2.35	0.00	0.19	99.88
C12.JL.47	AMP_03	Rim	1/3.	46.77	1.15	8.35	0.04	0.00	0.00	0.57	14.35	13.11	10.64	1.77	0.62	2.39	0.00	0.11	99.87
C12.JL.47	AMP_03	Rim	1/4.	46.96	1.07	8.50	0.04	0.00	0.00	0.54	13.74	13.54	10.58	1.83	0.65	2.33	0.00	0.10	99.88
C12.JL.47	AMP_03	Rim	1/5.	44.52	1.24	9.93	0.06	0.00	0.00	0.54	15.33	11.93	10.59	1.90	0.88	2.80	0.00	0.17	99.89

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.47	AMP_03	Rim	1/6.	44.07	1.38	10.43	0.05	0.00	0.00	0.55	15.38	11.98	10.72	1.86	1.04	2.22	0.00	0.20	99.88
C12.JL.47	AMP_03	Rim	1/7.	45.71	1.04	9.17	0.06	0.00	0.00	0.52	15.04	12.35	10.92	1.72	0.85	2.36	0.00	0.16	99.90
C12.JL.47	AMP_03	Rim	1/8.	45.03	1.35	9.50	0.05	0.00	0.00	0.56	15.57	11.95	10.53	1.87	0.81	2.48	0.00	0.14	99.84
C12.JL.47	AMP_03	Near core	1/9.	47.04	1.09	7.92	0.04	0.00	0.00	0.51	14.11	13.41	10.73	1.61	0.58	2.75	0.00	0.10	99.89
C12.JL.47	AMP_03	Near core	1/10.	46.12	1.26	8.85	0.04	0.00	0.00	0.55	14.79	12.74	10.61	1.72	0.71	2.42	0.00	0.12	99.93
C12.JL.47	AMP_03	Core	1/11.	45.82	1.26	8.85	0.05	0.00	0.00	0.57	14.90	12.60	10.50	1.72	0.67	2.86	0.00	0.11	99.91
C12.JL.47	AMP_03	Core	1/12.	47.01	1.12	8.18	0.04	0.00	0.00	0.55	14.79	12.94	10.47	1.62	0.61	2.44	0.00	0.13	99.90
C12.JL.47	AMP_03	Core	1/13.	45.67	1.32	9.11	0.05	0.00	0.00	0.57	15.11	12.51	10.63	1.83	0.74	2.26	0.00	0.12	99.92
C12.JL.47	AMP_03	Core	1/14.	47.72	1.15	8.69	0.05	0.00	0.00	0.56	13.69	12.94	10.25	1.80	0.86	2.06	0.00	0.11	99.88
C12.JL.47	AMP_03	Core	1/17.	45.21	1.31	9.21	0.07	0.00	0.00	0.55	15.48	12.09	10.47	1.80	0.80	2.83	0.00	0.13	99.95
C12.JL.47	AMP_03	Core	1/18.	45.06	1.30	9.58	0.06	0.00	0.00	0.57	15.67	11.99	10.37	1.75	0.82	2.60	0.00	0.17	99.94
C12.JL.47	AMP_03	Core	1/19.	45.78	1.30	9.00	0.05	0.00	0.00	0.53	15.07	12.61	10.52	1.79	0.73	2.45	0.00	0.11	99.94
C12.JL.47	AMP_04	Random	1/1.	48.41	1.05	7.37	0.04	0.00	0.00	0.54	12.03	15.22	10.26	1.52	0.42	2.91	0.00	0.09	99.86
C12.JL.47	AMP_04	Random	1/3.	47.01	1.11	8.14	0.04	0.00	0.00	0.51	13.41	13.95	10.29	1.84	0.53	2.88	0.00	0.11	99.82
C12.JL.47	AMP_04	Random	1/4.	47.69	1.13	7.71	0.04	0.00	0.00	0.54	13.32	14.30	10.56	1.69	0.52	2.29	0.00	0.09	99.88
C12.JL.47	AMP_04	Random	1/5.	47.58	1.09	7.91	0.00	0.00	0.00	0.52	13.20	14.34	10.64	1.68	0.50	2.26	0.14	0.09	99.95
C12.JL.47	AMP_04	Random	1/6.	47.18	1.11	8.19	0.04	0.00	0.00	0.52	14.07	13.75	10.69	1.43	0.55	2.26	0.00	0.10	99.89
C12.JL.47	AMP_04	Random	1/7.	46.44	1.25	8.55	0.04	0.00	0.00	0.49	13.97	13.48	10.48	1.63	0.59	2.85	0.00	0.10	99.87
C12.JL.47	AMP_04	Random	1/8.	46.86	1.25	8.61	0.06	0.00	0.00	0.51	13.78	13.63	10.48	1.72	0.62	2.23	0.00	0.12	99.87
C12.JL.47	AMP_04	Random	1/9.	47.07	1.22	8.17	0.05	0.00	0.00	0.51	13.75	13.86	10.55	1.76	0.54	2.25	0.14	0.12	99.99
C12.JL.47	AMP_04	Random	1/10.	46.62	1.30	8.44	0.04	0.00	0.00	0.49	13.94	13.79	10.58	1.82	0.56	2.13	0.00	0.10	99.81
C12.JL.47	AMP_04_1	Random	1/1.	47.40	1.22	7.92	0.04	0.00	0.00	0.54	13.09	14.41	10.29	1.85	0.46	2.52	0.18	0.09	100.01
C12.JL.47	AMP_04_1	Random	1/2.	47.72	1.10	8.35	0.05	0.00	0.00	0.49	13.42	13.56	9.87	1.74	0.89	2.55	0.15	0.11	100.00
C12.JL.47	AMP_04_1	Random	1/3.	46.88	1.24	8.47	0.04	0.00	0.00	0.52	13.28	13.90	10.31	2.00	0.53	2.57	0.00	0.12	99.86
C12.JL.47	AMP_04_1	Random	1/4.	47.62	1.08	7.76	0.00	0.00	0.00	0.54	13.30	14.19	10.38	1.75	0.49	2.59	0.14	0.11	99.95
C12.JL.47	AMP_04_1	Random	1/5.	49.36	1.09	6.07	0.00	0.00	0.00	0.56	12.15	15.49	10.59	1.13	0.49	2.77	0.15	0.10	99.95

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.47	AMP_04_1	Random	1/6.	47.70	1.11	7.87	0.05	0.00	0.00	0.54	13.39	14.11	10.23	1.87	0.48	2.44	0.00	0.11	99.90
C12.JL.47	AMP_04_1	Random	1/7.	46.31	1.26	8.99	0.05	0.00	0.00	0.53	14.15	13.35	10.32	1.82	0.65	2.33	0.00	0.12	99.88
C12.JL.47	AMP_04_1	Random	1/9.	47.80	1.23	7.91	0.04	0.00	0.00	0.57	12.67	14.79	10.57	1.65	0.49	2.03	0.14	0.11	100.00
C12.JL.47	AMP_04_1	Random	1/10.	47.87	1.09	7.63	0.04	0.00	0.00	0.53	13.01	14.50	10.31	1.77	0.46	2.55	0.00	0.10	99.86
C12.JL.47	AMP_04_1	Random	1/11.	46.50	1.23	8.63	0.04	0.00	0.00	0.55	13.57	13.76	10.48	1.99	0.56	2.45	0.00	0.11	99.87
C12.JL.47	AMP_04_1	Random	1/12.	46.62	1.35	8.72	0.00	0.00	0.00	0.50	13.44	13.96	10.32	2.03	0.53	2.25	0.00	0.10	99.82
C12.JL.47	AMP_04	Random	1/1.	48.41	1.05	7.37	0.04	0.00	0.00	0.54	12.03	15.22	10.26	1.52	0.42	2.91	0.00	0.09	99.86
C12.JL.47	AMP_04	Random	1/3.	47.01	1.11	8.14	0.04	0.00	0.00	0.51	13.41	13.95	10.29	1.84	0.53	2.88	0.00	0.11	99.82
C12.JL.47	AMP_04	Random	1/4.	47.69	1.13	7.71	0.04	0.00	0.00	0.54	13.32	14.30	10.56	1.69	0.52	2.29	0.00	0.09	99.88
C12.JL.47	AMP_04	Random	1/5.	47.58	1.09	7.91	0.00	0.00	0.00	0.52	13.20	14.34	10.64	1.68	0.50	2.26	0.14	0.09	99.95
C12.JL.47	AMP_04	Random	1/6.	47.18	1.11	8.19	0.04	0.00	0.00	0.52	14.07	13.75	10.69	1.43	0.55	2.26	0.00	0.10	99.89
C12.JL.47	AMP_04	Random	1/7.	46.44	1.25	8.55	0.04	0.00	0.00	0.49	13.97	13.48	10.48	1.63	0.59	2.85	0.00	0.10	99.87
C12.JL.47	AMP_04	Random	1/8.	46.86	1.25	8.61	0.06	0.00	0.00	0.51	13.78	13.63	10.48	1.72	0.62	2.23	0.00	0.12	99.87
C12.JL.47	AMP_04	Random	1/9.	47.07	1.22	8.17	0.05	0.00	0.00	0.51	13.75	13.86	10.55	1.76	0.54	2.25	0.14	0.12	99.99
C12.JL.47	AMP_04	Random	1/10.	46.62	1.30	8.44	0.04	0.00	0.00	0.49	13.94	13.79	10.58	1.82	0.56	2.13	0.00	0.10	99.81
C12.JL.47	AMP_05	Random	1/1.	46.95	1.10	8.12	0.04	0.00	0.00	0.57	14.24	13.18	10.61	1.77	0.61	2.53	0.16	0.10	99.98
C12.JL.47	AMP_05	Random	1/2.	46.41	1.18	8.73	0.05	0.00	0.00	0.57	14.10	13.26	10.58	1.87	0.66	2.31	0.00	0.12	99.84
C12.JL.47	AMP_05	Random	1/3.	45.09	1.29	9.58	0.04	0.00	0.00	0.55	14.11	12.85	10.69	1.95	0.80	2.78	0.00	0.13	99.86
C12.JL.47	AMP_05	Random	1/4.	46.37	1.26	8.75	0.04	0.00	0.00	0.61	14.92	12.86	10.42	1.96	0.54	2.09	0.00	0.00	99.82
C12.JL.47	AMP_05	Random	1/5.	46.68	1.17	8.02	0.04	0.00	0.00	0.54	13.86	13.48	10.76	1.80	0.55	2.83	0.14	0.09	99.96
C12.JL.47	AMP_05	Random	1/6.	45.54	1.31	9.60	0.04	0.00	0.00	0.53	13.42	13.30	10.77	1.99	0.76	2.42	0.16	0.13	99.97
C12.JL.47	AMP_05	Random	1/7.	46.60	1.20	8.84	0.05	0.00	0.00	0.55	13.19	13.91	10.73	1.98	0.54	2.13	0.14	0.10	99.96
C12.JL.47	AMP_05	Random	1/8.	46.26	1.19	8.51	0.05	0.00	0.00	0.54	14.40	13.06	10.87	1.84	0.66	2.36	0.00	0.10	99.84
C12.JL.47	AMP_05	Random	1/9.	46.29	1.18	8.53	0.04	0.00	0.00	0.57	14.60	12.96	10.89	1.83	0.61	2.27	0.00	0.11	99.88
C12.JL.47	AMP_05	Random	1/10.	47.69	1.08	7.56	0.00	0.00	0.00	0.56	13.82	13.84	10.45	1.74	0.53	2.44	0.00	0.10	99.81
C12.JL.47	AMP_05	Random	1/11.	47.23	1.13	7.94	0.04	0.00	0.00	0.56	13.87	13.67	10.79	1.66	0.53	2.33	0.00	0.12	99.87

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.47	AMP_05	Random	1/12.	46.86	1.14	8.20	0.05	0.00	0.00	0.56	14.24	13.37	10.67	1.75	0.61	2.25	0.16	0.12	99.98
C12.JL.47	AMP_05	Random	1/14.	46.37	1.22	8.56	0.04	0.06	0.00	0.53	13.64	13.56	10.66	1.79	0.57	2.73	0.15	0.10	99.98
C12.JL.47	AMP_05	Random	1/15.	46.20	1.19	8.63	0.05	0.00	0.00	0.56	14.77	12.79	10.83	1.82	0.64	2.33	0.00	0.10	99.91
C12.JL.47	AMP_06	Rim	1/1.	47.21	1.15	8.26	0.05	0.00	0.00	0.55	13.30	14.00	10.43	1.65	0.48	2.70	0.00	0.00	99.78
C12.JL.47	AMP_06	Rim	1/2.	47.31	1.09	7.72	0.05	0.00	0.00	0.57	14.15	13.53	10.51	1.58	0.50	2.77	0.00	0.09	99.87
C12.JL.47	AMP_06	Rim	1/3.	46.24	1.27	8.70	0.05	0.00	0.00	0.57	14.84	12.83	10.66	1.69	0.62	2.26	0.00	0.14	99.87
C12.JL.47	AMP_06	Rim	1/4.	46.27	1.22	8.66	0.05	0.00	0.00	0.57	14.84	12.90	10.67	1.71	0.63	2.22	0.00	0.11	99.85
C12.JL.47	AMP_06	Rim	1/7.	46.78	1.13	8.36	0.04	0.00	0.00	0.56	14.51	13.29	10.71	1.68	0.63	2.09	0.00	0.12	99.90
C12.JL.47	AMP_06	Rim	1/8.	46.20	1.22	8.46	0.00	0.00	0.00	0.55	14.72	13.03	10.67	1.90	0.66	2.30	0.00	0.11	99.82
C12.JL.47	AMP_06	Rim	1/9.	46.57	1.17	8.41	0.04	0.00	0.00	0.52	14.37	13.32	10.85	1.71	0.61	2.15	0.00	0.10	99.82
C12.JL.47	AMP_06	Rim	1/10.	46.65	1.20	8.52	0.04	0.00	0.00	0.53	14.22	13.33	10.74	1.79	0.63	2.09	0.00	0.10	99.84
C12.JL.47	AMP_06	Rim	1/11.	46.29	1.23	8.68	0.05	0.00	0.00	0.57	14.92	12.79	10.67	1.70	0.64	2.22	0.00	0.11	99.87
C12.JL.47	AMP_06	Rim	1/12.	46.44	1.21	8.65	0.04	0.00	0.00	0.56	14.65	12.89	10.72	1.72	0.62	2.25	0.00	0.11	99.86
C12.JL.47	AMP_06	Rim	1/13.	46.13	1.25	8.53	0.05	0.00	0.00	0.57	14.69	12.90	10.69	1.65	0.60	2.78	0.00	0.09	99.93
C12.JL.47	AMP_06	Rim	1/14.	47.87	1.05	7.54	0.05	0.00	0.00	0.55	13.82	13.74	10.53	1.66	0.48	2.50	0.00	0.09	99.88
C12.JL.47	AMP_06	Rim	1/15.	46.54	1.14	8.49	0.05	0.00	0.00	0.54	14.26	13.33	10.67	1.80	0.64	2.30	0.00	0.11	99.87
C12.JL.47	AMP_06	Core	1/16.	46.20	1.26	8.59	0.05	0.00	0.00	0.56	14.51	12.87	10.62	1.80	0.56	2.75	0.00	0.12	99.89
C12.JL.47	AMP_06	Core	1/17.	46.50	1.23	8.49	0.05	0.00	0.00	0.57	14.41	13.08	10.69	1.75	0.61	2.41	0.00	0.11	99.90
C12.JL.47	AMP_06	Core	1/18.	46.62	1.14	8.35	0.05	0.00	0.00	0.57	14.50	13.20	10.68	1.58	0.62	2.44	0.00	0.12	99.87
C12.JL.47	AMP_06	Core	1/19.	46.29	1.13	8.92	0.04	0.00	0.00	0.55	14.18	13.27	10.86	1.78	0.71	1.96	0.00	0.14	99.83
C12.JL.47	AMP_06	Core	1/20.	44.74	1.35	9.92	0.04	0.00	0.00	0.52	14.63	12.48	10.87	1.92	0.88	2.39	0.00	0.15	99.89
C12.JL.47	AMP_06	Core	1/21.	46.49	1.16	8.52	0.00	0.00	0.00	0.55	15.00	12.83	10.75	1.74	0.60	2.13	0.00	0.11	99.88
C12.JL.48	AMP_01	Rim	1/11.	46.60	1.21	10.20	0.04	0.00	0.00	0.50	13.69	10.96	10.20	2.19	1.17	2.98	0.00	0.13	99.87
C12.JL.48	AMP_01	Rim	1/12.	44.73	1.23	10.43	0.05	0.00	0.00	0.52	14.68	11.49	9.87	1.95	1.06	3.69	0.16	0.14	100.00
C12.JL.48	AMP_01	Rim	1/13.	44.56	1.31	9.38	0.05	0.00	0.00	0.56	15.08	11.89	10.62	1.92	0.81	3.50	0.16	0.15	99.99
C12.JL.48	AMP_01	Core	1/15.	44.72	1.35	9.82	0.00	0.00	0.00	0.55	14.88	12.26	11.54	2.12	0.79	1.64	0.00	0.15	99.82

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.48	AMP_01	Core	1/16.	46.50	1.23	8.58	0.04	0.00	0.00	0.55	14.55	13.05	10.60	1.87	0.63	2.12	0.00	0.12	99.84
C12.JL.48	AMP_01	Core	1/17.	45.94	1.25	8.97	0.04	0.00	0.00	0.56	14.73	12.90	10.63	1.99	0.66	2.02	0.15	0.13	99.97
C12.JL.48	AMP_01	Core	1/18.	46.36	1.20	8.44	0.05	0.00	0.00	0.52	14.34	13.12	10.53	1.83	0.62	2.70	0.17	0.11	99.99
C12.JL.48	AMP_01	Core	1/19.	46.37	1.21	8.43	0.05	0.00	0.00	0.55	14.34	13.04	10.49	1.88	0.60	2.69	0.20	0.11	99.96
C12.JL.48	AMP_01	Core	1/20.	46.97	1.13	8.20	0.04	0.00	0.00	0.55	14.34	13.33	10.51	1.88	0.57	2.18	0.18	0.10	99.98
C12.JL.48	AMP_01	Core	1/21.	47.05	1.17	8.20	0.05	0.00	0.00	0.54	14.55	13.20	10.41	1.72	0.56	2.26	0.15	0.12	99.98
C12.JL.48	AMP_01	Core	1/22.	46.72	1.16	8.39	0.04	0.00	0.00	0.56	14.32	13.22	10.57	1.71	0.61	2.40	0.17	0.12	99.99
C12.JL.48	AMP_03	Rim	1/1.	46.94	1.17	7.70	0.00	0.00	0.00	0.57	12.70	14.44	11.14	1.29	0.56	3.13	0.17	0.15	99.96
C12.JL.48	AMP_03	Rim	1/2.	47.12	1.27	8.90	0.04	0.00	0.00	0.54	13.05	14.09	10.62	1.74	0.56	1.71	0.21	0.13	99.98
C12.JL.48	AMP_03	Rim	1/3.	44.39	0.90	8.20	0.04	0.00	0.00	0.51	11.72	13.51	13.38	1.20	0.52	5.36	0.15	0.08	99.96
C12.JL.48	AMP_03	Rim	1/4.	45.85	1.14	8.42	0.05	0.00	0.00	0.52	12.68	14.14	12.13	1.54	0.55	2.64	0.18	0.12	99.96
C12.JL.48	AMP_03	Rim	1/5.	46.72	1.25	8.53	0.05	0.00	0.00	0.53	13.13	13.88	10.56	1.82	0.57	2.63	0.18	0.11	99.96
C12.JL.48	AMP_03	Rim	1/6.	47.57	1.20	6.16	0.04	0.00	0.00	0.58	11.07	15.27	12.30	1.04	0.48	3.95	0.17	0.15	99.98
C12.JL.48	AMP_03	Rim	1/7.	47.87	1.21	6.04	0.00	0.00	0.00	0.57	11.06	15.39	12.35	0.96	0.48	3.67	0.17	0.16	99.93
C12.JL.48	AMP_03	Rim	1/8.	47.08	1.38	7.80	0.04	0.00	0.00	0.56	12.39	14.89	10.55	1.33	0.59	3.02	0.16	0.19	99.98
C12.JL.48	AMP_03	Rim	1/9.	46.68	1.36	8.54	0.05	0.00	0.00	0.52	12.87	14.24	10.57	1.57	0.55	2.72	0.19	0.11	99.97
C12.JL.48	AMP_03	Rim	1/10.	49.13	1.44	5.96	0.00	0.00	0.00	0.50	11.71	15.76	10.66	1.16	0.56	2.66	0.21	0.17	99.92
C12.JL.48	AMP_03	Rim	1/11.	47.43	1.43	7.76	0.04	0.00	0.00	0.51	12.38	14.61	10.64	1.63	0.54	2.70	0.18	0.13	99.98
C12.JL.48	AMP_03	Core	1/12.	43.07	1.99	11.70	0.08	0.00	0.14	0.45	13.81	12.32	10.76	2.28	0.64	2.55	0.00	0.00	99.79
C12.JL.48	AMP_03	Core	1/13.	43.00	2.07	11.69	0.09	0.00	0.11	0.43	13.80	12.27	10.80	2.38	0.67	2.44	0.16	0.08	99.99
C12.JL.48	AMP_03	Core	1/14.	43.02	2.05	11.90	0.08	0.00	0.05	0.41	13.86	12.19	10.70	2.36	0.67	2.46	0.15	0.08	99.98
C12.JL.48	AMP_03	Core	1/15.	42.92	2.03	12.08	0.07	0.00	0.05	0.39	13.68	12.27	10.72	2.41	0.64	2.47	0.16	0.08	99.97
C12.JL.48	AMP_03	Core	1/16.	42.72	1.97	12.15	0.08	0.00	0.00	0.40	14.06	11.95	10.61	2.37	0.75	2.69	0.14	0.09	99.98
C12.JL.48	AMP_03	Core	1/17.	44.56	1.45	10.75	0.05	0.00	0.00	0.43	13.87	12.67	10.71	2.10	0.75	2.38	0.17	0.12	100.01
C12.JL.48	AMP_03	Random	1/18.	47.31	1.31	8.54	0.05	0.00	0.06	0.46	12.38	14.55	10.47	1.58	0.44	2.65	0.00	0.00	99.80
C12.JL.48	AMP_03	Random	1/19.	46.80	1.24	8.50	0.05	0.00	0.00	0.47	13.15	14.06	10.38	1.87	0.54	2.65	0.17	0.10	99.98

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.48	AMP_03	Random	1/20.	47.75	1.25	8.06	0.05	0.00	0.00	0.51	12.47	14.54	10.31	1.92	0.43	2.43	0.19	0.00	99.91
C12.JL.48	AMP_03	Random	1/21.	42.81	2.16	12.51	0.08	0.00	0.10	0.39	13.19	12.34	10.71	2.57	0.65	2.28	0.16	0.00	99.95
C12.JL.48	AMP_03	Random	1/22.	46.85	1.23	8.57	0.04	0.00	0.00	0.56	13.27	13.89	10.50	1.46	0.62	2.64	0.19	0.15	99.97
C12.JL.48	AMP_03	Random	1/23.	45.82	1.36	9.23	0.04	0.00	0.00	0.48	13.75	13.42	10.60	1.67	0.69	2.59	0.17	0.17	99.99
C12.JL.48	AMP_04	Random	1/2.	46.23	1.33	8.67	0.05	0.00	0.00	0.48	13.63	13.88	10.69	1.94	0.62	2.26	0.00	0.10	99.88
C12.JL.48	AMP_04	Random	1/3.	48.24	1.10	7.41	0.00	0.00	0.00	0.52	12.88	14.57	10.62	1.78	0.42	2.21	0.00	0.08	99.83
C12.JL.48	AMP_04	Random	1/4.	48.39	1.09	7.29	0.04	0.00	0.00	0.52	12.33	15.03	10.72	1.78	0.39	2.19	0.15	0.00	99.92
C12.JL.48	AMP_04	Random	1/5.	48.10	1.07	7.39	0.00	0.00	0.00	0.52	12.65	14.86	10.71	1.65	0.42	2.42	0.00	0.00	99.79
C12.JL.48	AMP_04	Random	1/6.	47.36	1.13	7.91	0.05	0.00	0.00	0.51	12.90	14.49	10.86	1.78	0.57	2.18	0.00	0.10	99.84
C12.JL.48	AMP_04	Random	1/7.	47.45	1.19	7.84	0.05	0.00	0.00	0.53	12.94	14.67	10.61	1.62	0.44	2.49	0.00	0.00	99.83
C12.JL.48	AMP_04	Random	1/9.	47.88	1.10	7.41	0.00	0.00	0.00	0.54	12.85	14.51	10.61	1.63	0.46	2.74	0.00	0.08	99.81
C12.JL.48	AMP_04	Random	1/10.	45.41	1.36	9.26	0.05	0.00	0.00	0.52	14.07	13.03	10.78	1.88	0.73	2.64	0.00	0.14	99.87
C12.JL.48	AMP_04	Random	1/11.	47.56	1.14	8.05	0.04	0.00	0.00	0.50	12.80	14.41	10.61	1.79	0.49	2.41	0.00	0.00	99.80
C12.JL.48	AMP_04	Random	1/12.	47.16	1.45	7.65	0.04	0.00	0.00	0.51	12.90	14.34	10.45	1.84	0.60	2.79	0.00	0.12	99.85
C12.JL.48	AMP_04	Random	1/13.	47.28	1.18	7.86	0.04	0.00	0.00	0.52	12.93	14.46	10.77	1.75	0.49	2.44	0.17	0.00	99.89
C12.JL.48	AMP_04	Random	1/14.	47.26	1.24	7.97	0.04	0.00	0.00	0.51	13.05	14.35	10.80	1.91	0.50	2.08	0.15	0.10	99.96
C12.JL.48	AMP_04	Random	1/15.	47.50	1.14	7.89	0.00	0.00	0.00	0.52	12.98	14.46	10.66	1.68	0.42	2.51	0.00	0.08	99.84
C12.JL.48	AMP_04	Random	1/16.	48.02	1.17	7.72	0.00	0.00	0.00	0.50	12.59	14.71	10.61	1.81	0.40	2.15	0.17	0.09	99.94
C12.JL.48	AMP_04	Random	1/17.	45.73	1.28	9.08	0.05	0.00	0.00	0.51	14.24	13.09	10.80	1.81	0.73	2.39	0.00	0.11	99.82
C12.JL.48	AMP_04	Random	1/18.	45.60	1.37	9.26	0.04	0.00	0.00	0.51	14.03	12.99	10.85	2.05	0.74	2.22	0.15	0.15	99.96
C12.JL.48	AMP_04	Random	1/23.	47.86	2.93	6.21	0.03	0.00	0.00	0.45	10.74	14.68	12.20	1.23	0.44	2.86	0.23	0.09	99.95
C12.JL.183	AMP_01	Rim	1/1.	42.32	2.03	11.41	0.10	0.00	0.00	0.17	15.17	11.42	11.30	2.21	0.97	2.68	0.00	0.08	99.86
C12.JL.183	AMP_01	Rim	1/2.	42.50	1.95	11.29	0.10	0.00	0.00	0.15	13.56	12.44	11.21	2.21	0.84	3.51	0.15	0.00	99.91
C12.JL.183	AMP_01	Rim	1/3.	43.51	1.92	11.46	0.11	0.00	0.18	0.10	10.86	13.92	11.44	2.34	0.90	3.07	0.00	0.00	99.81
C12.JL.183	AMP_01	Core	1/4.	42.14	2.01	12.33	0.08	0.00	0.00	0.16	12.97	12.31	11.31	2.48	0.95	3.06	0.00	0.00	99.80
C12.JL.183	AMP_01	Core	1/5.	43.47	1.93	11.16	0.07	0.00	0.00	0.12	11.20	13.81	11.31	2.41	1.00	3.33	0.00	0.00	99.81

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.183	AMP_01	Core	1/6.	43.41	1.94	11.39	0.08	0.00	0.00	0.12	11.38	13.65	11.40	2.37	0.94	3.15	0.00	0.00	99.83
C12.JL.183	AMP_01	Core	1/7.	43.71	1.79	11.08	0.06	0.00	0.00	0.12	11.20	14.10	11.35	2.33	0.94	3.09	0.00	0.00	99.77
C12.JL.183	AMP_01	Core	1/8.	43.52	1.82	10.99	0.07	0.00	0.00	0.11	11.38	13.93	11.37	2.33	0.91	3.31	0.00	0.00	99.74
C12.JL.183	AMP_01	Core	1/9.	42.86	1.86	11.32	0.07	0.00	0.00	0.17	14.64	11.94	11.26	2.28	0.93	2.38	0.16	0.00	99.87
C12.JL.183	AMP_01	Core	1/10.	43.94	1.82	11.16	0.08	0.00	0.00	0.11	11.25	14.08	11.46	2.40	0.91	2.58	0.00	0.00	99.79
C12.JL.183	AMP_01	Core	1/11.	43.44	1.89	11.34	0.08	0.00	0.00	0.10	11.13	14.00	11.48	2.42	0.94	2.99	0.00	0.00	99.81
C12.JL.183	AMP_01	Core	1/12.	43.33	1.85	11.18	0.08	0.00	0.00	0.11	11.31	13.82	11.46	2.43	0.94	3.30	0.00	0.00	99.81
C12.JL.183	AMP_01	Core	1/13.	44.22	1.77	10.80	0.08	0.00	0.00	0.12	10.81	14.30	11.43	2.39	0.91	2.96	0.00	0.00	99.79
C12.JL.183	AMP_01	Core	1/14.	44.13	1.92	11.40	0.09	0.00	0.00	0.10	11.07	13.93	11.42	2.46	0.88	2.38	0.00	0.00	99.78
C12.JL.183	AMP_01	Core	1/15.	41.81	1.91	12.76	0.08	0.00	0.00	0.16	12.64	12.14	11.29	2.52	0.88	3.60	0.00	0.00	99.79
C12.JL.183	AMP_01	Core	1/16.	0.15	0.00	0.00	0.00	0.00	0.00	1.87	1.57	0.29	54.95	0.00	0.00	41.09	0.00	0.00	99.92
C12.JL.183	AMP_01	Core	1/17.	42.24	2.07	12.46	0.09	0.00	0.00	0.14	12.21	12.66	11.39	2.46	0.92	3.17	0.00	0.00	99.81
C12.JL.183	AMP_01	Core	1/18.	42.45	1.96	11.27	0.08	0.00	0.00	0.20	15.26	11.43	11.28	2.27	0.93	2.67	0.00	0.00	99.80
C12.JL.183	AMP_01	Core	1/19.	43.02	1.79	11.17	0.08	0.00	0.00	0.15	11.82	13.51	11.28	2.23	1.13	3.58	0.00	0.09	99.85
C12.JL.183	AMP_01	Core	1/20.	41.65	2.01	12.28	0.09	0.00	0.05	0.13	12.01	12.84	11.11	2.45	0.88	4.30	0.00	0.08	99.88
C12.JL.183	AMP_01	Core	1/21.	41.44	1.82	12.64	0.07	0.00	0.00	0.18	13.50	11.77	11.18	2.58	0.92	3.73	0.00	0.00	99.83
C12.JL.183	AMP_01	Core	1/22.	41.01	1.76	12.50	0.07	0.00	0.00	0.17	13.09	11.81	11.18	2.51	1.00	4.73	0.00	0.00	99.83
C12.JL.183	AMP_01	Core	1/23.	42.25	1.73	12.02	0.06	0.00	0.00	0.21	13.46	12.08	11.25	2.20	1.26	3.23	0.00	0.14	99.89
C12.JL.183	AMP_01	Core	1/24.	42.71	1.94	12.18	0.09	0.00	0.00	0.12	11.86	13.12	11.39	2.39	0.93	3.08	0.00	0.00	99.81
C12.JL.183	AMP_01	Rim	1/25.	41.85	1.97	11.25	0.09	0.00	0.00	0.18	15.08	11.28	11.22	2.19	0.96	3.64	0.16	0.08	99.95
C12.JL.183	AMP_01	Rim	1/26.	41.92	1.94	11.16	0.08	0.00	0.00	0.19	15.01	11.40	11.22	2.14	0.94	3.76	0.00	0.00	99.76
C12.JL.183	AMP_01	Rim	1/27.	42.03	1.91	11.21	0.09	0.00	0.00	0.21	15.07	11.39	11.26	2.09	0.95	3.52	0.17	0.00	99.90
C12.JL.183	AMP_01	Rim	1/28.	42.92	1.86	11.19	0.09	0.00	0.00	0.18	15.05	11.71	11.23	2.23	0.90	2.39	0.15	0.00	99.90
C12.JL.183	AMP_01	Rim	1/29.	42.81	1.88	11.02	0.08	0.00	0.00	0.18	15.01	11.69	11.25	2.14	0.89	2.80	0.15	0.08	99.98
C12.JL.183	AMP_01	Rim	1/30.	42.60	1.86	11.02	0.08	0.00	0.00	0.21	15.13	11.58	11.29	2.16	0.87	2.98	0.00	0.00	99.78
C12.JL.183	AMP_01	Rim	1/31.	42.30	1.93	10.93	0.08	0.00	0.00	0.19	15.03	11.57	11.27	2.12	0.89	3.44	0.16	0.00	99.91

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.183	AMP_01	Rim	1/32.	42.34	1.94	11.15	0.09	0.00	0.00	0.19	15.05	11.60	11.25	2.22	0.95	2.98	0.00	0.00	99.76
C12.JL.183	AMP_02	Random	1/1.	42.42	1.88	11.06	0.08	0.00	0.00	0.18	15.10	11.53	11.22	2.09	0.94	3.27	0.00	0.00	99.77
C12.JL.183	AMP_02	Random	1/2.	42.47	1.94	11.43	0.08	0.00	0.00	0.17	15.06	11.50	11.30	2.19	0.95	2.70	0.00	0.00	99.79
C12.JL.183	AMP_02	Random	1/3.	41.97	2.13	11.25	0.10	0.00	0.00	0.19	15.21	11.11	11.22	2.32	0.94	3.37	0.00	0.00	99.81
C12.JL.183	AMP_02	Random	1/5.	42.45	2.00	11.43	0.09	0.00	0.00	0.22	15.80	11.19	11.24	2.19	0.97	2.22	0.00	0.00	99.80
C12.JL.183	AMP_02	Random	1/6.	42.50	1.97	11.56	0.08	0.00	0.00	0.20	15.58	11.12	11.26	2.19	0.93	2.44	0.00	0.00	99.83
C12.JL.183	AMP_02	Random	1/7.	42.50	1.89	11.26	0.08	0.00	0.00	0.17	15.36	11.28	11.14	2.22	0.96	2.94	0.00	0.00	99.80
C12.JL.183	AMP_02	Random	1/8.	42.47	1.81	11.28	0.07	0.00	0.00	0.20	15.44	11.38	11.20	2.21	0.97	2.74	0.00	0.00	99.77
C12.JL.183	AMP_02	Random	1/9.	42.91	1.86	11.12	0.08	0.00	0.00	0.18	15.43	11.45	11.19	2.17	0.92	2.49	0.00	0.00	99.80
C12.JL.183	AMP_02	Random	1/10.	42.87	1.87	10.95	0.09	0.00	0.00	0.19	15.18	11.49	11.21	2.25	0.90	2.78	0.00	0.00	99.78
C12.JL.183	AMP_02	Random	1/11.	42.52	1.92	11.42	0.08	0.00	0.00	0.20	15.31	11.37	11.25	2.16	0.98	2.58	0.00	0.09	99.88
C12.JL.183	AMP_02	Random	1/12.	42.99	1.85	11.02	0.08	0.00	0.00	0.19	15.08	11.43	11.11	2.23	0.95	2.88	0.00	0.08	99.89
C12.JL.183	AMP_03	Rim	1/1.	43.67	1.50	10.56	0.07	0.00	0.00	0.45	15.36	11.62	11.46	2.00	0.97	2.08	0.21	0.00	99.95
C12.JL.183	AMP_03	Rim	1/2.	42.88	1.83	11.12	0.07	0.00	0.00	0.26	14.96	11.45	11.44	2.09	0.92	2.69	0.21	0.00	99.92
C12.JL.183	AMP_03	Rim	1/3.	42.84	1.67	11.06	0.08	0.00	0.00	0.34	15.37	11.51	11.47	2.08	0.96	2.37	0.20	0.00	99.95
C12.JL.183	AMP_03	Rim	1/4.	43.31	1.70	11.03	0.08	0.00	0.00	0.35	15.29	11.62	11.50	2.09	0.99	1.69	0.24	0.00	99.89
C12.JL.183	AMP_03	Rim	1/5.	41.52	1.84	10.40	0.05	0.00	0.00	0.48	15.40	10.66	12.47	2.02	0.91	4.00	0.18	0.00	99.93
C12.JL.183	AMP_03	Rim	1/6.	42.56	2.04	11.03	0.07	0.00	0.00	0.26	15.55	11.24	11.26	2.17	0.86	2.72	0.16	0.00	99.92
C12.JL.183	AMP_03	Rim	1/7.	43.78	1.62	11.58	0.07	0.00	0.00	0.51	13.27	9.24	11.11	1.65	0.93	5.99	0.17	0.00	99.92
C12.JL.183	AMP_03	Rim	1/8.	49.17	1.58	10.43	0.06	0.00	0.00	0.24	13.77	10.27	10.30	1.86	1.07	0.96	0.16	0.00	99.87
C12.JL.183	AMP_03	Rim	1/9.	42.89	1.74	11.73	0.08	0.13	0.00	0.44	14.17	10.81	11.63	2.01	0.86	3.23	0.21	0.00	99.93
C12.JL.183	AMP_03	Rim	1/10.	42.58	1.61	10.86	0.06	0.00	0.00	0.36	15.25	11.22	11.12	2.06	0.93	3.66	0.24	0.00	99.95
C12.JL.183	AMP_03	Rim to core	1/11.	45.79	0.88	8.13	0.00	0.00	0.00	0.83	17.44	11.12	11.36	1.66	0.96	1.48	0.24	0.00	99.89
C12.JL.183	AMP_03	Rim to core	1/12.	45.28	0.85	7.88	0.04	0.00	0.00	0.79	17.38	11.22	11.16	1.61	0.94	2.56	0.23	0.00	99.94
C12.JL.183	AMP_03	Rim to core	1/13.	44.89	0.93	7.78	0.04	0.00	0.00	0.79	17.36	11.08	11.28	1.64	0.92	3.01	0.22	0.00	99.94
C12.JL.183	AMP_03	Rim to core	1/14.	45.42	0.89	7.96	0.04	0.00	0.00	0.77	17.46	11.17	11.42	1.64	0.96	1.95	0.25	0.00	99.93

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.183	AMP_03	Rim to core	1/15.	45.44	0.95	8.03	0.04	0.00	0.00	0.82	17.46	11.11	11.44	1.65	1.04	1.71	0.26	0.00	99.95
C12.JL.183	AMP_03	Rim to core	1/16.	45.17	0.98	8.21	0.05	0.00	0.00	0.81	17.57	11.03	11.38	1.58	1.01	1.90	0.26	0.00	99.95
C12.JL.183	AMP_03	Rim to core	1/17.	44.87	0.95	8.03	0.04	0.00	0.00	0.80	17.56	10.94	11.16	1.57	1.02	2.80	0.23	0.00	99.97
C12.JL.183	AMP_03	Rim to core	1/18.	46.57	0.86	7.11	0.04	0.00	0.00	0.83	16.81	11.73	11.39	1.49	0.82	2.06	0.24	0.00	99.95
C12.JL.183	AMP_03	Random	1/19.	45.00	0.94	8.04	0.05	0.00	0.00	0.82	17.46	11.03	11.28	1.63	0.98	2.41	0.30	0.00	99.94
C12.JL.183	AMP_03	Random	1/20.	45.42	0.99	7.89	0.05	0.00	0.00	0.85	17.31	11.11	11.46	1.66	0.98	1.99	0.25	0.00	99.96
C12.JL.183	AMP_03	Random	1/21.	45.47	0.87	7.70	0.04	0.00	0.00	0.80	17.20	11.32	11.55	1.51	0.98	2.30	0.22	0.00	99.96
C12.JL.183	AMP_03	Random	1/22.	43.05	2.03	11.08	0.09	0.00	0.00	0.18	14.56	11.93	11.61	2.20	0.86	2.14	0.18	0.00	99.91
C12.JL.183	AMP_03	Random	1/23.	45.60	0.91	8.41	0.05	0.00	0.00	0.80	17.41	11.04	11.50	1.61	1.05	1.37	0.22	0.00	99.97
C12.JL.183	AMP_03	Random	1/24.	45.25	0.98	7.96	0.04	0.00	0.00	0.79	17.36	10.95	11.44	1.58	1.01	2.31	0.23	0.00	99.90
C12.JL.183	AMP_03	Random	1/25.	45.00	0.96	7.70	0.05	0.00	0.00	0.80	17.20	11.04	11.21	1.61	0.93	3.17	0.27	0.00	99.94
C12.JL.183	AMP_03	Rim to core	1/26.	44.83	0.94	8.11	0.05	0.00	0.00	0.80	17.67	10.92	11.33	1.49	1.05	2.48	0.29	0.00	99.96
C12.JL.183	AMP_03	Rim to core	1/28.	44.73	0.99	8.21	0.05	0.00	0.00	0.79	17.62	10.87	11.51	1.62	1.07	2.29	0.19	0.00	99.94
C12.JL.183	AMP_03	Rim to core	1/29.	44.07	0.92	8.18	0.04	0.00	0.00	0.80	17.60	10.62	11.20	1.73	1.05	3.50	0.23	0.00	99.94
C12.JL.183	AMP_03	Rim to core	1/30.	44.86	0.88	7.89	0.04	0.00	0.00	0.82	17.34	11.05	11.29	1.74	0.95	2.82	0.27	0.00	99.95
C12.JL.183	AMP_03	Rim to core	1/31.	45.29	0.91	7.97	0.00	0.00	0.00	0.81	17.48	11.11	11.42	1.62	0.99	2.04	0.28	0.00	99.92
C12.JL.183	AMP_03	Rim to core	1/32.	43.94	0.94	8.54	0.05	0.00	0.00	0.84	17.76	10.58	11.18	1.56	1.10	3.20	0.26	0.00	99.95
C12.JL.183	AMP_04	Rim	1/1.	42.97	1.79	11.21	0.08	0.00	0.00	0.20	14.78	12.06	11.36	2.06	0.82	2.42	0.00	0.00	99.75
C12.JL.183	AMP_04	Rim	1/2.	42.39	1.71	11.25	0.07	0.00	0.00	0.17	14.92	11.57	11.26	2.06	0.92	3.48	0.00	0.00	99.80
C12.JL.183	AMP_04	Rim	1/3.	42.12	1.68	11.35	0.07	0.00	0.00	0.20	15.03	11.72	11.35	2.09	0.89	3.29	0.16	0.00	99.95
C12.JL.183	AMP_04	Rim	1/4.	42.77	1.74	11.48	0.09	0.00	0.00	0.17	14.68	11.92	11.34	2.18	0.88	2.53	0.15	0.00	99.93
C12.JL.183	AMP_04	Rim	1/5.	43.47	1.69	10.04	0.07	0.00	0.00	0.21	14.78	12.08	11.44	2.02	0.83	3.13	0.18	0.00	99.94
C12.JL.183	AMP_04	Rim	1/6.	44.15	1.65	10.36	0.08	0.00	0.00	0.22	14.99	12.44	11.34	1.98	0.77	1.79	0.15	0.00	99.92
C12.JL.183	AMP_04	Rim	1/7.	44.50	1.73	10.20	0.07	0.00	0.00	0.23	14.73	12.57	11.47	1.97	0.78	1.49	0.17	0.00	99.91
C12.JL.183	AMP_04	Rim	1/8.	44.07	1.72	11.03	0.07	0.00	0.00	0.20	14.84	12.25	11.35	2.15	0.88	1.21	0.16	0.00	99.93
C12.JL.183	AMP_04	Rim	1/9.	43.51	1.94	10.80	0.07	0.00	0.00	0.20	15.10	12.02	11.39	2.08	0.81	1.85	0.15	0.00	99.92

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.183	AMP_04	Rim	1/10.	43.17	1.97	10.84	0.07	0.00	0.00	0.20	15.19	11.84	11.32	2.26	0.83	2.03	0.17	0.00	99.89
C12.JL.183	AMP_04	Rim	1/11.	43.31	1.97	10.75	0.07	0.00	0.00	0.23	15.14	12.00	11.39	2.11	0.86	1.93	0.15	0.00	99.91
C12.JL.183	AMP_04	Rim	1/12.	44.08	1.71	10.47	0.07	0.00	0.00	0.22	14.90	12.16	11.43	2.08	0.85	1.78	0.16	0.07	99.98
C12.JL.183	AMP_04	Rim	1/13.	44.59	1.63	9.93	0.07	0.00	0.00	0.24	14.50	12.37	11.49	1.98	0.75	2.18	0.18	0.00	99.91
C12.JL.183	AMP_04	Rim	1/14.	43.16	1.75	10.73	0.07	0.00	0.00	0.22	14.82	11.82	11.34	2.02	0.86	2.94	0.17	0.00	99.90
C12.JL.183	AMP_04	Rim	1/15.	43.74	1.77	10.57	0.07	0.00	0.00	0.22	14.91	12.03	11.34	2.12	0.82	2.14	0.15	0.00	99.88
C12.JL.183	AMP_04	Rim to core	1/16.	42.93	2.05	12.00	0.09	0.00	0.00	0.12	11.64	13.18	11.65	2.29	0.94	2.88	0.00	0.00	99.77
C12.JL.183	AMP_04	Rim to core	1/17.	41.87	2.33	12.40	0.09	0.00	0.00	0.21	14.97	11.25	11.18	2.43	0.94	2.12	0.00	0.00	99.79
C12.JL.183	AMP_04	Rim to core	1/18.	43.39	2.01	12.06	0.10	0.00	0.00	0.10	11.57	13.34	11.63	2.35	0.94	2.31	0.00	0.00	99.80
C12.JL.183	AMP_04	Rim to core	1/19.	43.47	1.98	11.57	0.10	0.00	0.00	0.11	11.72	13.34	11.67	2.26	0.87	2.64	0.16	0.00	99.89
C12.JL.183	AMP_04	Rim to core	1/20.	43.20	2.03	11.84	0.10	0.00	0.00	0.12	11.84	13.36	11.63	2.40	0.90	2.41	0.00	0.07	99.90
C12.JL.183	AMP_04	Rim to core	1/21.	42.53	2.39	12.16	0.09	0.00	0.00	0.16	14.77	10.98	10.94	2.39	1.00	2.42	0.00	0.08	99.91
C12.JL.183	AMP_04	Rim to core	1/22.	42.09	2.44	12.46	0.10	0.00	0.00	0.18	14.04	11.78	11.24	2.49	0.99	2.02	0.00	0.00	99.83
C12.JL.183	AMP_04	Rim to core	1/24.	43.36	2.02	11.91	0.10	0.00	0.00	0.10	11.86	13.19	11.56	2.26	0.93	2.52	0.00	0.00	99.81
C12.JL.183	AMP_04	Core	1/25.	42.10	2.44	12.62	0.10	0.00	0.00	0.19	14.64	11.38	11.12	2.52	0.94	1.76	0.00	0.00	99.81
C12.JL.183	AMP_04	Core	1/26.	42.79	2.23	12.73	0.09	0.00	0.05	0.14	12.43	12.74	11.38	2.39	0.96	1.82	0.18	0.00	99.93
C12.JL.183	AMP_04	Core	1/27.	41.86	2.43	12.19	0.08	0.00	0.00	0.22	15.45	11.00	11.13	2.47	0.91	2.10	0.00	0.00	99.84
C12.JL.183	AMP_04	Core	1/28.	42.21	2.17	12.31	0.10	0.00	0.05	0.22	11.93	12.72	11.91	2.29	0.97	2.94	0.00	0.00	99.82
C12.JL.183	AMP_05	Random	1/1.	42.98	1.78	11.12	0.07	0.00	0.00	0.21	15.35	11.59	11.36	2.10	0.78	2.41	0.19	0.00	99.94
C12.JL.183	AMP_05	Random	1/2.	44.01	1.64	10.38	0.07	0.00	0.00	0.27	15.23	12.00	11.48	2.05	0.72	1.91	0.18	0.00	99.94
C12.JL.183	AMP_05	Random	1/3.	44.64	1.42	9.29	0.06	0.00	0.00	0.32	15.34	12.21	11.48	1.82	0.73	2.43	0.19	0.00	99.93
C12.JL.183	AMP_05	Random	1/4.	44.13	1.44	9.42	0.07	0.26	0.00	0.31	15.15	12.19	11.78	1.85	0.73	2.42	0.19	0.00	99.94
C12.JL.183	AMP_05	Random	1/5.	45.64	1.18	8.44	0.05	0.00	0.00	0.32	14.83	12.70	11.62	1.59	0.72	2.61	0.22	0.00	99.92
C12.JL.183	AMP_05	Random	1/6.	44.84	1.26	8.88	0.06	0.00	0.00	0.36	15.33	12.28	11.47	1.78	0.73	2.75	0.19	0.00	99.93
C12.JL.183	AMP_05	Random	1/7.	46.19	1.20	8.73	0.07	0.00	0.00	0.37	15.10	12.75	11.55	1.65	0.72	1.46	0.18	0.00	99.97
C12.JL.183	AMP_05	Random	1/8.	44.71	1.28	9.19	0.06	0.00	0.00	0.32	15.19	12.21	11.53	1.72	0.75	2.80	0.18	0.00	99.94

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.183	AMP_05	Random	1/9.	42.72	2.06	11.00	0.08	0.00	0.00	0.25	15.20	11.57	11.45	2.11	0.83	2.50	0.16	0.00	99.93
C12.JL.183	AMP_05	Random	1/10.	43.30	1.74	10.18	0.08	0.00	0.00	0.31	15.28	11.77	11.53	2.01	0.72	2.80	0.20	0.00	99.92
C12.JL.183	AMP_06	Random	1/1.	41.34	2.27	12.14	0.10	0.00	0.00	0.16	14.81	11.16	11.47	2.45	0.91	3.01	0.00	0.00	99.82
C12.JL.183	AMP_06	Random	1/4.	41.84	2.31	11.98	0.10	0.00	0.00	0.19	14.55	11.64	11.49	2.17	0.87	2.61	0.18	0.00	99.93
C12.JL.183	AMP_06	Random	1/6.	41.40	2.46	12.45	0.10	0.00	0.00	0.17	14.29	11.43	11.42	2.39	0.86	2.74	0.18	0.00	99.89
C12.JL.183	AMP_07	Random	1/1.	44.46	1.66	10.36	0.05	0.00	0.00	0.25	13.72	12.78	11.23	2.02	0.86	2.32	0.19	0.00	99.90
C12.JL.183	AMP_07	Random	1/2.	43.70	1.90	11.78	0.09	0.00	0.07	0.12	11.27	13.93	11.53	2.41	0.93	2.11	0.14	0.00	99.98
C12.JL.183	AMP_07	Random	1/3.	43.62	1.94	11.89	0.09	0.00	0.07	0.13	11.01	14.01	11.41	2.53	0.92	2.21	0.00	0.00	99.83
C12.JL.183	AMP_07	Random	1/4.	43.86	2.01	11.58	0.10	0.00	0.00	0.11	10.85	14.28	11.60	2.52	0.86	2.04	0.00	0.00	99.81
C12.JL.183	AMP_07	Random	1/5.	44.59	1.72	10.91	0.08	0.00	0.05	0.10	10.22	14.75	11.37	2.34	0.91	2.78	0.18	0.00	100.00
C12.JL.183	AMP_07	Random	1/6.	43.68	1.85	11.50	0.09	0.00	0.00	0.10	11.40	13.75	11.47	2.30	0.84	2.82	0.00	0.00	99.80
C12.JL.183	AMP_07	Random	1/7.	43.57	2.09	11.73	0.10	0.00	0.11	0.12	11.53	13.48	11.44	2.44	0.84	2.43	0.00	0.00	99.88
C12.JL.183	AMP_07	Random	1/8.	43.53	1.89	11.55	0.11	0.00	0.00	0.09	11.50	13.88	11.48	2.33	0.85	2.57	0.00	0.00	99.78
C12.JL.183	AMP_07	Random	1/9.	43.93	2.03	11.30	0.09	0.00	0.00	0.10	10.76	14.05	11.59	2.36	0.85	2.76	0.00	0.00	99.82
C12.JL.183	AMP_07	Random	1/10.	43.86	1.93	11.45	0.09	0.00	0.07	0.11	11.23	13.78	11.64	2.17	0.82	2.61	0.17	0.00	99.93
C12.JL.183	AMP_07	Random	1/11.	44.29	1.99	11.15	0.10	0.00	0.00	0.09	11.19	13.99	11.55	2.30	0.87	2.17	0.21	0.00	99.90
C12.JL.183	AMP_07	Random	1/12.	43.85	2.04	11.36	0.10	0.00	0.13	0.10	11.17	13.91	11.64	2.31	0.86	2.33	0.00	0.00	99.80
C12.JL.183	AMP_07	Random	1/13.	43.43	2.03	11.74	0.09	0.00	0.08	0.10	11.42	13.67	11.64	2.49	0.89	2.25	0.00	0.00	99.83
C12.JL.183	AMP_07	Random	1/14.	43.92	1.99	11.30	0.09	0.00	0.05	0.12	10.98	13.94	11.65	2.51	0.87	2.39	0.00	0.00	99.81
C12.JL.186	AMP_01	Core	1/1.	45.49	0.99	7.93	0.04	0.00	0.00	0.82	16.78	11.18	11.18	1.66	1.00	2.62	0.23	0.00	99.92
C12.JL.186	AMP_01	Core	1/2.	44.97	0.98	7.91	0.05	0.00	0.00	0.87	17.23	11.05	11.21	1.61	0.96	2.88	0.22	0.00	99.94
C12.JL.186	AMP_01	Core	1/3.	45.26	1.02	7.90	0.06	0.00	0.00	0.86	17.05	11.13	11.16	1.42	0.99	2.88	0.24	0.00	99.97
C12.JL.186	AMP_01	Alteration	1/4.	43.84	0.95	7.64	0.04	0.00	0.00	0.84	16.71	10.78	10.89	1.50	0.96	5.55	0.23	0.00	99.93
C12.JL.186	AMP_01	Core	1/5.	44.98	0.97	7.75	0.04	0.00	0.00	0.88	17.01	10.99	11.16	1.62	0.98	3.32	0.24	0.00	99.94
C12.JL.186	AMP_01	Core	1/6.	46.11	0.85	7.35	0.05	0.00	0.00	0.84	16.16	11.24	10.90	1.61	0.87	3.73	0.21	0.00	99.92
C12.JL.186	AMP_01	Core	1/7.	46.31	0.84	6.72	0.04	0.00	0.00	0.91	16.13	11.87	11.18	1.43	0.74	3.61	0.21	0.00	99.99

