

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Act	Act	Act	Act	Act	Act	Act
LA-ICP-MS Spot ID	G909166_25-1	G909166_25-3	G909166_27-1	G909166_27-2	G909166_29-1	G909166_29-2	G909166_29-4
Data Quality (1-3)	1	0	1.5	1	1.5	1	1
1 standard error (ppm) *							
Li	0.07	0.55	0.06	0.27	0.05	0.56	0.06
B	0.22	0.97	0.08	0.15	0.32	0.14	0.13
Si	2848.73	2848.73	2848.73	2848.73	2848.73	2848.73	2848.73
P	20.65	44834.77	5.10	6.00	562.28	694.37	4343.21
Sc	2.60	2.62	1.78	2.36	3.29	4.16	3.71
Ti	26.49	42.18	36.72	98.34	126.52	98.19	71.74
V	6.62	13.87	7.01	11.23	8.57	9.68	6.88
Cr	0.14	0.47	0.14	0.13	0.32	0.97	0.25
Mn	117.59	98.89	87.16	109.84	107.22	161.88	83.10
Co	1.25	1.10	0.99	1.35	1.13	1.35	1.33
Cu	0.47	1.87	0.43	1.00	0.66	0.40	1.85
Cu	0.45	1.17	0.49	1.05	0.41	0.60	2.23
Zn	5.23	4.46	3.71	5.30	4.71	4.64	6.96
Zn	5.18	4.25	3.39	5.23	5.42	5.74	7.78
As	0.16	17.21	0.13	0.12	0.44	0.18	1.13
Se	0.05	0.58	0.06	0.04	0.05	0.13	0.17
Se	0.21	2.03	0.05	0.06	0.06	BDL	0.55
Rb	0.03	0.10	0.14	0.02	0.51	0.33	0.25
Sr	5.92	97.86	9.62	2.61	3.39	8.03	9.00
Mo	0.02	0.10	0.07	0.04	0.09	0.06	0.14
Sn	0.02	0.04	0.05	0.05	0.03	0.11	0.03
Te	BDL	BDL	0.01	BDL	0.01	BDL	BDL
Cs	0.01	0.05	0.00	0.01	0.01	0.01	0.02
Ba	0.21	6.47	2.05	38.68	0.41	98.53	0.39
Ba	0.14	6.65	2.09	60.35	0.48	92.99	0.61
W	0.02	0.44	0.04	0.01	0.06	0.05	0.14
Pb	0.08	0.91	0.09	0.06	0.04	0.18	0.23
Bi	0.01	0.02	0.01	0.00	0.00	0.01	0.01
Th	0.14	8.95	0.23	0.35	0.29	0.15	1.28
U	0.18	2.85	0.17	1.54	0.09	0.15	0.58
Tl	0.00	0.02	BDL	BDL	0.00	0.00	0.00

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Act	Act	Act	Act	Act	Act	Act
LA-ICP-MS Spot ID	G909166_25-1	G909166_25-3	G909166_27-1	G909166_27-2	G909166_29-1	G909166_29-2	G909166_29-4
Data Quality (1-3)	1	0	1.5	1	1.5	1	1
1 standard error (ppm)**							
Li	0.22	0.97	0.16	0.31	0.20	0.64	0.25
B	0.85	3.97	0.68	0.49	2.63	0.66	1.11
Si	4893.37	4893.37	4893.37	4893.37	4893.37	4893.37	4893.37
P	33.22	287130.75	8.18	28.15	1429.19	1370.91	16275.30
Sc	4.03	4.06	2.73	3.23	5.04	6.08	5.22
Ti	52.21	57.68	53.85	116.01	271.91	196.63	146.20
V	12.98	16.60	10.64	15.51	14.80	15.83	12.55
Cr	1.02	2.12	0.72	0.77	2.30	4.35	1.59
Mn	200.06	166.55	134.97	147.06	157.56	195.43	144.96
Co	2.60	2.09	1.81	1.99	2.09	2.37	2.66
Cu	1.68	4.05	1.06	1.53	1.66	1.18	2.76
Cu	1.67	3.92	1.06	1.57	1.50	1.26	3.06
Zn	7.29	6.06	5.19	6.23	6.08	6.04	8.86
Zn	6.99	5.95	4.78	6.11	6.46	6.79	9.35
As	1.00	98.18	0.91	0.66	1.47	0.98	6.77
Se	0.69	5.08	0.56	0.57	0.76	0.80	1.05
Se	0.69	18.92	0.33	0.07	0.43	BDL	2.47
Rb	0.03	0.12	0.14	0.02	0.51	0.34	0.25
Sr	6.19	124.70	9.78	2.67	3.85	8.42	10.54
Mo	0.03	0.22	0.07	0.05	0.11	0.07	0.15
Sn	0.09	0.14	0.10	0.11	0.12	0.16	0.11
Te	BDL	BDL	0.01	BDL	0.01	BDL	BDL
Cs	0.01	0.05	0.01	0.01	0.01	0.01	0.02
Ba	0.23	6.97	2.07	38.74	0.45	98.82	0.40
Ba	0.15	7.23	2.12	60.39	0.52	93.24	0.64
W	0.03	1.36	0.05	0.02	0.09	0.06	0.19
Pb	0.10	0.97	0.11	0.07	0.07	0.19	0.25
Bi	0.01	0.02	0.01	0.00	0.00	0.01	0.01
Th	0.17	11.11	0.24	0.36	0.36	0.17	1.77
U	0.18	4.41	0.18	1.64	0.15	0.17	0.71
Tl	0.00	0.02	BDL	BDL	0.00	0.00	0.00

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Act	Act	Act	Act	Act	Act	Act
LA-ICP-MS Spot ID	G909166_29-5	G909166_34-2	G909166_36-1	G909166_36-2	G909166_36-3	G909166_36-4	G909166_37-1
Data Quality (1-3)	1.5	1	1	1.5	1.5	1.5	1
1 standard error (ppm) *							
Li	0.13	0.77	0.11	0.04	0.13	0.19	0.08
B	0.21	0.12	0.11	0.14	0.36	0.27	0.08
Si	2848.73	2848.73	2848.73	2848.73	2848.73	2848.73	2848.73
P	0.68	58.20	81.96	41.33	57.33	268.20	0.82
Sc	1.45	2.13	3.20	2.48	2.51	3.00	2.52
Ti	9.32	203.76	32.92	84.40	160.67	78.42	67.57
V	2.07	9.94	9.90	3.91	7.84	6.77	5.97
Cr	0.24	0.24	0.22	0.20	0.36	0.21	0.21
Mn	50.23	198.33	144.82	94.55	71.78	89.94	91.70
Co	0.54	2.84	2.11	1.07	1.31	1.51	1.15
Cu	0.84	3.40	0.54	0.65	1.41	1.45	0.40
Cu	0.74	4.34	0.61	0.55	1.38	1.64	0.97
Zn	3.15	12.33	9.24	4.84	5.52	7.59	3.77
Zn	2.97	10.99	8.22	4.66	5.10	6.85	3.74
As	0.12	0.18	0.15	0.20	0.30	0.25	0.12
Se	0.06	0.17	0.07	0.07	0.04	0.09	0.06
Se	BDL	BDL	0.10	0.14	0.10	BDL	BDL
Rb	0.55	0.12	0.06	0.01	0.48	0.09	0.04
Sr	2.20	0.26	4.05	0.81	2.76	1.19	0.34
Mo	0.08	0.05	0.01	0.18	0.07	0.02	0.03
Sn	0.03	0.06	0.03	0.03	0.11	0.08	0.02
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.01	0.01	0.02	0.01	0.01	0.01	0.01
Ba	4.00	0.24	1.40	BDL	10.46	0.22	0.50
Ba	4.75	0.33	1.71	BDL	8.65	0.11	0.24
W	0.02	0.10	0.05	0.11	0.12	0.04	0.02
Pb	0.04	0.09	0.02	0.10	0.09	0.07	0.04
Bi	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Th	0.06	0.10	0.14	0.02	0.18	0.09	0.01
U	0.02	0.06	0.08	0.04	0.05	0.04	0.04
Tl	0.00	0.00	0.00	BDL	0.00	0.00	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Act	Act	Act	Act	Act	Act	Act
LA-ICP-MS Spot ID	G909166_29-5	G909166_34-2	G909166_36-1	G909166_36-2	G909166_36-3	G909166_36-4	G909166_37-1
Data Quality (1-3)	1.5	1	1	1.5	1.5	1.5	1
1 standard error (ppm)**							
Li	0.26	2.74	0.31	0.11	0.40	0.66	0.15
B	0.46	0.68	0.76	0.84	1.21	1.09	0.54
Si	4893.37	4893.37	4893.37	4893.37	4893.37	4893.37	4893.37
P	3.33	109.96	397.82	53.61	190.35	1380.01	3.00
Sc	2.24	3.08	3.78	3.82	3.88	4.62	3.79
Ti	19.56	204.61	38.58	196.67	350.30	181.41	93.25
V	4.18	14.61	13.37	7.48	15.32	12.94	9.37
Cr	1.34	1.60	0.89	0.97	2.67	0.88	1.54
Mn	84.98	240.20	174.22	144.87	121.78	147.08	134.65
Co	1.18	4.79	2.82	2.01	2.90	3.27	1.93
Cu	1.98	11.82	1.73	2.00	4.42	4.07	1.04
Cu	1.92	12.55	1.75	1.90	4.37	4.18	1.33
Zn	4.40	15.50	10.68	6.56	7.87	10.84	5.38
Zn	4.17	13.96	9.57	6.16	7.24	9.84	5.10
As	0.82	0.75	1.10	1.30	1.59	1.59	0.80
Se	0.28	1.76	0.56	0.76	0.85	0.67	0.72
Se	BDL	BDL	0.25	0.65	0.22	BDL	BDL
Rb	0.58	0.14	0.07	0.02	0.48	0.10	0.04
Sr	2.68	0.33	4.08	0.87	3.16	1.38	0.42
Mo	0.09	0.05	0.02	0.21	0.08	0.03	0.03
Sn	0.06	0.10	0.09	0.09	0.18	0.16	0.06
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.01	0.03	0.02	0.01	0.02	0.01	0.01
Ba	5.03	0.25	1.49	BDL	10.51	0.23	0.52
Ba	5.55	0.34	1.79	BDL	8.70	0.13	0.27
W	0.02	0.11	0.06	0.12	0.23	0.05	0.03
Pb	0.05	0.10	0.03	0.11	0.12	0.08	0.06
Bi	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Th	0.07	0.11	0.15	0.03	0.20	0.12	0.01
U	0.02	0.09	0.09	0.07	0.09	0.07	0.04
Tl	0.00	0.00	0.00	BDL	0.00	0.00	BDL

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Act	Act	Act	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909166_37-2	G909166_39-1	G909166_39-2	80JD-94D_01-1	80JD-94D_01-2	80JD-94D_02-1	80JD-94D_02-2
Data Quality (1-3)	1.5	1.5	1.5	2.5	2.5	2	1.5
Li (ppm)	1.72	2.16	1.41	50.74	55.72	47.80	56.52
B (ppm)	3.12	2.43	2.15	2.00	2.37	1.75	2.57
Si (ppm)	142436.42	142436.42	142436.42	132619.67	132619.67	132619.67	132619.67
P (ppm)	727.08	24.11	7778.55	432.21	20.98	28.28	1889.19
Sc (ppm)	47.60	59.82	57.51	2.67	2.45	3.02	5.65
Ti (ppm)	505.82	1325.02	1354.47	2422.49	2140.70	7617.12	44273.24
V (ppm)	120.65	215.82	190.97	142.01	128.21	103.73	220.77
Cr (ppm)	6.01	33.40	5.63	101.40	135.76	58.61	61.19
Mn (ppm)	3260.49	3843.39	3145.04	2030.07	1730.85	1972.06	1785.30
Co (ppm)	34.18	37.91	30.54	67.50	49.92	35.44	29.80
Cu(63) (ppm)	19.43	19.39	11.48	509.28	504.37	578.31	607.85
Cu(65)* (ppm)	19.75	18.67	11.70	498.74	501.24	570.36	599.07
Zn(66)* (ppm)	135.07	144.77	120.83	138.74	118.69	126.87	111.27
Zn(68) (ppm)	132.58	143.77	120.03	139.46	133.27	132.11	109.91
As (ppm)	4.07	3.36	5.60	1.90	0.45	0.61	2.84
Se(76) (ppm)	0.89	BDL	0.91	2.07	1.93	BDL	2.36
Se(77)* (ppm)	0.42	BDL	0.64	BDL	BDL	BDL	1.34
Rb (ppm)	0.66	0.98	0.45	35.16	58.50	23.26	33.45
Sr (ppm)	11.89	16.76	58.38	15.54	110.48	7.33	33.18
Mo (ppm)	0.24	0.62	0.38	BDL	0.08	BDL	0.14
Sn (ppm)	0.49	0.40	0.58	0.27	0.28	0.37	1.60
Te (ppm)	BDL	BDL	BDL	BDL	0.06	BDL	0.06
Cs (ppm)	0.10	0.11	0.08	2.77	4.09	2.01	3.85
Ba(137) (ppm)	0.39	65.82	BDL	144.53	340.05	112.53	104.32
Ba(138)* (ppm)	0.87	64.80	BDL	143.22	344.27	110.62	106.79
W (ppm)	0.18	0.40	0.39	0.41	0.25	3.02	11.44
Pb (ppm)	1.15	1.43	1.57	1.26	3.20	4.05	4.63
Bi (ppm)	0.00	0.02	0.01	BDL	0.03	0.02	0.09
Th (ppm)	0.46	0.26	1.58	0.87	0.31	0.02	0.05
U (ppm)	0.30	0.73	1.03	0.74	1.72	0.78	0.89
Tl (ppm)	0.01	BDL	0.01	0.24	0.40	0.09	0.25
SiO2 wt. %	30.47	30.47	30.47	28.37	28.37	28.37	28.37

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Act	Act	Act	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909166_37-2	G909166_39-1	G909166_39-2	80JD-94D_01-1	80JD-94D_01-2	80JD-94D_02-1	80JD-94D_02-2
Data Quality (1-3)	1.5	1.5	1.5	2.5	2.5	2	1.5
1 standard error (ppm) *							
Li	0.09	0.22	0.06	2.34	2.02	1.31	1.24
B	0.28	0.19	0.40	0.22	0.15	0.25	0.40
Si	2848.73	2848.73	2848.73	2652.39	2652.39	2652.39	2652.39
P	111.83	1.22	550.11	25.89	1.13	4.89	414.11
Sc	2.35	3.34	3.51	0.25	0.09	0.17	0.29
Ti	19.63	47.50	65.31	125.80	54.77	561.45	1630.19
V	3.62	6.57	5.80	5.97	4.60	6.57	7.40
Cr	0.17	1.05	0.18	3.13	5.56	2.83	1.90
Mn	88.87	111.92	114.47	51.51	47.55	64.69	42.43
Co	0.97	1.21	1.48	2.51	1.90	1.13	1.03
Cu	0.99	0.88	0.39	19.26	14.12	18.27	27.77
Cu	0.59	0.84	0.41	23.66	19.79	24.52	30.00
Zn	5.01	4.90	4.55	3.68	4.94	3.42	3.15
Zn	4.24	4.95	6.00	3.89	3.73	4.17	3.03
As	0.22	0.16	0.38	0.76	0.04	0.14	0.21
Se	0.10	BDL	0.07	0.20	0.17	BDL	0.17
Se	0.10	BDL	0.21	BDL	BDL	BDL	0.41
Rb	0.05	0.04	0.04	1.86	1.82	1.68	0.82
Sr	0.84	0.74	3.09	0.82	4.49	0.33	1.41
Mo	0.03	0.08	0.05	BDL	0.03	BDL	0.02
Sn	0.05	0.03	0.03	0.02	0.03	0.05	0.11
Te	BDL	BDL	BDL	BDL	0.03	BDL	0.02
Cs	0.01	0.01	0.01	0.26	0.13	0.08	0.15
Ba	3.57	6.01	BDL	12.51	18.79	6.90	8.00
Ba	3.08	5.90	BDL	12.50	16.09	8.23	8.16
W	0.02	0.08	0.04	0.05	0.03	1.35	0.55
Pb	0.15	0.06	0.06	0.08	0.50	0.38	0.46
Bi	0.00	0.00	0.00	BDL	0.01	0.01	0.01
Th	0.04	0.04	0.21	0.12	0.06	0.01	0.01
U	0.03	0.13	0.07	0.12	0.66	0.11	0.06
Tl	0.00	BDL	0.00	0.02	0.03	0.05	0.02

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Act	Act	Act	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909166_37-2	G909166_39-1	G909166_39-2	80JD-94D_01-1	80JD-94D_01-2	80JD-94D_02-1	80JD-94D_02-2
Data Quality (1-3)	1.5	1.5	1.5	2.5	2.5	2	1.5
1 standard error (ppm)**							
Li	0.26	0.38	0.21	7.46	8.04	6.80	7.99
B	1.17	0.91	0.88	0.76	0.87	0.68	1.02
Si	4893.37	4893.37	4893.37	4556.12	4556.12	4556.12	4556.12
P	237.37	7.05	2306.61	126.83	6.13	9.48	682.65
Sc	3.64	4.83	4.86	0.27	0.14	0.21	0.36
Ti	52.46	135.99	145.72	260.09	208.49	909.72	4468.43
V	6.99	12.56	11.10	9.56	8.16	8.54	13.77
Cr	1.22	6.79	1.14	20.62	27.85	12.12	12.45
Mn	151.09	182.41	164.30	89.50	78.45	96.12	77.09
Co	2.15	2.45	2.27	4.60	3.42	2.32	1.99
Cu	2.29	2.25	1.29	57.37	55.35	64.03	70.22
Cu	2.18	2.15	1.31	58.33	57.12	65.71	70.72
Zn	6.80	6.95	6.13	5.26	5.89	4.85	4.36
Zn	6.00	6.77	7.13	5.50	5.26	5.57	4.31
As	1.44	1.18	1.99	1.01	0.16	0.25	1.01
Se	0.72	BDL	0.73	1.67	1.55	BDL	1.89
Se	0.35	BDL	0.56	BDL	BDL	BDL	1.15
Rb	0.06	0.04	0.04	1.94	2.04	1.72	0.97
Sr	0.93	0.93	3.66	0.85	4.74	0.34	1.48
Mo	0.03	0.10	0.06	BDL	0.03	BDL	0.03
Sn	0.10	0.08	0.11	0.05	0.06	0.08	0.31
Te	BDL	BDL	BDL	BDL	0.03	BDL	0.03
Cs	0.01	0.01	0.01	0.32	0.30	0.15	0.29
Ba	3.57	6.32	BDL	12.67	19.35	7.07	8.13
Ba	3.08	6.16	BDL	12.66	16.80	8.38	8.30
W	0.03	0.09	0.06	0.07	0.04	1.40	1.47
Pb	0.16	0.08	0.09	0.11	0.54	0.45	0.54
Bi	0.00	0.00	0.00	BDL	0.01	0.01	0.01
Th	0.05	0.05	0.24	0.13	0.07	0.01	0.01
U	0.04	0.14	0.10	0.13	0.68	0.13	0.09
Tl	0.00	BDL	0.00	0.03	0.05	0.05	0.03

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	80JD-94D_02-3	80JD-94D_03-1	80JD-94D_03-3	80JD-94D_03-4	80JD-94D_03-5	80JD-94D_05-1	80JD-94D_05-2
Data Quality (1-3)	1.5	0	1	2.5	2	2	3
1 standard error (ppm) *							
Li	0.24	0.40	0.87	1.02	1.29	1.75	1.85
B	1.25	0.49	0.36	0.16	0.26	0.39	0.15
Si	2652.39	2652.39	2652.39	2652.39	2652.39	2652.39	2652.39
P	144.32	15358.10	1223.90	21.28	48.12	5.20	1.24
Sc	0.92	1.81	0.53	0.09	0.11	0.12	0.10
Ti	56.14	15.85	409.29	219.93	45.91	419.81	7.56
V	5.39	5.80	5.26	3.87	5.21	5.70	4.15
Cr	0.89	1.62	2.34	1.84	2.14	1.88	1.25
Mn	98.17	33.62	47.71	55.84	55.33	53.60	57.73
Co	0.31	0.56	0.99	1.19	1.23	1.43	0.96
Cu	15.43	13.91	11.25	15.91	12.46	47.20	6.03
Cu	15.58	14.40	8.98	15.90	18.40	37.85	7.05
Zn	0.73	1.78	3.13	3.67	5.15	6.97	4.55
Zn	2.05	1.40	2.96	4.22	5.18	6.03	3.73
As	0.26	1.09	0.14	0.05	0.08	0.04	0.06
Se	0.25	BDL	0.25	0.30	0.51	0.36	0.69
Se	BDL	0.45	BDL	BDL	BDL	BDL	BDL
Rb	1.07	1.77	0.29	0.85	0.50	2.15	0.36
Sr	63.95	104.24	33.88	5.26	2.87	BDL	6.32
Mo	0.05	0.04	0.12	0.07	BDL	0.06	0.06
Sn	0.10	0.09	0.03	0.04	0.06	0.08	0.03
Te	BDL	BDL	BDL	0.06	0.03	BDL	BDL
Cs	0.07	0.08	0.02	0.09	0.08	0.28	0.03
Ba	15.68	7.96	0.46	0.73	0.51	3.58	0.26
Ba	18.96	7.31	0.37	0.80	0.36	1.95	0.12
W	0.04	0.70	0.22	0.15	0.24	0.98	BDL
Pb	1.10	0.33	0.09	0.38	0.16	0.19	0.11
Bi	0.06	0.05	0.01	0.01	0.00	0.08	0.01
Th	0.09	0.77	0.21	0.01	0.02	0.04	0.02
U	0.10	0.31	0.03	0.09	0.02	0.06	0.02
Tl	0.03	0.02	0.00	0.04	0.00	0.03	0.00

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	80JD-94D_02-3	80JD-94D_03-1	80JD-94D_03-3	80JD-94D_03-4	80JD-94D_03-5	80JD-94D_05-1	80JD-94D_05-2
Data Quality (1-3)	1.5	0	1	2.5	2	2	3
1 standard error (ppm)**							
Li	1.49	2.10	3.24	6.41	5.98	8.50	6.37
B	7.24	1.84	0.69	0.79	0.43	0.93	0.46
Si	4556.12	4556.12	4556.12	4556.12	4556.12	4556.12	4556.12
P	147.90	110366.96	3235.92	32.79	320.77	14.30	7.74
Sc	1.65	1.92	0.58	0.15	0.13	0.15	0.13
Ti	163.46	36.22	1176.87	572.19	116.02	876.06	16.13
V	9.88	10.53	8.04	6.97	6.98	10.22	7.72
Cr	5.35	10.22	10.58	13.04	13.17	10.62	8.80
Mn	116.48	56.61	72.55	93.54	99.58	84.27	105.15
Co	0.47	0.90	1.85	2.41	2.64	2.47	1.92
Cu	21.03	31.03	30.69	59.67	45.09	115.09	24.35
Cu	21.07	30.92	30.52	60.29	47.51	119.14	24.46
Zn	1.03	2.07	4.01	5.09	6.27	7.79	5.86
Zn	2.70	1.94	3.92	5.53	6.31	7.01	5.23
As	2.61	12.19	0.50	0.19	0.18	0.36	0.08
Se	1.82	BDL	1.93	2.47	1.76	3.06	0.69
Se	BDL	0.70	BDL	BDL	BDL	BDL	BDL
Rb	1.19	1.79	0.29	1.01	0.50	2.56	0.36
Sr	74.85	116.22	33.89	5.33	2.91	BDL	7.12
Mo	0.05	0.04	0.12	0.07	BDL	0.06	0.06
Sn	0.23	0.19	0.15	0.08	0.08	0.12	0.04
Te	BDL	BDL	BDL	0.06	0.04	BDL	BDL
Cs	0.12	0.11	0.03	0.22	0.09	0.50	0.03
Ba	18.31	8.06	0.47	0.81	0.52	3.76	0.27
Ba	21.41	7.41	0.39	0.87	0.38	2.25	0.13
W	0.06	1.66	0.32	0.33	0.24	1.02	BDL
Pb	1.56	0.44	0.11	0.45	0.19	0.27	0.14
Bi	0.09	0.10	0.01	0.01	0.01	0.08	0.01
Th	0.13	1.37	0.21	0.01	0.02	0.04	0.02
U	0.20	0.57	0.06	0.09	0.03	0.07	0.02
Tl	0.03	0.03	0.00	0.05	0.01	0.07	0.00

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	80JD-94D_05-3	80JD-94D_06-1	80JD-94D_06-2	80JD-94D_08-1	80JD-94D_08-2	80JD-94D_08-3	81JD-94B_18-1
Data Quality (1-3)	3	3	3	1	0	0	2.5
1 standard error (ppm) *							
Li	0.78	1.12	0.98	0.54	0.58	0.57	1.14
B	0.12	0.27	0.27	0.72	0.24	1.26	6.85
Si	2652.39	2652.39	2652.39	2652.39	2652.39	2652.39	6722.14
P	1.35	1.37	2.07	10.57	23838.09	79510.89	20.16
Sc	0.06	0.10	0.12	1.03	0.72	1.47	1.75
Ti	42.50	6.69	4.93	27.97	65.02	5107.47	1.27
V	3.43	3.80	5.28	10.22	6.26	25.45	1.08
Cr	2.46	1.22	0.78	1.82	2.32	3.33	1.07
Mn	69.67	58.22	56.46	20.28	106.97	198.78	1.06
Co	0.91	1.03	1.24	0.31	0.94	0.36	0.97
Cu	6.53	8.39	4.41	6.33	7.51	5.83	1.12
Cu	7.77	7.79	4.87	5.22	8.98	5.96	0.98
Zn	4.19	4.04	3.30	1.03	2.28	1.60	0.81
Zn	3.58	3.54	3.36	1.04	3.37	2.78	1.12
As	0.08	0.05	0.04	0.54	1.13	2.67	2.67
Se	0.16	0.22	0.26	1.06	0.44	0.49	0.22
Se	0.36	BDL	0.44	BDL	0.81	1.87	8.00
Rb	0.03	0.04	0.03	0.14	0.82	0.21	5.67
Sr	0.79	13.14	11.24	471.72	97.24	308.05	2.20
Mo	BDL	BDL	0.10	BDL	0.16	0.61	BDL
Sn	0.05	0.05	0.12	0.12	0.11	0.29	4.23
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.01	0.02	0.04	0.03	0.05	0.04	7.25
Ba	0.84	0.18	0.24	0.52	5.55	2.30	4.49
Ba	1.41	0.06	0.63	0.14	5.86	3.97	1.44
W	0.01	BDL	0.06	0.05	0.73	3.42	BDL
Pb	0.12	0.14	0.08	0.42	0.51	1.82	1.55
Bi	0.01	0.01	0.03	0.36	0.07	0.10	7.24
Th	BDL	BDL	BDL	0.10	1.43	10.33	1.54
U	0.01	0.03	0.01	0.16	0.59	4.21	3.05
Tl	0.00	BDL	BDL	BDL	0.02	0.02	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	80JD-94D_05-3	80JD-94D_06-1	80JD-94D_06-2	80JD-94D_08-1	80JD-94D_08-2	80JD-94D_08-3	81JD-94B_18-1
Data Quality (1-3)	3	3	3	1	0	0	2.5
1 standard error (ppm)**							
Li	4.89	6.29	5.79	0.92	2.81	1.10	4.52
B	0.86	0.64	0.62	2.39	3.20	8.11	10.67
Si	4556.12	4556.12	4556.12	4556.12	4556.12	4556.12	11546.88
P	8.43	7.96	14.23	40.58	184072.34	530255.39	26.08
Sc	0.09	0.13	0.16	1.67	1.15	2.23	2.36
Ti	50.38	16.45	19.51	72.32	220.94	11159.22	3.39
V	6.26	7.08	8.90	16.80	11.71	44.67	1.98
Cr	17.10	8.25	4.79	9.80	12.65	21.67	6.22
Mn	111.14	105.25	103.42	32.17	151.02	301.57	1.64
Co	1.85	2.17	2.51	0.43	1.60	0.59	1.85
Cu	29.11	27.05	13.57	13.50	30.99	17.73	3.20
Cu	28.98	27.02	13.60	12.70	31.16	17.92	3.11
Zn	5.37	5.46	4.73	1.16	3.06	1.88	1.11
Zn	4.88	5.00	4.74	1.20	4.13	3.13	1.58
As	0.10	0.11	0.09	0.86	15.94	29.73	7.40
Se	1.37	2.13	1.57	2.60	3.66	6.04	1.65
Se	1.25	BDL	0.59	BDL	4.95	13.62	12.26
Rb	0.03	0.04	0.03	0.14	0.83	0.21	5.68
Sr	0.80	13.22	11.62	478.65	115.01	332.72	2.57
Mo	BDL	BDL	0.10	BDL	0.16	0.69	BDL
Sn	0.05	0.05	0.13	0.30	0.16	0.99	5.82
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.02	0.02	0.04	0.04	0.07	0.05	7.56
Ba	0.84	0.19	0.24	0.52	5.65	2.39	4.54
Ba	1.41	0.07	0.63	0.15	5.98	4.14	1.57
W	0.01	BDL	0.06	0.06	1.60	8.27	BDL
Pb	0.17	0.16	0.11	0.59	0.72	2.68	2.17
Bi	0.01	0.01	0.03	0.40	0.15	0.20	7.59
Th	BDL	BDL	BDL	0.13	3.18	16.39	2.26
U	0.01	0.03	0.01	0.31	1.22	6.99	3.68
Tl	0.00	BDL	BDL	BDL	0.02	0.02	BDL

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	81JD-94B_18-2	81JD-94B_18-3	81JD-94B_19-1	81JD-94B_19-2	81JD-94B_21-1	81JD-94B_21-2	81JD-94B_21-3
Data Quality (1-3)	2.5	3	1.5	1.5	2.5	3	3
1 standard error (ppm) *							
Li	1.72	1.40	1.47	1.54	1.93	1.70	2.77
B	3.37	3.61	11.32	7.87	0.08	0.62	0.19
Si	6722.14	6722.14	4973.82	4973.82	2683.25	2683.25	2683.25
P	4.71	10.51	80.81	626.09	13.33	7.13	0.87
Sc	1.94	1.76	3.88	1.86	0.80	0.12	0.24
Ti	1.07	1.01	279.98	307.12	4.24	2.25	4.26
V	1.03	1.06	1.58	1.41	3.28	2.74	2.66
Cr	0.73	0.93	1.11	1.09	1.67	1.81	1.09
Mn	0.88	0.89	6.73	6.39	164.45	128.13	165.86
Co	1.02	0.90	1.25	1.34	0.45	0.35	0.35
Cu	0.90	0.93	1.42	1.38	15.55	10.32	21.04
Cu	0.86	0.93	1.30	1.30	14.88	9.81	20.51
Zn	0.97	0.77	1.45	1.29	8.40	9.68	13.08
Zn	1.25	1.27	2.07	1.99	10.87	10.31	12.31
As	5.84	6.96	6.46	3.13	0.14	0.03	BDL
Se	0.08	0.09	0.38	0.27	0.14	0.12	0.15
Se	BDL	2.53	0.93	0.56	0.40	#VALUE!	BDL
Rb	3.06	10.30	1.28	6.11	0.07	0.26	0.03
Sr	11.44	3.07	3.40	2.68	3.03	1.09	BDL
Mo	18.95	11.53	8.42	8.24	#VALUE!	BDL	0.04
Sn	5.09	4.92	3.93	3.00	0.02	0.07	0.03
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	1.58	14.01	3.86	10.13	0.01	0.04	0.02
Ba	4.54	4.41	7.18	12.08	0.28	9.00	1.54
Ba	5.09	4.22	3.14	9.02	0.30	3.69	2.69
W	BDL	BDL	42.52	3.40	BDL	#VALUE!	BDL
Pb	3.00	5.63	3.03	7.42	0.16	0.13	0.03
Bi	48.33	13.06	4.89	13.08	0.05	0.01	0.00
Th	7.22	3.98	5.02	3.74	0.71	0.06	0.04
U	9.82	BDL	4.90	8.49	0.13	0.01	#VALUE!
Tl	1.65	BDL	BDL	BDL	#VALUE!	BDL	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	81JD-94B_18-2	81JD-94B_18-3	81JD-94B_19-1	81JD-94B_19-2	81JD-94B_21-1	81JD-94B_21-2	81JD-94B_21-3
Data Quality (1-3)	2.5	3	1.5	1.5	2.5	3	3
1 standard error (ppm)**							
Li	4.82	4.72	6.32	6.19	7.46	7.30	8.52
B	9.32	8.70	21.49	19.35	0.41	0.78	0.62
Si	11546.88	11546.88	8543.73	8543.73	4609.12	4609.12	4609.12
P	17.08	19.49	407.37	742.76	30.63	11.55	7.20
Sc	2.42	2.28	4.53	2.97	0.81	0.15	0.25
Ti	3.11	3.13	810.11	807.77	9.68	7.56	9.71
V	1.95	1.98	2.73	2.64	5.86	5.25	4.98
Cr	6.15	6.29	9.16	9.21	13.49	11.34	8.56
Mn	1.49	1.52	11.17	10.90	255.54	215.48	255.65
Co	1.82	1.82	2.62	2.59	0.75	0.66	0.68
Cu	3.14	3.18	4.67	4.83	36.70	35.07	45.90
Cu	3.09	3.06	4.64	4.65	36.59	35.21	45.63
Zn	1.24	1.10	1.94	1.81	11.39	11.87	14.97
Zn	1.72	1.74	2.87	2.78	15.06	13.74	15.93
As	8.68	9.82	10.97	9.57	0.18	0.09	BDL
Se	1.31	1.21	2.59	3.42	2.04	1.88	1.66
Se	BDL	9.40	2.21	2.05	0.62	#VALUE!	BDL
Rb	3.07	10.30	1.34	6.12	0.07	0.26	0.03
Sr	11.51	3.31	3.72	3.06	3.26	1.12	BDL
Mo	19.08	11.77	8.99	8.76	#VALUE!	BDL	0.04
Sn	6.46	6.38	6.33	5.72	0.04	0.08	0.05
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	2.66	14.17	4.44	10.38	0.01	0.05	0.02
Ba	4.58	4.45	7.35	12.19	0.28	9.18	1.54
Ba	5.13	4.26	3.48	9.14	0.30	4.05	2.69
W	BDL	BDL	42.80	5.83	BDL	#VALUE!	BDL
Pb	3.34	5.83	3.87	7.82	0.17	0.13	0.04
Bi	48.38	13.26	5.73	13.41	0.05	0.01	0.00
Th	7.36	4.22	5.50	4.32	0.80	0.06	0.05
U	10.03	BDL	5.77	9.00	0.14	0.01	#VALUE!
Tl	2.02	BDL	BDL	BDL	#VALUE!	BDL	BDL