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.186	AMP_01	Core	1/8.	46.89	0.80	6.66	0.04	0.00	0.00	0.90	16.10	11.79	11.20	1.26	0.78	3.30	0.23	0.00	99.95
C12.JL.186	AMP_01	Core	1/9.	44.50	0.99	7.83	0.04	0.00	0.00	0.85	16.94	10.91	11.08	1.62	0.96	3.97	0.25	0.00	99.94
C12.JL.186	AMP_01	Core	1/10.	45.04	0.94	7.79	0.05	0.00	0.00	0.83	16.95	11.03	11.31	1.59	0.96	3.19	0.25	0.00	99.93
C12.JL.186	AMP_01	Rim	1/11.	41.71	1.73	11.09	0.07	0.00	0.00	0.29	16.90	10.23	11.14	2.00	1.09	3.47	0.00	0.08	99.80
C12.JL.186	AMP_01	Rim	1/12.	43.13	1.60	11.07	0.07	0.00	0.00	0.30	16.61	10.62	10.98	1.98	1.03	2.36	0.16	0.00	99.91
C12.JL.186	AMP_01	Rim	1/13.	46.07	0.93	7.22	0.00	0.00	0.00	0.98	16.48	11.45	11.18	1.42	0.85	3.14	0.19	0.00	99.91
C12.JL.186	AMP_01	Alteration	1/14.	41.82	1.41	9.88	0.05	0.00	0.00	0.47	16.67	10.17	11.01	1.75	1.02	5.47	0.16	0.08	99.96
C12.JL.186	AMP_01	Alteration	1/15.	43.39	0.96	7.81	0.04	0.00	0.00	0.88	16.86	10.57	10.83	1.49	0.92	5.99	0.19	0.00	99.93
C12.JL.186	AMP_01	Rim	1/16.	44.43	0.90	7.72	0.04	0.00	0.00	0.93	17.02	10.92	11.04	1.66	0.96	4.18	0.16	0.00	99.96
C12.JL.186	AMP_01	Rim	1/17.	45.18	0.99	8.00	0.05	0.00	0.00	0.84	17.22	10.97	11.27	1.67	0.97	2.60	0.20	0.00	99.96
C12.JL.186	AMP_01	Rim	1/18.	40.88	1.55	9.52	0.06	0.00	0.00	0.34	15.76	10.29	10.72	1.70	0.89	8.06	0.00	0.00	99.77
C12.JL.186	AMP_01	Rim	1/19.	41.91	1.69	10.73	0.08	0.00	0.00	0.32	16.88	10.18	11.04	1.86	1.04	4.00	0.00	0.00	99.73
C12.JL.186	AMP_01	Rim	1/20.	44.78	0.91	7.59	0.05	0.00	0.00	0.91	16.82	11.02	11.12	1.52	0.91	4.12	0.20	0.00	99.95
C12.JL.186	AMP_02	Random	1/3.	42.37	2.01	13.42	0.09	0.00	0.00	0.16	12.76	11.75	10.90	2.27	0.92	3.08	0.16	0.00	99.89
C12.JL.186	AMP_02	Random	1/5.	45.24	1.17	8.07	0.05	0.00	0.00	0.41	14.92	12.32	11.39	1.56	0.66	3.98	0.17	0.00	99.94
C12.JL.186	AMP_03	Core	1/1.	41.38	2.53	12.47	0.09	0.00	0.00	0.13	14.28	11.53	11.64	2.60	0.82	2.33	0.14	0.00	99.94
C12.JL.186	AMP_03	Core	1/2.	41.49	2.49	12.49	0.09	0.00	0.00	0.13	13.97	11.61	11.71	2.53	0.79	2.46	0.00	0.00	99.76
C12.JL.186	AMP_03	Core	1/3.	41.55	2.36	12.47	0.10	0.00	0.00	0.13	13.67	11.70	11.78	2.54	0.81	2.69	0.00	0.00	99.80
C12.JL.186	AMP_03	Core	1/4.	42.31	2.39	12.67	0.08	0.00	0.00	0.13	13.68	12.04	11.75	2.58	0.87	1.29	0.00	0.00	99.79
C12.JL.186	AMP_03	Core	1/5.	43.22	2.30	13.26	0.09	0.00	0.00	0.14	13.75	12.02	11.54	2.74	0.81	0.00	0.00	0.00	99.87
C12.JL.186	AMP_03	Core	1/6.	42.38	2.41	12.85	0.09	0.00	0.00	0.15	13.87	11.88	11.66	2.65	0.79	1.11	0.00	0.00	99.84
C12.JL.186	AMP_03	Rim	1/7.	41.71	2.33	12.40	0.09	0.00	0.00	0.13	13.63	12.01	11.74	2.46	0.81	2.46	0.15	0.00	99.92
C12.JL.186	AMP_03	Rim	1/8.	40.66	2.18	11.71	0.08	0.00	0.00	0.18	14.29	11.54	11.62	2.36	0.83	4.31	0.00	0.00	99.76
C12.JL.186	AMP_03	Rim	1/9.	40.67	2.27	11.57	0.09	0.00	0.00	0.17	14.09	11.59	11.93	2.33	0.81	4.22	0.16	0.00	99.90
C12.JL.186	AMP_03	Rim	1/10.	41.29	2.36	12.25	0.09	0.00	0.00	0.14	13.58	11.69	11.57	2.47	0.78	3.57	0.15	0.00	99.94
C12.JL.186	AMP_03	Rim	1/11.	41.56	2.50	11.91	0.09	0.00	0.00	0.19	14.51	11.11	11.24	2.28	0.77	3.59	0.15	0.00	99.90

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.186	AMP_03	Rim	1/12.	43.84	1.49	9.17	0.07	0.00	0.00	0.35	15.45	11.91	11.37	1.83	0.78	3.50	0.17	0.00	99.93
C12.JL.186	AMP_03	Rim	1/13.	43.62	1.51	9.28	0.07	0.00	0.00	0.36	15.30	11.85	11.39	1.80	0.76	3.82	0.16	0.00	99.92
C12.JL.186	AMP_03	Rim	1/14.	43.03	1.46	9.50	0.06	0.00	0.00	0.36	14.13	10.78	10.75	1.68	0.71	7.35	0.00	0.07	99.88
C12.JL.186	AMP_03	Random	1/15.	41.14	2.36	12.56	0.10	0.00	0.00	0.15	13.80	11.66	11.61	2.63	0.80	2.94	0.16	0.00	99.91
C12.JL.186	AMP_03	Random	1/16.	41.32	2.12	10.75	0.06	0.00	0.00	0.26	14.48	10.99	11.09	2.16	0.78	5.74	0.17	0.00	99.92
C12.JL.186	AMP_03	Random	1/17.	41.56	2.42	12.76	0.10	0.00	0.00	0.11	13.77	11.76	11.71	2.55	0.82	2.20	0.17	0.00	99.93
C12.JL.186	AMP_03	Random	2/1.	42.30	1.41	10.57	0.05	0.00	0.05	0.29	13.41	10.09	10.28	1.71	0.68	8.92	0.15	0.00	99.91
C12.JL.186	AMP_04	Core	1/1.	45.12	0.91	8.14	0.04	0.00	0.00	0.82	17.36	11.02	11.71	1.56	1.07	1.98	0.22	0.00	99.95
C12.JL.186	AMP_04	Core	1/2.	44.96	0.92	8.14	0.04	0.00	0.00	0.84	17.33	11.26	11.66	1.59	1.10	1.93	0.18	0.00	99.95
C12.JL.186	AMP_04	Core	1/3.	44.26	1.27	9.50	0.05	0.00	0.00	0.60	16.83	11.18	11.72	1.90	1.06	1.41	0.15	0.00	99.93
C12.JL.186	AMP_04	Rim to core	1/4.	42.25	2.10	11.27	0.07	0.00	0.00	0.19	15.38	11.32	11.48	2.28	1.02	2.42	0.00	0.08	99.86
C12.JL.186	AMP_04	Rim to core	1/5.	42.61	2.01	11.31	0.09	0.00	0.00	0.20	15.62	11.29	11.53	2.15	1.03	1.96	0.00	0.00	99.80
C12.JL.186	AMP_04	Rim to core	1/6.	43.03	1.75	11.96	0.08	0.00	0.00	0.22	15.44	11.26	11.55	2.28	1.04	1.14	0.00	0.09	99.84
C12.JL.186	AMP_04	Rim to core	1/7.	42.98	1.97	11.57	0.07	0.00	0.00	0.20	15.33	11.13	11.44	2.16	1.03	1.92	0.00	0.00	99.80
C12.JL.186	AMP_04	Rim to core	1/8.	42.78	1.95	11.38	0.08	0.00	0.00	0.22	15.92	11.29	11.65	2.11	1.02	1.39	0.00	0.00	99.79
C12.JL.186	AMP_04	Rim to core	1/9.	43.75	1.57	10.64	0.07	0.00	0.00	0.39	16.11	11.40	11.75	2.03	1.08	0.99	0.00	0.00	99.78
C12.JL.186	AMP_04	Rim to core	1/10.	43.00	1.88	12.14	0.07	0.00	0.00	0.23	15.77	11.31	11.68	2.23	1.08	0.38	0.14	0.00	99.91
C12.JL.186	AMP_04	Rim	1/11.	43.77	2.02	11.94	0.07	0.00	0.00	0.16	14.67	12.13	11.67	2.36	1.01	0.00	0.00	0.00	99.80
C12.JL.186	AMP_04	Rim	1/12.	42.83	2.01	11.70	0.09	0.00	0.00	0.18	14.68	11.65	11.58	2.26	0.91	1.85	0.00	0.08	99.82
C12.JL.186	AMP_04	Rim	1/13.	42.97	1.95	11.35	0.08	0.00	0.00	0.22	15.35	11.50	11.61	2.21	0.98	1.55	0.00	0.00	99.77
C12.JL.186	AMP_04	Rim	1/14.	42.32	1.86	11.71	0.09	0.00	0.00	0.20	15.65	11.09	11.62	2.22	1.08	1.96	0.00	0.00	99.80
C12.JL.186	AMP_04	Rim	1/15.	40.69	1.77	10.86	0.07	0.00	0.00	0.23	15.65	10.78	11.31	2.06	1.01	5.32	0.00	0.09	99.84
C12.JL.186	AMP_04	Rim	1/16.	41.61	2.10	11.21	0.08	0.00	0.00	0.16	14.78	11.41	11.53	2.24	0.98	3.63	0.16	0.00	99.89
C12.JL.186	AMP_04	Core	1/17.	42.02	2.08	11.54	0.07	0.00	0.00	0.17	14.78	11.54	11.61	2.19	0.96	2.79	0.00	0.00	99.75
C12.JL.186	AMP_05	Random	1/1.	43.13	1.95	10.67	0.06	0.00	0.00	0.22	15.36	11.85	11.54	1.95	0.89	2.13	0.00	0.00	99.75
C12.JL.186	AMP_05	Random	1/4.	42.16	2.02	11.97	0.10	0.00	0.00	0.14	13.77	12.33	11.64	2.27	0.94	2.44	0.00	0.00	99.78

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.186	AMP_05	Random	1/5.	42.97	2.10	11.30	0.10	0.00	0.00	0.13	13.08	12.73	11.77	2.16	0.94	2.50	0.00	0.00	99.78
C12.JL.186	AMP_05	Random	1/6.	42.03	1.89	10.76	0.07	0.00	0.00	0.21	15.09	11.73	11.65	2.01	0.94	3.38	0.16	0.00	99.92
C12.JL.186	AMP_06	Random	1/1.	43.89	1.84	11.17	0.09	0.00	0.21	0.09	10.47	14.56	11.75	2.32	0.90	2.51	0.00	0.00	99.80
C12.JL.186	AMP_06	Random	1/2.	43.83	1.82	11.39	0.09	0.00	0.20	0.09	10.54	14.45	11.79	2.29	0.94	2.38	0.00	0.00	99.81
C12.JL.186	AMP_06	Random	1/3.	43.01	1.80	11.14	0.11	0.00	0.18	0.09	10.54	14.02	11.63	2.21	0.93	4.13	0.00	0.00	99.79
C12.JL.186	AMP_06	Random	1/4.	43.86	1.81	11.34	0.09	0.00	0.18	0.09	10.55	14.45	11.77	2.31	0.94	2.43	0.00	0.00	99.82
C12.JL.186	AMP_06	Random	1/5.	43.68	1.72	11.41	0.08	0.00	0.07	0.08	10.69	14.20	11.78	2.25	0.93	2.94	0.00	0.00	99.83
C12.JL.186	AMP_06	Random	1/6.	44.53	1.83	11.47	0.11	0.00	0.22	0.10	10.37	14.58	11.76	2.35	0.93	1.56	0.00	0.00	99.81
C12.JL.186	AMP_06	Random	1/7.	43.95	1.96	11.54	0.09	0.00	0.24	0.09	10.51	14.38	11.83	2.29	1.00	1.93	0.00	0.00	99.81
C12.JL.186	AMP_06	Random	1/8.	44.02	1.99	11.34	0.09	0.00	0.19	0.10	10.54	14.37	11.75	2.32	0.96	2.15	0.00	0.00	99.82
C12.JL.186	AMP_06	Random	1/9.	43.66	1.85	11.17	0.09	0.00	0.17	0.10	10.46	14.33	11.88	2.18	0.91	2.99	0.15	0.00	99.94
C12.JL.186	AMP_06	Random	1/10.	42.66	2.07	11.20	0.09	0.00	0.00	0.14	14.24	12.23	11.73	2.19	0.94	2.31	0.00	0.00	99.80
C12.JL.186	AMP_06	Random	1/11.	41.92	2.15	11.78	0.09	0.00	0.00	0.17	14.52	11.73	11.71	2.32	1.00	2.43	0.00	0.00	99.82
C12.JL.186	AMP_06	Random	1/12.	41.47	2.17	11.53	0.10	0.00	0.00	0.16	14.78	11.37	11.58	2.29	0.99	3.36	0.00	0.00	99.80
C12.JL.186	AMP_06	Random	1/13.	43.50	1.87	11.09	0.09	0.00	0.27	0.09	10.52	14.20	11.76	2.26	0.96	3.24	0.00	0.00	99.85
C12.JL.186	AMP_06	Random	1/14.	43.72	1.94	11.35	0.11	0.00	0.15	0.10	10.91	14.11	11.82	2.26	0.96	2.42	0.00	0.00	99.85
C12.JL.186	AMP_07	Rim-Core	1/1.	42.75	1.85	10.47	0.07	0.00	0.00	0.27	15.49	11.49	11.57	1.97	0.83	2.93	0.19	0.00	99.88
C12.JL.186	AMP_07	Rim-Core	1/2.	43.12	1.67	10.69	0.07	0.00	0.00	0.27	15.97	11.47	11.42	1.98	1.09	1.98	0.16	0.10	99.99
C12.JL.186	AMP_07	Rim-Core	1/3.	41.51	2.14	11.59	0.08	0.00	0.00	0.19	15.09	11.05	11.38	2.13	0.93	3.67	0.00	0.08	99.84
C12.JL.186	AMP_07	Core	1/4.	44.99	1.97	10.84	0.06	0.00	0.00	0.13	11.75	12.51	11.14	1.96	0.73	3.68	0.19	0.00	99.95
C12.JL.186	AMP_07	Rim-Core	1/5.	43.73	1.84	11.00	0.09	0.00	0.00	0.10	10.62	14.22	11.70	2.31	0.81	3.29	0.21	0.00	99.92
C12.JL.186	AMP_07	Rim-Core	1/6.	42.09	2.03	10.93	0.09	0.00	0.00	0.13	11.30	13.46	11.77	2.27	0.80	4.79	0.26	0.00	99.92
C12.JL.186	AMP_07	Rim-Core	1/7.	41.05	2.20	13.15	0.10	0.00	0.09	0.13	12.00	12.32	11.08	2.44	1.08	4.05	0.19	0.00	99.88
C12.JL.186	AMP_07	Rim-Core	1/8.	44.88	1.91	10.93	0.08	0.00	0.07	0.10	10.65	13.93	11.53	2.12	0.77	2.79	0.17	0.00	99.93
C12.JL.180	AMP_01	Rim	1/1.	48.33	1.32	6.81	0.00	0.00	0.00	0.61	12.48	14.88	11.31	1.48	0.56	1.81	0.21	0.14	99.94
C12.JL.180	AMP_01	Rim	1/2.	51.29	0.97	5.33	0.00	0.00	0.00	0.56	10.49	16.01	11.35	1.11	0.49	2.10	0.00	0.12	99.82

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.180	AMP_01	Rim	1/3.	50.35	0.91	4.71	0.00	0.00	0.00	0.57	10.71	16.29	11.98	1.09	0.45	2.60	0.20	0.11	99.97
C12.JL.180	AMP_01	Rim	1/4.	48.80	1.00	6.86	0.00	0.00	0.00	0.55	12.03	15.19	11.52	1.42	0.52	1.74	0.21	0.09	99.93
C12.JL.180	AMP_01	Rim	1/5.	46.25	1.21	8.55	0.05	0.00	0.00	0.56	14.01	13.50	11.16	1.81	0.54	2.01	0.19	0.12	99.96
C12.JL.180	AMP_01	Rim	1/6.	46.56	1.22	8.56	0.04	0.00	0.00	0.58	13.74	13.66	11.17	1.76	0.63	1.74	0.21	0.12	99.99
C12.JL.180	AMP_01	Rim	1/7.	45.81	1.18	9.27	0.04	0.00	0.00	0.59	14.15	14.13	10.53	1.61	0.62	1.74	0.18	0.11	99.96
C12.JL.180	AMP_01	Rim	1/8.	45.66	1.32	9.04	0.05	0.00	0.00	0.58	14.06	13.25	11.10	1.80	0.69	2.18	0.00	0.12	99.85
C12.JL.180	AMP_01	Rim	1/9.	47.40	1.14	7.82	0.00	0.00	0.00	0.59	13.47	14.01	10.97	1.74	0.48	2.03	0.19	0.10	99.94
C12.JL.180	AMP_01	Rim	1/10.	51.36	0.81	4.68	0.00	0.00	0.00	0.58	10.79	16.49	11.85	0.98	0.34	1.81	0.18	0.09	99.96
C12.JL.180	AMP_01	Rim	1/11.	47.50	1.18	7.60	0.00	0.00	0.00	0.59	12.92	14.48	11.25	1.54	0.55	2.00	0.21	0.11	99.93
C12.JL.180	AMP_01	Rim	1/12.	51.62	1.02	4.15	0.00	0.00	0.00	0.59	10.56	17.00	11.63	0.98	0.39	1.72	0.19	0.11	99.96
C12.JL.180	AMP_01	Rim	1/13.	51.61	0.53	4.31	0.00	0.00	0.00	0.51	10.72	16.75	11.99	0.95	0.30	1.98	0.25	0.00	99.90
C12.JL.180	AMP_01	Rim	1/14.	46.28	1.27	8.69	0.04	0.00	0.00	0.55	13.61	13.70	11.23	1.79	0.65	1.89	0.17	0.11	99.98
C12.JL.180	AMP_01	Rim	1/15.	50.88	0.70	5.03	0.00	0.00	0.00	0.54	10.87	16.52	12.04	0.80	0.38	1.88	0.17	0.12	99.93
C12.JL.180	AMP_01	Rim	1/16.	47.37	1.19	8.00	0.04	0.00	0.00	0.58	13.62	13.93	11.13	1.64	0.52	1.67	0.18	0.00	99.87
C12.JL.180	AMP_01	Rim	1/17.	53.02	0.56	3.41	0.00	0.00	0.00	0.44	9.19	17.99	12.18	0.66	0.25	1.98	0.20	0.00	99.88
C12.JL.180	AMP_01	Rim	1/18.	53.82	0.53	3.08	0.00	0.00	0.00	0.45	9.36	17.95	12.15	0.66	0.25	1.46	0.20	0.00	99.91
C12.JL.180	AMP_01	Rim	1/19.	46.23	1.29	8.95	0.04	0.00	0.00	0.58	13.31	13.79	11.33	1.84	0.68	1.63	0.18	0.13	99.98
C12.JL.180	AMP_01	Rim-core	1/20.	47.62	1.12	7.79	0.00	0.00	0.00	0.55	13.46	14.05	11.18	1.71	0.49	1.78	0.17	0.00	99.92
C12.JL.180	AMP_01	Rim-core	1/21.	46.91	1.19	8.24	0.05	0.00	0.00	0.56	13.95	13.74	11.14	1.78	0.54	1.64	0.00	0.08	99.82
C12.JL.180	AMP_01	Rim-core	1/22.	47.57	1.12	7.73	0.04	0.00	0.00	0.55	13.45	14.13	11.09	1.62	0.48	1.92	0.18	0.11	99.99
C12.JL.180	AMP_01	Rim-core	1/23.	47.62	1.14	7.89	0.00	0.00	0.00	0.59	13.31	14.12	11.12	1.68	0.56	1.63	0.19	0.09	99.94
C12.JL.180	AMP_01	Rim-core	1/24.	47.28	1.13	8.10	0.05	0.00	0.00	0.57	13.67	13.66	11.05	1.79	0.51	1.92	0.16	0.09	99.98
C12.JL.180	AMP_01	Core	1/25.	47.39	1.17	8.10	0.00	0.00	0.00	0.57	13.63	13.95	11.14	1.67	0.53	1.52	0.17	0.10	99.94
C12.JL.180	AMP_01	Rim-core	1/26.	47.95	1.15	7.41	0.04	0.00	0.00	0.57	12.99	14.46	11.33	1.51	0.58	1.68	0.18	0.15	100.00
C12.JL.180	AMP_01	Rim-core	1/27.	47.51	1.15	7.90	0.04	0.00	0.00	0.56	12.86	14.45	11.42	1.66	0.58	1.54	0.18	0.11	99.96
C12.JL.180	AMP_01	Rim-core	1/28.	49.78	1.09	5.85	0.00	0.00	0.00	0.61	11.51	16.00	11.47	1.39	0.47	1.45	0.22	0.13	99.97

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.180	AMP_01	Rim-core	1/29.	48.56	1.20	7.21	0.00	0.00	0.00	0.58	12.20	15.26	11.41	1.53	0.60	1.12	0.19	0.11	99.97
C12.JL.180	AMP_02	Rim	1/1.	53.16	0.48	3.47	0.00	0.00	0.00	0.55	9.56	17.70	11.98	0.64	0.27	1.92	0.16	0.00	99.89
C12.JL.180	AMP_02	Rim	1/2.	47.78	1.24	7.86	0.00	0.00	0.00	0.55	12.81	14.52	11.19	1.78	0.53	1.40	0.19	0.10	99.95
C12.JL.180	AMP_02	Rim	1/3.	46.51	1.31	8.54	0.05	0.00	0.00	0.55	13.45	13.77	11.21	1.73	0.56	2.01	0.19	0.09	99.97
C12.JL.180	AMP_02	Rim	1/4.	48.94	1.00	8.78	0.00	0.00	0.00	0.54	11.50	13.26	10.60	2.36	0.46	2.26	0.16	0.09	99.95
C12.JL.180	AMP_02	Rim	1/5.	44.28	1.50	10.17	0.05	0.00	0.00	0.52	14.69	12.38	11.18	2.01	0.84	2.02	0.18	0.18	100.00
C12.JL.180	AMP_02	Rim	1/6.	48.16	1.04	7.42	0.04	0.00	0.00	0.55	12.70	14.52	11.05	1.57	0.47	2.18	0.18	0.10	99.98
C12.JL.180	AMP_02	Rim	1/7.	48.20	1.08	7.44	0.04	0.00	0.00	0.59	12.57	14.86	11.02	1.58	0.43	1.92	0.16	0.10	99.99
C12.JL.180	AMP_02	Rim	1/8.	48.63	1.05	7.08	0.04	0.00	0.00	0.56	12.59	14.94	11.02	1.58	0.40	1.82	0.21	0.00	99.92
C12.JL.180	AMP_02	Rim	1/9.	46.77	1.19	8.13	0.04	0.00	0.00	0.52	13.57	13.86	11.00	1.89	0.49	2.19	0.19	0.12	99.96
C12.JL.180	AMP_02	Rim	1/10.	47.05	1.18	8.11	0.05	0.00	0.00	0.55	13.26	13.85	11.14	1.81	0.54	2.15	0.18	0.10	99.97
C12.JL.180	AMP_02	Rim	1/11.	48.56	1.12	7.03	0.00	0.00	0.00	0.60	12.62	14.83	11.13	1.57	0.39	1.84	0.19	0.08	99.96
C12.JL.180	AMP_02	Rim	1/12.	51.76	1.31	4.06	0.00	0.00	0.00	0.55	9.84	17.31	11.51	1.01	0.40	1.89	0.20	0.13	99.97
C12.JL.180	AMP_02	Rim	1/13.	48.79	1.05	7.04	0.04	0.00	0.00	0.63	11.82	15.02	10.86	1.46	0.55	2.47	0.17	0.00	99.90
C12.JL.180	AMP_02	Rim	1/14.	51.49	1.04	4.31	0.00	0.00	0.00	0.56	11.17	16.41	11.39	1.03	0.38	1.88	0.20	0.09	99.95
C12.JL.180	AMP_02	Rim	1/15.	46.03	1.32	8.86	0.05	0.00	0.00	0.52	13.92	13.44	11.04	1.97	0.64	1.88	0.17	0.12	99.96
C12.JL.180	AMP_02	Rim	1/16.	47.72	1.18	7.64	0.00	0.00	0.00	0.62	13.20	14.25	11.09	1.66	0.46	1.82	0.18	0.09	99.91
C12.JL.180	AMP_02	Core	1/17.	45.75	1.32	9.35	0.04	0.00	0.00	0.52	14.48	13.01	11.02	1.88	0.68	1.64	0.17	0.10	99.96
C12.JL.180	AMP_02	Core	1/18.	46.63	1.18	8.40	0.05	0.00	0.00	0.53	14.10	13.42	11.07	1.73	0.59	1.98	0.17	0.11	99.96
C12.JL.180	AMP_02	Core	1/19.	45.88	1.32	8.90	0.05	0.00	0.00	0.52	13.95	13.35	11.26	1.85	0.66	1.91	0.18	0.13	99.96
C12.JL.180	AMP_02	Core	1/20.	46.61	1.21	8.53	0.04	0.00	0.00	0.57	14.08	13.40	10.99	1.86	0.57	1.81	0.17	0.13	99.97
C12.JL.180	AMP_02	Core	1/21.	47.40	1.15	7.90	0.05	0.00	0.00	0.59	13.48	13.93	10.93	1.70	0.50	2.07	0.19	0.10	99.99
C12.JL.180	AMP_02	Core	1/22.	48.58	1.04	6.67	0.04	0.00	0.00	0.54	12.69	14.86	11.47	1.43	0.49	1.87	0.18	0.12	99.98
C12.JL.180	AMP_02	Core	1/23.	48.58	1.16	6.26	0.05	0.00	0.00	0.61	11.95	15.27	11.26	1.34	0.48	2.72	0.20	0.10	99.98
C12.JL.180	AMP_02	Core	1/24.	46.87	1.20	8.29	0.00	0.00	0.00	0.55	13.40	13.81	11.07	1.80	0.58	2.03	0.20	0.13	99.93
C12.JL.180	AMP_02	Core	1/25.	50.17	0.98	5.44	0.00	0.00	0.00	0.54	11.59	15.71	11.91	1.04	0.44	1.86	0.15	0.12	99.95

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.180	AMP_02	Core	1/26.	50.97	0.84	5.23	0.00	0.00	0.00	0.50	11.25	16.14	11.76	1.15	0.38	1.47	0.20	0.00	99.89
C12.JL.180	AMP_03	Random	1/1.	47.96	1.29	7.71	0.00	0.00	0.00	0.54	12.41	14.71	11.05	1.82	0.42	1.77	0.19	0.09	99.96
C12.JL.180	AMP_03	Random	1/2.	48.41	1.16	7.38	0.00	0.00	0.00	0.55	12.52	14.78	11.01	1.69	0.41	1.72	0.24	0.00	99.87
C12.JL.180	AMP_03	Random	1/3.	47.42	1.24	7.72	0.00	0.00	0.00	0.57	13.31	14.11	11.31	1.69	0.55	1.70	0.20	0.11	99.93
C12.JL.180	AMP_03	Random	1/4.	49.42	1.09	6.08	0.04	0.00	0.00	0.59	11.40	15.79	11.36	1.39	0.46	2.02	0.22	0.11	99.97
C12.JL.180	AMP_03	Random	1/5.	51.49	0.81	4.29	0.00	0.00	0.00	0.53	10.97	16.45	11.71	0.91	0.35	2.14	0.21	0.09	99.95
C12.JL.180	AMP_04	Random	1/1.	48.10	1.04	6.96	0.06	0.00	0.00	0.56	14.05	13.46	11.88	1.37	0.55	1.71	0.00	0.11	99.85
C12.JL.180	AMP_04	Random	1/2.	45.73	1.25	8.95	0.04	0.00	0.00	0.56	15.37	12.52	11.32	1.81	0.70	1.46	0.00	0.12	99.83
C12.JL.180	AMP_04	Random	1/3.	46.33	1.27	8.63	0.05	0.00	0.00	0.56	14.65	13.00	11.41	1.65	0.65	1.52	0.15	0.11	99.98
C12.JL.180	AMP_04	Random	1/4.	46.48	1.17	8.35	0.06	0.00	0.00	0.58	14.39	13.21	11.39	1.63	0.65	1.83	0.15	0.10	99.99
C12.JL.180	AMP_04	Random	1/5.	46.95	1.06	7.99	0.05	0.00	0.00	0.59	14.48	13.32	11.53	1.53	0.68	1.54	0.15	0.10	99.97
C12.JL.180	AMP_04	Random	1/6.	45.84	1.26	9.12	0.05	0.00	0.00	0.58	15.41	12.51	11.43	1.70	0.72	1.13	0.00	0.12	99.87
C12.JL.180	AMP_04	Random	1/7.	46.03	1.18	8.93	0.04	0.00	0.00	0.60	13.89	13.35	11.50	1.70	0.74	1.74	0.17	0.09	99.96
C12.JL.180	AMP_04	Random	1/8.	46.69	1.13	8.14	0.05	0.00	0.00	0.59	14.91	13.11	11.39	1.55	0.63	1.57	0.15	0.10	100.01
C12.JL.180	AMP_04	Random	1/9.	46.20	1.20	8.65	0.04	0.00	0.00	0.56	15.18	12.73	11.43	1.71	0.67	1.37	0.00	0.10	99.84
C12.JL.180	AMP_04	Random	1/10.	45.64	1.29	8.95	0.04	0.00	0.00	0.58	15.12	12.47	11.41	1.75	0.76	1.68	0.15	0.13	99.97
C12.JL.180	AMP_04	Random	1/11.	45.61	1.24	8.97	0.04	0.00	0.00	0.58	15.25	12.56	11.44	1.76	0.71	1.60	0.00	0.11	99.87
C12.JL.180	AMP_04	Random	1/12.	45.31	1.25	9.26	0.05	0.00	0.00	0.55	15.13	12.45	11.42	1.76	0.74	1.81	0.00	0.13	99.86
C12.JL.180	AMP_04	Random	1/13.	45.77	1.17	9.04	0.04	0.00	0.00	0.56	14.83	12.71	11.47	1.70	0.66	1.80	0.00	0.09	99.84
C12.JL.180	AMP_04	Random	1/14.	45.71	1.20	8.97	0.05	0.00	0.00	0.54	14.54	12.96	11.50	1.63	0.71	1.97	0.00	0.11	99.89
C12.JL.180	AMP_04	Random	1/15.	46.14	1.21	8.55	0.04	0.00	0.00	0.59	14.54	13.01	11.43	1.77	0.69	1.76	0.00	0.11	99.84
C12.JL.180	AMP_04	Random	1/16.	45.61	1.23	8.96	0.05	0.00	0.00	0.58	14.65	12.82	11.36	1.75	0.78	1.89	0.00	0.12	99.80
C12.JL.180	AMP_04	Random	1/17.	43.92	1.37	10.20	0.06	0.00	0.00	0.54	16.30	11.30	11.26	1.92	1.03	1.80	0.00	0.16	99.86
C12.JL.180	AMP_04	Random	1/18.	46.63	1.18	8.37	0.05	0.00	0.00	0.57	14.85	12.92	11.27	1.72	0.61	1.57	0.15	0.11	100.00
C12.JL.180	AMP_04	Random	1/19.	45.06	1.40	9.41	0.06	0.00	0.00	0.59	15.07	12.41	11.37	1.82	0.81	1.69	0.15	0.14	99.98
C12.JL.180	AMP_04	Random	1/20.	45.03	1.31	9.39	0.04	0.00	0.00	0.56	15.41	12.37	11.37	1.86	0.77	1.60	0.00	0.13	99.84

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.180	AMP_04	Random	1/21.	47.02	1.06	8.16	0.05	0.00	0.00	0.60	13.55	13.72	11.60	1.47	0.66	1.87	0.00	0.10	99.86
C12.JL.180	AMP_04	Random	1/22.	51.09	0.71	5.14	0.00	0.00	0.00	0.60	10.65	16.53	12.23	0.96	0.38	1.40	0.19	0.09	99.97
C12.JL.180	AMP_04	Random	1/23.	51.91	0.73	4.45	0.00	0.00	0.00	0.60	10.37	16.84	11.83	1.01	0.36	1.56	0.19	0.09	99.94
C12.JL.180	AMP_04	Random	1/24.	46.25	1.29	8.71	0.05	0.00	0.00	0.55	14.82	12.87	11.37	1.65	0.73	1.45	0.00	0.11	99.85
C12.JL.180	AMP_04	Random	1/25.	47.05	1.08	8.00	0.05	0.00	0.00	0.59	13.65	13.83	11.44	1.62	0.62	1.76	0.17	0.11	99.97
C12.JL.180	AMP_04	Random	1/28.	53.53	0.95	8.71	0.00	0.00	0.00	0.48	8.38	13.44	10.24	2.88	0.47	0.60	0.14	0.11	99.93
C12.JL.180	AMP_05	Random	1/1.	46.80	1.16	8.12	0.04	0.00	0.00	0.57	14.05	13.56	11.46	1.69	0.61	1.70	0.00	0.10	99.86
C12.JL.180	AMP_05	Random	1/2.	46.69	1.16	8.18	0.04	0.00	0.00	0.58	14.16	13.37	11.49	1.63	0.66	1.78	0.15	0.10	99.99
C12.JL.180	AMP_05	Random	1/3.	46.35	1.19	8.35	0.05	0.00	0.00	0.55	14.40	13.18	11.59	1.68	0.65	1.72	0.16	0.10	99.97
C12.JL.180	AMP_05	Random	1/4.	47.04	1.14	7.87	0.00	0.00	0.00	0.57	14.17	13.52	11.52	1.63	0.56	1.72	0.00	0.09	99.83
C12.JL.180	AMP_05	Random	1/5.	46.76	1.14	8.04	0.04	0.00	0.00	0.57	14.33	13.43	11.55	1.70	0.63	1.54	0.17	0.10	100.00
C12.JL.180	AMP_05	Random	1/6.	46.68	1.17	8.28	0.04	0.00	0.00	0.56	13.46	13.78	11.56	1.66	0.65	1.86	0.16	0.10	99.96
C12.JL.180	AMP_05	Random	1/7.	46.90	1.22	7.55	0.04	0.00	0.00	0.57	13.76	13.91	11.57	1.55	0.67	1.94	0.17	0.14	99.99
C12.JL.180	AMP_05	Random	1/8.	47.35	1.12	7.77	0.04	0.00	0.00	0.58	13.56	13.92	11.43	1.60	0.54	1.85	0.16	0.00	99.92
C12.JL.180	AMP_06	Random	1/1.	50.95	1.19	4.67	0.00	0.00	0.00	0.69	10.69	16.47	11.50	1.22	0.45	1.81	0.19	0.13	99.96
C12.JL.180	AMP_06	Random	1/2.	46.81	1.26	8.23	0.05	0.00	0.00	0.55	13.07	14.18	11.27	1.73	0.54	2.00	0.17	0.11	99.97
C12.JL.180	AMP_06	Random	1/3.	48.55	1.02	5.70	0.04	0.00	0.00	0.62	13.76	15.85	11.03	1.25	0.39	1.58	0.00	0.10	99.89
C12.JL.180	AMP_06	Random	1/4.	48.73	1.03	5.69	0.04	0.00	0.00	0.61	13.78	15.95	11.00	1.35	0.41	1.14	0.00	0.11	99.84
C12.JL.180	AMP_06	Random	1/5.	47.43	1.14	7.96	0.04	0.00	0.00	0.58	12.46	14.75	11.24	1.70	0.52	1.92	0.16	0.09	99.99
C12.JL.180	AMP_06	Random	1/6.	50.53	1.09	5.39	0.00	0.00	0.00	0.59	10.94	16.24	11.43	1.25	0.42	1.83	0.18	0.00	99.89
C12.JL.180	AMP_06	Random	1/7.	51.37	1.09	4.49	0.00	0.00	0.00	0.61	10.38	16.75	11.62	1.09	0.42	1.83	0.18	0.12	99.95
C12.JL.180	AMP_06	Random	1/8.	47.29	1.17	7.88	0.04	0.00	0.00	0.55	12.39	14.54	11.25	1.76	0.52	2.29	0.19	0.11	99.98
C12.JL.180	AMP_06	Random	1/9.	51.89	1.10	3.92	0.00	0.00	0.00	0.63	10.27	17.05	11.51	0.96	0.38	1.93	0.18	0.11	99.93
C12.JL.180	AMP_06	Random	1/10.	49.45	1.15	5.82	0.00	0.00	0.00	0.60	11.47	15.77	11.39	1.31	0.44	2.27	0.19	0.10	99.96
C12.JL.180	AMP_06	Random	1/11.	48.78	1.05	7.03	0.00	0.00	0.00	0.58	11.90	15.27	11.24	1.53	0.39	1.91	0.18	0.09	99.95
C12.JL.180	AMP_06	Random	1/12.	48.33	1.16	7.35	0.04	0.00	0.00	0.60	12.39	14.87	11.00	1.63	0.41	1.94	0.16	0.09	99.97

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.180	AMP_06	Random	1/13.	47.78	1.06	7.47	0.04	0.00	0.00	0.57	12.74	14.67	11.26	1.57	0.49	2.05	0.16	0.11	99.97
C12.JL.180	AMP_06	Random	1/14.	50.51	0.84	5.41	0.00	0.00	0.00	0.59	10.77	16.32	11.60	1.14	0.38	2.14	0.00	0.08	99.78
C12.JL.180	AMP_06	Random	1/15.	49.93	1.06	5.76	0.04	0.00	0.00	0.59	11.12	16.25	11.61	1.19	0.49	1.65	0.19	0.10	99.98
C12.JL.180	AMP_06	Random	1/16.	47.44	1.06	7.97	0.05	0.00	0.00	0.59	12.54	14.59	11.29	1.72	0.53	1.91	0.20	0.10	99.99
C12.JL.180	AMP_07	Random	1/1.	46.67	1.14	7.99	0.05	0.00	0.00	0.60	14.57	13.18	11.65	1.54	0.71	1.64	0.17	0.00	99.91
C12.JL.180	AMP_07	Random	1/2.	50.72	1.04	4.38	0.00	0.00	0.00	0.63	11.62	15.86	11.58	1.08	0.44	2.32	0.20	0.10	99.97
C12.JL.180	AMP_07	Random	1/3.	46.79	1.11	7.82	0.04	0.00	0.00	0.61	14.06	13.19	11.50	1.66	0.62	2.27	0.20	0.09	99.96
C12.JL.180	AMP_07	Random	1/4.	46.66	1.08	7.88	0.05	0.00	0.00	0.62	14.52	12.90	11.53	1.63	0.63	2.24	0.16	0.10	100.00
C12.JL.180	AMP_07	Random	1/5.	46.90	1.12	7.80	0.05	0.00	0.00	0.63	14.55	12.91	11.40	1.56	0.57	2.23	0.17	0.08	99.97
C12.JL.180	AMP_07	Random	1/6.	46.50	1.16	7.90	0.04	0.00	0.00	0.65	14.87	12.78	11.49	1.61	0.58	2.18	0.00	0.09	99.85
C12.JL.180	AMP_07	Random	1/7.	46.94	1.08	7.79	0.04	0.00	0.00	0.62	13.66	13.49	11.43	1.71	0.59	2.35	0.20	0.09	99.99
C12.JL.180	AMP_07	Random	1/8.	50.30	1.27	4.99	0.00	0.00	0.00	0.57	11.34	15.83	11.79	1.24	0.48	1.85	0.22	0.08	99.96
C12.JL.180	AMP_07	Random	1/9.	53.06	0.51	3.39	0.00	0.00	0.00	0.53	9.50	17.64	12.00	0.80	0.22	2.00	0.25	0.00	99.90
C12.JL.180	AMP_08	Random	1/1.	51.69	1.02	4.23	0.00	0.00	0.00	0.53	10.33	16.86	11.84	0.96	0.41	1.83	0.18	0.00	99.88
C12.JL.180	AMP_08	Random	1/2.	52.13	0.68	4.35	0.00	0.00	0.00	0.56	10.18	17.04	11.66	0.94	0.31	1.87	0.17	0.08	99.97
C12.JL.180	AMP_08	Random	1/3.	49.56	1.07	5.93	0.04	0.00	0.00	0.58	11.70	15.65	11.31	1.43	0.44	2.01	0.17	0.09	99.98
C12.JL.180	AMP_08	Random	1/4.	50.20	1.00	5.58	0.04	0.00	0.00	0.57	11.04	16.31	11.30	1.32	0.39	1.95	0.20	0.08	99.98
C12.JL.180	AMP_08	Random	1/5.	51.19	0.80	4.78	0.00	0.00	0.00	0.53	10.95	16.37	11.75	1.10	0.35	1.87	0.20	0.00	99.89
C12.JL.180	AMP_08	Random	1/6.	53.37	0.46	3.27	0.00	0.00	0.00	0.50	9.30	17.76	12.07	0.76	0.22	2.00	0.18	0.00	99.89
C12.JL.180	AMP_08	Random	1/7.	53.48	0.51	3.35	0.00	0.00	0.00	0.52	9.33	17.79	12.11	0.74	0.22	1.61	0.19	0.08	99.93
C12.JL.180	AMP_08	Random	1/8.	51.21	0.76	5.09	0.04	0.00	0.00	0.51	10.74	16.33	11.86	1.01	0.28	1.92	0.15	0.00	99.90
C12.JL.180	AMP_08	Random	1/9.	47.76	1.15	7.64	0.04	0.00	0.00	0.57	12.62	14.49	10.87	1.73	0.41	2.44	0.19	0.00	99.91
C12.JL.180	AMP_09	Random	1/1.	50.09	1.11	5.41	0.04	0.00	0.00	0.58	10.73	16.34	11.57	1.29	0.49	2.00	0.21	0.11	99.97
C12.JL.180	AMP_09	Random	1/2.	49.43	1.28	6.30	0.04	0.00	0.00	0.57	11.12	15.94	11.60	1.36	0.52	1.54	0.17	0.12	99.99
C12.JL.180	AMP_09	Random	1/3.	48.08	1.16	7.54	0.00	0.00	0.00	0.58	12.43	14.84	11.30	1.64	0.51	1.62	0.19	0.09	99.98
C12.JL.180	AMP_09	Random	1/4.	47.58	1.17	7.92	0.04	0.00	0.00	0.56	12.67	14.52	11.30	1.73	0.55	1.67	0.18	0.09	99.98

Sample	Amp no.	Location	Spot no.	SiO_2	TiO_2	Al_2O_3	V_2O_3	P_2O_5	Cr_2O_3	MnO	FeO	MgO	CaO	Na_2O	K_2O	H_2O*	F	Cl	Total
C12.JL.180	AMP_09	Random	1/5.	47.85	1.09	7.66	0.04	0.00	0.00	0.55	13.14	14.23	11.21	1.76	0.50	1.68	0.19	0.10	100.00
C12.JL.180	AMP_09	Random	1/6.	47.12	1.14	8.08	0.05	0.00	0.00	0.53	13.06	14.24	11.37	1.59	0.54	2.00	0.16	0.09	99.97
C12.JL.180	AMP_09	Random	1/7.	46.36	1.24	8.82	0.04	0.00	0.00	0.51	13.62	13.65	11.30	1.82	0.63	1.68	0.20	0.11	99.98
C12.JL.180	AMP_09	Random	1/8.	53.39	0.54	3.20	0.00	0.00	0.00	0.53	9.07	18.00	12.05	0.57	0.26	2.08	0.18	0.00	99.87
C12.JL.180	AMP_09	Random	1/9.	46.25	1.23	8.76	0.04	0.00	0.00	0.54	13.93	13.50	11.34	1.85	0.65	1.75	0.00	0.11	99.95
C12.JL.180	AMP_09	Random	1/10.	52.04	0.94	4.02	0.00	0.00	0.00	0.58	10.37	16.98	11.73	0.94	0.38	1.72	0.19	0.00	99.89

Table 3.8: Amphibole nomenclature and mineral stoichiometry as calculated using IMA 2012 method (Hawthorne et al. 2012).

Sample info				T-site				C-site								B-site				A-site		W-site			Sum T,C,B,A
Sample	Amp no.	Spot no.	Species	Si	P	Al	Ti	Ti	Al	V	Cr	Fe[III]	Mn[II]	Fe[II]	Mg	Mn[II]	Fe[II]	Ca	Na	Na	K	OH	F	Cl	
C12.JL.47	AMP_01	1/1.	MF-Hbl	6.832		1.168		0.128	0.244			0.608		0.760	3.259	0.061	0.191	1.527	0.221	0.204	0.078	2.000			15.281
C12.JL.47	AMP_01	1/2.	MF-Hbl	6.939		1.061		0.129	0.262			0.493		0.945	3.171	0.061	0.081	1.619	0.238	0.206	0.081	1.983		0.017	15.286
C12.JL.47	AMP_01	1/3.	MF-Hbl	6.949		1.051		0.130	0.256	0.006		0.522		0.928	3.157	0.064	0.101	1.590	0.246	0.174	0.077	1.984		0.016	15.251
C12.JL.47	AMP_01	1/4.	MF-Hbl	6.883		1.117		0.131	0.229	0.007		0.547		0.955	3.132	0.064	0.095	1.609	0.232	0.222	0.083	1.981		0.019	15.306
C12.JL.47	AMP_01	1/5.	MF-Hbl	6.842		1.158		0.137	0.289	0.005		0.324		1.205	3.040	0.063	0.124	1.639	0.174	0.336	0.104	1.981		0.019	15.440
C12.JL.47	AMP_01	1/6.	MF-Hbl	6.906		1.094		0.132	0.285	0.005		0.442		1.100	3.037	0.064	0.063	1.636	0.237	0.228	0.108	1.984		0.016	15.337
C12.JL.47	AMP_01	1/7.	MF-Hbl	6.845		1.155		0.131	0.311	0.006		0.320		1.219	3.013	0.061	0.124	1.649	0.167	0.305	0.118	1.981		0.019	15.424
C12.JL.47	AMP_01	1/8.	MF-Hbl	6.828		1.172		0.134	0.300	0.005		0.341		1.188	3.031	0.063	0.134	1.653	0.149	0.296	0.110	1.981		0.019	15.404
C12.JL.47	AMP_01	1/9.	MF-Hbl	6.827		1.173		0.143	0.287	0.005		0.346		1.177	3.042	0.062	0.138	1.659	0.141	0.282	0.108	1.978		0.022	15.390
C12.JL.47	AMP_01	1/10.	MF-Hbl	6.971		1.029		0.116	0.225	0.005		0.475		1.024	3.156	0.065	0.072	1.642	0.221	0.229	0.085	1.985		0.015	15.315
C12.JL.47	AMP_01	1/11.	MF-Hbl	6.862		1.138		0.131	0.280	0.006		0.343		1.194	3.047	0.064	0.134	1.656	0.145	0.282	0.112	1.977		0.023	15.394
C12.JL.47	AMP_01	1/12.	MF-Hbl	6.870		1.130		0.130	0.264	0.006		0.471		1.122	3.008	0.064	0.072	1.664	0.200	0.226	0.104	1.980		0.020	15.331
C12.JL.47	AMP_01	1/13.	MF-Hbl	6.828		1.172		0.137	0.290	0.006		0.314		1.222	3.031	0.060	0.122	1.669	0.150	0.320	0.118	1.982		0.018	15.439
C12.JL.47	AMP_02_01	1/1.	MF-Hbl	6.823		1.177		0.153	0.270	0.005		0.306		1.196	3.071	0.069	0.107	1.688	0.135	0.310	0.116	1.980		0.020	15.426
C12.JL.47	AMP_02_01	1/2.	M-Hbl	6.730		1.270		0.154	0.326	0.006		0.310		1.249	2.955	0.066	0.112	1.652	0.169	0.355	0.134	1.979		0.021	15.488
C12.JL.47	AMP_02_01	1/3.	pargasite	6.712		1.288		0.159	0.334	0.006		0.278		1.303	2.920	0.066	0.094	1.683	0.157	0.367	0.143	1.977		0.023	15.510
C12.JL.47	AMP_02_01	1/4.	MF-Hbl	6.771		1.229		0.151	0.291	0.006		0.313		1.213	3.025	0.068	0.113	1.670	0.149	0.350	0.115	1.982		0.018	15.464
C12.JL.47	AMP_02_01	1/5.	pargasite	6.681		1.319		0.148	0.356	0.006		0.255		1.386	2.849	0.064	0.083	1.690	0.163	0.415	0.154	1.970		0.030	15.569
C12.JL.47	AMP_02_01	1/6.	pargasite	6.734		1.266		0.146	0.334	0.007		0.281		1.463	2.768	0.068	0.094	1.666	0.172	0.382	0.142	1.973		0.027	15.523
C12.JL.47	AMP_02_01	1/7.	MF-Hbl	7.009		0.991		0.116	0.239	0.005		0.488		1.141	3.011	0.069	0.072	1.605	0.254	0.206	0.076	2.000			15.282
C12.JL.47	AMP_02_01	1/8.	MF-Hbl	6.972		1.028		0.117	0.215			0.481		1.146	3.041	0.072	0.066	1.644	0.217	0.238	0.078	1.980		0.020	15.315
C12.JL.47	AMP_02_01	1/9.	MF-Hbl	6.768		1.232		0.139	0.285	0.006		0.300		1.385	2.885	0.071	0.102	1.695	0.132	0.369	0.127	1.973		0.027	15.496
C12.JL.47	AMP_02_01	1/10.	MF-Hbl	6.998		1.002		0.117	0.248	0.005		0.487		1.125	3.019	0.071	0.069	1.630	0.230	0.175	0.085	2.000			15.261
C12.JL.47	AMP_02_01	1/11.	MF-Hbl	6.848	0.008	1.143		0.130	0.304	0.005		0.307		1.381	2.873	0.071	0.106	1.658	0.165	0.316	0.109	1.978		0.022	15.424
C12.JL.47	AMP_02_01	1/12.	MF-Hbl	6.747		1.253		0.143	0.297	0.006		0.319		1.397	2.839	0.071	0.113	1.670	0.146	0.364	0.128	1.973		0.027	15.493
C12.JL.47	AMP_02_01	1/13.	MF-Hbl	6.915		1.085		0.125	0.262	0.006		0.284		1.309	3.014	0.067	0.097	1.670	0.166	0.346	0.102	1.976		0.024	15.448
C12.JL.47	AMP_02_01	1/14.	MF-Hbl	6.923		1.077		0.120	0.277	0.005		0.315		1.296	2.987	0.069	0.113	1.662	0.156	0.294	0.102	1.978		0.022	15.396
C12.JL.47	AMP_02_01	1/15.	MF-Hbl	6.877		1.123		0.128	0.294	0.005		0.296		1.366	2.913	0.069	0.102	1.656	0.174	0.338	0.109	1.982		0.018	15.450
C12.JL.47	AMP_02_01	1/16.	pargasite	6.802		1.198		0.138	0.305			0.258		1.420	2.880	0.066	0.082	1.689	0.163	0.400	0.122	1.968		0.032	15.523
C12.JL.47	AMP_02_01	1/17.	MF-Hbl	6.878		1.122		0.130	0.284	0.005		0.326		1.325	2.931	0.071	0.117	1.643	0.168	0.315	0.101	1.978		0.022	15.416
C12.JL.47	AMP_02_01	1/18.	MF-Hbl	6.955		1.045		0.117	0.238			0.490		1.159	2.995	0.073	0.069	1.641	0.217	0.209	0.091	1.977		0.023	15.299
C12.JL.47	AMP_02_01	1/19.	MF-Hbl	6.943		1.057		0.116	0.236	0.005		0.460		1.178	3.006	0.071	0.061	1.672	0.195	0.218	0.102	2.000			15.320
C12.JL.47	AMP_02	1/1.	pargasite	6.706		1.294		0.146	0.342			0.242		1.399	2.871	0.068	0.071	1.708	0.153	0.425	0.146	1.966		0.034	15.571

C12.JL.47	AMP_02	1/2.	MF-Hbl	6.934	1.066	0.129	0.253		0.287	1.084	3.247	0.069	0.096	1.695	0.140	0.301	0.106	1.932	0.048	0.020	15.407
C12.JL.47	AMP_02	1/3.	MF-Hbl	6.968	1.032	0.113	0.256	0.005	0.469	1.124	3.033	0.075	0.060	1.620	0.245	0.234	0.088	1.945	0.055		15.322
C12.JL.47	AMP_02	1/5.	pargasite	6.731	1.269	0.146	0.338	0.006	0.262	1.482	2.765	0.069	0.082	1.688	0.161	0.384	0.147	1.973		0.027	15.530
C12.JL.47	AMP_02	1/6.	M-Hbl	6.817	1.183	0.137	0.321	0.005	0.284	1.412	2.841	0.066	0.097	1.691	0.145	0.323	0.120	1.976		0.024	15.442
C12.JL.47	AMP_02	1/7.	MF-Hbl	6.879	1.121	0.128	0.285	0.005	0.309	1.303	2.971	0.068	0.110	1.656	0.166	0.327	0.106	1.975		0.025	15.434
C12.JL.47	AMP_02	1/8.	MF-Hbl	6.982	1.018	0.118	0.233	0.005	0.468	1.172	3.005	0.071	0.064	1.631	0.234	0.225	0.087	1.924	0.058	0.018	15.313
C12.JL.47	AMP_02	1/9.	M-Hbl	6.824	1.176	0.130	0.298	0.006	0.274	1.460	2.833	0.071	0.086	1.688	0.155	0.364	0.130	1.976		0.024	15.495
C12.JL.47	AMP_02	1/10.	M-Hbl	6.820	1.180	0.137	0.296	0.005	0.284	1.436	2.842	0.071	0.093	1.668	0.168	0.373	0.116	1.972		0.028	15.489
C12.JL.47	AMP_02	1/11.	M-Hbl	6.781	1.219	0.139	0.332	0.005	0.317	1.383	2.824	0.074	0.109	1.649	0.168	0.329	0.126	1.975		0.025	15.455
C12.JL.47	AMP_02	1/12.	pargasite	6.724	1.276	0.146	0.332	0.006	0.283	1.479	2.753	0.068	0.095	1.677	0.160	0.386	0.136	1.974		0.026	15.521
C12.JL.47	AMP_02	1/13.	MF-Hbl	6.975	1.025	0.121	0.291	0.005	0.440	1.173	2.971	0.070	0.056	1.609	0.264	0.211	0.102	1.979		0.021	15.313
C12.JL.47	AMP_02	1/14.	M-Hbl	6.823	1.177	0.136	0.322	0.005	0.292	1.409	2.836	0.072	0.096	1.650	0.182	0.344	0.124	1.976		0.024	15.468
C12.JL.47	AMP_02	1/15.	MF-Hbl	6.977	1.023	0.120	0.256		0.458	1.121	3.045	0.073	0.059	1.628	0.240	0.216	0.093	1.985		0.015	15.309
C12.JL.47	AMP_03	1/1.	pargasite	6.547	1.453	0.149	0.409	0.006	0.258	1.527	2.651	0.067	0.082	1.712	0.140	0.436	0.187	1.960		0.040	15.624
C12.JL.47	AMP_03	1/2.	pargasite	6.555	1.445	0.151	0.367	0.006	0.292	1.435	2.749	0.069	0.099	1.711	0.121	0.411	0.189	1.960		0.040	15.600
C12.JL.47	AMP_03	1/3.	M-Hbl	6.872	1.128	0.127	0.318	0.005	0.270	1.409	2.872	0.071	0.084	1.675	0.170	0.335	0.116	1.977		0.023	15.452
C12.JL.47	AMP_03	1/4.	M-Hbl	6.870	1.130	0.118	0.336	0.005	0.277	1.311	2.953	0.067	0.093	1.658	0.182	0.337	0.121	1.978		0.022	15.458
C12.JL.47	AMP_03	1/5.	pargasite	6.637	1.363	0.139	0.382	0.007	0.277	1.543	2.651	0.068	0.091	1.692	0.149	0.400	0.167	1.970		0.030	15.566
C12.JL.47	AMP_03	1/6.	pargasite	6.547	1.453	0.154	0.373	0.006	0.288	1.526	2.653	0.069	0.097	1.706	0.128	0.408	0.197	1.955		0.045	15.605
C12.JL.47	AMP_03	1/7.	pargasite	6.764	1.236	0.116	0.364	0.007	0.240	1.548	2.725	0.065	0.073	1.731	0.131	0.363	0.160	1.966		0.034	15.523
C12.JL.47	AMP_03	1/8.	pargasite	6.690	1.310	0.151	0.353	0.006	0.281	1.562	2.647	0.070	0.091	1.676	0.162	0.377	0.154	1.972		0.028	15.530
C12.JL.47	AMP_03	1/9.	M-Hbl	6.920	1.080	0.121	0.293	0.005	0.275	1.366	2.941	0.064	0.095	1.691	0.151	0.309	0.109	1.982		0.018	15.420
C12.JL.47	AMP_03	1/10.	M-Hbl	6.795	1.205	0.140	0.331	0.005	0.286	1.440	2.798	0.069	0.096	1.675	0.160	0.331	0.133	1.975		0.025	15.464
C12.JL.47	AMP_03	1/11.	M-Hbl	6.785	1.215	0.140	0.329	0.006	0.301	1.443	2.781	0.071	0.102	1.666	0.161	0.333	0.127	1.981		0.019	15.460
C12.JL.47	AMP_03	1/12.	M-Hbl	6.907	1.093	0.124	0.324	0.005	0.299	1.414	2.834	0.068	0.104	1.648	0.179	0.282	0.114	1.973		0.027	15.395
C12.JL.47	AMP_03	1/13.	pargasite	6.739	1.261	0.147	0.324	0.006	0.285	1.487	2.752	0.071	0.093	1.681	0.155	0.369	0.139	1.973		0.027	15.509
C12.JL.47	AMP_03	1/14.	M-Hbl	6.937	1.063	0.126	0.426	0.006	0.331	1.308	2.804	0.069	0.026	1.596	0.309	0.199	0.159	1.973		0.027	15.359
C12.JL.47	AMP_03	1/17.	pargasite	6.724	1.276	0.147	0.338	0.008	0.292	1.534	2.681	0.069	0.099	1.668	0.163	0.356	0.152	1.977		0.023	15.507
C12.JL.47	AMP_03	1/18.	M-Hbl	6.688	1.312	0.145	0.364	0.007	0.322	1.509	2.653	0.072	0.114	1.649	0.165	0.339	0.155	1.967		0.033	15.494
C12.JL.47	AMP_03	1/19.	M-Hbl	6.757	1.243	0.144	0.322	0.006	0.301	1.451	2.775	0.066	0.108	1.664	0.163	0.350	0.137	1.977		0.023	15.487
C12.JL.47	AMP_04	1/1.	MF-Hbl	6.992	1.008	0.114	0.247	0.005	0.526	0.832	3.277	0.066	0.096	1.588	0.250	0.175	0.077	1.984		0.016	15.253
C12.JL.47	AMP_04	1/3.	MF-Hbl	6.895	1.105	0.122	0.302	0.005	0.324	1.197	3.050	0.063	0.124	1.617	0.196	0.327	0.099	1.981		0.019	15.426
C12.JL.47	AMP_04	1/4.	MF-Hbl	6.941	1.059	0.124	0.263	0.005	0.315	1.192	3.102	0.067	0.115	1.647	0.172	0.305	0.097	1.980		0.020	15.404
C12.JL.47	AMP_04	1/5.	MF-Hbl	6.923	1.077	0.119	0.280		0.313	1.177	3.111	0.064	0.116	1.659	0.161	0.313	0.093	1.924	0.057	0.019	15.406
C12.JL.47	AMP_04	1/6.	MF-Hbl	6.860	1.140	0.121	0.264	0.005	0.502	1.127	2.980	0.064	0.081	1.665	0.189	0.214	0.102	1.978		0.022	15.314
C12.JL.47	AMP_04	1/7.	MF-Hbl	6.829	1.171	0.138	0.311	0.005	0.325	1.266	2.955	0.061	0.127	1.651	0.161	0.304	0.111	1.982		0.018	15.415
C12.JL.47	AMP_04	1/8.	M-Hbl	6.842	1.158	0.137	0.323	0.007	0.312	1.254	2.967	0.063	0.117	1.639	0.181	0.306	0.115	1.973		0.027	15.421
C12.JL.47	AMP_04	1/9.	MF-Hbl	6.874	1.126	0.134	0.280	0.006	0.312	1.251	3.017	0.063	0.117	1.651	0.169	0.329	0.101	1.917	0.057	0.026	15.430

C12.JL.47	AMP_04	1/10.	MF-Hbl	6.814		1.186	0.143	0.268	0.005	0.321	1.258	3.005	0.061	0.125	1.657	0.157	0.358	0.104	1.976		0.024	15.462
C12.JL.47	AMP_04_1	1/1.	MF-Hbl	6.906		1.094	0.134	0.267	0.005	0.340	1.125	3.130	0.067	0.130	1.606	0.197	0.326	0.086	1.918	0.065	0.017	15.413
C12.JL.47	AMP_04_1	1/2.	MF-Hbl	6.940		1.060	0.120	0.371	0.006	0.451	1.112	2.940	0.060	0.070	1.538	0.332	0.159	0.165	1.925	0.054	0.021	15.324
C12.JL.47	AMP_04_1	1/3.	M-Hbl	6.856		1.144	0.136	0.315	0.005	0.304	1.209	3.030	0.064	0.111	1.615	0.209	0.358	0.099	1.977		0.023	15.455
C12.JL.47	AMP_04_1	1/4.	MF-Hbl	6.952		1.048	0.119	0.287		0.320	1.186	3.088	0.067	0.118	1.624	0.192	0.304	0.091	1.930	0.049	0.021	15.396
C12.JL.47	AMP_04_1	1/5.	MF-Hbl	7.142		0.858	0.119	0.177		0.403	0.960	3.341	0.069	0.107	1.642	0.183	0.134	0.090	1.933	0.050	0.018	15.225
C12.JL.47	AMP_04_1	1/6.	MF-Hbl	6.947		1.053	0.122	0.298	0.006	0.323	1.188	3.064	0.067	0.120	1.596	0.217	0.311	0.089	1.977		0.023	15.401
C12.JL.47	AMP_04_1	1/7.	M-Hbl	6.783		1.217	0.139	0.335	0.006	0.335	1.271	2.915	0.066	0.128	1.620	0.187	0.330	0.121	1.974		0.026	15.453
C12.JL.47	AMP_04_1	1/9.	MF-Hbl	6.914		1.086	0.134	0.263	0.005	0.334	1.075	3.189	0.070	0.123	1.638	0.169	0.294	0.090	1.911	0.062	0.026	15.384
C12.JL.47	AMP_04_1	1/10.	MF-Hbl	6.966		1.034	0.119	0.274	0.005	0.333	1.124	3.145	0.065	0.127	1.607	0.200	0.299	0.085	1.980		0.020	15.383
C12.JL.47	AMP_04_1	1/11.	MF-Hbl	6.811		1.189	0.136	0.300	0.005	0.304	1.251	3.004	0.068	0.107	1.645	0.180	0.385	0.105	1.977		0.023	15.490
C12.JL.47	AMP_04_1	1/12.	MF-Hbl	6.802		1.198	0.148	0.301		0.325	1.189	3.036	0.062	0.126	1.613	0.199	0.375	0.099	1.978		0.022	15.473
C12.JL.47	AMP_04	1/1.	MF-Hbl	6.992		1.008	0.114	0.247	0.005	0.526	0.832	3.277	0.066	0.096	1.588	0.250	0.175	0.077	1.984		0.016	15.253
C12.JL.47	AMP_04	1/3.	MF-Hbl	6.895		1.105	0.122	0.302	0.005	0.324	1.197	3.050	0.063	0.124	1.617	0.196	0.327	0.099	1.981		0.019	15.426
C12.JL.47	AMP_04	1/4.	MF-Hbl	6.941		1.059	0.124	0.263	0.005	0.315	1.192	3.102	0.067	0.115	1.647	0.172	0.305	0.097	1.980		0.020	15.404
C12.JL.47	AMP_04	1/5.	MF-Hbl	6.923		1.077	0.119	0.280		0.313	1.177	3.111	0.064	0.116	1.659	0.161	0.313	0.093	1.924	0.057	0.019	15.406
C12.JL.47	AMP_04	1/6.	MF-Hbl	6.860		1.140	0.121	0.264	0.005	0.502	1.127	2.980	0.064	0.081	1.665	0.189	0.214	0.102	1.978		0.022	15.314
C12.JL.47	AMP_04	1/7.	MF-Hbl	6.829		1.171	0.138	0.311	0.005	0.325	1.266	2.955	0.061	0.127	1.651	0.161	0.304	0.111	1.982		0.018	15.415
C12.JL.47	AMP_04	1/8.	M-Hbl	6.842		1.158	0.137	0.323	0.007	0.312	1.254	2.967	0.063	0.117	1.639	0.181	0.306	0.115	1.973		0.027	15.421
C12.JL.47	AMP_04	1/9.	MF-Hbl	6.874		1.126	0.134	0.280	0.006	0.312	1.251	3.017	0.063	0.117	1.651	0.169	0.329	0.101	1.917	0.057	0.026	15.430
C12.JL.47	AMP_04	1/10.	MF-Hbl	6.814		1.186	0.143	0.268	0.005	0.321	1.258	3.005	0.061	0.125	1.657	0.157	0.358	0.104	1.976		0.024	15.462
C12.JL.47	AMP_05	1/1.	M-Hbl	6.906		1.094	0.122	0.313	0.005	0.265	1.405	2.890	0.071	0.081	1.672	0.176	0.329	0.114	1.923	0.058	0.019	15.443
C12.JL.47	AMP_05	1/2.	M-Hbl	6.813		1.187	0.130	0.324	0.006	0.285	1.354	2.902	0.071	0.093	1.664	0.172	0.360	0.124	1.974		0.026	15.485
C12.JL.47	AMP_05	1/3.	pargasite	6.679		1.321	0.144	0.351	0.005	0.267	1.396	2.837	0.069	0.085	1.696	0.150	0.410	0.151	1.977		0.023	15.561
C12.JL.47	AMP_05	1/4.	M-Hbl	6.803		1.197	0.139	0.315	0.005	0.309	1.420	2.812	0.076	0.102	1.638	0.184	0.373	0.101	2.000			15.474
C12.JL.47	AMP_05	1/5.	M-Hbl	6.882		1.118	0.130	0.276	0.005	0.260	1.366	2.963	0.067	0.082	1.700	0.151	0.364	0.103	1.939	0.045	0.016	15.467
C12.JL.47	AMP_05	1/6.	pargasite	6.698		1.302	0.145	0.362	0.005	0.252	1.320	2.916	0.066	0.079	1.697	0.158	0.409	0.143	1.914	0.060	0.026	15.552
C12.JL.47	AMP_05	1/7.	M-Hbl	6.799		1.201	0.132	0.319	0.006	0.277	1.240	3.026	0.068	0.092	1.677	0.163	0.397	0.101	1.917	0.060	0.023	15.498
C12.JL.47	AMP_05	1/8.	pargasite	6.817		1.183	0.132	0.295	0.006	0.250	1.449	2.869	0.067	0.076	1.716	0.140	0.385	0.124	1.979		0.021	15.509
C12.JL.47	AMP_05	1/9.	pargasite	6.816		1.184	0.131	0.297	0.005	0.255	1.468	2.845	0.071	0.075	1.718	0.135	0.387	0.115	1.976		0.024	15.502
C12.JL.47	AMP_05	1/10.	MF-Hbl	6.974		1.026	0.119	0.277		0.299	1.288	3.017	0.069	0.103	1.637	0.190	0.303	0.099	1.979		0.021	15.401
C12.JL.47	AMP_05	1/11.	M-Hbl	6.912		1.088	0.124	0.282	0.005	0.278	1.328	2.982	0.069	0.091	1.692	0.148	0.323	0.099	1.974		0.026	15.421
C12.JL.47	AMP_05	1/12.	M-Hbl	6.874		1.126	0.126	0.292	0.006	0.284	1.369	2.924	0.070	0.094	1.677	0.159	0.338	0.114	1.910	0.064	0.026	15.453
C12.JL.47	AMP_05	1/14.	M-Hbl	6.820	0.004	1.176	0.135	0.308	0.005	0.285	1.295	2.973	0.066	0.098	1.680	0.156	0.354	0.107	1.932	0.050	0.018	15.462
C12.JL.47	AMP_05	1/15.	M-Hbl	6.810		1.190	0.132	0.309	0.006	0.256	1.487	2.810	0.070	0.077	1.710	0.142	0.378	0.120	1.978		0.022	15.497
C12.JL.47	AMP_06	1/1.	MF-Hbl	6.870		1.130	0.126	0.287	0.006	0.493	1.051	3.037	0.068	0.075	1.626	0.231	0.234	0.089	2.000			15.323
C12.JL.47	AMP_06	1/2.	MF-Hbl	6.923		1.077	0.120	0.255	0.006	0.468	1.199	2.952	0.071	0.064	1.648	0.217	0.231	0.093	1.984		0.016	15.324
C12.JL.47	AMP_06	1/3.	M-Hbl	6.804		1.196	0.141	0.313	0.006	0.296	1.431	2.814	0.071	0.099	1.681	0.149	0.333	0.116	1.969		0.031	15.450

C12.JL.47	AMP_06	1/4.	M-Hbl	6.805	1.195	0.135	0.307	0.006		0.299		1.425	2.828	0.071	0.101	1.681	0.146	0.341	0.118	1.975		0.025	15.458
C12.JL.47	AMP_06	1/7.	MF-Hbl	6.852	1.148	0.125	0.295	0.005		0.299		1.375	2.902	0.069	0.103	1.681	0.147	0.330	0.118	1.971		0.029	15.449
C12.JL.47	AMP_06	1/8.	M-Hst	6.810	1.190	0.135	0.280			0.280		1.442	2.863	0.069	0.093	1.685	0.154	0.389	0.124	1.976		0.024	15.514
C12.JL.47	AMP_06	1/9.	M-Hbl	6.833	1.167	0.129	0.287	0.005		0.281		1.384	2.913	0.065	0.097	1.706	0.132	0.354	0.114	1.977		0.023	15.467
C12.JL.47	AMP_06	1/10.	M-Hbl	6.833	1.167	0.132	0.304	0.005		0.277		1.371	2.911	0.066	0.094	1.686	0.155	0.353	0.118	1.976		0.024	15.472
C12.JL.47	AMP_06	1/11.	M-Hbl	6.810	1.190	0.136	0.315	0.006		0.292		1.446	2.805	0.071	0.097	1.682	0.150	0.335	0.120	1.975		0.025	15.455
C12.JL.47	AMP_06	1/12.	M-Hbl	6.826	1.174	0.134	0.325	0.005		0.276		1.436	2.825	0.070	0.089	1.688	0.153	0.337	0.116	1.975		0.025	15.454
C12.JL.47	AMP_06	1/13.	M-Hbl	6.814	1.186	0.139	0.299	0.006		0.295		1.421	2.841	0.071	0.099	1.692	0.138	0.334	0.113	1.984		0.016	15.448
C12.JL.47	AMP_06	1/14.	MF-Hbl	6.973	1.027	0.115	0.268	0.006		0.430		1.197	2.984	0.068	0.056	1.644	0.233	0.236	0.089	1.982		0.018	15.326
C12.JL.47	AMP_06	1/15.	M-Hbl	6.831	1.169	0.126	0.300	0.006		0.289		1.362	2.917	0.067	0.099	1.678	0.155	0.357	0.120	1.976		0.024	15.476
C12.JL.47	AMP_06	1/16.	M-Hbl	6.822	1.178	0.140	0.317	0.006		0.276		1.428	2.833	0.070	0.089	1.680	0.161	0.354	0.105	1.978		0.022	15.459
C12.JL.47	AMP_06	1/17.	M-Hbl	6.837	1.163	0.136	0.308	0.006		0.277		1.406	2.867	0.071	0.089	1.684	0.156	0.342	0.114	1.977		0.023	15.456
C12.JL.47	AMP_06	1/18.	MF-Hbl	6.852	1.148	0.126	0.299	0.006		0.306		1.370	2.892	0.071	0.106	1.682	0.141	0.309	0.116	1.975		0.025	15.424
C12.JL.47	AMP_06	1/19.	pargasite	6.783	1.217	0.125	0.324	0.005		0.274		1.374	2.899	0.068	0.090	1.705	0.137	0.369	0.133	1.965		0.035	15.503
C12.JL.47	AMP_06	1/20.	pargasite	6.626	1.374	0.150	0.358	0.005		0.253		1.479	2.755	0.065	0.080	1.725	0.130	0.422	0.166	1.969		0.031	15.588
C12.JL.47	AMP_06	1/21.	M-Hbl	6.834	1.166	0.128	0.310			0.281		1.469	2.811	0.068	0.094	1.693	0.145	0.351	0.113	1.974		0.026	15.463
C12.JL.48	AMP_01	1/11.	M-Hbl	6.906	1.094	0.135	0.687	0.005		0.027	0.055	1.669	2.421	0.008		1.620	0.373	0.257	0.221	1.978		0.022	15.478
C12.JL.48	AMP_01	1/12.	M-Hbl	6.695	1.305	0.139	0.535	0.006		0.257		1.499	2.564	0.066	0.082	1.583	0.269	0.296	0.202	1.941	0.040	0.019	15.498
C12.JL.48	AMP_01	1/13.	pargasite	6.694	1.306	0.148	0.355	0.006		0.240		1.588	2.663	0.071	0.066	1.709	0.153	0.406	0.155	1.937	0.042	0.021	15.560
C12.JL.48	AMP_01	1/15.	pargasite	6.615	1.385	0.150	0.327			0.159		1.659	2.704	0.069	0.022	1.829	0.080	0.528	0.149	1.962		0.038	15.676
C12.JL.48	AMP_01	1/16.	M-Hbl	6.826	1.174	0.136	0.310	0.005		0.280		1.413	2.856	0.068	0.093	1.667	0.172	0.361	0.118	1.972		0.028	15.479
C12.JL.48	AMP_01	1/17.	pargasite	6.756	1.244	0.138	0.311	0.005		0.284		1.434	2.828	0.070	0.094	1.675	0.162	0.406	0.124	1.902	0.067	0.031	15.531
C12.JL.48	AMP_01	1/18.	M-Hbl	6.839	1.161	0.133	0.306	0.006		0.285		1.384	2.885	0.065	0.099	1.664	0.171	0.352	0.117	1.923	0.057	0.020	15.467
C12.JL.48	AMP_01	1/19.	M-Hbl	6.845	1.155	0.134	0.312	0.006		0.279		1.400	2.870	0.069	0.092	1.659	0.180	0.358	0.113	1.913	0.067	0.020	15.472
C12.JL.48	AMP_01	1/20.	M-Hbl	6.883	1.117	0.125	0.299	0.005		0.289		1.370	2.912	0.068	0.098	1.650	0.183	0.351	0.107	1.903	0.075	0.022	15.457
C12.JL.48	AMP_01	1/21.	M-Hbl	6.894	1.106	0.129	0.311	0.006		0.311		1.360	2.884	0.067	0.112	1.634	0.186	0.302	0.105	1.914	0.060	0.026	15.407
C12.JL.48	AMP_01	1/22.	M-Hbl	6.862	1.138	0.128	0.314	0.005		0.295		1.363	2.895	0.070	0.100	1.663	0.167	0.320	0.114	1.912	0.064	0.024	15.434
C12.JL.48	AMP_03	1/1.	MF-Hbl	6.878	1.122	0.129	0.208			0.452		1.057	3.154	0.071	0.047	1.749	0.133	0.233	0.105	1.927	0.050	0.023	15.338
C12.JL.48	AMP_03	1/2.	M-Hbl	6.825	1.175	0.138	0.344	0.005		0.307		1.163	3.042	0.066	0.111	1.648	0.175	0.314	0.103	1.872	0.096	0.032	15.416
C12.JL.48	AMP_03	1/4.	MF-Hbl	6.735	1.265	0.126	0.192	0.006		0.371	0.022	1.186	3.096	0.042		1.909	0.049	0.390	0.103	1.916	0.062	0.022	15.492
C12.JL.48	AMP_03	1/5.	M-Hbl	6.844	1.156	0.138	0.317	0.006		0.288		1.221	3.031	0.066	0.100	1.657	0.177	0.340	0.107	1.917	0.062	0.020	15.448
C12.JL.48	AMP_03	1/6.	MF-Hbl	7.019	0.981	0.133	0.090	0.005		0.291	0.047	1.075	3.359	0.026		1.945	0.030	0.268	0.090	1.942	0.040	0.019	15.359
C12.JL.48	AMP_03	1/7.	MF-Hbl	7.039	0.961	0.134	0.086			0.301	0.046	1.060	3.374	0.025		1.946	0.029	0.245	0.090	1.936	0.043	0.021	15.336
C12.JL.48	AMP_03	1/8.	MF-Hbl	6.828	1.172	0.151	0.161	0.005		0.730		0.735	3.219	0.069	0.038	1.639	0.254	0.120	0.109	1.921	0.048	0.031	15.230
C12.JL.48	AMP_03	1/9.	MF-Hbl	6.824	1.176	0.150	0.295	0.006		0.332		1.113	3.103	0.064	0.128	1.656	0.152	0.293	0.103	1.917	0.063	0.020	15.395
C12.JL.48	AMP_03	1/10.	MF-Hbl	7.108	0.892	0.157	0.124			0.407		0.914	3.399	0.061	0.096	1.652	0.190	0.135	0.103	1.898	0.071	0.031	15.238
C12.JL.48	AMP_03	1/11.	MF-Hbl	6.898	1.102	0.156	0.228	0.005		0.433		1.011	3.167	0.063	0.062	1.658	0.218	0.242	0.100	1.916	0.061	0.023	15.343
C12.JL.48	AMP_03	1/12.	pargasite	6.375	1.625	0.222	0.416	0.009	0.016	0.257		1.361	2.718	0.056	0.091	1.706	0.146	0.508	0.121	2.000			15.627

C12.JL.48	AMP_03	1/13.	pargasite	6.368	1.632	0.231	0.408	0.011	0.013	0.234		1.395	2.709	0.054	0.080	1.714	0.152	0.531	0.127	1.924	0.060	0.016	15.659
C12.JL.48	AMP_03	1/14.	pargasite	6.366	1.634	0.228	0.441	0.009	0.006	0.244		1.382	2.689	0.051	0.089	1.696	0.163	0.514	0.126	1.928	0.056	0.016	15.638
C12.JL.48	AMP_03	1/15.	pargasite	6.348	1.652	0.226	0.454	0.008	0.006	0.244		1.358	2.705	0.049	0.091	1.699	0.161	0.530	0.121	1.925	0.059	0.016	15.652
C12.JL.48	AMP_03	1/16.	pargasite	6.344	1.656	0.220	0.471	0.010		0.248		1.405	2.646	0.050	0.092	1.688	0.169	0.513	0.142	1.936	0.048	0.016	15.654
C12.JL.48	AMP_03	1/17.	pargasite	6.567	1.433	0.161	0.434	0.006		0.255		1.361	2.783	0.054	0.093	1.691	0.162	0.438	0.141	1.911	0.065	0.024	15.579
C12.JL.48	AMP_03	1/18.	MF-Hbl	6.843	1.157	0.143	0.299	0.006	0.007	0.502		0.907	3.137	0.056	0.089	1.623	0.233	0.211	0.081	2.000			15.294
C12.JL.48	AMP_03	1/19.	MF-Hbl	6.844	1.156	0.136	0.309	0.006		0.318		1.166	3.065	0.058	0.125	1.626	0.190	0.340	0.101	1.923	0.058	0.018	15.440
C12.JL.48	AMP_03	1/20.	M-Hbl	6.931	1.069	0.137	0.310	0.006		0.303		1.098	3.146	0.063	0.112	1.603	0.222	0.319	0.080	1.929	0.071		15.399
C12.JL.48	AMP_03	1/21.	pargasite	6.308	1.692	0.239	0.481	0.009	0.012	0.220		1.328	2.711	0.049	0.078	1.691	0.183	0.551	0.122	1.936	0.064		15.674
C12.JL.48	AMP_03	1/22.	MF-Hbl	6.828	1.172	0.135	0.300	0.005		0.500		1.042	3.018	0.069	0.075	1.640	0.216	0.197	0.115	1.907	0.065	0.028	15.312
C12.JL.48	AMP_03	1/23.	M-Hbl	6.736	1.264	0.150	0.335	0.005		0.315		1.254	2.941	0.060	0.122	1.670	0.149	0.327	0.129	1.909	0.059	0.032	15.457
C12.JL.48	AMP_04	1/2.	M-Hst	6.768	1.232	0.146	0.264	0.006		0.301		1.253	3.029	0.060	0.114	1.677	0.149	0.401	0.116	1.978		0.022	15.516
C12.JL.48	AMP_04	1/3.	MF-Hbl	6.977	1.023	0.120	0.240			0.428		1.070	3.142	0.064	0.060	1.646	0.231	0.268	0.077	1.982		0.018	15.346
C12.JL.48	AMP_04	1/4.	MF-Hbl	7.001	0.999	0.119	0.244	0.005		0.287		1.104	3.242	0.064	0.102	1.662	0.173	0.326	0.072	1.937	0.063		15.400
C12.JL.48	AMP_04	1/5.	MF-Hbl	6.958	1.042	0.116	0.218			0.463		0.998	3.205	0.064	0.070	1.660	0.206	0.256	0.078	2.000			15.334
C12.JL.48	AMP_04	1/6.	MF-Hbl	6.895	1.105	0.124	0.253	0.006		0.280		1.193	3.145	0.063	0.098	1.694	0.145	0.358	0.106	1.977		0.023	15.465
C12.JL.48	AMP_04	1/7.	MF-Hbl	6.900	1.100	0.130	0.244	0.006		0.345		1.094	3.180	0.065	0.134	1.653	0.147	0.310	0.082	2.000			15.390
C12.JL.48	AMP_04	1/9.	MF-Hbl	6.964	1.036	0.120	0.234			0.450		1.049	3.146	0.067	0.063	1.653	0.217	0.243	0.085	1.985		0.015	15.327
C12.JL.48	AMP_04	1/10.	pargasite	6.709	1.291	0.151	0.322	0.006		0.266		1.385	2.870	0.065	0.088	1.707	0.141	0.398	0.138	1.973		0.027	15.537
C12.JL.48	AMP_04	1/11.	M-Hbl	6.917	1.083	0.125	0.297	0.005		0.293		1.157	3.124	0.062	0.107	1.653	0.178	0.327	0.091	2.000			15.419
C12.JL.48	AMP_04	1/12.	MF-Hbl	6.908	1.092	0.160	0.228	0.005		0.291		1.186	3.131	0.063	0.104	1.640	0.193	0.330	0.112	1.978		0.022	15.443
C12.JL.48	AMP_04	1/13.	MF-Hbl	6.898	1.102	0.130	0.249	0.005		0.295		1.176	3.145	0.064	0.106	1.684	0.146	0.349	0.091	1.936	0.064		15.440
C12.JL.48	AMP_04	1/14.	MF-Hbl	6.882	1.118	0.136	0.250	0.005		0.274		1.220	3.115	0.063	0.095	1.685	0.157	0.382	0.093	1.911	0.065	0.023	15.475
C12.JL.48	AMP_04	1/15.	MF-Hbl	6.918	1.082	0.125	0.272			0.316		1.147	3.140	0.064	0.118	1.664	0.154	0.320	0.078	1.984		0.016	15.398
C12.JL.48	AMP_04	1/16.	MF-Hbl	6.958	1.042	0.128	0.277			0.294		1.124	3.178	0.061	0.108	1.647	0.183	0.325	0.074	1.908	0.072	0.020	15.399
C12.JL.48	AMP_04	1/17.	pargasite	6.739	1.261	0.142	0.316	0.006		0.275		1.386	2.876	0.064	0.094	1.705	0.137	0.380	0.137	1.977		0.023	15.518
C12.JL.48	AMP_04	1/18.	pargasite	6.720	1.280	0.152	0.328	0.005		0.229		1.432	2.854	0.064	0.068	1.713	0.155	0.430	0.139	1.906	0.061	0.033	15.569
C12.JL.48	AMP_04	1/23.	Ti-rich M-Hbl	7.014	0.986	0.323	0.087	0.004			0.056	1.316	3.207			1.916	0.084	0.265	0.082	1.912	0.073	0.015	15.340
C12.JL.183	AMP_01	1/1.	pargasite	6.352	1.648	0.229	0.370	0.012		0.161		1.673	2.555	0.022	0.070	1.817	0.091	0.552	0.186	1.985		0.015	15.738
C12.JL.183	AMP_01	1/2.	pargasite	6.375	1.625	0.220	0.371	0.012		0.184		1.431	2.782	0.019	0.086	1.802	0.093	0.550	0.161	1.960	0.040		15.711
C12.JL.183	AMP_01	1/3.	pargasite	6.417	1.583	0.213	0.409	0.013	0.021	0.121		1.162	3.061	0.012	0.057	1.808	0.123	0.546	0.169	2.000			15.715
C12.JL.183	AMP_01	1/4.	pargasite	6.290	1.710	0.226	0.459	0.010		0.128		1.439	2.739	0.020	0.053	1.809	0.118	0.599	0.181	2.000			15.781
C12.JL.183	AMP_01	1/5.	pargasite	6.442	1.558	0.215	0.391	0.008		0.120		1.215	3.051	0.015	0.053	1.796	0.136	0.556	0.189	2.000			15.745
C12.JL.183	AMP_01	1/6.	pargasite	6.423	1.577	0.216	0.409	0.009		0.119		1.236	3.011	0.015	0.053	1.807	0.125	0.555	0.177	2.000			15.732
C12.JL.183	AMP_01	1/7.	pargasite	6.453	1.547	0.199	0.381	0.007		0.153		1.158	3.103	0.015	0.072	1.795	0.117	0.549	0.177	2.000			15.726
C12.JL.183	AMP_01	1/8.	pargasite	6.450	1.550	0.203	0.370	0.008		0.146		1.195	3.078	0.014	0.070	1.806	0.111	0.559	0.172	2.000			15.732
C12.JL.183	AMP_01	1/9.	pargasite	6.391	1.609	0.209	0.380	0.008		0.172		1.576	2.654	0.021	0.077	1.799	0.103	0.557	0.177	1.938	0.062		15.733
C12.JL.183	AMP_01	1/10.	pargasite	6.455	1.545	0.201	0.387	0.009		0.134		1.186	3.083	0.014	0.062	1.804	0.120	0.563	0.171	2.000			15.734

C12.JL.183	AMP_01	1/11.	pargasite	6.413	1.587	0.210	0.385	0.009		0.127		1.187	3.081	0.013	0.060	1.816	0.112	0.581	0.177	2.000			15.758
C12.JL.183	AMP_01	1/12.	pargasite	6.426	1.574	0.206	0.380	0.010		0.119		1.230	3.055	0.014	0.054	1.821	0.112	0.587	0.178	2.000			15.766
C12.JL.183	AMP_01	1/13.	pargasite	6.507	1.493	0.196	0.380	0.009		0.119		1.159	3.137	0.015	0.053	1.802	0.130	0.552	0.171	2.000			15.723
C12.JL.183	AMP_01	1/14.	pargasite	6.462	1.538	0.212	0.430	0.011		0.107		1.201	3.041	0.012	0.048	1.792	0.147	0.551	0.164	2.000			15.716
C12.JL.183	AMP_01	1/15.	pargasite	6.267	1.733	0.215	0.522	0.010		0.114		1.427	2.713	0.020	0.044	1.813	0.122	0.610	0.168	2.000			15.778
C12.JL.183	AMP_01	1/17.	pargasite	6.288	1.712	0.232	0.475	0.011		0.114		1.359	2.810	0.018	0.047	1.817	0.118	0.592	0.175	2.000			15.768
C12.JL.183	AMP_01	1/18.	pargasite	6.371	1.629	0.221	0.364	0.010		0.162		1.686	2.557	0.025	0.067	1.814	0.094	0.567	0.178	2.000			15.745
C12.JL.183	AMP_01	1/19.	pargasite	6.416	1.584	0.201	0.380	0.010		0.153		1.253	3.004	0.019	0.068	1.803	0.110	0.535	0.215	1.987		0.013	15.751
C12.JL.183	AMP_01	1/20.	pargasite	6.266	1.734	0.227	0.443	0.011	0.006	0.165		1.268	2.880	0.017	0.078	1.791	0.115	0.600	0.169	1.991		0.009	15.770
C12.JL.183	AMP_01	1/21.	pargasite	6.247	1.753	0.206	0.493	0.008		0.138		1.509	2.645	0.023	0.056	1.806	0.115	0.639	0.177	2.000			15.815
C12.JL.183	AMP_01	1/22.	pargasite	6.246	1.754	0.202	0.490	0.009		0.125		1.493	2.682	0.022	0.049	1.824	0.104	0.637	0.194	2.000			15.831
C12.JL.183	AMP_01	1/23.	pargasite	6.337	1.663	0.195	0.462	0.007		0.143		1.491	2.701	0.027	0.055	1.808	0.111	0.529	0.241	1.978		0.022	15.770
C12.JL.183	AMP_01	1/24.	pargasite	6.333	1.667	0.216	0.461	0.011		0.131		1.280	2.900	0.015	0.059	1.810	0.116	0.571	0.176	2.000			15.746
C12.JL.183	AMP_01	1/25.	pargasite	6.353	1.647	0.225	0.365	0.011		0.159		1.687	2.553	0.023	0.068	1.825	0.084	0.560	0.186	1.949	0.041	0.011	15.746
C12.JL.183	AMP_01	1/26.	pargasite	6.362	1.638	0.221	0.358	0.010		0.171		1.660	2.579	0.024	0.073	1.824	0.078	0.552	0.182	2.000			15.732
C12.JL.183	AMP_01	1/27.	pargasite	6.364	1.636	0.218	0.365	0.011		0.175		1.661	2.571	0.027	0.073	1.827	0.073	0.540	0.184	1.955	0.045		15.725
C12.JL.183	AMP_01	1/28.	pargasite	6.406	1.594	0.209	0.375	0.011		0.178		1.622	2.606	0.023	0.079	1.796	0.102	0.543	0.171	1.942	0.058		15.715
C12.JL.183	AMP_01	1/29.	pargasite	6.417	1.583	0.212	0.363	0.010		0.178		1.625	2.612	0.023	0.079	1.807	0.092	0.530	0.170	1.937	0.049	0.014	15.701
C12.JL.183	AMP_01	1/30.	pargasite	6.404	1.596	0.210	0.356	0.010		0.175		1.653	2.595	0.027	0.074	1.818	0.081	0.548	0.167	2.000			15.714
C12.JL.183	AMP_01	1/31.	pargasite	6.393	1.607	0.219	0.340	0.010		0.175		1.649	2.607	0.024	0.076	1.825	0.075	0.546	0.172	1.957	0.043		15.718
C12.JL.183	AMP_01	1/32.	pargasite	6.371	1.629	0.220	0.349	0.011		0.174		1.645	2.602	0.024	0.075	1.814	0.087	0.561	0.182	2.000			15.744
C12.JL.183	AMP_02	1/1.	pargasite	6.396	1.604	0.213	0.362	0.010		0.181		1.642	2.592	0.023	0.081	1.813	0.084	0.527	0.181	2.000			15.709
C12.JL.183	AMP_02	1/2.	pargasite	6.367	1.633	0.219	0.386	0.010		0.164		1.651	2.570	0.022	0.072	1.815	0.091	0.545	0.182	2.000			15.727
C12.JL.183	AMP_02	1/3.	pargasite	6.355	1.645	0.243	0.362	0.012		0.132		1.743	2.508	0.024	0.051	1.820	0.105	0.577	0.182	2.000			15.759
C12.JL.183	AMP_02	1/5.	pargasite	6.352	1.648	0.225	0.368	0.011		0.184		1.716	2.496	0.028	0.077	1.802	0.093	0.543	0.185	2.000			15.728
C12.JL.183	AMP_02	1/6.	pargasite	6.364	1.636	0.222	0.404	0.010		0.164		1.718	2.482	0.025	0.069	1.807	0.100	0.536	0.178	2.000			15.715
C12.JL.183	AMP_02	1/7.	pargasite	6.393	1.607	0.214	0.389	0.010		0.167		1.691	2.529	0.022	0.074	1.795	0.109	0.538	0.184	2.000			15.722
C12.JL.183	AMP_02	1/8.	pargasite	6.380	1.620	0.205	0.377	0.008		0.182		1.679	2.549	0.025	0.079	1.803	0.093	0.551	0.186	2.000			15.737
C12.JL.183	AMP_02	1/9.	pargasite	6.418	1.582	0.209	0.378	0.010		0.179		1.671	2.553	0.023	0.080	1.793	0.104	0.525	0.176	2.000			15.701
C12.JL.183	AMP_02	1/10.	pargasite	6.432	1.568	0.211	0.369	0.011		0.156		1.683	2.570	0.024	0.065	1.802	0.109	0.546	0.172	2.000			15.718
C12.JL.183	AMP_02	1/11.	pargasite	6.372	1.628	0.216	0.389	0.010		0.173		1.673	2.540	0.025	0.073	1.806	0.095	0.532	0.187	1.982		0.018	15.719
C12.JL.183	AMP_02	1/12.	pargasite	6.449	1.551	0.209	0.397	0.010		0.152		1.677	2.556	0.024	0.063	1.786	0.127	0.521	0.182	1.986		0.014	15.704
C12.JL.183	AMP_03	1/1.	pargasite	6.510	1.490	0.168	0.365	0.008		0.167		1.710	2.582	0.057	0.039	1.830	0.074	0.504	0.184	1.909	0.091		15.688
C12.JL.183	AMP_03	1/2.	pargasite	6.430	1.570	0.206	0.395	0.008		0.137		1.693	2.560	0.033	0.045	1.838	0.084	0.524	0.176	1.929	0.071		15.699
C12.JL.183	AMP_03	1/3.	pargasite	6.413	1.587	0.188	0.365	0.010		0.172		1.696	2.569	0.043	0.055	1.840	0.062	0.542	0.183	1.923	0.077		15.725
C12.JL.183	AMP_03	1/4.	pargasite	6.439	1.561	0.190	0.372	0.010		0.161		1.692	2.575	0.044	0.048	1.832	0.076	0.526	0.188	1.887	0.113		15.714
C12.JL.183	AMP_03	1/6.	pargasite	6.397	1.603	0.231	0.351	0.008		0.168		1.724	2.518	0.033	0.063	1.813	0.091	0.541	0.165	1.946	0.054		15.706
C12.JL.183	AMP_03	1/7.	M-Hbl	6.715	1.285	0.187	0.808	0.009			0.066	1.702	2.113			1.826	0.174	0.316	0.182	1.973	0.027		15.383

C12.JL.183	AMP_03	1/8.	M-Hbl	7.078		0.922	0.171	0.847	0.007		0.029	1.658	2.204			1.589	0.411	0.108	0.196	1.927	0.073		15.220
C12.JL.183	AMP_03	1/9.	pargasite	6.457	0.008	1.535	0.197	0.546	0.010	0.034	0.037	1.750	2.426	0.019		1.876	0.105	0.482	0.165	1.940	0.060		15.647
C12.JL.183	AMP_03	1/10.	pargasite	6.455		1.545	0.184	0.395	0.007	0.176		1.702	2.536	0.046	0.055	1.806	0.093	0.512	0.180	1.940	0.060		15.692
C12.JL.183	AMP_03	1/11.	pargasite	6.830		1.170	0.099	0.260		0.195		1.974	2.473	0.105	0.007	1.816	0.073	0.407	0.183	1.887	0.113		15.592
C12.JL.183	AMP_03	1/12.	M-Hst	6.802		1.198	0.096	0.198	0.005	0.371	0.005	1.813	2.513	0.095		1.796	0.108	0.361	0.180	1.918	0.082		15.541
C12.JL.183	AMP_03	1/13.	M-Hst	6.789		1.211	0.106	0.175	0.005	0.345	0.021	1.851	2.498	0.081		1.828	0.092	0.389	0.177	1.933	0.067		15.568
C12.JL.183	AMP_03	1/14.	M-Hst	6.796		1.204	0.100	0.200	0.005	0.320	0.019	1.865	2.492	0.079		1.831	0.090	0.386	0.183	1.885	0.115		15.570
C12.JL.183	AMP_03	1/15.	pargasite	6.805		1.195	0.107	0.223	0.005	0.192		1.993	2.480	0.104	0.002	1.836	0.058	0.421	0.199	1.877	0.123		15.620
C12.JL.183	AMP_03	1/16.	M-Hst	6.758		1.242	0.110	0.205	0.006	0.347	0.020	1.851	2.460	0.082		1.824	0.094	0.365	0.193	1.878	0.122		15.557
C12.JL.183	AMP_03	1/17.	M-Hst	6.771		1.229	0.108	0.199	0.005	0.361	0.011	1.855	2.461	0.091		1.804	0.104	0.355	0.196	1.925	0.075		15.550
C12.JL.183	AMP_03	1/18.	pargasite	6.949		1.051	0.097	0.200	0.005	0.198		1.892	2.609	0.105	0.008	1.821	0.066	0.365	0.156	1.895	0.105		15.522
C12.JL.183	AMP_03	1/19.	M-Hst	6.771		1.229	0.106	0.197	0.006	0.343	0.020	1.854	2.474	0.085		1.819	0.097	0.379	0.188	1.889	0.111		15.568
C12.JL.183	AMP_03	1/20.	pargasite	6.819		1.181	0.112	0.215	0.006	0.179	0.008	1.995	2.486	0.100		1.843	0.056	0.427	0.188	1.888	0.112		15.615
C12.JL.183	AMP_03	1/21.	M-Hst	6.816		1.184	0.098	0.177	0.005	0.334	0.034	1.823	2.530	0.068		1.855	0.077	0.362	0.187	1.913	0.087		15.550
C12.JL.183	AMP_03	1/22.	pargasite	6.408		1.592	0.227	0.352	0.011	0.127		1.635	2.647	0.023	0.050	1.852	0.076	0.559	0.163	1.923	0.077		15.722
C12.JL.183	AMP_03	1/23.	pargasite	6.795		1.205	0.102	0.272	0.006	0.180		1.987	2.452	0.101	0.002	1.836	0.061	0.404	0.200	1.896	0.104		15.603
C12.JL.183	AMP_03	1/24.	pargasite	6.819		1.181	0.111	0.233	0.005	0.174	0.003	2.014	2.460	0.098		1.847	0.055	0.407	0.194	1.910	0.090		15.601
C12.JL.183	AMP_03	1/25.	pargasite	6.833		1.167	0.110	0.211	0.006	0.202		1.972	2.499	0.103	0.010	1.824	0.063	0.411	0.180	1.922	0.078		15.591
C12.JL.183	AMP_03	1/26.	M-Hst	6.750		1.250	0.106	0.190	0.006	0.388	0.022	1.837	2.451	0.080		1.828	0.092	0.343	0.202	1.895	0.105		15.545
C12.JL.183	AMP_03	1/28.	M-Hst	6.734		1.266	0.112	0.190	0.006	0.320	0.034	1.898	2.439	0.067		1.857	0.076	0.396	0.205	1.924	0.076		15.600
C12.JL.183	AMP_03	1/29.	M-Hst	6.728		1.272	0.106	0.200	0.005	0.318	0.025	1.930	2.417	0.078		1.832	0.089	0.423	0.205	1.940	0.060		15.628
C12.JL.183	AMP_03	1/30.	M-Hst	6.782		1.218	0.100	0.188	0.005	0.315	0.025	1.877	2.490	0.080		1.829	0.091	0.419	0.183	1.913	0.087		15.602
C12.JL.183	AMP_03	1/31.	M-Hst	6.789		1.211	0.103	0.198		0.324	0.025	1.867	2.483	0.077		1.834	0.088	0.383	0.189	1.878	0.122		15.571
C12.JL.183	AMP_03	1/32.	M-Hst	6.678		1.322	0.107	0.208	0.006	0.411	0.024	1.846	2.397	0.084		1.821	0.096	0.364	0.213	1.926	0.074		15.577
C12.JL.183	AMP_04	1/1.	pargasite	6.399		1.601	0.201	0.366	0.010	0.209		1.537	2.677	0.025	0.094	1.813	0.068	0.527	0.156	2.000			15.683
C12.JL.183	AMP_04	1/2.	pargasite	6.395		1.605	0.194	0.396	0.008	0.183		1.617	2.602	0.022	0.083	1.820	0.075	0.527	0.177	2.000			15.704
C12.JL.183	AMP_04	1/3.	M-Hst	6.331		1.669	0.190	0.341	0.008	0.343		1.491	2.626	0.025	0.055	1.828	0.092	0.517	0.171	1.955	0.045		15.687
C12.JL.183	AMP_04	1/4.	pargasite	6.379		1.621	0.195	0.397	0.011	0.186		1.560	2.650	0.021	0.085	1.812	0.081	0.549	0.167	1.945	0.055		15.714
C12.JL.183	AMP_04	1/5.	pargasite	6.528		1.472	0.191	0.306	0.008	0.162		1.629	2.705	0.027	0.066	1.841	0.067	0.522	0.159	1.947	0.053		15.683
C12.JL.183	AMP_04	1/6.	pargasite	6.518		1.482	0.183	0.321	0.009	0.226		1.522	2.738	0.028	0.102	1.794	0.076	0.490	0.145	1.930	0.070		15.634
C12.JL.183	AMP_04	1/7.	pargasite	6.547		1.453	0.191	0.315	0.008	0.197		1.531	2.757	0.029	0.084	1.808	0.079	0.483	0.146	1.921	0.079		15.628
C12.JL.183	AMP_04	1/8.	pargasite	6.472		1.528	0.190	0.381	0.008	0.191		1.548	2.682	0.025	0.084	1.786	0.105	0.507	0.165	1.926	0.074		15.672
C12.JL.183	AMP_04	1/9.	pargasite	6.447		1.553	0.216	0.333	0.008	0.192		1.595	2.655	0.025	0.085	1.808	0.082	0.516	0.153	1.930	0.070		15.668
C12.JL.183	AMP_04	1/10.	pargasite	6.426		1.574	0.221	0.328	0.008	0.175		1.641	2.627	0.025	0.075	1.805	0.094	0.558	0.158	1.924	0.076		15.715
C12.JL.183	AMP_04	1/11.	pargasite	6.433		1.567	0.220	0.314	0.008	0.191		1.610	2.657	0.029	0.080	1.813	0.078	0.529	0.163	1.930	0.070		15.692
C12.JL.183	AMP_04	1/12.	pargasite	6.521		1.479	0.190	0.346	0.008	0.170		1.604	2.682	0.028	0.070	1.812	0.091	0.505	0.160	1.908	0.075	0.018	15.666
C12.JL.183	AMP_04	1/13.	pargasite	6.605		1.395	0.182	0.339	0.008	0.152		1.587	2.732	0.030	0.057	1.824	0.089	0.479	0.142	1.925	0.075		15.621
C12.JL.183	AMP_04	1/14.	pargasite	6.470		1.530	0.197	0.365	0.008	0.172		1.616	2.641	0.028	0.070	1.821	0.081	0.507	0.164	1.947	0.053		15.670

C12.JL.183	AMP_04	1/15.	pargasite	6.498		1.502	0.198	0.349	0.008		0.174	1.607	2.664	0.028	0.072	1.805	0.095	0.515	0.155	1.936	0.064		15.670
C12.JL.183	AMP_04	1/16.	pargasite	6.355		1.645	0.228	0.449	0.011		0.093	1.311	2.909	0.015	0.038	1.848	0.099	0.558	0.178	2.000			15.737
C12.JL.183	AMP_04	1/17.	pargasite	6.245		1.755	0.261	0.424	0.011		0.160	1.642	2.501	0.027	0.065	1.787	0.122	0.581	0.179	2.000			15.760
C12.JL.183	AMP_04	1/18.	pargasite	6.375		1.625	0.222	0.463	0.012		0.093	1.288	2.922	0.012	0.040	1.831	0.116	0.553	0.176	2.000			15.728
C12.JL.183	AMP_04	1/19.	pargasite	6.415		1.585	0.220	0.428	0.012		0.096	1.310	2.935	0.014	0.041	1.845	0.100	0.546	0.164	1.944	0.056		15.711
C12.JL.183	AMP_04	1/20.	pargasite	6.363		1.637	0.225	0.418	0.012		0.109	1.303	2.933	0.015	0.047	1.835	0.103	0.583	0.169	1.985		0.015	15.752
C12.JL.183	AMP_04	1/21.	pargasite	6.344		1.656	0.268	0.482	0.011		0.116	1.681	2.442	0.020	0.046	1.749	0.186	0.506	0.190	1.983		0.017	15.697
C12.JL.183	AMP_04	1/22.	pargasite	6.245		1.755	0.272	0.424	0.012		0.138	1.547	2.606	0.023	0.056	1.787	0.134	0.582	0.187	2.000			15.768
C12.JL.183	AMP_04	1/24.	pargasite	6.387		1.613	0.224	0.455	0.012		0.107	1.306	2.897	0.012	0.048	1.825	0.115	0.531	0.175	2.000			15.707
C12.JL.183	AMP_04	1/25.	pargasite	6.242		1.758	0.272	0.447	0.012		0.149	1.604	2.515	0.024	0.061	1.766	0.148	0.576	0.178	2.000			15.752
C12.JL.183	AMP_04	1/26.	pargasite	6.281		1.719	0.246	0.483	0.011	0.006	0.134	1.332	2.788	0.017	0.059	1.790	0.134	0.547	0.180	1.916	0.084		15.727
C12.JL.183	AMP_04	1/27.	pargasite	6.254		1.746	0.273	0.400	0.010		0.158	1.710	2.450	0.028	0.063	1.782	0.128	0.587	0.173	2.000			15.762
C12.JL.183	AMP_04	1/28.	pargasite	6.281		1.719	0.243	0.440	0.012	0.006	0.062	1.415	2.822	0.028	0.007	1.899	0.066	0.595	0.184	2.000			15.779
C12.JL.183	AMP_05	1/1.	pargasite	6.419		1.581	0.200	0.376	0.008		0.189	1.647	2.580	0.027	0.082	1.818	0.074	0.534	0.149	1.928	0.072		15.684
C12.JL.183	AMP_05	1/2.	pargasite	6.525		1.475	0.183	0.338	0.008		0.182	1.636	2.652	0.034	0.070	1.824	0.072	0.517	0.136	1.916	0.084		15.652
C12.JL.183	AMP_05	1/3.	M-Hst	6.635		1.365	0.159	0.262	0.007		0.299	1.568	2.705	0.040	0.040	1.828	0.092	0.433	0.138	1.929	0.071		15.571
C12.JL.183	AMP_05	1/4.	M-Hst	6.578	0.016	1.406	0.161	0.249	0.008		0.262	1.610	2.709	0.039	0.016	1.881	0.063	0.471	0.139	1.928	0.072		15.608
C12.JL.183	AMP_05	1/5.	M-Hst	6.770		1.230	0.132	0.246	0.006		0.285	1.524	2.808	0.040	0.031	1.847	0.082	0.376	0.136	1.923	0.077		15.513
C12.JL.183	AMP_05	1/6.	M-Hst	6.684		1.316	0.141	0.244	0.007		0.307	1.571	2.729	0.045	0.033	1.832	0.089	0.425	0.139	1.937	0.063		15.562
C12.JL.183	AMP_05	1/7.	pargasite	6.777		1.223	0.132	0.286	0.008		0.200	1.585	2.789	0.046	0.068	1.816	0.070	0.399	0.135	1.916	0.084		15.534
C12.JL.183	AMP_05	1/8.	M-Hst	6.663		1.337	0.144	0.277	0.007		0.295	1.564	2.713	0.040	0.034	1.841	0.085	0.412	0.143	1.941	0.059		15.555
C12.JL.183	AMP_05	1/9.	pargasite	6.395		1.605	0.232	0.336	0.010		0.164	1.677	2.582	0.032	0.062	1.836	0.070	0.543	0.159	1.941	0.059		15.703
C12.JL.183	AMP_05	1/10.	pargasite	6.486		1.514	0.196	0.283	0.010		0.268	1.615	2.628	0.039	0.031	1.850	0.080	0.504	0.138	1.934	0.066		15.642
C12.JL.183	AMP_06	1/1.	pargasite	6.237		1.763	0.258	0.395	0.012		0.112	1.713	2.510	0.020	0.044	1.854	0.082	0.635	0.175	2.000			15.810
C12.JL.183	AMP_06	1/4.	pargasite	6.263		1.737	0.260	0.377	0.012		0.161	1.592	2.598	0.024	0.068	1.843	0.065	0.565	0.166	1.937	0.063		15.731
C12.JL.183	AMP_06	1/6.	pargasite	6.211		1.789	0.278	0.413	0.012		0.129	1.612	2.556	0.022	0.052	1.836	0.090	0.605	0.165	1.940	0.060		15.770
C12.JL.183	AMP_07	1/1.	pargasite	6.568		1.432	0.184	0.372	0.006		0.181	1.441	2.815	0.031	0.072	1.778	0.119	0.460	0.162	1.925	0.075		15.621
C12.JL.183	AMP_07	1/2.	pargasite	6.389		1.611	0.209	0.419	0.011	0.008	0.133	1.183	3.036	0.015	0.061	1.806	0.118	0.566	0.173	1.939	0.061		15.738
C12.JL.183	AMP_07	1/3.	pargasite	6.378		1.622	0.213	0.427	0.011	0.008	0.133	1.154	3.054	0.016	0.060	1.788	0.137	0.581	0.172	2.000			15.754
C12.JL.183	AMP_07	1/4.	pargasite	6.400		1.600	0.221	0.392	0.012		0.119	1.150	3.106	0.014	0.054	1.814	0.118	0.595	0.160	2.000			15.755
C12.JL.183	AMP_07	1/5.	pargasite	6.518		1.482	0.189	0.398	0.009	0.006	0.138	1.045	3.214	0.012	0.066	1.781	0.140	0.523	0.170	1.940	0.060		15.691
C12.JL.183	AMP_07	1/6.	pargasite	6.431		1.569	0.205	0.427	0.011		0.135	1.205	3.018	0.012	0.064	1.809	0.114	0.543	0.158	2.000			15.701
C12.JL.183	AMP_07	1/7.	pargasite	6.397		1.603	0.231	0.427	0.012	0.013	0.111	1.256	2.950	0.015	0.049	1.800	0.137	0.558	0.157	2.000			15.716
C12.JL.183	AMP_07	1/8.	pargasite	6.399		1.601	0.209	0.400	0.013		0.155	1.182	3.042	0.011	0.077	1.808	0.104	0.560	0.159	2.000			15.720
C12.JL.183	AMP_07	1/9.	pargasite	6.452		1.548	0.224	0.408	0.011		0.094	1.186	3.076	0.012	0.041	1.824	0.123	0.550	0.159	2.000			15.708
C12.JL.183	AMP_07	1/10.	pargasite	6.442		1.558	0.213	0.425	0.011	0.008	0.118	1.208	3.017	0.014	0.053	1.832	0.101	0.517	0.154	1.940	0.060		15.671
C12.JL.183	AMP_07	1/11.	pargasite	6.479		1.521	0.219	0.401	0.012		0.110	1.207	3.051	0.011	0.051	1.810	0.127	0.525	0.162	1.912	0.088		15.686
C12.JL.183	AMP_07	1/12.	pargasite	6.427		1.573	0.225	0.389	0.012	0.015	0.109	1.210	3.039	0.012	0.050	1.828	0.110	0.547	0.161	2.000			15.707