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	81JD-94B_22-1	81JD-94B_22-2	81JD-94B_22-3	81JD-94B_22-4	81JD-94B_22-5	81JD-94B_23-1	81JD-94B_23-2
Data Quality (1-3)	2.5	2.5	2.5	2.5	3	3	3
1 standard error (ppm) *							
Li	1.78	1.67	1.57	2.04	1.95	1.15	2.20
B	0.38	0.18	0.75	0.78	0.30	0.70	0.31
Si	2683.25	2683.25	2683.25	2683.25	2683.25	2683.25	2683.25
P	122.98	3.06	1.57	2.68	1.44	25.66	9.82
Sc	0.07	0.09	1.43	0.23	0.25	0.12	0.12
Ti	2.68	234.00	4.71	3.78	4.90	2.77	3.57
V	2.97	4.13	2.62	2.98	2.94	1.60	2.71
Cr	2.26	1.85	1.17	0.98	1.74	0.67	1.59
Mn	128.18	137.21	123.93	149.19	143.26	95.66	153.64
Co	0.30	0.26	0.29	0.34	0.35	0.22	0.30
Cu	38.03	11.10	10.32	9.82	12.40	56.67	36.06
Cu	34.39	11.18	10.58	9.91	12.11	57.26	36.13
Zn	8.31	7.10	5.92	7.74	7.24	5.28	7.58
Zn	10.97	9.48	8.40	9.96	9.93	7.37	10.68
As	0.15	0.04	0.01	0.11	#VALUE!	0.04	BDL
Se	0.40	0.34	0.05	0.17	0.19	0.18	0.22
Se	BDL	0.24	BDL	0.07	BDL	BDL	0.51
Rb	0.03	0.04	0.03	0.02	0.01	0.16	0.02
Sr	0.15	1.38	392.52	0.15	#VALUE!	5.98	3.11
Mo	BDL	0.03	0.00	#VALUE!	BDL	BDL	0.03
Sn	0.05	0.11	0.03	0.10	0.01	0.02	0.03
Te	BDL	#VALUE!	BDL	BDL	BDL	BDL	BDL
Cs	0.02	0.01	0.09	0.02	0.01	0.01	0.09
Ba	0.49	0.30	0.55	0.06	0.08	4.07	0.39
Ba	0.57	0.37	0.51	0.10	0.01	8.24	0.17
W	BDL	0.49	#VALUE!	BDL	#VALUE!	#VALUE!	BDL
Pb	0.18	0.05	0.09	0.06	0.07	0.16	0.40
Bi	0.00	0.00	0.06	0.00	0.02	0.12	0.23
Th	0.02	0.01	26.90	0.00	0.47	0.20	0.74
U	0.01	0.01	BDL	0.00	1.87	0.09	BDL
Tl	#VALUE!	#VALUE!	BDL	#VALUE!	#VALUE!	0.02	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	81JD-94B_22-1	81JD-94B_22-2	81JD-94B_22-3	81JD-94B_22-4	81JD-94B_22-5	81JD-94B_23-1	81JD-94B_23-2
Data Quality (1-3)	2.5	2.5	2.5	2.5	3	3	3
1 standard error (ppm)**							
Li	6.57	6.55	6.43	8.26	8.23	4.93	8.15
B	0.75	0.51	0.99	1.91	0.82	0.84	0.80
Si	4609.12	4609.12	4609.12	4609.12	4609.12	4609.12	4609.12
P	279.09	12.49	8.03	14.62	8.86	49.77	26.66
Sc	0.10	0.14	1.47	0.25	0.34	0.15	0.17
Ti	7.44	650.28	9.17	9.94	12.48	6.35	10.03
V	5.03	7.42	4.80	5.20	5.43	2.97	5.10
Cr	15.50	15.76	10.17	9.27	16.82	6.38	10.94
Mn	217.50	216.02	199.56	244.51	241.35	153.35	248.55
Co	0.56	0.54	0.57	0.67	0.66	0.42	0.63
Cu	61.52	31.27	31.36	33.16	43.51	187.99	125.95
Cu	59.29	31.09	31.35	33.08	43.39	190.06	127.62
Zn	11.49	10.07	8.42	10.83	10.43	7.57	10.83
Zn	15.41	13.55	11.69	14.27	14.09	10.48	15.13
As	0.23	0.14	0.06	0.16	#VALUE!	0.12	BDL
Se	2.11	2.44	1.44	1.97	2.33	3.05	2.29
Se	BDL	0.82	BDL	0.17	BDL	BDL	1.48
Rb	0.03	0.04	0.03	0.03	0.01	0.16	0.03
Sr	0.16	1.39	392.53	0.17	#VALUE!	6.47	3.45
Mo	BDL	0.03	0.00	#VALUE!	BDL	BDL	0.03
Sn	0.06	0.15	0.05	0.16	0.03	0.03	0.05
Te	BDL	#VALUE!	BDL	BDL	BDL	BDL	BDL
Cs	0.02	0.01	0.09	0.02	0.01	0.01	0.09
Ba	0.50	0.33	0.57	0.07	0.09	4.32	0.40
Ba	0.58	0.38	0.53	0.10	0.02	8.34	0.18
W	BDL	0.59	#VALUE!	BDL	#VALUE!	#VALUE!	BDL
Pb	0.20	0.07	0.10	0.08	0.07	0.18	0.42
Bi	0.00	0.00	0.06	0.00	0.02	0.12	0.23
Th	0.02	0.02	26.90	0.01	0.48	0.21	0.90
U	0.01	0.01	BDL	0.00	1.88	0.09	BDL
Tl	#VALUE!	#VALUE!	BDL	#VALUE!	#VALUE!	0.02	BDL

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	81JD-94B_24-1	81JD-94B_24-2	81JD-94B_24-3	81JD-94B_26-1	81JD-94B_26-2	81JD-94B_26-3	ANN006001.045-10
Data Quality (1-3)	3	2.5	3	3	2.5	1.5	1.5
1 standard error (ppm) *							
Li	2.12	2.22	3.03	1.92	2.02	2.00	1.64
B	0.14	0.21	0.34	0.42	0.36	0.21	0.41
Si	2683.25	2683.25	2683.25	2683.25	2683.25	2683.25	2638.93
P	2.63	1.98	2.61	2.09	0.91	62.18	9.99
Sc	0.15	0.13	0.13	0.19	0.12	0.09	0.42
Ti	14.33	3.37	2.95	2.85	4.61	2.03	574.74
V	2.63	2.89	3.68	2.91	2.81	2.86	13.26
Cr	1.32	1.22	1.85	1.92	1.78	0.98	0.64
Mn	138.13	140.79	153.72	160.11	141.18	134.05	14.42
Co	0.33	0.31	0.37	0.37	0.27	0.29	1.23
Cu	15.64	26.68	12.11	11.68	15.39	4.00	0.80
Cu	16.16	28.95	11.64	10.44	12.20	3.76	0.68
Zn	7.57	7.73	8.51	10.02	7.63	7.41	3.15
Zn	10.39	9.71	10.92	11.52	10.74	10.98	3.18
As	0.11	0.05	0.23	0.05	#VALUE!	0.07	0.06
Se	0.23	0.16	0.21	0.19	0.20	2.41	0.29
Se	#VALUE!	BDL	BDL	BDL	0.17	0.28	BDL
Rb	0.08	0.09	0.04	0.10	0.06	0.10	2.45
Sr	0.16	29.72	0.02	0.02	1.25	0.27	0.18
Mo	0.81	0.03	#VALUE!	BDL	0.04	0.01	0.04
Sn	0.03	0.02	0.03	0.05	0.07	0.02	0.12
Te	BDL	BDL	BDL	BDL	BDL	BDL	0.09
Cs	0.01	0.04	0.03	BDL	0.02	0.02	0.19
Ba	14.84	10.45	0.07	0.08	0.38	8.59	19.18
Ba	18.80	11.70	0.11	0.11	0.50	17.73	16.01
W	0.02	#VALUE!	0.01	0.00	#VALUE!	0.02	0.17
Pb	0.14	0.16	0.03	0.04	0.11	0.13	0.06
Bi	0.00	0.03	0.00	BDL	0.00	0.00	0.01
Th	0.04	0.51	0.01	0.07	0.06	0.01	0.04
U	#VALUE!	0.06	0.00	BDL	#VALUE!	0.00	0.03
Tl	BDL	BDL	BDL	BDL	BDL	#VALUE!	0.05

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	81JD-94B_24-1	81JD-94B_24-2	81JD-94B_24-3	81JD-94B_26-1	81JD-94B_26-2	81JD-94B_26-3	ANN006001.045-10
Data Quality (1-3)	3	2.5	3	3	2.5	1.5	1.5
1 standard error (ppm)**							
Li	8.13	8.16	8.47	7.12	8.05	8.47	6.73
B	0.30	0.65	0.92	0.64	0.74	0.75	1.02
Si	4609.12	4609.12	4609.12	4609.12	4609.12	4609.12	4532.99
P	7.55	8.74	8.58	11.62	7.55	81.26	22.10
Sc	0.16	0.20	0.17	0.21	0.15	0.11	0.61
Ti	39.59	11.35	9.51	9.03	12.11	6.10	1318.18
V	4.81	5.54	6.47	5.44	5.10	5.39	25.64
Cr	11.23	11.77	17.15	18.11	16.62	8.29	4.34
Mn	234.84	232.23	249.81	247.64	240.45	226.44	23.09
Co	0.68	0.62	0.70	0.57	0.52	0.56	2.61
Cu	53.04	89.59	40.66	37.19	40.71	13.17	1.04
Cu	54.34	91.31	40.71	36.77	39.31	13.28	1.01
Zn	10.79	10.58	11.50	12.72	10.94	10.28	4.38
Zn	14.79	13.77	15.12	15.74	15.10	14.65	4.59
As	0.22	0.10	0.27	0.13	#VALUE!	0.15	0.21
Se	1.84	2.24	2.28	2.37	2.16	2.90	2.87
Se	#VALUE!	BDL	BDL	BDL	0.38	0.44	BDL
Rb	0.08	0.09	0.04	0.10	0.06	0.10	3.02
Sr	0.16	30.78	0.03	0.03	1.25	0.27	0.20
Mo	0.81	0.03	#VALUE!	BDL	0.04	0.01	0.04
Sn	0.06	0.04	0.05	0.06	0.10	0.05	0.32
Te	BDL	BDL	BDL	BDL	BDL	BDL	0.09
Cs	0.01	0.05	0.04	BDL	0.02	0.02	0.39
Ba	14.84	10.49	0.08	0.09	0.38	8.59	23.92
Ba	18.80	11.73	0.12	0.12	0.51	17.73	20.01
W	0.02	#VALUE!	0.01	0.00	#VALUE!	0.02	0.34
Pb	0.14	0.18	0.04	0.05	0.12	0.16	0.06
Bi	0.00	0.03	0.00	BDL	0.00	0.00	0.01
Th	0.04	0.52	0.01	0.07	0.06	0.01	0.04
U	#VALUE!	0.11	0.00	BDL	#VALUE!	0.00	0.05
Tl	BDL	BDL	BDL	BDL	BDL	#VALUE!	0.09

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN006001.045-11	ANN006001.045-12	ANN006001.045-2	ANN006001.045-3	ANN006001.045-4	ANN006001.045-5	ANN006001.045-6
Data Quality (1-3)	1.5	3	2.5	2	2.5	1.5	1.5
1 standard error (ppm) *							
Li	1.21	1.29	3.29	2.47	2.77	3.29	2.60
B	0.23	0.19	0.76	0.18	0.70	0.20	1.23
Si	2638.93	2638.93	2639.30	2639.30	2639.30	2639.30	2639.30
P	2.69	2.91	3.40	9.33	4.25	7.11	346.05
Sc	0.30	0.14	0.37	0.12	0.07	0.27	0.28
Ti	610.92	107.55	108.35	365.46	44.24	3256.63	239.15
V	11.25	6.43	10.81	12.12	10.48	12.73	10.96
Cr	1.00	0.90	0.73	2.75	2.10	2.02	1.41
Mn	16.23	10.02	12.31	12.98	14.49	14.41	24.80
Co	1.76	0.86	1.43	1.36	2.09	1.76	3.17
Cu	0.21	0.18	0.23	0.16	0.29	0.27	0.48
Cu	0.24	0.33	0.70	0.27	0.26	0.45	0.42
Zn	2.66	2.62	4.53	3.68	6.28	4.72	6.67
Zn	2.65	2.64	7.55	7.71	9.46	6.86	8.07
As	0.11	0.16	0.20	0.30	BDL	0.14	0.20
Se	0.18	0.10	0.89	1.31	BDL	0.56	0.86
Se	BDL	BDL	0.34	0.69	BDL	BDL	BDL
Rb	1.06	1.15	0.73	4.13	1.66	1.78	1.07
Sr	0.10	1.00	1.17	0.45	3.94	0.24	1.19
Mo	0.03	BDL	BDL	BDL	BDL	0.18	BDL
Sn	0.15	0.02	0.07	0.09	BDL	0.11	0.13
Te	BDL	BDL	0.07	0.17	BDL	BDL	BDL
Cs	0.08	0.10	0.21	0.27	0.08	0.12	0.26
Ba	4.60	10.95	12.81	33.36	22.48	15.60	25.39
Ba	3.72	9.02	9.63	33.57	23.69	15.04	18.93
W	0.21	0.05	0.22	0.04	BDL	1.04	0.10
Pb	0.04	0.03	0.28	0.10	0.05	0.18	0.04
Bi	0.01	BDL	BDL	0.01	BDL	0.02	BDL
Th	0.03	0.02	0.01	0.00	BDL	0.09	0.03
U	0.03	0.01	0.02	0.00	0.01	0.52	0.01
Tl	0.03	0.02	0.02	0.08	0.03	0.07	0.09

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN006001.045-11	ANN006001.045-12	ANN006001.045-2	ANN006001.045-3	ANN006001.045-4	ANN006001.045-5	ANN006001.045-6
Data Quality (1-3)	1.5	3	2.5	2	2.5	1.5	1.5
1 standard error (ppm)**							
Li	5.56	5.27	8.25	8.03	7.09	8.10	8.01
B	0.51	0.81	0.86	0.95	0.86	0.91	1.45
Si	4532.99	4532.99	4533.63	4533.63	4533.63	4533.63	4533.63
P	9.21	8.98	9.49	16.11	11.25	14.20	1203.53
Sc	0.48	0.17	0.39	0.18	0.10	0.34	0.30
Ti	1951.45	211.53	283.49	535.93	48.23	4007.14	271.65
V	26.04	12.43	19.56	22.43	17.36	23.64	20.11
Cr	4.04	5.24	3.58	13.85	10.04	9.27	6.80
Mn	28.47	16.39	22.91	21.38	26.58	24.75	33.79
Co	2.95	1.94	3.14	2.81	3.97	3.44	4.52
Cu	0.30	0.33	0.73	0.37	0.44	0.46	0.49
Cu	0.32	0.45	1.01	0.36	0.46	0.63	0.43
Zn	3.70	3.61	6.17	5.08	7.88	6.10	7.82
Zn	3.62	3.72	10.19	9.99	12.19	9.58	10.62
As	0.36	0.22	0.27	0.36	BDL	0.18	0.40
Se	1.68	1.15	2.41	4.87	BDL	1.86	3.27
Se	BDL	BDL	0.68	2.11	BDL	BDL	BDL
Rb	1.24	1.41	0.77	4.36	1.67	1.85	1.25
Sr	0.11	1.19	1.29	0.53	3.94	0.27	1.26
Mo	0.03	BDL	BDL	BDL	BDL	0.18	BDL
Sn	0.43	0.07	0.10	0.14	BDL	0.51	0.15
Te	BDL	BDL	0.07	0.17	BDL	BDL	BDL
Cs	0.14	0.19	0.24	0.40	0.12	0.19	0.39
Ba	5.79	13.42	13.65	38.30	22.58	18.11	28.03
Ba	4.73	11.06	11.14	39.77	23.81	18.46	23.02
W	0.31	0.06	0.26	0.07	BDL	2.08	0.11
Pb	0.04	0.05	0.29	0.10	0.05	0.18	0.04
Bi	0.01	BDL	BDL	0.01	BDL	0.02	BDL
Th	0.03	0.02	0.01	0.00	BDL	0.09	0.03
U	0.05	0.01	0.02	0.00	0.01	0.53	0.01
Tl	0.04	0.05	0.03	0.11	0.03	0.08	0.10

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN006001.045-7	ANN006001.045-8	ANN006001.045-9	ANN006002.023-2	ANN006002.023-3	ANN006002.023-4	ANN006002.023-5
Data Quality (1-3)	1.5	1.5	1.5	2.5	1.5	2.5	1.5
Li (ppm)	34.10	38.87	41.38	19.48	21.47	16.57	23.10
B (ppm)	2.86	2.82	1.42	1.21	1.08	2.05	1.67
Si (ppm)	131965.22	131965.22	131965.22	127902.95	127902.95	127902.95	127902.95
P (ppm)	38.09	27.53	626.66	28.97	65.40	6.46	252.63
Sc (ppm)	6.00	3.43	3.58	2.00	4.99	2.62	3.17
Ti (ppm)	14096.10	12291.17	18632.41	1786.46	26354.23	7023.71	14655.60
V (ppm)	408.37	331.47	383.34	139.49	438.61	166.77	374.73
Cr (ppm)	53.46	67.91	65.68	13.22	26.04	13.70	16.64
Mn (ppm)	633.42	815.75	771.70	2234.93	3138.80	1307.57	2461.51
Co (ppm)	42.89	51.33	48.52	67.64	87.15	50.52	136.66
Cu(63) (ppm)	6.15	9.83	2.45	1.36	1.68	2.72	1.34
Cu(65)* (ppm)	5.54	11.68	3.03	1.58	2.51	3.68	1.76
Zn(66)* (ppm)	122.70	121.90	112.77	429.25	555.06	281.51	467.11
Zn(68) (ppm)	120.95	126.22	114.46	437.33	528.74	320.80	445.20
As (ppm)	0.55	0.85	0.41	BDL	0.52	0.54	BDL
Se(76) (ppm)	5.90	4.36	2.26	3.23	2.69	2.62	4.46
Se(77)* (ppm)	1.92	BDL	BDL	BDL	BDL	0.31	1.80
Rb (ppm)	11.20	2.63	3.17	129.02	21.66	150.46	2.53
Sr (ppm)	28.86	1.88	4.27	27.27	17.04	108.96	3.33
Mo (ppm)	BDL	BDL	BDL	BDL	0.38	0.48	0.10
Sn (ppm)	1.40	1.20	1.16	0.18	0.58	0.26	0.32
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs (ppm)	0.64	0.32	0.35	9.16	2.52	6.93	1.37
Ba(137) (ppm)	164.88	22.22	13.21	525.16	75.52	1471.04	3.62
Ba(138)* (ppm)	165.26	21.66	13.20	512.90	73.76	1429.93	3.68
W (ppm)	1.59	0.93	0.33	0.06	1.44	0.27	0.48
Pb (ppm)	1.76	1.24	0.33	0.57	0.60	4.13	0.26
Bi (ppm)	0.28	0.10	0.08	BDL	0.03	0.02	0.04
Th (ppm)	0.06	BDL	0.02	BDL	0.13	BDL	BDL
U (ppm)	0.24	0.06	0.17	0.07	0.23	0.28	0.19
Tl (ppm)	0.07	BDL	0.05	0.65	0.14	0.71	0.01
SiO2 wt. %	28.23	28.23	28.23	27.36	27.36	27.36	27.36

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN006001.045-7	ANN006001.045-8	ANN006001.045-9	ANN006002.023-2	ANN006002.023-3	ANN006002.023-4	ANN006002.023-5
Data Quality (1-3)	1.5	1.5	1.5	2.5	1.5	2.5	1.5
1 standard error (ppm) *							
Li	1.91	2.30	2.37	0.77	0.67	0.64	0.70
B	0.28	1.18	0.40	0.16	0.22	0.25	0.08
Si	2639.30	2639.30	2639.30	2558.06	2558.06	2558.06	2558.06
P	4.23	54.68	139.28	1.57	4.63	70.13	49.58
Sc	0.22	0.23	0.40	0.12	0.13	0.21	0.21
Ti	541.76	734.66	1091.75	80.22	734.62	349.22	711.55
V	16.68	14.02	17.43	3.29	10.36	5.31	8.52
Cr	2.81	3.20	2.87	0.35	0.76	0.44	0.65
Mn	30.17	17.65	17.71	71.81	78.37	33.46	92.02
Co	2.24	1.55	1.72	2.23	2.34	2.08	4.45
Cu	1.24	2.93	0.36	0.18	0.26	0.31	0.14
Cu	0.30	3.51	0.69	0.22	0.12	0.29	0.27
Zn	6.53	5.82	3.95	13.57	16.48	8.11	17.40
Zn	9.71	6.97	5.74	13.66	14.92	9.67	15.50
As	0.17	0.15	0.11	BDL	0.14	0.08	BDL
Se	1.32	1.18	0.83	0.22	0.16	0.81	0.40
Se	0.29	BDL	BDL	BDL	BDL	0.21	0.55
Rb	0.62	0.08	0.37	3.61	0.93	4.29	0.12
Sr	1.09	0.24	0.31	1.00	0.74	17.63	0.11
Mo	BDL	BDL	BDL	BDL	0.04	0.15	0.06
Sn	0.12	0.18	0.29	0.02	0.03	0.05	0.03
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.02	0.02	0.06	0.48	0.09	0.23	0.09
Ba	5.63	1.56	0.62	59.58	3.92	53.02	0.17
Ba	7.24	0.74	0.54	55.22	3.75	56.69	0.16
W	0.08	0.07	0.36	0.02	0.30	0.04	0.08
Pb	0.11	0.34	0.15	0.08	0.07	0.49	0.07
Bi	0.10	0.05	0.05	BDL	0.01	0.00	0.01
Th	0.02	BDL	0.02	BDL	0.03	BDL	BDL
U	0.02	0.04	0.05	0.01	0.02	0.04	0.04
Tl	0.03	BDL	0.02	0.05	0.03	0.05	0.01

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN006001.045-7	ANN006001.045-8	ANN006001.045-9	ANN006002.023-2	ANN006002.023-3	ANN006002.023-4	ANN006002.023-5
Data Quality (1-3)	1.5	1.5	1.5	2.5	1.5	2.5	1.5
1 standard error (ppm)**							
Li	5.32	6.11	6.48	2.85	3.10	2.43	3.33
B	1.08	1.57	0.66	0.47	0.45	0.79	0.61
Si	4533.63	4533.63	4533.63	4394.08	4394.08	4394.08	4394.08
P	12.04	55.28	231.87	8.48	19.37	70.15	87.97
Sc	0.36	0.28	0.44	0.15	0.23	0.23	0.25
Ti	1474.67	1403.56	2116.28	186.00	2582.31	746.50	1549.70
V	27.34	22.50	26.79	7.23	22.72	9.35	19.26
Cr	11.17	14.09	13.58	2.68	5.28	2.78	3.40
Mn	37.25	33.21	31.97	108.87	139.11	58.41	128.80
Co	3.29	3.28	3.22	4.34	5.34	3.47	8.74
Cu	1.41	3.12	0.45	0.23	0.32	0.43	0.20
Cu	0.67	3.73	0.76	0.28	0.30	0.49	0.33
Zn	7.38	6.75	5.06	18.48	23.12	11.55	22.11
Zn	11.09	8.93	7.65	18.18	20.82	13.08	19.74
As	0.25	0.33	0.18	BDL	0.23	0.21	BDL
Se	5.07	3.81	2.05	2.59	2.16	2.25	3.59
Se	1.57	BDL	BDL	BDL	BDL	0.33	1.54
Rb	0.64	0.08	0.37	4.34	1.01	5.12	0.13
Sr	1.34	0.24	0.33	1.16	0.83	17.79	0.13
Mo	BDL	BDL	BDL	BDL	0.05	0.15	0.06
Sn	0.28	0.28	0.36	0.04	0.11	0.07	0.07
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.05	0.03	0.07	0.79	0.20	0.53	0.13
Ba	7.02	1.66	0.71	61.59	4.52	68.71	0.20
Ba	8.74	0.98	0.67	56.65	4.17	66.78	0.19
W	0.20	0.13	0.36	0.02	0.34	0.05	0.10
Pb	0.12	0.34	0.15	0.10	0.09	0.64	0.08
Bi	0.10	0.05	0.05	BDL	0.01	0.00	0.01
Th	0.02	BDL	0.02	BDL	0.03	BDL	BDL
U	0.03	0.04	0.05	0.01	0.03	0.05	0.05
Tl	0.03	BDL	0.02	0.09	0.03	0.09	0.01

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN006002.023-7	ANN006002.023-8	ANN007006.057-1	ANN007006.057-10	ANN007006.057-12	ANN007006.057-2	ANN007006.057-3
Data Quality (1-3)	2	2.5	2	2.5	3	2.5	3
Li (ppm)	22.45	24.13	50.77	68.59	57.44	60.50	58.27
B (ppm)	1.28	1.63	0.81	0.87	0.93	1.83	0.75
Si (ppm)	127902.95	127902.95	128389.12	128389.12	128389.12	128389.12	128389.12
P (ppm)	936.68	38.91	38.78	30.65	33.12	81.37	34.94
Sc (ppm)	1.99	2.03	16.78	15.22	15.93	13.21	15.68
Ti (ppm)	4078.89	4361.46	216.64	1471.24	236.22	1461.25	226.26
V (ppm)	266.54	276.65	559.16	373.90	425.56	456.18	522.69
Cr (ppm)	17.44	10.90	6.56	103.67	16.10	9.15	9.08
Mn (ppm)	2881.18	2655.75	792.92	690.07	700.05	742.98	760.92
Co (ppm)	144.27	149.47	4.71	4.83	4.65	4.09	3.44
Cu(63) (ppm)	4.90	4.26	0.70	1.72	BDL	0.93	1.49
Cu(65)* (ppm)	4.54	3.93	BDL	1.57	BDL	1.58	1.04
Zn(66)* (ppm)	520.47	504.05	80.23	100.56	87.44	88.95	79.75
Zn(68) (ppm)	500.07	479.01	76.83	96.87	85.15	93.01	81.44
As (ppm)	0.33	0.31	BDL	BDL	0.42	0.43	BDL
Se(76) (ppm)	6.23	3.10	4.09	2.99	4.50	4.56	4.25
Se(77)* (ppm)	BDL	BDL	BDL	BDL	BDL	0.97	BDL
Rb (ppm)	3.40	4.28	0.49	0.77	2.91	0.46	0.33
Sr (ppm)	4.07	2.12	0.18	0.65	0.42	0.51	0.53
Mo (ppm)	BDL	BDL	BDL	0.08	0.01	BDL	0.11
Sn (ppm)	0.10	0.07	0.15	0.81	0.20	0.21	0.14
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs (ppm)	1.66	1.52	0.24	0.21	0.23	0.22	0.29
Ba(137) (ppm)	4.40	4.77	BDL	0.33	0.58	0.44	0.54
Ba(138)* (ppm)	4.21	5.52	0.16	0.57	0.66	0.28	0.26
W (ppm)	0.11	0.17	BDL	2.24	0.11	0.70	0.03
Pb (ppm)	0.54	0.52	0.08	0.13	0.03	0.13	0.09
Bi (ppm)	BDL	0.00	BDL	BDL	0.01	BDL	BDL
Th (ppm)	0.14	0.05	BDL	0.68	BDL	0.26	BDL
U (ppm)	0.12	0.05	0.32	1.81	BDL	1.22	0.05
Tl (ppm)	0.03	0.03	BDL	BDL	0.02	BDL	BDL
SiO2 wt. %	27.36	27.36	27.47	27.47	27.47	27.47	27.47

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN006002.023-7	ANN006002.023-8	ANN007006.057-1	ANN007006.057-10	ANN007006.057-12	ANN007006.057-2	ANN007006.057-3
Data Quality (1-3)	2	2.5	2	2.5	3	2.5	3
1 standard error (ppm) *							
Li	0.81	1.01	1.81	2.12	1.78	2.27	2.34
B	0.36	0.24	0.13	0.35	0.23	0.63	0.15
Si	2558.06	2558.06	2567.78	2567.78	2567.78	2567.78	2567.78
P	46.55	3.57	2.35	7.00	3.77	4.35	1.73
Sc	0.21	0.07	0.42	0.54	0.55	0.32	0.54
Ti	200.96	133.14	5.72	120.32	12.03	139.99	12.21
V	6.63	6.32	12.31	9.17	11.77	11.55	22.11
Cr	0.80	0.35	0.61	3.07	0.74	0.41	0.43
Mn	99.31	80.21	19.84	17.44	20.82	19.24	32.57
Co	3.93	4.39	0.17	0.20	0.25	0.18	0.16
Cu	1.10	0.46	0.06	0.15	BDL	0.17	0.15
Cu	0.77	0.81	BDL	0.11	BDL	0.19	0.20
Zn	14.96	19.90	3.20	3.40	2.60	3.14	2.66
Zn	13.25	14.67	2.26	2.90	2.39	3.75	2.82
As	0.23	0.08	BDL	BDL	0.09	0.14	BDL
Se	0.32	0.46	0.32	0.21	0.25	0.29	0.27
Se	BDL	BDL	BDL	BDL	BDL	0.24	BDL
Rb	0.15	0.16	0.06	0.05	0.09	0.05	0.05
Sr	0.28	0.15	0.02	0.06	0.06	0.05	2.48
Mo	BDL	BDL	BDL	0.03	0.08	BDL	0.05
Sn	0.05	0.01	0.03	0.10	0.05	0.08	0.02
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.07	0.11	0.05	0.03	0.04	0.02	0.03
Ba	0.58	0.27	BDL	0.21	0.20	0.17	0.22
Ba	0.15	0.21	0.03	0.08	0.06	0.03	0.10
W	0.11	0.04	BDL	0.28	0.04	0.15	0.05
Pb	0.09	0.10	0.02	0.02	0.02	0.05	0.02
Bi	BDL	0.01	BDL	BDL	0.01	BDL	BDL
Th	0.03	0.01	BDL	0.56	BDL	0.05	BDL
U	0.04	0.02	0.07	1.19	BDL	0.36	0.02
Tl	0.01	0.01	BDL	BDL	0.02	BDL	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN006002.023-7	ANN006002.023-8	ANN007006.057-1	ANN007006.057-10	ANN007006.057-12	ANN007006.057-2	ANN007006.057-3
Data Quality (1-3)	2	2.5	2	2.5	3	2.5	3
1 standard error (ppm)**							
Li	3.27	3.55	7.39	9.91	8.30	8.83	8.55
B	0.59	0.64	0.32	0.48	0.41	0.92	0.31
Si	4394.08	4394.08	4410.78	4410.78	4410.78	4410.78	4410.78
P	273.42	11.75	11.40	11.26	10.24	23.81	10.20
Sc	0.22	0.11	0.78	0.81	0.84	0.61	0.82
Ti	432.66	430.79	21.14	183.24	25.24	196.06	24.51
V	13.96	14.24	28.57	19.53	22.88	23.99	32.70
Cr	3.59	2.21	1.45	21.03	3.31	1.88	1.87
Mn	144.88	126.05	35.17	30.70	33.02	33.32	42.86
Co	8.86	9.32	0.31	0.33	0.36	0.29	0.25
Cu	1.22	0.65	0.10	0.24	BDL	0.20	0.22
Cu	0.91	0.91	BDL	0.20	BDL	0.25	0.23
Zn	21.33	24.76	3.97	4.49	3.65	4.07	3.54
Zn	19.08	19.70	3.09	3.93	3.34	4.54	3.60
As	0.26	0.13	BDL	BDL	0.17	0.21	BDL
Se	5.00	2.52	3.29	2.41	3.61	3.66	3.42
Se	BDL	BDL	BDL	BDL	BDL	0.82	BDL
Rb	0.17	0.18	0.06	0.05	0.11	0.05	0.05
Sr	0.29	0.15	0.02	0.07	0.06	0.05	2.48
Mo	BDL	BDL	BDL	0.03	0.08	BDL	0.05
Sn	0.05	0.02	0.04	0.18	0.06	0.09	0.03
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.14	0.15	0.06	0.03	0.04	0.03	0.03
Ba	0.60	0.31	BDL	0.21	0.20	0.17	0.22
Ba	0.18	0.25	0.03	0.08	0.06	0.03	0.10
W	0.11	0.05	BDL	0.38	0.05	0.17	0.05
Pb	0.11	0.11	0.02	0.02	0.03	0.05	0.02
Bi	BDL	0.01	BDL	BDL	0.01	BDL	BDL
Th	0.03	0.01	BDL	0.56	BDL	0.06	BDL
U	0.04	0.02	0.07	1.20	BDL	0.37	0.02
Tl	0.01	0.01	BDL	BDL	0.02	BDL	BDL

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN007006.057-4	ANN007006.057-5	ANN007006.057-6	ANN007006.057-7	ANN007006.057-8	ANN007006.057-9	G909166_27-3
Data Quality (1-3)	1.5	2.5	2.5	2	2.5	3	1.5
1 standard error (ppm) *							
Li	1.56	1.84	2.07	4.74	3.03	1.70	1.71
B	0.21	0.39	0.31	0.19	0.35	0.22	0.14
Si	2567.78	2567.78	2567.78	2567.78	2567.78	2567.78	2848.73
P	4.41	1.53	6.94	6.71	6.95	1.81	1343.89
Sc	0.79	0.58	0.48	0.80	0.58	0.45	0.30
Ti	1205.20	8.67	85.16	534.91	375.53	18.67	51.47
V	12.60	12.68	9.87	14.55	14.74	15.12	8.21
Cr	0.59	0.25	3.03	2.69	2.89	0.89	0.34
Mn	21.22	19.42	17.70	18.13	13.80	17.37	174.83
Co	0.27	0.15	0.46	0.37	0.29	0.27	3.98
Cu	0.69	0.11	0.28	0.58	0.90	0.17	3.39
Cu	0.68	0.45	0.26	0.44	0.46	0.17	2.95
Zn	3.50	2.20	7.30	4.57	3.93	3.45	20.27
Zn	2.21	2.13	6.09	3.61	3.74	2.96	18.20
As	0.19	BDL	0.16	0.14	0.18	0.15	0.95
Se	0.45	0.30	0.29	0.40	0.29	0.36	0.20
Se	BDL	BDL	0.27	BDL	BDL	BDL	0.33
Rb	0.05	0.04	0.42	1.39	0.89	0.12	0.15
Sr	2.38	0.01	0.09	0.14	0.15	0.03	4.18
Mo	BDL	BDL	BDL	BDL	BDL	BDL	0.12
Sn	0.55	0.05	BDL	0.29	0.14	0.03	0.02
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.03	0.02	0.01	0.05	0.04	0.01	0.01
Ba	0.60	0.26	0.67	2.65	5.11	0.64	3.61
Ba	0.16	0.02	0.71	1.58	4.30	0.38	3.05
W	0.77	BDL	BDL	2.35	0.36	0.09	0.15
Pb	0.06	0.03	0.05	0.09	0.09	0.04	0.06
Bi	0.02	BDL	BDL	BDL	BDL	BDL	0.00
Th	0.29	BDL	0.10	0.02	0.04	0.05	0.19
U	0.52	0.00	0.50	0.12	0.05	0.52	0.07
Tl	BDL	BDL	0.01	0.03	0.04	0.01	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN007006.057-4	ANN007006.057-5	ANN007006.057-6	ANN007006.057-7	ANN007006.057-8	ANN007006.057-9	G909166_27-3
Data Quality (1-3)	1.5	2.5	2.5	2	2.5	3	1.5
1 standard error (ppm)**							
Li	7.19	7.76	9.69	12.81	11.64	7.08	6.37
B	0.40	0.56	0.87	1.34	1.70	0.33	0.61
Si	4410.78	4410.78	4410.78	4410.78	4410.78	4410.78	4893.37
P	9.24	10.75	19.55	16.91	12.76	9.78	3283.75
Sc	1.03	0.93	0.60	1.02	0.90	0.75	0.45
Ti	1818.94	22.30	85.19	1042.78	628.22	28.90	63.91
V	29.07	28.44	22.13	29.76	28.93	26.67	15.96
Cr	2.71	1.20	21.93	21.07	22.18	6.00	1.85
Mn	34.30	33.59	29.83	26.76	23.09	30.32	260.87
Co	0.33	0.26	0.72	0.69	0.60	0.55	8.35
Cu	0.83	0.13	0.38	0.75	1.07	0.18	11.44
Cu	0.76	0.46	0.34	0.67	0.83	0.20	10.92
Zn	4.09	3.16	8.37	5.93	5.27	4.50	26.91
Zn	2.86	2.94	7.11	5.05	4.99	4.06	24.55
As	0.24	BDL	0.21	0.38	0.20	0.26	4.74
Se	3.76	3.05	2.78	2.78	2.85	3.40	1.97
Se	BDL	BDL	0.73	BDL	BDL	BDL	1.03
Rb	0.05	0.05	0.43	1.42	1.05	0.13	0.18
Sr	2.38	0.01	0.09	0.17	0.16	0.03	5.20
Mo	BDL	BDL	BDL	BDL	BDL	BDL	0.13
Sn	1.11	0.05	BDL	0.69	0.38	0.05	0.05
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.03	0.02	0.02	0.06	0.06	0.02	0.03
Ba	0.60	0.26	0.74	2.89	5.78	0.65	4.03
Ba	0.16	0.02	0.74	1.82	4.88	0.39	3.46
W	1.29	BDL	BDL	2.55	0.56	0.10	0.21
Pb	0.07	0.03	0.06	0.10	0.10	0.04	0.08
Bi	0.02	BDL	BDL	BDL	BDL	BDL	0.00
Th	0.29	BDL	0.10	0.03	0.04	0.06	0.25
U	0.53	0.00	0.50	0.14	0.08	0.55	0.09
Tl	BDL	BDL	0.01	0.03	0.05	0.01	BDL