C12.JL.183	AMP_07	1/13.	pargasite	6.375	1.625	0.224	0.407	0.011	0.009	0.100		1.258	2.992	0.012	0.044	1.831	0.113	0.596	0.167	2.000			15.764
C12.JL.183	AMP_07	1/14.	pargasite	6.443	1.557	0.220	0.397	0.011	0.006	0.077		1.241	3.049	0.015	0.029	1.831	0.125	0.589	0.163	2.000			15.753
C12.JL.186	AMP_01	1/1.	pargasite	6.850	1.150	0.112	0.257	0.005		0.177	0.003	1.936	2.510	0.101		1.804	0.095	0.390	0.192	1.920	0.080		15.582
C12.JL.186	AMP_01	1/2.	M-Hst	6.789	1.211	0.111	0.196	0.006		0.329	0.024	1.847	2.487	0.087		1.813	0.099	0.372	0.185	1.930	0.070		15.556
C12.JL.186	AMP_01	1/3.	pargasite	6.831	1.169	0.116	0.236	0.007		0.226		1.910	2.504	0.110	0.016	1.805	0.069	0.346	0.191	1.924	0.076		15.536
C12.JL.186	AMP_01	1/4.	M-Hst	6.803	1.197	0.111	0.200	0.005		0.331	0.022	1.838	2.494	0.089		1.811	0.101	0.350	0.190	1.961	0.039		15.542
C12.JL.186	AMP_01	1/5.	pargasite	6.838	1.162	0.111	0.226	0.005		0.189	0.005	1.973	2.491	0.108		1.818	0.074	0.404	0.190	1.934	0.066		15.594
C12.JL.186	AMP_01	1/6.	pargasite	6.984	1.016	0.097	0.296	0.006		0.160	0.017	1.887	2.538	0.091		1.769	0.140	0.333	0.168	1.948	0.052		15.502
C12.JL.186	AMP_01	1/7.	MF-Hbl	6.994	1.006	0.095	0.191	0.005		0.205		1.832	2.673	0.116	0.001	1.809	0.073	0.345	0.143	1.946	0.054		15.488
C12.JL.186	AMP_01	1/8.	MF-Hbl	7.036	0.964	0.090	0.214	0.005		0.284	0.033	1.736	2.637	0.081		1.801	0.118	0.249	0.149	1.936	0.064		15.397
C12.JL.186	AMP_01	1/9.	pargasite	6.813	1.187	0.114	0.226	0.005		0.198		1.967	2.490	0.110	0.003	1.817	0.069	0.412	0.187	1.942	0.058		15.598
C12.JL.186	AMP_01	1/10.	pargasite	6.838	1.162	0.107	0.232	0.006		0.175	0.006	1.977	2.496	0.100		1.840	0.060	0.408	0.186	1.928	0.072		15.593
C12.JL.186	AMP_01	1/11.	pargasite	6.374	1.626	0.199	0.371	0.009		0.185		1.906	2.330	0.038	0.068	1.824	0.070	0.522	0.212	1.988		0.012	15.734
C12.JL.186	AMP_01	1/12.	pargasite	6.471	1.529	0.181	0.428	0.008		0.200		1.808	2.375	0.038	0.076	1.765	0.121	0.455	0.197	1.938	0.062		15.652
C12.JL.186	AMP_01	1/13.	M-Hbl	6.947	1.053	0.105	0.230			0.196	0.013	1.882	2.574	0.112		1.806	0.081	0.334	0.164	1.944	0.056		15.497
C12.JL.186	AMP_01	1/14.	pargasite	6.505	1.495	0.165	0.317	0.006		0.287		1.866	2.358	0.062	0.015	1.835	0.088	0.440	0.202	1.965	0.027	0.007	15.641
C12.JL.186	AMP_01	1/15.	M-Hst	6.765	1.235	0.113	0.200	0.005		0.374	0.027	1.824	2.457	0.089		1.809	0.102	0.349	0.183	1.970	0.030		15.532
C12.JL.186	AMP_01	1/16.	M-Hst	6.814	1.186	0.104	0.210	0.005		0.214	0.001	1.969	2.497	0.120		1.814	0.066	0.427	0.188	1.964	0.036		15.615
C12.JL.186	AMP_01	1/17.	pargasite	6.817	1.183	0.112	0.239	0.006		0.184	0.002	1.989	2.467	0.105		1.822	0.073	0.416	0.187	1.930	0.070		15.602
C12.JL.186	AMP_01	1/18.	pargasite	6.525	1.475	0.186	0.315	0.008		0.192		1.851	2.448	0.046	0.061	1.833	0.060	0.466	0.181	2.000			15.647
C12.JL.186	AMP_01	1/19.	pargasite	6.430	1.570	0.195	0.370	0.010		0.193		1.904	2.328	0.042	0.069	1.815	0.075	0.479	0.204	2.000			15.684
C12.JL.186	AMP_01	1/20.	M-Hst	6.836	1.164	0.105	0.201	0.006		0.314	0.033	1.834	2.508	0.085		1.819	0.096	0.353	0.177	1.955	0.045		15.531
C12.JL.186	AMP_02	1/3.	pargasite	6.292	1.708	0.225	0.641	0.011		0.145		1.377	2.601	0.020	0.063	1.734	0.183	0.471	0.174	1.952	0.048		15.645
C12.JL.186	AMP_02	1/5.	pargasite	6.824	1.176	0.133	0.258	0.006		0.179		1.654	2.770	0.052	0.049	1.841	0.058	0.399	0.127	1.960	0.040		15.526
C12.JL.186	AMP_03	1/1.	pargasite	6.188	1.812	0.285	0.386	0.011		0.096		1.652	2.570	0.016	0.038	1.865	0.080	0.674	0.156	1.945	0.055		15.829
C12.JL.186	AMP_03	1/2.	pargasite	6.204	1.796	0.280	0.406	0.011		0.085		1.630	2.588	0.016	0.032	1.876	0.075	0.658	0.151	2.000			15.808
C12.JL.186	AMP_03	1/3.	pargasite	6.221	1.779	0.266	0.421	0.012		0.067		1.623	2.611	0.016	0.022	1.890	0.072	0.665	0.155	2.000			15.820
C12.JL.186	AMP_03	1/4.	pargasite	6.232	1.768	0.265	0.431	0.009		0.089		1.562	2.644	0.016	0.034	1.854	0.095	0.641	0.163	2.000			15.803
C12.JL.186	AMP_03	1/5.	pargasite	6.257	1.743	0.251	0.520	0.010		0.100		1.526	2.594	0.017	0.040	1.790	0.153	0.616	0.150	2.000			15.767
C12.JL.186	AMP_03	1/6.	pargasite	6.227	1.773	0.266	0.452	0.011		0.095		1.574	2.602	0.019	0.035	1.836	0.110	0.645	0.148	2.000			15.793
C12.JL.186	AMP_03	1/7.	pargasite	6.221	1.779	0.261	0.401	0.011		0.106		1.551	2.670	0.016	0.044	1.876	0.064	0.648	0.154	1.944	0.056		15.802
C12.JL.186	AMP_03	1/8.	pargasite	6.206	1.794	0.250	0.313	0.010		0.217		1.584	2.626	0.023	0.023	1.900	0.053	0.645	0.162	2.000			15.806
C12.JL.186	AMP_03	1/9.	pargasite	6.210	1.790	0.261	0.292	0.011		0.171		1.628	2.638	0.022	0.001	1.952	0.026	0.664	0.158	1.965	0.035		15.824
C12.JL.186	AMP_03	1/10.	pargasite	6.232	1.768	0.268	0.411	0.011		0.091		1.589	2.630	0.018	0.034	1.871	0.077	0.646	0.150	1.961	0.039		15.796
C12.JL.186	AMP_03	1/11.	pargasite	6.286	1.714	0.284	0.410	0.011		0.123		1.667	2.505	0.024	0.046	1.822	0.108	0.560	0.149	1.961	0.039		15.709
C12.JL.186	AMP_03	1/12.	M-Hst	6.605	1.395	0.169	0.233	0.008		0.306		1.608	2.675	0.045	0.032	1.835	0.088	0.447	0.150	1.955	0.045		15.596
C12.JL.186	AMP_03	1/13.	M-Hst	6.591	1.409	0.172	0.244	0.008		0.306		1.601	2.669	0.046	0.027	1.844	0.083	0.444	0.147	1.961	0.039		15.591
C12.JL.186	AMP_03	1/14.	pargasite	6.722	1.278	0.172	0.471	0.008		0.097		1.742	2.511	0.048	0.007	1.799	0.146	0.363	0.142	1.995		0.005	15.506

C12.JL.186	AMP_03	1/15.	pargasite	6.184	1.816	0.267	0.409	0.012		0.095		1.605	2.613	0.019	0.035	1.870	0.076	0.690	0.153	1.950	0.050		15.844
C12.JL.186	AMP_03	1/16.	pargasite	6.401	1.599	0.247	0.364	0.007		0.117		1.727	2.538	0.034	0.032	1.841	0.093	0.556	0.154	1.972	0.028		15.710
C12.JL.186	AMP_03	1/17.	pargasite	6.190	1.810	0.271	0.429	0.012		0.092		1.584	2.611	0.014	0.039	1.869	0.079	0.657	0.156	1.929	0.071		15.813
C12.JL.186	AMP_03	2/1.	M-Hbl	6.688	1.312	0.168	0.658	0.006	0.006	0.102	0.010	1.671	2.378	0.029		1.742	0.229	0.295	0.137	1.984	0.016		15.431
C12.JL.186	AMP_04	1/1.	M-Hst	6.765	1.235	0.103	0.204	0.005		0.290	0.049	1.887	2.463	0.055		1.881	0.063	0.390	0.205	1.900	0.100		15.595
C12.JL.186	AMP_04	1/2.	M-Hst	6.729	1.271	0.104	0.165	0.005		0.362	0.046	1.807	2.512	0.061		1.870	0.069	0.392	0.210	1.915	0.085		15.603
C12.JL.186	AMP_04	1/3.	pargasite	6.591	1.409	0.142	0.259	0.006		0.248	0.015	1.848	2.482	0.061		1.870	0.069	0.479	0.201	1.929	0.071		15.680
C12.JL.186	AMP_04	1/4.	pargasite	6.345	1.655	0.237	0.339	0.008		0.131		1.750	2.534	0.024	0.050	1.847	0.078	0.586	0.195	1.983		0.017	15.779
C12.JL.186	AMP_04	1/5.	pargasite	6.364	1.636	0.226	0.355	0.011		0.144		1.750	2.514	0.025	0.057	1.845	0.073	0.550	0.196	2.000			15.746
C12.JL.186	AMP_04	1/6.	pargasite	6.364	1.636	0.195	0.449	0.009		0.129		1.735	2.483	0.028	0.046	1.830	0.096	0.558	0.196	1.977		0.023	15.754
C12.JL.186	AMP_04	1/7.	pargasite	6.401	1.599	0.221	0.431	0.008		0.116		1.753	2.471	0.025	0.041	1.825	0.109	0.515	0.196	2.000			15.711
C12.JL.186	AMP_04	1/8.	pargasite	6.359	1.641	0.218	0.352	0.010		0.155		1.764	2.502	0.028	0.061	1.855	0.056	0.552	0.193	2.000			15.746
C12.JL.186	AMP_04	1/9.	pargasite	6.480	1.520	0.175	0.337	0.008		0.144		1.818	2.517	0.049	0.033	1.865	0.053	0.530	0.204	2.000			15.733
C12.JL.186	AMP_04	1/10.	pargasite	6.320	1.680	0.208	0.423	0.008		0.148		1.735	2.478	0.029	0.056	1.839	0.076	0.559	0.203	1.935	0.065		15.762
C12.JL.186	AMP_04	1/11.	pargasite	6.366	1.634	0.221	0.412	0.008		0.132		1.597	2.630	0.020	0.055	1.818	0.106	0.559	0.187	2.000			15.745
C12.JL.186	AMP_04	1/12.	pargasite	6.361	1.639	0.225	0.409	0.011		0.122		1.654	2.579	0.023	0.047	1.843	0.088	0.563	0.172	1.980		0.020	15.736
C12.JL.186	AMP_04	1/13.	pargasite	6.382	1.618	0.218	0.369	0.010		0.134		1.724	2.546	0.028	0.049	1.848	0.076	0.560	0.186	2.000			15.748
C12.JL.186	AMP_04	1/14.	pargasite	6.331	1.669	0.209	0.395	0.011		0.126		1.785	2.473	0.025	0.046	1.862	0.066	0.578	0.206	2.000			15.782
C12.JL.186	AMP_04	1/15.	pargasite	6.307	1.693	0.206	0.291	0.009		0.290		1.712	2.491	0.030	0.026	1.878	0.065	0.554	0.200	1.991		0.009	15.752
C12.JL.186	AMP_04	1/16.	pargasite	6.324	1.676	0.240	0.332	0.010		0.116		1.717	2.585	0.021	0.046	1.878	0.056	0.604	0.190	1.959	0.041		15.795
C12.JL.186	AMP_04	1/17.	pargasite	6.318	1.682	0.235	0.363	0.008		0.129		1.677	2.587	0.022	0.052	1.870	0.056	0.582	0.184	2.000			15.765
C12.JL.186	AMP_05	1/1.	M-Hst	6.414	1.586	0.218	0.285	0.007		0.298		1.565	2.627	0.028	0.048	1.839	0.086	0.476	0.169	2.000			15.646
C12.JL.186	AMP_05	1/4.	pargasite	6.279	1.721	0.226	0.379	0.012		0.154		1.491	2.737	0.018	0.070	1.857	0.055	0.600	0.179	2.000			15.778
C12.JL.186	AMP_05	1/5.	pargasite	6.380	1.620	0.235	0.358	0.012		0.110		1.468	2.818	0.016	0.046	1.873	0.065	0.557	0.178	2.000			15.736
C12.JL.186	AMP_05	1/6.	M-Hst	6.345	1.655	0.215	0.259	0.008		0.312		1.566	2.640	0.027	0.027	1.884	0.062	0.527	0.181	1.956	0.044		15.708
C12.JL.186	AMP_06	1/1.	pargasite	6.429	1.571	0.203	0.358	0.011	0.024	0.120		1.105	3.180	0.011	0.057	1.844	0.087	0.572	0.168	2.000			15.740
C12.JL.186	AMP_06	1/2.	pargasite	6.414	1.586	0.200	0.379	0.011	0.023	0.117		1.118	3.152	0.011	0.055	1.849	0.085	0.565	0.175	2.000			15.740
C12.JL.186	AMP_06	1/3.	pargasite	6.419	1.581	0.202	0.378	0.013	0.021	0.107		1.159	3.119	0.011	0.049	1.860	0.080	0.560	0.177	2.000			15.736
C12.JL.186	AMP_06	1/4.	pargasite	6.421	1.579	0.199	0.378	0.011	0.021	0.115		1.122	3.154	0.011	0.054	1.846	0.088	0.568	0.176	2.000			15.743
C12.JL.186	AMP_06	1/5.	pargasite	6.430	1.570	0.190	0.410	0.009	0.008	0.107		1.159	3.116	0.010	0.051	1.858	0.081	0.561	0.175	2.000			15.735
C12.JL.186	AMP_06	1/6.	pargasite	6.449	1.551	0.199	0.407	0.013	0.025	0.106		1.102	3.148	0.012	0.048	1.825	0.115	0.545	0.172	2.000			15.717
C12.JL.186	AMP_06	1/7.	pargasite	6.405	1.595	0.215	0.387	0.011	0.028	0.099		1.136	3.124	0.011	0.045	1.847	0.096	0.551	0.186	2.000			15.736
C12.JL.186	AMP_06	1/8.	pargasite	6.427	1.573	0.219	0.378	0.011	0.022	0.100		1.143	3.128	0.012	0.044	1.838	0.105	0.552	0.179	2.000			15.731
C12.JL.186	AMP_06	1/9.	pargasite	6.432	1.568	0.205	0.372	0.011	0.020	0.099		1.147	3.147	0.012	0.044	1.875	0.069	0.554	0.171	1.954	0.046		15.726
C12.JL.186	AMP_06	1/10.	pargasite	6.357	1.643	0.232	0.324	0.011		0.134		1.582	2.717	0.018	0.059	1.873	0.051	0.582	0.179	2.000			15.762
C12.JL.186	AMP_06	1/11.	pargasite	6.277	1.723	0.242	0.356	0.011		0.117		1.656	2.618	0.022	0.045	1.879	0.055	0.619	0.191	2.000			15.811
C12.JL.186	AMP_06	1/12.	pargasite	6.284	1.716	0.247	0.343	0.012		0.113		1.716	2.568	0.021	0.044	1.880	0.056	0.617	0.191	2.000			15.808
C12.JL.186	AMP_06	1/13.	pargasite	6.430	1.570	0.208	0.362	0.011	0.032	0.092		1.167	3.129	0.011	0.041	1.862	0.085	0.563	0.181	2.000			15.744

C12.JL.186	AMP_06	1/14.	pargasite	6.414	1.586	0.214	0.376	0.013	0.017	0.100		1.194	3.086	0.012	0.044	1.858	0.085	0.558	0.180	2.000			15.737
C12.JL.186	AMP_07	1/1.	pargasite	6.430	1.570	0.209	0.286	0.008		0.267		1.652	2.576	0.034	0.029	1.865	0.072	0.502	0.159	1.940	0.060		15.659
C12.JL.186	AMP_07	1/2.	pargasite	6.444	1.556	0.188	0.327	0.008		0.190		1.732	2.555	0.034	0.074	1.829	0.063	0.511	0.208	1.903	0.073	0.024	15.719
C12.JL.186	AMP_07	1/3.	pargasite	6.306	1.694	0.245	0.382	0.010		0.141		1.721	2.503	0.024	0.056	1.852	0.067	0.560	0.180	1.989		0.011	15.741
C12.JL.186	AMP_07	1/4.	M-Hbl	6.667	1.333	0.220	0.560	0.007		0.041		1.408	2.764	0.016	0.007	1.769	0.208	0.355	0.138	1.952	0.048		15.493
C12.JL.186	AMP_07	1/5.	pargasite	6.465	1.535	0.205	0.382	0.011		0.099		1.170	3.134	0.013	0.044	1.853	0.090	0.572	0.153	1.941	0.059		15.726
C12.JL.186	AMP_07	1/6.	pargasite	6.373	1.627	0.231	0.323	0.011		0.089		1.307	3.038	0.017	0.034	1.909	0.040	0.627	0.155	1.950	0.050		15.781
C12.JL.186	AMP_07	1/7.	pargasite	6.180	1.820	0.249	0.513	0.012	0.011	0.136		1.314	2.765	0.017	0.061	1.787	0.135	0.577	0.207	1.956	0.044		15.784
C12.JL.186	AMP_07	1/8.	pargasite	6.572	1.428	0.210	0.459	0.009	0.008	0.078		1.194	3.041	0.012	0.032	1.809	0.147	0.455	0.144	1.944	0.056		15.598
C12.JL.180	AMP_01	1/1.	MF-Hbl	6.995	1.005	0.144	0.157			0.339		1.150	3.211	0.075	0.022	1.754	0.149	0.267	0.103	1.870	0.096	0.034	15.371
C12.JL.180	AMP_01	1/2.	MF-Hbl	7.330	0.670	0.104	0.228			0.229	0.002	1.025	3.411	0.065		1.738	0.197	0.111	0.089	1.971		0.029	15.199
C12.JL.180	AMP_01	1/3.	actinolite	7.282	0.718	0.099	0.084			0.213	0.009	1.082	3.512	0.061		1.856	0.083	0.223	0.083	1.910	0.070	0.021	15.305
C12.JL.180	AMP_01	1/4.	MF-Hbl	7.035	0.965	0.108	0.200			0.316		1.111	3.264	0.067	0.023	1.779	0.130	0.267	0.096	1.882	0.096	0.022	15.361
C12.JL.180	AMP_01	1/5.	pargasite	6.787	1.213	0.134	0.265	0.006		0.256		1.386	2.953	0.070	0.077	1.755	0.098	0.417	0.101	1.887	0.085	0.029	15.518
C12.JL.180	AMP_01	1/6.	pargasite	6.803	1.197	0.134	0.277	0.005		0.248		1.360	2.976	0.072	0.071	1.749	0.109	0.390	0.117	1.873	0.097	0.030	15.508
C12.JL.180	AMP_01	1/7.	MF-Hbl	6.628	1.372	0.128	0.208	0.005		0.726		0.885	3.048	0.072	0.101	1.632	0.195	0.257	0.114	1.891	0.082	0.027	15.371
C12.JL.180	AMP_01	1/8.	pargasite	6.719	1.281	0.146	0.287	0.006		0.257		1.397	2.907	0.072	0.076	1.750	0.102	0.412	0.130	1.972		0.028	15.542
C12.JL.180	AMP_01	1/9.	MF-Hbl	6.916	1.084	0.125	0.261			0.261		1.306	3.047	0.073	0.077	1.715	0.135	0.357	0.089	1.892	0.084	0.024	15.446
C12.JL.180	AMP_01	1/10.	MF-Hbl	7.333	0.667	0.087	0.120			0.264		1.019	3.510	0.070	0.005	1.813	0.112	0.159	0.062	1.897	0.081	0.022	15.221
C12.JL.180	AMP_01	1/11.	MF-Hbl	6.920	1.080	0.129	0.225			0.254		1.246	3.145	0.073	0.073	1.756	0.098	0.337	0.102	1.880	0.094	0.026	15.438
C12.JL.180	AMP_01	1/12.	MF-Hbl	7.349	0.651	0.109	0.045			0.317		0.921	3.608	0.071	0.020	1.774	0.135	0.135	0.071	1.888	0.086	0.027	15.206
C12.JL.180	AMP_01	1/13.	actinolite	7.378	0.622	0.057	0.105			0.262		1.007	3.570	0.062	0.013	1.837	0.088	0.175	0.055	1.887	0.113		15.231
C12.JL.180	AMP_01	1/14.	pargasite	6.773	1.227	0.140	0.272	0.005		0.242		1.353	2.989	0.068	0.071	1.761	0.100	0.408	0.121	1.894	0.079	0.027	15.530
C12.JL.180	AMP_01	1/15.	MF-Hbl	7.269	0.731	0.075	0.116			0.342		0.949	3.518	0.065	0.008	1.843	0.084	0.138	0.069	1.894	0.077	0.029	15.207
C12.JL.180	AMP_01	1/16.	M-Hbl	6.891	1.109	0.130	0.263	0.005		0.257		1.324	3.021	0.071	0.076	1.735	0.118	0.345	0.097	1.917	0.083		15.442
C12.JL.180	AMP_01	1/17.	actinolite	7.504	0.496	0.060	0.073			0.243		0.828	3.796	0.053	0.017	1.847	0.083	0.098	0.045	1.910	0.090		15.143
C12.JL.180	AMP_01	1/18.	actinolite	7.562	0.438	0.056	0.072			0.291	0.013	0.808	3.760	0.040		1.829	0.131	0.049	0.045	1.911	0.089		15.094
C12.JL.180	AMP_01	1/19.	pargasite	6.747	1.253	0.142	0.287	0.005		0.227		1.340	3.000	0.072	0.058	1.772	0.098	0.423	0.127	1.885	0.083	0.032	15.551
C12.JL.180	AMP_01	1/20.	M-Hbl	6.926	1.074	0.123	0.262			0.237		1.332	3.047	0.068	0.068	1.742	0.122	0.361	0.091	1.922	0.078		15.453
C12.JL.180	AMP_01	1/21.	MF-Hbl	6.839	1.161	0.131	0.255	0.006		0.258		1.364	2.986	0.069	0.079	1.740	0.112	0.392	0.100	1.980		0.020	15.492
C12.JL.180	AMP_01	1/22.	MF-Hbl	6.926	1.074	0.123	0.252	0.005		0.263		1.291	3.067	0.068	0.084	1.730	0.119	0.339	0.089	1.890	0.083	0.027	15.430
C12.JL.180	AMP_01	1/23.	M-Hbl	6.918	1.082	0.125	0.269			0.245		1.304	3.058	0.073	0.068	1.731	0.129	0.345	0.104	1.891	0.087	0.022	15.451
C12.JL.180	AMP_01	1/24.	M-Hbl	6.899	1.101	0.124	0.293	0.006		0.231		1.374	2.972	0.070	0.062	1.728	0.139	0.367	0.095	1.904	0.074	0.022	15.461
C12.JL.180	AMP_01	1/25.	M-Hbl	6.885	1.115	0.128	0.272			0.256		1.323	3.021	0.070	0.077	1.734	0.119	0.352	0.098	1.897	0.078	0.025	15.450
C12.JL.180	AMP_01	1/26.	MF-Hbl	6.960	1.040	0.126	0.228	0.005		0.233		1.280	3.129	0.070	0.064	1.762	0.104	0.321	0.107	1.880	0.083	0.037	15.429
C12.JL.180	AMP_01	1/27.	M-Hbl	6.893	1.107	0.126	0.244	0.005		0.225		1.276	3.125	0.069	0.060	1.775	0.096	0.371	0.107	1.890	0.083	0.027	15.479
C12.JL.180	AMP_01	1/28.	MF-Hbl	7.126	0.874	0.117	0.113			0.340		1.015	3.415	0.074	0.024	1.759	0.143	0.243	0.086	1.869	0.100	0.032	15.329
C12.JL.180	AMP_01	1/29.	MF-Hbl	6.979	1.021	0.130	0.200			0.238		1.163	3.269	0.071	0.066	1.757	0.106	0.320	0.110	1.887	0.086	0.027	15.430

C12.JL.180	AMP_02	1/1.	actinolite	7.524	0.476	0.051	0.103		0.240		0.872	3.735	0.066	0.021	1.817	0.097	0.079	0.049	1.928	0.072		15.130
C12.JL.180	AMP_02	1/2.	M-Hbl	6.911	1.089	0.135	0.251		0.234		1.249	3.131	0.067	0.067	1.734	0.132	0.368	0.098	1.889	0.087	0.025	15.466
C12.JL.180	AMP_02	1/3.	M-Hbl	6.802	1.198	0.144	0.274	0.006	0.243		1.331	3.002	0.068	0.071	1.757	0.104	0.387	0.104	1.894	0.085	0.022	15.491
C12.JL.180	AMP_02	1/4.	M-Hbl	7.086	0.914	0.109	0.584		0.049	0.052	1.344	2.862	0.014		1.644	0.342	0.321	0.085	1.916	0.064	0.019	15.406
C12.JL.180	AMP_02	1/5.	pargasite	6.560	1.440	0.167	0.336	0.006	0.223		1.534	2.734	0.065	0.063	1.775	0.097	0.480	0.159	1.878	0.079	0.043	15.639
C12.JL.180	AMP_02	1/6.	MF-Hbl	6.979	1.021	0.113	0.246	0.005	0.372		1.128	3.137	0.068	0.039	1.716	0.178	0.263	0.087	1.903	0.075	0.022	15.352
C12.JL.180	AMP_02	1/7.	MF-Hbl	6.952	1.048	0.117	0.217	0.005	0.423		1.044	3.195	0.072	0.050	1.703	0.175	0.266	0.079	1.903	0.073	0.024	15.346
C12.JL.180	AMP_02	1/8.	MF-Hbl	7.004	0.996	0.114	0.206	0.005	0.407		1.060	3.208	0.068	0.049	1.701	0.182	0.259	0.073	1.904	0.096		15.332
C12.JL.180	AMP_02	1/9.	pargasite	6.852	1.148	0.131	0.256	0.005	0.253		1.329	3.027	0.065	0.081	1.727	0.128	0.409	0.092	1.896	0.078	0.026	15.503
C12.JL.180	AMP_02	1/10.	M-Hbl	6.881	1.119	0.130	0.279	0.006	0.218		1.347	3.020	0.068	0.057	1.746	0.129	0.384	0.101	1.902	0.075	0.022	15.485
C12.JL.180	AMP_02	1/11.	MF-Hbl	7.006	0.994	0.122	0.202		0.379		1.108	3.190	0.073	0.036	1.721	0.170	0.269	0.072	1.894	0.087	0.020	15.342
C12.JL.180	AMP_02	1/12.	MF-Hbl	7.359	0.641	0.140	0.039		0.295		0.857	3.669	0.066	0.018	1.753	0.162	0.116	0.073	1.879	0.090	0.031	15.188
C12.JL.180	AMP_02	1/13.	MF-Hbl	7.050	0.950	0.114	0.249	0.005	0.378		1.019	3.235	0.077	0.031	1.681	0.210	0.199	0.101	1.937	0.063		15.299
C12.JL.180	AMP_02	1/14.	MF-Hbl	7.356	0.644	0.112	0.082		0.316		0.996	3.495	0.068	0.023	1.743	0.166	0.119	0.069	1.888	0.090	0.022	15.189
C12.JL.180	AMP_02	1/15.	pargasite	6.749	1.251	0.146	0.280	0.006	0.245		1.386	2.938	0.065	0.076	1.734	0.125	0.435	0.120	1.891	0.079	0.030	15.556
C12.JL.180	AMP_02	1/16.	MF-Hbl	6.938	1.062	0.129	0.247		0.255		1.280	3.089	0.076	0.070	1.728	0.126	0.342	0.085	1.895	0.083	0.022	15.427
C12.JL.180	AMP_02	1/17.	pargasite	6.704	1.296	0.146	0.319	0.005	0.261		1.429	2.842	0.065	0.085	1.730	0.120	0.414	0.127	1.896	0.079	0.025	15.543
C12.JL.180	AMP_02	1/18.	M-Hbl	6.833	1.167	0.130	0.283	0.006	0.251		1.398	2.931	0.066	0.079	1.738	0.118	0.374	0.110	1.896	0.077	0.027	15.484
C12.JL.180	AMP_02	1/19.	pargasite	6.738	1.262	0.146	0.279	0.006	0.229		1.418	2.923	0.065	0.067	1.772	0.097	0.430	0.124	1.884	0.084	0.032	15.556
C12.JL.180	AMP_02	1/20.	pargasite	6.819	1.181	0.133	0.290	0.005	0.251		1.398	2.923	0.071	0.074	1.723	0.133	0.395	0.106	1.889	0.079	0.032	15.502
C12.JL.180	AMP_02	1/21.	M-Hbl	6.914	1.086	0.126	0.272	0.006	0.263		1.304	3.029	0.073	0.078	1.708	0.141	0.340	0.093	1.894	0.082	0.023	15.433
C12.JL.180	AMP_02	1/22.	MF-Hbl	7.031	0.969	0.113	0.169	0.005	0.331		1.177	3.206	0.066	0.029	1.779	0.127	0.275	0.090	1.888	0.082	0.029	15.367
C12.JL.180	AMP_02	1/23.	MF-Hbl	7.062	0.938	0.127	0.134	0.006	0.362		1.062	3.309	0.075	0.029	1.754	0.142	0.235	0.089	1.915	0.067	0.018	15.324
C12.JL.180	AMP_02	1/24.	M-Hbl	6.856	1.144	0.132	0.285		0.236		1.336	3.011	0.068	0.067	1.735	0.130	0.381	0.108	1.881	0.088	0.031	15.489
C12.JL.180	AMP_02	1/25.	MF-Hbl	7.215	0.785	0.106	0.138		0.251		1.138	3.368	0.066	0.006	1.835	0.093	0.197	0.081	1.903	0.068	0.029	15.279
C12.JL.180	AMP_02	1/26.	MF-Hbl	7.271	0.729	0.090	0.150		0.265		1.062	3.432	0.060	0.015	1.798	0.127	0.191	0.069	1.910	0.090		15.259
C12.JL.180	AMP_03	1/1.	M-Hbl	6.940	1.060	0.140	0.255		0.237		1.194	3.173	0.066	0.070	1.713	0.151	0.360	0.078	1.891	0.087	0.022	15.437
C12.JL.180	AMP_03	1/2.	MF-Hbl	6.977	1.023	0.126	0.231		0.376		1.092	3.176	0.067	0.041	1.700	0.192	0.281	0.075	1.891	0.109		15.357
C12.JL.180	AMP_03	1/3.	M-Hbl	6.909	1.091	0.136	0.234		0.221		1.344	3.065	0.070	0.056	1.766	0.108	0.370	0.102	1.881	0.092	0.027	15.472
C12.JL.180	AMP_03	1/4.	MF-Hbl	7.112	0.888	0.118	0.143	0.005	0.337		1.011	3.387	0.072	0.025	1.752	0.152	0.236	0.084	1.877	0.097	0.026	15.322
C12.JL.180	AMP_03	1/5.	MF-Hbl	7.376	0.624	0.087	0.101		0.278		1.021	3.513	0.064	0.015	1.797	0.123	0.130	0.064	1.892	0.088	0.020	15.193
C12.JL.180	AMP_04	1/1.	M-Hbl	7.023	0.977	0.114	0.221	0.007	0.199	0.012	1.516	2.930	0.057		1.859	0.085	0.303	0.102	1.973		0.027	15.405
C12.JL.180	AMP_04	1/2.	pargasite	6.729	1.271	0.138	0.281	0.005	0.229		1.601	2.746	0.070	0.062	1.785	0.084	0.432	0.131	1.970		0.030	15.564
C12.JL.180	AMP_04	1/3.	pargasite	6.788	1.212	0.140	0.278	0.006	0.222		1.515	2.839	0.069	0.058	1.791	0.082	0.387	0.121	1.903	0.070	0.027	15.508
C12.JL.180	AMP_04	1/4.	pargasite	6.821	1.179	0.129	0.265	0.007	0.225		1.485	2.890	0.072	0.057	1.791	0.080	0.383	0.122	1.906	0.070	0.025	15.506
C12.JL.180	AMP_04	1/5.	M-Hbl	6.871	1.129	0.117	0.249	0.006	0.218		1.505	2.906	0.073	0.050	1.808	0.069	0.365	0.127	1.906	0.069	0.025	15.493
C12.JL.180	AMP_04	1/6.	pargasite	6.718	1.282	0.139	0.293	0.006	0.234		1.595	2.733	0.072	0.060	1.795	0.073	0.410	0.135	1.970		0.030	15.545
C12.JL.180	AMP_04	1/7.	pargasite	6.749	1.251	0.130	0.292	0.005	0.214		1.441	2.918	0.075	0.048	1.807	0.071	0.412	0.138	1.899	0.079	0.022	15.551

C12.JL.180	AMP_04	1/8.	MF-Hbl	6.821	1.179		0.124	0.222	0.006	0.378		1.415	2.855	0.073	0.029	1.783	0.116	0.323	0.117	1.906	0.069	0.025	15.441
C12.JL.180	AMP_04	1/9.	pargasite	6.778	1.222		0.132	0.273	0.005	0.221		1.585	2.784	0.070	0.057	1.797	0.077	0.410	0.125	1.975		0.025	15.536
C12.JL.180	AMP_04	1/10.	pargasite	6.733	1.267		0.143	0.289	0.005	0.204		1.617	2.742	0.072	0.044	1.803	0.080	0.421	0.143	1.898	0.070	0.033	15.563
C12.JL.180	AMP_04	1/11.	M-Hst	6.701	1.299		0.137	0.254	0.005	0.343		1.510	2.751	0.072	0.021	1.801	0.106	0.395	0.133	1.973		0.027	15.528
C12.JL.180	AMP_04	1/12.	pargasite	6.690	1.310		0.139	0.302	0.006	0.220		1.593	2.740	0.069	0.055	1.807	0.069	0.435	0.139	1.967		0.033	15.574
C12.JL.180	AMP_04	1/13.	pargasite	6.737	1.263		0.130	0.305	0.005	0.221		1.551	2.789	0.070	0.053	1.809	0.068	0.417	0.124	1.978		0.022	15.542
C12.JL.180	AMP_04	1/14.	MF-Hbl	6.710	1.290		0.133	0.262	0.006	0.363		1.400	2.836	0.067	0.022	1.809	0.102	0.362	0.133	1.973		0.027	15.495
C12.JL.180	AMP_04	1/15.	pargasite	6.784	1.216		0.134	0.266	0.005	0.206		1.538	2.852	0.073	0.044	1.801	0.081	0.423	0.129	1.973		0.027	15.552
C12.JL.180	AMP_04	1/16.	pargasite	6.727	1.273		0.136	0.285	0.006	0.219		1.534	2.819	0.072	0.053	1.795	0.079	0.422	0.147	1.970		0.030	15.567
C12.JL.180	AMP_04	1/17.	pargasite	6.550	1.450		0.154	0.343	0.007	0.206		1.777	2.512	0.068	0.050	1.799	0.083	0.473	0.196	1.960		0.040	15.668
C12.JL.180	AMP_04	1/18.	pargasite	6.833	1.167		0.130	0.279	0.006	0.223		1.539	2.823	0.071	0.057	1.770	0.102	0.386	0.114	1.903	0.070	0.027	15.500
C12.JL.180	AMP_04	1/19.	pargasite	6.655	1.345		0.156	0.293	0.007	0.215		1.597	2.732	0.074	0.049	1.799	0.078	0.444	0.153	1.895	0.070	0.035	15.597
C12.JL.180	AMP_04	1/20.	M-Hst	6.632	1.368		0.145	0.262	0.005	0.353		1.518	2.716	0.070	0.026	1.794	0.109	0.422	0.145	1.968		0.032	15.565
C12.JL.180	AMP_04	1/21.	M-Hbl	6.871	1.129		0.117	0.276	0.006	0.207		1.406	2.989	0.074	0.043	1.816	0.066	0.350	0.123	1.975		0.025	15.473
C12.JL.180	AMP_04	1/22.	MF-Hbl	7.275	0.725		0.076	0.137		0.245	0.010	1.023	3.509	0.063		1.866	0.072	0.193	0.069	1.893	0.086	0.022	15.263
C12.JL.180	AMP_04	1/23.	MF-Hbl	7.377	0.623		0.078	0.122		0.254		0.978	3.568	0.072		1.801	0.126	0.152	0.065	1.893	0.085	0.022	15.216
C12.JL.180	AMP_04	1/24.	pargasite	6.778	1.222		0.142	0.282	0.006	0.221		1.537	2.812	0.068	0.058	1.785	0.088	0.381	0.136	1.973		0.027	15.516
C12.JL.180	AMP_04	1/25.	M-Hbl	6.873	1.127		0.119	0.251	0.006	0.222		1.391	3.012	0.073	0.055	1.791	0.082	0.377	0.116	1.894	0.079	0.027	15.495
C12.JL.180	AMP_04	1/28.	M-Hbl	7.444	0.556		0.099	0.871			0.057	0.975	2.786			1.526	0.474	0.302	0.083	1.913	0.062	0.026	15.173
C12.JL.180	AMP_05	1/1.	pargasite	6.846	1.154		0.128	0.245	0.005	0.216		1.449	2.957	0.071	0.053	1.796	0.080	0.399	0.114	1.975		0.025	15.513
C12.JL.180	AMP_05	1/2.	pargasite	6.844	1.156		0.128	0.257	0.005	0.207		1.483	2.921	0.072	0.046	1.804	0.077	0.386	0.123	1.906	0.070	0.025	15.509
C12.JL.180	AMP_05	1/3.	pargasite	6.807	1.193		0.131	0.253	0.006	0.198		1.526	2.886	0.068	0.044	1.824	0.064	0.415	0.122	1.901	0.074	0.025	15.537
C12.JL.180	AMP_05	1/4.	M-Hbl	6.883	1.117		0.125	0.240		0.208		1.477	2.949	0.071	0.049	1.806	0.075	0.388	0.105	1.978		0.022	15.493
C12.JL.180	AMP_05	1/5.	pargasite	6.845	1.155		0.126	0.232	0.005	0.207		1.500	2.931	0.071	0.048	1.812	0.070	0.413	0.118	1.896	0.079	0.025	15.533
C12.JL.180	AMP_05	1/6.	pargasite	6.831	1.169		0.129	0.259	0.005	0.201		1.401	3.006	0.069	0.046	1.812	0.073	0.398	0.121	1.901	0.074	0.025	15.520
C12.JL.180	AMP_05	1/7.	MF-Hbl	6.860	1.140		0.134	0.161	0.005	0.340		1.327	3.033	0.071	0.017	1.813	0.099	0.340	0.125	1.887	0.078	0.035	15.465
C12.JL.180	AMP_05	1/8.	M-Hbl	6.908	1.092		0.123	0.244	0.005	0.219		1.381	3.028	0.072	0.054	1.787	0.088	0.365	0.101	1.926	0.074		15.467
C12.JL.180	AMP_06	1/1.	MF-Hbl	7.289	0.711		0.128	0.076		0.276	0.005	1.003	3.512	0.079		1.763	0.158	0.180	0.082	1.883	0.086	0.032	15.262
C12.JL.180	AMP_06	1/2.	M-Hbl	6.832	1.168		0.138	0.247	0.006	0.244		1.280	3.085	0.068	0.072	1.762	0.098	0.392	0.101	1.897	0.076	0.027	15.493
C12.JL.180	AMP_06	1/3.	MF-Hbl	6.957	0.963	0.081	0.029		0.005	0.806		0.774	3.386	0.075	0.069	1.693	0.163	0.185	0.071	1.976		0.024	15.257
C12.JL.180	AMP_06	1/4.	MF-Hbl	6.960	0.958	0.082	0.028		0.005	0.784		0.787	3.396	0.074	0.075	1.683	0.168	0.206	0.075	1.973		0.027	15.281
C12.JL.180	AMP_06	1/5.	MF-Hbl	6.883	1.117		0.124	0.244	0.005	0.256		1.180	3.191	0.071	0.076	1.748	0.105	0.373	0.096	1.904	0.073	0.022	15.469
C12.JL.180	AMP_06	1/6.	MF-Hbl	7.223	0.777		0.117	0.131		0.309		0.981	3.461	0.071	0.017	1.751	0.161	0.186	0.077	1.919	0.081		15.262
C12.JL.180	AMP_06	1/7.	MF-Hbl	7.329	0.671		0.117	0.085		0.268		0.968	3.563	0.074	0.003	1.776	0.147	0.155	0.076	1.890	0.081	0.029	15.232
C12.JL.180	AMP_06	1/8.	M-Hbl	6.898	1.102		0.128	0.253	0.005	0.222		1.230	3.162	0.068	0.059	1.758	0.114	0.383	0.097	1.902	0.075	0.023	15.479
C12.JL.180	AMP_06	1/9.	MF-Hbl	7.391	0.609		0.118	0.049		0.303		0.910	3.620	0.076	0.011	1.757	0.157	0.109	0.069	1.892	0.081	0.027	15.179
C12.JL.180	AMP_06	1/10.	MF-Hbl	7.133	0.867		0.125	0.123		0.334		1.027	3.391	0.073	0.023	1.760	0.144	0.223	0.081	1.903	0.076	0.021	15.304
C12.JL.180	AMP_06	1/11.	MF-Hbl	7.020	0.980		0.114	0.212		0.366		1.032	3.276	0.071	0.034	1.733	0.162	0.265	0.072	1.896	0.082	0.022	15.337

C12.JL.180	AMP_06	1/12.	MF-Hbl	6.970	1.030	0.126	0.219	0.005	0.396		1.057	3.197	0.073	0.041	1.700	0.186	0.269	0.075	1.905	0.073	0.022	15.344
C12.JL.180	AMP_06	1/13.	MF-Hbl	6.947	1.053	0.116	0.227	0.005	0.255		1.218	3.180	0.070	0.076	1.754	0.099	0.343	0.091	1.904	0.070	0.026	15.434
C12.JL.180	AMP_06	1/14.	MF-Hbl	7.237	0.763	0.091	0.150		0.308		0.966	3.486	0.072	0.017	1.781	0.131	0.186	0.069	1.981		0.019	15.257
C12.JL.180	AMP_06	1/15.	MF-Hbl	7.141	0.859	0.114	0.112	0.005	0.340		0.964	3.465	0.071	0.026	1.779	0.123	0.207	0.089	1.890	0.086	0.024	15.295
C12.JL.180	AMP_06	1/16.	M-Hbl	6.893	1.107	0.116	0.258	0.006	0.239		1.221	3.160	0.073	0.064	1.758	0.105	0.379	0.098	1.883	0.092	0.025	15.477
C12.JL.180	AMP_07	1/1.	MF-Hbl	6.834	1.166	0.126	0.213	0.006	0.309		1.469	2.877	0.074	0.006	1.828	0.092	0.346	0.133	1.921	0.079		15.479
C12.JL.180	AMP_07	1/2.	MF-Hbl	7.323	0.677	0.113	0.069		0.265	0.001	1.139	3.414	0.076		1.791	0.133	0.169	0.081	1.901	0.078	0.021	15.251
C12.JL.180	AMP_07	1/3.	pargasite	6.900	1.100	0.123	0.259	0.005	0.170		1.543	2.900	0.076	0.021	1.817	0.086	0.389	0.117	1.901	0.079	0.019	15.506
C12.JL.180	AMP_07	1/4.	pargasite	6.890	1.110	0.120	0.262	0.006	0.172		1.601	2.840	0.078	0.021	1.824	0.078	0.389	0.119	1.913	0.065	0.022	15.510
C12.JL.180	AMP_07	1/5.	M-Hbl	6.914	1.086	0.124	0.269	0.006	0.190		1.573	2.837	0.079	0.030	1.801	0.090	0.355	0.107	1.913	0.069	0.017	15.461
C12.JL.180	AMP_07	1/6.	pargasite	6.869	1.131	0.129	0.245	0.005	0.194		1.613	2.814	0.081	0.030	1.819	0.070	0.391	0.109	1.979		0.021	15.500
C12.JL.180	AMP_07	1/7.	pargasite	6.909	1.091	0.120	0.260	0.005	0.179		1.477	2.960	0.077	0.025	1.802	0.095	0.393	0.111	1.905	0.077	0.019	15.504
C12.JL.180	AMP_07	1/8.	MF-Hbl	7.242	0.758	0.138	0.089		0.206	0.011	1.160	3.398	0.059		1.819	0.123	0.223	0.088	1.880	0.100	0.020	15.314
C12.JL.180	AMP_07	1/9.	actinolite	7.525	0.475	0.054	0.092		0.233		0.890	3.730	0.064	0.003	1.824	0.110	0.110	0.040	1.888	0.112		15.150
C12.JL.180	AMP_08	1/1.	MF-Hbl	7.369	0.631	0.109	0.080		0.239		0.989	3.583	0.064	0.004	1.809	0.123	0.142	0.075	1.919	0.081		15.217
C12.JL.180	AMP_08	1/2.	MF-Hbl	7.401	0.599	0.073	0.129		0.294		0.898	3.607	0.067	0.017	1.774	0.142	0.117	0.056	1.904	0.076	0.019	15.174
C12.JL.180	AMP_08	1/3.	MF-Hbl	7.133	0.867	0.116	0.139	0.005	0.333		1.050	3.358	0.071	0.025	1.744	0.160	0.239	0.081	1.902	0.076	0.022	15.321
C12.JL.180	AMP_08	1/4.	MF-Hbl	7.182	0.818	0.108	0.123	0.005	0.364		0.922	3.479	0.069	0.035	1.732	0.163	0.203	0.071	1.890	0.090	0.019	15.274
C12.JL.180	AMP_08	1/5.	MF-Hbl	7.320	0.680	0.086	0.126		0.263		1.036	3.490	0.064	0.011	1.800	0.125	0.180	0.064	1.910	0.090		15.245
C12.JL.180	AMP_08	1/6.	actinolite	7.556	0.444	0.049	0.102		0.212		0.888	3.749	0.060	0.001	1.831	0.108	0.100	0.040	1.919	0.081		15.140
C12.JL.180	AMP_08	1/7.	actinolite	7.546	0.454	0.054	0.103		0.216		0.884	3.742	0.062		1.831	0.108	0.095	0.040	1.896	0.085	0.019	15.135
C12.JL.180	AMP_08	1/8.	MF-Hbl	7.310	0.690	0.082	0.167	0.005	0.252		1.020	3.475	0.062	0.010	1.814	0.114	0.166	0.051	1.932	0.068		15.218
C12.JL.180	AMP_08	1/9.	M-Hbl	6.956	1.044	0.126	0.267	0.005	0.262		1.194	3.146	0.070	0.081	1.696	0.153	0.335	0.076	1.929	0.071		15.411
C12.JL.180	AMP_09	1/1.	MF-Hbl	7.189	0.811	0.120	0.104	0.005	0.290		0.986	3.496	0.071	0.012	1.779	0.138	0.221	0.090	1.880	0.094	0.026	15.312
C12.JL.180	AMP_09	1/2.	MF-Hbl	7.077	0.923	0.138	0.140	0.005	0.299		1.016	3.402	0.069	0.017	1.780	0.135	0.243	0.095	1.894	0.077	0.029	15.339
C12.JL.180	AMP_09	1/3.	M-Hbl	6.951	1.049	0.126	0.236		0.235		1.204	3.199	0.071	0.064	1.751	0.115	0.345	0.094	1.891	0.087	0.022	15.440
C12.JL.180	AMP_09	1/4.	M-Hbl	6.900	1.100	0.128	0.253	0.005	0.227		1.248	3.139	0.069	0.061	1.756	0.114	0.372	0.102	1.895	0.083	0.022	15.474
C12.JL.180	AMP_09	1/5.	M-Hbl	6.948	1.052	0.119	0.259	0.005	0.221		1.316	3.080	0.068	0.059	1.744	0.129	0.366	0.093	1.888	0.087	0.025	15.459
C12.JL.180	AMP_09	1/6.	M-Hbl	6.868	1.132	0.125	0.256	0.006	0.241		1.277	3.094	0.065	0.073	1.776	0.086	0.364	0.100	1.906	0.072	0.022	15.463
C12.JL.180	AMP_09	1/7.	pargasite	6.772	1.228	0.136	0.291	0.005	0.228		1.368	2.972	0.063	0.068	1.769	0.100	0.415	0.117	1.880	0.092	0.027	15.532
C12.JL.180	AMP_09	1/8.	actinolite	7.558	0.442	0.058	0.091		0.208		0.844	3.798	0.064	0.021	1.828	0.088	0.069	0.047	1.921	0.079		15.116
C12.JL.180	AMP_09	1/9.	pargasite	6.765	1.235	0.135	0.275	0.005	0.226		1.416	2.944	0.067	0.063	1.777	0.093	0.431	0.121	1.973		0.027	15.553
C12.JL.180	AMP_09	1/10.	MF-Hbl	7.400	0.600	0.101	0.074		0.269		0.957	3.600	0.070	0.007	1.787	0.136	0.123	0.069	1.915	0.085		15.193

Abbreviations: MF-Hbl =magnesio-ferri-hornblende; M-Hbl=magnesio-hornblende; M-Hst= magnesio-hastingsite

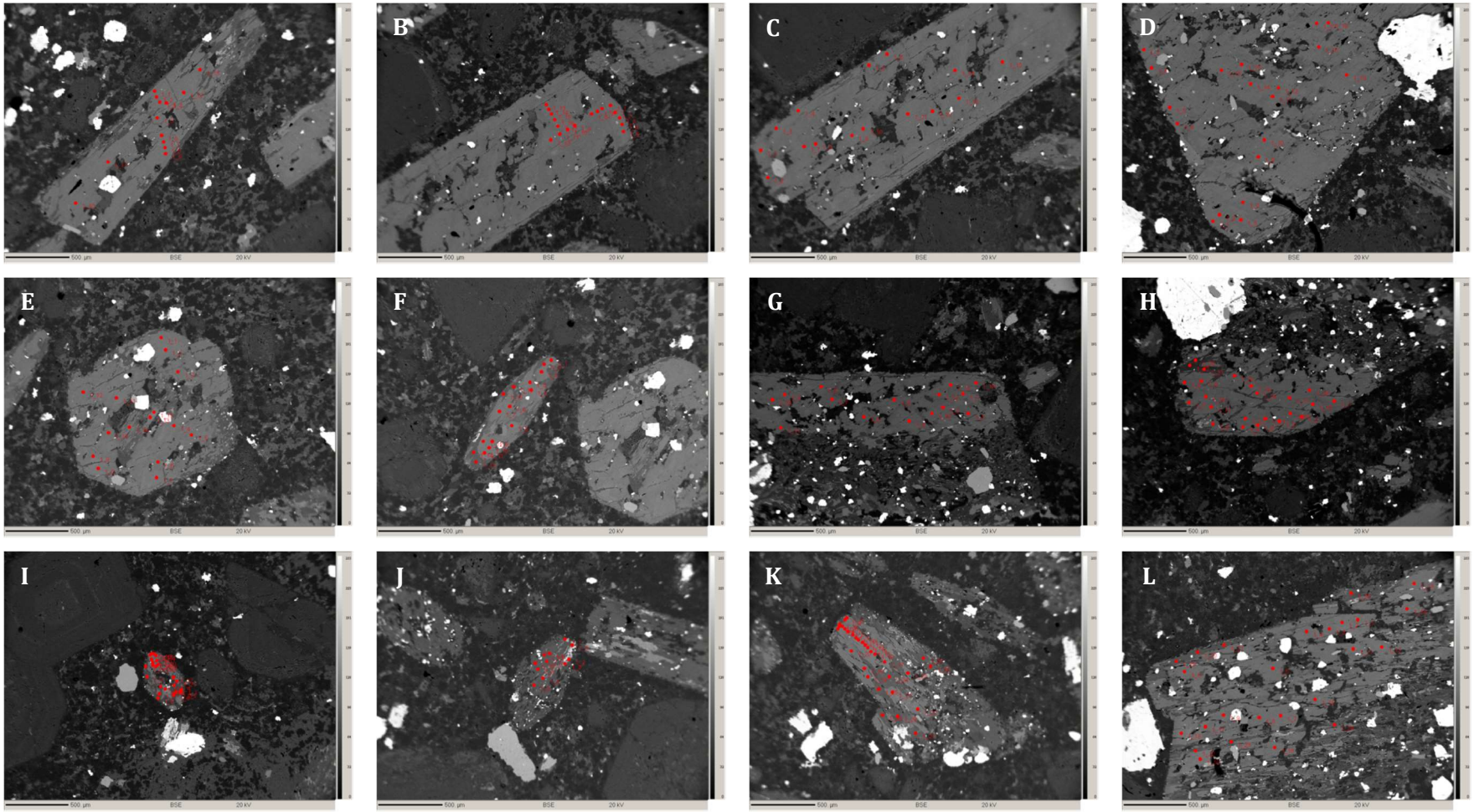


Figure 3.3: Location of microprobe analyses for amphiboles A) C12.JL.47 AMP1, B) C12.JL.47 AMP 02_01, C) C12.JL.47 AMP 02, D) C12.JL.47 AMP 03, E) C12.JL.47 AMP 04_01, F) C12.JL.47 AMP 04, G)C12.JL.47 AMP 05, H) C12.JL.47 AMP 06, I) C12.JL.48 AMP 01, J) C12.JL.48 AMP 02, K) C12.JL.48 AMP 03 and L) C12.JL.48 AMP 04

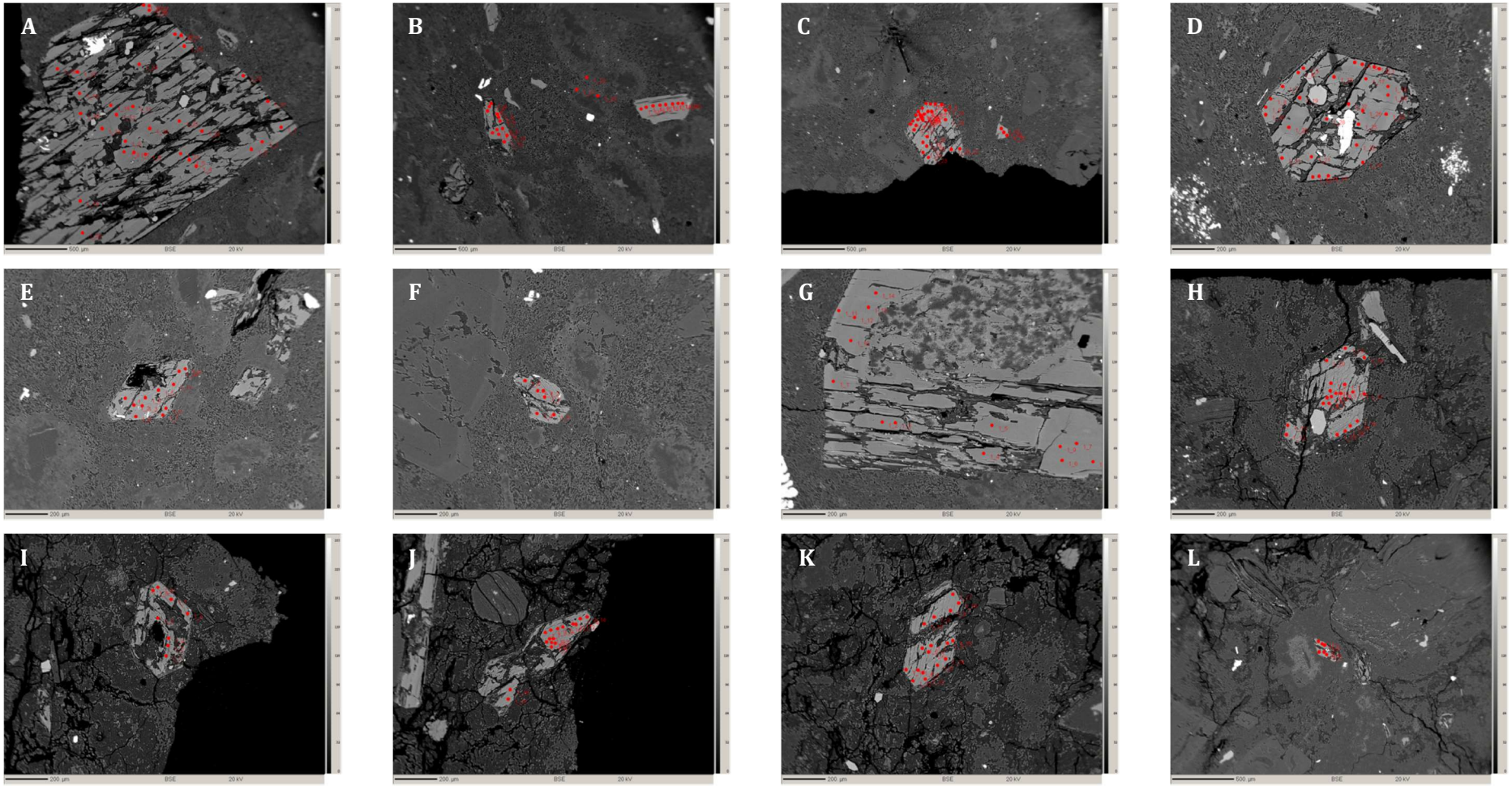


Figure 3.4: Location of electron microprobe analysis of amphiboles: A) C12.JL.183 AMP 01, B) C12.JL.183 AMP 02, C) C12.JL.183 AMP 03, D) C12.JL.183 AMP 04, E) C12.JL.183 AMP 05, F) C12.JL.183 AMP 06, G) C12.JL.183 AMP 07, H) C12.JL.186 AMP 01, I) C12.JL.186 AMP 02, J) C12.JL.186 AMP 03, K) C12.JL.186 AMP 04, and, L) C12.JL.186 AMP 05

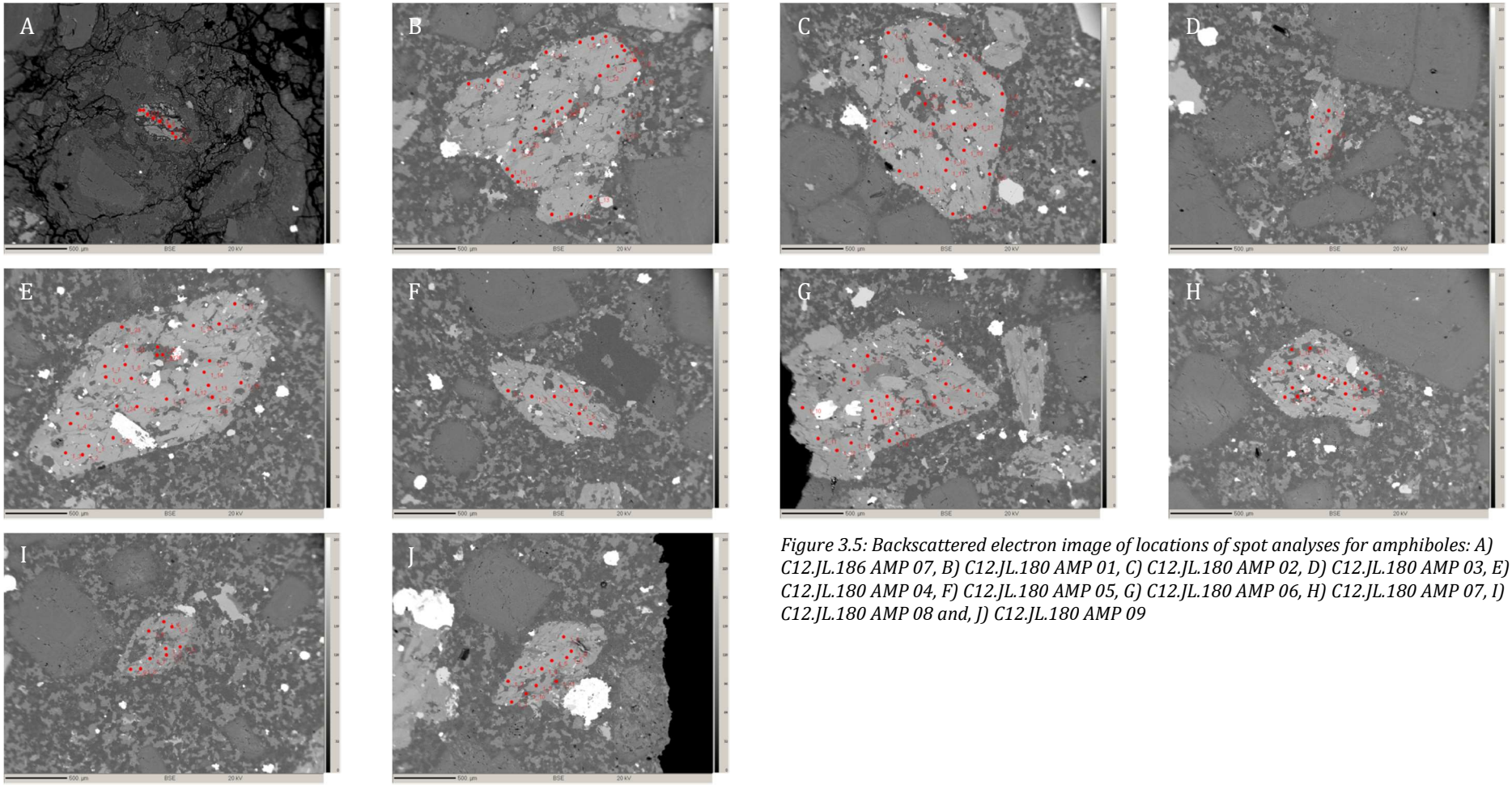


Figure 3.5: Backscattered electron image of locations of spot analyses for amphiboles: A) C12.JL.186 AMP 07, B) C12.JL.180 AMP 01, C) C12.JL.180 AMP 02, D) C12.JL.180 AMP 03, E) C12.JL.180 AMP 04, F) C12.JL.180 AMP 05, G) C12.JL.180 AMP 06, H) C12.JL.180 AMP 07, I) C12.JL.180 AMP 08 and, J) C12.JL.180 AMP 09

3.3 Electron microprobe data of mica

The setup to analyse micas was aided by discussion with John Spratt at the Natural History Museum, London. The Cameca SX 100 electron microprobe was run at 20keV and 20nA. The current was stable and had a variation of <0.6% (up to 20.12nA) over a 12 hour run. A beam size of 20μm was used for analysis.

Wavelength-dispersive electron spectroscopy is analysed using five wavelength-dispersive X-ray crystal configuration outlined in Table 3.9.

Table 3.9: Analytical setup of Cameca SX100 electron microprobe

Spectrometer position	Element and wavelength	Crystal	Dwell time (ms)
Sp2	F Kα	LPC0	1510.00
Sp4	Na Kα	TAP	1321.00
Sp4	Mg Kα	TAP	1321.00
Sp4	Al Kα	TAP	1312.00
Sp4	Si Kα	TAP	1312.00
Sp1	Ca Kα	PET	1321.00
Sp1	Cl Kα	PET	1305.00
Sp3	K Kα	LPET	1826.00
Sp3	Ti Kα	LPET	1820.00
Sp5	V Kα	LLIF	1827.00
Sp3	Cr Kα	LPET	1820.00
Sp5	Mn Kα	LLIF	1827.00
Sp5	Fe Kα	LLIF	1820.00
Sp5	Co Kα	LLIF	1827.00
Sp5	Ni Kα	LLIF	1827.00
Sp3	Sr Lα	LPET	1826.00
Sp1	Ba Lα	PET	1321.00

Sixteen standards are used to calibrate the electron microprobe counts as outlined in Table 3.10.

Table 3.10: Standards used for quantification, their composition and calibration file name.

Standard Name	Standard composition	Calibration file name (Element intensity cps/nA):
F On TOP2 STD093	O: 34.50%, F: 20.70%, Al: 29.80%, Si: 15.00%	TOP2 STD093_F Sp2_050.calDat (F: 41.9 cps/nA)
Na On JAD3 STD048	O: 47.60%, Na: 11.28%, Mg: 0.05%, Al: 13.33%, Si: 27.79%, Ca: 0.08%,	JAD3 STD048_NaSp4_034.calDat (Na: 81.7 cps/nA)

	Fe: 0.00%	
Mg On FOR STD277	O: 45.48%, Mg: 34.55%, Si: 19.98%	FOR STD277_MgSp4_018.calDat (Mg: 563.5 cps/nA)
Al On COR4 STD028	Al: 52.92%, O: 47.08%	COR4 STD028_AlSp4_017.calDat (Al: 1214.5 cps/nA)
Si, Ca On WOL4 STD097	O: 41.04%, Si: 23.80%, Ca: 34.16%, Fe: 0.60%, Mn: 0.05%	WOL4 STD097_SiSp4_CaSp1_CaSp3_004.calDat (Si: 584.6 cps/nA, Ca: 419.7 cps/nA)
Cl On HAL2 STD042	Na: 39.34%, Cl: 60.66%	HAL2 STD042_ClSp1_ClSp3_002.calDat (Cl: 298.3 cps/nA)
K On KBR3 STD075	K: 32.86%, Br: 67.14%	KBR3 STD075_K Sp1_K Sp3_021.calDat (K: 778.3 cps/nA)
Ti On RUT STD082	Ti: 59.95%, O: 40.05%	RUT STD082_TiSp3_051.calDat (Ti: 2100.9 cps/nA)
V On VAN STDIC	O: 13.55%, Cl: 2.55%, V: 10.78%, Pb: 73.12%	VAN STDIC_V Sp5_045.calDat (V: 91.6 cps/nA)
Cr On CRO2 STDIC	Cr: 68.42%, O: 31.58%	CRO2 STDIC_CrSp3_065.calDat (Cr: 2612.8 cps/nA)
Mn On MNT STDIC	Mn: 36.42%, Ti: 31.76%, O: 31.82%	MNT STDIC_MnSp5_048.calDat (Mn: 430.7 cps/nA)
Fe On FAY STD278	O: 31.40%, Si: 13.78%, Fe: 54.81%	FAY STD278_SiSp2_FeSp5_077.calDat (Fe: 791.7 cps/nA)
Co On PCO STD121	Co: 100.%	PCO STD121_CoSp5_029.calDat (Co: 1649.5 cps/nA)
Ni On NIO2 STDIC	Ni: 78.58%, O: 21.42%	NIO2 STDIC_NiSp5_039.calDat (Ni: 1243.4 cps/nA)
Sr On STO STD088	Sr: 47.74%, Ti: 26.10%, O: 26.16%	STO STD088_SrSp3_008.calDat (Sr: 113.9 cps/nA)
Ba On BAR2 STDIC	Ba: 58.84%, S: 13.74%, O: 27.42%	BAR2 STDIC_BaSp1_BaSp3_003.calDat (Ba: 270.7 cps/nA)

All results are presented as weight percent oxides. If the analytical result is below detection limits, a value of zero is assigned. In some instances, Barium was not analysed ("N/A"). The location of analysed micas are given in Fig. 3.6, Fig. 3.7 and Fig. 3.8.

Mica stoichiometry as calculated using modified version of Tindle excel spreadsheets, with calculations made for 22 O and 2 OH sites in which Cl and F substitute.. "T-site" refers to tetrahedral cation, "O-site" refers to the octahedral cation;" I-site" refers to interlayer cation; and H-site refers to the hydroxyl site, thus distinction between di-octahedral and tri-octahedral micas can be made and classified (Table 3.12)

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C12.JL.48	1/1.	M_01	Biotite	36.10	4.06	14.55	14.08	0.24	16.24	0.33	0.26	8.24	0.00	N/A	0.42	0.18	0.05	0.01	0.00	0.00	5.24	100.00
C12.JL.48	1/2.	M_01	Biotite	35.54	4.69	14.42	13.88	0.22	16.07	1.19	0.20	7.62	0.00	N/A	0.47	0.18	0.06	0.00	0.00	0.00	5.45	99.99
C12.JL.48	1/3.	M_01	Biotite	36.36	4.04	14.53	14.00	0.21	16.22	0.17	0.23	8.40	0.00	N/A	0.41	0.17	0.04	0.00	0.00	0.00	5.19	99.97
C12.JL.48	1/4.	M_01	Biotite	35.86	3.97	14.83	14.37	0.25	16.54	0.23	0.27	7.76	0.00	N/A	0.43	0.19	0.05	0.00	0.00	0.00	5.23	99.98
C12.JL.48	1/5.	M_01	Biotite	35.93	4.49	14.54	14.35	0.19	16.07	0.26	0.21	7.93	0.00	N/A	0.39	0.19	0.05	0.00	0.00	0.00	5.38	99.98
C12.JL.48	1/6.	M_01	Biotite	35.88	4.04	14.66	14.55	0.23	16.32	0.16	0.24	8.07	0.00	N/A	0.41	0.19	0.06	0.00	0.00	0.00	5.19	100.00
C12.JL.48	1/7.	M_01	Biotite	35.49	4.02	14.55	14.76	0.23	16.22	0.18	0.26	7.98	0.00	N/A	0.43	0.23	0.05	0.00	0.00	0.00	5.56	99.96
C12.JL.48	1/8.	M_01	Biotite	35.13	3.80	14.71	15.08	0.23	16.50	0.18	0.21	7.23	0.00	N/A	0.37	0.21	0.05	0.01	0.00	0.00	6.29	100.00
C12.JL.48	1/9.	M_01	Biotite	33.82	5.63	14.49	14.75	0.25	15.48	1.61	0.13	5.63	0.00	N/A	0.36	0.20	0.05	0.00	0.00	0.00	7.56	99.96
C12.JL.48	1/10.	M_01	Biotite	36.11	3.85	14.46	14.49	0.15	16.27	0.07	0.24	8.37	0.00	N/A	0.43	0.23	0.05	0.01	0.00	0.00	5.25	99.98
C12.JL.48	1/11.	M_01	Biotite	35.80	4.34	14.08	15.64	0.22	15.63	0.19	0.19	7.90	0.00	N/A	0.32	0.25	0.05	0.00	0.00	0.00	5.37	99.98
C12.JL.48	1/13.	M_01	pycnochlorite	30.05	0.12	16.65	19.31	0.29	20.28	0.38	0.00	0.10	0.00	N/A	0.00	0.00	0.02	0.00	0.00	0.00	12.75	99.95
C12.JL.48	1/14.	M_01	pycnochlorite	31.51	3.50	15.57	16.65	0.27	17.52	3.80	0.06	1.09	0.00	N/A	0.20	0.04	0.06	0.00	0.00	0.00	9.72	99.99
C12.JL.48	1/15.	M_01	pycnochlorite	29.81	2.74	15.52	17.87	0.27	18.29	2.89	0.02	0.21	0.00	N/A	0.17	0.02	0.04	0.01	0.00	0.00	12.14	100.00
C12.JL.48	1/16.	M_01	pycnochlorite	30.55	1.14	16.26	19.12	0.30	20.51	0.91	0.05	0.26	0.00	N/A	0.08	0.03	0.03	0.01	0.00	0.00	10.74	99.99
C12.JL.48	1/17.	M_01	pycnochlorite	30.17	0.62	16.84	19.18	0.28	20.41	0.43	0.03	0.46	0.00	N/A	0.04	0.03	0.02	0.00	0.00	0.00	11.46	99.97
C12.JL.48	1/18.	M_01	pycnochlorite	29.48	0.04	17.10	19.74	0.34	20.85	0.21	0.03	0.02	0.00	N/A	0.00	0.00	0.02	0.00	0.00	0.00	12.10	99.93
C12.JL.48	1/19.	M_01	pycnochlorite	30.38	0.59	16.48	19.09	0.32	20.08	0.36	0.04	0.46	0.00	N/A	0.04	0.03	0.00	0.00	0.00	0.00	12.11	99.98
C12.JL.48	1/20.	M_01	pycnochlorite	29.51	0.45	16.29	19.69	0.38	20.19	0.64	0.01	0.03	0.00	N/A	0.06	0.00	0.02	0.00	0.00	0.00	12.70	99.97
C12.JL.48	1/21.	M_01	pycnochlorite	29.33	0.07	16.74	20.23	0.38	20.60	0.20	0.03	0.01	0.00	N/A	0.01	0.00	0.01	0.00	0.00	0.00	12.37	99.98
C12.JL.48	1/22.	M_01	pycnochlorite	29.70	0.47	16.65	19.86	0.33	20.61	0.39	0.02	0.14	0.00	N/A	0.03	0.01	0.02	0.00	0.00	0.00	11.76	99.99
C12.JL.48	1/23.	M_01	pycnochlorite	29.49	0.88	16.48	19.57	0.37	19.48	1.05	0.01	0.01	0.00	N/A	0.06	0.01	0.04	0.01	0.00	0.00	12.52	99.98
C12.JL 141	1/1.	M_01	pycnochlorite	29.61	1.74	17.24	17.54	0.13	17.45	0.56	0.03	0.47	0.03	0.00	0.25	0.04	0.04	0.00	0.00	0.00	14.82	99.95
C12.JL 141	1/2.	M_01	pycnochlorite	28.79	2.48	16.54	17.34	0.12	16.59	2.35	0.04	0.41	0.00	0.04	0.19	0.05	0.04	0.02	0.03	0.00	14.95	99.98
C12.JL 141	1/4.	M_01	diabantite	33.23	3.12	16.51	16.62	0.11	13.37	0.89	0.14	3.32	0.02	0.23	0.54	0.17	0.05	0.00	0.01	0.00	11.66	99.99

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C12.JL 141	1/5.	M_01	pycnochlorite	30.01	2.16	15.93	16.39	0.14	16.24	0.62	0.14	2.44	0.01	0.07	0.54	0.14	0.05	0.03	0.00	0.00	15.08	99.99
C12.JL 141	1/6.	M_01	pycnochlorite	29.13	3.28	16.69	17.50	0.13	17.65	0.49	0.09	0.92	0.00	0.08	0.36	0.08	0.04	0.00	0.00	0.00	13.53	99.97
C12.JL 141	1/7.	M_01	pycnochlorite	28.87	0.33	17.51	18.73	0.16	19.02	0.40	0.01	0.15	0.00	0.01	0.17	0.03	0.04	0.00	0.00	0.00	14.49	99.92
C12.JL 141	1/8.	M_01	pycnochlorite	29.84	5.70	15.69	15.46	0.16	17.49	0.69	0.06	2.06	0.04	0.07	0.61	0.15	0.03	0.01	0.00	0.00	11.95	100.01
C12.JL 141	1/9.	M_01	pycnochlorite	30.66	1.53	17.22	16.73	0.17	19.29	0.47	0.03	1.03	0.00	0.01	0.50	0.10	0.04	0.00	0.01	0.00	12.19	99.98
C12.JL 141	1/10.	M_01	pycnochlorite	29.34	4.66	15.39	15.91	0.13	15.03	0.73	0.09	1.98	0.01	0.11	0.44	0.15	0.06	0.02	0.00	0.00	15.96	100.01
C12.JL 141	1/11.	M_01	pycnochlorite	29.56	2.05	16.14	15.79	0.17	18.83	0.48	0.08	1.39	0.04	0.02	0.61	0.11	0.04	0.01	0.00	0.00	14.65	99.97
C12.JL 141	1/12.	M_01	pycnochlorite	27.16	0.79	16.31	18.20	0.23	16.94	0.45	0.03	0.52	0.00	0.00	0.26	0.06	0.05	0.00	0.00	0.00	18.96	99.96
C12.JL 141	1/13.	M_01	diabantite	30.49	2.57	15.19	15.18	0.12	13.82	1.48	0.11	2.48	0.03	0.18	0.45	0.15	0.03	0.00	0.00	0.00	17.67	99.95
C12.JL 141	1/1.	M_02	pycnochlorite	29.74	0.96	17.95	17.32	0.22	19.25	0.38	0.01	0.45	0.00	0.00	0.32	0.03	0.04	0.00	0.00	0.00	13.28	99.95
C12.JL 141	1/2.	M_02	pycnochlorite	29.28	0.58	17.71	17.97	0.22	19.24	0.31	0.05	0.26	0.01	0.00	0.23	0.02	0.05	0.00	0.00	0.00	14.03	99.96
C12.JL 141	1/3.	M_02	pycnochlorite	29.78	1.69	17.10	16.97	0.13	19.68	0.36	0.03	0.46	0.01	0.01	0.26	0.06	0.04	0.02	0.00	0.00	13.38	99.98
C12.JL 141	1/4.	M_02	pycnochlorite	29.40	4.21	18.37	17.15	0.23	18.57	0.34	0.00	0.39	0.01	0.05	0.13	0.00	0.06	0.00	0.01	0.00	11.06	99.98
C12.JL 141	1/5.	M_02	pycnochlorite	28.33	5.64	17.09	16.53	0.21	18.08	0.38	0.03	0.36	0.00	0.04	0.27	0.02	0.07	0.01	0.00	0.00	12.91	99.97
C12.JL 141	1/6.	M_02	pycnochlorite	29.57	0.93	17.12	17.39	0.15	20.11	0.33	0.00	0.50	0.01	0.01	0.35	0.06	0.04	0.00	0.00	0.00	13.39	99.96
C12.JL 141	1/7.	M_02	diabantite	30.41	1.33	15.82	15.26	0.13	14.87	0.77	0.04	1.16	0.00	0.00	0.61	0.08	0.05	0.00	0.00	0.00	19.43	99.96
C12.JL 141	1/8.	M_02	pycnochlorite	28.90	1.02	17.83	17.63	0.30	19.49	0.27	0.02	0.33	0.01	0.01	0.30	0.05	0.06	0.00	0.00	0.00	13.76	99.98
C12.JL 141	1/9.	M_02	pycnochlorite	26.93	2.24	14.84	16.34	0.35	16.67	0.62	0.05	0.40	0.02	0.02	0.58	0.12	0.06	0.01	0.00	0.00	20.74	99.99
C12.JL 141	1/10.	M_02	ripidolite	26.85	9.04	16.20	15.93	0.13	18.08	0.38	0.02	0.17	0.00	0.11	0.27	0.03	0.09	0.00	0.00	0.00	12.69	99.99
C12.JL 170	1/1.	M_01	Muscovite	50.24	0.02	31.47	0.67	0.01	1.54	0.61	0.60	8.80	0.05	0.06	0.13	0.05	0.01	0.00	0.00	0.00	5.71	99.97
C12.JL 170	1/2.	M_01	Muscovite	47.65	0.03	29.82	0.84	0.02	1.66	0.50	0.27	9.02	0.05	0.06	0.15	0.03	0.01	0.00	0.00	0.00	9.86	99.97
C12.JL 170	1/3.	M_01	illite	49.49	0.04	31.67	0.64	0.01	1.63	0.59	0.16	8.82	0.00	0.06	0.17	0.03	0.02	0.00	0.00	0.00	6.64	99.97
C12.JL 170	1/4.	M_01	illite	50.18	0.02	31.92	0.63	0.02	1.61	0.56	0.17	8.61	0.03	0.04	0.16	0.05	0.02	0.00	0.00	0.00	5.96	99.98
C12.JL 170	1/5.	M_01	illite	49.87	0.03	31.96	0.61	0.02	1.53	0.55	0.24	8.96	0.00	0.06	0.10	0.05	0.02	0.00	0.00	0.00	5.99	99.99
C12.JL 170	1/6.	M_01	Muscovite	49.59	0.03	31.44	0.72	0.01	1.61	0.59	0.35	8.93	0.01	0.05	0.06	0.04	0.00	0.01	0.00	0.01	6.56	100.01
C12.JL 170	1/7.	M_01	illite	50.38	0.02	31.94	0.60	0.00	1.69	0.57	0.12	8.85	0.01	0.06	0.12	0.05	0.01	0.00	0.00	0.00	5.54	99.96

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C12.JL 170	1/8.	M_01	illite	50.33	0.04	32.28	0.68	0.00	1.63	0.58	0.14	8.93	0.00	0.07	0.10	0.05	0.01	0.00	0.01	0.01	5.13	99.99
C12.JL 170	1/9.	M_01	illite	50.69	0.04	31.84	0.85	0.00	1.70	0.52	0.16	9.21	0.04	0.07	0.12	0.03	0.02	0.00	0.00	0.00	4.68	99.97
C12.JL 170	1/10.	M_01	illite	50.68	0.03	32.30	0.66	0.01	1.72	0.53	0.12	9.13	0.00	0.06	0.13	0.04	0.00	0.00	0.01	0.01	4.57	100.00
C12.JL 170	1/3.	M_02	illite	50.78	0.00	29.13	0.67	0.05	1.01	4.23	1.29	2.02	0.06	0.02	0.05	0.10	0.01	0.00	0.01	0.00	10.56	99.99
C12.JL 170	1/1.	M_03	Muscovite	47.56	0.89	32.98	1.12	0.00	1.47	0.03	0.37	10.33	0.00	0.04	0.07	0.01	0.06	0.00	0.00	0.01	5.06	100.00
C12.JL 170	1/2.	M_03	Di-octahedral mica	47.42	2.92	32.70	0.75	0.00	1.34	0.00	0.37	10.41	0.00	0.04	0.08	0.00	0.05	0.00	0.01	0.01	3.89	99.99
C12.JL 170	1/3.	M_03	Muscovite	47.56	1.97	33.26	0.72	0.00	1.33	0.03	0.36	10.17	0.00	0.07	0.08	0.01	0.06	0.00	0.01	0.01	4.35	99.99
C12.JL 170	1/4.	M_03	Muscovite	47.41	1.77	32.90	0.87	0.01	1.40	0.03	0.33	10.28	0.02	0.06	0.09	0.01	0.05	0.00	0.00	0.00	4.76	99.99
C12.JL 170	1/5.	M_03	Muscovite	48.09	1.47	32.82	0.82	0.00	1.50	0.03	0.35	10.33	0.00	0.06	0.08	0.01	0.06	0.00	0.00	0.00	4.31	99.93
C12.JL 170	1/6.	M_03	Muscovite	48.20	1.41	32.27	1.06	0.01	1.67	0.05	0.32	10.38	0.00	0.05	0.11	0.00	0.06	0.00	0.00	0.00	4.35	99.94
C12.JL 170	1/7.	M_03	Muscovite	46.50	2.45	32.36	0.91	0.00	1.32	0.00	0.36	10.46	0.00	0.02	0.11	0.02	0.07	0.00	0.00	0.01	5.37	99.96
C12.JL 170	1/8.	M_03	Muscovite	47.83	1.40	32.10	0.90	0.02	1.70	0.05	0.28	10.28	0.01	0.08	0.14	0.01	0.05	0.00	0.00	0.00	5.15	100.00
C12.JL 170	1/9.	M_03	Muscovite	48.48	1.28	32.16	1.15	0.00	1.69	0.17	0.30	10.20	0.03	0.03	0.10	0.01	0.07	0.00	0.02	0.00	4.29	99.98
C12.JL 170	1/10.	M_03	Muscovite	46.35	3.36	31.10	0.86	0.00	1.53	0.34	0.31	9.87	0.02	0.06	0.12	0.02	0.04	0.00	0.00	0.01	5.97	99.96
C12.JL 170	1/1.	M_04	illite	50.95	0.24	30.99	0.87	0.01	2.50	0.29	0.09	8.70	0.01	0.04	0.16	0.04	0.06	0.00	0.01	0.00	5.02	99.98
C12.JL 170	1/2.	M_04	illite	51.73	0.07	31.53	0.60	0.02	2.17	0.31	0.11	8.77	0.04	0.05	0.13	0.03	0.06	0.00	0.00	0.00	4.36	99.98
C12.JL 170	1/3.	M_04	illite	49.74	1.74	30.73	1.16	0.03	2.76	0.32	0.10	8.52	0.03	0.06	0.17	0.02	0.05	0.00	0.00	0.00	4.55	99.98
C12.JL 170	1/4.	M_04	illite	50.64	0.15	31.22	1.12	0.03	2.57	0.25	0.11	8.90	0.07	0.04	0.09	0.01	0.06	0.00	0.00	0.00	4.72	99.98
C12.JL 170	1/5.	M_04	illite	51.39	0.10	31.74	0.59	0.02	2.02	0.34	0.11	8.95	0.05	0.02	0.13	0.03	0.06	0.01	0.00	0.00	4.43	99.99
C12.JL 170	1/6.	M_04	diabantite	46.26	0.56	28.52	3.98	0.10	5.96	0.24	0.07	7.34	0.00	0.03	0.17	0.03	0.07	0.00	0.00	0.00	6.65	99.98
C12.JL 170	1/9.	M_04	illite	50.30	1.34	30.73	0.62	0.02	2.01	0.39	0.13	8.87	0.00	0.03	0.13	0.05	0.10	0.01	0.00	0.00	5.25	99.98
C12.JL 170	1/10.	M_04	illite	51.04	0.64	30.72	0.66	0.03	2.07	0.34	0.46	8.32	0.04	0.05	0.17	0.05	0.06	0.01	0.00	0.00	5.33	99.99
C12.JL 170	1/1.	M_05	illite	50.89	0.03	31.15	0.95	0.01	1.90	0.56	0.04	8.96	0.00	0.04	0.10	0.01	0.00	0.00	0.00	0.00	5.35	99.99
C12.JL 170	1/2.	M_05	illite	50.94	0.04	31.59	0.96	0.03	1.84	0.53	0.07	8.88	0.03	0.07	0.10	0.02	0.01	0.00	0.00	0.01	4.88	100.00
C12.JL 170	1/3.	M_05	illite	50.83	0.06	31.45	0.93	0.00	1.85	0.54	0.06	9.04	0.02	0.07	0.15	0.01	0.02	0.00	0.00	0.00	4.95	99.98
C12.JL 170	1/4.	M_05	illite	51.15	0.05	31.97	0.93	0.01	1.75	0.55	0.06	8.98	0.00	0.01	0.14	0.01	0.02	0.00	0.01	0.00	4.35	99.99

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C12.JL 170	1/5.	M_05	illite	50.98	0.05	31.21	0.93	0.01	1.93	0.56	0.07	9.14	0.01	0.04	0.14	0.01	0.01	0.00	0.00	0.01	4.89	99.99
C12.JL 170	1/6.	M_05	illite	50.60	0.02	31.27	0.92	0.00	1.82	0.53	0.09	9.01	0.03	0.02	0.11	0.00	0.01	0.00	0.00	0.01	5.54	99.98
C12.JL 170	1/7.	M_05	illite	50.80	0.04	31.41	0.94	0.00	1.93	0.55	0.10	9.13	0.01	0.07	0.13	0.01	0.02	0.00	0.00	0.00	4.85	99.99
C12.JL 170	1/8.	M_05	illite	50.52	0.04	31.81	0.95	0.02	1.70	0.57	0.07	8.98	0.01	0.03	0.12	0.01	0.00	0.00	0.00	0.00	5.14	99.97
C12.JL 170	1/9.	M_05	illite	50.35	0.05	31.01	0.95	0.01	1.93	0.55	0.05	9.17	0.04	0.04	0.15	0.01	0.02	0.00	0.00	0.00	5.64	99.97
C12.JL 170	1/10.	M_05	illite	50.46	0.04	31.26	0.99	0.00	1.89	0.54	0.05	9.18	0.00	0.04	0.06	0.02	0.01	0.00	0.00	0.00	5.39	99.93
C12.JL 170	1/3.	M_06	diabantite	44.54	5.98	16.38	10.21	0.16	11.94	0.18	0.04	2.21	0.02	0.06	0.22	0.06	0.01	0.00	0.00	0.00	7.98	99.99
C12.JL 170	1/5.	M_06	diabantite	40.50	0.65	24.29	8.83	0.16	12.01	0.27	0.06	4.44	0.00	0.03	0.23	0.05	0.02	0.00	0.00	0.00	8.42	99.96
C12.JL 170	1/6.	M_06	illite	50.95	0.03	32.05	0.85	0.01	1.78	0.59	0.06	9.01	0.00	0.07	0.13	0.01	0.00	0.00	0.01	0.00	4.42	99.97
C12.JL 170	1/7.	M_06	illite	49.78	0.04	31.60	0.73	0.01	1.72	0.64	0.05	8.86	0.05	0.07	0.13	0.01	0.01	0.00	0.01	0.00	6.28	99.99
C12.JL 170	1/8.	M_06	illite	49.92	0.02	31.45	0.69	0.01	1.68	0.58	0.05	8.82	0.04	0.03	0.14	0.00	0.01	0.00	0.01	0.02	6.50	99.97
C12.JL 170	1/9.	M_06	illite	50.44	0.03	31.73	0.75	0.03	1.81	0.60	0.06	9.01	0.02	0.02	0.11	0.01	0.02	0.00	0.00	0.00	5.32	99.96
C12.JL 170	1/10.	M_06	illite	50.90	0.03	32.15	0.73	0.01	1.81	0.61	0.05	8.94	0.03	0.08	0.12	0.01	0.02	0.00	0.00	0.00	4.48	99.97
C12.JL 170	1/11.	M_06	illite	50.77	0.04	31.74	0.84	0.00	1.86	0.55	0.07	9.05	0.05	0.06	0.13	0.01	0.00	0.00	0.00	0.00	4.82	99.99
C12.JL.47	1/1.	M_01	Biotite	36.50	4.00	14.43	13.80	0.25	15.36	0.00	0.24	9.60	0.00	0.55	0.30	0.26	0.04	0.00	0.00	0.01	4.63	99.97
C12.JL.47	1/2.	M_01	Biotite	36.45	4.09	14.21	13.99	0.26	15.30	0.00	0.22	9.69	0.01	0.59	0.36	0.29	0.05	0.00	0.01	0.00	4.48	100.00
C12.JL.47	1/3.	M_01	Biotite	36.33	4.03	14.34	14.07	0.23	15.18	0.00	0.26	9.54	0.00	0.65	0.34	0.25	0.04	0.02	0.00	0.01	4.69	99.98
C12.JL.47	1/4.	M_01	Biotite	36.33	4.24	14.27	14.11	0.25	15.14	0.27	0.19	9.32	0.00	0.66	0.35	0.22	0.04	0.00	0.00	0.00	4.57	99.96
C12.JL.47	1/5.	M_01	Biotite	36.21	4.10	14.23	13.95	0.23	15.16	0.01	0.21	9.41	0.02	0.68	0.34	0.27	0.05	0.00	0.02	0.00	5.11	100.00
C12.JL.47	1/6.	M_01	Biotite	36.55	4.07	14.11	13.97	0.26	15.31	0.00	0.20	9.62	0.02	0.81	0.33	0.24	0.04	0.01	0.00	0.00	4.42	99.96
C12.JL.47	1/7.	M_01	Biotite	35.95	3.97	14.26	14.40	0.24	15.39	0.07	0.19	8.93	0.04	0.67	0.32	0.27	0.04	0.00	0.00	0.01	5.24	99.99
C12.JL.47	1/8.	M_01	Biotite	35.95	4.60	14.07	14.75	0.28	14.73	0.04	0.18	9.20	0.02	0.70	0.33	0.29	0.06	0.00	0.00	0.00	4.78	99.98
C12.JL.47	1/12.	M_01	pycnochlorite	30.99	4.26	14.34	16.61	0.35	16.30	3.80	0.04	0.88	0.04	0.11	0.32	0.07	0.05	0.00	0.01	0.00	11.79	99.96
C12.JL.47	1/1.	M_02	Biotite	35.71	4.09	14.16	14.75	0.32	15.44	0.12	0.18	8.61	0.01	0.60	0.27	0.30	0.05	0.01	0.00	0.01	5.37	100.00
C12.JL.47	1/2.	M_02	Biotite	36.24	4.24	13.87	14.57	0.28	14.84	0.01	0.16	9.36	0.05	0.71	0.23	0.28	0.06	0.00	0.02	0.00	5.06	99.98
C12.JL.47	1/3.	M_02	Biotite	36.63	4.11	14.04	14.09	0.25	15.43	0.02	0.22	9.49	0.00	0.80	0.25	0.27	0.05	0.01	0.01	0.00	4.31	99.98

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C12.JL.47	1/4.	M_02	Biotite	36.35	4.01	13.99	14.26	0.25	15.50	0.04	0.20	9.37	0.04	0.72	0.27	0.26	0.06	0.00	0.02	0.00	4.63	99.97
C12.JL.47	1/5.	M_02	Biotite	35.89	4.27	14.25	14.27	0.29	15.43	0.42	0.21	8.63	0.00	0.67	0.26	0.24	0.05	0.01	0.00	0.00	5.09	99.98
C12.JL.47	1/6.	M_02	Biotite	36.31	4.44	13.88	14.77	0.30	14.89	0.05	0.17	9.34	0.00	0.70	0.23	0.27	0.06	0.00	0.00	0.01	4.55	99.97
C12.JL.47	1/7.	M_02	Biotite	36.42	4.39	13.79	14.68	0.27	14.60	0.09	0.21	9.36	0.07	0.78	0.22	0.27	0.04	0.00	0.00	0.00	4.77	99.96
C12.JL.47	1/8.	M_02	pycnochlorite	30.13	0.87	15.78	18.96	0.40	19.73	0.49	0.04	0.38	0.00	0.01	0.13	0.04	0.02	0.00	0.00	0.00	12.99	99.97
C12.JL.47	1/9.	M_02	diabantite	30.68	1.13	15.43	18.35	0.38	19.97	0.45	0.02	0.73	0.00	0.01	0.18	0.06	0.02	0.00	0.00	0.00	12.54	99.95
C12.JL.47	1/11.	M_02	pycnochlorite	30.48	2.11	15.07	17.02	0.38	19.55	1.35	0.04	0.94	0.00	0.05	0.27	0.08	0.03	0.00	0.02	0.00	12.60	99.99
C12.JL.47	1/12.	M_02	diabantite	31.39	0.67	16.39	18.01	0.37	19.45	0.49	0.40	0.52	0.03	0.00	0.11	0.03	0.02	0.01	0.01	0.01	12.09	100.00
C12.JL.180	1/1.	M_02	Biotite	36.69	3.85	14.35	14.07	0.24	15.25	0.00	0.29	9.63	0.01	0.66	0.37	0.24	0.06	0.00	0.00	0.00	4.24	99.95
C12.JL.180	1/2.	M_02	Biotite	36.73	3.95	14.44	14.09	0.25	15.15	0.00	0.27	9.61	0.01	0.65	0.33	0.26	0.05	0.00	0.00	0.01	4.18	99.98
C12.JL.180	1/3.	M_02	Biotite	36.74	3.91	14.20	14.26	0.20	15.27	0.00	0.28	9.61	0.06	0.62	0.35	0.25	0.05	0.00	0.00	0.00	4.15	99.95
C12.JL.180	1/4.	M_02	Biotite	36.72	3.83	14.29	14.22	0.18	15.52	0.00	0.31	9.57	0.00	0.63	0.36	0.25	0.06	0.01	0.01	0.00	3.99	99.95
C12.JL.180	1/5.	M_02	Biotite	36.47	4.04	14.22	14.44	0.20	14.96	0.00	0.25	9.52	0.04	0.66	0.34	0.27	0.05	0.00	0.00	0.00	4.52	99.98
C12.JL.180	1/6.	M_02	Biotite	36.96	3.83	14.32	14.20	0.17	15.42	0.00	0.29	9.54	0.02	0.67	0.38	0.26	0.07	0.00	0.00	0.00	3.84	99.97
C12.JL.180	1/7.	M_02	Biotite	36.63	4.54	14.23	14.40	0.18	14.87	0.00	0.30	9.46	0.00	0.66	0.33	0.25	0.05	0.00	0.01	0.00	4.01	99.92
C12.JL.180	1/8.	M_02	Biotite	36.86	3.81	14.46	14.06	0.17	15.52	0.00	0.31	9.57	0.02	0.64	0.37	0.25	0.05	0.00	0.00	0.00	3.90	99.99
C12.JL.180	1/9.	M_02	Biotite	36.40	3.81	14.18	14.46	0.18	15.48	0.01	0.20	9.40	0.03	0.63	0.34	0.31	0.06	0.00	0.00	0.00	4.49	99.98
C12.JL.180	1/10.	M_02	diabantite	33.78	3.21	14.50	15.15	0.26	17.57	2.15	0.11	3.60	0.01	0.22	0.33	0.14	0.04	0.00	0.00	0.00	8.93	100.00
C12.JL.180	1/11.	M_02	diabantite	31.39	0.23	15.55	16.00	0.29	22.05	0.35	0.01	0.17	0.01	0.01	0.15	0.00	0.25	0.04	0.02	0.00	13.46	99.98
C12.JL.180	1/14.	M_02	Biotite	34.04	4.18	13.50	14.51	0.19	15.92	3.29	0.11	4.32	0.02	0.28	0.34	0.15	0.06	0.01	0.00	0.01	9.08	100.01
C11.JL 178	1/1.	M_01	Biotite	36.82	4.12	14.18	13.15	0.12	15.89	0.00	0.26	9.44	0.02	0.65	0.80	0.26	0.04	0.00	0.00	0.00	4.23	99.98
C11.JL 178	1/2.	M_01	Biotite	37.08	3.97	14.25	13.06	0.13	16.06	0.00	0.30	9.57	0.02	0.68	0.77	0.24	0.04	0.00	0.01	0.00	3.75	99.93
C11.JL 178	1/3.	M_01	Biotite	36.87	4.01	14.12	13.31	0.12	16.19	0.00	0.30	9.43	0.00	0.67	0.84	0.25	0.03	0.00	0.01	0.00	3.81	99.96
C11.JL 178	1/4.	M_01	Biotite	36.79	4.20	14.18	13.22	0.15	16.24	0.00	0.31	9.16	0.00	0.62	0.86	0.24	0.04	0.00	0.01	0.00	3.97	99.99
C11.JL 178	1/5.	M_01	Biotite	37.05	4.23	14.14	13.19	0.14	16.06	0.00	0.25	9.33	0.00	0.59	0.82	0.25	0.04	0.00	0.01	0.00	3.86	99.96
C11.JL 178	1/6.	M_01	Biotite	36.86	4.42	14.20	13.31	0.14	15.80	0.00	0.31	9.52	0.01	0.64	0.76	0.25	0.04	0.00	0.00	0.02	3.68	99.96

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C11.JL 178	1/7.	M_01	Biotite	36.86	4.47	14.09	13.25	0.13	15.92	0.00	0.30	9.45	0.00	0.64	0.75	0.25	0.04	0.00	0.01	0.00	3.79	99.95
C11.JL 178	1/8.	M_01	Biotite	36.95	4.53	14.02	13.39	0.13	15.89	0.00	0.27	9.44	0.03	0.68	0.73	0.26	0.04	0.00	0.00	0.00	3.63	99.99
C11.JL 178	1/9.	M_01	Biotite	37.03	4.28	14.27	13.11	0.14	15.96	0.02	0.24	8.94	0.03	0.57	0.74	0.23	0.03	0.00	0.00	0.00	4.39	99.98
C11.JL 178	1/10.	M_01	Biotite	37.29	4.26	14.06	13.12	0.13	15.78	0.03	0.35	9.28	0.01	0.59	0.78	0.26	0.04	0.01	0.00	0.00	4.00	99.99
C11.JL 178	1/16.	M_01	diabantite	35.90	2.34	16.15	13.18	0.13	16.83	0.30	0.11	4.42	0.01	0.01	0.74	0.15	0.02	0.00	0.01	0.00	9.68	99.98
C11.JL 178	1/1.	M_02	Biotite	37.03	4.09	14.14	13.10	0.12	16.17	0.00	0.29	9.48	0.00	0.63	0.94	0.26	0.05	0.00	0.01	0.00	3.68	99.99
C11.JL 178	1/2.	M_02	Biotite	37.01	4.02	14.21	13.09	0.09	16.13	0.01	0.29	9.44	0.00	0.62	0.83	0.27	0.05	0.00	0.00	0.00	3.90	99.96
C11.JL 178	1/3.	M_02	Biotite	36.56	4.11	14.13	13.18	0.13	15.87	0.00	0.26	9.23	0.00	0.61	0.85	0.26	0.05	0.01	0.00	0.00	4.61	99.86
C11.JL 178	1/4.	M_02	Biotite	36.58	4.25	14.04	13.33	0.12	15.78	0.00	0.31	9.40	0.02	0.61	0.79	0.26	0.05	0.00	0.01	0.00	4.41	99.96
C11.JL 178	1/5.	M_02	Biotite	36.67	4.36	13.86	13.52	0.12	15.77	0.00	0.31	9.37	0.00	0.61	0.82	0.25	0.04	0.00	0.00	0.00	4.24	99.94
C11.JL 178	1/6.	M_02	Biotite	36.72	4.32	14.13	13.33	0.12	15.91	0.00	0.29	9.49	0.00	0.61	0.82	0.26	0.05	0.00	0.02	0.00	3.89	99.96
C11.JL 178	1/7.	M_02	Biotite	37.17	4.46	14.17	13.35	0.13	15.56	0.00	0.26	9.22	0.00	0.61	0.81	0.25	0.02	0.00	0.00	0.00	3.94	99.95
C11.JL 178	1/8.	M_02	Biotite	37.13	4.54	14.09	13.48	0.14	15.80	0.00	0.24	9.51	0.04	0.58	0.81	0.25	0.05	0.00	0.00	0.01	3.28	99.95
C11.JL 178	1/9.	M_02	Biotite	37.08	4.64	14.00	13.34	0.12	15.83	0.00	0.29	9.47	0.00	0.60	0.81	0.21	0.05	0.00	0.01	0.00	3.49	99.94
C11.JL 178	1/10.	M_02	Biotite	36.57	4.61	13.88	13.42	0.12	15.79	0.00	0.29	9.38	0.00	0.66	0.78	0.25	0.04	0.01	0.01	0.00	4.15	99.96
C11.JL 178	1/11.	M_02	Biotite	36.30	4.49	14.36	13.58	0.14	15.94	0.04	0.19	8.27	0.03	0.52	0.76	0.21	0.03	0.00	0.00	0.00	5.13	99.99
C11.JL 178	1/14.	M_02	pycnochlorite	32.43	5.54	15.65	14.48	0.18	18.27	0.28	0.08	2.48	0.00	0.04	0.56	0.10	0.01	0.00	0.00	0.02	9.86	99.98
C11.JL 178	1/15.	M_02	diabantite	35.46	12.20	14.93	10.21	0.12	10.01	0.58	0.57	2.33	0.00	0.15	0.20	0.04	0.00	0.01	0.01	0.00	13.18	100.00
C11.JL 178	1/17.	M_02	pycnochlorite	32.23	4.10	16.23	14.58	0.15	18.22	0.65	0.02	2.65	0.02	0.04	0.55	0.09	0.02	0.00	0.00	0.00	10.46	100.01
C11.JL 178	1/18.	M_02	Biotite	37.07	3.66	14.52	13.02	0.11	16.28	0.05	0.17	8.17	0.00	0.47	0.89	0.23	0.02	0.00	0.01	0.00	5.30	99.97
C11.JL 178	1/19.	M_02	diabantite	33.98	3.32	15.73	14.34	0.15	17.78	0.14	0.10	4.46	0.00	0.10	0.69	0.14	0.02	0.00	0.00	0.00	9.00	99.95
C11.JL 178	1/20.	M_02	diabantite	35.61	2.33	17.01	13.78	0.16	16.50	0.16	0.12	4.51	0.02	0.09	0.56	0.15	0.02	0.00	0.00	0.00	8.95	99.97
C11.JL 178	1/21.	M_02	diabantite	32.99	4.01	15.82	14.53	0.20	18.60	0.22	0.06	3.38	0.00	0.07	0.65	0.12	0.02	0.00	0.00	0.00	9.29	99.96
C11.JL 178	1/22.	M_02	diabantite	37.44	4.49	14.92	12.36	0.12	14.46	0.05	0.22	8.51	0.01	0.53	0.77	0.24	0.04	0.00	0.00	0.00	5.81	99.97
C11.JL 178	1/10.	M_03	Muscovite	49.10	1.53	28.72	3.15	0.06	1.89	0.05	0.53	10.07	0.00	0.05	0.19	0.02	0.00	0.00	0.00	0.01	4.61	99.98
C11.JL 178	1/11.	M_03	Muscovite	49.10	0.01	30.02	2.52	0.02	1.58	0.25	0.59	8.71	0.03	0.05	0.15	0.04	0.00	0.00	0.01	0.00	6.89	99.97

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C11.JL 178	1/15.	M_03	illite	52.75	0.00	25.30	2.65	0.02	1.98	0.56	2.58	3.76	0.06	0.00	0.05	0.04	0.01	0.00	0.00	0.01	10.19	99.96
C11.JL 178	1/16.	M_03	illite	54.51	0.01	24.55	2.42	0.02	1.77	0.63	3.04	2.94	0.04	0.01	0.07	0.06	0.00	0.00	0.00	0.00	9.90	99.97
C11.JL 178	1/17.	M_03	Muscovite	48.64	0.02	29.96	3.41	0.02	1.91	0.10	0.70	9.95	0.05	0.06	0.16	0.00	0.00	0.00	0.00	0.00	4.99	99.97
C11.JL 178	1/3.	M_04	illite	51.19	0.00	30.65	1.09	0.00	1.76	0.37	0.50	8.00	0.01	0.00	0.28	0.02	0.00	0.00	0.00	0.01	6.07	99.95
C11.JL 178	1/6.	M_04	illite	55.03	0.00	27.17	1.10	0.01	1.47	0.65	2.19	3.27	0.00	0.04	0.10	0.06	0.00	0.00	0.01	0.00	8.88	99.98
C11.JL 178	1/22.	M_04	illite	53.06	0.07	27.43	1.41	0.01	1.17	0.64	3.09	4.42	0.03	0.01	0.12	0.03	0.01	0.01	0.00	0.00	8.48	99.99
C11.JL 178	1/23.	M_04	illite	54.84	0.00	27.32	1.26	0.01	1.79	0.99	1.90	5.06	0.04	0.00	0.16	0.01	0.01	0.00	0.00	0.00	6.56	99.95
C11.JL 178	1/27.	M_04	illite	52.55	0.01	30.07	1.23	0.02	1.76	0.38	0.73	7.96	0.06	0.02	0.28	0.01	0.00	0.00	0.01	0.00	4.88	99.97
C11.JL 178	1/28.	M_04	Muscovite	52.05	0.06	28.08	2.02	0.02	1.30	0.44	2.86	6.44	0.00	0.01	0.11	0.02	0.00	0.00	0.01	0.00	6.57	99.99
C11.JL 178	1/30.	M_04	illite	56.53	0.01	25.41	1.43	0.02	2.40	0.55	2.66	4.04	0.05	0.00	0.14	0.06	0.00	0.00	0.01	0.00	6.67	99.98
C11.JL 178	1/33.	M_04	illite	54.80	0.01	27.59	1.19	0.02	1.53	0.57	2.44	4.95	0.08	0.03	0.08	0.04	0.01	0.00	0.00	0.00	6.64	99.98
C11.JL 178	1/36.	M_04	illite	53.96	0.24	27.65	1.67	0.03	1.91	0.52	1.31	5.75	0.00	0.01	0.14	0.03	0.02	0.00	0.00	0.00	6.73	99.97
C11.JL 178	1/38.	M_04	illite	51.44	0.02	27.63	2.17	0.02	1.43	0.43	1.59	6.12	0.01	0.02	0.10	0.04	0.00	0.00	0.00	0.01	8.97	100.00
C11.JL 178	1/1.	M_05	Biotite	36.29	4.20	14.05	13.29	0.15	15.71	0.02	0.21	8.96	0.03	0.57	0.98	0.27	0.04	0.00	0.00	0.00	5.17	99.94
C11.JL 178	1/2.	M_05	Biotite	37.09	4.32	14.09	13.36	0.13	15.80	0.00	0.27	9.23	0.00	0.62	1.00	0.27	0.05	0.01	0.00	0.00	3.72	99.96
C11.JL 178	1/3.	M_05	Biotite	37.52	4.40	14.16	13.05	0.12	16.00	0.00	0.26	9.37	0.00	0.59	0.93	0.24	0.05	0.00	0.01	0.00	3.29	99.99
C11.JL 178	1/4.	M_05	Biotite	36.43	4.32	13.94	13.32	0.12	15.69	0.00	0.31	9.30	0.01	0.64	1.08	0.25	0.04	0.00	0.01	0.00	4.53	99.99
C11.JL 178	1/5.	M_05	Biotite	37.05	4.43	14.14	13.21	0.13	15.65	0.00	0.27	9.40	0.00	0.58	1.03	0.27	0.05	0.00	0.00	0.00	3.75	99.96
C11.JL 178	1/6.	M_05	Biotite	36.78	4.28	14.01	13.11	0.13	15.76	0.00	0.34	9.49	0.00	0.63	1.07	0.27	0.04	0.00	0.00	0.01	4.04	99.96
C11.JL 178	1/7.	M_05	Biotite	37.19	4.46	14.11	13.15	0.11	15.98	0.00	0.28	9.32	0.00	0.62	1.02	0.23	0.05	0.01	0.00	0.00	3.44	99.97
C11.JL 178	1/8.	M_05	Biotite	37.13	4.36	14.06	13.15	0.12	15.83	0.00	0.27	9.40	0.00	0.61	0.99	0.23	0.05	0.00	0.00	0.00	3.75	99.95
C11.JL 178	1/9.	M_05	Biotite	36.70	4.36	14.17	13.45	0.14	15.78	0.03	0.25	9.06	0.03	0.60	0.96	0.25	0.04	0.00	0.01	0.00	4.14	99.97
C11.JL 178	1/10.	M_05	pycnochlorite	31.81	2.24	16.74	16.40	0.19	19.04	0.32	0.03	2.01	0.02	0.01	0.57	0.09	0.03	0.00	0.00	0.00	10.48	99.98
C11.JL 178	1/11.	M_05	Biotite	36.96	4.56	13.94	13.03	0.12	15.72	0.01	0.26	9.30	0.00	0.63	1.03	0.25	0.04	0.00	0.01	0.00	4.10	99.96
C11.JL 178	1/12.	M_05	Biotite	36.92	4.50	13.96	13.13	0.12	15.74	0.00	0.29	9.42	0.00	0.64	0.96	0.25	0.05	0.00	0.00	0.01	3.99	99.98
C11.JL 178	1/13.	M_05	Biotite	35.22	4.89	14.30	13.67	0.13	15.93	0.04	0.21	7.72	0.00	0.53	0.88	0.21	0.04	0.00	0.01	0.00	6.15	99.93

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C11.JL 178	1/14.	M_05	Biotite	36.75	4.29	14.00	13.09	0.11	15.56	0.02	0.22	9.14	0.00	0.63	1.05	0.24	0.05	0.00	0.00	0.00	4.83	99.98
C11.JL 178	1/15.	M_05	Biotite	37.46	4.55	14.14	13.23	0.12	16.00	0.01	0.19	9.47	0.00	0.51	0.97	0.25	0.03	0.01	0.02	0.00	3.03	99.99
C11.JL 178	1/16.	M_05	diabantite	34.59	1.34	18.26	14.84	0.16	16.79	0.32	0.04	1.65	0.02	0.03	0.42	0.07	0.04	0.00	0.00	0.00	11.41	99.98
C11.JL 178	1/17.	M_05	Biotite	36.23	4.50	14.61	13.66	0.14	15.51	0.07	0.16	8.01	0.00	0.61	0.96	0.22	0.05	0.02	0.01	0.00	5.22	99.98
C11.JL 178	1/18.	M_05	diabantite	34.83	1.51	16.81	14.11	0.13	14.83	0.49	0.05	1.53	0.04	0.01	0.44	0.08	0.03	0.00	0.02	0.00	15.05	99.96
C11.JL 178	1/19.	M_05	diabantite	36.35	3.15	16.53	13.85	0.16	15.37	0.36	0.09	3.31	0.02	0.09	0.64	0.11	0.05	0.00	0.01	0.02	9.87	99.98
C11.JL 178	1/20.	M_05	Biotite	36.35	6.11	14.10	13.16	0.12	16.08	0.05	0.16	8.67	0.00	0.65	0.91	0.22	0.03	0.01	0.00	0.00	3.38	100.00
C11.JL 178	1/21.	M_05	Biotite	36.98	4.39	14.33	13.21	0.12	15.40	0.05	0.22	8.89	0.00	0.67	0.92	0.24	0.05	0.00	0.01	0.00	4.49	99.97
C11.JL 178	1/22.	M_05	diabantite	33.59	3.54	15.45	15.14	0.15	17.06	0.12	0.11	5.26	0.03	0.35	0.76	0.16	0.03	0.02	0.00	0.00	8.22	99.99
C11.JL 178	1/23.	M_05	Biotite	36.93	4.52	14.25	13.51	0.14	16.00	0.00	0.25	8.96	0.00	0.64	0.98	0.25	0.03	0.01	0.00	0.00	3.51	99.98
C11.JL 178	1/24.	M_05	Biotite	36.74	4.62	14.03	13.43	0.14	15.85	0.04	0.27	8.85	0.01	0.58	1.00	0.22	0.04	0.00	0.00	0.01	4.17	100.00
C11.JL 178	1/25.	M_05	diabantite	31.80	3.36	13.13	12.14	0.14	12.16	6.49	0.16	5.76	0.03	0.40	0.80	0.19	0.03	0.01	0.00	0.00	13.39	99.99
C12.JL.183	1/1.	M_01	Biotite	37.69	3.71	13.60	16.99	0.20	13.73	0.00	0.48	9.79	0.00	N/A	0.36	0.06	0.06	0.00	0.00	0.00	3.32	99.99
C12.JL.183	1/2.	M_01	Biotite	37.53	3.57	13.61	17.07	0.20	13.75	0.00	0.49	9.69	0.00	N/A	0.40	0.05	0.05	0.01	0.00	0.00	3.55	99.97
C12.JL.183	1/3.	M_01	Biotite	37.61	3.54	13.56	17.01	0.19	13.72	0.00	0.49	9.65	0.00	N/A	0.39	0.06	0.06	0.02	0.00	0.00	3.65	99.95
C12.JL.183	1/4.	M_01	Biotite	37.75	3.46	13.59	17.02	0.19	13.68	0.00	0.48	9.74	0.00	N/A	0.41	0.04	0.06	0.00	0.00	0.00	3.54	99.96
C12.JL.183	1/5.	M_01	Biotite	37.61	3.54	13.53	16.99	0.21	13.71	0.00	0.45	9.64	0.00	N/A	0.39	0.06	0.05	0.01	0.00	0.00	3.78	99.97
C12.JL.183	1/6.	M_01	Biotite	37.36	3.78	13.66	17.20	0.21	13.47	0.00	0.46	9.55	0.00	N/A	0.40	0.07	0.06	0.00	0.00	0.00	3.75	99.97
C12.JL.183	1/7.	M_01	Biotite	37.64	3.74	13.62	17.06	0.21	13.59	0.00	0.49	9.54	0.00	N/A	0.37	0.07	0.05	0.01	0.00	0.00	3.57	99.96
C12.JL.183	1/8.	M_01	Biotite	37.62	3.69	13.65	17.16	0.19	13.54	0.00	0.49	9.62	0.00	N/A	0.37	0.05	0.05	0.00	0.00	0.00	3.53	99.96
C12.JL.183	1/9.	M_01	Biotite	37.57	3.78	13.62	17.08	0.17	13.61	0.00	0.48	9.60	0.00	N/A	0.40	0.06	0.06	0.00	0.00	0.00	3.52	99.95
C12.JL.183	1/10.	M_01	Biotite	37.46	3.66	13.69	17.16	0.20	13.52	0.00	0.50	9.66	0.00	N/A	0.39	0.05	0.05	0.00	0.00	0.00	3.62	99.96
C12.JL.183	1/11.	M_01	Biotite	37.66	3.75	13.62	17.10	0.21	13.60	0.00	0.47	9.51	0.00	N/A	0.35	0.05	0.05	0.00	0.00	0.00	3.58	99.95
C12.JL.183	1/12.	M_01	Biotite	37.70	3.54	13.63	17.16	0.20	13.61	0.00	0.46	9.64	0.00	N/A	0.42	0.06	0.04	0.00	0.00	0.00	3.51	99.97
C12.JL.183	1/13.	M_01	Biotite	37.71	3.42	13.51	17.08	0.20	13.63	0.00	0.47	9.75	0.00	N/A	0.41	0.07	0.05	0.01	0.00	0.00	3.65	99.96
C12.JL.183	1/1.	no image	Biotite	37.27	3.59	13.61	17.10	0.19	13.50	0.00	0.49	9.54	0.00	N/A	0.40	0.07	0.06	0.00	0.00	0.00	4.16	99.98