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909166-1	G909166-10	G909166-2	G909166-3	G909166-4	G909166-5	G909166-6
Data Quality (1-3)	2	1.5	1.5	2	2.5	1.5	3
1 standard error (ppm) *							
Li	0.79	1.07	1.31	1.03	0.25	1.38	0.67
B	0.30	0.19	0.30	0.41	0.15	0.08	0.14
Si	2849.01	2849.01	2849.01	2849.01	2849.01	2849.01	2849.01
P	BDL	405.40	345.30	176.94	7.72	237.01	1.46
Sc	1.88	1.00	1.20	0.61	0.92	0.63	0.70
Ti	3.36	168.43	5.48	14.65	5.73	137.86	5.58
V	7.89	6.08	7.33	5.96	4.64	8.97	6.60
Cr	0.41	0.29	0.35	0.58	0.22	0.47	0.36
Mn	106.37	90.78	132.55	96.58	61.12	119.79	84.54
Co	3.90	3.00	3.00	2.85	1.47	3.63	2.22
Cu	5.47	5.50	7.35	4.92	6.46	5.70	6.14
Cu	6.03	5.14	6.19	5.49	7.67	6.93	8.60
Zn	14.76	10.44	14.57	12.54	6.83	12.36	8.81
Zn	12.87	10.15	11.41	12.81	7.48	15.36	11.98
As	0.45	0.50	1.07	0.31	0.12	0.26	0.16
Se	0.23	0.17	0.30	0.55	0.08	0.12	BDL
Se	0.95	BDL	1.12	0.29	0.18	BDL	BDL
Rb	0.04	0.06	0.05	0.35	0.04	0.06	0.03
Sr	9.01	2.83	16.82	1.12	1.18	0.87	0.64
Mo	0.09	0.02	0.35	0.15	0.05	0.10	0.07
Sn	0.07	0.05	0.05	0.07	0.03	0.05	0.07
Te	BDL	BDL	BDL	BDL	BDL	0.06	BDL
Cs	0.02	0.02	0.02	0.07	0.01	0.04	0.04
Ba	0.13	0.29	0.25	0.52	0.16	3.43	10.33
Ba	0.24	0.31	0.20	0.58	0.09	3.66	10.50
W	0.03	0.09	0.14	0.02	0.01	0.04	0.02
Pb	0.11	0.15	0.37	0.26	0.13	0.32	0.05
Bi	0.01	0.00	0.02	0.00	0.00	0.01	BDL
Th	0.34	0.14	0.51	0.06	0.02	0.11	0.01
U	0.11	0.15	0.22	0.02	0.02	0.04	0.01
Tl	BDL	BDL	0.00	0.01	BDL	0.00	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909166-1	G909166-10	G909166-2	G909166-3	G909166-4	G909166-5	G909166-6
Data Quality (1-3)	2	1.5	1.5	2	2.5	1.5	3
1 standard error (ppm)**							
Li	3.61	3.16	4.44	4.11	1.06	4.56	2.55
B	1.02	0.98	0.98	1.06	0.85	0.75	0.97
Si	4893.85	4893.85	4893.85	4893.85	4893.85	4893.85	4893.85
P	BDL	2326.26	2976.54	190.38	14.81	700.24	8.95
Sc	2.73	1.84	1.52	1.08	1.18	0.89	1.07
Ti	9.33	170.48	10.35	16.37	16.90	507.97	13.67
V	17.85	13.41	14.85	13.45	10.97	18.15	11.77
Cr	2.44	1.68	1.95	2.07	1.25	2.53	1.49
Mn	167.76	164.56	181.94	169.13	113.04	193.21	138.94
Co	6.96	5.92	6.00	6.53	3.37	7.18	4.64
Cu	18.82	20.77	18.56	21.56	14.93	20.96	13.80
Cu	18.35	20.96	18.31	21.22	15.51	21.77	15.02
Zn	18.73	14.80	18.29	17.70	9.42	17.61	12.29
Zn	17.00	14.62	16.01	17.60	9.86	19.44	14.69
As	0.61	5.72	9.67	0.99	1.15	2.80	1.36
Se	1.92	1.54	1.14	2.44	0.98	2.63	BDL
Se	2.26	BDL	2.64	1.64	0.74	BDL	BDL
Rb	0.04	0.06	0.06	0.35	0.04	0.06	0.03
Sr	9.75	2.87	17.28	1.16	1.20	0.88	0.65
Mo	0.09	0.03	0.37	0.16	0.06	0.11	0.08
Sn	0.17	0.10	0.08	0.09	0.06	0.16	0.12
Te	BDL	BDL	BDL	BDL	BDL	0.06	BDL
Cs	0.02	0.02	0.02	0.07	0.01	0.04	0.04
Ba	0.14	0.30	0.26	0.52	0.16	3.44	10.34
Ba	0.25	0.33	0.21	0.58	0.09	3.67	10.51
W	0.03	0.11	0.16	0.03	0.01	0.14	0.02
Pb	0.13	0.15	0.38	0.26	0.14	0.44	0.06
Bi	0.01	0.00	0.02	0.01	0.00	0.01	BDL
Th	0.59	0.20	1.14	0.06	0.02	0.11	0.01
U	0.22	0.19	0.31	0.03	0.02	0.07	0.01
Tl	BDL	BDL	0.01	0.01	BDL	0.00	BDL

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909166-8	G909166-9	G909168_12-2	G909168_12-3	G909168_13-1	G909168_13-2	G909168_13-3
Data Quality (1-3)	3	1.5	1	2.5	3	3	2.5
Li (ppm)	43.89	28.70	0.32	53.78	57.12	58.03	42.28
B (ppm)	1.91	2.66	2.96	9.94	2.89	1.90	18.66
Si (ppm)	142450.45	142450.45	129814.88	129814.88	129814.88	129814.88	129814.88
P (ppm)	39.95	10116.46	83.01	91.07	78.25	33.28	361.88
Sc (ppm)	9.17	20.07	1.72	20.63	5.02	5.52	13.50
Ti (ppm)	104.84	1217.86	2.81	3948.85	181.78	190.47	9838.42
V (ppm)	249.42	312.79	1.85	220.06	154.01	169.76	293.13
Cr (ppm)	7.08	10.20	1.54	51.08	5.83	5.91	69.97
Mn (ppm)	4778.48	4162.27	15.98	1739.30	2828.86	2822.74	979.55
Co (ppm)	125.70	115.78	BDL	26.12	35.19	38.27	21.93
Cu(63) (ppm)	114.36	149.82	0.78	235.94	101.47	103.66	356.82
Cu(65)* (ppm)	113.51	158.40	0.20	237.44	106.60	105.52	356.44
Zn(66)* (ppm)	510.96	469.18	1.32	179.89	207.83	198.90	222.89
Zn(68) (ppm)	488.28	465.55	3.09	179.09	204.29	197.62	213.44
As (ppm)	1.30	23.36	0.27	1.49	0.27	0.23	3.68
Se(76) (ppm)	0.69	2.98	0.75	1.94	1.54	2.22	3.29
Se(77)* (ppm)	BDL	1.94	BDL	0.58	BDL	BDL	1.14
Rb (ppm)	0.67	0.99	2.06	62.70	9.53	11.00	188.07
Sr (ppm)	14.58	23.57	297.94	382.46	12.17	2.70	31.50
Mo (ppm)	1.07	0.32	BDL	0.32	BDL	0.08	1.35
Sn (ppm)	0.32	0.26	0.07	1.06	0.15	0.29	1.65
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	0.18
Cs (ppm)	0.08	0.25	0.09	2.75	0.07	0.29	6.87
Ba(137) (ppm)	2.27	3.11	13.97	59.11	14.58	8.80	170.22
Ba(138)* (ppm)	1.80	2.63	14.59	60.33	16.77	8.92	172.96
W (ppm)	0.00	1.01	0.01	1.28	BDL	0.01	3.68
Pb (ppm)	0.71	1.53	0.74	4.59	0.07	0.23	11.17
Bi (ppm)	BDL	0.02	0.01	0.21	BDL	0.03	0.53
Th (ppm)	0.07	1.16	0.01	0.84	BDL	BDL	1.54
U (ppm)	0.09	0.59	0.01	3.18	BDL	0.01	5.42
Tl (ppm)	0.01	0.01	0.01	0.45	0.01	0.01	1.45
SiO2 wt. %	30.47	30.47	27.77	27.77	27.77	27.77	27.77

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909166-8	G909166-9	G909168_12-2	G909168_12-3	G909168_13-1	G909168_13-2	G909168_13-3
Data Quality (1-3)	3	1.5	1	2.5	3	3	2.5
1 standard error (ppm) *							
Li	1.11	0.76	0.06	2.00	1.62	1.94	1.60
B	0.07	0.40	0.31	0.72	0.12	0.22	1.15
Si	2849.01	2849.01	2596.30	2596.30	2596.30	2596.30	2596.30
P	1.57	685.58	19.34	103.89	2.88	1.68	26.84
Sc	0.46	0.55	0.09	1.15	0.25	0.25	0.49
Ti	4.13	161.68	0.55	120.99	5.78	5.20	511.08
V	6.02	6.81	0.25	6.58	5.09	4.62	8.05
Cr	0.49	0.31	0.11	1.31	0.17	0.23	2.51
Mn	114.53	89.94	1.59	74.01	66.77	64.86	29.18
Co	3.28	2.90	BDL	0.68	0.95	1.13	1.16
Cu	6.11	3.73	0.17	6.72	4.54	4.15	29.41
Cu	5.99	4.70	0.05	5.56	3.44	3.91	27.62
Zn	14.13	13.70	0.05	7.90	5.66	5.89	10.16
Zn	13.61	12.55	0.20	6.75	6.07	5.90	11.72
As	0.31	1.20	0.04	0.27	0.09	0.09	0.40
Se	0.21	0.20	0.05	0.43	0.11	0.18	1.10
Se	BDL	0.25	BDL	0.16	BDL	BDL	0.20
Rb	0.07	0.06	0.09	2.09	0.32	0.46	9.59
Sr	5.20	0.85	8.47	34.68	0.47	0.10	2.20
Mo	0.29	0.09	BDL	0.03	BDL	0.02	0.13
Sn	0.04	0.12	0.02	0.06	0.04	0.04	0.26
Te	BDL	BDL	BDL	BDL	BDL	BDL	0.06
Cs	0.02	0.08	0.01	0.15	0.02	0.04	0.36
Ba	0.38	0.25	0.49	1.42	0.60	0.42	8.33
Ba	0.59	0.13	0.46	2.29	0.92	0.38	8.13
W	0.02	0.21	0.01	0.24	BDL	0.29	0.19
Pb	0.03	0.11	0.07	0.27	0.03	0.08	0.70
Bi	BDL	0.01	0.00	0.04	BDL	0.02	0.12
Th	0.01	0.21	0.01	0.08	BDL	BDL	0.18
U	0.02	0.13	0.01	0.31	BDL	0.01	0.18
Tl	0.01	0.00	0.00	0.04	0.01	0.00	0.08

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909166-8	G909166-9	G909168_12-2	G909168_12-3	G909168_13-1	G909168_13-2	G909168_13-3
Data Quality (1-3)	3	1.5	1	2.5	3	3	2.5
1 standard error (ppm)**							
Li	6.25	4.09	0.07	7.84	8.21	8.41	6.17
B	0.70	1.04	1.12	3.69	1.06	0.73	6.89
Si	4893.85	4893.85	4459.76	4459.76	4459.76	4459.76	4459.76
P	11.54	2974.64	30.65	107.12	22.59	9.68	107.05
Sc	0.58	0.96	0.11	1.40	0.32	0.33	0.72
Ti	10.67	197.97	0.61	390.58	18.05	18.65	1057.02
V	12.93	15.89	0.26	12.40	8.95	9.33	16.15
Cr	1.50	2.06	0.33	10.32	1.18	1.21	14.24
Mn	201.18	169.83	1.68	95.34	118.39	117.14	44.69
Co	7.57	6.92	BDL	1.57	2.12	2.35	1.66
Cu	13.58	16.32	0.19	25.83	11.65	11.72	47.83
Cu	13.45	17.45	0.05	25.73	11.79	11.83	46.74
Zn	20.06	18.93	0.06	9.30	8.02	8.01	11.85
Zn	19.31	18.11	0.22	8.29	8.18	7.94	13.05
As	0.55	8.18	0.10	0.58	0.13	0.12	1.34
Se	0.59	2.40	0.60	1.61	1.23	1.79	2.85
Se	BDL	1.57	BDL	0.49	BDL	BDL	0.93
Rb	0.07	0.06	0.10	2.43	0.37	0.51	10.28
Sr	5.20	0.90	9.93	35.31	0.51	0.11	2.27
Mo	0.30	0.09	BDL	0.04	BDL	0.02	0.17
Sn	0.07	0.13	0.03	0.20	0.04	0.06	0.39
Te	BDL	BDL	BDL	BDL	BDL	BDL	0.07
Cs	0.02	0.09	0.01	0.24	0.02	0.05	0.58
Ba	0.38	0.25	0.52	1.58	0.63	0.44	8.56
Ba	0.59	0.14	0.54	2.58	0.98	0.42	8.82
W	0.02	0.24	0.01	0.28	BDL	0.29	0.47
Pb	0.04	0.13	0.09	0.39	0.03	0.08	0.97
Bi	BDL	0.01	0.00	0.04	BDL	0.02	0.13
Th	0.01	0.22	0.01	0.09	BDL	BDL	0.20
U	0.02	0.13	0.01	0.39	BDL	0.01	0.44
Tl	0.01	0.00	0.00	0.06	0.01	0.00	0.17

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909168_13-4	G909168_14-1	G909168_14-2	G909168_14-3	G909168_15-1	G909168_15-2	G909168_15-3
Data Quality (1-3)	1.5	3	3	3	1.5	1.5	1.5
1 standard error (ppm) *							
Li	0.38	1.69	1.49	1.52	1.26	1.58	1.13
B	2.88	0.48	0.89	0.49	0.18	0.35	0.28
Si	2596.30	2596.30	2596.30	2596.30	2596.30	2596.30	2596.30
P	2.20	9.92	9.58	5.24	4121.39	121.65	54.05
Sc	5.29	0.30	0.33	0.22	0.28	0.32	0.49
Ti	19.91	93.36	209.98	101.64	1150.92	999.01	1594.64
V	13.33	6.22	6.62	6.15	10.22	10.35	14.58
Cr	0.31	1.65	1.79	1.64	0.80	0.96	0.86
Mn	51.23	31.09	24.76	28.83	26.61	30.16	25.92
Co	0.09	0.57	0.74	0.57	0.43	0.49	0.60
Cu	0.35	8.90	10.45	10.05	2.11	4.38	2.05
Cu	0.66	10.56	10.41	9.88	2.54	4.34	1.65
Zn	0.41	4.15	5.26	4.06	3.18	3.52	2.83
Zn	0.47	4.54	5.71	5.12	3.36	3.77	4.38
As	0.45	0.18	0.18	0.11	0.17	0.07	0.17
Se	0.58	0.19	0.14	0.10	0.11	0.16	0.13
Se	BDL	BDL	BDL	BDL	BDL	BDL	0.13
Rb	0.84	3.84	4.41	4.51	5.90	4.19	5.69
Sr	219.55	4.29	1.81	0.83	14.11	0.71	8.12
Mo	BDL	0.11	0.09	0.09	0.05	0.11	0.04
Sn	0.06	0.04	0.06	0.04	0.05	0.11	0.23
Te	BDL	BDL	BDL	BDL	0.11	BDL	BDL
Cs	0.03	0.16	0.18	0.33	0.25	0.18	0.28
Ba	0.94	3.97	5.27	3.17	11.42	8.88	9.05
Ba	0.96	4.27	5.17	3.03	15.31	9.68	11.14
W	0.03	0.10	0.09	0.10	0.18	0.16	0.26
Pb	1.08	0.19	0.29	0.15	0.28	0.35	0.48
Bi	0.02	0.01	0.04	0.01	0.01	0.04	0.01
Th	0.78	0.07	0.13	0.04	0.15	0.32	0.12
U	0.35	0.09	0.19	0.05	0.16	0.21	0.33
Tl	0.03	0.05	0.06	0.05	0.08	0.06	0.07

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909168_13-4	G909168_14-1	G909168_14-2	G909168_14-3	G909168_15-1	G909168_15-2	G909168_15-3
Data Quality (1-3)	1.5	3	3	3	1.5	1.5	1.5
1 standard error (ppm)**							
Li	0.46	7.74	5.99	6.80	4.99	5.76	4.68
B	27.58	5.38	7.31	5.93	2.57	2.88	2.19
Si	4459.76	4459.76	4459.76	4459.76	4459.76	4459.76	4459.76
P	15.83	60.78	64.62	51.89	10900.07	145.21	77.98
Sc	6.05	0.48	0.54	0.41	0.42	0.41	0.74
Ti	64.21	362.82	447.22	326.30	3482.25	3875.19	6456.59
V	26.81	12.14	12.66	12.38	20.88	21.52	31.04
Cr	2.08	13.63	13.67	13.04	6.68	7.94	7.13
Mn	81.15	55.94	33.53	52.07	49.10	54.63	47.00
Co	0.10	1.35	1.26	1.36	0.97	1.23	1.00
Cu	0.79	41.72	36.45	43.08	6.93	13.42	7.37
Cu	0.93	41.66	36.65	43.00	7.26	14.22	7.53
Zn	0.47	5.78	6.34	5.83	4.44	5.04	3.84
Zn	0.57	6.09	6.69	6.72	4.82	5.35	5.21
As	2.03	0.42	0.66	0.48	1.96	1.05	1.24
Se	0.62	1.75	1.55	1.91	1.53	0.85	1.61
Se	BDL	BDL	BDL	BDL	BDL	BDL	0.58
Rb	0.88	4.70	5.31	5.40	7.30	5.15	7.04
Sr	252.75	4.73	2.00	0.95	14.40	0.76	9.45
Mo	BDL	0.12	0.11	0.11	0.08	0.13	0.09
Sn	0.22	0.14	0.14	0.15	0.31	0.39	0.64
Te	BDL	BDL	BDL	BDL	0.12	BDL	BDL
Cs	0.03	0.36	0.44	0.52	0.54	0.47	0.60
Ba	0.97	4.22	5.67	3.42	13.19	9.39	10.14
Ba	1.07	4.90	6.32	3.76	19.17	11.15	13.76
W	0.04	0.18	0.23	0.17	0.60	0.60	0.98
Pb	1.59	0.25	0.35	0.21	0.37	0.50	0.69
Bi	0.05	0.01	0.05	0.02	0.02	0.05	0.02
Th	0.83	0.08	0.14	0.05	0.18	0.33	0.17
U	0.76	0.16	0.24	0.12	0.34	0.49	0.67
Tl	0.03	0.12	0.14	0.14	0.24	0.16	0.21

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909168_15-4	G909168_19-1	G909168_19-2	G909168_23-1	G909168_23-2	G909168_24-1	G909168_24-2
Data Quality (1-3)	2	3	2.5	2.5	2.5	1.5	1.5
1 standard error (ppm) *							
Li	1.28	2.12	1.87	2.04	1.70	0.13	0.37
B	0.60	0.47	0.62	0.91	0.79	0.67	1.54
Si	2596.30	2596.30	2596.30	2596.30	2596.30	2596.30	2596.30
P	7.18	2.87	14.87	7.66	10.19	3.05	12.68
Sc	0.59	0.21	0.21	0.12	0.23	0.38	1.33
Ti	487.06	6.09	26.94	7.25	67.71	212.57	565.89
V	8.45	3.72	4.80	0.86	3.61	9.15	12.90
Cr	0.99	0.45	0.46	0.66	0.54	0.69	0.97
Mn	41.43	74.43	78.90	12.86	51.16	31.68	33.78
Co	0.53	1.20	0.89	0.17	0.88	0.21	0.08
Cu	3.63	3.66	12.49	3.65	4.24	0.41	1.40
Cu	3.65	3.62	13.14	3.10	4.29	0.56	3.03
Zn	4.07	8.03	7.47	0.80	3.66	0.73	0.32
Zn	6.15	5.80	12.47	0.73	4.22	0.48	0.70
As	0.24	0.15	0.08	0.05	0.04	0.27	0.36
Se	0.10	0.15	0.57	0.07	0.18	0.21	0.17
Se	0.14	BDL	BDL	BDL	0.11	BDL	BDL
Rb	4.34	0.17	1.39	0.16	0.22	0.06	0.09
Sr	30.51	0.84	1.17	1.32	2.18	211.53	229.11
Mo	0.13	0.05	0.06	0.04	0.03	0.03	0.06
Sn	0.03	0.03	0.33	0.04	0.12	0.13	0.12
Te	BDL	0.06	BDL	BDL	BDL	BDL	0.00
Cs	0.23	0.02	0.10	0.02	0.05	0.02	0.04
Ba	8.30	0.50	2.17	1.76	1.75	0.53	2.05
Ba	6.98	0.47	2.07	1.58	1.71	0.42	3.92
W	0.18	BDL	0.08	0.02	0.05	0.03	0.16
Pb	0.26	0.04	0.25	0.05	0.05	1.05	1.32
Bi	0.01	0.01	0.01	0.15	0.01	0.03	0.04
Th	0.52	0.16	0.02	0.22	0.09	0.06	0.24
U	0.14	0.03	BDL	0.03	0.05	0.12	0.37
Tl	0.12	0.01	0.03	0.00	BDL	BDL	0.01

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909168_15-4	G909168_19-1	G909168_19-2	G909168_23-1	G909168_23-2	G909168_24-1	G909168_24-2
Data Quality (1-3)	2	3	2.5	2.5	2.5	1.5	1.5
1 standard error (ppm)**							
Li	5.96	9.12	8.88	7.95	7.96	0.49	0.43
B	3.21	1.96	1.80	11.68	5.84	8.64	5.20
Si	4459.76	4459.76	4459.76	4459.76	4459.76	4459.76	4459.76
P	47.71	24.65	67.30	57.10	81.35	22.03	77.17
Sc	0.66	0.27	0.26	0.18	0.30	0.49	1.68
Ti	1059.99	21.77	40.99	8.71	71.68	690.72	968.68
V	17.28	8.02	9.67	1.84	7.28	19.45	27.84
Cr	7.95	2.76	1.86	3.82	2.72	4.14	5.96
Mn	62.52	141.09	128.24	15.61	85.11	60.69	60.72
Co	1.34	2.26	2.04	0.29	1.52	0.24	0.11
Cu	15.68	16.01	29.63	10.13	18.17	1.38	3.57
Cu	15.58	16.13	29.68	9.86	18.12	1.50	4.69
Zn	5.56	9.80	9.81	0.99	5.13	0.87	0.43
Zn	7.29	8.03	13.91	0.95	5.51	0.67	0.80
As	0.80	0.24	0.21	0.14	0.12	1.45	1.28
Se	1.10	0.86	3.02	1.38	1.31	0.96	1.55
Se	0.56	BDL	BDL	BDL	0.73	BDL	BDL
Rb	5.32	0.20	1.50	0.18	0.25	0.07	0.11
Sr	30.58	0.99	1.19	1.58	2.55	254.78	277.65
Mo	0.14	0.05	0.06	0.04	0.03	0.03	0.11
Sn	0.23	0.05	0.42	0.08	0.16	0.22	0.42
Te	BDL	0.06	BDL	BDL	BDL	BDL	0.01
Cs	0.48	0.02	0.11	0.03	0.05	0.03	0.04
Ba	8.81	0.53	2.20	1.84	1.86	0.54	2.06
Ba	8.73	0.57	2.14	1.82	2.08	0.47	3.97
W	0.28	BDL	0.08	0.03	0.06	0.13	0.23
Pb	0.37	0.04	0.26	0.05	0.06	1.51	1.90
Bi	0.02	0.01	0.01	0.20	0.01	0.04	0.06
Th	0.53	0.17	0.02	0.22	0.09	0.08	0.39
U	0.27	0.03	BDL	0.03	0.05	0.36	1.05
Tl	0.19	0.01	0.04	0.00	BDL	BDL	0.01

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909168_24-3	G909172-1	G909172-10	G909172-2	G909172-3	G909172-4	G909172-5
Data Quality (1-3)	1.5	2	2.5	2	2.5	2	1.5
1 standard error (ppm) *							
Li	1.16	1.73	1.25	1.31	1.47	1.37	0.42
B	0.36	0.63	0.48	0.62	0.43	0.57	0.31
Si	2596.30	2564.51	2564.51	2564.51	2564.51	2564.51	2564.51
P	6.20	2.22	5.07	2.69	3.44	2.44	1.26
Sc	0.19	0.36	0.29	0.34	0.39	0.50	0.07
Ti	2984.74	169.94	268.43	241.19	171.03	399.99	454.67
V	10.66	10.44	12.40	12.08	10.23	9.96	9.44
Cr	2.90	0.72	0.57	0.60	0.54	0.38	0.29
Mn	64.35	142.09	61.11	70.57	70.06	50.93	26.44
Co	0.67	1.85	2.09	1.36	1.53	1.29	1.18
Cu	2.74	13.00	11.99	7.29	24.08	21.56	10.54
Cu	2.28	13.89	10.48	7.50	19.76	17.37	6.95
Zn	4.76	14.91	9.49	8.10	8.60	8.02	4.38
Zn	4.66	12.94	10.61	8.26	9.69	7.88	4.47
As	0.24	0.21	BDL	0.19	0.04	0.22	0.16
Se	0.14	0.66	0.89	0.54	0.96	BDL	0.30
Se	BDL	BDL	0.82	0.53	BDL	BDL	0.39
Rb	0.47	0.21	0.25	0.32	2.44	2.96	0.64
Sr	7.69	5.97	1.07	9.94	10.19	0.66	1.83
Mo	0.12	0.09	BDL	BDL	BDL	BDL	0.07
Sn	0.12	0.10	0.05	0.08	0.17	0.07	0.10
Te	BDL	BDL	BDL	0.10	BDL	BDL	BDL
Cs	0.02	0.06	0.01	0.05	0.14	0.14	0.06
Ba	2.12	0.43	1.07	4.75	56.69	10.48	9.79
Ba	1.96	0.22	1.12	4.96	58.71	15.73	14.74
W	0.57	0.07	0.02	0.06	0.07	0.16	0.05
Pb	0.38	0.10	0.08	0.05	0.30	0.07	0.07
Bi	0.10	0.02	0.00	0.01	BDL	BDL	0.00
Th	0.04	0.08	0.05	0.08	0.04	0.02	0.08
U	0.27	0.08	0.03	0.03	0.04	0.03	0.05
Tl	0.01	0.00	0.00	0.01	0.12	0.05	0.01

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909168_24-3	G909172-1	G909172-10	G909172-2	G909172-3	G909172-4	G909172-5
Data Quality (1-3)	1.5	2	2.5	2	2.5	2	1.5
1 standard error (ppm)**							
Li	5.58	4.80	5.10	3.89	4.85	4.20	2.18
B	1.64	0.96	0.65	0.98	0.60	0.91	0.73
Si	4459.76	4405.16	4405.16	4405.16	4405.16	4405.16	4405.16
P	58.30	11.79	11.67	10.87	9.33	10.16	7.60
Sc	0.32	0.42	0.32	0.38	0.41	0.53	0.14
Ti	9111.47	428.20	710.10	588.87	470.61	953.45	1340.71
V	22.49	19.67	23.95	20.09	17.75	17.91	15.64
Cr	16.23	3.32	2.72	2.69	2.42	2.44	1.27
Mn	112.80	156.98	101.80	95.88	100.11	76.04	40.61
Co	1.52	3.06	4.42	2.38	2.73	2.45	1.96
Cu	9.73	37.00	44.62	24.38	69.85	67.12	22.02
Cu	10.02	37.07	44.48	24.13	67.52	65.46	20.44
Zn	6.39	17.32	13.33	10.82	12.39	10.76	5.71
Zn	6.16	15.64	13.92	10.90	13.53	10.86	5.95
As	1.17	0.29	BDL	0.32	0.07	0.31	0.24
Se	1.88	1.37	3.26	1.30	1.38	BDL	1.00
Se	BDL	BDL	1.30	0.64	BDL	BDL	0.47
Rb	0.50	0.21	0.27	0.37	2.78	3.15	0.76
Sr	7.77	6.89	1.09	10.25	10.27	0.73	2.21
Mo	0.15	0.09	BDL	BDL	BDL	BDL	0.07
Sn	0.79	0.12	0.06	0.09	0.17	0.08	0.16
Te	BDL	BDL	BDL	0.10	BDL	BDL	BDL
Cs	0.03	0.06	0.03	0.05	0.24	0.29	0.08
Ba	2.19	0.43	1.10	4.88	57.32	11.55	10.65
Ba	2.19	0.24	1.27	5.65	62.06	19.59	17.73
W	2.22	0.07	0.02	0.09	0.07	0.17	0.07
Pb	0.48	0.10	0.09	0.06	0.31	0.11	0.07
Bi	0.12	0.02	0.00	0.01	BDL	BDL	0.00
Th	0.05	0.08	0.05	0.08	0.04	0.02	0.09
U	0.43	0.09	0.03	0.03	0.04	0.03	0.06
Tl	0.02	0.00	0.00	0.01	0.13	0.07	0.02

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909172-6	G909172-7	G909172-8	G909172-9	G909174-1	G909174-10	G909174-11
Data Quality (1-3)	2	2.5	2.5	1.5	3	3	3
Li (ppm)	37.29	31.59	32.25	36.00	44.26	45.79	42.70
B (ppm)	1.12	3.47	1.43	1.93	0.71	0.91	1.89
Si (ppm)	128225.50	128225.50	128225.50	128225.50	128692.97	128692.97	128692.97
P (ppm)	34.81	26.50	37.95	37.49	161.31	45.27	91.39
Sc (ppm)	4.04	11.68	4.73	5.58	2.25	3.67	4.38
Ti (ppm)	10377.13	6652.10	5400.07	11483.91	66.60	73.78	2053.21
V (ppm)	443.63	391.98	402.82	418.62	168.82	302.24	332.80
Cr (ppm)	13.19	11.58	11.08	14.61	18.75	44.11	32.06
Mn (ppm)	2009.15	1543.91	1729.94	1910.78	1794.62	2006.66	2045.97
Co (ppm)	76.86	58.15	78.47	66.17	158.51	33.94	34.25
Cu(63) (ppm)	418.65	994.02	371.68	546.36	102.61	78.90	165.86
Cu(65)* (ppm)	415.32	995.37	374.15	540.64	103.84	77.94	169.11
Zn(66)* (ppm)	324.27	251.43	291.00	301.95	267.96	328.55	333.30
Zn(68) (ppm)	311.17	251.49	287.23	305.05	268.23	312.22	325.90
As (ppm)	0.18	1.13	BDL	0.65	0.28	BDL	0.65
Se(76) (ppm)	BDL	0.87	BDL	4.02	2.74	BDL	BDL
Se(77)* (ppm)	BDL	BDL	BDL	BDL	BDL	1.68	BDL
Rb (ppm)	10.42	88.18	79.12	22.97	5.01	2.04	6.37
Sr (ppm)	12.14	27.52	10.91	17.03	4.67	3.08	5.62
Mo (ppm)	BDL	0.38	0.14	0.03	BDL	BDL	0.05
Sn (ppm)	0.25	0.43	0.24	0.63	0.15	0.05	0.31
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs (ppm)	0.65	6.61	3.42	0.96	0.29	0.44	0.41
Ba(137) (ppm)	68.22	436.37	357.79	212.97	6.75	5.38	8.03
Ba(138)* (ppm)	70.02	455.19	372.73	219.91	7.07	4.93	9.35
W (ppm)	0.31	1.18	0.24	0.42	0.01	0.02	0.50
Pb (ppm)	0.81	4.90	2.13	1.32	5.11	3.52	2.57
Bi (ppm)	BDL	0.01	BDL	0.02	BDL	BDL	BDL
Th (ppm)	0.32	2.94	0.16	0.35	0.08	0.01	0.09
U (ppm)	0.04	0.40	0.08	0.17	BDL	0.00	0.04
Tl (ppm)	0.09	0.71	0.55	0.16	0.01	0.01	0.05
SiO2 wt. %	27.43	27.43	27.43	27.43	27.53	27.53	27.53

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909172-6	G909172-7	G909172-8	G909172-9	G909174-1	G909174-10	G909174-11
Data Quality (1-3)	2	2.5	2.5	1.5	3	3	3
1 standard error (ppm) *							
Li	2.04	1.52	0.94	1.65	2.19	1.98	2.55
B	0.95	0.38	0.44	0.73	0.55	0.59	0.36
Si	2564.51	2564.51	2564.51	2564.51	2573.86	2573.86	2573.86
P	1.41	4.33	3.69	3.71	12.66	6.97	8.23
Sc	0.11	0.43	0.23	0.40	0.16	0.18	0.42
Ti	496.07	343.48	160.30	414.28	5.00	2.12	85.17
V	13.99	13.68	13.00	13.68	4.27	7.40	8.19
Cr	0.71	0.35	0.53	1.15	0.64	1.40	1.02
Mn	62.24	45.00	48.82	57.35	59.24	58.90	56.49
Co	2.33	1.55	2.43	2.40	5.17	0.92	1.41
Cu	13.62	30.87	10.46	17.49	4.03	2.41	4.71
Cu	13.07	29.46	10.21	17.54	3.72	3.41	5.39
Zn	14.89	7.46	8.23	12.32	8.95	9.71	10.49
Zn	9.05	7.61	9.64	8.94	9.66	8.25	9.02
As	0.13	0.07	BDL	0.08	0.29	BDL	0.30
Se	BDL	0.40	BDL	0.34	0.44	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	0.87	BDL
Rb	0.33	2.80	2.15	0.62	0.21	0.12	0.24
Sr	0.37	0.88	0.43	1.68	0.23	0.13	0.23
Mo	BDL	0.09	0.08	0.09	BDL	BDL	0.05
Sn	0.09	0.07	0.11	0.06	0.09	0.01	0.03
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.04	0.30	0.13	0.07	0.05	0.07	0.05
Ba	1.57	13.03	8.52	9.83	0.84	0.24	0.80
Ba	2.43	21.24	13.88	10.27	0.22	0.19	0.34
W	0.03	0.04	0.11	0.14	0.00	0.00	0.09
Pb	0.08	0.17	0.09	0.09	0.37	0.32	0.13
Bi	BDL	0.00	BDL	0.01	BDL	BDL	BDL
Th	0.27	0.37	0.06	0.14	0.02	0.02	0.03
U	0.05	0.05	0.02	0.04	BDL	0.00	0.03
Tl	0.02	0.05	0.04	0.03	0.02	0.02	0.02