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C12.JL.183	1/2.	no image	Biotite	37.75	3.40	13.70	17.00	0.20	13.83	0.00	0.42	9.72	0.00	N/A	0.40	0.05	0.05	0.00	0.00	0.00	3.47	99.99
C12.JL.183	1/3.	no image	Biotite	37.19	3.28	13.54	17.19	0.17	13.63	0.00	0.49	9.49	0.00	N/A	0.43	0.07	0.05	0.00	0.00	0.00	4.40	99.93
C12.JL.183	1/4.	no image	Biotite	37.36	3.30	13.55	17.42	0.22	13.29	0.00	0.48	9.39	0.00	N/A	0.40	0.06	0.05	0.00	0.00	0.00	4.44	99.96
C12.JL.183	1/5.	no image	Biotite	37.41	3.34	13.48	17.26	0.19	13.51	0.00	0.47	9.60	0.00	N/A	0.38	0.05	0.05	0.00	0.00	0.00	4.22	99.96
C12.JL.183	1/6.	no image	Biotite	37.40	3.56	13.66	17.24	0.19	13.46	0.00	0.46	9.62	0.00	N/A	0.38	0.04	0.04	0.00	0.00	0.00	3.91	99.96
C12.JL.183	1/7.	no image	Biotite	37.27	3.29	13.41	17.59	0.20	13.50	0.00	0.47	9.58	0.00	N/A	0.42	0.04	0.04	0.01	0.00	0.00	4.13	99.95
C12.JL.183	1/8.	no image	Biotite	37.42	3.36	13.45	17.47	0.21	13.39	0.00	0.48	9.45	0.00	N/A	0.38	0.06	0.03	0.00	0.00	0.00	4.25	99.95
C12.JL.183	1/9.	no image	Biotite	37.62	3.27	13.49	17.30	0.19	13.59	0.00	0.41	9.60	0.00	N/A	0.41	0.05	0.05	0.01	0.00	0.00	3.95	99.94
C12.JL.183	1/10.	no image	Biotite	37.30	3.31	13.51	17.20	0.22	13.44	0.00	0.50	9.55	0.00	N/A	0.40	0.07	0.05	0.00	0.00	0.00	4.40	99.95
C12.JL.183	1/11.	no image	Biotite	37.17	3.29	13.48	17.18	0.20	13.46	0.00	0.48	9.39	0.00	N/A	0.41	0.05	0.06	0.00	0.00	0.00	4.78	99.95
C12.JL.183	1/12.	no image	Biotite	37.55	3.37	13.47	17.05	0.19	13.61	0.00	0.46	9.58	0.00	N/A	0.42	0.05	0.05	0.01	0.00	0.00	4.16	99.97
C12.JL.183	1/13.	no image	Biotite	37.49	3.31	13.47	16.95	0.20	13.83	0.00	0.51	9.54	0.00	N/A	0.41	0.05	0.06	0.00	0.00	0.00	4.15	99.97
C12.JL.183	1/14.	no image	Biotite	37.45	3.32	13.52	16.92	0.20	13.83	0.00	0.53	9.62	0.00	N/A	0.40	0.04	0.06	0.01	0.00	0.00	4.08	99.98
C12.JL.183	1/15.	no image	Biotite	37.48	3.40	13.74	16.91	0.21	13.85	0.00	0.51	9.57	0.00	N/A	0.39	0.05	0.06	0.00	0.00	0.00	3.79	99.96
C12.JL.183	1/16.	no image	Biotite	37.55	3.25	13.78	17.09	0.19	13.78	0.00	0.46	9.60	0.00	N/A	0.40	0.05	0.06	0.01	0.00	0.00	3.76	99.98
C12.JL.183	1/17.	no image	Biotite	37.43	3.32	13.39	17.50	0.23	13.42	0.00	0.42	9.62	0.00	N/A	0.41	0.05	0.04	0.00	0.00	0.00	4.13	99.96
C11.JL.29A	1/1.	M 01	Biotite	37.64	4.00	13.68	12.84	0.22	16.30	0.00	0.31	9.46	0.00	N/A	0.65	0.18	0.04	0.00	0.00	0.00	4.62	99.94
C11.JL.29A	1/2.	M 01	Biotite	37.41	3.96	13.73	12.77	0.19	16.21	0.00	0.33	9.26	0.00	N/A	0.64	0.16	0.05	0.00	0.00	0.00	5.26	99.97
C11.JL.29A	1/3.	M 01	Biotite	37.32	3.95	13.70	13.19	0.22	15.94	0.00	0.36	9.35	0.00	N/A	0.61	0.14	0.05	0.00	0.00	0.00	5.13	99.96
C11.JL.29A	1/4.	M 01	Biotite	37.05	3.93	13.69	13.18	0.20	15.71	0.00	0.42	9.21	0.00	N/A	0.61	0.14	0.04	0.00	0.00	0.00	5.83	100.01
C11.JL.29A	1/5.	M 01	Biotite	37.29	3.92	13.78	13.24	0.21	15.65	0.00	0.34	9.12	0.00	N/A	0.60	0.13	0.05	0.00	0.00	0.00	5.66	99.99
C11.JL.29A	1/6.	M 01	Biotite	37.70	3.95	13.96	13.31	0.23	15.72	0.00	0.39	9.42	0.00	N/A	0.58	0.14	0.05	0.00	0.00	0.00	4.51	99.96
C11.JL.29A	1/7.	M 01	Biotite	37.90	4.05	14.11	13.42	0.21	15.76	0.00	0.40	9.38	0.00	N/A	0.58	0.14	0.04	0.00	0.00	0.00	3.95	99.94
C11.JL.29A	1/8.	M 01	Biotite	37.08	3.90	13.77	13.64	0.22	15.61	0.00	0.30	9.13	0.00	N/A	0.60	0.14	0.05	0.00	0.00	0.00	5.55	99.99
C11.JL.29A	1/9.	M 01	Biotite	37.09	3.85	13.77	13.46	0.20	15.30	0.00	0.35	8.99	0.00	N/A	0.56	0.16	0.06	0.00	0.00	0.00	6.20	99.99
C11.JL.29A	1/10.	M 01	Biotite	37.25	3.17	14.47	13.40	0.25	15.65	0.03	0.23	8.43	0.00	N/A	0.60	0.21	0.05	0.00	0.00	0.00	6.27	100.01

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C11.JL.29A	1/11.	M 01	Biotite	37.43	4.06	13.77	13.71	0.25	15.55	0.00	0.31	9.35	0.00	N/A	0.62	0.16	0.04	0.00	0.00	0.00	4.70	99.95
C11.JL.29A	1/12.	M 01	Biotite	37.68	3.96	13.82	13.79	0.22	15.78	0.00	0.31	9.33	0.00	N/A	0.62	0.22	0.06	0.00	0.00	0.00	4.20	99.99
C11.JL.29A	1/13.	M 01	Biotite	37.30	3.95	13.61	13.47	0.21	15.58	0.00	0.30	9.32	0.00	N/A	0.58	0.17	0.03	0.00	0.00	0.00	5.42	99.94
C11.JL.29A	1/14.	M 01	Biotite	36.90	3.93	13.35	13.50	0.24	15.77	0.00	0.26	9.03	0.00	N/A	0.62	0.15	0.04	0.00	0.00	0.00	6.16	99.95
C11.JL.29A	1/15.	M 01	Biotite	37.30	4.20	13.57	13.71	0.24	15.58	0.00	0.24	9.32	0.00	N/A	0.59	0.18	0.05	0.00	0.00	0.00	4.98	99.96
C11.JL.29A	1/16.	M 01	Biotite	37.42	4.23	13.63	13.78	0.26	15.36	0.00	0.27	9.23	0.00	N/A	0.55	0.19	0.05	0.00	0.00	0.00	5.00	99.97
C11.JL.29A	1/17.	M 01	Biotite	37.74	4.00	13.91	13.62	0.24	15.91	0.00	0.38	9.26	0.00	N/A	0.57	0.15	0.05	0.00	0.00	0.00	4.17	100.00
C11.JL.29A	1/18.	M 01	Biotite	37.64	4.03	13.87	13.38	0.23	16.02	0.00	0.36	9.11	0.00	N/A	0.61	0.16	0.04	0.00	0.00	0.00	4.50	99.95
C11.JL.29A	1/19.	M 01	Biotite	37.13	4.01	13.61	12.86	0.22	16.22	0.00	0.35	9.11	0.00	N/A	0.62	0.20	0.05	0.00	0.00	0.00	5.58	99.96
C11.JL.29A	1/20.	M 01	Biotite	37.56	4.00	13.92	13.28	0.21	15.79	0.00	0.43	9.10	0.00	N/A	0.59	0.15	0.05	0.00	0.00	0.00	4.85	99.93
C11.JL.29A	1/21.	M 01	Biotite	37.78	3.93	13.84	13.52	0.22	15.90	0.00	0.30	9.58	0.00	N/A	0.59	0.22	0.04	0.00	0.00	0.00	4.03	99.95
C11.JL.29A	1/22.	M 01	Biotite	37.53	4.00	14.18	13.76	0.23	15.83	0.00	0.32	9.05	0.00	N/A	0.56	0.18	0.06	0.00	0.00	0.00	4.30	100.00
C11.JL.29A	1/23.	M 01	Biotite	37.49	3.96	13.98	13.81	0.23	15.54	0.00	0.41	9.10	0.00	N/A	0.54	0.12	0.05	0.00	0.00	0.00	4.70	99.93
C11.JL.29A	1/24.	M 01	Biotite	37.70	3.99	14.04	13.69	0.23	15.77	0.00	0.41	9.29	0.00	N/A	0.59	0.15	0.04	0.00	0.00	0.00	4.05	99.95
C11.JL.29A	1/25.	M 01	Biotite	37.62	3.99	14.02	13.73	0.22	15.53	0.00	0.43	9.35	0.00	N/A	0.57	0.14	0.05	0.01	0.00	0.00	4.34	100.00
C11.JL.29A	1/26.	M 01	Biotite	37.52	4.10	13.89	13.83	0.21	15.50	0.00	0.45	9.25	0.00	N/A	0.58	0.13	0.05	0.00	0.00	0.00	4.46	99.97
C11.JL.29A	1/27.	M 01	Biotite	37.73	3.96	13.92	13.23	0.22	15.90	0.00	0.33	9.45	0.00	N/A	0.60	0.19	0.05	0.00	0.00	0.00	4.40	99.98
C11.JL.29A	1/28.	M 01	Biotite	37.60	4.10	14.03	13.36	0.23	16.09	0.00	0.38	9.53	0.00	N/A	0.55	0.16	0.06	0.00	0.00	0.00	3.87	99.96
C11.JL.29A	1/29.	M 01	Biotite	37.03	3.91	13.59	13.67	0.21	15.46	0.00	0.44	9.03	0.00	N/A	0.54	0.14	0.02	0.00	0.00	0.00	5.92	99.96
C11.JL.29A	1/30.	M 01	Biotite	37.72	3.99	13.94	13.99	0.24	15.46	0.00	0.48	9.20	0.00	N/A	0.51	0.16	0.04	0.00	0.00	0.00	4.24	99.97
C11.JL.29A	1/31.	M 01	Biotite	37.39	3.99	13.75	13.90	0.23	15.45	0.00	0.37	9.18	0.00	N/A	0.49	0.19	0.04	0.00	0.00	0.00	4.96	99.94
C11.JL.29A	1/32.	M 01	Biotite	37.78	4.01	14.04	13.79	0.23	15.45	0.00	0.39	9.28	0.00	N/A	0.48	0.16	0.04	0.00	0.00	0.00	4.31	99.96
C11.JL.29A	1/33.	M 01	Biotite	37.72	4.03	13.86	14.01	0.22	15.43	0.00	0.33	9.22	0.00	N/A	0.44	0.19	0.05	0.00	0.00	0.00	4.48	99.98
C11.JL.29A	1/34.	M 01	Biotite	37.64	3.94	13.87	13.71	0.23	15.73	0.00	0.34	9.34	0.00	N/A	0.47	0.15	0.06	0.00	0.00	0.00	4.47	99.95
C11.JL.29A	1/1.	no image	diabantite	31.31	0.18	17.13	16.30	0.54	20.85	0.46	0.02	0.17	0.00	N/A	0.16	0.01	0.04	0.01	0.00	0.00	12.80	99.98
C11.JL.29A	1/2.	no image	diabantite	31.04	0.12	16.75	15.97	0.53	21.58	0.41	0.02	0.14	0.00	N/A	0.20	0.01	0.03	0.01	0.00	0.00	13.19	100.00

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C11.JL.29A	1/3.	no image	pycnochlorite	30.18	0.06	16.71	16.22	0.51	20.98	1.15	0.01	0.08	0.00	N/A	0.15	0.02	0.03	0.01	0.00	0.00	13.86	99.97
C11.JL.29A	1/4.	no image	diabantite	31.36	1.26	16.47	14.72	0.38	21.14	0.29	0.04	0.37	0.00	N/A	0.35	0.15	0.04	0.01	0.00	0.00	13.41	99.99
C11.JL.29A	1/5.	no image	pycnochlorite	30.40	0.22	17.35	15.53	0.48	21.90	0.25	0.02	0.18	0.00	N/A	0.18	0.03	0.04	0.01	0.00	0.00	13.39	99.98
C11.JL.29A	1/6.	no image	pycnochlorite	30.67	0.07	16.91	16.33	0.47	21.45	0.34	0.02	0.21	0.00	N/A	0.22	0.01	0.03	0.02	0.00	0.00	13.24	99.99
C11.JL.29A	1/7.	no image	pycnochlorite	30.03	0.08	17.48	16.57	0.63	21.27	0.25	0.00	0.07	0.00	N/A	0.15	0.00	0.03	0.00	0.00	0.00	13.39	99.95
C11.JL.29A	1/8.	no image	Biotite	37.62	4.43	13.02	13.04	0.24	16.41	0.02	0.15	8.66	0.00	N/A	0.32	0.19	0.04	0.00	0.00	0.00	5.85	99.99
C12.JL.180	1/1.	M 01	Biotite	37.25	4.34	13.81	14.78	0.27	15.20	0.06	0.19	9.93	0.00	N/A	0.32	0.24	0.05	0.01	0.00	0.00	3.56	100.01
C12.JL.180	1/2.	M 01	Biotite	37.26	4.42	13.96	14.75	0.28	14.98	0.00	0.20	10.15	0.00	N/A	0.31	0.26	0.06	0.00	0.00	0.00	3.35	99.98
C12.JL.180	1/3.	M 01	Biotite	37.27	4.43	13.98	14.78	0.26	15.18	0.00	0.19	10.09	0.00	N/A	0.30	0.26	0.05	0.00	0.00	0.00	3.20	99.99
C12.JL.180	1/4.	M 01	Biotite	37.38	4.14	13.98	14.58	0.28	15.29	0.00	0.25	10.01	0.00	N/A	0.35	0.27	0.06	0.00	0.00	0.00	3.37	99.96
C12.JL.180	1/5.	M 01	Biotite	37.21	3.98	14.08	14.48	0.27	15.61	0.00	0.23	10.18	0.00	N/A	0.35	0.21	0.07	0.00	0.00	0.00	3.29	99.96
C12.JL.180	1/6.	M 01	Biotite	37.39	4.27	13.84	14.66	0.29	15.20	0.00	0.23	10.12	0.00	N/A	0.33	0.24	0.07	0.00	0.00	0.00	3.31	99.95
C12.JL.180	1/1.	M_03	Biotite	37.58	4.40	13.52	14.74	0.29	15.17	0.00	0.22	10.03	0.00	N/A	0.32	0.25	0.05	0.00	0.00	0.00	3.38	99.95
C12.JL.180	1/2.	M_03	Biotite	37.63	4.55	13.59	14.75	0.31	15.12	0.00	0.24	10.18	0.00	N/A	0.35	0.24	0.05	0.00	0.00	0.00	2.96	99.97
C12.JL.180	1/3.	M_03	Biotite	37.64	4.07	14.05	14.12	0.25	15.73	0.00	0.29	10.10	0.00	N/A	0.40	0.21	0.04	0.00	0.00	0.00	3.04	99.94
C12.JL.180	1/4.	M_03	Biotite	37.61	4.10	14.03	14.29	0.27	15.49	0.00	0.26	10.18	0.00	N/A	0.39	0.21	0.04	0.00	0.00	0.00	3.08	99.95
C12.JL.180	1/5.	M_03	Biotite	37.51	4.06	13.90	14.22	0.28	15.72	0.00	0.21	10.14	0.00	N/A	0.40	0.24	0.04	0.00	0.00	0.00	3.23	99.95
C12.JL.180	1/6.	M_03	Biotite	37.44	4.13	13.95	14.58	0.26	15.33	0.00	0.31	10.18	0.00	N/A	0.36	0.20	0.04	0.00	0.00	0.00	3.18	99.96
C12.JL.180	1/7.	M_03	Biotite	37.51	4.14	14.01	14.56	0.24	15.48	0.00	0.28	10.15	0.00	N/A	0.39	0.21	0.05	0.00	0.00	0.00	2.95	99.97
C12.JL.180	1/8.	M_03	Biotite	37.37	4.11	13.61	14.48	0.27	15.59	0.00	0.25	10.23	0.00	N/A	0.43	0.23	0.05	0.00	0.00	0.00	3.32	99.94
C12.JL.180	1/9.	M_03	Biotite	37.39	4.24	14.03	14.37	0.25	15.60	0.00	0.26	10.19	0.00	N/A	0.41	0.21	0.05	0.00	0.00	0.00	2.96	99.96
C12.JL.180	1/1.	M_04	diabantite	37.92	4.77	13.55	14.95	0.33	14.61	0.00	0.14	10.08	0.00	N/A	0.26	0.28	0.04	0.00	0.00	0.00	3.06	99.99
C12.JL.180	1/2.	M_04	Biotite	37.47	4.44	13.52	14.57	0.30	15.10	0.00	0.18	10.16	0.00	N/A	0.29	0.25	0.04	0.00	0.00	0.00	3.65	99.97
C12.JL.180	1/3.	M_04	Biotite	37.48	4.34	13.50	14.40	0.29	15.17	0.00	0.17	10.10	0.00	N/A	0.28	0.24	0.05	0.00	0.00	0.00	3.94	99.96
C12.JL.180	1/4.	M_04	Biotite	37.64	4.45	13.46	14.49	0.30	15.11	0.00	0.24	10.01	0.00	N/A	0.28	0.23	0.05	0.00	0.00	0.00	3.68	99.94
C12.JL.180	1/5.	M_04	Biotite	37.24	4.31	13.50	14.18	0.27	15.35	0.00	0.19	10.07	0.00	N/A	0.35	0.24	0.05	0.00	0.00	0.00	4.19	99.94

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C12.JL.180	1/6.	M_04	Biotite	37.25	4.22	13.72	14.24	0.29	15.40	0.00	0.21	10.06	0.00	N/A	0.31	0.25	0.05	0.00	0.00	0.00	3.95	99.95
C12.JL.180	1/7.	M_04	Biotite	37.48	4.12	13.55	14.39	0.30	15.32	0.00	0.19	10.07	0.00	N/A	0.34	0.25	0.05	0.00	0.00	0.00	3.89	99.95
C12.JL.180	1/8.	M_04	Biotite	37.84	3.81	13.70	13.70	0.27	15.90	0.00	0.25	9.97	0.00	N/A	0.38	0.19	0.04	0.00	0.00	0.00	3.89	99.94
C12.JL.180	1/9.	M_04	Biotite	37.62	3.89	13.67	13.93	0.25	15.73	0.00	0.24	10.09	0.00	N/A	0.38	0.26	0.05	0.00	0.00	0.00	3.84	99.95
C12.JL.180	1/10.	M_04	Biotite	37.37	4.20	13.72	14.07	0.27	15.47	0.00	0.22	10.04	0.00	N/A	0.35	0.22	0.05	0.00	0.00	0.00	3.94	99.92
C12.JL.180	1/11.	M_04	Biotite	37.26	4.64	13.58	14.30	0.27	15.14	0.00	0.19	9.94	0.00	N/A	0.34	0.25	0.05	0.00	0.00	0.00	3.98	99.94
C12.JL.180	1/12.	M_04	Biotite	37.33	4.04	13.65	14.09	0.24	15.51	0.00	0.25	10.05	0.00	N/A	0.37	0.24	0.05	0.00	0.00	0.00	4.13	99.95
C12.JL.180	1/13.	M_04	Biotite	37.87	4.04	13.64	14.17	0.27	15.62	0.00	0.20	10.20	0.00	N/A	0.34	0.26	0.05	0.00	0.00	0.00	3.30	99.96
C12.JL.180	1/14.	M_04	Biotite	37.83	3.70	13.81	13.63	0.25	16.00	0.00	0.25	10.15	0.00	N/A	0.39	0.18	0.04	0.00	0.00	0.00	3.72	99.95
C12.JL.180	1/15.	M_04	Biotite	37.36	4.17	13.67	14.07	0.26	15.55	0.00	0.23	10.14	0.00	N/A	0.37	0.25	0.05	0.00	0.00	0.00	3.81	99.93
C12.JL.180	1/16.	M_04	Biotite	37.55	3.85	13.60	13.90	0.25	15.86	0.00	0.29	10.12	0.00	N/A	0.38	0.23	0.05	0.00	0.00	0.00	3.87	99.95
C12.JL.180	1/17.	M_04	Biotite	37.90	3.74	13.78	13.62	0.25	16.04	0.00	0.27	10.14	0.00	N/A	0.38	0.19	0.05	0.00	0.00	0.00	3.59	99.95
C12.JL.180	1/18.	M_04	Biotite	38.25	3.64	13.45	13.52	0.26	16.24	0.00	0.22	10.16	0.00	N/A	0.40	0.20	0.05	0.00	0.00	0.00	3.55	99.94
C12.JL.180	1/19.	M_04	Biotite	37.49	4.03	13.50	14.08	0.26	15.75	0.00	0.27	10.13	0.00	N/A	0.40	0.25	0.05	0.00	0.00	0.00	3.74	99.95
C12.JL.180	1/20.	M_04	diabantite	32.43	2.18	14.99	17.73	0.49	18.51	0.67	0.07	3.07	0.00	N/A	0.13	0.07	0.03	0.00	0.00	0.00	9.62	99.99
C12.JL.180	1/21.	M_04	pycnochlorite	28.82	0.49	16.36	19.19	0.61	19.88	0.35	0.02	0.25	0.00	N/A	0.05	0.01	0.03	0.01	0.00	0.00	13.94	100.01
C12.JL.180	1/22.	M_04	diabantite	33.88	3.06	13.95	16.17	0.41	17.44	1.19	0.07	4.12	0.00	N/A	0.24	0.12	0.05	0.00	0.00	0.00	9.29	99.99
C12.JL.180	1/1.	M_05	Biotite	37.62	4.42	13.67	14.19	0.27	15.40	0.00	0.22	10.10	0.00	N/A	0.37	0.24	0.05	0.00	0.00	0.00	3.41	99.96
C12.JL.180	1/2.	M_05	Biotite	37.38	4.84	13.70	14.72	0.25	14.86	0.00	0.17	10.22	0.00	N/A	0.31	0.22	0.06	0.00	0.00	0.00	3.21	99.94
C12.JL.180	1/3.	M_05	Biotite	37.34	4.45	13.79	14.39	0.26	15.21	0.26	0.28	9.85	0.00	N/A	0.31	0.21	0.05	0.00	0.00	0.00	3.58	99.98
C12.JL.180	1/4.	M_05	Biotite	37.49	4.15	13.72	14.46	0.27	15.36	0.00	0.22	10.14	0.00	N/A	0.33	0.21	0.05	0.00	0.00	0.00	3.56	99.96
C12.JL.180	1/5.	M_05	Biotite	37.59	4.02	13.97	14.09	0.26	15.69	0.00	0.24	10.14	0.00	N/A	0.38	0.20	0.04	0.00	0.00	0.00	3.34	99.96
C12.JL.180	1/6.	M_05	Biotite	37.58	4.12	13.93	14.38	0.26	15.40	0.00	0.29	10.19	0.00	N/A	0.36	0.22	0.06	0.00	0.00	0.00	3.15	99.94
C12.JL.180	1/7.	M_05	Biotite	37.55	4.15	13.82	14.28	0.27	15.55	0.00	0.23	10.16	0.00	N/A	0.37	0.23	0.05	0.00	0.00	0.00	3.27	99.93
C12.JL.180	1/8.	M_05	Biotite	37.75	4.26	13.85	14.29	0.26	15.33	0.00	0.21	10.22	0.00	N/A	0.33	0.24	0.05	0.00	0.00	0.00	3.13	99.92
C12.JL.180	1/9.	M_05	Biotite	37.53	4.10	14.00	14.31	0.26	15.60	0.00	0.26	10.21	0.00	N/A	0.33	0.24	0.06	0.00	0.00	0.00	3.06	99.96

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C12.JL.180	1/10.	M_05	Biotite	37.45	4.09	13.97	14.35	0.26	15.45	0.00	0.22	10.30	0.00	N/A	0.31	0.24	0.06	0.00	0.00	0.00	3.25	99.95
C12.JL.180	1/11.	M_05	Biotite	37.88	4.19	13.74	14.12	0.27	15.51	0.00	0.24	10.07	0.00	N/A	0.34	0.24	0.06	0.00	0.00	0.00	3.27	99.93
C12.JL.180	1/12.	M_05	Biotite	37.69	4.11	13.59	14.17	0.26	15.53	0.00	0.20	10.10	0.00	N/A	0.36	0.23	0.06	0.00	0.00	0.00	3.64	99.94
C12.JL.180	1/13.	M_05	Biotite	37.66	4.38	13.84	14.27	0.24	15.43	0.00	0.20	10.23	0.00	N/A	0.35	0.25	0.04	0.00	0.00	0.00	3.05	99.94
C12.JL.180	1/14.	M_05	Biotite	37.52	5.06	13.67	14.78	0.27	14.86	0.00	0.16	10.26	0.00	N/A	0.28	0.24	0.04	0.00	0.00	0.00	2.83	99.97
C12.JL.180	1/15.	M_05	Biotite	37.72	4.16	13.96	14.43	0.25	15.29	0.00	0.24	10.11	0.00	N/A	0.36	0.24	0.05	0.00	0.00	0.00	3.17	99.98
C12.JL.186	1/1.	M_01	diabantite	37.50	3.45	13.74	16.67	0.24	13.53	0.03	0.47	9.98	0.00	N/A	0.36	0.05	0.05	0.00	0.00	0.00	3.90	99.97
C12.JL.186	1/2.	M_01	Biotite	37.56	3.29	13.95	17.08	0.20	13.95	0.00	0.47	10.52	0.00	N/A	0.42	0.06	0.06	0.01	0.00	0.00	2.39	99.96
C12.JL.186	1/3.	M_01	Biotite	37.88	3.38	13.88	17.10	0.24	13.96	0.00	0.46	10.28	0.00	N/A	0.40	0.05	0.05	0.00	0.00	0.00	2.28	99.96
C12.JL.186	1/4.	M_01	Biotite	37.39	3.47	14.05	17.14	0.20	13.81	0.00	0.51	10.43	0.00	N/A	0.38	0.07	0.06	0.00	0.00	0.00	2.46	99.97
C12.JL.186	1/5.	M_01	Biotite	37.24	3.36	14.10	17.34	0.20	13.65	0.00	0.47	10.50	0.00	N/A	0.41	0.05	0.05	0.00	0.00	0.00	2.60	99.97
C12.JL.186	1/6.	M_01	Biotite	37.86	3.50	14.01	17.13	0.25	13.92	0.00	0.47	10.30	0.00	N/A	0.38	0.07	0.06	0.00	0.00	0.00	2.05	100.00
C12.JL.186	1/7.	M_01	Biotite	37.51	3.48	14.09	17.10	0.23	13.80	0.00	0.44	10.43	0.00	N/A	0.44	0.05	0.04	0.00	0.00	0.00	2.36	99.97
C12.JL.186	1/8.	M_01	Biotite	37.82	3.36	13.91	17.09	0.20	13.94	0.00	0.47	10.18	0.00	N/A	0.45	0.04	0.05	0.01	0.00	0.00	2.44	99.96
C12.JL.186	1/9.	M_01	Biotite	37.60	3.33	13.84	17.18	0.18	13.80	0.00	0.47	10.20	0.00	N/A	0.41	0.05	0.05	0.00	0.00	0.00	2.85	99.96
C12.JL.186	1/10.	M_01	Biotite	37.50	3.38	13.94	17.23	0.24	13.96	0.00	0.47	10.19	0.00	N/A	0.43	0.05	0.04	0.00	0.00	0.00	2.53	99.96
C12.JL.186	1/11.	M_01	diabantite	34.52	3.35	12.11	15.57	0.20	11.78	0.09	0.40	9.06	0.00	N/A	0.35	0.10	0.06	0.01	0.00	0.00	12.40	100.00
C12.JL.186	1/12.	M_01	Biotite	37.84	3.42	14.00	16.88	0.25	13.71	0.06	0.49	9.99	0.00	N/A	0.36	0.07	0.05	0.00	0.00	0.00	2.87	99.99
C12.JL.186	1/1.	M_02	Biotite	37.59	3.15	13.65	16.56	0.20	14.11	0.00	0.45	9.72	0.00	N/A	0.43	0.06	0.04	0.00	0.00	0.00	4.00	99.96
C12.JL.186	1/2.	M_02	Biotite	37.85	3.08	13.71	16.42	0.18	13.96	0.00	0.46	9.56	0.00	N/A	0.45	0.05	0.05	0.00	0.00	0.00	4.19	99.96
C12.JL.186	1/3.	M_02	Biotite	37.77	3.42	13.70	16.55	0.18	14.28	0.00	0.47	9.70	0.00	N/A	0.42	0.04	0.05	0.01	0.00	0.00	3.33	99.92
C12.JL.186	1/4.	M_02	Biotite	37.12	3.50	13.93	16.62	0.18	13.75	0.00	0.48	9.72	0.00	N/A	0.42	0.05	0.05	0.00	0.00	0.00	4.13	99.95
C12.JL.186	1/5.	M_02	Biotite	37.63	3.31	13.62	16.55	0.22	13.99	0.00	0.47	10.00	0.00	N/A	0.46	0.06	0.06	0.02	0.00	0.00	3.59	99.98
C12.JL.186	1/6.	M_02	Biotite	37.48	3.26	13.65	16.56	0.20	14.02	0.00	0.49	9.75	0.00	N/A	0.45	0.05	0.05	0.00	0.00	0.00	4.01	99.97
C12.JL.186	1/7.	M_02	Biotite	37.57	3.17	13.66	16.42	0.20	13.94	0.00	0.46	9.48	0.00	N/A	0.43	0.06	0.06	0.00	0.00	0.00	4.50	99.95
C12.JL.186	1/8.	M_02	Biotite	37.36	3.48	13.97	16.71	0.21	13.87	0.00	0.48	9.79	0.00	N/A	0.41	0.03	0.05	0.00	0.00	0.00	3.60	99.96

Sample	Spot	Mica no.	Mineral	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	SrO	BaO	F	Cl	V_2O_3	Cr_2O_3	NiO	CoO	H_2O*	Total
C12.JL.186	1/9.	M_02	Biotite	37.62	2.94	13.87	16.72	0.22	14.11	0.00	0.54	9.63	0.00	N/A	0.43	0.05	0.03	0.00	0.00	0.00	3.82	99.98
C12.JL.186	1/10.	M_02	Biotite	37.41	3.01	13.79	16.74	0.20	13.93	0.00	0.48	9.77	0.00	N/A	0.45	0.03	0.05	0.00	0.00	0.00	4.09	99.95
C12.JL.186	1/11.	M_02	Biotite	37.84	2.99	13.61	16.54	0.21	14.21	0.00	0.45	9.59	0.00	N/A	0.45	0.05	0.04	0.00	0.00	0.00	3.98	99.96
C12.JL.186	1/12.	M_02	Biotite	37.99	3.24	13.76	16.64	0.21	14.07	0.00	0.54	9.69	0.00	N/A	0.45	0.04	0.04	0.00	0.00	0.00	3.31	99.98
C12.JL.186	1/13.	M_02	Biotite	37.82	2.97	13.63	16.58	0.22	14.18	0.00	0.50	9.54	0.00	N/A	0.44	0.05	0.04	0.00	0.00	0.00	4.00	99.97
C12.JL.186	1/14.	M_02	Biotite	37.85	3.04	13.89	16.70	0.20	14.15	0.00	0.46	9.65	0.00	N/A	0.44	0.06	0.04	0.00	0.00	0.00	3.47	99.95
C12.JL.186	1/15.	M_02	Biotite	37.74	3.03	13.82	16.55	0.20	14.16	0.00	0.50	9.78	0.00	N/A	0.45	0.05	0.05	0.00	0.00	0.00	3.61	99.94
C12.JL.186	1/16.	M_02	Biotite	37.57	3.27	13.77	16.48	0.20	14.18	0.00	0.52	9.95	0.00	N/A	0.45	0.05	0.05	0.00	0.00	0.00	3.49	99.98
C12.JL.186	1/17.	M_02	Biotite	37.56	3.09	13.35	16.50	0.20	14.11	0.00	0.41	9.57	0.00	N/A	0.49	0.08	0.04	0.00	0.00	0.00	4.55	99.95
C12.JL.186	1/18.	M_02	Biotite	37.80	3.25	13.55	16.45	0.20	14.15	0.00	0.53	9.69	0.00	N/A	0.43	0.06	0.05	0.00	0.00	0.00	3.81	99.97

Table 3.11: Mica stoichiometry as calculated using modified version of Tindle excel spreadsheets where "T-site" refers to tetrahedral cation, "O-site" refers to the octahedral cation;" I-site" refers to interlayer cation; and H-site refers to the hydroxyl site.

Mineral info.				T-site		O-site							I-site				H-site		
Sample	Mica no.4	Spot no.	Species	Si	Al iv	Al vi	Ti	Fe(tot)	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Sr	OH*	F	Cl
C12.JL.48	M_01	1/1.	Biotite	2.718	1.282	0.010	0.230	0.887			0.015	1.823	0.027	0.038	0.791	0.000	1.877	0.100	0.023
C12.JL.48	M_01	1/2.	Biotite	2.683	1.283	0.000	0.266	0.876			0.014	1.808	0.096	0.029	0.734	0.000	1.865	0.112	0.023
C12.JL.48	M_01	1/3.	Biotite	2.734	1.266	0.021	0.228	0.880			0.013	1.818	0.014	0.034	0.806	0.000	1.881	0.097	0.022
C12.JL.48	M_01	1/4.	Biotite	2.697	1.303	0.012	0.225	0.904			0.016	1.854	0.019	0.039	0.744	0.000	1.873	0.102	0.024
C12.JL.48	M_01	1/5.	Biotite	2.707	1.291	0.000	0.254	0.904			0.012	1.805	0.021	0.031	0.762	0.000	1.883	0.093	0.024
C12.JL.48	M_01	1/6.	Biotite	2.703	1.297	0.005	0.229	0.917			0.015	1.833	0.013	0.035	0.776	0.000	1.878	0.098	0.024
C12.JL.48	M_01	1/7.	Biotite	2.692	1.301	0.000	0.229	0.936			0.015	1.834	0.015	0.038	0.772	0.000	1.867	0.103	0.030
C12.JL.48	M_01	1/8.	Biotite	2.676	1.321	0.000	0.218	0.961			0.015	1.874	0.015	0.031	0.703	0.000	1.884	0.089	0.027
C12.JL.48	M_01	1/9.	Biotite	2.605	1.316	0.000	0.326	0.950			0.016	1.778	0.133	0.019	0.553	0.000	1.886	0.088	0.026
C12.JL.48	M_01	1/10.	Biotite	2.726	1.274	0.012	0.219	0.915			0.010	1.831	0.006	0.035	0.806	0.000	1.868	0.103	0.029
C12.JL.48	M_01	1/11.	Biotite	2.716	1.259	0.000	0.248	0.992			0.014	1.767	0.015	0.028	0.764	0.000	1.891	0.077	0.032
C12.JL.48	M_01	1/13.	pycnochlorite	3.065	0.935	1.073	0.009		0.081	1.565	0.025	3.083	0.042	0.000	0.026		8.000	0.000	0.000
C12.JL.48	M_01	1/14.	pycnochlorite	3.075	0.925	0.895	0.257		0.254	1.104	0.022	2.548	0.397	0.000	0.271		7.877	0.123	0.000
C12.JL.48	M_01	1/15.	pycnochlorite	3.013	0.987	0.881	0.208		0.200	1.311	0.023	2.756	0.313	0.000	0.054		7.891	0.109	0.000
C12.JL.48	M_01	1/16.	pycnochlorite	3.051	0.949	0.974	0.086		0.096	1.501	0.025	3.054	0.097	0.000	0.066		8.000	0.000	0.000
C12.JL.48	M_01	1/17.	pycnochlorite	3.036	0.964	1.042	0.047		0.070	1.544	0.024	3.061	0.046	0.000	0.118		8.000	0.000	0.000
C12.JL.48	M_01	1/18.	pycnochlorite	3.002	0.998	1.058	0.000		0.034	1.648	0.029	3.165	0.023	0.000	0.000		8.000	0.000	0.000
C12.JL.48	M_01	1/19.	pycnochlorite	3.073	0.927	1.049	0.045		0.093	1.522	0.027	3.028	0.039	0.000	0.119		8.000	0.000	0.000
C12.JL.48	M_01	1/20.	pycnochlorite	3.030	0.970	1.005	0.035		0.059	1.632	0.033	3.090	0.070	0.000	0.000		8.000	0.000	0.000
C12.JL.48	M_01	1/21.	pycnochlorite	3.005	0.995	1.028	0.005		0.025	1.709	0.033	3.146	0.022	0.000	0.000		8.000	0.000	0.000
C12.JL.48	M_01	1/22.	pycnochlorite	3.014	0.986	1.009	0.036		0.045	1.640	0.028	3.117	0.042	0.000	0.036		8.000	0.000	0.000
C12.JL.48	M_01	1/23.	pycnochlorite	3.019	0.981	1.015	0.068		0.095	1.581	0.032	2.973	0.115	0.000	0.000		8.000	0.000	0.000
C12.JL 141	M_01	1/1.	pycnochlorite	3.037	0.963	1.154	0.134		0.284	1.220	0.011	2.668	0.062	0.000	0.123		7.838	0.162	0.000
C12.JL 141	M_01	1/2.	pycnochlorite	3.007	0.993	1.064	0.195		0.234	1.281	0.011	2.583	0.263	0.000	0.109		8.000	0.000	0.000
C12.JL 141	M_01	1/3.	Biotite	2.669	1.331	0.205	0.223	1.047			0.007	1.618	0.071	0.000	0.340	0.000	1.873	0.127	0.000
C12.JL 141	M_01	1/4.	diabantite	3.239	0.761	1.209	0.229		0.427	0.927	0.009	1.943	0.093	0.053	0.826		7.667	0.333	0.000
C12.JL 141	M_01	1/5.	pycnochlorite	3.081	0.919	1.062	0.167		0.234	1.174	0.012	2.485	0.068	0.056	0.639		7.649	0.351	0.000
C12.JL 141	M_01	1/6.	pycnochlorite	2.956	1.044	0.990	0.250		0.276	1.209	0.011	2.670	0.053	0.000	0.238		7.769	0.231	0.000
C12.JL 141	M_01	1/7.	pycnochlorite	3.005	0.995	1.163	0.026		0.114	1.517	0.014	2.951	0.045	0.000	0.040		8.000	0.000	0.000
C12.JL 141	M_01	1/8.	pycnochlorite	2.938	1.062	0.812	0.422		0.350	0.923	0.013	2.567	0.073	0.000	0.517		7.620	0.380	0.000
C12.JL 141	M_01	1/9.	pycnochlorite	3.032	0.968	1.078	0.114		0.238	1.146	0.014	2.844	0.050	0.000	0.260		7.687	0.313	0.000
C12.JL 141	M_01	1/10.	pycnochlorite	3.036	0.964	0.967	0.363		0.392	0.985	0.011	2.318	0.081	0.000	0.523		7.712	0.288	0.000

Mineral info.				T-site		O-site							I-site				H-site		
Sample	Mica no.4	Spot no.	Species	Si	Al iv	Al vi	Ti	Fe(tot)	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Sr	OH*	F	Cl
C12.JL 141	M_01	1/11.	pycnochlorite	3.010	0.990	0.990	0.157		0.230	1.115	0.015	2.858	0.052	0.000	0.361		7.607	0.393	0.000
C12.JL 141	M_01	1/12.	pycnochlorite	2.978	1.022	1.110	0.065		0.151	1.518	0.021	2.769	0.053	0.000	0.145		7.820	0.180	0.000
C12.JL 141	M_01	1/13.	diabantite	3.207	0.793	1.150	0.203		0.384	0.951	0.011	2.167	0.167	0.000	0.665		7.701	0.299	0.000
C12.JL 141	M_02	1/1.	pycnochlorite	2.994	1.006	1.153	0.073		0.207	1.252	0.019	2.889	0.041	0.000	0.116		7.796	0.204	0.000
C12.JL 141	M_02	1/2.	pycnochlorite	3.014	0.986	1.177	0.045		0.142	1.405	0.019	2.953	0.034	0.000	0.068		8.000	0.000	0.000
C12.JL 141	M_02	1/3.	pycnochlorite	3.003	0.997	1.062	0.128		0.210	1.221	0.011	2.959	0.039	0.000	0.118		7.834	0.166	0.000
C12.JL 141	M_02	1/4.	pycnochlorite	2.894	1.106	1.053	0.312		0.297	1.115	0.019	2.725	0.036	0.000	0.098		8.000	0.000	0.000
C12.JL 141	M_02	1/5.	pycnochlorite	2.836	1.164	0.889	0.425		0.359	1.025	0.018	2.698	0.041	0.000	0.092		7.829	0.171	0.000
C12.JL 141	M_02	1/6.	pycnochlorite	2.993	1.007	1.060	0.071		0.156	1.316	0.013	3.034	0.036	0.000	0.129		7.776	0.224	0.000
C12.JL 141	M_02	1/7.	diabantite	3.220	0.780	1.254	0.106		0.454	0.898	0.012	2.347	0.087	0.000	0.313		7.591	0.409	0.000
C12.JL 141	M_02	1/8.	pycnochlorite	2.945	1.055	1.110	0.078		0.165	1.338	0.026	2.961	0.029	0.000	0.086		7.807	0.193	0.000
C12.JL 141	M_02	1/9.	pycnochlorite	2.979	1.021	0.952	0.186		0.283	1.228	0.033	2.749	0.073	0.000	0.113		7.594	0.406	0.000
C12.JL 141	M_02	1/10.	ripidolite	2.686	1.314	0.633	0.680		0.430	0.903	0.011	2.696	0.041	0.000	0.043		7.829	0.171	0.000
C12.JL 170	M_01	1/1.	Muscovite	3.332	0.668	1.792	0.000	0.037			0.000	0.152	0.043	0.077	0.744	0.002	2.000	0.000	0.000
C12.JL 170	M_01	1/2.	Muscovite	3.322	0.678	1.773	0.000	0.049			0.000	0.173	0.037	0.036	0.802	0.002	2.000	0.000	0.000
C12.JL 170	M_01	1/3.	illite	3.311	0.689	1.809	0.002	0.036			0.000	0.163	0.042	0.021	0.753	0.000	2.000	0.000	0.000
C12.JL 170	M_01	1/4.	illite	3.325	0.675	1.818	0.000	0.035			0.000	0.159	0.040	0.022	0.728	0.001	2.000	0.000	0.000
C12.JL 170	M_01	1/5.	illite	3.313	0.687	1.816	0.000	0.034			0.000	0.152	0.039	0.031	0.759	0.000	2.000	0.000	0.000
C12.JL 170	M_01	1/6.	Muscovite	3.317	0.683	1.796	0.000	0.040			0.000	0.161	0.042	0.045	0.762	0.000	2.000	0.000	0.000
C12.JL 170	M_01	1/7.	illite	3.328	0.672	1.815	0.000	0.033			0.000	0.166	0.040	0.000	0.746	0.000	2.000	0.000	0.000
C12.JL 170	M_01	1/8.	illite	3.310	0.690	1.813	0.002	0.037			0.000	0.160	0.041	0.018	0.749	0.000	2.000	0.000	0.000
C12.JL 170	M_01	1/9.	illite	3.327	0.673	1.790	0.002	0.047			0.000	0.166	0.037	0.020	0.771	0.002	2.000	0.000	0.000
C12.JL 170	M_01	1/10.	illite	3.317	0.683	1.808	0.000	0.036			0.000	0.168	0.037	0.015	0.762	0.000	2.000	0.000	0.000
C12.JL 170	M_02	1/3.	illite	3.443	0.557	1.771	0.000	0.038			0.000	0.102	0.307	0.170	0.175	0.002	1.989	0.000	0.011
C12.JL 170	M_03	1/1.	Muscovite	3.174	0.826	1.768	0.045	0.063			0.000	0.146	0.000	0.048	0.879	0.000	2.000	0.000	0.000
C12.JL 170	M_03	1/2.	Di-octahedral mica	3.130	0.870	1.673	0.145	0.041			0.000	0.132	0.000	0.047	0.876	0.000	2.000	0.000	0.000
C12.JL 170	M_03	1/3.	Muscovite	3.146	0.854	1.739	0.098	0.040			0.000	0.131	0.000	0.046	0.858	0.000	2.000	0.000	0.000
C12.JL 170	M_03	1/4.	Muscovite	3.154	0.846	1.734	0.089	0.048			0.000	0.139	0.000	0.043	0.872	0.001	2.000	0.000	0.000
C12.JL 170	M_03	1/5.	Muscovite	3.182	0.818	1.741	0.073	0.045			0.000	0.148	0.000	0.045	0.872	0.000	2.000	0.000	0.000
C12.JL 170	M_03	1/6.	Muscovite	3.196	0.804	1.719	0.070	0.059			0.000	0.165	0.000	0.041	0.878	0.000	2.000	0.000	0.000
C12.JL 170	M_03	1/7.	Muscovite	3.126	0.874	1.689	0.124	0.051			0.000	0.132	0.000	0.047	0.897	0.000	2.000	0.000	0.000
C12.JL 170	M_03	1/8.	Muscovite	3.196	0.804	1.724	0.070	0.050			0.000	0.169	0.000	0.036	0.876	0.000	2.000	0.000	0.000
C12.JL 170	M_03	1/9.	Muscovite	3.208	0.792	1.717	0.064	0.064			0.000	0.167	0.012	0.038	0.861	0.001	2.000	0.000	0.000
C12.JL 170	M_03	1/10.	Muscovite	3.133	0.867	1.612	0.171	0.049			0.000	0.154	0.025	0.041	0.851	0.001	2.000	0.000	0.000
C12.JL 170	M_04	1/1.	illite	3.349	0.651	1.749	0.012	0.048			0.000	0.245	0.020	0.000	0.729	0.000	2.000	0.000	0.000

Mineral info.				T-site		O-site						I-site				H-site		
Sample	Mica no.4	Spot no.	Species	Si	Al iv	Al vi	Ti	Fe(tot)	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Sr	OH*	F	Cl
C12.JL 170	M_04	1/2.	illite	3.365	0.635	1.782	0.003	0.033			0.000	0.210	0.022	0.014	0.728	0.002	2.000	0.000	0.000
C12.JL 170	M_04	1/3.	illite	3.270	0.730	1.652	0.086	0.064			0.000	0.271	0.023	0.000	0.715	0.001	2.000	0.000	0.000
C12.JL 170	M_04	1/4.	illite	3.324	0.676	1.740	0.007	0.061			0.000	0.251	0.018	0.014	0.745	0.003	2.000	0.000	0.000
C12.JL 170	M_04	1/5.	illite	3.350	0.650	1.788	0.005	0.032			0.000	0.196	0.024	0.014	0.744	0.002	2.000	0.000	0.000
C12.JL 170	M_04	1/6.	diabantite	3.870	0.130	2.792	0.035		0.278	0.000	0.007	0.743	0.022	0.000	1.566		8.000	0.000	0.000
C12.JL 170	M_04	1/9.	illite	3.320	0.680	1.711	0.067	0.034			0.000	0.198	0.028	0.017	0.747	0.000	2.000	0.000	0.000
C12.JL 170	M_04	1/10.	illite	3.359	0.641	1.742	0.032	0.036			0.000	0.203	0.024	0.059	0.698	0.002	2.000	0.000	0.000
C12.JL 170	M_05	1/1.	illite	3.356	0.644	1.778	0.000	0.052			0.000	0.187	0.040	0.000	0.754	0.000	2.000	0.000	0.000
C12.JL 170	M_05	1/2.	illite	3.344	0.656	1.788	0.002	0.053			0.000	0.180	0.037	0.000	0.743	0.001	2.000	0.000	0.000
C12.JL 170	M_05	1/3.	illite	3.343	0.657	1.781	0.003	0.051			0.000	0.181	0.038	0.000	0.758	0.001	2.000	0.000	0.000
C12.JL 170	M_05	1/4.	illite	3.337	0.663	1.796	0.002	0.051			0.000	0.170	0.038	0.000	0.747	0.000	2.000	0.000	0.000
C12.JL 170	M_05	1/5.	illite	3.352	0.648	1.771	0.002	0.051			0.000	0.189	0.039	0.000	0.767	0.000	2.000	0.000	0.000
C12.JL 170	M_05	1/6.	illite	3.347	0.653	1.785	0.000	0.051			0.000	0.179	0.038	0.000	0.760	0.001	2.000	0.000	0.000
C12.JL 170	M_05	1/7.	illite	3.339	0.661	1.772	0.002	0.052			0.000	0.189	0.039	0.013	0.765	0.000	2.000	0.000	0.000
C12.JL 170	M_05	1/8.	illite	3.327	0.673	1.797	0.002	0.052			0.000	0.167	0.040	0.000	0.754	0.000	2.000	0.000	0.000
C12.JL 170	M_05	1/9.	illite	3.342	0.658	1.768	0.002	0.053			0.000	0.191	0.039	0.000	0.776	0.002	2.000	0.000	0.000
C12.JL 170	M_05	1/10.	illite	3.337	0.663	1.774	0.002	0.055			0.000	0.186	0.038	0.000	0.774	0.000	2.000	0.000	0.000
C12.JL 170	M_06	1/1.	Biotite	2.711	1.289	0.705	0.020	0.740			0.025	1.604	0.021	0.000	0.313	0.000	1.938	0.062	0.000
C12.JL 170	M_06	1/3.	diabantite	3.878	0.122	1.621	0.392		0.743	0.000	0.012	1.550	0.017	0.000	0.491		8.000	0.000	0.000
C12.JL 170	M_06	1/4.	Biotite	3.557	0.443	0.601	0.027	0.601			0.010	1.613	0.015	0.000	0.054	0.000	1.930	0.070	0.000
C12.JL 170	M_06	1/5.	diabantite	3.544	0.456	2.156	0.043		0.646	0.000	0.012	1.567	0.025	0.000	0.991		8.000	0.000	0.000
C12.JL 170	M_06	1/6.	illite	3.330	0.670	1.799	0.000	0.046			0.000	0.173	0.041	0.000	0.751	0.000	2.000	0.000	0.000
C12.JL 170	M_06	1/7.	illite	3.318	0.682	1.801	0.002	0.041			0.000	0.171	0.046	0.000	0.753	0.002	2.000	0.000	0.000
C12.JL 170	M_06	1/8.	illite	3.332	0.668	1.807	0.000	0.039			0.000	0.167	0.041	0.000	0.751	0.002	2.000	0.000	0.000
C12.JL 170	M_06	1/9.	illite	3.328	0.672	1.796	0.000	0.041			0.000	0.178	0.042	0.000	0.758	0.001	2.000	0.000	0.000
C12.JL 170	M_06	1/10.	illite	3.326	0.674	1.803	0.000	0.040			0.000	0.176	0.043	0.000	0.745	0.001	2.000	0.000	0.000
C12.JL 170	M_06	1/11.	illite	3.332	0.668	1.788	0.002	0.046			0.000	0.182	0.039	0.000	0.758	0.002	2.000	0.000	0.000
C12.JL.47	M_01	1/1.	Biotite	2.759	1.241	0.044	0.227	0.872			0.016	1.731	0.000	0.035	0.926	0.000	1.895	0.072	0.033
C12.JL.47	M_01	1/2.	Biotite	2.759	1.241	0.027	0.233	0.886			0.017	1.727	0.000	0.032	0.936	0.000	1.877	0.086	0.037
C12.JL.47	M_01	1/3.	Biotite	2.756	1.244	0.038	0.230	0.893			0.015	1.717	0.000	0.038	0.923	0.000	1.886	0.082	0.032
C12.JL.47	M_01	1/4.	Biotite	2.751	1.249	0.025	0.241	0.894			0.016	1.709	0.022	0.028	0.900	0.000	1.888	0.084	0.028
C12.JL.47	M_01	1/5.	Biotite	2.758	1.242	0.035	0.235	0.889			0.015	1.721	0.000	0.031	0.914	0.001	1.883	0.082	0.035
C12.JL.47	M_01	1/6.	Biotite	2.768	1.232	0.028	0.232	0.885			0.017	1.729	0.000	0.029	0.929	0.001	1.890	0.079	0.031
C12.JL.47	M_01	1/7.	Biotite	2.741	1.259	0.023	0.228	0.918			0.016	1.749	0.006	0.028	0.869	0.002	1.888	0.077	0.035
C12.JL.47	M_01	1/8.	Biotite	2.741	1.259	0.005	0.264	0.940			0.018	1.674	0.000	0.027	0.895	0.001	1.883	0.080	0.037