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909172-6	G909172-7	G909172-8	G909172-9	G909174-1	G909174-10	G909174-11
Data Quality (1-3)	2	2.5	2.5	1.5	3	3	3
1 standard error (ppm)**							
Li	5.63	4.70	4.64	5.33	6.75	6.90	6.67
B	1.03	1.32	0.68	1.01	0.60	0.68	0.78
Si	4405.16	4405.16	4405.16	4405.16	4421.22	4421.22	4421.22
P	10.09	8.75	11.50	11.38	48.68	14.92	27.88
Sc	0.19	0.61	0.30	0.45	0.19	0.24	0.46
Ti	1107.75	721.88	539.77	1171.78	8.04	7.29	211.91
V	26.39	24.04	24.12	25.15	9.07	16.13	17.78
Cr	2.73	2.34	2.28	3.14	3.83	9.00	6.54
Mn	98.96	74.30	82.30	92.97	89.87	95.81	95.54
Co	4.85	3.58	4.98	4.38	10.12	2.08	2.35
Cu	46.65	110.34	40.97	60.80	11.69	8.78	18.36
Cu	46.12	110.02	41.13	60.19	11.76	9.05	18.96
Zn	17.43	10.25	11.57	14.93	11.54	13.19	13.86
Zn	12.71	10.48	12.68	12.50	11.83	11.46	12.26
As	0.14	0.40	BDL	0.24	0.31	BDL	0.38
Se	BDL	0.81	BDL	3.24	2.23	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	1.60	BDL
Rb	0.39	3.28	2.64	0.76	0.23	0.13	0.26
Sr	0.43	1.01	0.48	1.71	0.25	0.14	0.26
Mo	BDL	0.09	0.08	0.09	BDL	BDL	0.05
Sn	0.10	0.11	0.12	0.13	0.10	0.01	0.06
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.06	0.53	0.26	0.10	0.06	0.08	0.06
Ba	1.76	14.00	9.49	10.14	0.85	0.27	0.82
Ba	3.04	24.32	16.93	11.76	0.28	0.23	0.40
W	0.05	0.14	0.11	0.15	0.00	0.00	0.11
Pb	0.08	0.23	0.11	0.10	0.43	0.35	0.16
Bi	BDL	0.00	BDL	0.01	BDL	BDL	BDL
Th	0.27	0.41	0.06	0.14	0.02	0.02	0.03
U	0.05	0.06	0.02	0.04	BDL	0.00	0.03
Tl	0.02	0.09	0.07	0.04	0.02	0.02	0.02

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909174-2	G909174-3	G909174-4	G909174-5	G909174-6	G909174-7	G909174-8
Data Quality (1-3)	1.5	2.5	1.5	2.5	2	2	2
1 standard error (ppm) *							
Li	2.66	2.07	2.36	4.59	2.39	3.51	2.46
B	0.61	0.14	0.22	0.84	0.40	0.43	0.40
Si	2573.86	2573.86	2573.86	2573.86	2573.86	2573.86	2573.86
P	5.01	37.04	43.20	19.52	18.16	32.03	21.81
Sc	0.26	0.08	0.22	0.14	0.10	0.47	0.60
Ti	400.13	129.42	336.85	169.28	428.15	245.74	122.53
V	7.98	7.15	6.19	8.69	11.46	13.97	8.41
Cr	0.83	0.74	0.46	1.17	0.75	0.75	0.72
Mn	60.61	51.78	49.70	105.38	75.80	79.47	73.51
Co	5.31	5.71	4.72	7.49	3.20	1.79	0.94
Cu	3.62	2.45	2.92	2.56	1.16	1.87	2.13
Cu	3.67	3.67	3.28	4.39	1.40	3.90	2.01
Zn	9.28	7.01	9.66	10.68	7.82	15.19	8.76
Zn	9.59	6.44	7.80	10.28	5.64	7.41	6.76
As	0.08	0.33	0.16	BDL	BDL	0.43	0.18
Se	BDL	0.60	0.76	BDL	0.80	BDL	0.76
Se	BDL	BDL	BDL	BDL	0.46	BDL	BDL
Rb	0.25	0.18	0.21	0.32	0.12	0.31	0.25
Sr	0.34	0.30	0.44	0.24	0.37	0.50	13.48
Mo	0.09	0.05	0.19	BDL	0.06	0.08	BDL
Sn	0.11	0.09	0.16	0.16	0.06	0.04	0.05
Te	0.20	BDL	BDL	BDL	BDL	0.28	0.11
Cs	0.05	0.05	0.06	0.03	0.04	0.07	0.06
Ba	2.62	0.16	0.84	0.58	0.52	0.84	0.46
Ba	3.29	0.24	0.43	0.49	0.34	0.39	0.35
W	0.12	0.02	0.16	0.07	0.05	0.01	0.05
Pb	0.23	0.27	0.30	0.84	0.10	0.22	0.13
Bi	0.01	0.01	0.02	0.01	0.01	0.01	0.01
Th	0.08	0.02	0.01	BDL	0.05	0.03	0.06
U	0.03	0.03	0.02	0.02	0.02	0.03	0.15
Tl	0.04	0.04	0.01	0.01	0.00	0.01	0.02

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909174-2	G909174-3	G909174-4	G909174-5	G909174-6	G909174-7	G909174-8
Data Quality (1-3)	1.5	2.5	1.5	2.5	2	2	2
1 standard error (ppm)**							
Li	7.22	7.33	6.65	8.86	8.05	7.58	6.57
B	0.67	0.30	0.79	0.86	0.64	0.74	0.57
Si	4421.22	4421.22	4421.22	4421.22	4421.22	4421.22	4421.22
P	14.72	109.34	188.75	54.29	69.09	132.03	33.68
Sc	0.28	0.13	0.25	0.16	0.13	0.48	0.63
Ti	1308.19	378.00	1212.08	259.58	913.33	536.27	278.01
V	15.85	12.63	12.92	13.02	21.04	20.12	18.07
Cr	4.06	3.98	2.65	4.86	4.08	2.66	2.50
Mn	88.13	85.82	85.16	123.98	97.08	97.65	91.68
Co	10.05	10.12	9.73	11.41	6.98	2.83	2.02
Cu	10.88	8.55	11.66	5.45	4.12	5.70	6.71
Cu	10.43	8.84	11.94	6.94	4.10	6.76	6.47
Zn	11.49	9.71	11.86	12.67	10.10	16.72	10.86
Zn	11.45	8.85	9.99	11.99	8.15	9.62	8.97
As	0.21	0.45	0.43	BDL	BDL	0.52	0.24
Se	BDL	1.98	1.40	BDL	2.31	0.68	1.15
Se	BDL	BDL	BDL	BDL	0.70	BDL	BDL
Rb	0.28	0.20	0.22	0.32	0.14	0.33	0.27
Sr	0.37	0.32	0.48	0.25	0.42	0.51	14.98
Mo	0.10	0.05	0.19	BDL	0.07	0.08	BDL
Sn	0.16	0.10	0.19	0.16	0.07	0.04	0.07
Te	0.20	BDL	BDL	BDL	BDL	0.28	0.11
Cs	0.06	0.05	0.07	0.03	0.05	0.07	0.06
Ba	3.11	0.20	0.88	0.59	0.59	0.85	0.48
Ba	3.67	0.27	0.49	0.50	0.43	0.41	0.37
W	0.13	0.04	0.23	0.07	0.07	0.02	0.05
Pb	0.28	0.34	0.45	0.85	0.15	0.25	0.18
Bi	0.01	0.01	0.02	0.01	0.01	0.01	0.01
Th	0.09	0.02	0.01	BDL	0.05	0.03	0.06
U	0.04	0.04	0.03	0.02	0.04	0.04	0.19
Tl	0.04	0.04	0.01	0.01	0.01	0.01	0.02

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	H437269_10-1	H437269_10-2	H437269_10-3	H437269_11-1	H437269_11-2	H437269_11-3	H437269_12-1
Data Quality (1-3)	1	2	2	3	3	2	1.5
1 standard error (ppm) *							
Li	3.19	2.22	2.20	2.16	2.44	1.31	3.71
B	0.86	0.23	0.53	0.33	0.49	0.66	0.49
Si	2616.87	2616.87	2616.87	2616.87	2616.87	2616.87	2616.87
P	280.48	32.85	34.74	7.20	4.98	10.00	369.57
Sc	1.79	0.96	1.08	1.82	1.29	0.75	1.02
Ti	29.44	13.11	89.60	20.12	23.07	281.49	135.53
V	17.86	16.33	22.05	30.57	20.24	11.02	16.81
Cr	2.79	2.71	3.09	1.76	2.43	1.41	2.57
Mn	14.20	13.55	17.21	23.85	20.20	9.13	17.86
Co	1.91	0.83	0.64	0.90	0.24	0.38	0.40
Cu	1948.09	633.75	319.94	128.83	20.38	83.78	125.38
Cu	1606.64	708.12	347.57	131.00	20.07	85.47	106.30
Zn	11.81	6.38	4.69	3.49	3.73	3.80	5.96
Zn	10.15	6.63	5.10	3.05	3.49	2.97	4.35
As	2.35	0.52	0.85	0.24	0.06	0.19	1.40
Se	0.37	0.40	0.42	0.40	0.58	1.01	0.43
Se	0.56	0.13	BDL	BDL	BDL	BDL	2.86
Rb	0.15	0.05	0.06	0.26	0.05	0.07	0.75
Sr	1.22	0.91	0.16	0.08	0.04	1.95	4.01
Mo	0.69	0.32	0.25	0.14	0.02	0.12	0.05
Sn	0.11	0.05	0.04	0.18	0.05	0.06	0.07
Te	0.17	0.12	0.11	0.12	BDL	0.20	0.06
Cs	0.03	0.07	0.08	0.13	0.08	0.05	0.05
Ba	0.41	4.91	0.19	0.38	0.05	0.65	3.12
Ba	0.33	6.22	0.15	0.19	0.05	0.43	1.24
W	0.11	0.18	0.17	0.22	0.06	0.15	0.18
Pb	0.32	0.12	0.19	0.04	0.09	0.70	0.03
Bi	0.05	0.01	0.03	0.09	0.03	0.03	0.01
Th	0.11	0.03	0.06	0.07	0.02	0.04	3.71
U	1.01	0.40	0.26	0.14	0.03	1.12	1.18
Tl	BDL	0.00	0.01	0.01	BDL	0.02	0.02

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	H437269_10-1	H437269_10-2	H437269_10-3	H437269_11-1	H437269_11-2	H437269_11-3	H437269_12-1
Data Quality (1-3)	1	2	2	3	3	2	1.5
1 standard error (ppm)**							
Li	7.28	7.87	10.48	8.20	10.49	5.38	12.75
B	3.42	1.89	3.82	1.47	1.85	1.63	1.55
Si	4495.09	4495.09	4495.09	4495.09	4495.09	4495.09	4495.09
P	461.42	70.81	80.68	15.62	11.23	23.23	729.46
Sc	2.16	1.57	1.74	1.97	1.97	1.14	1.83
Ti	40.34	19.14	139.53	30.06	37.45	394.01	176.88
V	31.46	31.46	41.56	45.22	38.26	21.54	34.02
Cr	18.11	20.88	24.78	10.25	9.40	10.94	19.51
Mn	20.37	22.44	28.82	31.75	32.35	15.76	28.89
Co	2.52	1.62	1.57	1.30	0.58	0.82	0.91
Cu	3183.40	1664.49	1001.09	170.50	56.29	233.80	317.39
Cu	2943.17	1669.94	1001.62	173.31	56.60	236.51	313.15
Zn	12.88	7.82	6.69	4.65	4.48	4.59	6.98
Zn	11.47	8.39	7.19	4.38	4.44	4.08	5.73
As	12.35	4.74	6.38	0.55	0.27	0.80	3.89
Se	2.88	2.98	3.33	2.67	3.86	1.67	3.37
Se	1.78	0.57	BDL	BDL	BDL	BDL	14.83
Rb	0.16	0.06	0.07	0.28	0.06	0.09	0.77
Sr	1.40	1.06	0.18	0.10	0.04	2.25	4.06
Mo	0.81	0.38	0.46	0.15	0.02	0.14	0.05
Sn	0.14	0.06	0.11	0.25	0.13	0.09	0.11
Te	0.20	0.14	0.22	0.17	BDL	0.20	0.07
Cs	0.06	0.10	0.10	0.18	0.10	0.08	0.11
Ba	0.43	6.11	0.20	0.39	0.06	0.68	3.14
Ba	0.36	7.32	0.18	0.21	0.05	0.49	1.39
W	0.41	0.25	0.33	0.25	0.07	0.24	0.22
Pb	0.34	0.13	0.22	0.06	0.09	0.72	0.04
Bi	0.06	0.02	0.05	0.11	0.03	0.03	0.01
Th	0.12	0.05	0.06	0.08	0.02	0.05	3.93
U	1.32	0.56	0.53	0.17	0.03	1.20	1.67
Tl	BDL	0.00	0.01	0.01	BDL	0.02	0.02

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	H437269_12-3	H437269_12-4	H437269_13-1	H437269_13-2	H437269_13-3	H437269_15-1	H437269_15-2
Data Quality (1-3)	3	2.5	2.5	1	2.5	3	3
Li (ppm)	68.15	71.17	95.95	86.548	94.33	68.79	70.69
B (ppm)	4.14	4.74	5.96	7.177	9.05	2.87	4.43
Si (ppm)	130843.31	130843.31	130843.31	130843.306	130843.31	130843.31	130843.31
P (ppm)	67.63	23.53	43.98	62.885	64.59	59.37	40.42
Sc (ppm)	48.82	28.55	46.32	41.618	48.35	40.37	31.91
Ti (ppm)	5937.87	192.42	250.86	275.899	276.81	172.77	123.06
V (ppm)	732.30	504.02	796.76	709.463	740.75	578.55	534.73
Cr (ppm)	83.05	91.01	112.41	101.660	114.63	89.33	106.73
Mn (ppm)	537.15	522.24	609.93	2156.467	604.63	492.85	583.26
Co (ppm)	13.22	15.62	11.38	76.877	12.59	13.91	20.22
Cu(63) (ppm)	2968.62	4735.41	811.94	1062.548	773.46	832.95	1430.45
Cu(65)* (ppm)	2717.08	3557.84	814.50	1069.936	778.62	834.72	1446.60
Zn(66)* (ppm)	125.96	134.89	115.98	91.923	126.30	84.43	157.89
Zn(68) (ppm)	123.13	130.36	121.00	93.651	120.86	82.83	147.30
As (ppm)	3.16	0.93	1.78	3.405	1.26	1.74	0.89
Se(76) (ppm)	2.96	2.77	3.91	2.846	3.15	3.14	3.89
Se(77)* (ppm)	0.62	0.25	BDL	BDL	BDL	BDL	BDL
Rb (ppm)	3.25	1.01	22.57	39.436	40.74	1.47	1.91
Sr (ppm)	17.64	27.38	2.54	1.774	2.03	30.38	19.63
Mo (ppm)	0.20	BDL	0.09	0.483	0.18	0.59	BDL
Sn (ppm)	2.78	0.34	0.92	0.725	2.00	0.32	0.31
Te (ppm)	BDL	BDL	1.70	3.093	0.48	0.11	BDL
Cs (ppm)	1.11	0.71	1.76	2.000	1.55	0.74	0.90
Ba(137) (ppm)	6.69	3.65	9.29	22.443	18.41	5.33	4.26
Ba(138)* (ppm)	4.72	3.91	11.84	22.056	19.41	4.71	4.56
W (ppm)	5.71	0.24	0.26	0.427	0.16	0.29	0.01
Pb (ppm)	6.17	0.69	0.94	170.943	2.12	2.50	1.17
Bi (ppm)	0.03	0.01	0.96	0.929	1.01	0.26	0.07
Th (ppm)	0.85	0.67	0.05	0.132	0.67	0.08	0.50
U (ppm)	3.09	2.32	0.70	1.718	5.86	0.52	2.29
Tl (ppm)	0.00	0.01	0.12	0.309	0.27	0.01	0.00
SiO2 wt. %	27.99	27.99	27.99	27.990	27.99	27.99	27.99

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	H437269_12-3	H437269_12-4	H437269_13-1	H437269_13-2	H437269_13-3	H437269_15-1	H437269_15-2
Data Quality (1-3)	3	2.5	2.5	1	2.5	3	3
1 standard error (ppm) *							
Li	2.06	2.54	2.98	2.665	2.79	2.28	2.39
B	0.37	0.41	0.28	0.448	0.33	0.26	0.20
Si	2616.87	2616.87	2616.87	2616.866	2616.87	2616.87	2616.87
P	16.54	4.06	8.95	9.700	18.85	10.43	6.50
Sc	1.57	0.75	1.20	1.290	1.35	1.69	0.84
Ti	682.83	23.06	29.12	31.729	31.68	20.69	15.12
V	21.64	19.42	23.28	21.389	21.28	16.40	15.15
Cr	2.20	4.25	2.84	2.595	2.87	2.34	2.82
Mn	14.24	18.46	15.90	58.122	16.68	13.34	17.08
Co	0.43	0.66	0.55	1.973	0.42	0.50	0.58
Cu	157.93	421.15	61.79	37.537	27.97	32.00	85.99
Cu	110.81	188.43	61.70	39.826	29.41	32.00	63.28
Zn	3.22	7.82	3.90	2.332	4.04	2.52	4.36
Zn	3.67	7.07	4.22	3.009	3.90	2.85	4.20
As	0.16	0.14	0.10	0.172	0.14	0.15	0.08
Se	0.24	0.78	0.44	0.126	0.29	0.16	0.61
Se	0.25	0.22	BDL	BDL	BDL	BDL	BDL
Rb	0.15	0.07	0.66	2.102	1.34	0.05	0.17
Sr	0.54	1.03	0.20	0.052	0.15	1.74	1.39
Mo	0.03	BDL	0.02	0.080	0.06	0.15	BDL
Sn	0.10	0.06	0.08	0.075	0.53	0.05	0.02
Te	BDL	BDL	0.05	0.126	0.12	0.06	BDL
Cs	0.05	0.05	0.08	0.180	0.08	0.07	0.03
Ba	2.70	0.22	1.16	0.961	0.51	0.29	0.19
Ba	1.65	0.25	0.56	0.794	0.60	0.16	0.23
W	0.38	0.06	0.08	0.035	0.05	0.07	0.02
Pb	0.16	0.04	0.12	4.300	0.42	0.09	0.03
Bi	0.00	0.00	0.12	0.091	0.18	0.07	0.01
Th	0.20	0.15	0.04	0.015	0.22	0.01	0.07
U	0.12	0.91	0.38	0.325	1.72	0.08	0.57
Tl	0.00	0.00	0.02	0.019	0.03	0.00	0.00

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	H437269_12-3	H437269_12-4	H437269_13-1	H437269_13-2	H437269_13-3	H437269_15-1	H437269_15-2
Data Quality (1-3)	3	2.5	2.5	1	2.5	3	3
1 standard error (ppm)**							
Li	9.84	10.36	13.87	12.506	13.61	9.98	10.26
B	1.55	1.77	2.19	2.651	3.31	1.08	1.62
Si	4495.09	4495.09	4495.09	4495.092	4495.09	4495.09	4495.09
P	27.38	8.61	16.78	22.492	28.10	21.81	14.58
Sc	2.55	1.39	2.25	2.142	2.40	2.37	1.56
Ti	1103.53	36.34	46.79	51.276	51.35	32.62	23.48
V	42.20	31.61	45.78	41.101	42.38	32.98	30.49
Cr	16.80	18.74	22.72	20.551	23.17	18.07	21.59
Mn	24.74	26.98	27.94	99.883	28.23	22.86	27.83
Co	0.83	1.07	0.82	4.585	0.80	0.90	1.23
Cu	360.43	666.68	108.03	121.889	88.93	96.37	178.23
Cu	317.86	433.23	108.55	123.890	90.30	96.96	170.77
Zn	4.59	8.57	4.92	3.334	5.20	3.34	5.98
Zn	5.01	7.94	5.39	3.973	5.14	3.66	5.85
As	1.11	0.35	0.63	1.192	0.46	0.62	0.32
Se	2.38	2.35	3.16	2.281	2.53	2.52	3.17
Se	0.56	0.30	BDL	BDL	BDL	BDL	BDL
Rb	0.17	0.08	0.85	2.301	1.65	0.06	0.18
Sr	0.66	1.20	0.21	0.065	0.15	1.86	1.45
Mo	0.03	BDL	0.02	0.089	0.06	0.16	BDL
Sn	0.51	0.08	0.18	0.150	0.64	0.08	0.06
Te	BDL	BDL	0.31	0.569	0.15	0.06	BDL
Cs	0.09	0.07	0.15	0.230	0.14	0.09	0.07
Ba	2.70	0.23	1.18	1.082	0.65	0.32	0.21
Ba	1.65	0.26	0.63	0.959	0.76	0.20	0.26
W	0.77	0.07	0.09	0.061	0.05	0.08	0.02
Pb	0.26	0.05	0.12	6.979	0.42	0.12	0.05
Bi	0.01	0.00	0.15	0.127	0.21	0.07	0.01
Th	0.20	0.16	0.04	0.016	0.22	0.01	0.08
U	0.26	0.92	0.38	0.349	1.78	0.09	0.60
Tl	0.00	0.00	0.02	0.037	0.04	0.00	0.00

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	H437269_15-3	H437289_27-1	H437289_31-1	H437289_31-2	H437289_31-3	H437289_35-1	H437289_35-2
Data Quality (1-3)	3	2.5	2.5	2.5	2.5	2.5	2.5
1 standard error (ppm) *							
Li	2.03	3.09	3.08	3.07	3.73	3.17	3.23
B	0.17	0.48	0.35	0.41	0.61	0.65	0.17
Si	2616.87	2693.53	2693.53	2693.53	2693.53	2693.53	2693.53
P	5.82	1.11	12.46	5.08	446.41	37.85	3.46
Sc	0.65	0.34	0.20	0.49	0.29	0.25	0.38
Ti	132.73	54.30	292.57	35.51	61.48	20.51	4.87
V	11.47	5.01	3.98	5.08	4.04	6.16	8.35
Cr	2.09	0.16	0.48	0.36	0.49	2.78	2.20
Mn	10.03	13.62	18.55	16.41	17.02	18.35	23.06
Co	0.62	2.88	3.96	4.28	4.28	4.16	4.39
Cu	86.87	12.38	22.96	26.73	19.44	13.13	14.44
Cu	88.40	11.20	23.61	26.99	19.17	12.88	19.60
Zn	3.87	2.28	3.45	2.26	2.64	3.30	2.32
Zn	5.78	2.98	4.17	3.11	3.22	3.30	2.88
As	0.13	0.08	0.23	0.16	0.12	0.06	0.18
Se	0.11	0.74	0.13	0.23	0.70	0.21	0.10
Se	0.08	BDL	0.42	BDL	BDL	BDL	0.12
Rb	0.06	0.91	5.17	0.70	1.73	0.14	0.09
Sr	0.46	0.04	0.16	0.04	2.00	0.76	0.15
Mo	0.03	BDL	BDL	BDL	BDL	BDL	BDL
Sn	0.05	0.05	0.02	0.10	0.04	0.07	0.07
Te	0.05	0.03	BDL	BDL	0.05	BDL	BDL
Cs	0.05	0.01	BDL	0.02	0.03	0.02	0.01
Ba	0.33	0.40	BDL	1.32	1.80	0.77	0.19
Ba	0.14	0.30	BDL	0.81	2.74	0.17	0.12
W	0.14	0.67	1.77	1.23	0.61	BDL	0.02
Pb	0.20	0.02	0.08	0.06	0.04	0.04	0.03
Bi	0.03	0.01	BDL	0.01	BDL	0.02	0.01
Th	0.03	0.03	1.23	0.04	0.14	0.02	0.01
U	0.03	0.02	0.95	0.03	0.10	0.01	0.02
Tl	BDL	0.00	BDL	0.01	BDL	BDL	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	H437269_15-3	H437289_27-1	H437289_31-1	H437289_31-2	H437289_31-3	H437289_35-1	H437289_35-2
Data Quality (1-3)	3	2.5	2.5	2.5	2.5	2.5	2.5
1 standard error (ppm)**							
Li	6.60	9.08	11.25	12.53	12.89	12.78	13.46
B	1.72	1.35	1.09	1.39	1.42	1.05	0.57
Si	4495.09	4626.78	4626.78	4626.78	4626.78	4626.78	4626.78
P	13.66	6.18	23.77	20.88	529.19	45.85	8.46
Sc	1.09	0.45	0.27	0.56	0.37	0.37	0.51
Ti	204.44	88.54	295.94	75.22	135.95	32.98	15.57
V	22.82	7.93	7.05	8.93	7.73	11.49	15.27
Cr	16.92	1.07	2.34	1.80	2.47	23.09	15.83
Mn	17.20	20.15	27.92	27.25	28.45	30.75	37.36
Co	1.17	5.90	8.08	8.79	8.95	8.33	9.26
Cu	219.16	38.04	66.29	73.57	67.57	44.75	48.97
Cu	219.65	37.21	65.59	72.19	67.21	44.29	51.28
Zn	5.08	2.65	4.10	3.18	3.48	3.89	3.14
Zn	6.73	3.48	5.11	4.38	4.48	4.25	4.11
As	0.59	0.14	0.24	0.33	0.36	0.11	0.25
Se	2.48	1.44	2.54	2.46	2.86	3.94	2.93
Se	0.31	BDL	1.27	BDL	BDL	BDL	0.43
Rb	0.08	0.93	5.17	0.76	1.73	0.15	0.09
Sr	0.53	0.04	0.16	0.04	2.00	0.76	0.15
Mo	0.03	BDL	BDL	BDL	BDL	BDL	BDL
Sn	0.12	0.06	0.06	0.19	0.08	0.09	0.11
Te	0.13	0.04	BDL	BDL	0.05	BDL	BDL
Cs	0.08	0.02	BDL	0.03	0.03	0.03	0.02
Ba	0.34	0.42	BDL	1.37	1.83	0.77	0.20
Ba	0.17	0.33	BDL	0.88	2.76	0.19	0.13
W	0.17	0.81	1.79	1.29	1.38	BDL	0.02
Pb	0.20	0.02	0.08	0.06	0.05	0.04	0.03
Bi	0.04	0.01	BDL	0.01	BDL	0.02	0.01
Th	0.03	0.04	1.23	0.04	0.17	0.02	0.01
U	0.06	0.03	0.95	0.03	0.12	0.01	0.02
Tl	BDL	0.00	BDL	0.01	BDL	BDL	BDL

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	Y-727-1	Y-727-2	Y-727-3	Y-727-4	Y-727-5	Y-727-6	Y-727-7
Data Quality (1-3)	1.5	1.5	3	1.5	2	1.5	2
1 standard error (ppm) *							
Li	3.13	1.55	2.29	1.68	1.88	2.44	2.41
B	0.77	2.39	0.68	0.98	0.41	1.51	0.67
Si	2486.91	2486.91	2486.91	2486.91	2486.91	2486.91	2486.91
P	18.59	424.65	4.94	25.22	2.17	74.97	18.27
Sc	0.74	0.75	0.92	1.08	0.27	2.87	0.81
Ti	1176.30	2383.89	331.78	465.27	210.91	3211.38	678.74
V	11.04	6.63	7.29	6.88	5.24	11.30	4.96
Cr	1.18	0.39	0.30	0.38	0.56	0.52	0.34
Mn	317.62	83.71	68.53	70.59	113.85	198.17	102.94
Co	3.31	1.47	1.84	2.14	1.32	2.04	2.63
Cu	6.80	4.57	9.29	5.38	11.15	8.37	6.21
Cu	8.99	4.63	11.39	7.66	9.27	12.61	5.54
Zn	14.08	7.67	9.37	7.52	7.89	6.51	6.67
Zn	14.99	6.76	10.35	7.78	10.82	9.07	6.62
As	0.32	0.47	0.27	0.19	0.16	0.22	0.41
Se	0.72	0.76	0.64	0.50	0.30	0.97	1.12
Se	BDL	0.17	BDL	BDL	BDL	0.59	1.04
Rb	0.25	1.87	0.29	0.78	1.29	1.42	0.87
Sr	0.36	13.77	0.22	0.30	0.78	14.79	2.31
Mo	BDL	0.05	BDL	0.04	BDL	0.15	0.08
Sn	0.14	0.14	0.08	0.09	0.10	0.15	0.06
Te	BDL	BDL	BDL	BDL	BDL	0.16	BDL
Cs	0.15	0.06	0.08	0.16	0.22	0.12	0.15
Ba	0.78	5.43	0.45	1.90	10.38	7.15	8.72
Ba	0.47	3.80	0.10	1.14	14.27	6.58	8.77
W	1.94	6.87	0.40	1.36	0.34	4.35	0.40
Pb	0.64	0.32	0.47	0.61	0.16	0.29	0.29
Bi	0.02	0.01	0.01	0.00	0.01	0.05	0.01
Th	BDL	0.04	BDL	0.03	BDL	0.40	0.04
U	0.04	0.08	0.07	0.04	0.05	0.11	0.05
Tl	0.02	0.05	0.01	0.03	0.06	0.10	0.06

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	Y-727-1	Y-727-2	Y-727-3	Y-727-4	Y-727-5	Y-727-6	Y-727-7
Data Quality (1-3)	1.5	1.5	3	1.5	2	1.5	2
1 standard error (ppm)**							
Li	9.44	5.73	7.69	7.67	7.02	7.15	8.43
B	2.20	3.39	1.50	1.65	1.05	2.88	0.84
Si	4271.86	4271.86	4271.86	4271.86	4271.86	4271.86	4271.86
P	21.94	522.19	13.69	136.25	8.58	79.20	59.41
Sc	1.12	1.07	1.01	1.54	0.35	3.20	1.19
Ti	1629.59	2865.61	810.17	1203.31	685.43	4856.64	933.86
V	16.43	12.31	11.81	16.06	8.96	20.81	10.82
Cr	2.21	1.54	1.58	2.52	1.14	1.61	2.05
Mn	335.13	120.67	120.43	116.78	131.72	216.07	129.94
Co	5.04	2.87	4.10	4.15	2.95	3.40	4.29
Cu	17.60	18.39	31.96	19.81	44.18	32.37	26.49
Cu	19.04	18.94	33.00	20.13	43.85	33.99	26.45
Zn	16.32	9.36	12.16	10.48	9.80	8.48	9.46
Zn	16.98	8.56	12.79	10.51	12.32	10.54	9.31
As	0.53	0.76	0.46	0.35	0.34	0.81	0.45
Se	2.26	1.95	1.39	1.74	0.59	2.35	3.44
Se	BDL	1.11	BDL	BDL	BDL	2.10	1.55
Rb	0.25	1.93	0.29	0.90	1.40	1.63	0.97
Sr	0.36	13.91	0.24	0.31	0.81	14.83	2.81
Mo	BDL	0.05	BDL	0.04	BDL	0.15	0.08
Sn	0.24	0.29	0.15	0.21	0.19	0.65	0.23
Te	BDL	BDL	BDL	BDL	BDL	0.16	BDL
Cs	0.17	0.08	0.10	0.20	0.26	0.22	0.21
Ba	0.78	5.47	0.45	2.01	10.95	7.33	8.76
Ba	0.47	3.86	0.12	1.33	14.72	6.77	8.81
W	2.45	7.29	0.94	1.55	0.60	4.81	0.69
Pb	0.82	0.40	0.54	0.72	0.24	0.39	0.40
Bi	0.02	0.01	0.01	0.00	0.01	0.05	0.01
Th	BDL	0.04	BDL	0.03	BDL	0.40	0.04
U	0.05	0.09	0.07	0.05	0.06	0.14	0.06
Tl	0.02	0.05	0.01	0.05	0.07	0.11	0.07

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	Y-727-8	Y-727-9	YD01-01C_15-1	YD01-01C_15-2	YD01-01C_15-3	YD01-01C_17-1	YD01-01C_17-2
Data Quality (1-3)	1.5	1.5	3	2.5	2	2	3
Li (ppm)	66.59	57.63	40.57	34.71	43.41	27.01	44.97
B (ppm)	3.72	6.67	1.52	1.29	1.23	3.13	2.15
Si (ppm)	124345.55	124345.55	133741.59	133741.59	133741.59	133741.59	133741.59
P (ppm)	46.54	32.88	30.52	31.49	23.28	BDL	35.58
Sc (ppm)	9.84	19.28	2.28	2.56	0.26	5.81	3.01
Ti (ppm)	25312.05	31041.18	87.65	4547.69	132.66	9073.39	123.65
V (ppm)	311.88	345.82	298.30	345.04	231.73	314.49	288.37
Cr (ppm)	8.23	9.01	39.20	42.50	35.65	35.35	30.13
Mn (ppm)	4187.33	3048.94	3944.26	3753.78	3952.73	2614.42	3998.37
Co (ppm)	67.61	64.55	12.00	12.51	12.42	8.79	12.07
Cu(63) (ppm)	250.55	184.86	198.72	263.20	262.77	270.37	252.70
Cu(65)* (ppm)	259.36	183.53	193.81	259.08	259.88	266.97	250.28
Zn(66)* (ppm)	318.13	284.02	232.34	229.27	230.64	175.18	235.65
Zn(68) (ppm)	306.92	282.78	221.70	224.20	225.72	213.38	220.53
As (ppm)	3.37	2.58	0.57	1.85	0.58	0.94	0.47
Se(76) (ppm)	2.49	BDL	3.78	2.67	2.44	1.26	2.51
Se(77)* (ppm)	BDL	BDL	1.13	BDL	BDL	0.52	0.65
Rb (ppm)	21.12	9.02	0.98	2.08	0.62	31.79	0.99
Sr (ppm)	5.63	4.52	1.64	2.95	BDL	75.70	1.42
Mo (ppm)	BDL	BDL	BDL	0.18	0.19	0.04	0.18
Sn (ppm)	1.20	2.03	0.11	0.46	0.35	0.36	0.17
Te (ppm)	BDL	BDL	BDL	0.16	BDL	0.41	0.08
Cs (ppm)	2.76	1.38	0.63	0.94	0.71	1.07	0.92
Ba(137) (ppm)	14.89	11.16	1.78	3.70	1.86	1114.36	2.23
Ba(138)* (ppm)	15.61	10.92	1.46	3.46	1.55	1175.99	2.07
W (ppm)	21.92	17.29	0.15	30.60	0.36	24.77	0.18
Pb (ppm)	8.63	7.23	4.55	16.99	3.14	9.03	6.10
Bi (ppm)	0.09	0.08	0.09	0.43	0.10	0.65	0.28
Th (ppm)	0.07	BDL	BDL	1.12	BDL	13.47	0.01
U (ppm)	0.80	1.14	0.00	2.00	BDL	2.31	0.03
Tl (ppm)	0.23	0.10	BDL	0.03	BDL	0.18	BDL
SiO2 wt. %	26.60	26.60	28.61	28.61	28.61	28.61	28.61