Mineral info.				T-site		O-site							I-site				H-site		
Sample	Mica no.4	Spot no.	Species	Si	Al iv	Al vi	Ti	Fe(tot)	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Sr	OH*	F	Cl
C12.JL.47	M_01	1/12.	pycnochlorite	3.097	0.903	0.819	0.320		0.334	1.054	0.030	2.428	0.407	0.000	0.224		7.798	0.202	0.000
C12.JL.47	M_02	1/1.	Biotite	2.727	1.273	0.002	0.235	0.942			0.021	1.758	0.010	0.027	0.839	0.000	1.896	0.065	0.039
C12.JL.47	M_02	1/2.	Biotite	2.767	1.233	0.015	0.243	0.930			0.018	1.689	0.000	0.024	0.912	0.002	1.964	0.000	0.036
C12.JL.47	M_02	1/3.	Biotite	2.769	1.231	0.020	0.234	0.891			0.016	1.739	0.000	0.032	0.915	0.000	1.906	0.060	0.035
C12.JL.47	M_02	1/4.	Biotite	2.759	1.241	0.011	0.229	0.905			0.016	1.754	0.000	0.029	0.907	0.002	1.902	0.065	0.033
C12.JL.47	M_02	1/5.	Biotite	2.728	1.272	0.004	0.244	0.907			0.019	1.748	0.034	0.031	0.837	0.000	1.907	0.062	0.031
C12.JL.47	M_02	1/6.	Biotite	2.759	1.241	0.002	0.254	0.939			0.019	1.687	0.000	0.025	0.905	0.000	1.965	0.000	0.035
C12.JL.47	M_02	1/7.	Biotite	2.774	1.226	0.012	0.251	0.935			0.017	1.658	0.007	0.031	0.909	0.003	1.965	0.000	0.035
C12.JL.47	M_02	1/8.	pycnochlorite	3.088	0.912	1.005	0.067		0.106	1.520	0.035	3.014	0.054	0.000	0.099		8.000	0.000	0.000
C12.JL.47	M_02	1/9.	diabantite	3.118	0.882	0.981	0.086		0.111	1.449	0.033	3.026	0.049	0.000	0.189		8.000	0.000	0.000
C12.JL.47	M_02	1/11.	pycnochlorite	3.074	0.926	0.890	0.160		0.166	1.270	0.032	2.939	0.146	0.000	0.242		7.828	0.172	0.000
C12.JL.47	M_02	1/12.	diabantite	3.145	0.855	1.099	0.050		0.130	1.379	0.031	2.905	0.053	0.155	0.133		8.000	0.000	0.000
C12.JL.180	M_02	1/1.	Biotite	2.770	1.230	0.048	0.219	0.889			0.015	1.717	0.000	0.042	0.928	0.000	1.881	0.088	0.031
C12.JL.180	M_02	1/2.	Biotite	2.769	1.231	0.052	0.224	0.888			0.016	1.703	0.000	0.039	0.924	0.000	1.888	0.079	0.033
C12.JL.180	M_02	1/3.	Biotite	2.773	1.227	0.036	0.222	0.900			0.013	1.718	0.000	0.041	0.925	0.003	1.884	0.084	0.032
C12.JL.180	M_02	1/4.	Biotite	2.766	1.234	0.034	0.217	0.896			0.011	1.742	0.000	0.045	0.919	0.000	1.882	0.086	0.032
C12.JL.180	M_02	1/5.	Biotite	2.766	1.234	0.037	0.230	0.916			0.013	1.691	0.000	0.037	0.921	0.002	1.884	0.082	0.035
C12.JL.180	M_02	1/6.	Biotite	2.777	1.223	0.046	0.216	0.892			0.011	1.727	0.000	0.042	0.914	0.001	1.877	0.090	0.033
C12.JL.180	M_02	1/7.	Biotite	2.761	1.239	0.025	0.257	0.908			0.011	1.671	0.000	0.044	0.910	0.000	1.889	0.079	0.032
C12.JL.180	M_02	1/8.	Biotite	2.768	1.232	0.048	0.215	0.883			0.011	1.737	0.000	0.045	0.917	0.001	1.880	0.088	0.032
C12.JL.180	M_02	1/9.	Biotite	2.759	1.241	0.026	0.217	0.917			0.012	1.749	0.000	0.029	0.909	0.001	1.879	0.082	0.040
C12.JL.180	M_02	1/10.	diabantite	3.228	0.772	0.909	0.231		0.231	0.980	0.021	2.503	0.220	0.000	0.878		7.755	0.199	0.045
C12.JL.180	M_02	1/11.	diabantite	3.176	0.824	1.041	0.018		0.132	1.222	0.025	3.326	0.038	0.000	0.044		8.000	0.000	0.000
C12.JL.180	M_02	1/14.	Biotite	2.664	1.245	0.000	0.246	0.950			0.013	1.857	0.276	0.000	0.431	0.001	1.896	0.084	0.020
C11.JL 178	M_01	1/1.	Biotite	2.775	1.225	0.034	0.233	0.829			0.008	1.785	0.000	0.038	0.907	0.001	1.776	0.191	0.033
C11.JL 178	M_01	1/2.	Biotite	2.780	1.220	0.040	0.224	0.819			0.008	1.795	0.000	0.044	0.915	0.001	1.787	0.183	0.031
C11.JL 178	M_01	1/3.	Biotite	2.770	1.230	0.021	0.227	0.836			0.008	1.813	0.000	0.044	0.904	0.000	1.769	0.200	0.032
C11.JL 178	M_01	1/4.	Biotite	2.762	1.238	0.017	0.237	0.830			0.010	1.818	0.000	0.045	0.877	0.000	1.765	0.204	0.031
C11.JL 178	M_01	1/5.	Biotite	2.777	1.223	0.027	0.238	0.827			0.009	1.795	0.000	0.036	0.892	0.000	1.774	0.194	0.032
C11.JL 178	M_01	1/6.	Biotite	2.765	1.235	0.020	0.249	0.835			0.009	1.767	0.000	0.045	0.911	0.000	1.788	0.180	0.032
C11.JL 178	M_01	1/7.	Biotite	2.766	1.234	0.012	0.252	0.831			0.008	1.781	0.000	0.044	0.904	0.000	1.790	0.178	0.032
C11.JL 178	M_01	1/8.	Biotite	2.769	1.231	0.007	0.255	0.839			0.008	1.775	0.000	0.039	0.902	0.001	1.794	0.173	0.033
C11.JL 178	M_01	1/9.	Biotite	2.779	1.221	0.042	0.242	0.823			0.009	1.786	0.000	0.035	0.856	0.001	1.795	0.176	0.029
C11.JL 178	M_01	1/10.	Biotite	2.796	1.204	0.038	0.240	0.823			0.008	1.764	0.000	0.051	0.887	0.000	1.782	0.185	0.033
C11.JL 178	M_01	1/16.	diabantite	3.332	0.668	1.176	0.163		0.405	0.618	0.010	2.329	0.030	0.000	1.047		7.518	0.434	0.047

Mineral info.				T-site		O-site							I-site				H-site		
Sample	Mica no.4	Spot no.	Species	Si	Al iv	Al vi	Ti	Fe(tot)	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Sr	OH*	F	Cl
C11.JL 178	M_02	1/1.	Biotite	2.777	1.223	0.026	0.231	0.821			0.008	1.807	0.000	0.042	0.907	0.000	1.744	0.223	0.033
C11.JL 178	M_02	1/2.	Biotite	2.778	1.222	0.035	0.227	0.822			0.006	1.805	0.000	0.042	0.904	0.000	1.769	0.197	0.034
C11.JL 178	M_02	1/3.	Biotite	2.769	1.231	0.031	0.234	0.835			0.008	1.792	0.000	0.038	0.892	0.000	1.763	0.204	0.033
C11.JL 178	M_02	1/4.	Biotite	2.766	1.234	0.018	0.242	0.843			0.008	1.779	0.000	0.045	0.907	0.001	1.778	0.189	0.033
C11.JL 178	M_02	1/5.	Biotite	2.770	1.230	0.005	0.248	0.854			0.008	1.776	0.000	0.045	0.903	0.000	1.772	0.196	0.032
C11.JL 178	M_02	1/6.	Biotite	2.762	1.238	0.015	0.244	0.839			0.008	1.784	0.000	0.042	0.911	0.000	1.772	0.195	0.033
C11.JL 178	M_02	1/7.	Biotite	2.787	1.213	0.039	0.252	0.837			0.008	1.739	0.000	0.038	0.882	0.000	1.776	0.192	0.032
C11.JL 178	M_02	1/8.	Biotite	2.773	1.227	0.014	0.255	0.842			0.009	1.759	0.000	0.035	0.906	0.002	1.777	0.191	0.032
C11.JL 178	M_02	1/9.	Biotite	2.773	1.227	0.008	0.261	0.834			0.008	1.765	0.000	0.042	0.903	0.000	1.782	0.192	0.027
C11.JL 178	M_02	1/10.	Biotite	2.760	1.235	0.000	0.262	0.847			0.008	1.777	0.000	0.042	0.903	0.000	1.782	0.186	0.032
C11.JL 178	M_02	1/11.	Biotite	2.745	1.255	0.025	0.255	0.859			0.009	1.797	0.000	0.028	0.798	0.001	1.791	0.182	0.027
C11.JL 178	M_02	1/14.	pycnochlorite	3.070	0.930	0.873	0.394		0.406	0.740	0.014	2.578	0.028	0.000	0.599		7.633	0.335	0.032
C11.JL 178	M_02	1/15.	diabantite	3.350	0.650	1.086	0.867		0.807	0.000	0.010	1.410	0.059	0.209	0.562		8.000	0.000	0.000
C11.JL 178	M_02	1/16.	Biotite	2.819	1.181	0.318	0.180	0.838			0.008	1.706	0.020	0.000	0.361	0.002	1.856	0.127	0.018
C11.JL 178	M_02	1/17.	pycnochlorite	3.083	0.917	0.968	0.295		0.332	0.835	0.012	2.598	0.067	0.000	0.647		7.667	0.333	0.000
C11.JL 178	M_02	1/18.	Biotite	2.794	1.206	0.084	0.207	0.821			0.007	1.829	0.000	0.025	0.785	0.000	1.758	0.212	0.029
C11.JL 178	M_02	1/19.	diabantite	3.189	0.811	0.996	0.234		0.290	0.836	0.012	2.487	0.014	0.000	1.068		7.546	0.410	0.045
C11.JL 178	M_02	1/20.	diabantite	3.301	0.699	1.235	0.162		0.376	0.692	0.013	2.280	0.016	0.000	1.066		7.625	0.328	0.047
C11.JL 178	M_02	1/21.	diabantite	3.111	0.889	0.929	0.284		0.310	0.836	0.016	2.614	0.022	0.000	0.813		7.574	0.388	0.038
C11.JL 178	M_02	1/22.	diabantite	3.364	0.636	1.038	0.303		0.303	0.626	0.009	1.937	0.000	0.077	1.951		7.489	0.438	0.073
C11.JL 178	M_03	1/10.	Muscovite	3.300	0.700	1.575	0.077	0.177			0.000	0.189	0.000	0.069	0.863	0.000	2.000	0.000	0.000
C11.JL 178	M_03	1/11.	Muscovite	3.331	0.669	1.731	0.000	0.143			0.000	0.160	0.018	0.078	0.754	0.001	2.000	0.000	0.000
C11.JL 178	M_03	1/15.	illite	3.606	0.394	1.644	0.000	0.151			0.000	0.202	0.041	0.342	0.328	0.002	2.000	0.000	0.000
C11.JL 178	M_03	1/16.	illite	3.687	0.313	1.645	0.000	0.137			0.000	0.178	0.046	0.399	0.254	0.002	2.000	0.000	0.000
C11.JL 178	M_03	1/17.	Muscovite	3.280	0.720	1.662	0.000	0.192			0.000	0.192	0.007	0.092	0.856	0.002	2.000	0.000	0.000
C11.JL 178	M_04	1/3.	illite	3.390	0.610	1.783	0.000	0.060			0.000	0.174	0.026	0.064	0.676	0.000	1.941	0.059	0.000
C11.JL 178	M_04	1/6.	illite	3.644	0.356	1.765	0.000	0.061			0.000	0.145	0.046	0.281	0.276	0.000	2.000	0.000	0.000
C11.JL 178	M_04	1/22.	illite	3.555	0.445	1.722	0.004	0.079			0.000	0.117	0.046	0.401	0.378	0.001	2.000	0.000	0.000
C11.JL 178	M_04	1/23.	illite	3.594	0.406	1.704	0.000	0.069			0.000	0.175	0.070	0.241	0.423	0.002	2.000	0.000	0.000
C11.JL 178	M_04	1/27.	illite	3.438	0.562	1.757	0.000	0.067			0.000	0.172	0.027	0.093	0.664	0.002	1.942	0.058	0.000
C11.JL 178	M_04	1/28.	Muscovite	3.474	0.526	1.683	0.003	0.113			0.000	0.129	0.031	0.370	0.548	0.000	2.000	0.000	0.000
C11.JL 178	M_04	1/30.	illite	3.690	0.310	1.645	0.000	0.078			0.000	0.234	0.038	0.337	0.336	0.002	2.000	0.000	0.000
C11.JL 178	M_04	1/33.	illite	3.592	0.408	1.723	0.000	0.065			0.000	0.149	0.040	0.310	0.414	0.003	2.000	0.000	0.000
C11.JL 178	M_04	1/36.	illite	3.556	0.444	1.704	0.012	0.092			0.000	0.188	0.037	0.167	0.483	0.000	2.000	0.000	0.000
C11.JL 178	M_04	1/38.	illite	3.502	0.498	1.719	0.000	0.124			0.000	0.145	0.031	0.210	0.531	0.000	2.000	0.000	0.000

Mineral info.				T-site		O-site						I-site				H-site		
Sample	Mica no.4	Spot no.	Species	Si	Al iv	Al vi	Ti	Fe(tot)	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Sr	OH*	F	Cl
C11.JL 178	M_05	1/1.	Biotite	2.766	1.234	0.028	0.241	0.847			0.010	1.785	0.000	0.031	0.871	0.001	1.729	0.236	0.035
C11.JL 178	M_05	1/2.	Biotite	2.784	1.216	0.030	0.244	0.839			0.008	1.768	0.000	0.039	0.884	0.000	1.728	0.237	0.034
C11.JL 178	M_05	1/3.	Biotite	2.793	1.207	0.035	0.246	0.812			0.008	1.775	0.000	0.038	0.890	0.000	1.751	0.219	0.030
C11.JL 178	M_05	1/4.	Biotite	2.766	1.234	0.014	0.247	0.846			0.008	1.776	0.000	0.046	0.901	0.000	1.708	0.259	0.032
C11.JL 178	M_05	1/5.	Biotite	2.782	1.218	0.033	0.250	0.829			0.008	1.752	0.000	0.039	0.900	0.000	1.721	0.245	0.034
C11.JL 178	M_05	1/6.	Biotite	2.776	1.224	0.023	0.243	0.828			0.008	1.773	0.000	0.050	0.914	0.000	1.710	0.255	0.035
C11.JL 178	M_05	1/7.	Biotite	2.780	1.220	0.023	0.251	0.822			0.007	1.781	0.000	0.041	0.889	0.000	1.730	0.241	0.029
C11.JL 178	M_05	1/8.	Biotite	2.785	1.215	0.029	0.246	0.825			0.008	1.770	0.000	0.039	0.899	0.000	1.736	0.235	0.029
C11.JL 178	M_05	1/9.	Biotite	2.766	1.234	0.025	0.247	0.848			0.009	1.773	0.000	0.037	0.871	0.001	1.739	0.229	0.032
C11.JL 178	M_05	1/10.	pycnochlorite	3.075	0.925	1.028	0.163		0.250	1.076	0.016	2.743	0.033	0.000	0.496		7.652	0.348	0.000
C11.JL 178	M_05	1/11.	Biotite	2.784	1.216	0.021	0.258	0.821			0.008	1.765	0.000	0.038	0.893	0.000	1.723	0.245	0.032
C11.JL 178	M_05	1/12.	Biotite	2.779	1.221	0.018	0.255	0.827			0.008	1.766	0.000	0.042	0.904	0.000	1.740	0.229	0.032
C11.JL 178	M_05	1/13.	Biotite	2.700	1.292	0.000	0.282	0.876			0.008	1.820	0.000	0.031	0.755	0.000	1.759	0.213	0.027
C11.JL 178	M_05	1/14.	Biotite	2.788	1.212	0.040	0.245	0.831			0.007	1.760	0.000	0.032	0.885	0.000	1.717	0.252	0.031
C11.JL 178	M_05	1/15.	Biotite	2.784	1.216	0.023	0.254	0.822			0.008	1.773	0.000	0.027	0.898	0.000	1.741	0.228	0.031
C11.JL 178	M_05	1/16.	diabantite	3.286	0.714	1.391	0.096		0.483	0.696	0.013	2.378	0.033	0.000	0.400		7.748	0.252	0.000
C11.JL 178	M_05	1/17.	Biotite	2.747	1.253	0.053	0.257	0.866			0.009	1.753	0.006	0.024	0.775	0.000	1.741	0.230	0.028
C11.JL 178	M_05	1/18.	diabantite	3.419	0.581	1.431	0.111		0.609	0.549	0.011	2.170	0.052	0.000	0.383		7.727	0.273	0.000
C11.JL 178	M_05	1/19.	diabantite	3.367	0.633	1.250	0.219		0.561	0.512	0.013	2.122	0.036	0.000	0.782		7.590	0.375	0.035
C11.JL 178	M_05	1/20.	Biotite	2.709	1.239	0.000	0.342	0.820			0.008	1.787	0.000	0.023	0.824	0.000	1.758	0.215	0.028
C11.JL 178	M_05	1/21.	Biotite	2.788	1.212	0.062	0.249	0.833			0.008	1.731	0.000	0.032	0.855	0.000	1.750	0.219	0.031
C11.JL 178	M_05	1/22.	diabantite	3.160	0.840	0.945	0.250		0.237	0.954	0.012	2.392	0.012	0.000	1.262		7.497	0.452	0.051
C11.JL 178	M_05	1/23.	Biotite	2.762	1.238	0.018	0.254	0.845			0.009	1.784	0.000	0.036	0.855	0.000	1.737	0.232	0.032
C11.JL 178	M_05	1/24.	Biotite	2.766	1.234	0.011	0.262	0.846			0.009	1.779	0.000	0.039	0.850	0.000	1.734	0.238	0.028
C11.JL 178	M_05	1/25.	diabantite	3.211	0.789	0.847	0.255		0.183	0.842	0.012	1.831	0.702	0.063	1.484		7.424	0.511	0.065
C12.JL.183	M_01	1/1.	Biotite	2.829	1.171	0.032	0.209	1.066			0.013	1.536	0.000	0.070	0.937	0.000	1.915	0.085	0.000
C12.JL.183	M_01	1/2.	Biotite	2.826	1.174	0.034	0.202	1.075			0.013	1.543	0.000	0.072	0.931	0.000	1.905	0.095	0.000
C12.JL.183	M_01	1/3.	Biotite	2.834	1.166	0.038	0.201	1.072			0.012	1.541	0.000	0.072	0.927	0.000	1.907	0.093	0.000
C12.JL.183	M_01	1/4.	Biotite	2.840	1.160	0.046	0.196	1.071			0.012	1.534	0.000	0.070	0.935	0.000	1.902	0.098	0.000
C12.JL.183	M_01	1/5.	Biotite	2.836	1.164	0.039	0.201	1.071			0.013	1.541	0.000	0.066	0.927	0.000	1.907	0.093	0.000
C12.JL.183	M_01	1/6.	Biotite	2.820	1.180	0.035	0.215	1.086			0.013	1.516	0.000	0.067	0.919	0.000	1.905	0.095	0.000
C12.JL.183	M_01	1/7.	Biotite	2.831	1.169	0.039	0.212	1.073			0.013	1.524	0.000	0.071	0.915	0.000	1.912	0.088	0.000
C12.JL.183	M_01	1/8.	Biotite	2.830	1.170	0.040	0.209	1.080			0.012	1.518	0.000	0.071	0.923	0.000	1.912	0.088	0.000
C12.JL.183	M_01	1/9.	Biotite	2.827	1.173	0.034	0.214	1.075			0.011	1.526	0.000	0.070	0.921	0.000	1.905	0.095	0.000
C12.JL.183	M_01	1/10.	Biotite	2.823	1.177	0.039	0.207	1.082			0.013	1.519	0.000	0.073	0.929	0.000	1.907	0.093	0.000

Mineral info.				T-site		O-site							I-site				H-site		
Sample	Mica no.4	Spot no.	Species	Si	Al iv	Al vi	Ti	Fe(tot)	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Sr	OH*	F	Cl
C12.JL.183	M_01	1/11.	Biotite	2.831	1.169	0.038	0.212	1.075			0.013	1.524	0.000	0.069	0.912	0.000	1.917	0.083	0.000
C12.JL.183	M_01	1/12.	Biotite	2.836	1.164	0.045	0.200	1.080			0.013	1.526	0.000	0.067	0.925	0.000	1.900	0.100	0.000
C12.JL.183	M_01	1/13.	Biotite	2.843	1.157	0.044	0.194	1.077			0.013	1.532	0.000	0.069	0.938	0.000	1.902	0.098	0.000
C12.JL.183	no image	1/1.	Biotite	2.824	1.176	0.040	0.205	1.084			0.012	1.525	0.000	0.072	0.922	0.000	1.904	0.096	0.000
C12.JL.183	no image	1/2.	Biotite	2.836	1.164	0.048	0.192	1.068			0.013	1.549	0.000	0.061	0.931	0.000	1.905	0.095	0.000
C12.JL.183	no image	1/3.	Biotite	2.829	1.171	0.043	0.188	1.094			0.011	1.545	0.000	0.072	0.921	0.000	1.897	0.103	0.000
C12.JL.183	no image	1/4.	Biotite	2.841	1.159	0.055	0.189	1.108			0.014	1.506	0.000	0.071	0.911	0.000	1.904	0.096	0.000
C12.JL.183	no image	1/5.	Biotite	2.838	1.162	0.044	0.191	1.095			0.012	1.528	0.000	0.069	0.929	0.000	1.909	0.091	0.000
C12.JL.183	no image	1/6.	Biotite	2.827	1.173	0.044	0.202	1.090			0.012	1.517	0.000	0.067	0.927	0.000	1.909	0.091	0.000
C12.JL.183	no image	1/7.	Biotite	2.832	1.168	0.033	0.188	1.118			0.013	1.529	0.000	0.069	0.928	0.000	1.899	0.101	0.000
C12.JL.183	no image	1/8.	Biotite	2.840	1.160	0.044	0.192	1.109			0.014	1.515	0.000	0.071	0.915	0.000	1.909	0.091	0.000
C12.JL.183	no image	1/9.	Biotite	2.846	1.154	0.049	0.186	1.094			0.012	1.532	0.000	0.060	0.926	0.000	1.902	0.098	0.000
C12.JL.183	no image	1/10.	Biotite	2.837	1.163	0.048	0.189	1.094			0.014	1.524	0.000	0.074	0.926	0.000	1.904	0.096	0.000
C12.JL.183	no image	1/11.	Biotite	2.836	1.164	0.048	0.189	1.096			0.013	1.531	0.000	0.071	0.914	0.000	1.901	0.099	0.000
C12.JL.183	no image	1/12.	Biotite	2.844	1.156	0.046	0.192	1.080			0.012	1.536	0.000	0.068	0.925	0.000	1.899	0.101	0.000
C12.JL.183	no image	1/13.	Biotite	2.838	1.162	0.040	0.188	1.073			0.013	1.561	0.000	0.075	0.921	0.000	1.902	0.098	0.000
C12.JL.183	no image	1/14.	Biotite	2.834	1.166	0.039	0.189	1.071			0.013	1.560	0.000	0.078	0.928	0.000	1.904	0.096	0.000
C12.JL.183	no image	1/15.	Biotite	2.825	1.175	0.046	0.193	1.066			0.013	1.556	0.000	0.075	0.920	0.000	1.907	0.093	0.000
C12.JL.183	no image	1/16.	Biotite	2.831	1.169	0.055	0.184	1.077			0.012	1.549	0.000	0.067	0.923	0.000	1.905	0.095	0.000
C12.JL.183	no image	1/17.	Biotite	2.841	1.159	0.039	0.190	1.111			0.015	1.519	0.000	0.062	0.931	0.000	1.902	0.098	0.000
C11.JL.29A	M 01	1/1.	Biotite	2.816	1.184	0.022	0.225	0.803			0.014	1.818	0.000	0.045	0.903	0.000	1.823	0.154	0.023
C11.JL.29A	M 01	1/2.	Biotite	2.813	1.187	0.030	0.224	0.803			0.012	1.817	0.000	0.048	0.888	0.000	1.827	0.152	0.020
C11.JL.29A	M 01	1/3.	Biotite	2.810	1.190	0.026	0.224	0.831			0.014	1.789	0.000	0.053	0.898	0.000	1.837	0.145	0.018
C11.JL.29A	M 01	1/4.	Biotite	2.809	1.191	0.032	0.224	0.836			0.013	1.775	0.000	0.062	0.891	0.000	1.836	0.146	0.018
C11.JL.29A	M 01	1/5.	Biotite	2.818	1.182	0.045	0.223	0.837			0.013	1.763	0.000	0.050	0.879	0.000	1.840	0.143	0.017
C11.JL.29A	M 01	1/6.	Biotite	2.818	1.182	0.048	0.222	0.832			0.015	1.752	0.000	0.057	0.898	0.000	1.845	0.137	0.018
C11.JL.29A	M 01	1/7.	Biotite	2.815	1.185	0.050	0.226	0.834			0.013	1.745	0.000	0.058	0.889	0.000	1.846	0.136	0.018
C11.JL.29A	M 01	1/8.	Biotite	2.806	1.194	0.035	0.222	0.863			0.014	1.761	0.000	0.044	0.881	0.000	1.838	0.144	0.018
C11.JL.29A	M 01	1/9.	Biotite	2.821	1.179	0.056	0.220	0.856			0.013	1.735	0.000	0.052	0.872	0.000	1.845	0.135	0.021
C11.JL.29A	M 01	1/10.	Biotite	2.822	1.178	0.114	0.181	0.849			0.016	1.767	0.000	0.034	0.815	0.000	1.829	0.144	0.027
C11.JL.29A	M 01	1/11.	Biotite	2.812	1.188	0.031	0.229	0.861			0.016	1.741	0.000	0.045	0.896	0.000	1.832	0.147	0.020
C11.JL.29A	M 01	1/12.	Biotite	2.815	1.185	0.032	0.222	0.862			0.014	1.757	0.000	0.045	0.889	0.000	1.826	0.146	0.028
C11.JL.29A	M 01	1/13.	Biotite	2.820	1.180	0.033	0.225	0.852			0.013	1.756	0.000	0.044	0.899	0.000	1.840	0.139	0.022
C11.JL.29A	M 01	1/14.	Biotite	2.812	1.188	0.012	0.225	0.861			0.015	1.792	0.000	0.038	0.878	0.000	1.831	0.149	0.019
C11.JL.29A	M 01	1/15.	Biotite	2.811	1.189	0.016	0.238	0.864			0.015	1.750	0.000	0.035	0.896	0.000	1.836	0.141	0.023

Mineral info.				T-site		O-site							I-site				H-site		
Sample	Mica no.4	Spot no.	Species	Si	Al iv	Al vi	Ti	Fe(tot)	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Sr	OH*	F	Cl
C11.JL.29A	M 01	1/16.	Biotite	2.818	1.182	0.027	0.240	0.868			0.017	1.724	0.000	0.039	0.886	0.000	1.845	0.131	0.024
C11.JL.29A	M 01	1/17.	Biotite	2.811	1.189	0.032	0.224	0.848			0.015	1.767	0.000	0.055	0.880	0.000	1.847	0.134	0.019
C11.JL.29A	M 01	1/18.	Biotite	2.811	1.189	0.032	0.226	0.836			0.015	1.784	0.000	0.052	0.868	0.000	1.836	0.144	0.020
C11.JL.29A	M 01	1/19.	Biotite	2.805	1.195	0.016	0.228	0.812			0.014	1.826	0.000	0.051	0.878	0.000	1.826	0.148	0.026
C11.JL.29A	M 01	1/20.	Biotite	2.815	1.185	0.044	0.225	0.832			0.013	1.764	0.000	0.062	0.870	0.000	1.841	0.140	0.019
C11.JL.29A	M 01	1/21.	Biotite	2.817	1.183	0.033	0.220	0.843			0.014	1.767	0.000	0.043	0.911	0.000	1.833	0.139	0.028
C11.JL.29A	M 01	1/22.	Biotite	2.798	1.202	0.044	0.224	0.858			0.015	1.759	0.000	0.046	0.861	0.000	1.845	0.132	0.023
C11.JL.29A	M 01	1/23.	Biotite	2.810	1.190	0.045	0.223	0.866			0.015	1.736	0.000	0.060	0.870	0.000	1.857	0.128	0.015
C11.JL.29A	M 01	1/24.	Biotite	2.808	1.192	0.040	0.223	0.853			0.015	1.751	0.000	0.059	0.883	0.000	1.842	0.139	0.019
C11.JL.29A	M 01	1/25.	Biotite	2.811	1.189	0.045	0.224	0.858			0.014	1.730	0.000	0.062	0.891	0.000	1.848	0.135	0.018
C11.JL.29A	M 01	1/26.	Biotite	2.809	1.191	0.034	0.231	0.866			0.013	1.730	0.000	0.065	0.883	0.000	1.846	0.137	0.016
C11.JL.29A	M 01	1/27.	Biotite	2.817	1.183	0.042	0.222	0.826			0.014	1.770	0.000	0.048	0.900	0.000	1.834	0.142	0.024
C11.JL.29A	M 01	1/28.	Biotite	2.795	1.205	0.024	0.229	0.831			0.014	1.783	0.000	0.055	0.904	0.000	1.851	0.129	0.020
C11.JL.29A	M 01	1/29.	Biotite	2.813	1.187	0.030	0.223	0.868			0.014	1.751	0.000	0.065	0.875	0.000	1.852	0.130	0.018
C11.JL.29A	M 01	1/30.	Biotite	2.815	1.185	0.042	0.224	0.873			0.015	1.720	0.000	0.069	0.876	0.000	1.859	0.120	0.020
C11.JL.29A	M 01	1/31.	Biotite	2.814	1.186	0.034	0.226	0.875			0.015	1.733	0.000	0.054	0.881	0.000	1.859	0.117	0.024
C11.JL.29A	M 01	1/32.	Biotite	2.818	1.182	0.052	0.225	0.860			0.015	1.718	0.000	0.056	0.883	0.000	1.867	0.113	0.020
C11.JL.29A	M 01	1/33.	Biotite	2.820	1.180	0.042	0.227	0.876			0.014	1.720	0.000	0.048	0.879	0.000	1.872	0.104	0.024
C11.JL.29A	M 01	1/34.	Biotite	2.814	1.186	0.037	0.222	0.857			0.015	1.753	0.000	0.049	0.891	0.000	1.870	0.111	0.019
C11.JL.29A	no image	1/1.	diabantite	3.119	0.881	1.150	0.013		0.191	1.168	0.046	3.097	0.049	0.000	0.043		7.899	0.101	0.000
C11.JL.29A	no image	1/2.	diabantite	3.106	0.894	1.099	0.009		0.160	1.176	0.045	3.219	0.044	0.000	0.036		7.873	0.127	0.000
C11.JL.29A	no image	1/3.	pycnochlorite	3.084	0.916	1.105	0.000		0.101	1.285	0.044	3.196	0.126	0.000	0.021		8.000	0.000	0.000
C11.JL.29A	no image	1/4.	diabantite	3.105	0.895	1.059	0.094		0.269	0.950	0.032	3.121	0.031	0.000	0.093		7.730	0.219	0.050
C11.JL.29A	no image	1/5.	pycnochlorite	3.049	0.951	1.116	0.017		0.139	1.164	0.041	3.274	0.027	0.000	0.046		7.886	0.114	0.000
C11.JL.29A	no image	1/6.	pycnochlorite	3.080	0.920	1.099	0.005		0.142	1.230	0.040	3.211	0.037	0.000	0.054		7.860	0.140	0.000
C11.JL.29A	no image	1/7.	pycnochlorite	3.033	0.967	1.127	0.006		0.124	1.275	0.054	3.202	0.027	0.000	0.018		7.904	0.096	0.000
C11.JL.29A	no image	1/8.	Biotite	2.831	1.155	0.000	0.251	0.821			0.015	1.841	0.000	0.022	0.831	0.000	1.900	0.076	0.024
C12.JL.180	M 01	1/1.	Biotite	2.783	1.216	0.000	0.244	0.924			0.017	1.693	0.000	0.028	0.946	0.000	1.894	0.076	0.030
C12.JL.180	M 01	1/2.	Biotite	2.780	1.220	0.008	0.248	0.920			0.018	1.666	0.000	0.029	0.966	0.000	1.894	0.073	0.033
C12.JL.180	M 01	1/3.	Biotite	2.775	1.225	0.002	0.248	0.920			0.016	1.685	0.000	0.027	0.958	0.000	1.897	0.071	0.033
C12.JL.180	M 01	1/4.	Biotite	2.787	1.213	0.015	0.232	0.909			0.018	1.699	0.000	0.036	0.952	0.000	1.883	0.083	0.034
C12.JL.180	M 01	1/5.	Biotite	2.773	1.227	0.009	0.223	0.902			0.017	1.734	0.000	0.033	0.968	0.000	1.891	0.082	0.027
C12.JL.180	M 01	1/6.	Biotite	2.788	1.212	0.005	0.239	0.914			0.018	1.690	0.000	0.033	0.963	0.000	1.892	0.078	0.030
C12.JL.180	M_03	1/1.	Biotite	2.803	1.189	0.000	0.247	0.919			0.018	1.687	0.000	0.032	0.954	0.000	1.893	0.075	0.032
C12.JL.180	M_03	1/2.	Biotite	2.797	1.191	0.000	0.254	0.917			0.020	1.675	0.000	0.035	0.965	0.000	1.887	0.082	0.030

Mineral info.				T-site		O-site						I-site				H-site		
Sample	Mica no.4	Spot no.	Species	Si	Al iv	Al vi	Ti	Fe(tot)	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Sr	OH*	F	Cl
C12.JL.180	M_03	1/3.	Biotite	2.789	1.211	0.017	0.227	0.875			0.016	1.738	0.000	0.042	0.955	0.000	1.880	0.094	0.026
C12.JL.180	M_03	1/4.	Biotite	2.791	1.209	0.019	0.229	0.887			0.017	1.714	0.000	0.037	0.964	0.000	1.882	0.092	0.026
C12.JL.180	M_03	1/5.	Biotite	2.789	1.211	0.007	0.227	0.884			0.018	1.742	0.000	0.030	0.962	0.000	1.876	0.094	0.030
C12.JL.180	M_03	1/6.	Biotite	2.786	1.214	0.010	0.231	0.907			0.016	1.701	0.000	0.045	0.966	0.000	1.890	0.085	0.025
C12.JL.180	M_03	1/7.	Biotite	2.784	1.216	0.009	0.231	0.904			0.015	1.713	0.000	0.040	0.961	0.000	1.882	0.092	0.026
C12.JL.180	M_03	1/8.	Biotite	2.790	1.198	0.000	0.231	0.904			0.017	1.735	0.000	0.036	0.974	0.000	1.869	0.102	0.029
C12.JL.180	M_03	1/9.	Biotite	2.775	1.225	0.003	0.237	0.892			0.016	1.726	0.000	0.037	0.965	0.000	1.877	0.096	0.026
C12.JL.180	M_04	1/1.	diabantite	3.392	0.608	0.895	0.321		0.096	1.022	0.025	1.948	0.000	0.049	2.300		7.768	0.147	0.085
C12.JL.180	M_04	1/2.	Biotite	2.801	1.191	0.000	0.250	0.911			0.019	1.683	0.000	0.026	0.969	0.000	1.900	0.069	0.032
C12.JL.180	M_04	1/3.	Biotite	2.807	1.192	0.000	0.244	0.902			0.018	1.694	0.000	0.025	0.965	0.000	1.903	0.066	0.030
C12.JL.180	M_04	1/4.	Biotite	2.811	1.185	0.000	0.250	0.905			0.019	1.682	0.000	0.035	0.954	0.000	1.905	0.066	0.029
C12.JL.180	M_04	1/5.	Biotite	2.798	1.196	0.000	0.244	0.891			0.017	1.719	0.000	0.028	0.965	0.000	1.886	0.083	0.031
C12.JL.180	M_04	1/6.	Biotite	2.791	1.209	0.002	0.238	0.892			0.018	1.720	0.000	0.031	0.961	0.000	1.895	0.073	0.032
C12.JL.180	M_04	1/7.	Biotite	2.808	1.192	0.004	0.232	0.901			0.019	1.711	0.000	0.028	0.962	0.000	1.888	0.081	0.032
C12.JL.180	M_04	1/8.	Biotite	2.820	1.180	0.023	0.214	0.854			0.017	1.766	0.000	0.036	0.948	0.000	1.886	0.090	0.024
C12.JL.180	M_04	1/9.	Biotite	2.811	1.189	0.014	0.219	0.870			0.016	1.752	0.000	0.035	0.962	0.000	1.877	0.090	0.033
C12.JL.180	M_04	1/10.	Biotite	2.797	1.203	0.007	0.236	0.881			0.017	1.726	0.000	0.032	0.958	0.000	1.889	0.083	0.028
C12.JL.180	M_04	1/11.	Biotite	2.792	1.199	0.000	0.261	0.896			0.017	1.691	0.000	0.028	0.950	0.000	1.888	0.081	0.032
C12.JL.180	M_04	1/12.	Biotite	2.800	1.200	0.007	0.228	0.884			0.015	1.734	0.000	0.036	0.962	0.000	1.882	0.088	0.031
C12.JL.180	M_04	1/13.	Biotite	2.815	1.185	0.010	0.226	0.881			0.017	1.731	0.000	0.029	0.967	0.000	1.887	0.080	0.033
C12.JL.180	M_04	1/14.	Biotite	2.815	1.185	0.026	0.207	0.848			0.016	1.775	0.000	0.036	0.963	0.000	1.886	0.092	0.023
C12.JL.180	M_04	1/15.	Biotite	2.795	1.205	0.001	0.235	0.880			0.016	1.734	0.000	0.033	0.968	0.000	1.881	0.088	0.032
C12.JL.180	M_04	1/16.	Biotite	2.807	1.193	0.005	0.216	0.869			0.016	1.767	0.000	0.042	0.965	0.000	1.881	0.090	0.029
C12.JL.180	M_04	1/17.	Biotite	2.816	1.184	0.023	0.209	0.846			0.016	1.777	0.000	0.039	0.961	0.000	1.887	0.089	0.024
C12.JL.180	M_04	1/18.	Biotite	2.839	1.161	0.016	0.203	0.839			0.016	1.797	0.000	0.032	0.962	0.000	1.881	0.094	0.025
C12.JL.180	M_04	1/19.	Biotite	2.803	1.190	0.000	0.227	0.881			0.016	1.756	0.000	0.039	0.966	0.000	1.874	0.095	0.032
C12.JL.180	M_04	1/20.	diabantite	3.174	0.826	0.936	0.160		0.103	1.349	0.041	2.701	0.070	0.000	0.766		7.920	0.080	0.000
C12.JL.180	M_04	1/21.	pycnochlorite	3.002	0.998	1.017	0.038		0.039	1.633	0.054	3.087	0.039	0.000	0.066		8.000	0.000	0.000
C12.JL.180	M_04	1/22.	diabantite	3.264	0.736	0.893	0.222		0.182	1.121	0.033	2.504	0.123	0.000	1.012		7.815	0.146	0.039
C12.JL.180	M_05	1/1.	Biotite	2.801	1.199	0.000	0.247	0.883			0.017	1.709	0.000	0.032	0.959	0.000	1.883	0.087	0.030
C12.JL.180	M_05	1/2.	Biotite	2.785	1.203	0.000	0.271	0.917			0.016	1.651	0.000	0.025	0.971	0.000	1.899	0.073	0.028
C12.JL.180	M_05	1/3.	Biotite	2.784	1.212	0.000	0.250	0.897			0.016	1.691	0.021	0.040	0.937	0.000	1.900	0.073	0.027
C12.JL.180	M_05	1/4.	Biotite	2.798	1.202	0.005	0.233	0.903			0.017	1.709	0.000	0.032	0.965	0.000	1.896	0.078	0.027
C12.JL.180	M_05	1/5.	Biotite	2.793	1.207	0.017	0.225	0.876			0.016	1.738	0.000	0.035	0.961	0.000	1.885	0.089	0.025
C12.JL.180	M_05	1/6.	Biotite	2.794	1.206	0.014	0.230	0.894			0.016	1.707	0.000	0.042	0.966	0.000	1.888	0.085	0.028

Mineral info.				T-site		O-site						I-site				H-site		
Sample	Mica no.4	Spot no.	Species	Si	Al iv	Al vi	Ti	Fe(tot)	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Sr	OH*	F	Cl
C12.JL.180	M_05	1/7.	Biotite	2.794	1.206	0.006	0.232	0.889			0.017	1.725	0.000	0.033	0.964	0.000	1.884	0.087	0.029
C12.JL.180	M_05	1/8.	Biotite	2.803	1.197	0.015	0.238	0.887			0.016	1.697	0.000	0.030	0.968	0.000	1.892	0.077	0.030
C12.JL.180	M_05	1/9.	Biotite	2.786	1.214	0.011	0.229	0.888			0.016	1.726	0.000	0.037	0.967	0.000	1.892	0.077	0.030
C12.JL.180	M_05	1/10.	Biotite	2.787	1.213	0.013	0.229	0.893			0.016	1.714	0.000	0.032	0.978	0.000	1.897	0.073	0.030
C12.JL.180	M_05	1/11.	Biotite	2.812	1.188	0.015	0.234	0.877			0.017	1.716	0.000	0.035	0.954	0.000	1.890	0.080	0.030
C12.JL.180	M_05	1/12.	Biotite	2.812	1.188	0.007	0.231	0.884			0.016	1.727	0.000	0.029	0.961	0.000	1.886	0.085	0.029
C12.JL.180	M_05	1/13.	Biotite	2.795	1.205	0.005	0.244	0.886			0.015	1.707	0.000	0.029	0.968	0.000	1.886	0.082	0.031
C12.JL.180	M_05	1/14.	Biotite	2.784	1.195	0.000	0.282	0.917			0.017	1.644	0.000	0.023	0.971	0.000	1.904	0.066	0.030
C12.JL.180	M_05	1/15.	Biotite	2.801	1.199	0.023	0.232	0.896			0.016	1.693	0.000	0.035	0.958	0.000	1.885	0.085	0.030
C12.JL.186	M_01	1/1.	diabantite	3.417	0.583	0.968	0.236		0.016	1.254	0.019	1.838	0.000	0.166	2.320		7.793	0.207	0.000
C12.JL.186	M_01	1/2.	Biotite	2.808	1.192	0.037	0.185	1.068			0.013	1.555	0.000	0.068	1.003	0.000	1.901	0.099	0.000
C12.JL.186	M_01	1/3.	Biotite	2.821	1.179	0.040	0.189	1.065			0.015	1.550	0.000	0.066	0.977	0.000	1.906	0.094	0.000
C12.JL.186	M_01	1/4.	Biotite	2.796	1.204	0.035	0.195	1.072			0.013	1.540	0.000	0.074	0.995	0.000	1.910	0.090	0.000
C12.JL.186	M_01	1/5.	Biotite	2.794	1.206	0.040	0.190	1.088			0.013	1.526	0.000	0.068	1.005	0.000	1.903	0.097	0.000
C12.JL.186	M_01	1/6.	Biotite	2.813	1.187	0.039	0.196	1.064			0.016	1.542	0.000	0.068	0.976	0.000	1.902	0.089	0.009
C12.JL.186	M_01	1/7.	Biotite	2.801	1.199	0.041	0.195	1.068			0.015	1.536	0.000	0.064	0.993	0.000	1.896	0.104	0.000
C12.JL.186	M_01	1/8.	Biotite	2.821	1.179	0.044	0.188	1.066			0.013	1.550	0.000	0.068	0.969	0.000	1.894	0.106	0.000
C12.JL.186	M_01	1/9.	Biotite	2.819	1.181	0.042	0.188	1.077			0.011	1.542	0.000	0.068	0.975	0.000	1.903	0.097	0.000
C12.JL.186	M_01	1/10.	Biotite	2.804	1.196	0.033	0.190	1.077			0.015	1.556	0.000	0.068	0.972	0.000	1.898	0.102	0.000
C12.JL.186	M_01	1/11.	diabantite	3.446	0.554	0.947	0.251		0.061	1.239	0.017	1.753	0.010	0.155	2.307		7.745	0.221	0.034
C12.JL.186	M_01	1/12.	Biotite	2.828	1.172	0.061	0.192	1.055			0.016	1.527	0.000	0.071	0.952	0.000	1.915	0.085	0.000
C12.JL.186	M_02	1/1.	Biotite	2.837	1.163	0.052	0.179	1.045			0.013	1.588	0.000	0.066	0.936	0.000	1.897	0.103	0.000
C12.JL.186	M_02	1/2.	Biotite	2.855	1.145	0.075	0.175	1.036			0.012	1.570	0.000	0.067	0.920	0.000	1.893	0.107	0.000
C12.JL.186	M_02	1/3.	Biotite	2.830	1.170	0.039	0.193	1.037			0.011	1.595	0.000	0.068	0.927	0.000	1.900	0.100	0.000
C12.JL.186	M_02	1/4.	Biotite	2.809	1.191	0.052	0.199	1.052			0.012	1.551	0.000	0.070	0.938	0.000	1.899	0.101	0.000
C12.JL.186	M_02	1/5.	Biotite	2.834	1.166	0.044	0.188	1.043			0.014	1.571	0.000	0.069	0.961	0.000	1.890	0.110	0.000
C12.JL.186	M_02	1/6.	Biotite	2.831	1.169	0.047	0.185	1.046			0.013	1.579	0.000	0.072	0.940	0.000	1.892	0.108	0.000
C12.JL.186	M_02	1/7.	Biotite	2.846	1.154	0.065	0.181	1.040			0.013	1.574	0.000	0.068	0.916	0.000	1.897	0.103	0.000
C12.JL.186	M_02	1/8.	Biotite	2.811	1.189	0.050	0.197	1.052			0.013	1.556	0.000	0.070	0.940	0.000	1.902	0.098	0.000
C12.JL.186	M_02	1/9.	Biotite	2.833	1.167	0.065	0.167	1.053			0.014	1.584	0.000	0.079	0.925	0.000	1.898	0.102	0.000
C12.JL.186	M_02	1/10.	Biotite	2.831	1.169	0.061	0.171	1.059			0.013	1.571	0.000	0.070	0.943	0.000	1.892	0.108	0.000
C12.JL.186	M_02	1/11.	Biotite	2.851	1.149	0.060	0.169	1.042			0.013	1.596	0.000	0.066	0.922	0.000	1.893	0.107	0.000
C12.JL.186	M_02	1/12.	Biotite	2.844	1.156	0.058	0.182	1.042			0.013	1.570	0.000	0.078	0.925	0.000	1.893	0.107	0.000
C12.JL.186	M_02	1/13.	Biotite	2.850	1.150	0.061	0.168	1.045			0.014	1.593	0.000	0.073	0.917	0.000	1.895	0.105	0.000
C12.JL.186	M_02	1/14.	Biotite	2.839	1.161	0.067	0.171	1.048			0.013	1.582	0.000	0.067	0.923	0.000	1.896	0.104	0.000

Mineral info.				T-site		O-site							I-site				H-site		
Sample	**Mica no.4**	**Spot no.**	**Species**	**Si**	**Al iv**	**Al vi**	**Ti**	**Fe(tot)**	**Fe3+**	**Fe2+**	**Mn**	**Mg**	**Ca**	**Na**	**K**	**Sr**	**OH***	**F**	**Cl**
C12.JL.186	M_02	1/15.	Biotite	2.837	1.163	0.062	0.171	1.041			0.013	1.587	0.000	0.073	0.938	0.000	1.893	0.107	0.000
C12.JL.186	M_02	1/16.	Biotite	2.824	1.176	0.044	0.185	1.036			0.013	1.589	0.000	0.076	0.954	0.000	1.893	0.107	0.000
C12.JL.186	M_02	1/17.	Biotite	2.852	1.148	0.047	0.176	1.048			0.013	1.597	0.000	0.060	0.927	0.000	1.882	0.118	0.000
C12.JL.186	M_02	1/18.	Biotite	2.845	1.155	0.047	0.184	1.035			0.013	1.587	0.000	0.077	0.930	0.000	1.898	0.102	0.000

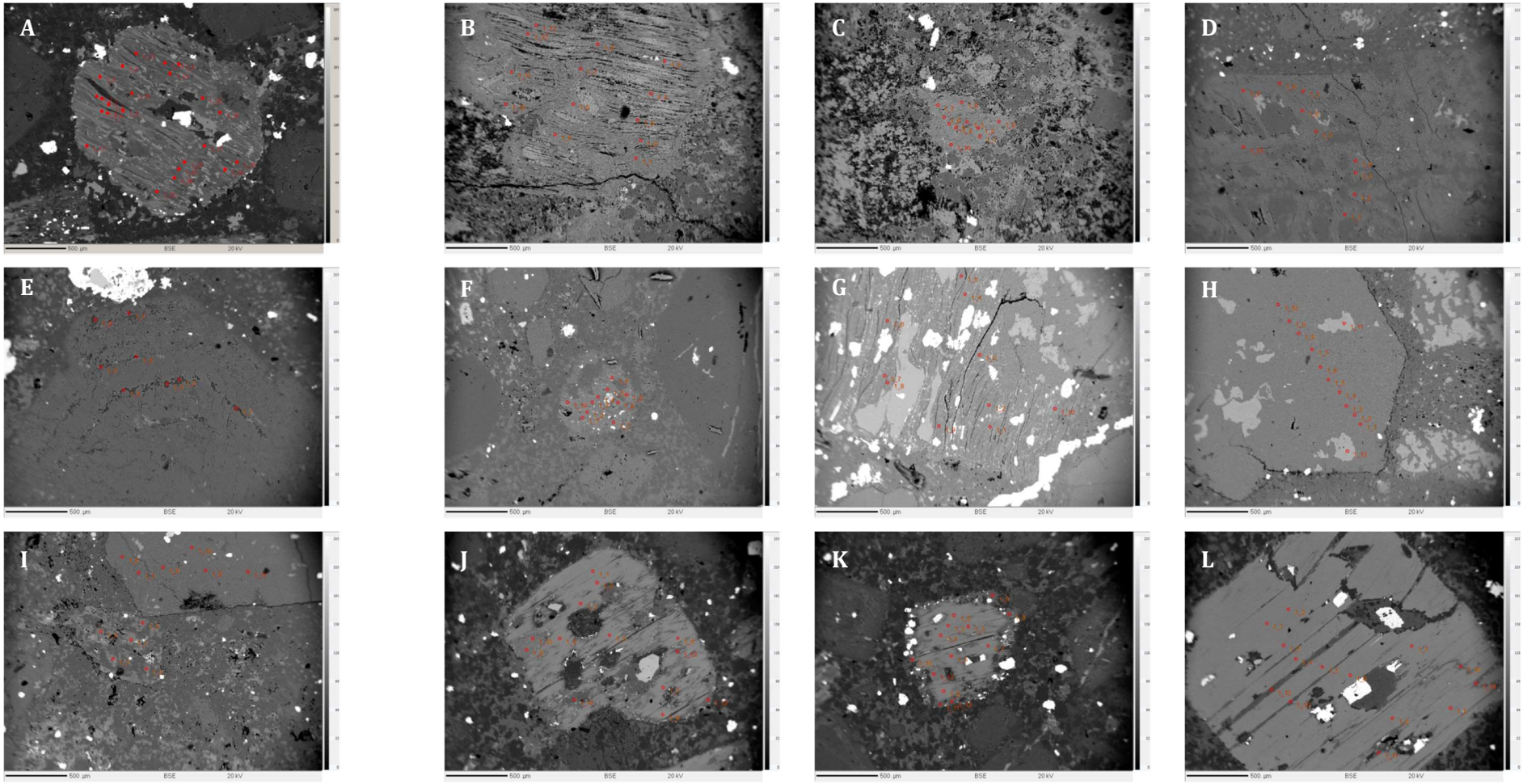


Figure 3.6: Back scattered electron images of micas with spot locations A)C12.JL.48 M 01, biotite altering to pynochlorite, B), C12.JL.141 M01, biotite altering to pynochlorite; C) C12.JL.141 MO2, chlorite alteration; D)C12.JL.170 M 01, altered to muscovite-illite; E) C12.JL.170 M 02, illite alteration of feldspar; F) C12.JL.170 M_03, Biotite altered to muscovite; G) C12.JL.170 M_04 biotite altered to illite; H) C12.JL.170 M_05, Plagioclase altered to illite; I) C12.JL. 170 M_06, J) C12.JL.47 M 01, biotite phenocryst; K) C12.JL.47 M_02 biotite altering to chlorite; L) C12.JL.180 M_02 biotite phenocryst

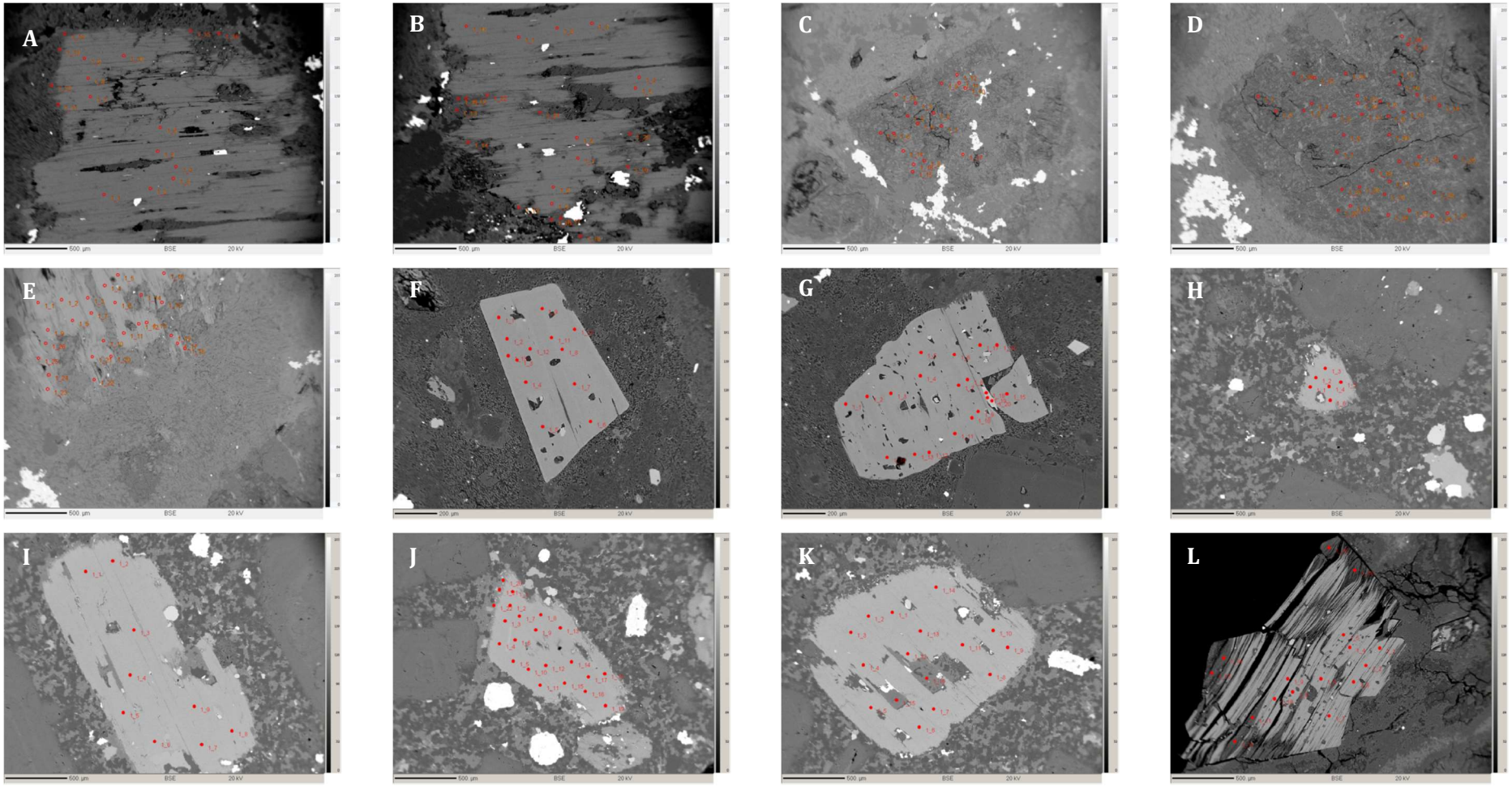


Figure 3.7: Back scattered electron image of micas: A) C11.JL.178, M_01, biotite phenocryst, B) C11.JL.178 M 02 biotite phenocryst altering to chlorite, C) C11.JL.178 M_03, plagioclase altered to illite: D) C11.JL.178 M_04, plagioclase altered to illite: E) C11.JL.178 M_05 biotite altering to chlorite; F) C12.JL.183 M 01, biotite phenocryst; G) C11.JL.29A, biotite phenocryst; H) C12.JL.180 M 01, I) C12.JL.180 M_03, biotite phenocryst; J) C12.JL.180 M_04, biotite phenocryst; K) C12.JL.180 M_05, biotite phenocryst; L) C12.JL.186 biotite phenocryst

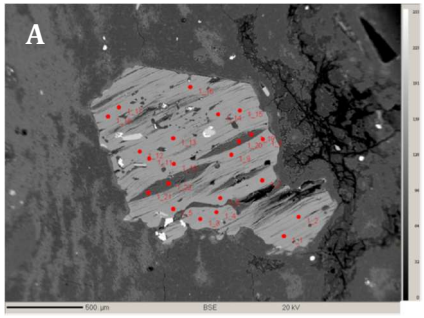


Figure 3.8: Back scattered electron image of biotite phenocryst: A) C12.JL.186, biotite phenocryst

3.4 Electron microprobe data of sulphides

The setup to analyse sulphides was aided by discussion with John Spratt at the Natural History Museum, London. The Cameca SX 100 electron microprobe was run at 25keV and 40nA, with the current was very stable, with current variation of <0.05% (up to 40.02nA) over a 12 hour run with a spot size of 10μm. A high current excites gold Lα_{lpha} lines, which is used to detect occurrence of invisible gold within pyrite and chalcopyrite Lαttice, which was not detected.

Wavelength-dispersive electron spectroscopy is analysed using five wavelength-dispersive X-ray crystal configuration outlined in Table 3.12.

Table 3.12: Analytical sept up of Cameca SX100 electron microprobe for sulphides

Spectrometer position	Element and wavelength	Crystal	Dwell time (ms)
Sp1	S Kα	PET	1328.00
Sp4	Fe Kα	LIF	1308.00
Sp4	Mn Kα	LIF	1308.00
Sp4	Co Kα	LIF	1308.00
Sp4	Cu Kα	LIF	1308.00
Sp4	Zn Kα	LIF	1308.00
Sp2	As Lα	LTAP	1330.00
Sp1	Sb Lα	PET	1328.00
Sp3	Au Lα	LLIF	1823.00
Sp5	Au Lα	LLIF	1830.00
Sp4	Ni Kα	LIF	1308.00

Nine standards are used to calibrate the electron microprobe counts to weight percent as outlined in Table 3.13.

Table 3.13: Standards used for quantification, their composition and calibration files.

Standard Name	Standard composition	Calibration file name (Element intensity cps/nA) :
S , Zn On ZNS2 STDIC	Zn : 67.1%, S : 32.9%	S , Zn : ZNS2 STDIC_S Sp1_ZnSp4_001.calDat (S : 164.4 cps/nA, Zn : 200.2 cps/nA)
Fe On FE2 STD120	Fe : 100.%	Fe : FE2 STD120_FeSp4_001.calDat (Fe : 421.8 cps/nA)
Mn On PMN STD105	Mn : 100.%	Mn : PMN STD105_MnSp4_001.calDat (Mn : 406.4 cps/nA)
Co On PCO STD121	Co : 100.%	Co : PCO STD121_CoSp4_001.calDat (Co : 410.6 cps/nA)
Cu On CU3 STD123	Cu : 100.%	Cu : CU3 STD123_CuSp4_001.calDat (Cu : 359.0 cps/nA)
As On GAA STD208	Ga : 48.208%, As : 51.792%	As : GAA STD208_AsSp2_049.calDat (As : 597.8 cps/nA)
Sb On PSB STD109	Sb : 100.%	Sb : PSB STD109_SbSp1_001.calDat (Sb : 602.4 cps/nA)
Au, Au On PAU STD189	Au : 100.%	Au, Au : PAU STD189_AuSp3_AuSp5_001.calDat (Au : 756.2 cps/nA, Au : 1028.7 cps/nA)
Ni On NI2 STD122	Ni : 100.%	Ni : NI2 STD122_NiSp4_001.calDat (Ni : 393.9 cps/nA)

The results are presented in weight percent and exceed the detection limits, with the results are below detection limit assigned a value of zero (Table 3.14). The locations of sulphide analysis are displayed in Figure 3.9 and Figure 3.10.

Sulphide stoichiometry is calculated on the basis of two sulphur anions per formula unit for pyrite and chalcopyrite and one sulphur anion per formula unit for sphalerite (Table 3.16). Where no mineral is identified the "mineral" is classified as "non-stoichiometric".

Table 3.14: Results of microprobe analysis of sulphides.

Sample	Sulphide	Spot no.	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total
B05	PY1	1/1.	53.68	46.82	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.55
B05	PY1	1/2.	53.77	46.98	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.78
B05	PY1	1/3.	53.64	46.84	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.51
B05	PY1	1/4.	53.65	46.82	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.48
B05	PY2	1/1.	53.27	46.77	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.05
B05	PY2	1/2.	53.68	46.55	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.25
B05	PY2	1/3.	53.53	46.58	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.08
B05	PY2	1/5.	53.72	46.78	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.52
B05	PY3	1/1.	53.37	46.83	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.20
B05	PY3	1/2.	53.67	46.62	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.31
B05	PY3	1/3.	53.55	46.53	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.09
B05	PY3	1/4.	53.88	46.40	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.30
B28	PY1	1/1.	53.50	44.46	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	98.00
B28	PY1	1/2.	52.25	42.73	0.00	0.16	1.29	0.00	0.12	0.00	0.00	0.00	96.46
B28	PY1	1/3.	53.53	44.56	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	98.06
B28	PY1	1/4.	53.90	45.24	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	99.12
B28	PY1	1/5.	53.81	46.06	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	99.92
B28	PY2	1/2.	53.57	46.70	0.00	0.00	0.05	0.00	0.08	0.00	0.00	0.00	100.30
B28	PY2	1/3.	53.40	46.72	0.00	0.00	0.03	0.00	0.07	0.00	0.00	0.00	100.17
B28	PY2	1/4.	54.08	46.25	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.35
B28	PY3	1/2.	53.91	46.19	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.10
B28	PY3	1/3.	53.72	46.25	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.05
B28	PY3	1/4.	53.69	46.41	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.11
B28	PY4	1/1.	49.43	43.66	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	93.12
B28	PY4	1/2.	49.27	43.47	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	92.74
B28	PY4	1/3.	49.68	44.34	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	94.05
B28	PY4	1/4.	50.30	44.76	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	95.12
B28	PY4	1/5.	49.86	44.32	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	94.21
B43	PY1	1/1.	54.07	46.44	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.54

Sample	Sulphide	Spot no.	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total
B43	PY1	1/2.	53.56	45.80	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.33
B43	PY1	1/3.	53.64	46.51	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.16
B43	PY1	1/4.	54.01	46.67	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.69
B43	PY1	1/5.	53.61	47.17	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.83
B43	PY1	1/6.	53.92	46.37	0.00	0.17	0.00	0.00	0.08	0.00	0.00	0.00	100.50
B43	PY2	1/1.	53.89	46.45	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.42
B43	PY2	1/2.	53.82	46.82	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.62
B43	PY2	1/3.	53.67	47.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.69
B43	PY2	1/4.	53.89	46.73	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.58
B43	PY3	1/1.	53.90	46.54	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.49
B43	PY3	1/2.	53.61	47.02	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.64
B43	PY3	1/3.	53.66	47.26	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.98
B49	PY1	1/1.	34.81	29.73	0.00	0.00	33.86	0.00	0.08	0.00	0.00	0.00	98.40
B49	PY1	1/2.	34.76	29.85	0.00	0.00	33.82	0.00	0.09	0.00	0.00	0.00	98.45
B49	PY1	1/3.	34.89	29.83	0.00	0.00	33.95	0.00	0.08	0.00	0.00	0.00	98.70
B49	PY1	1/4.	34.94	29.68	0.00	0.00	33.88	0.00	0.09	0.00	0.00	0.00	98.55
B49	PY2	1/1.	34.75	29.87	0.00	0.00	33.95	0.00	0.08	0.00	0.00	0.00	98.56
B49	PY2	1/2.	34.46	29.81	0.00	0.00	33.88	0.00	0.09	0.00	0.00	0.00	98.18
B49	PY2	1/3.	34.84	29.78	0.00	0.00	33.85	0.00	0.08	0.00	0.00	0.00	98.48
B49	PY2	1/4.	34.70	29.68	0.00	0.00	33.83	0.03	0.08	0.00	0.00	0.00	98.29
B49	PY3	1/1.	34.90	29.83	0.00	0.00	34.02	0.00	0.08	0.00	0.00	0.00	98.77
B49	PY3	1/2.	34.75	30.03	0.00	0.00	33.86	0.03	0.09	0.00	0.00	0.00	98.68
B49	PY3	1/3.	35.26	29.51	0.00	0.00	33.72	0.00	0.08	0.00	0.00	0.00	98.45
C11.JL.122	PY1	1/1.	53.30	45.84	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	99.15
C11.JL.122	PY1	1/2.	53.75	45.25	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	99.07
C11.JL.122	PY1	1/3.	52.02	44.65	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	96.70
C11.JL.122	PY1	1/4.	52.19	44.20	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	96.46
C11.JL.122	PY1	1/5.	32.01	22.87	0.00	0.00	28.65	5.90	0.31	0.00	0.00	0.00	89.68
C11.JL.122	PY1	1/6.	29.74	1.32	0.00	0.00	0.92	59.48	0.15	0.00	0.00	0.00	91.52
C11.JL.122	PY2	1/1.	50.81	44.79	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	95.61
C11.JL.122	PY2	1/2.	51.45	44.84	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	96.35

Sample	Sulphide	Spot no.	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total
C11.JL.122	PY2	1/3.	51.11	43.92	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	95.04
C11.JL.122	PY2	1/4.	50.84	43.89	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	94.77
C11.JL.122	PY2	1/5.	50.73	43.38	0.00	0.00	0.66	0.26	0.18	0.00	0.00	0.00	95.06
C11.JL.122	PY2	1/6.	32.74	0.07	0.00	0.00	0.52	64.50	0.11	0.00	0.00	0.00	97.90
C11.JL.122	PY3	1/1.	53.23	44.93	0.00	0.31	0.00	0.00	0.10	0.00	0.00	0.00	98.48
C11.JL.122	PY3	1/2.	51.74	44.16	0.00	0.36	0.00	0.00	0.09	0.00	0.00	0.00	96.32
C11.JL.122	PY3	1/3.	49.29	45.07	0.00	0.40	0.00	0.00	0.09	0.00	0.00	0.00	94.79
C11.JL.122	PY3	1/4.	52.12	42.95	0.00	0.57	0.00	0.00	0.09	0.00	0.00	0.00	95.67
C11.JL.122	PY4	1/1.	53.38	44.94	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	98.34
C11.JL.122	PY4	1/2.	51.70	44.86	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	96.55
C11.JL.122	PY4	1/3.	51.32	44.54	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	95.89
C11.JL.122	PY4	1/4.	34.39	29.20	0.00	0.00	32.72	0.00	0.13	0.00	0.00	0.00	96.40
C11.JL.122	PY5	1/1.	53.07	45.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	98.04
C11.JL.122	PY5	1/2.	53.75	45.62	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	99.43
C11.JL.122	PY5	1/3.	52.33	44.94	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	97.29
C11.JL.122	PY5	1/4.	53.84	45.92	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	99.84
C11.JL.122	PY6	1/1.	53.85	45.53	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	99.45
C11.JL.122	PY6	1/2.	52.81	45.28	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	98.13
C11.JL.122	PY6	1/3.	47.23	44.09	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	91.32
C11.JL.122	PY6	1/4.	54.45	44.84	0.00	0.02	0.00	0.00	0.09	0.00	0.00	0.00	99.39
C11.JL.122	PY6	1/5.	52.81	45.01	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	97.88
C11.JL.122	PY6	1/6.	51.03	45.04	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	96.06
C11.JL.122	PY7	1/1.	52.88	44.65	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	97.56
C11.JL.122	PY7	1/2.	54.10	45.32	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.46
C11.JL.122	PY7	1/3.	54.00	44.86	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	98.93
C11.JL.122	PY7	1/4.	32.29	17.98	0.00	0.00	33.34	9.77	0.32	0.00	0.00	0.00	93.68
C11.JL.122	PY7	1/6.	32.46	0.39	0.00	0.00	1.31	61.44	0.41	0.00	0.00	0.00	95.99
C11.JL.122	PY7	1/7.	34.46	28.95	0.00	0.00	32.62	0.00	0.08	0.00	0.00	0.00	96.03
C11.JL.122	PY7	1/8.	34.56	28.87	0.00	0.00	32.67	0.00	0.10	0.00	0.00	0.00	96.14
C11.JL.122	PY7	1/9.	52.13	44.12	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	96.26
C11.JL.122	PY8	1/1.	53.14	44.78	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	97.92

Sample	Sulphide	Spot no.	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total
C11.JL.122	PY8	1/2.	53.74	45.30	0.00	0.09	0.00	0.00	0.09	0.00	0.00	0.00	99.14
C11.JL.122	PY8	1/3.	48.71	45.36	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	94.07
C11.JL.122	PY8	1/4.	53.35	45.45	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	98.90
C11.JL.122	PY8	1/5.	52.70	45.39	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	98.12
C11.JL.122	PY8	1/6.	52.44	45.20	0.00	0.00	0.12	0.00	0.08	0.00	0.00	0.00	97.76
C11.JL.122	PY8	1/7.	34.17	29.50	0.00	0.00	33.10	0.00	0.07	0.00	0.00	0.00	96.79
C11.JL.122	PY8	1/8.	34.05	29.23	0.00	0.00	33.14	0.00	0.08	0.00	0.00	0.00	96.45
C11.JL.122	PY8	1/9.	33.81	28.99	0.00	0.00	33.00	0.00	0.08	0.00	0.00	0.00	95.86
C11.JL.122	PY9	1/1.	49.87	43.66	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	93.51
C11.JL.122	PY9	1/2.	52.76	44.95	0.00	0.02	0.00	0.00	0.07	0.00	0.00	0.00	97.76
C11.JL.122	PY9	1/3.	51.79	45.29	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	97.09
C11.JL.122	PY9	1/4.	53.45	45.53	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.02
C11.JL.122	PY9	1/5.	51.94	44.60	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	96.55
C11.JL.122	PY10	1/1.	52.40	44.55	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	96.95
C11.JL.122	PY10	1/2.	53.30	45.77	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	99.09
C11.JL.122	PY10	1/3.	50.86	45.11	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	95.97
C11.JL.122	PY10	1/4.	53.57	45.50	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	99.08
C11.JL.122	PY10	1/5.	34.51	29.46	0.00	0.00	33.38	0.08	0.09	0.00	0.00	0.00	97.42
C11.JL.122	PY10	1/6.	34.30	28.96	0.00	0.00	33.10	0.00	0.20	0.00	0.00	0.00	96.53
C11.JL.122	PY10	1/7.	34.64	29.33	0.00	0.00	33.32	0.00	0.09	0.00	0.00	0.00	97.33
C11.JL.122	PY10	1/8.	34.45	29.07	0.00	0.00	33.14	0.00	0.09	0.00	0.00	0.00	96.71
C11.JL.122	PY11	1/1.	52.19	46.13	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	98.38
C11.JL.122	PY11	1/2.	54.26	45.69	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.01
C11.JL.122	PY11	1/3.	51.66	45.06	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	96.69
C11.JL.122	PY11	1/4.	52.05	45.26	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	97.33
C11.JL.122	PY11	1/5.	52.11	46.30	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	98.41
C11.JL.122	PY11	1/6.	34.68	29.78	0.00	0.00	33.72	0.00	0.07	0.00	0.00	0.00	98.17
C11.JL.122	PY11	1/7.	34.63	29.79	0.00	0.00	33.68	0.00	0.10	0.00	0.00	0.00	98.20
C11.JL.122	PY11	1/8.	34.60	29.62	0.00	0.00	33.70	0.00	0.07	0.00	0.00	0.00	97.95
C11.JL.122	PY11	1/9.	34.39	29.53	0.00	0.00	33.88	0.00	0.09	0.00	0.00	0.00	97.84
C11.JL.122	PY11	1/10.	33.96	28.68	0.00	0.00	33.23	0.09	0.08	0.00	0.00	0.00	95.90

Sample	Sulphide	Spot no.	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total
C11.JL.122	PY12	1/1.	53.49	45.93	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	99.39
C11.JL.122	PY12	1/2.	53.78	45.94	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	99.79
C11.JL.122	PY12	1/3.	50.96	45.57	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	96.60
C11.JL.122	PY12	1/4.	53.50	45.93	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.47
C11.JL.122	PY12	1/5.	54.27	45.86	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.20
C11.JL.122	PY12	1/6.	34.77	29.55	0.00	0.00	33.49	0.00	0.08	0.00	0.00	0.00	97.83
C11.JL.122	PY12	1/7.	34.78	29.56	0.00	0.00	33.37	0.00	0.08	0.00	0.00	0.00	97.72
C11.JL.122	PY12	1/8.	32.71	4.36	0.00	0.00	61.84	0.00	0.04	0.00	0.00	0.00	98.87
C11.JL.122	PY13	1/1.	47.59	43.00	0.00	0.09	0.00	0.00	0.08	0.00	0.00	0.00	90.69
C11.JL.122	PY13	1/2.	50.63	45.47	0.00	0.22	0.00	0.00	0.08	0.00	0.00	0.00	96.34
C11.JL.122	PY13	1/3.	54.84	45.75	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.60
C11.JL.122	PY13	1/4.	53.86	45.79	0.00	0.03	0.00	0.00	0.09	0.00	0.00	0.00	99.70
C11.JL.122	PY13	1/5.	53.99	45.42	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.44
C11.JL.122	PY13	1/6.	53.02	45.98	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.00
C11.JL.122	PY13	1/7.	52.34	45.40	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	97.72
C11.JL.122	PY14	1/1.	50.79	41.91	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	92.68
C11.JL.122	PY14	1/2.	54.37	45.07	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	99.45
C11.JL.122	PY14	1/3.	50.55	45.58	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	96.12
C11.JL.122	PY14	1/4.	52.18	45.41	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	97.60
C11.JL.122	PY14	1/5.	54.11	45.15	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.26
C11.JL.122	PY14	1/6.	53.58	44.96	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	98.57
C11.JL.122	PY14	1/7.	54.14	45.32	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.50
C11.JL.122	PY14	1/8.	55.15	44.58	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.67
C11.JL.122	PY14	1/9.	54.31	44.76	0.00	0.03	0.00	0.00	0.08	0.00	0.00	0.00	99.18
C11.JL.122	PY14	1/10.	34.48	29.16	0.00	0.00	33.04	0.00	0.08	0.00	0.00	0.00	96.69
C11.JL.122	PY14	1/11.	34.66	29.25	0.00	0.00	33.07	0.00	0.08	0.00	0.00	0.00	97.01
C11.JL.122	PY14	1/12.	34.05	28.93	0.00	0.00	32.88	0.00	0.14	0.00	0.00	0.00	95.90
C11.JL.122	PY14	1/13.	34.57	29.09	0.00	0.00	33.07	0.00	0.08	0.00	0.00	0.00	96.75
C11.JL.122	PY14	1/14.	34.55	29.04	0.00	0.00	32.96	0.00	0.09	0.00	0.00	0.00	96.61
C11.JL.122	PY14	1/18.	53.28	44.76	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	98.09
C11.JL.122	PY14	1/19.	53.78	44.49	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	98.24

Sample	Sulphide	Spot no.	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total
C11.JL.122	PY15	1/1.	50.25	45.70	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	95.96
C11.JL.122	PY15	1/2.	52.30	45.44	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	97.76
C11.JL.122	PY15	1/3.	51.71	45.24	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	97.02
C11.JL.122	PY15	1/4.	54.89	45.94	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.86
C11.JL.122	PY15	1/5.	54.71	46.11	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	100.84
C11.JL.122	PY15	1/6.	54.92	45.45	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	100.42
C11.JL.122	PY15	1/7.	53.48	45.46	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	98.97
C11.JL.122	PY15	1/8.	51.48	45.32	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	96.86
C11.JL.122	PY15	1/9.	51.42	44.61	0.00	0.02	0.00	0.00	0.08	0.00	0.00	0.00	96.11
C11.JL.122	PY15	1/10.	52.97	45.84	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	98.85
C11.JL.122	PY15	1/11.	52.61	45.15	0.00	0.02	0.00	0.00	0.08	0.00	0.00	0.00	97.80
C11.JL.122	PY15	1/12.	50.60	45.47	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	96.04
C11.JL.122	PY15	1/13.	51.68	45.67	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	97.38
C12.JL.148	PY1	1/1.	34.55	29.96	0.00	0.00	33.76	0.00	0.08	0.00	0.00	0.00	98.31
C12.JL.148	PY1	1/2.	34.56	30.10	0.00	0.00	33.78	0.00	0.09	0.00	0.00	0.00	98.43
C12.JL.148	PY1	1/3.	53.07	46.32	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.37
C12.JL.148	PY2	1/1.	53.08	45.67	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.08	98.89
C12.JL.148	PY2	1/2.	53.21	45.66	0.00	0.08	0.00	0.00	0.09	0.00	0.00	0.00	99.01
C12.JL.148	PY2	1/3.	53.14	45.72	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	98.89
C12.JL.148	PY2	1/4.	53.08	45.59	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	98.74
C12.JL.148	PY2	1/5.	34.55	30.18	0.00	0.00	32.63	0.11	0.09	0.00	0.00	0.00	97.44
C12.JL.148	PY2	1/6.	34.44	30.01	0.00	0.00	32.98	0.05	0.08	0.00	0.00	0.00	97.49
C12.JL.148	PY2	1/7.	34.80	29.77	0.00	0.00	33.57	0.00	0.07	0.00	0.00	0.00	98.14
C12.JL.148	PY2	1/8.	34.22	29.68	0.00	0.00	33.54	0.00	0.09	0.00	0.00	0.00	97.46
C12.JL.148	PY2	1/9.	34.58	29.73	0.00	0.00	33.43	0.00	0.08	0.00	0.00	0.00	97.74
C12.JL.148	PY3	1/2.	34.52	29.69	0.00	0.00	33.43	0.00	0.10	0.00	0.00	0.00	97.69
C12.JL.148	PY3	1/3.	34.48	29.66	0.00	0.00	33.43	0.04	0.09	0.00	0.00	0.00	97.65
C12.JL.148	PY3	1/4.	34.49	29.72	0.00	0.00	33.45	0.00	0.09	0.00	0.00	0.00	97.73
C12.JL.148	PY3	1/5.	34.40	29.91	0.00	0.00	33.46	0.00	0.08	0.00	0.00	0.00	97.79
C12.JL.148	PY3	1/6.	34.49	29.73	0.00	0.00	33.50	0.00	0.09	0.00	0.00	0.00	97.77
C12.JL.148	PY3	1/7.	34.46	29.67	0.00	0.00	33.56	0.00	0.08	0.00	0.00	0.00	97.74

Sample	Sulphide	Spot no.	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total
C12.JL.228	PY7	1/1.	53.28	45.67	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	99.00
C12.JL.228	PY7	1/2.	53.14	45.44	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	98.56
C12.JL.228	PY7	1/3.	24.62	0.66	0.00	0.00	35.82	6.99	1.82	29.56	0.00	0.00	99.46
C12.JL.228	PY7	1/4.	34.77	28.28	0.00	0.00	32.70	0.00	0.07	0.00	0.00	0.00	95.78
C12.JL.228	PY8	1/1.	53.32	45.97	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	99.37
C12.JL.228	PY8	1/2.	53.24	46.00	0.00	0.02	0.00	0.00	0.09	0.00	0.00	0.00	99.33
C12.JL.228	PY8	1/3.	53.27	46.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.27
C12.JL.228	PY8	1/4.	53.21	45.74	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	98.99
C12.JL.228	PY8	1/7.	34.76	27.69	0.00	0.00	32.37	0.00	0.08	0.00	0.00	0.00	94.81
C12.JL.228	PY8	1/9.	28.94	28.14	0.00	0.00	32.35	0.00	0.05	0.00	0.00	0.00	89.39
C12.JL.228	PY9	1/1.	53.12	46.30	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	99.47
C12.JL.228	PY9	1/2.	53.36	46.35	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	99.76
C12.JL.228	PY9	1/3.	53.31	46.32	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	99.62
C12.JL.228	PY9	1/5.	34.45	29.80	0.00	0.00	33.60	0.00	0.09	0.00	0.00	0.00	97.91
C12.JL.228	PY9	1/6.	34.30	29.46	0.00	0.00	33.29	0.00	0.09	0.00	0.00	0.00	97.12
C12.JL.228	PY9	2/1.	24.47	0.73	0.00	0.00	36.39	7.10	1.83	29.53	0.00	0.00	100.02

Table 3.15: Sulphide stoichiometry. Calculations based on 2 sulphide anions pfu.with the exception of sphalerite, which is based on one sulphur anion.

Sample	Sulphide	Spot no.	Mineral	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total cations
B05	PY1	1/1.	pyrite	2.000	1.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.002
B05	PY1	1/2.	pyrite	2.000	1.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.003
B05	PY1	1/3.	pyrite	2.000	1.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.003
B05	PY1	1/4.	pyrite	2.000	1.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.002
B05	PY2	1/1.	pyrite	2.000	1.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.008
B05	PY2	1/2.	pyrite	2.000	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.996
B05	PY2	1/3.	pyrite	2.000	0.999	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.999
B05	PY2	1/5.	pyrite	2.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
B05	PY3	1/1.	pyrite	2.000	1.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.008
B05	PY3	1/2.	pyrite	2.000	0.997	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.997
B05	PY3	1/3.	pyrite	2.000	0.998	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.998

Sample	Sulphide	Spot no.	Mineral	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total cations
B05	PY3	1/4.	pyrite	2.000	0.989	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.989
B28	PY1	1/1.	pyrite	2.000	0.954	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.954
B28	PY1	1/2.	pyrite	2.000	0.939	0.000	0.003	0.025	0.000	0.000	0.000	0.000	0.000	0.967
B28	PY1	1/3.	pyrite	2.000	0.956	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.956
B28	PY1	1/4.	pyrite	2.000	0.964	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.964
B28	PY1	1/5.	pyrite	2.000	0.983	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.983
B28	PY2	1/2.	pyrite	2.000	1.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1.002
B28	PY2	1/3.	pyrite	2.000	1.005	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1.005
B28	PY2	1/4.	pyrite	2.000	0.982	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.982
B28	PY3	1/2.	pyrite	2.000	0.984	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.984
B28	PY3	1/3.	pyrite	2.000	0.989	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.989
B28	PY3	1/4.	pyrite	2.000	0.993	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.993
B28	PY4	1/1.	pyrite	2.000	1.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.014
B28	PY4	1/2.	pyrite	2.000	1.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.013
B28	PY4	1/3.	pyrite	2.000	1.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.025
B28	PY4	1/4.	pyrite	2.000	1.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.022
B28	PY4	1/5.	pyrite	2.000	1.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.021
B43	PY1	1/1.	pyrite	2.000	0.986	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.986
B43	PY1	1/2.	pyrite	2.000	0.982	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.982
B43	PY1	1/3.	pyrite	2.000	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.996
B43	PY1	1/4.	pyrite	2.000	0.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.992
B43	PY1	1/5.	pyrite	2.000	1.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.010
B43	PY1	1/6.	pyrite	2.000	0.987	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.991
B43	PY2	1/1.	pyrite	2.000	0.990	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.990
B43	PY2	1/2.	pyrite	2.000	0.999	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.999
B43	PY2	1/3.	pyrite	2.000	1.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.006
B43	PY2	1/4.	pyrite	2.000	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.996
B43	PY3	1/1.	pyrite	2.000	0.991	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.991
B43	PY3	1/2.	pyrite	2.000	1.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.007
B43	PY3	1/3.	pyrite	2.000	1.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.011
B49	PY1	1/1.	chalcopyrite	2.000	0.981	0.000	0.000	0.982	0.000	0.000	0.000	0.000	0.000	1.962
B49	PY1	1/2.	chalcopyrite	2.000	0.986	0.000	0.000	0.982	0.000	0.000	0.000	0.000	0.000	1.968
B49	PY1	1/3.	chalcopyrite	2.000	0.982	0.000	0.000	0.982	0.000	0.000	0.000	0.000	0.000	1.964
B49	PY1	1/4.	chalcopyrite	2.000	0.975	0.000	0.000	0.979	0.000	0.000	0.000	0.000	0.000	1.954
B49	PY2	1/1.	chalcopyrite	2.000	0.987	0.000	0.000	0.986	0.000	0.000	0.000	0.000	0.000	1.973

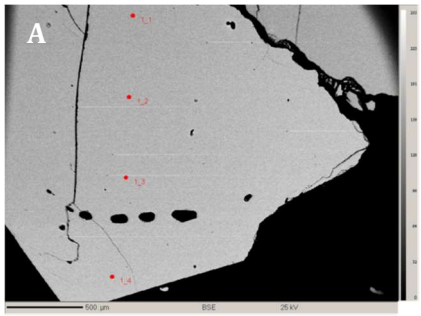
Sample	Sulphide	Spot no.	Mineral	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total cations
B49	PY2	1/2.	chalcopyrite	2.000	0.993	0.000	0.000	0.992	0.000	0.000	0.000	0.000	0.000	1.986
B49	PY2	1/3.	chalcopyrite	2.000	0.982	0.000	0.000	0.980	0.000	0.000	0.000	0.000	0.000	1.962
B49	PY2	1/4.	chalcopyrite	2.000	0.982	0.000	0.000	0.984	0.001	0.000	0.000	0.000	0.000	1.967
B49	PY3	1/1.	chalcopyrite	2.000	0.981	0.000	0.000	0.984	0.000	0.000	0.000	0.000	0.000	1.965
B49	PY3	1/2.	chalcopyrite	2.000	0.992	0.000	0.000	0.983	0.001	0.000	0.000	0.000	0.000	1.976
B49	PY3	1/3.	chalcopyrite	2.000	0.961	0.000	0.000	0.965	0.000	0.000	0.000	0.000	0.000	1.926
H11_JL_122	PY1	1/1.	pyrite	2.000	0.988	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.988
H11_JL_122	PY1	1/2.	pyrite	2.000	0.967	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.967
H11_JL_122	PY1	1/3.	pyrite	2.000	0.986	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.986
H11_JL_122	PY1	1/4.	pyrite	2.000	0.972	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.972
H11_JL_122	PY1	1/5.	non-stoichiometric	2.000	0.820	0.000	0.000	0.903	0.181	0.000	0.000	0.000	0.000	1.904
H11_JL_122	PY1	1/6.	sphalerite	1.000	0.025	0.000	0.000	0.016	0.981	0.000	0.000	0.000	0.000	1.022
H11_JL_122	PY2	1/1.	pyrite	2.000	1.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.012
H11_JL_122	PY2	1/2.	pyrite	2.000	1.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.001
H11_JL_122	PY2	1/3.	pyrite	2.000	0.987	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.987
H11_JL_122	PY2	1/4.	pyrite	2.000	0.991	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.991
H11_JL_122	PY2	1/5.	pyrite	2.000	0.982	0.000	0.000	0.013	0.005	0.001	0.000	0.000	0.000	1.001
H11_JL_122	PY2	1/6.	sphalerite	1.000	0.001	0.000	0.000	0.008	0.966	0.000	0.000	0.000	0.000	0.976
H11_JL_122	PY3	1/1.	pyrite	2.000	0.969	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.976
H11_JL_122	PY3	1/2.	pyrite	2.000	0.980	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.988
H11_JL_122	PY3	1/3.	pyrite	2.000	1.050	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1.059
H11_JL_122	PY3	1/4.	pyrite	2.000	0.946	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.958
H11_JL_122	PY4	1/1.	pyrite	2.000	0.967	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.967
H11_JL_122	PY4	1/2.	pyrite	2.000	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.996
H11_JL_122	PY4	1/3.	pyrite	2.000	0.997	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.997
H11_JL_122	PY4	1/4.	chalcopyrite	2.000	0.975	0.000	0.000	0.960	0.000	0.000	0.000	0.000	0.000	1.935
H11_JL_122	PY5	1/1.	pyrite	2.000	0.974	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.974
H11_JL_122	PY5	1/2.	pyrite	2.000	0.975	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.975
H11_JL_122	PY5	1/3.	pyrite	2.000	0.986	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.986
H11_JL_122	PY5	1/4.	pyrite	2.000	0.979	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.979
H11_JL_122	PY6	1/1.	pyrite	2.000	0.971	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.971
H11_JL_122	PY6	1/2.	pyrite	2.000	0.985	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.985
H11_JL_122	PY6	1/3.	pyrite	2.000	1.072	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.072
H11_JL_122	PY6	1/4.	pyrite	2.000	0.946	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.946
H11_JL_122	PY6	1/5.	pyrite	2.000	0.979	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.979

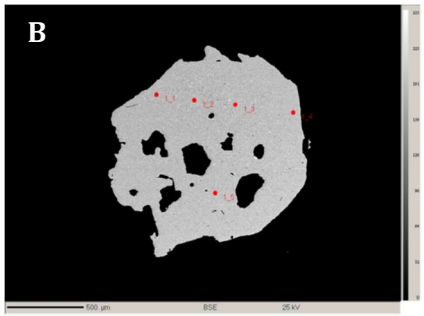
Sample	Sulphide	Spot no.	Mineral	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total cations
H11_JL_122	PY6	1/6.	pyrite	2.000	1.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.013
H11_JL_122	PY7	1/1.	pyrite	2.000	0.970	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.970
H11_JL_122	PY7	1/2.	pyrite	2.000	0.962	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.962
H11_JL_122	PY7	1/3.	pyrite	2.000	0.954	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.954
H11_JL_122	PY7	1/4.	non-stoichiometric	2.000	0.639	0.000	0.000	1.042	0.297	0.000	0.000	0.000	0.000	1.978
H11_JL_122	PY7	1/6.	non-stoichiometric	2.000	0.014	0.000	0.000	0.041	1.857	0.000	0.000	0.000	0.000	1.911
H11_JL_122	PY7	1/7.	chalcopyrite	2.000	0.965	0.000	0.000	0.955	0.000	0.000	0.000	0.000	0.000	1.920
H11_JL_122	PY7	1/8.	chalcopyrite	2.000	0.959	0.000	0.000	0.954	0.000	0.000	0.000	0.000	0.000	1.913
H11_JL_122	PY7	1/9.	pyrite	2.000	0.972	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.972
H11_JL_122	PY8	1/1.	pyrite	2.000	0.968	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.968
H11_JL_122	PY8	1/2.	pyrite	2.000	0.968	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.970
H11_JL_122	PY8	1/3.	pyrite	2.000	1.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.069
H11_JL_122	PY8	1/4.	pyrite	2.000	0.978	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.978
H11_JL_122	PY8	1/5.	pyrite	2.000	0.989	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.989
H11_JL_122	PY8	1/6.	pyrite	2.000	0.990	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.992
H11_JL_122	PY8	1/7.	chalcopyrite	2.000	0.991	0.000	0.000	0.978	0.000	0.000	0.000	0.000	0.000	1.969
H11_JL_122	PY8	1/8.	chalcopyrite	2.000	0.986	0.000	0.000	0.982	0.000	0.000	0.000	0.000	0.000	1.968
H11_JL_122	PY8	1/9.	chalcopyrite	2.000	0.985	0.000	0.000	0.985	0.000	0.000	0.000	0.000	0.000	1.970
H11_JL_122	PY9	1/1.	pyrite	2.000	1.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.005
H11_JL_122	PY9	1/2.	pyrite	2.000	0.978	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.979
H11_JL_122	PY9	1/3.	pyrite	2.000	1.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.004
H11_JL_122	PY9	1/4.	pyrite	2.000	0.978	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.978
H11_JL_122	PY9	1/5.	pyrite	2.000	0.986	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.986
H11_JL_122	PY10	1/1.	pyrite	2.000	0.976	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.976
H11_JL_122	PY10	1/2.	pyrite	2.000	0.986	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.986
H11_JL_122	PY10	1/3.	pyrite	2.000	1.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.018
H11_JL_122	PY10	1/4.	pyrite	2.000	0.975	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.975
H11_JL_122	PY10	1/5.	chalcopyrite	2.000	0.980	0.000	0.000	0.976	0.002	0.000	0.000	0.000	0.000	1.959
H11_JL_122	PY10	1/6.	chalcopyrite	2.000	0.970	0.000	0.000	0.974	0.000	0.000	0.000	0.000	0.000	1.943
H11_JL_122	PY10	1/7.	chalcopyrite	2.000	0.972	0.000	0.000	0.971	0.000	0.000	0.000	0.000	0.000	1.943
H11_JL_122	PY10	1/8.	chalcopyrite	2.000	0.969	0.000	0.000	0.971	0.000	0.000	0.000	0.000	0.000	1.940
H11_JL_122	PY11	1/1.	pyrite	2.000	1.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.015
H11_JL_122	PY11	1/2.	pyrite	2.000	0.967	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.967
H11_JL_122	PY11	1/3.	pyrite	2.000	1.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.002
H11_JL_122	PY11	1/4.	pyrite	2.000	0.998	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.998

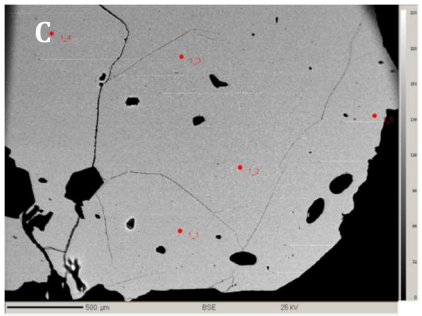
Sample	Sulphide	Spot no.	Mineral	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total cations
H11_JL_122	PY11	1/5.	pyrite	2.000	1.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.020
H11_JL_122	PY11	1/6.	chalcopyrite	2.000	0.986	0.000	0.000	0.981	0.000	0.000	0.000	0.000	0.000	1.967
H11_JL_122	PY11	1/7.	chalcopyrite	2.000	0.988	0.000	0.000	0.981	0.000	0.000	0.000	0.000	0.000	1.969
H11_JL_122	PY11	1/8.	chalcopyrite	2.000	0.983	0.000	0.000	0.983	0.000	0.000	0.000	0.000	0.000	1.966
H11_JL_122	PY11	1/9.	chalcopyrite	2.000	0.986	0.000	0.000	0.994	0.000	0.000	0.000	0.000	0.000	1.980
H11_JL_122	PY11	1/10.	chalcopyrite	2.000	0.970	0.000	0.000	0.987	0.003	0.000	0.000	0.000	0.000	1.960
H11_JL_122	PY12	1/1.	pyrite	2.000	0.986	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.986
H11_JL_122	PY12	1/2.	pyrite	2.000	0.981	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.981
H11_JL_122	PY12	1/3.	pyrite	2.000	1.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.027
H11_JL_122	PY12	1/4.	pyrite	2.000	0.986	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.986
H11_JL_122	PY12	1/5.	pyrite	2.000	0.970	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.970
H11_JL_122	PY12	1/6.	chalcopyrite	2.000	0.976	0.000	0.000	0.972	0.000	0.000	0.000	0.000	0.000	1.948
H11_JL_122	PY12	1/7.	chalcopyrite	2.000	0.976	0.000	0.000	0.968	0.000	0.000	0.000	0.000	0.000	1.944
H11_JL_122	PY12	1/8.	non-stoichiometric	2.000	0.153	0.000	0.000	1.908	0.000	0.000	0.000	0.000	0.000	2.061
H11_JL_122	PY13	1/1.	pyrite	2.000	1.038	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1.040
H11_JL_122	PY13	1/2.	pyrite	2.000	1.031	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1.036
H11_JL_122	PY13	1/3.	pyrite	2.000	0.958	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.958
H11_JL_122	PY13	1/4.	pyrite	2.000	0.976	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.977
H11_JL_122	PY13	1/5.	pyrite	2.000	0.966	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.966
H11_JL_122	PY13	1/6.	pyrite	2.000	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.996
H11_JL_122	PY13	1/7.	pyrite	2.000	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.996
H11_JL_122	PY14	1/1.	pyrite	2.000	0.948	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.948
H11_JL_122	PY14	1/2.	pyrite	2.000	0.952	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.952
H11_JL_122	PY14	1/3.	pyrite	2.000	1.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.035
H11_JL_122	PY14	1/4.	pyrite	2.000	0.999	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.999
H11_JL_122	PY14	1/5.	pyrite	2.000	0.958	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.958
H11_JL_122	PY14	1/6.	pyrite	2.000	0.964	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.964
H11_JL_122	PY14	1/7.	pyrite	2.000	0.961	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.961
H11_JL_122	PY14	1/8.	pyrite	2.000	0.928	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.928
H11_JL_122	PY14	1/9.	pyrite	2.000	0.946	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.947
H11_JL_122	PY14	1/10.	chalcopyrite	2.000	0.971	0.000	0.000	0.967	0.000	0.000	0.000	0.000	0.000	1.938
H11_JL_122	PY14	1/11.	chalcopyrite	2.000	0.969	0.000	0.000	0.963	0.000	0.000	0.000	0.000	0.000	1.932
H11_JL_122	PY14	1/12.	chalcopyrite	2.000	0.976	0.000	0.000	0.974	0.000	0.000	0.000	0.000	0.000	1.950
H11_JL_122	PY14	1/13.	chalcopyrite	2.000	0.966	0.000	0.000	0.965	0.000	0.000	0.000	0.000	0.000	1.932
H11_JL_122	PY14	1/14.	chalcopyrite	2.000	0.965	0.000	0.000	0.963	0.000	0.000	0.000	0.000	0.000	1.928

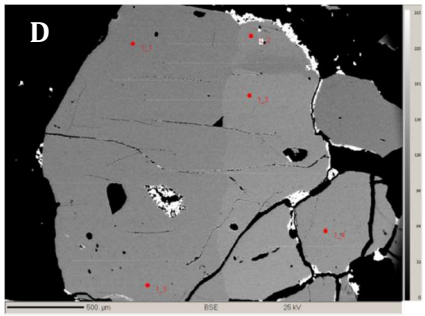
Sample	Sulphide	Spot no.	Mineral	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total cations
H11_JL_122	PY14	1/18.	pyrite	2.000	0.965	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.965
H11_JL_122	PY14	1/19.	pyrite	2.000	0.950	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.950
H11_JL_122	PY15	1/1.	pyrite	2.000	1.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.044
H11_JL_122	PY15	1/2.	pyrite	2.000	0.998	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.998
H11_JL_122	PY15	1/3.	pyrite	2.000	1.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.005
H11_JL_122	PY15	1/4.	pyrite	2.000	0.961	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.961
H11_JL_122	PY15	1/5.	pyrite	2.000	0.968	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.968
H11_JL_122	PY15	1/6.	pyrite	2.000	0.950	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.950
H11_JL_122	PY15	1/7.	pyrite	2.000	0.976	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.976
H11_JL_122	PY15	1/8.	pyrite	2.000	1.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.011
H11_JL_122	PY15	1/9.	pyrite	2.000	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.997
H11_JL_122	PY15	1/10.	pyrite	2.000	0.994	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.994
H11_JL_122	PY15	1/11.	pyrite	2.000	0.985	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.986
H11_JL_122	PY15	1/12.	pyrite	2.000	1.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.032
H11_JL_122	PY15	1/13.	pyrite	2.000	1.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.015
C10_C12_148	PY1	1/1.	chalcopyrite	2.000	0.996	0.000	0.000	0.986	0.000	0.000	0.000	0.000	0.000	1.982
C10_C12_148	PY1	1/2.	chalcopyrite	2.000	1.000	0.000	0.000	0.986	0.000	0.000	0.000	0.000	0.000	1.986
C10_C12_148	PY1	1/3.	pyrite	2.000	1.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.002
C10_C12_148	PY2	1/1.	pyrite	2.000	0.988	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.990
C10_C12_148	PY2	1/2.	pyrite	2.000	0.985	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.987
C10_C12_148	PY2	1/3.	pyrite	2.000	0.988	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.988
C10_C12_148	PY2	1/4.	pyrite	2.000	0.986	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.986
C10_C12_148	PY2	1/5.	chalcopyrite	2.000	1.003	0.000	0.000	0.953	0.003	0.000	0.000	0.000	0.000	1.959
C10_C12_148	PY2	1/6.	chalcopyrite	2.000	1.001	0.000	0.000	0.966	0.001	0.000	0.000	0.000	0.000	1.968
C10_C12_148	PY2	1/7.	chalcopyrite	2.000	0.982	0.000	0.000	0.973	0.000	0.000	0.000	0.000	0.000	1.956
C10_C12_148	PY2	1/8.	chalcopyrite	2.000	0.996	0.000	0.000	0.989	0.000	0.000	0.000	0.000	0.000	1.985
C10_C12_148	PY2	1/9.	chalcopyrite	2.000	0.987	0.000	0.000	0.976	0.000	0.000	0.000	0.000	0.000	1.963
C10_C12_148	PY3	1/2.	chalcopyrite	2.000	0.988	0.000	0.000	0.977	0.000	0.000	0.000	0.000	0.000	1.965
C10_C12_148	PY3	1/3.	chalcopyrite	2.000	0.988	0.000	0.000	0.978	0.001	0.000	0.000	0.000	0.000	1.967
C10_C12_148	PY3	1/4.	chalcopyrite	2.000	0.989	0.000	0.000	0.979	0.000	0.000	0.000	0.000	0.000	1.968
C10_C12_148	PY3	1/5.	chalcopyrite	2.000	0.998	0.000	0.000	0.982	0.000	0.000	0.000	0.000	0.000	1.980
C10_C12_148	PY3	1/6.	chalcopyrite	2.000	0.990	0.000	0.000	0.980	0.000	0.000	0.000	0.000	0.000	1.970
C10_C12_148	PY3	1/7.	chalcopyrite	2.000	0.989	0.000	0.000	0.983	0.000	0.000	0.000	0.000	0.000	1.971
C24_C12_228	PY7	1/1.	pyrite	2.000	0.984	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.984
C24_C12_228	PY7	1/2.	pyrite	2.000	0.982	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.982

Sample	Sulphide	Spot no.	Mineral	S	Fe	Mn	Co	Cu	Zn	As	Sb	Au	Ni	Total cations
C24_C12_228	PY7	1/3.	non-stoichiometric	2.000	0.031	0.000	0.000	1.468	0.279	0.000	0.632	0.000	0.000	2.410
C24_C12_228	PY7	1/4.	chalcopyrite	2.000	0.934	0.000	0.000	0.949	0.000	0.000	0.000	0.000	0.000	1.883
C24_C12_228	PY8	1/1.	pyrite	2.000	0.990	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.990
C24_C12_228	PY8	1/2.	pyrite	2.000	0.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.993
C24_C12_228	PY8	1/3.	pyrite	2.000	0.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.992
C24_C12_228	PY8	1/4.	pyrite	2.000	0.987	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.987
C24_C12_228	PY8	1/7.	chalcopyrite	2.000	0.915	0.000	0.000	0.940	0.000	0.000	0.000	0.000	0.000	1.854
C24_C12_228	PY8	1/8.	chalcopyrite	2.000	1.073	0.000	0.000	1.150	0.000	0.000	0.000	0.000	0.000	2.223
C24_C12_228	PY8	1/9.	chalcopyrite	2.000	1.117	0.000	0.000	1.128	0.000	0.000	0.000	0.000	0.000	2.245
C24_C12_228	PY9	1/1.	pyrite	2.000	1.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.001
C24_C12_228	PY9	1/2.	pyrite	2.000	0.997	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.997
C24_C12_228	PY9	1/3.	pyrite	2.000	0.998	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.998
C24_C12_228	PY9	1/5.	chalcopyrite	2.000	0.993	0.000	0.000	0.984	0.000	0.000	0.000	0.000	0.000	1.978
C24_C12_228	PY9	1/6.	chalcopyrite	2.000	0.986	0.000	0.000	0.979	0.000	0.000	0.000	0.000	0.000	1.966
C24_C12_228	PY9	1/7.	pyrite	2.000	0.954	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.954
C24_C12_228	PY9	2/1.	non-stoichiometric	2.000	0.034	0.000	0.000	1.501	0.285	0.000	0.636	0.000	0.000	2.455









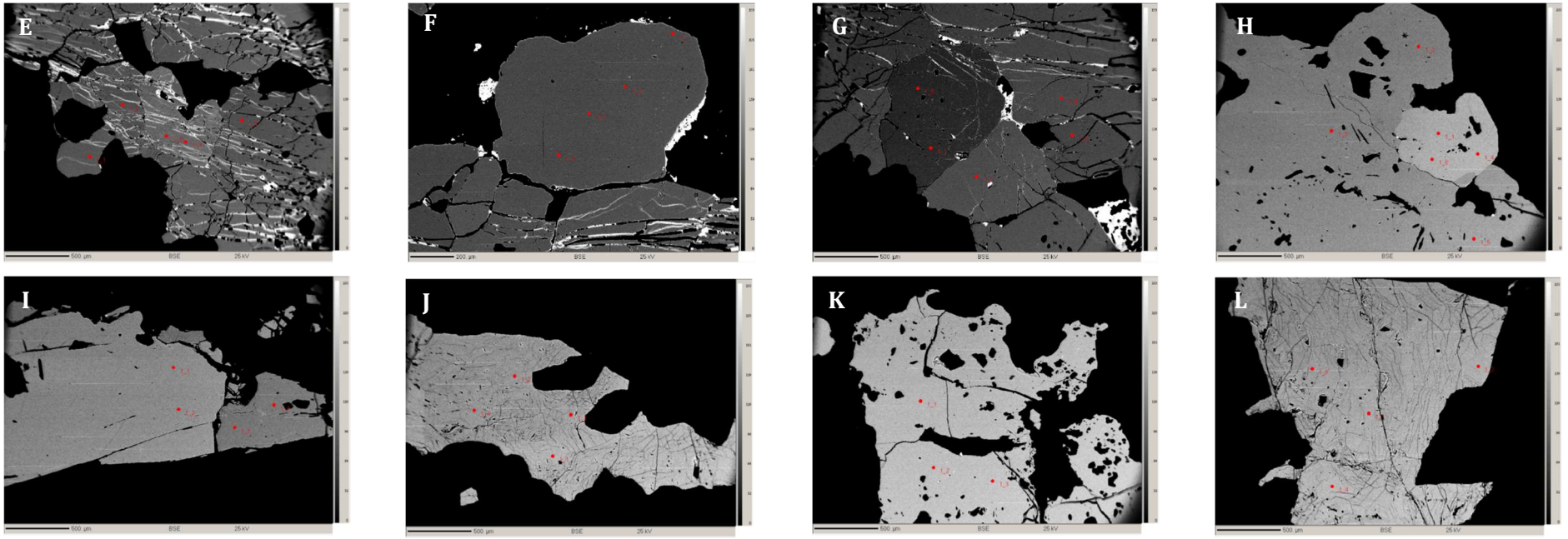


Figure 3.9: Back scattered electron images of analysed sulphides. A) B05 PY1, B) B05 PY2, C) B05 PY3, D) B28 PY1, E) B28 PY2, F) B28 PY3, G) B28 PY4, H) B43 PY1, I) B43 PY2, J) B43 PY3 K)B49 PY1 and, L) B49 PY2

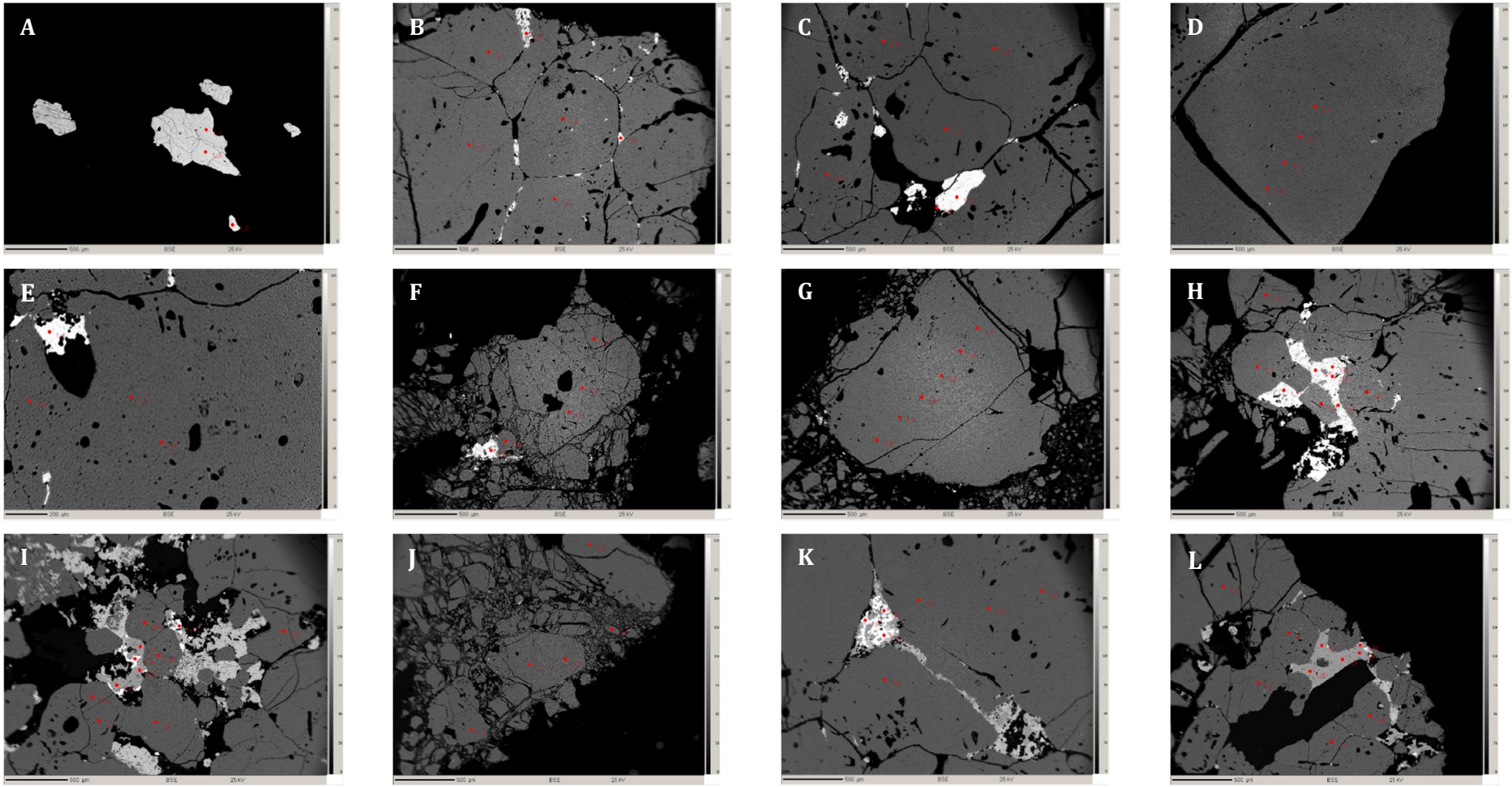


Figure 3.10: Back scattered electron images of analysed sulphides. A) B49 PY3, B) C11.JL.122 PY1, C) C11.JL.122 PY2, D) C11.JL.122 PY3, E) C11.JL.122 PY4, F) C11.JL.122 PY5, G) C11.JL.122 PY6, H) C11.JL.122 PY7, I) C11.JL.122 PY8, J) C11.JL.122 PY 9, K) C11.JL.122 PY 10 and, L) C11.JL.122 PY11.

3.5 References

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