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	Y-727-8	Y-727-9	YD01-01C_15-1	YD01-01C_15-2	YD01-01C_15-3	YD01-01C_17-1	YD01-01C_17-2
Data Quality (1-3)	1.5	1.5	3	2.5	2	2	3
1 standard error (ppm) *							
Li	3.40	4.41	2.04	1.47	0.91	0.82	1.39
B	0.62	1.32	0.22	0.19	0.53	0.18	0.37
Si	2486.91	2486.91	2674.83	2674.83	2674.83	2674.83	2674.83
P	6.15	4.27	1.83	2.90	4.20	BDL	5.87
Sc	0.43	1.94	0.17	0.07	2.61	0.22	0.16
Ti	4578.43	5863.09	3.79	180.37	5.55	207.87	5.31
V	8.42	15.94	10.94	12.28	7.74	12.66	9.65
Cr	0.70	1.47	1.27	1.24	1.14	1.08	0.92
Mn	219.15	154.85	99.93	88.71	94.49	65.18	95.99
Co	3.53	2.06	0.54	0.43	0.41	0.34	0.38
Cu	12.35	6.02	4.94	7.36	8.13	11.30	6.49
Cu	13.61	8.07	5.73	7.16	8.39	7.81	8.77
Zn	11.06	7.36	6.15	7.51	9.93	5.21	6.71
Zn	13.38	7.38	6.43	6.57	7.02	7.22	6.66
As	0.14	0.73	0.05	0.22	0.13	0.21	0.07
Se	0.61	BDL	0.55	0.12	0.21	0.23	0.21
Se	BDL	BDL	0.37	BDL	BDL	0.16	0.12
Rb	0.57	0.26	0.07	0.06	0.02	2.28	0.06
Sr	0.63	3.26	0.14	0.09	BDL	2.26	0.05
Mo	BDL	BDL	BDL	0.03	0.06	0.04	0.03
Sn	0.18	0.13	0.05	0.04	0.04	0.06	0.01
Te	BDL	BDL	BDL	0.09	BDL	0.06	0.05
Cs	0.32	0.08	0.04	0.04	0.05	0.08	0.04
Ba	0.64	0.51	0.12	0.30	0.15	58.43	0.19
Ba	1.38	0.35	0.07	0.13	0.07	180.56	0.06
W	5.91	2.44	0.05	1.81	0.10	1.05	0.03
Pb	0.54	0.40	0.27	1.05	0.29	0.55	0.36
Bi	0.03	0.02	0.01	0.02	0.07	0.05	0.02
Th	0.04	BDL	BDL	1.05	BDL	0.59	0.01
U	0.19	0.15	0.02	0.10	BDL	0.09	0.01
Tl	0.04	0.02	BDL	0.01	BDL	0.04	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	Y-727-8	Y-727-9	YD01-01C_15-1	YD01-01C_15-2	YD01-01C_15-3	YD01-01C_17-1	YD01-01C_17-2
Data Quality (1-3)	1.5	1.5	3	2.5	2	2	3
1 standard error (ppm)**							
Li	9.97	9.23	6.02	5.07	6.13	3.86	6.43
B	1.49	2.76	0.59	0.51	0.70	1.15	0.87
Si	4271.86	4271.86	4594.66	4594.66	4594.66	4594.66	4594.66
P	14.75	10.39	8.96	9.50	7.89	BDL	11.79
Sc	0.62	2.12	0.19	0.12	2.61	0.32	0.20
Ti	5159.86	6549.14	9.07	463.86	13.65	877.62	12.77
V	16.55	22.44	19.12	21.91	14.44	20.83	17.98
Cr	1.79	2.32	7.98	8.63	7.26	7.19	6.13
Mn	263.21	187.74	173.80	161.81	170.98	114.60	173.18
Co	5.04	4.01	0.87	0.83	0.82	0.61	0.79
Cu	29.21	20.44	21.66	28.88	29.04	30.83	27.59
Cu	30.62	21.02	21.49	28.61	29.02	29.59	28.15
Zn	13.28	9.87	8.79	9.74	11.73	7.05	9.26
Zn	15.13	9.84	8.92	9.07	9.43	9.35	9.07
As	1.18	1.15	0.20	0.68	0.24	0.39	0.18
Se	2.08	BDL	3.08	2.14	1.97	1.03	2.02
Se	BDL	BDL	0.98	BDL	BDL	0.44	0.53
Rb	0.65	0.30	0.07	0.07	0.02	2.33	0.06
Sr	0.63	3.26	0.14	0.10	BDL	2.49	0.05
Mo	BDL	BDL	BDL	0.03	0.06	0.04	0.03
Sn	0.28	0.39	0.05	0.09	0.08	0.09	0.03
Te	BDL	BDL	BDL	0.09	BDL	0.09	0.05
Cs	0.37	0.12	0.06	0.07	0.06	0.11	0.07
Ba	0.70	0.55	0.12	0.30	0.15	60.39	0.20
Ba	1.42	0.41	0.07	0.14	0.08	181.31	0.06
W	6.46	3.19	0.05	4.08	0.11	3.14	0.03
Pb	0.71	0.56	0.38	1.45	0.35	0.77	0.51
Bi	0.03	0.02	0.01	0.05	0.07	0.08	0.03
Th	0.04	BDL	BDL	1.05	BDL	0.96	0.01
U	0.20	0.17	0.02	0.18	BDL	0.19	0.01
Tl	0.04	0.03	BDL	0.01	BDL	0.05	BDL

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-01C_18-1	YD01-01C_18-2	YD01-01C_18-3	YD01-01C_18-4	YD01-01C_18-5	YD01-01C_18-6	YD01-01C_18-7
Data Quality (1-3)	2	2.5	2	2.5	2.5	2.5	2.5
1 standard error (ppm) *							
Li	0.73	1.53	0.85	1.37	1.02	1.07	1.29
B	0.21	0.18	0.14	0.23	0.27	0.60	0.32
Si	2674.83	2674.83	2674.83	2674.83	2674.83	2674.83	2674.83
P	2.30	2.26	2.19	2.35	2.79	22.05	2.33
Sc	0.11	0.09	0.13	0.40	0.27	0.15	0.11
Ti	52.93	80.60	96.68	188.41	205.60	215.22	156.43
V	7.48	7.07	7.75	9.94	10.14	13.35	6.99
Cr	1.09	1.06	0.98	0.97	1.32	0.90	0.89
Mn	83.92	81.40	75.70	96.53	101.29	89.77	65.63
Co	0.40	0.34	0.44	0.43	0.48	0.38	0.45
Cu	5.02	9.35	5.20	9.71	6.53	8.49	6.34
Cu	6.07	9.57	6.08	12.30	7.20	8.57	4.59
Zn	5.68	5.29	5.81	5.05	5.35	6.07	5.75
Zn	5.43	6.22	6.43	5.22	5.36	6.09	4.51
As	0.08	0.04	0.16	0.08	0.13	0.06	0.07
Se	0.23	0.10	0.27	0.07	0.25	0.81	0.20
Se	BDL	0.14	BDL	0.28	0.30	BDL	0.20
Rb	0.51	0.08	1.45	0.29	0.08	0.13	0.11
Sr	0.28	0.08	1.61	6.88	3.91	1.60	0.16
Mo	BDL	BDL	BDL	BDL	0.04	BDL	0.05
Sn	0.04	0.04	0.05	0.04	0.04	0.05	0.02
Te	BDL	0.05	0.04	0.06	0.03	BDL	BDL
Cs	0.05	0.07	0.04	0.03	0.04	0.12	0.04
Ba	12.74	6.87	28.76	7.84	9.79	6.43	0.24
Ba	11.35	7.62	31.71	8.13	9.43	6.33	0.23
W	0.68	0.45	0.17	0.73	0.54	0.33	0.42
Pb	0.30	0.37	0.46	0.49	0.33	0.49	0.36
Bi	0.01	0.03	0.02	0.02	0.02	0.02	0.03
Th	0.01	0.13	0.05	0.53	0.38	0.40	0.24
U	0.09	0.12	0.12	0.23	0.21	0.18	0.05
Tl	0.01	0.00	0.02	0.01	BDL	0.02	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-01C_18-1	YD01-01C_18-2	YD01-01C_18-3	YD01-01C_18-4	YD01-01C_18-5	YD01-01C_18-6	YD01-01C_18-7
Data Quality (1-3)	2	2.5	2	2.5	2.5	2.5	2.5
1 standard error (ppm)**							
Li	4.21	5.08	4.69	4.71	5.34	4.91	4.32
B	0.38	0.58	0.51	0.42	0.72	1.46	0.43
Si	4594.66	4594.66	4594.66	4594.66	4594.66	4594.66	4594.66
P	9.25	9.80	10.44	8.83	17.17	32.18	6.43
Sc	0.14	0.14	0.16	0.41	0.36	0.20	0.14
Ti	59.30	176.01	129.69	232.58	846.58	451.52	187.58
V	13.77	12.56	14.24	15.14	18.74	20.35	12.96
Cr	6.04	6.88	5.84	5.41	7.06	5.53	5.71
Mn	136.31	135.74	133.96	141.20	160.58	156.83	119.80
Co	0.70	0.66	0.71	0.66	0.80	0.75	0.69
Cu	20.75	29.17	22.27	29.45	27.48	31.01	18.40
Cu	21.18	29.26	22.72	30.24	27.71	30.87	18.21
Zn	7.60	7.48	7.71	6.99	7.69	8.46	7.35
Zn	7.75	8.18	9.04	7.32	7.60	8.42	6.51
As	0.21	0.23	0.29	0.34	0.48	0.36	0.21
Se	1.98	1.61	2.10	1.84	2.53	4.39	0.92
Se	BDL	0.41	BDL	0.43	0.82	BDL	0.79
Rb	0.53	0.09	1.49	0.32	0.09	0.13	0.11
Sr	0.30	0.08	1.64	6.90	4.06	1.61	0.16
Mo	BDL	BDL	BDL	BDL	0.04	BDL	0.05
Sn	0.06	0.06	0.07	0.06	0.13	0.10	0.05
Te	BDL	0.06	0.05	0.06	0.04	BDL	BDL
Cs	0.07	0.08	0.07	0.06	0.06	0.13	0.05
Ba	13.72	6.88	32.60	8.50	9.82	6.46	0.25
Ba	12.54	7.64	35.49	8.81	9.47	6.36	0.24
W	0.68	0.82	0.38	1.09	1.48	1.05	0.49
Pb	0.38	0.53	0.52	0.66	0.45	0.66	0.49
Bi	0.01	0.04	0.02	0.03	0.02	0.03	0.03
Th	0.01	0.23	0.05	0.53	0.70	0.40	0.25
U	0.09	0.14	0.12	0.24	0.26	0.21	0.05
Tl	0.01	0.00	0.02	0.01	BDL	0.02	BDL

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-01C_18-8	YD01-01C_21-1	YD01-01C_22-1	YD01-01C_22-2	YD01-01C_22-3	YD01-04_01-1	YD01-04_01-10
Data Quality (1-3)	2	2.5	3	3	2.5	3	2.5
Li (ppm)	34.47	39.85	38.97	39.93	43.55	45.39	40.87
B (ppm)	1.41	2.43	1.76	1.53	2.13	2.52	9.18
Si (ppm)	133741.59	133741.59	133741.59	133741.59	133741.59	131544.50	131544.50
P (ppm)	30.12	25.28	28.90	38.28	35.51	73.34	216.28
Sc (ppm)	2.07	1.78	3.05	2.41	2.38	3.03	2.41
Ti (ppm)	97.13	480.71	2277.42	776.65	5267.30	66.10	108.85
V (ppm)	218.78	256.87	272.74	253.06	262.55	110.21	120.49
Cr (ppm)	31.74	48.98	34.74	32.51	37.28	36.91	45.86
Mn (ppm)	3287.89	3754.45	3665.02	3524.42	3876.48	1995.23	1559.49
Co (ppm)	9.98	12.89	11.66	10.82	11.59	20.97	19.86
Cu(63) (ppm)	222.44	233.81	263.70	224.97	379.34	1579.23	717.65
Cu(65)* (ppm)	228.24	237.36	264.94	224.98	393.01	1612.41	676.11
Zn(66)* (ppm)	198.97	242.12	237.32	217.82	255.59	157.98	162.85
Zn(68) (ppm)	223.82	223.76	231.14	202.89	249.34	155.13	154.05
As (ppm)	0.27	0.52	1.12	0.88	1.20	0.18	0.74
Se(76) (ppm)	2.54	2.37	2.53	3.42	2.64	4.38	6.60
Se(77)* (ppm)	BDL	BDL	0.65	0.33	BDL	BDL	BDL
Rb (ppm)	20.85	1.45	2.39	0.98	1.90	0.55	4.56
Sr (ppm)	12.82	2.21	2.06	1.83	2.37	205.22	27.01
Mo (ppm)	0.11	0.05	0.10	BDL	0.28	BDL	0.17
Sn (ppm)	0.40	BDL	0.32	0.17	0.38	0.11	0.76
Te (ppm)	BDL	BDL	BDL	BDL	0.18	BDL	BDL
Cs (ppm)	0.72	1.25	1.12	0.81	1.19	0.51	0.56
Ba(137) (ppm)	691.71	3.44	2.54	2.17	2.32	0.68	9.68
Ba(138)* (ppm)	699.02	3.03	2.67	2.10	3.51	0.79	8.43
W (ppm)	BDL	1.23	4.44	2.47	13.98	BDL	0.29
Pb (ppm)	3.64	6.63	7.49	5.86	8.93	0.88	3.83
Bi (ppm)	0.09	BDL	0.25	0.14	0.46	BDL	0.20
Th (ppm)	BDL	0.06	0.07	0.47	4.21	1.42	0.24
U (ppm)	0.02	0.09	0.81	0.32	1.35	0.17	3.01
Tl (ppm)	0.15	0.02	0.02	BDL	0.02	0.01	0.01
SiO2 wt. %	28.61	28.61	28.61	28.61	28.61	28.14	28.14

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-01C_18-8	YD01-01C_21-1	YD01-01C_22-1	YD01-01C_22-2	YD01-01C_22-3	YD01-04_01-1	YD01-04_01-10
Data Quality (1-3)	2	2.5	3	3	2.5	3	2.5
1 standard error (ppm) *							
Li	0.92	1.79	1.03	1.88	1.31	1.57	1.46
B	0.28	0.17	0.12	0.29	0.28	0.14	4.89
Si	2674.83	2674.83	2674.83	2674.83	2674.83	2630.89	2630.89
P	3.53	4.20	1.62	1.40	3.65	26.24	97.99
Sc	0.06	0.18	0.21	0.12	0.23	0.14	0.14
Ti	71.28	62.75	105.73	36.63	266.09	8.22	12.57
V	7.42	8.82	9.15	9.12	9.11	3.45	3.99
Cr	1.55	1.75	1.55	0.94	1.35	1.26	3.42
Mn	93.97	88.84	93.79	116.40	155.27	52.78	84.74
Co	0.34	0.43	0.51	0.48	0.51	0.87	0.51
Cu	12.31	6.89	6.38	7.40	10.31	56.74	34.78
Cu	10.10	6.74	9.17	9.19	11.35	60.28	36.96
Zn	5.27	6.41	6.22	11.29	8.38	4.90	15.12
Zn	6.62	7.17	6.82	9.99	8.12	7.25	8.64
As	0.12	0.04	0.31	0.03	0.15	0.04	0.26
Se	0.22	0.19	0.31	0.20	0.24	0.46	2.11
Se	BDL	BDL	0.08	0.24	BDL	BDL	BDL
Rb	0.68	0.05	0.15	0.05	0.10	0.08	0.89
Sr	0.37	0.06	0.16	0.06	0.15	18.48	3.86
Mo	0.03	0.08	0.06	BDL	0.06	BDL	0.08
Sn	0.07	BDL	0.06	0.11	0.04	0.05	0.10
Te	BDL	BDL	BDL	BDL	0.08	BDL	BDL
Cs	0.06	0.11	0.09	0.03	0.06	0.03	0.03
Ba	18.13	0.16	0.23	0.15	1.50	0.29	2.55
Ba	16.66	0.11	0.10	0.12	0.50	0.08	0.58
W	BDL	0.27	0.43	0.17	0.63	BDL	0.08
Pb	0.21	0.42	0.62	0.38	0.99	0.05	1.22
Bi	0.01	BDL	0.03	0.03	0.04	BDL	0.06
Th	BDL	0.03	0.02	0.04	0.35	0.29	0.08
U	0.01	0.01	0.03	0.02	0.06	0.06	0.44
Tl	0.02	0.01	0.01	BDL	0.00	0.01	0.01

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-01C_18-8	YD01-01C_21-1	YD01-01C_22-1	YD01-01C_22-2	YD01-01C_22-3	YD01-04_01-1	YD01-04_01-10
Data Quality (1-3)	2	2.5	3	3	2.5	3	2.5
1 standard error (ppm)**							
Li	4.90	5.85	5.54	5.89	6.22	6.60	5.95
B	0.59	0.90	0.65	0.63	0.82	0.93	5.93
Si	4594.66	4594.66	4594.66	4594.66	4594.66	4519.18	4519.18
P	9.35	8.39	8.46	11.09	10.83	35.34	120.30
Sc	0.10	0.19	0.24	0.15	0.25	0.18	0.18
Ti	71.86	77.32	238.71	81.66	561.97	12.67	20.26
V	13.69	16.13	17.02	16.14	16.54	6.45	7.17
Cr	6.57	10.00	7.15	6.60	7.61	7.51	9.81
Mn	151.27	161.91	162.03	172.32	208.90	91.84	103.11
Co	0.66	0.85	0.84	0.78	0.83	1.43	1.18
Cu	26.62	25.75	28.70	24.99	41.55	181.45	85.70
Cu	26.40	26.25	29.77	25.74	43.52	186.79	82.83
Zn	7.54	9.17	8.94	12.74	10.87	6.39	15.69
Zn	9.10	9.50	9.38	11.48	10.69	8.43	9.63
As	0.15	0.19	0.50	0.31	0.44	0.07	0.37
Se	2.05	1.91	2.05	2.75	2.13	3.54	5.69
Se	BDL	BDL	0.53	0.36	BDL	BDL	BDL
Rb	0.75	0.06	0.16	0.05	0.11	0.08	0.90
Sr	0.41	0.06	0.16	0.07	0.16	19.02	3.91
Mo	0.03	0.08	0.06	BDL	0.07	BDL	0.08
Sn	0.10	BDL	0.08	0.12	0.08	0.05	0.17
Te	BDL	BDL	BDL	BDL	0.09	BDL	BDL
Cs	0.07	0.14	0.11	0.06	0.10	0.05	0.05
Ba	20.46	0.17	0.23	0.15	1.50	0.29	2.55
Ba	19.33	0.11	0.11	0.13	0.50	0.08	0.61
W	BDL	0.31	0.68	0.34	1.78	BDL	0.09
Pb	0.30	0.58	0.76	0.51	1.12	0.06	1.23
Bi	0.01	BDL	0.04	0.03	0.06	BDL	0.06
Th	BDL	0.03	0.02	0.05	0.42	0.30	0.08
U	0.01	0.01	0.07	0.03	0.11	0.06	0.49
Tl	0.02	0.01	0.01	BDL	0.00	0.01	0.01

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-04_01-2	YD01-04_01-3	YD01-04_01-4	YD01-04_01-5	YD01-04_01-6	YD01-04_01-7	YD01-04_01-8
Data Quality (1-3)	3	1.5	1	2.5	2.5	2.5	2
1 standard error (ppm) *							
Li	1.38	1.86	1.13	1.62	1.77	2.67	3.18
B	0.08	0.39	0.11	0.81	1.94	0.28	4.02
Si	2630.89	2630.89	2630.89	2630.89	2630.89	2630.89	2630.89
P	4.88	7.75	5.95	34.66	14.36	11.74	125.46
Sc	0.30	0.41	0.62	0.15	0.07	0.09	0.26
Ti	8.06	37.59	25.46	9.38	10.71	7.44	10.55
V	3.86	4.98	4.14	4.05	4.75	4.95	3.73
Cr	1.10	1.31	0.75	0.73	1.24	1.34	2.94
Mn	69.95	37.77	60.22	55.93	51.11	76.54	41.07
Co	0.68	0.38	0.53	0.54	0.66	0.85	1.20
Cu	50.24	481.79	150.13	20.80	11.18	18.62	65.97
Cu	57.01	556.89	93.98	21.89	15.72	16.46	71.54
Zn	4.65	5.44	3.07	3.40	4.72	4.83	52.42
Zn	5.42	5.63	2.79	3.88	4.55	4.66	45.11
As	0.07	0.07	0.08	0.11	0.09	0.10	0.71
Se	0.22	0.31	0.33	0.47	0.27	BDL	0.29
Se	0.07	0.24	BDL	BDL	0.27	BDL	BDL
Rb	0.06	6.91	3.60	0.40	0.32	0.03	2.78
Sr	25.39	63.15	89.18	2.20	0.33	0.26	1.60
Mo	0.04	0.03	0.03	BDL	BDL	0.03	BDL
Sn	0.05	0.04	0.04	0.07	0.08	0.05	1.14
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.03	0.50	0.11	0.20	0.20	0.04	0.09
Ba	0.09	35.47	24.59	1.22	0.19	0.30	2.18
Ba	0.16	36.96	25.38	0.50	0.19	0.35	1.07
W	0.01	0.01	0.01	0.07	0.07	0.02	0.10
Pb	0.15	0.12	0.28	0.28	0.24	0.12	1.94
Bi	0.02	0.01	0.07	0.03	0.02	0.00	0.01
Th	0.37	0.82	0.83	0.01	BDL	0.01	0.01
U	0.14	0.14	0.12	0.02	0.02	0.00	0.04
Tl	0.00	0.10	0.06	0.01	0.01	0.00	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-04_01-2	YD01-04_01-3	YD01-04_01-4	YD01-04_01-5	YD01-04_01-6	YD01-04_01-7	YD01-04_01-8
Data Quality (1-3)	3	1.5	1	2.5	2.5	2.5	2
1 standard error (ppm)**							
Li	5.90	5.13	3.48	6.43	6.36	6.35	7.53
B	0.42	2.25	0.94	1.43	3.27	0.41	5.95
Si	4519.18	4519.18	4519.18	4519.18	4519.18	4519.18	4519.18
P	10.87	15.82	13.10	45.00	29.75	17.00	156.64
Sc	0.32	0.54	0.76	0.18	0.13	0.14	0.29
Ti	12.91	49.06	32.70	14.76	16.51	11.77	14.11
V	7.58	7.94	8.05	7.21	7.91	7.55	6.65
Cr	7.80	7.24	5.39	5.19	5.40	6.83	16.94
Mn	99.61	58.14	70.86	90.57	89.89	99.31	72.28
Co	1.22	0.77	0.71	1.28	1.36	1.32	1.59
Cu	105.42	1002.49	293.20	57.28	35.09	38.68	94.89
Cu	109.69	1039.16	238.34	56.40	37.05	38.79	100.88
Zn	5.73	6.09	3.48	4.80	5.99	5.65	52.79
Zn	6.46	6.55	3.59	5.28	5.91	5.59	45.58
As	0.14	0.22	0.20	0.12	0.09	0.13	0.95
Se	3.15	2.91	4.31	3.14	2.13	BDL	2.21
Se	0.29	0.62	BDL	BDL	0.31	BDL	BDL
Rb	0.06	7.18	3.70	0.41	0.32	0.04	2.79
Sr	27.60	67.34	98.46	2.21	0.33	0.27	1.63
Mo	0.04	0.03	0.04	BDL	BDL	0.03	BDL
Sn	0.08	0.09	0.10	0.07	0.14	0.05	1.26
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.06	0.62	0.16	0.20	0.21	0.06	0.09
Ba	0.10	36.54	25.26	1.22	0.20	0.30	2.19
Ba	0.16	38.14	26.12	0.51	0.19	0.35	1.08
W	0.01	0.03	0.02	0.07	0.07	0.02	0.10
Pb	0.16	0.16	0.31	0.28	0.24	0.12	1.95
Bi	0.02	0.03	0.09	0.03	0.02	0.00	0.01
Th	0.40	0.99	1.30	0.01	BDL	0.01	0.02
U	0.16	0.19	0.25	0.02	0.02	0.00	0.04
Tl	0.00	0.12	0.07	0.01	0.01	0.00	BDL

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-04_03-1	YD01-04_03-2	YD01-04_03-3	YD01-04_03-4	YD01-04_03-5	YD01-04_04-1	YD01-04_04-2
Data Quality (1-3)	1.5	1.5	3	3	0	2	2.5
1 standard error (ppm) *							
Li	0.23	0.30	1.97	2.67	4.67	5.56	2.97
B	0.35	0.29	0.16	0.60	3.89	0.20	1.89
Si	2630.89	2630.89	2630.89	2630.89	2630.89	2630.89	2630.89
P	10.82	4.49	7.42	9.14	141552.05	4.74	24.97
Sc	0.48	0.27	0.09	0.17	0.42	0.11	0.20
Ti	25.14	11.30	12.19	12.34	112.31	68.11	27.25
V	3.88	2.98	3.84	3.92	5.09	2.82	3.51
Cr	0.55	0.61	1.16	1.28	3.20	0.99	0.82
Mn	16.65	16.60	52.21	62.75	40.46	43.53	51.75
Co	0.15	0.18	0.54	0.50	0.35	0.41	0.66
Cu	261.50	29.52	36.31	37.55	295.25	1209.19	208.36
Cu	192.14	32.43	39.67	37.20	314.14	1151.94	195.39
Zn	0.84	0.55	4.00	4.45	14.07	5.37	5.85
Zn	2.74	2.85	4.36	5.18	12.55	5.28	7.26
As	0.16	0.05	0.05	0.06	14.31	0.04	0.09
Se	0.13	0.12	0.18	0.22	0.38	0.20	0.65
Se	0.18	BDL	0.20	BDL	1.10	BDL	BDL
Rb	3.17	2.85	0.12	0.47	7.84	3.61	3.64
Sr	80.19	47.97	0.68	0.28	85.33	10.63	1.50
Mo	0.03	BDL	BDL	0.04	0.05	0.06	0.12
Sn	0.04	0.04	0.02	0.02	0.40	0.03	0.03
Te	0.07	BDL	0.09	0.03	0.12	0.04	BDL
Cs	0.06	0.05	0.04	0.04	0.66	0.71	0.36
Ba	27.47	44.24	0.25	0.11	32.04	1.97	1.45
Ba	26.67	50.93	0.44	0.11	32.42	2.40	1.48
W	0.10	0.03	BDL	0.04	2.11	BDL	0.05
Pb	0.22	0.15	0.07	0.05	0.52	0.13	0.13
Bi	0.04	0.02	0.01	0.01	0.04	0.03	0.02
Th	0.67	0.47	0.02	0.01	6.38	0.08	0.02
U	0.20	0.08	0.02	0.01	0.60	0.14	0.01
Tl	0.03	0.04	0.01	0.02	0.06	0.03	0.04

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-04_03-1	YD01-04_03-2	YD01-04_03-3	YD01-04_03-4	YD01-04_03-5	YD01-04_04-1	YD01-04_04-2
Data Quality (1-3)	1.5	1.5	3	3	0	2	2.5
1 standard error (ppm)**							
Li	0.79	0.84	7.50	7.05	8.21	22.05	7.88
B	1.85	0.90	0.43	1.38	8.70	1.06	2.65
Si	4519.18	4519.18	4519.18	4519.18	4519.18	4519.18	4519.18
P	20.58	10.42	16.75	19.64	332840.30	10.66	33.58
Sc	0.83	0.42	0.13	0.20	0.45	0.14	0.23
Ti	30.13	17.84	19.75	18.32	180.26	107.74	40.17
V	7.62	5.09	7.52	6.81	7.23	5.56	6.59
Cr	4.12	3.02	7.79	6.17	7.45	4.99	5.11
Mn	25.64	22.84	91.91	97.24	49.62	70.84	84.83
Co	0.19	0.23	1.32	1.27	0.64	0.98	1.25
Cu	351.17	79.68	106.91	85.52	924.15	3310.53	662.27
Cu	312.75	81.79	107.86	86.74	862.91	3235.57	577.61
Zn	0.99	0.76	5.62	5.72	14.30	7.04	7.18
Zn	3.22	3.53	5.99	6.37	12.95	7.19	8.49
As	0.54	0.29	0.15	0.11	188.33	0.13	0.10
Se	2.50	1.94	2.88	1.72	8.79	1.85	3.12
Se	0.40	BDL	0.96	BDL	1.45	BDL	BDL
Rb	3.37	3.25	0.14	0.48	8.83	4.60	4.06
Sr	101.83	58.49	0.71	0.29	96.13	10.64	1.57
Mo	0.03	BDL	BDL	0.04	0.05	0.06	0.12
Sn	0.11	0.09	0.05	0.05	0.49	0.06	0.06
Te	0.08	BDL	0.10	0.03	0.13	0.04	BDL
Cs	0.09	0.07	0.08	0.08	1.06	1.22	0.61
Ba	32.86	52.05	0.27	0.12	33.74	2.48	1.54
Ba	33.67	61.98	0.44	0.12	34.67	2.93	1.59
W	0.10	0.04	BDL	0.04	4.25	BDL	0.06
Pb	0.30	0.19	0.07	0.05	0.54	0.14	0.13
Bi	0.05	0.04	0.01	0.01	0.05	0.03	0.02
Th	1.45	0.89	0.02	0.01	6.59	0.09	0.02
U	0.37	0.18	0.02	0.01	0.61	0.14	0.01
Tl	0.04	0.05	0.01	0.02	0.12	0.09	0.07

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-04_05-1	YD01-04_05-3	YD01-30C-1	YD01-30C-10	YD01-30C-2	YD01-30C-3	YD01-30C-5
Data Quality (1-3)	3	2	3	2	2.5	2.5	3
Li (ppm)	47.65	58.44	17.23	16.39	37.71	17.56	23.65
B (ppm)	1.75	2.74	1.23	5.46	2.62	4.05	0.65
Si (ppm)	131544.50	131544.50	128038.52	128038.52	128038.52	128038.52	128038.52
P (ppm)	52.95	25.79	48.00	62.68	42.21	100.19	34.57
Sc (ppm)	2.64	3.60	6.11	13.97	14.56	17.48	6.66
Ti (ppm)	143.98	1808.04	30.52	120.30	1564.31	85.12	46.93
V (ppm)	129.31	101.21	369.30	165.11	456.25	475.10	664.07
Cr (ppm)	20.71	10.25	3.35	2.74	4.86	5.64	5.01
Mn (ppm)	1975.78	1349.93	3566.21	2330.08	5005.28	3341.75	4622.62
Co (ppm)	23.23	16.36	67.08	47.89	105.13	58.60	92.20
Cu(63) (ppm)	2794.85	10346.93	165.27	167.26	631.77	472.98	149.37
Cu(65)* (ppm)	2822.65	10066.39	167.03	164.48	630.63	475.30	150.19
Zn(66)* (ppm)	166.20	128.18	968.67	648.59	1363.00	893.10	1200.46
Zn(68) (ppm)	158.07	129.29	943.51	657.50	1330.16	878.87	1156.72
As (ppm)	0.09	6.22	1.06	0.70	0.78	3.16	0.29
Se(76) (ppm)	2.63	1.73	1.46	2.17	4.12	3.71	4.38
Se(77)* (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb (ppm)	11.70	96.81	2.15	10.53	8.36	2.49	1.81
Sr (ppm)	13.32	254.05	3.24	268.80	11.20	855.74	121.39
Mo (ppm)	BDL	0.07	0.15	0.11	0.14	0.33	BDL
Sn (ppm)	0.37	0.19	0.12	0.22	0.18	0.33	0.15
Te (ppm)	BDL	BDL	0.09	0.00	0.05	BDL	BDL
Cs (ppm)	2.34	8.76	0.26	0.60	0.40	0.41	0.02
Ba(137) (ppm)	5.58	71.50	43.15	136.47	65.49	34.14	9.85
Ba(138)* (ppm)	5.68	62.04	44.49	129.19	68.06	33.03	9.98
W (ppm)	BDL	1.73	0.04	0.16	0.09	0.41	0.06
Pb (ppm)	0.66	1.71	0.14	8.76	0.34	3.31	1.10
Bi (ppm)	0.11	0.11	BDL	0.01	0.01	0.01	0.03
Th (ppm)	0.20	2.73	0.08	0.83	0.02	2.23	0.02
U (ppm)	0.12	2.01	0.18	0.51	0.12	0.50	0.03
Tl (ppm)	0.05	0.63	BDL	0.16	0.03	0.01	BDL
SiO2 wt. %	28.14	28.14	27.39	27.39	27.39	27.39	27.39

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-04_05-1	YD01-04_05-3	YD01-30C-1	YD01-30C-10	YD01-30C-2	YD01-30C-3	YD01-30C-5
Data Quality (1-3)	3	2	3	2	2.5	2.5	3
1 standard error (ppm) *							
Li	2.32	2.22	1.02	0.62	1.72	0.85	1.36
B	0.23	0.35	0.41	0.65	0.29	0.63	0.30
Si	2630.89	2630.89	2560.77	2560.77	2560.77	2560.77	2560.77
P	18.03	3.92	4.28	14.02	3.54	7.71	5.40
Sc	0.11	0.18	0.56	0.82	0.70	1.63	0.38
Ti	16.88	219.34	1.02	23.34	67.90	3.26	2.18
V	4.03	3.08	12.12	8.10	17.39	16.58	17.24
Cr	0.57	0.34	0.33	0.58	0.61	0.37	0.93
Mn	68.40	38.43	124.63	98.08	180.13	117.12	131.98
Co	0.66	0.51	2.64	1.89	3.12	2.60	2.43
Cu	114.76	517.06	4.46	8.69	25.32	19.96	6.38
Cu	113.87	523.82	6.24	7.64	23.38	17.54	5.37
Zn	5.56	3.58	32.13	16.65	35.47	32.96	28.32
Zn	5.48	5.54	29.54	21.22	38.77	40.55	31.49
As	0.06	0.90	0.20	0.32	0.45	0.25	0.25
Se	0.29	0.15	0.19	0.49	1.74	0.30	1.02
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb	0.43	3.84	0.17	0.93	0.34	0.15	0.17
Sr	1.49	14.91	0.17	32.47	1.50	20.14	4.51
Mo	BDL	0.05	0.12	0.12	0.04	0.13	BDL
Sn	0.08	0.02	0.02	0.07	0.08	0.03	0.07
Te	BDL	BDL	0.22	0.13	0.14	BDL	BDL
Cs	0.13	0.42	0.01	0.05	0.07	0.02	0.12
Ba	0.23	17.53	3.17	28.20	11.82	2.79	0.79
Ba	0.27	12.78	1.50	23.51	9.72	3.58	1.99
W	BDL	0.12	0.01	0.02	0.04	0.03	0.04
Pb	0.17	0.11	0.02	1.64	0.04	0.40	0.09
Bi	0.05	0.01	BDL	0.00	0.01	0.01	0.01
Th	0.03	0.13	0.09	0.27	0.01	0.76	0.04
U	0.02	0.17	0.03	0.07	0.03	0.16	0.01
Tl	0.01	0.07	BDL	0.04	0.01	0.01	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-04_05-1	YD01-04_05-3	YD01-30C-1	YD01-30C-10	YD01-30C-2	YD01-30C-3	YD01-30C-5
Data Quality (1-3)	3	2	3	2	2.5	2.5	3
1 standard error (ppm)**							
Li	7.12	8.54	2.65	2.40	5.61	2.63	3.62
B	0.68	1.06	0.61	2.09	0.99	1.60	0.38
Si	4519.18	4519.18	4398.73	4398.73	4398.73	4398.73	4398.73
P	24.84	9.20	14.62	23.02	12.80	30.19	11.43
Sc	0.15	0.23	0.61	0.99	0.90	1.77	0.46
Ti	26.96	343.20	3.05	25.94	162.12	8.65	4.92
V	7.56	5.88	21.36	11.29	27.82	28.05	36.01
Cr	4.19	2.08	0.75	0.80	1.15	1.19	1.37
Mn	101.08	63.74	184.33	132.26	262.27	172.95	220.02
Co	1.42	1.02	4.41	3.15	6.35	4.03	5.43
Cu	325.90	1242.00	18.01	19.68	71.33	53.77	17.01
Cu	329.78	1221.73	18.72	18.98	70.61	53.19	16.75
Zn	7.04	4.89	38.88	22.18	46.99	38.65	39.22
Zn	7.01	6.59	36.89	26.22	49.74	45.47	41.54
As	0.06	2.33	0.42	0.40	0.52	1.13	0.27
Se	2.13	1.39	1.18	1.81	3.73	2.99	3.66
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb	0.52	4.48	0.17	0.94	0.37	0.15	0.17
Sr	1.52	15.93	0.18	32.69	1.51	23.37	4.81
Mo	BDL	0.05	0.12	0.12	0.04	0.13	BDL
Sn	0.10	0.04	0.03	0.08	0.08	0.07	0.08
Te	BDL	BDL	0.22	0.13	0.14	BDL	BDL
Cs	0.21	0.75	0.02	0.06	0.07	0.03	0.12
Ba	0.26	17.60	3.28	28.32	11.89	2.87	0.82
Ba	0.31	12.87	1.70	23.62	9.79	3.63	2.00
W	BDL	0.24	0.01	0.03	0.04	0.06	0.04
Pb	0.17	0.12	0.02	1.68	0.05	0.43	0.10
Bi	0.05	0.02	BDL	0.00	0.01	0.01	0.01
Th	0.03	0.20	0.09	0.27	0.01	0.77	0.04
U	0.03	0.23	0.03	0.08	0.03	0.17	0.01
Tl	0.01	0.09	BDL	0.05	0.01	0.01	BDL

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl?	Chl?	Chl?	Chl?
LA-ICP-MS Spot ID	YD01-30C-6	YD01-30C-7	YD01-30C-8	H437269_14-1	H437269_14-2	H437269_16-1	H437269_16-3
Data Quality (1-3)	2.5	3	3	1	1	1.5	1
Li (ppm)	20.87	30.39	28.70	24.31	20.78	7.34	3.34
B (ppm)	1.95	1.46	1.39	8.77	4.94	3.44	3.21
Si (ppm)	128038.52	128038.52	128038.52	130843.31	130843.31	130843.31	130843.31
P (ppm)	50.42	24.95	54.07	566.27	BDL	103.05	23.03
Sc (ppm)	9.34	6.75	9.24	26.17	12.76	6.83	3.57
Ti (ppm)	73.01	280.96	91.60	30779.63	84.58	902.51	10.50
V (ppm)	662.70	440.37	444.09	365.69	190.49	73.13	14.69
Cr (ppm)	3.89	2.10	4.02	46.97	37.83	15.22	3.58
Mn (ppm)	3751.77	5073.79	4233.57	168.65	161.39	55.28	9.31
Co (ppm)	73.95	106.64	87.40	16.75	10.48	3.37	3.26
Cu(63) (ppm)	403.20	173.96	272.69	7134.49	4757.60	636.22	2462.97
Cu(65)* (ppm)	403.47	172.24	269.56	6216.04	3791.02	643.24	1985.70
Zn(66)* (ppm)	959.68	1465.82	1153.86	84.56	63.50	25.09	22.32
Zn(68) (ppm)	942.56	1347.12	1131.73	82.68	61.27	27.47	25.22
As (ppm)	1.07	0.25	0.80	5.70	2.52	1.59	0.54
Se(76) (ppm)	BDL	0.31	3.76	4.25	2.88	1.51	2.02
Se(77)* (ppm)	BDL	BDL	BDL	BDL	0.19	BDL	0.21
Rb (ppm)	4.85	3.14	3.87	4.74	2.43	2.49	3.86
Sr (ppm)	1233.81	38.21	273.16	107.13	88.55	151.14	158.51
Mo (ppm)	0.33	0.02	0.17	0.66	0.56	BDL	0.12
Sn (ppm)	BDL	BDL	0.30	5.57	0.26	0.32	0.33
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs (ppm)	0.31	0.40	0.30	0.73	0.78	0.39	0.34
Ba(137) (ppm)	31.13	28.22	36.17	16.71	12.65	26.31	43.31
Ba(138)* (ppm)	28.64	29.15	35.43	17.14	13.07	27.91	42.51
W (ppm)	0.16	BDL	BDL	17.71	0.45	0.82	0.08
Pb (ppm)	3.86	1.19	1.52	8.95	4.34	5.76	3.40
Bi (ppm)	BDL	BDL	0.01	0.13	0.11	0.03	0.04
Th (ppm)	BDL	BDL	0.87	1.79	0.22	1.15	0.31
U (ppm)	0.12	BDL	0.32	4.89	1.34	2.46	1.34
Tl (ppm)	BDL	0.01	0.02	0.03	0.02	0.05	0.04
SiO2 wt. %	27.39	27.39	27.39	27.99	27.99	27.99	27.99

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl?	Chl?	Chl?	Chl?
LA-ICP-MS Spot ID	YD01-30C-6	YD01-30C-7	YD01-30C-8	H437269_14-1	H437269_14-2	H437269_16-1	H437269_16-3
Data Quality (1-3)	2.5	3	3	1	1	1.5	1
1 standard error (ppm) *							
Li	1.22	1.71	0.99	1.04	1.21	0.61	0.34
B	0.54	0.69	0.70	1.19	0.55	0.69	0.35
Si	2560.77	2560.77	2560.77	2616.87	2616.87	2616.87	2616.87
P	7.49	2.00	5.93	86.51	BDL	34.00	4.09
Sc	0.52	0.93	0.68	1.16	0.90	0.26	0.24
Ti	3.37	37.47	15.34	4732.69	15.27	111.62	2.93
V	17.92	12.56	13.85	15.08	9.94	2.58	0.85
Cr	0.76	2.21	0.30	1.91	1.48	0.61	0.19
Mn	173.45	219.88	152.52	5.63	7.86	1.73	0.40
Co	2.14	3.73	3.45	0.86	0.71	0.12	0.16
Cu	15.11	7.61	7.99	253.56	180.85	59.84	129.46
Cu	17.71	5.19	14.28	305.45	148.24	52.02	103.47
Zn	27.48	72.63	41.30	3.51	2.23	0.79	1.26
Zn	27.06	37.37	28.30	2.35	2.22	1.55	1.53
As	0.22	0.45	0.27	0.20	0.27	0.07	0.13
Se	BDL	6.79	0.51	0.52	0.16	0.09	0.33
Se	BDL	BDL	BDL	BDL	0.19	BDL	0.09
Rb	0.18	0.76	0.10	0.41	0.18	0.19	0.12
Sr	78.72	4.08	23.05	4.57	4.27	6.26	5.63
Mo	0.10	0.19	0.08	0.05	0.07	BDL	0.07
Sn	BDL	BDL	0.07	0.45	0.02	0.03	0.06
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.05	0.10	0.03	0.04	0.06	0.02	0.02
Ba	4.27	2.29	5.10	1.38	0.64	1.08	3.20
Ba	3.96	2.17	4.83	1.44	0.43	1.00	1.69
W	0.12	BDL	BDL	1.21	0.07	0.07	0.03
Pb	0.23	0.27	0.11	0.68	0.28	0.31	0.67
Bi	BDL	BDL	0.01	0.02	0.03	0.01	0.01
Th	BDL	BDL	0.31	0.14	0.03	0.20	0.05
U	0.03	BDL	0.08	0.16	0.12	0.37	0.20
Tl	BDL	0.02	0.01	0.01	0.00	0.01	0.01

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl?	Chl?	Chl?	Chl?
LA-ICP-MS Spot ID	YD01-30C-6	YD01-30C-7	YD01-30C-8	H437269_14-1	H437269_14-2	H437269_16-1	H437269_16-3
Data Quality (1-3)	2.5	3	3	1	1	1.5	1
1 standard error (ppm)**							
Li	3.20	4.63	4.18	3.59	3.17	1.20	0.58
B	0.90	0.87	0.87	3.41	1.88	1.43	1.22
Si	4398.73	4398.73	4398.73	4495.09	4495.09	4495.09	4495.09
P	16.48	7.54	16.83	202.18	BDL	47.56	8.48
Sc	0.63	0.96	0.77	1.58	1.04	0.38	0.28
Ti	7.65	45.86	17.60	6526.21	19.64	172.69	3.30
V	36.28	24.44	25.27	23.55	13.69	4.45	1.12
Cr	1.09	2.25	0.86	9.61	7.73	3.11	0.74
Mn	224.72	292.72	221.94	8.49	9.94	2.71	0.53
Co	4.44	6.74	5.75	1.25	0.91	0.22	0.24
Cu	45.16	19.88	29.87	818.89	549.83	91.66	298.35
Cu	46.16	18.92	31.86	746.88	441.32	87.64	241.06
Zn	35.02	79.83	48.85	4.14	2.77	1.03	1.39
Zn	34.92	48.91	38.77	3.28	2.80	1.72	1.68
As	0.43	0.46	0.39	1.98	0.91	0.55	0.23
Se	BDL	6.79	3.06	3.44	2.31	1.21	1.65
Se	BDL	BDL	BDL	BDL	0.25	BDL	0.19
Rb	0.20	0.76	0.12	0.43	0.19	0.20	0.15
Sr	80.55	4.11	23.35	5.15	4.70	7.10	6.63
Mo	0.10	0.19	0.08	0.07	0.08	BDL	0.07
Sn	BDL	BDL	0.09	1.10	0.05	0.07	0.09
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.06	0.10	0.03	0.06	0.08	0.03	0.03
Ba	4.31	2.36	5.15	1.43	0.70	1.23	3.34
Ba	3.99	2.23	4.87	1.50	0.53	1.21	1.98
W	0.12	BDL	BDL	2.40	0.09	0.12	0.03
Pb	0.28	0.27	0.12	0.74	0.31	0.36	0.68
Bi	BDL	BDL	0.01	0.02	0.03	0.01	0.01
Th	BDL	BDL	0.32	0.17	0.03	0.21	0.06
U	0.04	BDL	0.09	0.40	0.16	0.42	0.23
Tl	BDL	0.02	0.01	0.01	0.00	0.01	0.01

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl?	Chl?	Chl?	Chl?	Chl?	Chl?	Chl?
LA-ICP-MS Spot ID	H437289_27-2	H437289_27-3	H437289_27-4	H437289_29-1	H437289_29-2	H437289_30-1	H437289_30-2
Data Quality (1-3)	1.5	1	1.5	1.5	1.5	1.5	1.5
1 standard error (ppm) *							
Li	0.53	0.25	1.40	0.51	1.63	0.31	0.27
B	1.22	0.74	0.66	0.84	1.55	1.75	1.09
Si	2693.53	2693.53	2693.53	2693.53	2693.53	2693.53	2693.53
P	25.45	25.97	72.74	1.76	2.08	90.39	1.30
Sc	0.42	0.37	0.73	0.27	0.42	0.40	0.43
Ti	157.42	173.94	164.43	214.95	81.42	39.80	44.67
V	5.37	4.16	9.97	6.28	4.92	5.48	3.85
Cr	0.45	0.47	0.75	0.38	0.40	0.22	0.22
Mn	3.24	1.50	9.52	3.57	7.69	2.05	1.62
Co	0.81	0.38	2.07	0.87	2.40	0.37	0.31
Cu	24.52	11.94	13.48	288.66	17.75	11.94	11.26
Cu	22.52	12.74	11.19	424.60	19.55	11.76	15.13
Zn	0.71	0.27	1.31	0.97	1.75	0.44	0.42
Zn	2.01	1.46	1.66	1.59	2.53	1.91	1.53
As	0.17	0.06	0.15	0.21	0.22	0.03	0.04
Se	0.40	0.08	0.40	0.43	0.82	0.15	0.13
Se	0.31	BDL	BDL	0.16	BDL	BDL	BDL
Rb	3.88	3.40	6.19	4.66	3.19	9.25	3.95
Sr	0.23	0.17	0.32	0.18	0.11	0.31	0.17
Mo	0.04	0.03	0.05	0.03	0.07	0.03	BDL
Sn	0.07	0.09	0.05	0.05	0.07	0.11	0.03
Te	BDL	BDL	BDL	0.09	0.05	BDL	0.03
Cs	0.20	0.11	0.09	0.13	0.08	0.16	0.15
Ba	53.54	19.58	19.05	14.91	10.16	54.05	34.31
Ba	40.80	27.05	14.59	15.26	11.53	53.98	31.62
W	0.85	0.78	2.48	0.87	0.46	0.22	0.26
Pb	0.18	0.03	0.18	0.11	0.19	0.02	0.03
Bi	0.02	0.01	0.01	0.02	0.02	0.02	0.01
Th	0.14	0.09	0.16	0.26	0.04	0.01	0.11
U	0.15	0.06	0.07	0.17	0.02	0.04	0.43
Tl	0.06	0.04	0.02	0.03	0.02	0.02	0.04

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl?	Chl?	Chl?	Chl?	Chl?	Chl?	Chl?
LA-ICP-MS Spot ID	H437289_27-2	H437289_27-3	H437289_27-4	H437289_29-1	H437289_29-2	H437289_30-1	H437289_30-2
Data Quality (1-3)	1.5	1	1.5	1.5	1.5	1.5	1.5
1 standard error (ppm)**							
Li	2.04	0.94	3.75	2.12	5.10	1.06	1.03
B	6.06	6.20	4.15	7.24	3.75	7.89	7.82
Si	4626.78	4626.78	4626.78	4626.78	4626.78	4626.78	4626.78
P	63.59	79.00	156.32	7.80	4.72	124.27	5.76
Sc	0.59	0.53	0.84	0.43	0.53	0.61	0.64
Ti	370.60	360.27	322.01	482.33	232.35	122.02	131.16
V	10.12	7.12	12.62	11.91	8.99	8.35	7.01
Cr	3.32	1.99	2.63	1.89	1.84	0.96	1.97
Mn	4.67	2.23	12.10	5.60	12.10	2.73	2.36
Co	1.52	0.63	3.29	1.79	4.42	0.66	0.57
Cu	78.14	34.40	39.32	952.09	59.54	38.41	36.84
Cu	76.94	34.82	37.75	989.44	59.85	38.37	37.04
Zn	0.87	0.32	1.53	1.18	2.14	0.50	0.48
Zn	2.60	1.90	2.30	2.22	3.25	2.47	2.15
As	0.94	0.31	0.61	0.62	0.41	0.15	0.11
Se	2.79	1.71	2.50	2.22	2.38	1.76	1.82
Se	0.55	BDL	BDL	0.28	BDL	BDL	BDL
Rb	4.35	3.78	6.30	5.01	3.35	9.49	4.52
Sr	0.25	0.18	0.32	0.19	0.12	0.32	0.20
Mo	0.05	0.03	0.05	0.03	0.07	0.03	BDL
Sn	0.18	0.13	0.11	0.14	0.13	0.18	0.11
Te	BDL	BDL	BDL	0.10	0.06	BDL	0.03
Cs	0.31	0.23	0.14	0.25	0.14	0.31	0.35
Ba	57.11	25.22	21.33	19.06	11.88	59.01	41.93
Ba	44.86	30.72	17.07	18.75	12.82	58.19	38.80
W	3.84	2.08	4.25	3.09	1.06	0.83	1.14
Pb	0.20	0.04	0.19	0.13	0.20	0.02	0.03
Bi	0.02	0.01	0.02	0.05	0.03	0.03	0.01
Th	0.23	0.11	0.19	0.26	0.04	0.02	0.12
U	0.21	0.08	0.13	0.26	0.03	0.04	0.44
Tl	0.08	0.06	0.03	0.06	0.03	0.06	0.07

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl?	Chl?	Chl?	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	H437289_34-1	H437289_34-2	H437289_35-3	G909158-1	G909158-10	G909158-2	G909158-3
Data Quality (1-3)	1.5	1.5	1.5	2	1.5	2	3
Li (ppm)	5.66	12.60	11.54	45.44	46.61	38.82	44.56
B (ppm)	37.41	19.15	17.32	2.66	2.17	2.71	2.73
Si (ppm)	134676.51	134676.51	134676.51	135424.46	135424.46	135424.46	135424.46
P (ppm)	16.45	23.78	7.79	783.54	6125.55	107.36	95.66
Sc (ppm)	10.74	10.53	8.83	2.80	2.28	2.09	1.70
Ti (ppm)	951.41	870.50	1167.13	4714.04	207.06	125.64	151.49
V (ppm)	130.21	106.60	111.38	113.78	98.17	80.90	102.23
Cr (ppm)	3.85	3.58	6.65	13.01	28.51	17.98	11.58
Mn (ppm)	34.90	86.49	72.09	2365.85	2590.33	1763.30	2384.94
Co (ppm)	4.97	21.75	16.93	14.95	13.32	15.05	18.63
Cu(63) (ppm)	255.95	382.88	265.65	518.40	600.14	554.60	419.31
Cu(65)* (ppm)	241.02	388.08	262.19	513.99	591.37	553.12	413.22
Zn(66)* (ppm)	6.49	18.48	14.53	277.84	303.95	236.99	247.77
Zn(68) (ppm)	41.16	44.75	46.53	266.41	296.45	230.25	234.23
As (ppm)	0.32	0.43	0.23	1.88	2.46	0.54	1.25
Se(76) (ppm)	3.21	2.71	1.84	BDL	2.72	1.92	0.70
Se(77)* (ppm)	BDL	0.90	BDL	0.83	1.12	0.76	BDL
Rb (ppm)	224.39	161.79	187.70	20.11	42.11	21.70	16.52
Sr (ppm)	4.30	2.99	4.22	16.19	43.32	7.21	5.08
Mo (ppm)	BDL	0.07	0.00	0.93	0.19	0.14	0.36
Sn (ppm)	0.82	0.69	0.93	0.24	0.26	0.07	0.28
Te (ppm)	BDL	0.06	BDL	BDL	0.19	BDL	BDL
Cs (ppm)	4.18	3.72	4.77	0.76	0.58	0.96	0.69
Ba(137) (ppm)	1017.39	783.32	1030.73	16.27	85.67	11.97	10.39
Ba(138)* (ppm)	1006.51	774.07	1029.60	15.76	84.79	13.50	8.66
W (ppm)	6.81	6.57	8.62	1.25	0.33	0.13	0.08
Pb (ppm)	0.20	0.20	0.37	1.67	1.31	0.52	0.41
Bi (ppm)	0.03	0.18	0.01	BDL	BDL	BDL	BDL
Th (ppm)	0.03	0.19	0.43	0.58	0.56	0.03	BDL
U (ppm)	0.04	0.22	0.22	1.25	1.00	0.06	0.01
Tl (ppm)	0.69	0.52	0.59	0.15	0.21	0.12	0.08
SiO2 wt. %	28.81	28.81	28.81	28.97	28.97	28.97	28.97

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl?	Chl?	Chl?	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	H437289_34-1	H437289_34-2	H437289_35-3	G909158-1	G909158-10	G909158-2	G909158-3
Data Quality (1-3)	1.5	1.5	1.5	2	1.5	2	3
1 standard error (ppm) *							
Li	0.32	0.48	0.62	1.74	2.30	2.36	1.32
B	1.30	0.85	0.68	0.79	0.19	0.32	0.86
Si	2693.53	2693.53	2693.53	2708.49	2708.49	2708.49	2708.49
P	2.29	2.60	55.75	66.37	243.78	4.90	5.32
Sc	0.36	0.60	0.27	0.18	0.17	0.25	0.16
Ti	31.57	27.15	43.38	226.69	11.09	6.72	4.81
V	4.25	3.84	3.55	3.54	3.32	3.06	3.35
Cr	0.17	0.17	0.16	0.31	1.01	0.60	1.10
Mn	1.28	2.59	2.43	68.54	73.17	94.36	64.03
Co	0.20	1.04	0.72	0.87	0.41	0.68	0.64
Cu	9.78	13.54	9.28	16.12	16.84	18.19	15.87
Cu	10.13	13.97	11.26	17.06	15.54	15.44	16.01
Zn	0.24	0.99	0.54	7.77	8.34	9.05	7.89
Zn	1.65	1.75	1.82	9.29	8.53	9.06	9.51
As	0.05	0.03	0.06	0.32	0.27	0.34	0.18
Se	0.30	0.15	0.20	BDL	0.62	0.33	0.36
Se	BDL	0.45	BDL	0.86	1.21	0.56	BDL
Rb	5.01	3.95	4.51	0.68	1.17	0.83	0.83
Sr	0.36	0.14	0.17	1.10	4.02	0.30	0.24
Mo	BDL	0.01	0.02	0.06	0.12	0.16	0.11
Sn	0.03	0.07	0.08	0.12	0.17	0.03	0.04
Te	BDL	0.02	BDL	BDL	0.10	BDL	BDL
Cs	0.20	0.14	0.22	0.08	0.05	0.07	0.04
Ba	35.20	22.46	30.84	2.44	7.78	0.31	0.57
Ba	29.97	21.65	31.01	0.51	9.96	0.66	0.55
W	0.42	0.22	0.31	0.12	0.12	0.07	0.08
Pb	0.03	0.02	0.06	0.18	0.15	0.06	0.06
Bi	0.01	0.02	0.00	BDL	BDL	BDL	BDL
Th	0.01	0.02	0.09	0.10	0.67	0.03	BDL
U	0.01	0.03	0.05	0.17	0.13	0.03	0.01
Tl	0.03	0.02	0.03	0.03	0.07	0.03	0.04

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl?	Chl?	Chl?	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	H437289_34-1	H437289_34-2	H437289_35-3	G909158-1	G909158-10	G909158-2	G909158-3
Data Quality (1-3)	1.5	1.5	1.5	2	1.5	2	3
1 standard error (ppm)**							
Li	0.86	1.85	1.75	6.63	6.95	5.95	6.41
B	13.68	7.03	6.34	1.25	0.81	1.04	1.31
Si	4626.78	4626.78	4626.78	4652.48	4652.48	4652.48	4652.48
P	5.24	7.30	55.79	234.51	1775.20	31.21	27.97
Sc	0.59	0.75	0.46	0.19	0.19	0.26	0.17
Ti	96.50	87.74	119.98	503.82	22.66	13.75	15.24
V	7.93	6.70	6.74	6.74	5.96	5.10	6.15
Cr	0.79	0.74	1.34	2.62	5.79	3.65	2.56
Mn	1.88	4.29	3.74	113.60	123.27	116.03	111.54
Co	0.35	1.63	1.21	1.20	0.84	1.07	1.21
Cu	29.37	43.58	30.20	57.55	66.13	61.84	47.42
Cu	27.92	44.16	30.46	57.33	64.86	60.89	46.83
Zn	0.29	1.10	0.65	10.99	11.90	11.21	10.50
Zn	2.21	2.37	2.47	12.03	12.04	11.21	11.64
As	0.12	0.15	0.10	0.73	0.89	0.39	0.47
Se	2.58	2.17	1.49	BDL	2.27	1.58	0.67
Se	BDL	0.85	BDL	1.09	1.51	0.83	BDL
Rb	5.60	4.35	4.98	0.78	1.43	0.93	0.89
Sr	0.38	0.15	0.19	1.14	4.10	0.32	0.25
Mo	BDL	0.01	0.02	0.09	0.12	0.16	0.11
Sn	0.15	0.14	0.19	0.12	0.18	0.03	0.06
Te	BDL	0.02	BDL	BDL	0.11	BDL	BDL
Cs	0.35	0.29	0.39	0.09	0.06	0.10	0.06
Ba	42.23	28.76	38.85	2.45	7.84	0.34	0.58
Ba	36.76	27.14	37.89	0.66	10.20	0.75	0.59
W	0.90	0.80	1.05	0.19	0.12	0.07	0.08
Pb	0.03	0.02	0.06	0.19	0.15	0.06	0.06
Bi	0.01	0.02	0.00	BDL	BDL	BDL	BDL
Th	0.01	0.02	0.09	0.11	0.68	0.03	BDL
U	0.01	0.04	0.05	0.20	0.15	0.03	0.01
Tl	0.07	0.06	0.07	0.04	0.07	0.04	0.04

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909158-4	G909158-5	G909158-6	G909158-7	G909158-8	G909158-9	YD09-04area1-1
Data Quality (1-3)	2	1.5	2	2	2.5	3	3
1 standard error (ppm) *							
Li	0.92	1.61	3.13	1.71	2.63	2.62	3.82
B	0.96	2.18	0.17	0.66	0.40	0.49	2.60
Si	2708.49	2708.49	2708.49	2708.49	2708.49	2708.49	3272.25
P	83.95	1181.06	5.06	56.43	6.90	19.96	19.57
Sc	0.31	0.51	0.25	0.08	0.57	0.54	BDL
Ti	20.53	93.21	587.62	9.25	6.31	6.16	71.09
V	2.97	3.61	5.46	5.42	4.81	4.28	2.32
Cr	0.65	0.33	0.33	0.84	0.44	0.68	4.64
Mn	69.47	103.32	108.54	89.21	91.00	102.13	34.24
Co	0.46	0.66	0.93	0.58	0.79	0.63	0.87
Cu	21.64	15.87	9.49	10.18	7.01	14.63	33.27
Cu	23.58	16.66	7.61	8.96	7.48	17.68	21.67
Zn	8.03	12.11	13.52	8.86	7.00	12.01	18.75
Zn	8.98	10.07	10.07	9.94	11.45	16.38	12.35
As	0.59	0.25	0.40	0.21	BDL	0.51	BDL
Se	0.41	BDL	2.27	1.24	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	0.74	0.96	BDL
Rb	1.10	1.08	1.28	0.61	1.46	0.85	
Sr	0.60	9.57	1.94	0.56	0.16	0.39	
Mo	0.12	0.09	0.18	BDL	BDL	0.06	BDL
Sn	0.05	0.12	0.11	0.06	0.14	BDL	BDL
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.25	0.04	0.09	0.05	0.14	0.04	0.10
Ba	0.29	2.37	1.47	0.79	0.63	1.32	1.50
Ba	0.45	1.51	0.59	0.35	0.34	0.45	1.36
W	0.09	0.33	0.21	0.04	BDL	0.07	0.78
Pb	0.11	0.70	0.33	0.07	0.09	0.02	BDL
Bi	BDL	0.03	BDL	0.01	BDL	0.01	BDL
Th	0.03	0.56	0.85	0.02	BDL	0.02	
U	0.07	0.44	0.47	0.01	BDL	0.02	
Tl	0.02	0.04	0.03	0.04	0.05	0.01	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909158-4	G909158-5	G909158-6	G909158-7	G909158-8	G909158-9	YD09-04area1-1
Data Quality (1-3)	2	1.5	2	2	2.5	3	3
1 standard error (ppm)**							
Li	4.20	6.02	8.71	7.91	8.65	8.51	4.79
B	2.11	2.25	0.63	1.11	0.67	0.72	2.61
Si	4652.48	4652.48	4652.48	4652.48	4652.48	4652.48	3403.19
P	301.69	1908.16	19.59	307.19	19.07	77.32	31.54
Sc	0.32	0.52	0.27	0.12	0.58	0.55	BDL
Ti	21.71	116.04	596.25	19.13	18.72	17.38	79.27
V	4.77	5.73	8.56	8.10	8.24	7.66	7.54
Cr	3.45	2.96	2.48	3.18	1.86	4.08	8.59
Mn	84.63	129.22	167.13	152.54	151.54	165.52	46.14
Co	0.82	0.94	1.37	1.23	1.49	1.22	0.88
Cu	69.94	61.63	29.82	36.11	26.04	54.75	43.38
Cu	70.66	60.84	29.11	35.72	25.27	55.28	35.99
Zn	9.88	13.98	16.32	12.10	9.96	15.74	21.74
Zn	10.63	12.30	13.57	13.00	13.53	19.23	15.04
As	1.40	1.13	0.53	0.34	BDL	0.60	BDL
Se	1.35	BDL	4.83	1.84	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	1.26	1.11	BDL
Rb	1.16	1.17	1.33	0.74	1.53	1.05	
Sr	0.63	9.75	1.95	0.58	0.17	0.42	
Mo	0.13	0.09	0.19	BDL	BDL	0.07	BDL
Sn	0.11	0.13	0.12	0.08	0.15	BDL	BDL
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.27	0.07	0.09	0.06	0.15	0.05	0.22
Ba	0.32	2.42	1.48	0.80	0.63	1.33	1.58
Ba	0.55	1.83	0.70	0.41	0.37	0.58	1.49
W	0.10	0.38	0.21	0.04	BDL	0.08	0.78
Pb	0.12	0.72	0.34	0.07	0.09	0.03	BDL
Bi	BDL	0.03	BDL	0.01	BDL	0.01	BDL
Th	0.03	0.87	0.86	0.02	BDL	0.02	
U	0.08	0.46	0.50	0.01	BDL	0.02	
Tl	0.02	0.04	0.03	0.04	0.06	0.02	BDL

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD09-04area1-2	YD09-04area1-3	YD09-04area1-4	YD09-04area3-1	YD09-04area3-2	YD09-04area3-3	YD09-04area3-4
Data Quality (1-3)	3	3	3	3	3	3	3
Li (ppm)	64.53	58.73	73.95	43.42	51.66	50.50	51.53
B (ppm)	BDL	6.44	9.72	BDL	5.76	BDL	BDL
Si (ppm)	163612.57	163612.57	163612.57	144913.99	144913.99	144913.99	144913.99
P (ppm)	49.31	BDL	BDL	BDL	41.32	31.90	78.66
S (ppm)	BDL	5.26	BDL	1.73	BDL	BDL	4.27
Ti (ppm)	1103.76	51.88	462.67	73.66	332.38	1416.85	422.33
V (ppm)	93.15	101.08	85.85	81.96	73.73	88.35	70.62
Cr (ppm)	87.74	153.84	115.14	622.68	966.79	961.54	890.47
Mn (ppm)	1953.82	2254.57	1568.94	1966.60	1409.74	1622.08	1692.75
Co (ppm)	BDL	2.97	BDL	1.80	2.13	1.92	BDL
Cu(63) (ppm)	378.95	351.89	463.99	409.68	523.33	501.78	498.96
Cu(65)* (ppm)	413.37	328.31	443.41	421.35	482.86	452.99	493.27
Zn(66)* (ppm)	293.82	278.83	226.83	269.33	198.27	224.90	233.93
Zn(68) (ppm)	240.32	276.13	222.20	248.16	173.99	215.72	211.36
As (ppm)	BDL	BDL	BDL	2.96	BDL	BDL	BDL
Se(76) (ppm)	166.99	43.42	BDL	100.45	110.02	122.55	98.65
Se(77)* (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb (ppm)	null	null	null	null	null	null	null
Sr (ppm)	null	null	null	null	null	null	null
Mo (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sn (ppm)	BDL	BDL	1.68	BDL	BDL	BDL	0.19
Te (ppm)	BDL	BDL	3.91	BDL	1.91	2.48	BDL
Cs (ppm)	BDL	0.35	4.60	1.38	1.07	3.37	2.69
Ba(137) (ppm)	7.82	5.36	16.04	2.52	7.61	4.22	7.19
Ba(138)* (ppm)	4.67	2.67	17.21	2.21	6.00	4.19	4.45
W (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (ppm)	BDL	0.14	BDL	BDL	0.60	0.84	0.17
Bi (ppm)	BDL	BDL	0.10	BDL	BDL	BDL	BDL
Th (ppm)	null	null	null	null	null	null	null
U (ppm)	null	null	null	null	null	null	null
Tl (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
SiO2 wt. %	35.00	35.00	35.00	31.00	31.00	31.00	31.00

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD09-04area1-2	YD09-04area1-3	YD09-04area1-4	YD09-04area3-1	YD09-04area3-2	YD09-04area3-3	YD09-04area3-4
Data Quality (1-3)	3	3	3	3	3	3	3
1 standard error (ppm) *							
Li	5.26	2.33	2.85	1.51	1.69	2.54	2.97
B	BDL	10.23	2.84	BDL	4.41	BDL	BDL
Si	3272.25	3272.25	3272.25	2898.28	2898.28	2898.28	2898.28
P	12.50	BDL	BDL	BDL	10.81	19.22	30.38
Sc	BDL	0.91	BDL	0.48	BDL	BDL	0.90
Ti	67.24	7.04	63.96	11.46	361.98	87.00	45.50
V	3.83	3.46	4.46	2.74	2.29	6.75	2.93
Cr	4.54	6.99	5.86	20.90	30.08	29.97	27.78
Mn	53.93	57.89	41.45	48.18	34.60	51.83	41.70
Co	BDL	0.53	BDL	0.77	0.43	0.62	BDL
Cu	18.65	14.28	29.25	14.86	19.26	18.22	25.17
Cu	26.72	13.64	23.40	19.42	19.63	23.00	30.45
Zn	26.59	11.98	11.22	8.82	7.09	9.07	9.56
Zn	8.81	8.03	12.12	11.16	5.58	9.59	5.68
As	BDL	BDL	BDL	0.79	BDL	BDL	BDL
Se	37.98	16.66	BDL	16.91	26.80	33.92	30.91
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb							
Sr							
Mo	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sn	BDL	BDL	0.28	BDL	BDL	BDL	0.61
Te	BDL	BDL	2.82	BDL	1.08	1.14	BDL
Cs	BDL	0.05	0.37	0.23	0.20	0.59	0.26
Ba	1.41	1.13	1.61	0.85	0.75	0.62	1.99
Ba	0.85	0.40	0.69	0.17	0.62	0.45	0.61
W	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb	BDL	0.22	BDL	BDL	0.18	0.18	0.21
Bi	BDL	BDL	0.09	BDL	BDL	BDL	BDL
Th							
U							
Tl	BDL	BDL	BDL	BDL	BDL	BDL	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD09-04area1-2	YD09-04area1-3	YD09-04area1-4	YD09-04area3-1	YD09-04area3-2	YD09-04area3-3	YD09-04area3-4
Data Quality (1-3)	3	3	3	3	3	3	3
1 standard error (ppm)**							
Li	6.13	3.70	4.61	2.60	3.04	3.54	3.89
B	BDL	10.23	2.85	BDL	4.41	BDL	BDL
Si	3403.19	3403.19	3403.19	3014.26	3014.26	3014.26	3014.26
P	14.67	BDL	BDL	BDL	12.57	19.85	32.75
Sc	BDL	0.92	BDL	0.48	BDL	BDL	0.91
Ti	77.31	7.26	65.92	11.74	362.16	99.83	47.79
V	10.04	10.65	9.65	8.61	7.69	11.09	7.62
Cr	8.45	14.32	11.04	54.74	84.12	83.68	77.50
Mn	70.49	78.07	55.20	66.40	47.65	64.08	57.32
Co	BDL	0.56	BDL	0.78	0.44	0.63	BDL
Cu	29.62	25.70	40.61	28.97	37.16	35.50	39.39
Cu	37.86	25.30	37.09	33.54	36.97	37.32	44.18
Zn	30.11	17.98	15.64	15.67	11.88	14.11	14.76
Zn	13.64	14.41	15.48	15.50	9.38	13.39	10.78
As	BDL	BDL	BDL	0.80	BDL	BDL	BDL
Se	38.38	16.72	BDL	17.24	27.05	34.16	31.08
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb							
Sr							
Mo	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sn	BDL	BDL	0.29	BDL	BDL	BDL	0.61
Te	BDL	BDL	2.84	BDL	1.09	1.16	BDL
Cs	BDL	0.08	0.95	0.35	0.28	0.87	0.57
Ba	1.47	1.17	1.85	0.86	0.87	0.66	2.03
Ba	0.89	0.42	1.14	0.21	0.69	0.50	0.66
W	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb	BDL	0.22	BDL	BDL	0.18	0.19	0.21
Bi	BDL	BDL	0.09	BDL	BDL	BDL	BDL
Th							
U							
Tl	BDL	BDL	BDL	BDL	BDL	BDL	BDL

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	99017-10	99017-4	99017-5	99017-6	99017-7	99017-8	99017-9
Data Quality (1-3)	3	2	3	3	3	3	3
1 standard error (ppm) *							
Li	5.65	1.55	4.26	4.44	3.75	4.40	2.91
B	0.65	1.03	0.42	1.73	0.87	0.68	0.93
Si	2528.05	2528.05	2528.05	2528.05	2528.05	2528.05	2528.05
P	16.78	27.24	13.22	19.04	4.33	12.67	7.57
Sc	0.20	0.11	0.31	0.10	0.26	0.14	0.12
Ti	9.72	2.88	8.20	7.55	6.77	6.63	11.49
V	1.93	1.67	1.83	1.91	2.35	2.06	1.55
Cr	0.26	0.45	0.16	0.38	0.50	0.65	0.29
Mn	56.90	25.62	92.29	184.52	114.60	176.85	73.63
Co	6.87	4.17	4.21	6.13	4.62	6.02	4.59
Cu	1.39	2.41	0.59	4.06	0.77	1.76	1.07
Cu	1.19	3.13	1.21	3.26	1.04	1.83	0.94
Zn	20.55	5.91	15.31	15.62	19.61	17.00	17.58
Zn	21.93	7.52	16.21	15.48	17.02	18.68	16.02
As	0.50	0.23	0.26	0.22	0.14	BDL	0.17
Se	BDL	0.25	0.94	0.67	0.17	2.11	0.22
Se	BDL	BDL	BDL	BDL	0.33	BDL	BDL
Rb	1.20	0.73	0.40	5.07	0.57	1.55	1.08
Sr	0.28	0.13	0.17	0.28	0.18	0.52	0.26
Mo	0.11	0.12	0.11	BDL	0.10	BDL	BDL
Sn	0.03	0.05	BDL	0.03	BDL	BDL	0.07
Te	0.20	0.18	0.17	BDL	BDL	BDL	BDL
Cs	0.07	0.15	0.10	2.27	0.13	0.12	0.15
Ba	2.48	10.44	0.80	2.15	0.57	2.36	2.33
Ba	1.94	6.80	0.86	1.49	0.83	0.68	1.66
W	BDL	0.10	0.04	0.01	0.05	0.05	0.03
Pb	0.06	0.06	0.02	0.10	0.04	0.11	0.07
Bi	0.02	0.01	0.01	0.01	0.02	0.02	0.01
Th	0.05	0.11	BDL	0.05	0.01	0.04	0.01
U	0.07	0.06	0.01	0.04	0.01	0.03	0.01
Tl	0.07	0.05	0.03	0.21	0.04	0.06	0.11

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	99017-10	99017-4	99017-5	99017-6	99017-7	99017-8	99017-9
Data Quality (1-3)	3	2	3	3	3	3	3
1 standard error (ppm)**							
Li	17.38	7.78	11.74	17.00	14.73	16.15	13.73
B	3.23	2.72	1.05	5.49	1.43	1.75	2.11
Si	4342.53	4342.53	4342.53	4342.53	4342.53	4342.53	4342.53
P	78.61	95.19	61.91	86.05	24.99	40.52	31.06
Sc	0.22	0.13	0.32	0.13	0.28	0.15	0.16
Ti	16.78	10.40	18.44	15.22	22.04	20.39	24.90
V	3.18	2.61	3.56	2.76	4.48	4.15	3.58
Cr	1.34	1.18	1.07	1.25	1.53	1.88	1.28
Mn	82.47	35.47	149.79	188.82	173.29	210.31	133.20
Co	12.51	6.50	10.23	9.09	11.97	12.56	11.86
Cu	4.13	7.76	1.41	9.49	2.25	4.52	2.43
Cu	4.06	7.91	1.79	9.28	2.43	4.52	2.36
Zn	24.73	8.17	22.01	18.81	26.93	24.19	24.44
Zn	25.68	9.37	22.44	18.50	24.62	24.96	22.92
As	0.62	2.07	0.29	1.61	0.14	BDL	0.23
Se	BDL	1.31	1.99	4.40	2.71	5.00	1.55
Se	BDL	BDL	BDL	BDL	1.25	BDL	BDL
Rb	1.28	0.85	0.44	5.14	0.62	1.60	1.13
Sr	0.29	0.15	0.17	0.30	0.19	0.52	0.27
Mo	0.11	0.13	0.11	BDL	0.10	BDL	BDL
Sn	0.03	0.05	BDL	0.03	BDL	BDL	0.07
Te	0.20	0.18	0.17	BDL	BDL	BDL	BDL
Cs	0.15	0.28	0.13	2.30	0.18	0.25	0.18
Ba	2.50	10.59	0.81	2.23	0.61	2.37	2.38
Ba	1.96	7.03	0.87	1.61	0.86	0.75	1.73
W	BDL	0.11	0.04	0.04	0.05	0.06	0.03
Pb	0.06	0.06	0.02	0.11	0.04	0.12	0.07
Bi	0.02	0.01	0.01	0.01	0.02	0.02	0.01
Th	0.05	0.13	BDL	0.05	0.01	0.04	0.01
U	0.07	0.08	0.01	0.04	0.01	0.03	0.01
Tl	0.09	0.06	0.03	0.24	0.05	0.07	0.11

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN007006.017-1	ANN007006.017-11	ANN007006.017-12	ANN007006.017-13	ANN007006.017-2	ANN007006.017-3	G909165_40-1
Data Quality (1-3)	1	2.5	2	1.5	2.5	2.5	2
1 standard error (ppm) *							
Li	1.58	4.28	1.43	3.20	2.80	2.53	1.89
B	0.53	0.44	0.61	0.75	0.40	0.85	1.07
Si	2620.61	2620.61	2620.61	2620.61	2620.61	2620.61	2546.75
P	6.99	1.77	3.63	2.86	59.35	10.18	8.26
Sc	4.59	0.38	0.14	0.71	0.67	0.65	0.42
Ti	4382.99	221.51	2.28	1030.15	262.97	1169.59	23.37
V	16.55	6.64	3.75	12.42	11.70	16.97	4.98
Cr	4.63	4.19	2.58	2.29	2.50	3.48	0.30
Mn	12.26	21.03	11.87	17.96	12.90	19.97	56.06
Co	0.27	0.12	0.23	0.24	0.27	0.28	0.79
Cu	0.27	0.16	0.27	0.32	0.38	1.26	28.30
Cu	1.07	0.29	0.16	0.42	1.03	1.10	24.09
Zn	6.00	7.33	4.25	6.76	5.93	7.77	7.83
Zn	6.71	9.57	5.75	6.26	5.50	6.41	7.74
As	0.56	0.40	0.07	0.36	0.65	0.41	0.11
Se	0.11	0.38	0.43	0.96	0.56	BDL	0.11
Se	1.40	BDL	BDL	BDL	BDL	1.10	0.45
Rb	0.30	0.25	0.19	0.30	0.10	0.41	3.10
Sr	5.92	0.12	0.05	3.96	3.50	2.81	0.53
Mo	0.07	232.43	0.04	0.07	0.22	0.18	BDL
Sn	1.06	0.12	0.04	0.69	0.52	0.94	0.05
Te	BDL	0.14	BDL	BDL	BDL	BDL	0.03
Cs	0.13	0.21	0.08	0.14	0.16	0.28	0.07
Ba	0.97	0.56	0.32	3.51	1.79	2.84	36.80
Ba	0.92	0.52	0.20	2.65	2.33	3.88	31.43
W	12.89	1.93	0.04	1.16	1.83	3.79	0.02
Pb	1.86	0.45	0.13	0.70	1.14	2.20	0.05
Bi	0.04	0.05	BDL	0.05	0.01	0.00	BDL
Th	1.84	0.18	0.01	0.28	0.25	3.80	BDL
U	5.27	0.36	0.02	0.43	0.74	4.48	BDL
Tl	0.04	0.02	BDL	0.01	0.03	0.01	0.03

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	ANN007006.017-1	ANN007006.017-11	ANN007006.017-12	ANN007006.017-13	ANN007006.017-2	ANN007006.017-3	G909165_40-1
Data Quality (1-3)	1	2.5	2	1.5	2.5	2.5	2
1 standard error (ppm)**							
Li	8.25	8.94	5.72	9.28	8.45	8.23	7.25
B	1.60	0.99	0.71	1.02	0.89	1.21	3.35
Si	4501.52	4501.52	4501.52	4501.52	4501.52	4501.52	4374.64
P	16.18	12.18	9.68	13.81	62.48	19.82	13.59
Sc	4.79	0.44	0.18	0.82	0.77	0.78	0.61
Ti	9067.61	466.38	8.81	1592.26	958.40	1362.19	72.26
V	29.90	13.33	7.66	17.06	17.50	20.33	9.91
Cr	28.35	22.17	13.86	15.48	13.48	13.73	0.98
Mn	22.85	31.47	20.97	27.80	22.91	27.77	97.08
Co	0.40	0.26	0.27	0.36	0.41	0.46	1.51
Cu	0.39	0.19	0.27	0.35	0.56	1.34	82.06
Cu	1.13	0.33	0.17	0.49	1.12	1.20	79.90
Zn	7.27	9.09	5.87	8.14	7.34	9.00	11.21
Zn	7.74	10.87	7.00	7.69	6.95	7.77	11.00
As	1.65	0.52	0.22	0.65	0.74	0.55	0.22
Se	1.69	2.02	4.33	1.42	1.48	BDL	1.65
Se	2.07	BDL	BDL	BDL	BDL	2.03	1.03
Rb	0.34	0.25	0.19	0.30	0.11	0.42	3.59
Sr	6.01	0.13	0.05	3.98	3.55	2.89	0.59
Mo	0.07	237.25	0.06	0.07	0.22	0.18	BDL
Sn	5.83	0.60	0.11	1.26	1.26	1.25	0.12
Te	BDL	0.17	BDL	BDL	BDL	BDL	0.03
Cs	0.22	0.24	0.13	0.18	0.24	0.33	0.12
Ba	1.07	0.57	0.32	3.54	1.83	2.86	44.17
Ba	1.02	0.53	0.21	2.69	2.36	3.89	38.69
W	17.94	2.91	0.07	2.71	3.18	4.14	0.02
Pb	2.71	0.48	0.13	0.85	1.26	2.25	0.05
Bi	0.04	0.05	BDL	0.05	0.01	0.00	BDL
Th	1.94	0.19	0.01	0.29	0.26	3.89	BDL
U	5.62	0.44	0.02	0.50	0.81	4.91	BDL
Tl	0.04	0.02	BDL	0.01	0.03	0.01	0.05

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909165_40-3	G909165_41-1	G909165_41-2	G909165_46-1	G909165_46-2	G909165_46-3	G909165_46-4
Data Quality (1-3)	3	2	3	1.5	1.5	1.5	1.5
1 standard error (ppm) *							
Li	2.43	2.26	1.57	2.54	2.24	2.09	2.86
B	0.18	0.25	0.50	0.26	0.35	0.17	0.66
Si	2546.75	2546.75	2546.75	2546.75	2546.75	2546.75	2546.75
P	1.53	21.62	12.05	7.34	BDL	41.88	378.87
Sc	0.24	0.29	0.28	0.36	0.41	0.29	0.38
Ti	11.85	361.62	24.06	628.02	702.64	500.95	558.64
V	4.53	9.78	4.09	14.10	10.81	6.63	9.46
Cr	0.16	9.10	0.29	3.67	5.03	3.76	4.49
Mn	49.97	118.30	44.70	81.34	82.33	66.66	83.54
Co	0.70	1.03	0.62	1.02	0.92	0.84	0.98
Cu	39.97	10.65	19.81	9.85	19.07	4.12	13.32
Cu	44.58	10.46	21.69	10.17	17.69	3.73	10.35
Zn	7.81	12.15	6.12	11.94	10.63	7.12	10.86
Zn	7.28	14.09	7.04	10.46	9.66	7.00	10.83
As	0.06	1.22	1.34	0.22	0.39	0.33	1.00
Se	0.30	0.28	0.13	0.27	0.28	0.12	0.25
Se	BDL	0.21	BDL	BDL	BDL	BDL	2.08
Rb	1.23	0.06	2.26	0.16	0.16	1.06	0.29
Sr	0.12	0.60	0.32	0.10	1.64	0.13	1.60
Mo	BDL	0.06	0.04	0.18	0.06	0.08	0.13
Sn	0.04	0.12	0.07	0.11	0.08	0.14	0.08
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.06	BDL	0.06	0.03	0.02	0.01	0.03
Ba	18.61	4.67	39.27	1.05	0.55	12.56	4.34
Ba	17.76	3.74	38.88	1.39	0.52	11.37	3.24
W	BDL	0.31	0.20	0.21	0.08	0.10	0.16
Pb	0.00	0.13	0.06	0.10	0.04	0.08	0.24
Bi	BDL	BDL	BDL	BDL	0.01	0.01	0.01
Th	0.15	0.40	0.25	0.18	0.46	0.12	5.10
U	0.06	0.15	0.06	0.10	0.19	0.10	0.66
Tl	0.02	BDL	0.02	BDL	BDL	0.01	0.01

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909165_40-3	G909165_41-1	G909165_41-2	G909165_46-1	G909165_46-2	G909165_46-3	G909165_46-4
Data Quality (1-3)	3	2	3	1.5	1.5	1.5	1.5
1 standard error (ppm)**							
Li	7.59	7.68	5.93	9.24	9.86	6.60	9.94
B	0.76	0.51	2.36	0.73	0.61	0.81	0.86
Si	4374.64	4374.64	4374.64	4374.64	4374.64	4374.64	4374.64
P	5.37	48.88	70.54	13.58	BDL	50.55	2449.48
Sc	0.36	0.41	0.43	0.52	0.54	0.38	0.57
Ti	23.74	989.85	55.16	1671.56	2054.07	1536.98	1695.52
V	8.35	15.81	8.12	22.04	20.97	13.27	17.99
Cr	0.70	50.10	1.28	24.98	31.32	24.14	32.84
Mn	87.97	152.36	78.80	140.75	140.81	101.53	141.11
Co	1.48	1.84	1.19	2.01	2.03	1.52	2.04
Cu	163.55	26.17	46.40	31.65	41.74	16.39	28.54
Cu	169.10	25.63	47.45	31.34	40.66	16.30	25.08
Zn	10.89	15.21	8.74	16.17	14.95	10.22	15.03
Zn	10.25	16.28	9.42	14.37	13.43	9.70	14.58
As	0.13	5.62	5.91	1.59	2.36	1.41	5.09
Se	1.43	1.59	1.65	2.43	2.39	1.67	2.91
Se	BDL	0.94	BDL	BDL	BDL	BDL	6.27
Rb	1.31	0.06	2.60	0.16	0.17	1.08	0.29
Sr	0.15	0.60	0.37	0.11	1.64	0.16	2.04
Mo	BDL	0.07	0.05	0.18	0.07	0.08	0.13
Sn	0.05	0.31	0.09	0.23	0.34	0.27	0.30
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.06	BDL	0.10	0.03	0.02	0.02	0.03
Ba	20.09	4.68	43.70	1.11	0.63	13.17	4.46
Ba	19.05	3.74	43.01	1.44	0.58	11.95	3.47
W	BDL	0.56	0.38	0.32	0.22	0.24	0.28
Pb	0.01	0.13	0.06	0.11	0.05	0.08	0.25
Bi	BDL	BDL	BDL	BDL	0.01	0.01	0.01
Th	0.16	0.44	0.31	0.22	0.49	0.19	7.83
U	0.06	0.21	0.07	0.24	0.28	0.21	0.89
Tl	0.02	BDL	0.04	BDL	BDL	0.01	0.01

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909165_46-5	G909165_47-2	G909165_47-3	G909165_47-4	G909165_47-5	YD01-13A-1	YD01-13A-10
Data Quality (1-3)	1.5	1	0	0	2	3	2
Li (ppm)	70.60	39.38	8.17	8.72	52.97	47.87	33.69
B (ppm)	1.45	8.46	12.60	11.77	1.34	1.19	4.08
Si (ppm)	127337.32	127337.32	127337.32	127337.32	127337.32	113266.64	113266.64
P (ppm)	3683.15	546.84	820368.05	1564945.94	190.84	30.64	31.17
Sc (ppm)	6.25	12.77	9.49	11.17	3.50	7.26	8.07
Ti (ppm)	20462.10	437078.59	477.46	867.66	5881.31	143.86	103.11
V (ppm)	326.72	712.51	84.07	148.93	103.40	153.99	107.38
Cr (ppm)	135.81	27.04	10.79	26.43	15.34	151.18	87.78
Mn (ppm)	2949.71	1428.12	3093.10	3912.02	1745.59	1933.64	1145.18
Co (ppm)	32.78	21.61	5.72	5.47	24.71	39.83	17.65
Cu(63) (ppm)	185.20	299.86	568.27	257.15	4886.77	2.44	9.16
Cu(65)* (ppm)	191.09	318.23	571.18	256.95	4140.04	2.67	10.46
Zn(66)* (ppm)	317.97	267.45	45.70	41.63	245.37	278.88	182.71
Zn(68) (ppm)	300.16	261.12	71.33	67.58	242.40	285.36	179.44
As (ppm)	6.66	43.36	57.37	81.37	1.60	0.53	BDL
Se(76) (ppm)	2.82	6.55	6.43	7.33	0.91	BDL	BDL
Se(77)* (ppm)	0.62	BDL	20.97	42.04	BDL	BDL	0.56
Rb (ppm)	2.03	50.70	2.70	2.19	17.63	BDL	23.88
Sr (ppm)	12.41	24.71	2292.81	4401.60	7.33	11.83	5.03
Mo (ppm)	0.71	3.06	5.44	4.89	1.73	0.24	BDL
Sn (ppm)	2.53	44.77	0.45	0.60	0.38	0.17	0.18
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs (ppm)	0.11	1.09	0.26	0.28	0.57	BDL	0.25
Ba(137) (ppm)	17.47	545.50	642.21	461.17	15.83	413.45	249.24
Ba(138)* (ppm)	19.40	541.51	627.28	513.43	16.26	422.85	250.22
W (ppm)	1.92	148.02	0.85	1.36	0.78	BDL	BDL
Pb (ppm)	1.16	14.09	16.67	16.36	0.45	0.06	0.36
Bi (ppm)	0.01	0.26	0.28	0.29	0.01	BDL	BDL
Th (ppm)	3.83	29.64	140.56	279.03	4.86	BDL	0.12
U (ppm)	4.93	59.14	86.38	104.64	1.65	BDL	0.10
Tl (ppm)	0.01	0.38	0.03	BDL	0.12	BDL	0.99
SiO2 wt. %	27.24	27.24	27.24	27.24	27.24	24.23	24.23

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909165_46-5	G909165_47-2	G909165_47-3	G909165_47-4	G909165_47-5	YD01-13A-1	YD01-13A-10
Data Quality (1-3)	1.5	1	0	0	2	3	2
1 standard error (ppm) *							
Li	2.63	1.56	0.65	0.61	2.22	2.06	1.36
B	0.54	0.70	0.74	2.02	0.17	0.22	0.49
Si	2546.75	2546.75	2546.75	2546.75	2546.75	2265.33	2265.33
P	1794.29	34.41	35612.79	97833.97	8.79	2.86	3.55
Sc	0.41	0.68	0.83	1.39	0.19	0.73	0.38
Ti	775.84	20915.08	26.55	40.04	219.49	4.87	8.24
V	9.35	32.21	2.97	5.37	2.98	4.34	3.53
Cr	4.14	0.97	0.56	1.13	0.65	4.36	2.43
Mn	76.07	42.62	101.38	130.91	45.12	61.30	34.09
Co	1.00	0.64	0.22	1.50	0.76	0.86	0.77
Cu	4.90	8.42	21.25	12.43	201.25	0.17	0.41
Cu	7.32	9.03	18.00	13.90	111.50	0.63	0.66
Zn	11.02	9.38	2.12	1.65	8.34	8.10	5.09
Zn	9.34	9.28	3.37	3.53	8.13	8.26	4.81
As	0.34	2.27	3.04	9.12	0.19	0.29	BDL
Se	0.32	0.40	0.35	0.89	0.19	BDL	BDL
Se	0.49	BDL	2.00	10.86	BDL	BDL	0.52
Rb	0.15	1.46	0.12	0.86	0.53	BDL	1.05
Sr	6.29	1.03	97.85	367.81	0.33	0.44	0.99
Mo	0.05	0.30	0.30	0.78	0.57	0.07	BDL
Sn	0.29	1.68	0.06	0.09	0.04	0.02	0.02
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.03	0.04	0.04	0.12	0.06	BDL	0.14
Ba	2.88	18.92	40.77	30.71	0.57	10.81	12.65
Ba	1.87	18.83	43.32	45.88	0.53	10.56	13.27
W	0.18	5.77	0.12	0.06	0.07	BDL	BDL
Pb	0.12	0.75	0.88	1.83	0.06	0.03	0.04
Bi	0.00	0.02	0.03	0.07	0.01	BDL	BDL
Th	0.78	1.76	8.00	36.69	0.53	BDL	0.06
U	0.40	3.19	2.79	8.27	0.14	BDL	0.06
Tl	0.01	0.04	0.01	BDL	0.02	BDL	0.13

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	G909165_46-5	G909165_47-2	G909165_47-3	G909165_47-4	G909165_47-5	YD01-13A-1	YD01-13A-10
Data Quality (1-3)	1.5	1	0	0	2	3	2
1 standard error (ppm)**							
Li	10.36	5.80	1.33	1.38	7.84	7.09	4.96
B	0.76	3.16	4.65	4.74	0.52	0.49	1.57
Si	4374.64	4374.64	4374.64	4374.64	4374.64	3891.25	3891.25
P	2084.34	161.19	238917.12	461167.02	55.66	9.37	9.75
Sc	0.55	1.01	1.00	1.54	0.28	0.78	0.49
Ti	2115.30	46950.63	53.04	92.56	606.71	14.39	12.73
V	18.70	47.81	5.12	9.13	5.93	8.52	6.21
Cr	27.58	5.51	2.24	5.42	3.15	30.64	17.78
Mn	134.19	68.42	153.99	196.55	79.47	95.82	55.36
Co	2.09	1.37	0.39	1.54	1.58	2.26	1.21
Cu	20.34	33.05	64.20	30.10	558.45	0.31	1.05
Cu	21.59	35.01	63.32	30.65	453.96	0.69	1.29
Zn	15.44	13.07	2.63	2.17	11.80	10.26	6.55
Zn	13.41	12.50	4.07	4.14	11.25	10.62	6.39
As	2.35	15.29	20.23	29.80	0.59	0.35	BDL
Se	2.28	5.26	5.16	5.93	0.75	BDL	BDL
Se	0.70	BDL	16.98	35.50	BDL	BDL	0.69
Rb	0.15	1.84	0.13	0.86	0.66	BDL	1.13
Sr	6.30	1.33	124.78	396.71	0.41	0.47	0.99
Mo	0.07	0.38	0.52	0.87	0.59	0.07	BDL
Sn	0.54	8.22	0.10	0.14	0.08	0.03	0.04
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.03	0.09	0.04	0.12	0.07	BDL	0.14
Ba	2.93	24.95	45.04	33.65	0.74	13.50	13.56
Ba	1.95	23.98	46.61	47.99	0.69	12.98	14.01
W	0.29	18.36	0.16	0.17	0.12	BDL	BDL
Pb	0.13	0.93	1.09	1.93	0.06	0.03	0.04
Bi	0.00	0.03	0.04	0.08	0.01	BDL	BDL
Th	0.83	2.79	13.03	41.99	0.64	BDL	0.06
U	0.54	5.46	7.05	11.39	0.18	BDL	0.06
Tl	0.01	0.06	0.01	BDL	0.02	BDL	0.18

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-13A-14	YD01-13A-15	YD01-13A-2	YD01-13A-3	YD01-13A-4	YD01-13A-5	YD01-13A-9
Data Quality (1-3)	1	1.5	2.5	2.5	3	3	2
1 standard error (ppm) *							
Li	0.68	1.15	2.63	1.72	1.56	2.20	2.40
B	1.40	1.13	0.94	1.43	0.75	0.36	0.42
Si	2265.33	2265.33	2265.33	2265.33	2265.33	2265.33	2265.33
P	17.53	4.52	13.58	9.02	6.60	5.81	BDL
Sc	0.87	1.73	0.46	0.69	0.18	0.33	0.51
Ti	379.65	12.20	5.54	6.81	1.92	8.91	239.62
V	3.67	4.65	4.11	3.59	3.00	3.63	4.83
Cr	0.77	1.82	3.68	3.36	1.49	4.17	4.84
Mn	19.20	32.68	78.61	133.73	36.00	176.82	60.54
Co	0.18	0.39	1.40	0.82	0.77	1.26	1.21
Cu	0.19	0.39	0.45	0.64	0.44	0.79	0.77
Cu	0.34	0.52	0.27	0.63	0.24	0.62	1.76
Zn	2.42	4.30	9.54	6.28	5.54	7.44	10.95
Zn	2.59	8.74	6.89	10.69	3.63	7.30	12.73
As	0.27	0.14	BDL	0.45	0.05	0.26	0.31
Se	BDL	0.14	BDL	0.39	BDL	0.96	1.40
Se	BDL	BDL	BDL	1.09	0.29	0.68	0.45
Rb	3.48	1.78	BDL	0.19	0.07	0.12	0.23
Sr	0.73	0.32	0.08	0.10	0.15	1.44	BDL
Mo	0.04	BDL	BDL	0.14	0.12	0.07	BDL
Sn	0.14	0.12	0.13	0.06	0.01	0.06	0.05
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.08	0.10	BDL	0.05	0.03	0.05	0.09
Ba	35.58	18.97	0.94	9.87	2.57	65.46	2.78
Ba	32.99	17.74	0.81	7.40	3.12	54.51	2.49
W	0.22	0.04	0.05	0.13	0.01	0.29	0.12
Pb	0.48	0.07	0.08	0.27	0.03	0.05	0.11
Bi	0.01	BDL	BDL	0.02	BDL	BDL	BDL
Th	0.08	2.67	BDL	0.06	0.02	0.01	BDL
U	0.05	1.53	BDL	0.01	0.01	0.01	0.05
Tl	0.39	0.23	BDL	0.04	BDL	0.02	0.02

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD01-13A-14	YD01-13A-15	YD01-13A-2	YD01-13A-3	YD01-13A-4	YD01-13A-5	YD01-13A-9
Data Quality (1-3)	1	1.5	2.5	2.5	3	3	2
1 standard error (ppm)**							
Li	2.14	3.89	7.37	7.54	4.87	8.17	8.12
B	6.13	4.36	0.94	1.50	0.91	1.09	1.09
Si	3891.25	3891.25	3891.25	3891.25	3891.25	3891.25	3891.25
P	36.77	21.03	15.92	21.07	14.92	22.77	BDL
Sc	1.05	1.90	0.51	0.74	0.24	0.43	0.58
Ti	507.62	29.81	12.38	13.61	7.26	14.40	249.64
V	7.46	8.35	7.85	7.78	4.85	7.63	8.30
Cr	5.44	9.83	27.64	23.11	10.00	25.38	28.18
Mn	27.18	46.25	106.47	159.00	53.57	191.90	89.69
Co	0.43	0.78	2.78	1.91	1.32	2.29	1.88
Cu	0.45	1.49	0.48	1.08	0.63	1.47	2.69
Cu	0.51	1.61	0.31	1.01	0.50	1.49	3.03
Zn	2.94	5.38	11.24	8.87	6.74	10.00	12.92
Zn	3.51	9.48	9.24	12.59	5.20	10.08	14.59
As	0.34	0.35	BDL	0.59	0.08	0.35	0.31
Se	BDL	1.90	BDL	2.97	BDL	2.57	3.80
Se	BDL	BDL	BDL	1.23	0.30	1.48	0.90
Rb	3.93	2.17	BDL	0.19	0.07	0.12	0.23
Sr	0.77	0.35	0.08	0.10	0.15	1.45	BDL
Mo	0.04	BDL	BDL	0.14	0.12	0.09	BDL
Sn	0.21	0.15	0.13	0.07	0.03	0.07	0.07
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.15	0.13	BDL	0.05	0.03	0.05	0.09
Ba	39.66	23.53	0.97	10.01	2.58	66.08	2.80
Ba	36.81	22.01	0.84	7.54	3.12	55.15	2.51
W	0.25	0.04	0.05	0.22	0.01	0.30	0.13
Pb	0.48	0.07	0.08	0.27	0.03	0.05	0.11
Bi	0.01	BDL	BDL	0.03	BDL	BDL	BDL
Th	0.09	2.68	BDL	0.06	0.02	0.01	BDL
U	0.06	1.54	BDL	0.01	0.01	0.01	0.05
Tl	0.67	0.41	BDL	0.04	BDL	0.02	0.02

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD08-22area1-1	YD08-22area2-1	YD08-22area2-2	YD08-22area2-4	YTD-23-2008_area1_1	YTD-23-2008_area1_2	YTD-23-2008_area1_3
Data Quality (1-3)	3	2	3	3	3	3	3
Li (ppm)	34.53	104.02	37.65	30.93	176.44	164.44	169.94
B (ppm)	BDL	BDL	BDL	BDL	6.34	3.26	3.58
Si (ppm)	123878.09	123878.09	123878.09	123878.09	140239.34	140239.34	140239.34
P (ppm)	BDL	BDL	BDL	703.22	64.72	46.65	49.57
Sc (ppm)	BDL	BDL	BDL	6.48	4.15	4.25	3.63
Ti (ppm)	326.52	182.89	151.79	90.79	135.68	158.69	130.33
V (ppm)	81.32	87.13	75.24	76.40	101.03	117.19	104.80
Cr (ppm)	81.49	814.63	46.30	343.07	57.90	43.02	46.95
Mn (ppm)	2017.95	1640.78	1561.38	1883.91	1161.66	1309.30	1263.41
Co (ppm)	27.49	23.78	11.04	BDL	80.35	77.92	80.07
Cu(63) (ppm)	46.51	211.70	105.27	149.69	3.53	3.47	2.50
Cu(65)* (ppm)	34.81	347.57	BDL	87.44	2.68	1.74	2.14
Zn(66)* (ppm)	376.07	366.24	271.96	300.41	805.80	817.58	819.10
Zn(68) (ppm)	264.73	678.21	301.12	272.59	726.19	711.58	685.78
As (ppm)	13.56	BDL	BDL	BDL	BDL	0.84	BDL
Se(76) (ppm)	68.32	BDL	197.45	BDL	BDL	BDL	BDL
Se(77)* (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb (ppm)	null	null	null	null	8.12	2.40	1.71
Sr (ppm)	null	null	null	null	4.82	3.71	3.20
Mo (ppm)	21.69	BDL	BDL	BDL	0.50	0.11	BDL
Sn (ppm)	5.85	BDL	BDL	BDL	BDL	BDL	0.61
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs (ppm)	BDL	BDL	BDL	2.01	0.43	0.12	0.16
Ba(137) (ppm)	8.57	BDL	BDL	BDL	57.35	13.11	10.73
Ba(138)* (ppm)	5.58	2.33	0.26	0.97	57.92	14.98	10.74
W (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (ppm)	3.11	BDL	BDL	BDL	0.76	0.38	0.50
Bi (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Th (ppm)	null	null	null	null	null	null	null
U (ppm)	null	null	null	null	null	null	null
Tl (ppm)	BDL	BDL	BDL	BDL	0.23	BDL	BDL
SiO2 wt. %	26.50	26.50	26.50	26.50	30.00	30.00	30.00

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD08-22area1-1	YD08-22area2-1	YD08-22area2-2	YD08-22area2-4	YTD-23-2008_area1_1	YTD-23-2008_area1_2	YTD-23-2008_area1_3
Data Quality (1-3)	3	2	3	3	3	3	3
1 standard error (ppm) *							
Li	1.38	98.18	3.61	3.13	6.63	5.59	5.40
B	BDL	BDL	BDL	BDL	0.53	0.75	0.48
Si	2477.56	2477.56	2477.56	2477.56	2804.79	2804.79	2804.79
P	BDL	BDL	BDL	623.53	6.37	4.50	4.21
Sc	BDL	BDL	BDL	10.38	0.52	0.27	0.47
Ti	61.17	178.28	33.07	205.80	29.61	18.88	9.83
V	5.37	33.06	6.51	28.81	3.47	4.40	4.04
Cr	12.54	689.03	21.85	103.35	1.97	1.31	1.40
Mn	55.65	751.08	66.39	510.04	32.82	39.64	34.10
Co	1.95	8.58	2.83	BDL	2.46	2.19	2.27
Cu	6.04	457.43	38.88	60.41	0.25	0.42	0.38
Cu	3.84	260.50	BDL	147.48	0.81	0.79	0.48
Zn	16.92	239.20	21.88	169.63	24.98	23.27	23.99
Zn	27.16	430.87	25.80	113.15	33.29	30.95	29.92
As	2.57	BDL	BDL	BDL	BDL	0.19	BDL
Se	61.90	BDL	135.18	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb					0.51	0.12	0.18
Sr					0.15	0.24	0.20
Mo	15.46	BDL	BDL	BDL	0.17	0.08	BDL
Sn	1.92	BDL	BDL	BDL	BDL	BDL	0.11
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	BDL	BDL	BDL	3.19	0.12	0.04	0.06
Ba	4.49	BDL	BDL	BDL	7.57	1.31	0.81
Ba	3.63	4.33	0.43	0.84	3.78	0.53	0.36
W	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb	1.43	BDL	BDL	BDL	0.12	0.10	0.08
Bi	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Th							
U							
Tl	BDL	BDL	BDL	BDL	0.11	BDL	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl	Chl	Chl	Chl
LA-ICP-MS Spot ID	YD08-22area1-1	YD08-22area2-1	YD08-22area2-2	YD08-22area2-4	YTD-23-2008_area1_1	YTD-23-2008_area1_2	YTD-23-2008_area1_3
Data Quality (1-3)	3	2	3	3	3	3	3
1 standard error (ppm)**							
Li	2.18	98.31	4.05	3.48	14.81	13.55	13.85
B	BDL	BDL	BDL	BDL	0.79	0.81	0.59
Si	2576.70	2576.70	2576.70	2576.70	3416.31	3416.31	3416.31
P	BDL	BDL	BDL	633.05	10.92	7.82	7.99
Sc	BDL	BDL	BDL	10.38	0.67	0.51	0.60
Ti	62.20	178.39	33.49	205.82	34.35	27.76	19.39
V	9.72	34.18	9.93	29.80	11.09	12.99	11.65
Cr	14.18	692.20	22.17	107.04	5.32	3.90	4.24
Mn	72.77	752.04	75.66	511.91	49.09	57.13	52.33
Co	2.54	8.69	2.91	BDL	5.41	5.16	5.31
Cu	6.66	457.61	39.41	61.09	0.39	0.51	0.44
Cu	4.45	261.48	BDL	147.59	0.84	0.80	0.52
Zn	24.76	239.84	25.49	170.24	89.55	90.30	90.65
Zn	29.49	431.87	28.92	113.76	87.64	85.26	82.20
As	2.64	BDL	BDL	BDL	BDL	0.25	BDL
Se	61.94	BDL	135.34	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb					0.55	0.14	0.18
Sr					0.16	0.24	0.20
Mo	15.54	BDL	BDL	BDL	0.18	0.08	BDL
Sn	1.94	BDL	BDL	BDL	BDL	BDL	0.12
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	BDL	BDL	BDL	3.21	0.12	0.04	0.06
Ba	4.52	BDL	BDL	BDL	7.71	1.35	0.86
Ba	3.64	4.33	0.43	0.84	3.89	0.58	0.40
W	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb	1.43	BDL	BDL	BDL	0.12	0.10	0.08
Bi	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Th							
U							
Tl	BDL	BDL	BDL	BDL	0.11	BDL	BDL

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl?	Chl?	Chl?	Chl?
LA-ICP-MS Spot ID	YTD-23-2008_area2_4	YTD-23-2008_area2_5	YTD-23-2008_area2_6	G909165_42-1	G909165_42-2	G909165_45-3	G909165_45-4
Data Quality (1-3)	1.5	2.5	2.5	1.5	1.5	1.5	1.5
Li (ppm)	93.40	102.26	122.84	11.35	11.03	14.12	6.13
B (ppm)	7.85	7.40	3.01	23.07	24.46	8.81	23.09
Si (ppm)	140239.34	140239.34	140239.34	127337.32	127337.32	127337.32	127337.32
P (ppm)	9165.48	65.53	36.71	397.47	171.72	1000.97	10.17
Sc (ppm)	14.33	13.07	10.95	8.73	10.69	5.58	17.08
Ti (ppm)	1299.70	377.40	6819.33	1411.54	1495.67	1790.17	1201.95
V (ppm)	152.30	149.95	127.76	198.76	207.55	144.78	279.38
Cr (ppm)	78.19	82.69	74.41	3.07	3.55	42.23	4.11
Mn (ppm)	1178.07	1285.48	1687.79	470.94	414.68	551.28	232.01
Co (ppm)	63.27	72.24	89.56	6.48	5.55	7.13	3.24
Cu(63) (ppm)	1.00	1.27	1.80	43.40	24.66	44.86	96.30
Cu(65)* (ppm)	1.51	1.79	BDL	43.38	23.88	45.07	94.04
Zn(66)* (ppm)	549.36	593.73	612.22	72.58	59.81	80.24	41.52
Zn(68) (ppm)	498.32	517.81	559.16	130.24	121.37	109.57	115.10
As (ppm)	5.74	1.40	BDL	0.12	0.61	1.89	0.36
Se(76) (ppm)	BDL	BDL	BDL	2.14	2.65	2.11	2.26
Se(77)* (ppm)	BDL	BDL	BDL	1.22	0.60	2.14	BDL
Rb (ppm)	67.74	51.78	10.00	193.07	202.00	96.28	227.49
Sr (ppm)	62.40	5.88	3.02	17.32	17.79	16.38	14.18
Mo (ppm)	BDL	0.20	0.30	0.19	BDL	0.07	BDL
Sn (ppm)	1.58	0.38	0.98	1.20	1.21	0.70	0.67
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs (ppm)	2.75	2.72	0.49	3.19	3.24	1.59	3.39
Ba(137) (ppm)	272.72	163.49	66.04	1965.14	2199.17	1034.62	2534.08
Ba(138)* (ppm)	284.19	152.92	71.58	1973.27	2211.01	1017.11	3214.81
W (ppm)	BDL	BDL	2.33	0.35	0.33	0.19	0.13
Pb (ppm)	0.32	0.14	0.72	1.55	1.62	1.17	1.10
Bi (ppm)	BDL	BDL	BDL	0.01	BDL	BDL	BDL
Th (ppm)	null	null	null	3.02	0.13	36.97	1.75
U (ppm)	null	null	null	0.18	0.06	0.58	2.10
Tl (ppm)	0.26	0.27	0.07	1.26	1.21	0.58	1.42
SiO2 wt. %	30.00	30.00	30.00	27.24	27.24	27.24	27.24

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl?	Chl?	Chl?	Chl?
LA-ICP-MS Spot ID	YTD-23-2008_area2_4	YTD-23-2008_area2_5	YTD-23-2008_area2_6	G909165_42-1	G909165_42-2	G909165_45-3	G909165_45-4
Data Quality (1-3)	1.5	2.5	2.5	1.5	1.5	1.5	1.5
1 standard error (ppm) *							
Li	3.19	3.37	4.51	0.48	0.48	0.81	0.26
B	0.50	0.52	0.41	0.99	0.86	0.40	0.86
Si	2804.79	2804.79	2804.79	2546.75	2546.75	2546.75	2546.75
P	801.01	8.91	4.42	182.89	9.63	44.57	13.72
Sc	0.84	0.49	0.47	0.43	0.79	0.28	0.96
Ti	248.74	36.03	1538.48	44.02	52.84	86.74	50.35
V	5.21	4.14	4.34	5.68	6.15	5.29	8.60
Cr	2.25	2.46	2.34	0.12	0.15	2.07	0.17
Mn	37.28	39.98	56.71	14.62	11.73	24.78	6.11
Co	1.97	1.98	2.67	0.25	0.21	0.55	0.13
Cu	0.78	0.23	0.56	3.63	0.88	3.95	4.19
Cu	0.54	0.81	BDL	3.66	1.01	3.71	3.36
Zn	24.49	16.81	19.25	2.85	2.41	4.22	1.46
Zn	23.76	22.70	28.82	4.71	4.01	4.92	4.56
As	0.75	0.45	BDL	0.14	0.11	0.33	0.12
Se	BDL	BDL	BDL	0.10	0.15	0.13	0.18
Se	BDL	BDL	BDL	0.34	0.29	0.42	BDL
Rb	2.19	1.66	0.47	5.55	6.01	3.31	7.75
Sr	1.75	0.44	0.09	0.71	0.78	0.71	0.63
Mo	BDL	0.11	0.11	0.05	BDL	0.03	BDL
Sn	0.18	0.08	0.38	0.07	0.09	0.06	0.05
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.14	0.09	0.04	0.10	0.11	0.06	0.11
Ba	10.05	9.76	5.32	78.35	79.15	38.52	111.45
Ba	8.97	5.65	6.17	75.65	84.10	37.10	149.33
W	BDL	BDL	1.44	0.03	0.05	0.06	0.02
Pb	0.05	0.04	0.08	0.08	0.06	0.06	0.05
Bi	BDL	BDL	BDL	0.00	BDL	BDL	BDL
Th				0.42	0.02	3.06	0.55
U				0.06	0.01	0.04	0.71
Tl	0.05	0.04	0.03	0.07	0.07	0.03	0.08

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl	Chl	Chl	Chl?	Chl?	Chl?	Chl?
LA-ICP-MS Spot ID	YTD-23-2008_area2_4	YTD-23-2008_area2_5	YTD-23-2008_area2_6	G909165_42-1	G909165_42-2	G909165_45-3	G909165_45-4
Data Quality (1-3)	1.5	2.5	2.5	1.5	1.5	1.5	1.5
1 standard error (ppm)**							
Li	7.70	8.38	10.26	1.68	1.64	2.16	0.91
B	0.89	0.87	0.50	8.46	8.96	3.24	8.46
Si	3416.31	3416.31	3416.31	4374.64	4374.64	4374.64	4374.64
P	1490.06	12.65	6.70	215.76	50.38	291.68	14.03
Sc	1.68	1.42	1.21	0.67	1.00	0.43	1.38
Ti	299.44	60.35	1769.76	142.71	153.24	192.78	126.08
V	16.71	16.17	14.01	11.38	11.99	8.92	16.30
Cr	7.04	7.47	6.76	0.63	0.73	8.73	0.84
Mn	52.54	56.83	77.65	22.92	19.47	32.27	10.63
Co	4.28	4.76	6.00	0.44	0.38	0.68	0.22
Cu	0.79	0.26	0.58	5.88	2.77	6.20	11.09
Cu	0.55	0.83	BDL	5.89	2.73	6.06	10.55
Zn	63.54	65.56	68.12	3.77	3.16	5.02	2.03
Zn	60.49	62.11	68.76	6.29	5.59	6.05	5.86
As	1.35	0.53	BDL	0.15	0.24	0.74	0.17
Se	BDL	BDL	BDL	1.71	2.12	1.69	1.82
Se	BDL	BDL	BDL	1.04	0.56	1.77	BDL
Rb	2.81	2.14	0.54	7.03	7.52	3.95	9.26
Sr	1.90	0.45	0.10	0.92	0.98	0.90	0.79
Mo	BDL	0.11	0.11	0.06	BDL	0.03	BDL
Sn	0.20	0.09	0.38	0.23	0.24	0.14	0.13
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.25	0.22	0.06	0.24	0.25	0.12	0.25
Ba	12.29	10.64	5.59	97.83	102.77	49.35	134.63
Ba	9.99	6.13	6.26	93.03	103.70	46.43	173.44
W	BDL	BDL	1.44	0.05	0.07	0.06	0.02
Pb	0.05	0.04	0.08	0.10	0.09	0.08	0.07
Bi	BDL	BDL	BDL	0.00	BDL	BDL	BDL
Th				0.48	0.02	4.09	0.57
U				0.06	0.01	0.06	0.73
Tl	0.06	0.04	0.03	0.15	0.14	0.07	0.17

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl?	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD08-22area2-3	G909153_13-2	G909153_13-3	G909153_14-1	G909153_14-2	G909153_14-3	G909153_15-1
Data Quality (1-3)	1	2.5	3	3	1.5	3	3
1 standard error (ppm) *							
Li	BDL	0.36	0.18	0.30	0.69	0.35	0.35
B	29.48	4.62	3.16	2.57	2.90	3.29	2.44
Si	2477.56	4688.67	4688.67	4688.67	4688.67	4688.67	4688.67
P	BDL	15.24	5.00	14.23	120.66	7.18	11.90
Sc	BDL	0.65	0.53	0.90	1.02	0.77	1.19
Ti	78.98	89.82	62.90	41.61	34.24	35.07	37.62
V	12.98	9.26	11.75	10.12	14.01	12.49	16.72
Cr	27.90	2.58	3.48	2.92	3.04	2.90	2.41
Mn	BDL	1.81	1.46	1.41	2.18	2.96	1.52
Co	BDL	0.16	BDL	0.07	0.12	0.14	0.09
Cu	BDL	0.43	0.60	0.47	0.77	0.38	0.31
Cu	BDL	0.43	0.28	0.26	0.78	0.36	0.27
Zn	5.31	0.69	0.54	0.51	0.27	0.46	0.55
Zn	30.09	2.86	2.56	2.94	2.20	2.32	2.03
As	10.82	0.26	0.10	0.11	0.25	0.10	0.12
Se	BDL	0.82	0.24	0.30	0.15	0.76	2.03
Se	BDL	0.64	0.70	0.39	BDL	BDL	BDL
Rb		9.56	8.83	8.18	9.64	10.11	12.82
Sr		0.82	0.58	0.53	1.23	0.46	0.64
Mo	BDL	BDL	BDL	0.11	BDL	BDL	BDL
Sn	2.52	0.20	0.19	0.25	0.13	0.20	0.18
Te	BDL	BDL	0.01	BDL	0.09	BDL	BDL
Cs	0.98	0.16	0.11	0.23	0.22	0.15	0.12
Ba	53.45	47.01	31.22	28.19	27.64	44.52	37.88
Ba	20.89	43.36	30.47	25.27	35.39	68.91	43.85
W	BDL	0.14	0.22	0.08	0.12	0.14	0.41
Pb	BDL	0.03	0.02	0.04	0.04	0.01	0.07
Bi	BDL	0.02	0.01	0.01	BDL	0.01	0.01
Th		0.02	0.02	0.03	0.08	0.03	0.02
U		0.04	0.02	0.02	0.01	0.02	0.03
Tl	BDL	0.15	0.11	0.12	0.14	0.15	0.26

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Chl?	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD08-22area2-3	G909153_13-2	G909153_13-3	G909153_14-1	G909153_14-2	G909153_14-3	G909153_15-1
Data Quality (1-3)	1	2.5	3	3	1.5	3	3
1 standard error (ppm)**							
Li	BDL	1.02	0.94	0.88	1.29	0.97	0.88
B	29.68	28.75	35.56	29.73	29.12	29.58	33.95
Si	2576.70	8053.91	8053.91	8053.91	8053.91	8053.91	8053.91
P	BDL	48.48	36.10	66.35	417.02	41.88	72.21
Sc	BDL	0.91	0.89	1.06	1.26	1.14	1.42
Ti	79.33	172.78	135.42	127.95	125.01	131.45	128.93
V	22.15	17.89	22.40	19.44	24.39	24.57	29.14
Cr	30.76	13.87	15.68	17.97	17.25	19.65	15.27
Mn	BDL	3.07	2.63	2.54	3.14	3.88	2.71
Co	BDL	0.16	BDL	0.07	0.12	0.15	0.09
Cu	BDL	0.43	0.75	0.61	0.86	0.53	0.58
Cu	BDL	0.53	0.59	0.61	0.92	0.44	0.55
Zn	5.33	0.74	0.60	0.60	0.34	0.54	0.61
Zn	30.38	3.63	2.99	3.28	2.66	2.83	2.56
As	10.82	0.35	0.26	0.22	0.32	0.14	0.21
Se	BDL	4.85	3.86	2.27	3.30	3.77	6.06
Se	BDL	1.12	1.25	2.00	BDL	BDL	BDL
Rb		11.36	10.75	10.06	11.34	12.14	14.29
Sr		0.85	0.61	0.55	1.25	0.49	0.67
Mo	BDL	BDL	BDL	0.11	BDL	BDL	BDL
Sn	2.55	0.94	0.67	0.86	0.79	0.89	0.69
Te	BDL	BDL	0.02	BDL	0.09	BDL	BDL
Cs	1.41	0.23	0.19	0.28	0.35	0.26	0.23
Ba	54.73	52.71	35.85	31.97	32.16	48.23	42.05
Ba	24.35	49.55	34.99	29.24	39.07	71.57	47.32
W	BDL	0.27	0.28	0.15	0.21	0.23	0.42
Pb	BDL	0.04	0.03	0.04	0.04	0.02	0.07
Bi	BDL	0.02	0.01	0.01	BDL	0.01	0.01
Th		0.02	0.02	0.03	0.08	0.03	0.02
U		0.04	0.02	0.03	0.02	0.02	0.04
Tl	BDL	0.27	0.30	0.30	0.32	0.35	0.40

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909153_15-2	G909153_15-3	G909153_15-4	G909153_15-5	G909153_15-6	G909153_15-7	G909153_16-1
Data Quality (1-3)	3	2.5	3	3	3	1.5	3
1 standard error (ppm) *							
Li	0.52	0.45	0.37	0.38	0.29	0.64	0.35
B	4.43	3.11	3.12	2.85	3.14	3.47	1.89
Si	4688.67	4688.67	4688.67	4688.67	4688.67	4688.67	4688.67
P	15.16	11.15	20.03	9.86	12.76	140.45	11.05
Sc	2.21	1.55	1.09	0.93	1.29	0.44	0.41
Ti	39.67	44.05	41.25	41.98	42.15	34.18	37.96
V	37.45	21.37	13.90	19.44	26.85	7.68	9.03
Cr	3.35	6.43	3.05	2.17	2.52	2.25	1.79
Mn	1.81	1.98	1.79	1.66	1.54	1.74	1.59
Co	0.10	BDL	BDL	BDL	BDL	BDL	0.09
Cu	0.33	0.52	0.18	0.26	0.15	1.10	0.33
Cu	0.68	0.79	0.37	0.27	0.22	1.53	0.23
Zn	0.69	0.48	0.46	0.55	0.32	0.34	0.36
Zn	3.44	3.71	2.25	2.28	2.14	2.10	1.51
As	BDL	BDL	0.10	0.10	BDL	0.13	BDL
Se	0.63	0.35	0.20	0.27	0.30	0.35	0.19
Se	BDL	0.74	0.40	BDL	BDL	0.54	BDL
Rb	11.12	10.69	9.63	11.62	9.17	8.47	10.01
Sr	0.39	0.95	0.53	0.37	0.44	0.82	0.35
Mo	BDL	0.13	BDL	BDL	0.06	BDL	BDL
Sn	0.25	0.24	0.30	0.34	0.26	0.15	0.21
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.14	0.11	0.08	0.17	0.10	0.14	0.09
Ba	51.79	55.70	38.50	33.30	43.48	26.47	30.95
Ba	52.45	54.08	31.22	38.14	46.73	28.60	35.05
W	0.14	0.26	0.04	0.21	0.20	0.16	0.19
Pb	0.05	0.06	0.04	0.09	0.04	0.03	0.03
Bi	0.01	0.02	0.01	0.01	0.01	BDL	0.01
Th	0.01	0.03	0.05	0.03	0.01	0.07	0.02
U	0.02	0.07	0.03	0.01	0.04	0.04	0.01
Tl	0.15	0.14	0.11	0.10	0.22	0.09	0.10

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909153_15-2	G909153_15-3	G909153_15-4	G909153_15-5	G909153_15-6	G909153_15-7	G909153_16-1
Data Quality (1-3)	3	2.5	3	3	3	1.5	3
1 standard error (ppm)**							
Li	0.97	1.18	1.19	1.06	1.08	0.91	0.98
B	35.16	33.31	34.33	31.27	36.70	28.46	27.47
Si	8053.91	8053.91	8053.91	8053.91	8053.91	8053.91	8053.91
P	41.38	61.56	75.01	56.59	70.35	800.30	32.06
Sc	2.65	2.43	1.58	1.85	1.92	0.66	0.73
Ti	134.96	163.01	150.10	149.58	141.78	127.99	114.51
V	50.19	40.28	31.67	42.21	41.71	16.95	18.24
Cr	17.94	22.60	18.26	18.83	21.82	17.32	11.56
Mn	3.28	3.40	3.03	3.02	2.90	2.90	3.00
Co	0.10	BDL	BDL	BDL	BDL	BDL	0.09
Cu	0.45	0.68	0.39	0.39	0.26	1.22	0.45
Cu	0.78	0.94	0.49	0.50	0.35	1.67	0.41
Zn	0.78	0.54	0.55	0.68	0.40	0.40	0.44
Zn	3.96	4.38	2.88	3.02	2.87	2.42	2.15
As	BDL	BDL	0.22	0.21	BDL	0.40	BDL
Se	3.13	3.11	3.04	3.60	3.40	3.35	4.23
Se	BDL	1.17	1.65	BDL	BDL	0.61	BDL
Rb	13.07	12.65	11.56	13.42	11.25	10.16	11.85
Sr	0.42	0.98	0.56	0.41	0.47	0.86	0.39
Mo	BDL	0.14	BDL	BDL	0.07	BDL	BDL
Sn	0.87	0.72	0.76	0.80	0.74	0.74	0.94
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.27	0.24	0.23	0.26	0.23	0.33	0.19
Ba	56.86	61.28	43.50	39.49	48.74	29.87	35.64
Ba	57.27	59.63	36.84	43.30	51.43	31.75	39.08
W	0.24	0.28	0.12	0.25	0.23	0.19	0.26
Pb	0.06	0.06	0.04	0.09	0.04	0.03	0.04
Bi	0.01	0.02	0.01	0.01	0.01	BDL	0.01
Th	0.01	0.03	0.05	0.03	0.01	0.07	0.02
U	0.03	0.07	0.03	0.02	0.04	0.05	0.01
Tl	0.39	0.41	0.31	0.34	0.45	0.25	0.24

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909153_16-2	G909153_16-3	G909153_16-4	G909153_16-5	G909153_16-6	G909155_33-4	G909155_33-5
Data Quality (1-3)	3	2.5	3	3	3	1	1
Li (ppm)	4.12	6.06	4.92	8.03	7.46	16.72	12.10
B (ppm)	74.58	80.69	79.16	69.23	77.32	35.12	50.66
Si (ppm)	234433.43	234433.43	234433.43	234433.43	234433.43	224476.44	224476.44
P (ppm)	263.90	436.02	201.90	181.76	168.81	645.37	9142.63
S (ppm)	12.58	20.84	15.44	11.81	20.61	13.44	19.28
Ti (ppm)	1233.91	1404.02	1361.96	1003.88	1435.19	5244.12	90631.47
V (ppm)	297.33	370.67	343.87	300.88	400.70	169.86	234.14
Cr (ppm)	68.29	73.45	78.88	42.48	78.21	77.58	104.44
Mn (ppm)	59.97	67.93	61.37	96.87	71.84	33.95	57.16
Co (ppm)	0.63	0.12	BDL	BDL	0.25	3.83	5.17
Cu(63) (ppm)	3.42	3.54	3.65	1.45	4.47	701.08	1410.42
Cu(65)* (ppm)	3.16	4.61	2.57	1.85	4.11	696.15	1453.16
Zn(66)* (ppm)	8.13	8.64	8.70	12.03	13.25	24.34	16.75
Zn(68) (ppm)	60.40	62.14	61.68	60.45	58.88	95.85	66.92
As (ppm)	0.38	0.59	0.56	0.48	BDL	5.48	33.87
Se(76) (ppm)	3.15	2.77	3.74	3.14	4.01	2.14	7.69
Se(77)* (ppm)	BDL	BDL	0.78	2.26	0.91	2.40	8.50
Rb (ppm)	321.22	361.47	347.60	386.15	368.85	73.68	49.28
Sr (ppm)	14.49	18.43	16.33	13.61	14.28	40.43	3702.75
Mo (ppm)	BDL	0.30	BDL	BDL	0.14	6.62	71.96
Sn (ppm)	4.60	4.26	4.36	5.33	5.96	5.51	15.65
Te (ppm)	BDL	0.16	BDL	BDL	BDL	4.39	24.52
Cs (ppm)	2.50	2.76	2.42	3.04	3.04	1.63	1.54
Ba(137) (ppm)	1210.62	1421.08	1221.26	1194.86	1224.40	1516.28	1188.72
Ba(138)* (ppm)	1220.65	1424.41	1218.35	1212.99	1232.33	1539.78	1198.68
W (ppm)	1.11	0.92	1.12	1.56	1.92	4.27	35.12
Pb (ppm)	0.42	0.32	0.51	0.18	0.39	1.44	32.24
Bi (ppm)	0.01	0.00	BDL	BDL	BDL	2.22	54.64
Th (ppm)	0.10	0.16	0.06	0.14	BDL	4.99	118.10
U (ppm)	0.16	0.30	0.18	0.19	0.18	9.28	134.65
Tl (ppm)	2.50	2.60	2.10	1.86	2.97	0.37	0.30
SiO2 wt. %	50.15	50.15	50.15	50.15	50.15	48.02	48.02

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909153_16-2	G909153_16-3	G909153_16-4	G909153_16-5	G909153_16-6	G909155_33-4	G909155_33-5
Data Quality (1-3)	3	2.5	3	3	3	1	1
1 standard error (ppm) *							
Li	0.39	0.31	0.53	0.63	0.30	0.83	0.61
B	2.49	4.25	2.32	1.98	4.01	1.18	2.71
Si	4688.67	4688.67	4688.67	4688.67	4688.67	4489.53	4489.53
P	16.49	113.53	13.21	17.70	9.06	28.09	497.29
Sc	0.56	0.60	0.53	0.50	0.53	0.32	1.05
Ti	36.94	53.54	72.52	29.09	47.59	972.22	12460.20
V	8.26	10.85	8.04	8.01	12.22	6.74	9.86
Cr	1.97	1.90	2.63	1.31	1.87	2.24	6.84
Mn	1.76	1.78	1.67	2.36	1.53	1.37	3.08
Co	0.16	0.11	BDL	BDL	0.03	0.16	0.28
Cu	0.12	0.18	0.35	0.15	0.27	24.12	76.65
Cu	0.38	0.28	0.43	0.21	0.24	26.96	78.72
Zn	0.34	0.52	0.49	1.13	0.63	0.73	0.91
Zn	2.71	2.14	2.38	2.15	2.04	3.49	3.62
As	0.11	0.14	0.07	0.20	BDL	0.39	3.41
Se	0.65	0.51	0.34	0.18	0.24	0.43	0.71
Se	BDL	BDL	0.24	0.22	0.34	0.49	0.98
Rb	8.93	9.37	8.36	12.48	9.16	3.35	2.45
Sr	0.59	0.44	0.55	0.52	0.72	2.87	320.08
Mo	BDL	0.11	BDL	BDL	0.11	0.80	5.82
Sn	0.22	0.20	0.19	0.41	0.18	0.27	0.79
Te	BDL	0.15	BDL	BDL	BDL	0.51	2.31
Cs	0.08	0.15	0.13	0.16	0.11	0.10	0.07
Ba	28.76	38.41	26.40	66.07	33.20	45.15	33.70
Ba	28.27	50.44	26.31	65.64	30.56	48.04	47.29
W	0.23	0.11	0.07	0.12	0.11	1.28	2.61
Pb	0.04	0.05	0.06	0.04	0.05	0.08	2.96
Bi	0.01	0.05	BDL	BDL	BDL	0.08	3.95
Th	0.01	0.14	0.02	0.02	BDL	0.71	20.63
U	0.02	0.05	0.04	0.03	0.03	2.09	20.29
Tl	0.20	0.14	0.16	0.10	0.12	0.08	0.05

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909153_16-2	G909153_16-3	G909153_16-4	G909153_16-5	G909153_16-6	G909155_33-4	G909155_33-5
Data Quality (1-3)	3	2.5	3	3	3	1	1
1 standard error (ppm)**							
Li	0.70	0.90	0.87	1.29	1.09	2.50	1.81
B	27.25	29.66	28.89	25.27	28.42	12.84	18.64
Si	8053.91	8053.91	8053.91	8053.91	8053.91	7711.84	7711.84
P	77.69	169.20	59.57	55.21	49.41	186.87	2663.97
Sc	0.74	1.01	0.80	0.68	0.96	0.61	1.29
Ti	122.39	143.15	147.80	99.28	143.81	1089.07	15073.00
V	16.12	20.39	17.92	16.14	22.31	10.38	14.69
Cr	13.82	14.83	16.01	8.60	15.77	15.72	22.04
Mn	2.72	2.95	2.70	4.10	2.92	1.86	3.74
Co	0.16	0.11	BDL	BDL	0.04	0.27	0.41
Cu	0.38	0.42	0.52	0.21	0.55	79.65	170.88
Cu	0.51	0.56	0.51	0.29	0.50	80.83	177.47
Zn	0.40	0.57	0.54	1.18	0.72	1.04	1.04
Zn	3.12	2.67	2.86	2.65	2.54	4.48	4.12
As	0.17	0.25	0.21	0.26	BDL	1.95	12.27
Se	2.60	2.27	3.01	2.52	3.22	1.76	6.20
Se	BDL	BDL	0.67	1.82	0.80	1.98	6.87
Rb	10.48	11.22	10.26	14.12	11.12	3.52	2.56
Sr	0.61	0.49	0.58	0.54	0.74	2.95	326.09
Mo	BDL	0.12	BDL	BDL	0.11	0.95	8.09
Sn	0.85	0.79	0.80	1.03	1.08	1.02	2.91
Te	BDL	0.15	BDL	BDL	BDL	0.96	5.09
Cs	0.18	0.23	0.20	0.26	0.23	0.14	0.12
Ba	33.12	42.98	31.16	68.03	37.12	50.06	37.72
Ba	32.54	53.84	30.84	67.57	34.62	53.39	50.65
W	0.27	0.15	0.15	0.22	0.25	1.38	4.85
Pb	0.05	0.05	0.06	0.04	0.05	0.10	3.15
Bi	0.01	0.05	BDL	BDL	BDL	0.23	6.54
Th	0.01	0.14	0.02	0.02	BDL	0.76	21.62
U	0.02	0.05	0.04	0.03	0.03	2.20	22.57
Tl	0.32	0.30	0.27	0.22	0.32	0.09	0.06

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909155_33-6	G909155_33-7	G909155_33-8	G909155_33-9	G909155_34-1	G909155_36-1	G909155_36-2
Data Quality (1-3)	1	1	1	1	1.5	2.5	2.5
1 standard error (ppm) *							
Li	0.55	0.21	BDL	BDL	2.40	0.25	0.36
B	2.58	0.33	0.22	0.38	2.17	0.28	1.13
Si	4489.53	4489.53	4489.53	4489.53	4489.53	4489.53	4489.53
P	596.92	13.28	9.14	2.40	63.92	2.36	34.30
Sc	0.71	0.16	0.07	0.12	0.46	0.10	0.10
Ti	1455.08	6.60	3.77	2.42	33.31	3.35	61.03
V	4.15	0.27	0.03	0.03	1.86	0.33	0.66
Cr	5.87	0.20	0.45	0.22	3.42	0.28	0.65
Mn	1.15	0.24	1.91	0.09	2.31	0.32	0.72
Co	0.12	BDL	BDL	0.06	0.29	0.01	0.09
Cu	37.82	2.27	0.43	0.38	48.37	0.16	3.97
Cu	41.86	2.47	0.46	0.09	56.15	0.20	3.73
Zn	0.64	0.16	0.86	0.29	0.59	0.18	0.10
Zn	3.04	0.55	0.66	0.81	0.93	1.74	3.33
As	0.95	0.07	0.18	0.08	0.26	BDL	0.12
Se	0.32	0.19	0.14	0.24	1.10	0.09	0.40
Se	0.55	0.41	BDL	BDL	BDL	BDL	0.40
Rb	2.39	0.06	0.12	0.08	0.38	1.68	2.05
Sr	259.96	42.74	47.01	60.92	3.00	2.28	6.94
Mo	1.62	0.32	BDL	BDL	1.02	0.05	0.05
Sn	0.69	0.10	0.04	0.07	0.07	0.03	0.03
Te	1.10	BDL	BDL	BDL	0.17	0.05	BDL
Cs	0.13	0.02	BDL	0.03	0.12	0.04	0.07
Ba	26.56	13.11	9.64	7.97	1.20	39.66	52.33
Ba	27.92	7.13	10.01	7.33	4.15	32.60	46.49
W	1.44	0.03	BDL	BDL	0.09	0.04	0.06
Pb	5.66	0.28	0.25	0.19	0.17	0.16	0.14
Bi	2.86	0.01	BDL	0.01	0.09	0.02	0.07
Th	1.70	0.07	0.02	BDL	0.80	0.02	2.85
U	5.32	0.02	BDL	0.03	0.08	0.13	0.09
Tl	0.02	BDL	0.01	BDL	BDL	0.02	0.02

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909155_33-6	G909155_33-7	G909155_33-8	G909155_33-9	G909155_34-1	G909155_36-1	G909155_36-2
Data Quality (1-3)	1	1	1	1	1.5	2.5	2.5
1 standard error (ppm)**							
Li	1.57	0.23	BDL	BDL	3.83	0.49	0.93
B	20.58	1.07	1.13	0.82	13.35	1.17	3.87
Si	7711.84	7711.84	7711.84	7711.84	7711.84	7711.84	7711.84
P	4658.81	47.72	21.40	12.09	410.38	13.99	120.39
Sc	0.88	0.18	0.10	0.13	0.51	0.13	0.17
Ti	5300.18	9.90	8.61	7.26	36.70	8.63	76.48
V	9.36	0.28	0.03	0.03	2.54	0.46	0.99
Cr	15.94	1.28	1.12	0.95	11.30	0.87	4.47
Mn	1.94	0.31	1.98	0.14	3.21	0.44	0.98
Co	0.24	BDL	BDL	0.06	0.51	0.02	0.09
Cu	125.37	6.15	1.00	0.38	145.62	0.28	9.09
Cu	131.99	6.38	0.93	0.12	151.89	0.27	9.16
Zn	0.79	0.18	0.87	0.31	0.65	0.19	0.15
Zn	3.48	0.66	0.83	0.95	1.07	1.97	3.77
As	7.81	0.18	0.27	0.14	0.63	BDL	0.30
Se	4.95	2.05	1.68	1.52	2.38	1.05	1.06
Se	7.85	1.47	BDL	BDL	BDL	BDL	1.16
Rb	2.50	0.07	0.13	0.08	0.39	1.75	2.16
Sr	270.09	49.64	55.68	68.52	3.36	2.71	7.65
Mo	3.82	0.34	BDL	BDL	1.10	0.05	0.14
Sn	3.13	0.10	0.05	0.07	0.33	0.05	0.07
Te	3.34	BDL	BDL	BDL	0.27	0.06	BDL
Cs	0.15	0.02	BDL	0.04	0.14	0.04	0.08
Ba	30.65	13.55	10.64	9.22	1.26	41.15	54.66
Ba	32.38	7.96	11.13	8.78	4.17	34.76	49.51
W	3.21	0.03	BDL	BDL	0.09	0.05	0.10
Pb	6.40	0.33	0.34	0.31	0.18	0.16	0.14
Bi	6.47	0.01	BDL	0.01	0.11	0.02	0.07
Th	3.36	0.07	0.02	BDL	0.81	0.02	2.86
U	6.78	0.02	BDL	0.03	0.13	0.13	0.13
Tl	0.04	BDL	0.01	BDL	BDL	0.02	0.03

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909155_36-3	G909155-1	G909155-10	G909155-2	G909155-3	G909155-4	G909155-5
Data Quality (1-3)	2.5	2.5	2.5	2.5	3	3	2.5
1 standard error (ppm) *							
Li	0.48	1.11	0.42	0.27	0.39	0.59	0.57
B	0.85	1.50	0.93	1.56	1.13	0.91	1.01
Si	4489.53	4489.72	4489.72	4489.72	4489.72	4489.72	4489.72
P	10.23	40.05	36.35	24.54	63.59	55.52	23.70
Sc	0.13	0.59	0.30	0.42	0.78	0.74	0.66
Ti	95.33	114.24	4.50	130.76	113.82	123.49	99.27
V	1.62	7.02	0.33	8.06	8.99	8.40	7.87
Cr	0.60	0.65	0.21	0.70	0.66	0.39	0.59
Mn	0.52	1.71	1.29	3.28	0.91	1.01	0.98
Co	0.14	0.11	0.08	BDL	0.14	0.05	BDL
Cu	4.08	1.04	1.88	1.29	0.72	0.61	0.38
Cu	4.09	1.39	1.71	1.76	1.27	0.68	1.02
Zn	0.36	0.99	0.20	1.66	0.28	0.40	0.26
Zn	2.42	3.91	2.65	3.56	4.24	3.60	2.34
As	BDL	BDL	0.08	BDL	BDL	BDL	BDL
Se	BDL	0.86	0.11	0.94	0.57	0.63	0.32
Se	BDL	0.53	0.62	BDL	BDL	0.54	BDL
Rb	1.24	4.98	3.47	6.51	5.07	5.82	5.12
Sr	9.75	1.30	12.76	1.01	2.11	1.63	0.88
Mo	0.56	BDL	0.08	0.10	BDL	BDL	BDL
Sn	0.12	0.38	0.08	0.30	0.29	0.23	0.27
Te	BDL	BDL	BDL	BDL	BDL	0.14	0.15
Cs	0.03	0.18	0.05	0.12	0.05	0.08	0.04
Ba	24.59	60.90	85.99	70.73	55.99	91.20	65.09
Ba	26.73	54.69	93.34	82.60	63.97	77.85	58.15
W	0.13	0.12	0.06	0.43	0.14	0.15	0.15
Pb	0.06	0.05	0.15	0.13	0.05	0.07	0.01
Bi	0.01	0.03	0.02	0.04	0.01	0.10	0.01
Th	0.14	0.02	0.02	0.90	BDL	4.02	0.18
U	0.13	0.02	0.02	0.04	0.01	0.09	0.01
Tl	0.04	0.09	0.03	0.03	0.06	0.05	0.06

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909155_36-3	G909155-1	G909155-10	G909155-2	G909155-3	G909155-4	G909155-5
Data Quality (1-3)	2.5	2.5	2.5	2.5	3	3	2.5
1 standard error (ppm)**							
Li	1.27	2.14	1.83	1.56	1.48	1.86	1.64
B	4.31	10.84	6.18	12.51	9.06	10.91	10.15
Si	7711.84	7712.16	7712.16	7712.16	7712.16	7712.16	7712.16
P	18.28	55.94	76.32	62.34	111.79	103.79	36.43
Sc	0.18	0.89	0.32	0.75	1.04	1.04	0.93
Ti	97.30	390.56	12.34	399.53	433.47	404.35	385.21
V	2.42	16.68	0.75	16.83	18.06	17.30	17.36
Cr	3.34	2.86	0.60	3.04	2.57	2.25	2.50
Mn	0.69	2.31	1.79	3.77	1.67	1.75	1.76
Co	0.14	0.11	0.08	BDL	0.15	0.05	BDL
Cu	4.94	2.01	3.26	2.53	1.53	1.47	1.24
Cu	5.00	2.47	3.04	2.78	2.01	1.35	1.74
Zn	0.37	1.03	0.27	1.68	0.32	0.43	0.32
Zn	2.49	4.65	3.31	4.25	4.74	4.34	3.08
As	BDL	BDL	0.15	BDL	BDL	BDL	BDL
Se	BDL	2.46	1.65	BDL	3.68	2.41	1.53
Se	BDL	1.33	2.04	BDL	BDL	1.19	BDL
Rb	1.43	5.80	3.91	7.20	5.85	6.52	5.92
Sr	10.65	1.35	12.80	1.06	2.15	1.69	0.94
Mo	0.56	BDL	0.08	0.11	BDL	BDL	BDL
Sn	0.15	1.69	0.12	1.57	1.63	1.54	1.53
Te	BDL	BDL	BDL	BDL	BDL	0.15	0.15
Cs	0.06	0.20	0.12	0.15	0.07	0.11	0.08
Ba	25.62	70.98	92.19	79.39	64.78	99.08	72.63
Ba	27.84	64.04	97.67	89.26	70.75	85.61	65.18
W	0.13	0.52	0.13	0.68	0.50	0.46	0.49
Pb	0.07	0.05	0.16	0.13	0.05	0.07	0.01
Bi	0.01	0.03	0.02	0.04	0.01	0.10	0.01
Th	0.14	0.02	0.02	0.90	BDL	4.08	0.19
U	0.13	0.02	0.02	0.04	0.01	0.09	0.01
Tl	0.04	0.13	0.08	0.09	0.11	0.10	0.12

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909155-6	G909155-7	G909155-8	G909155-9	G909157_1-1	G909157_1-3	G909157_10-1
Data Quality (1-3)	2.5	2.5	3	1.5	2.5	1.5	2.5
Li (ppm)	9.23	16.47	15.13	20.30	10.85	13.78	12.57
B (ppm)	22.75	18.58	23.99	33.88	56.25	50.32	62.38
Si (ppm)	224485.79	224485.79	224485.79	224485.79	233825.73	233825.73	233825.73
P (ppm)	161.67	103.19	66.29	1243.46	170.47	3890.98	108.49
Sc (ppm)	17.13	2.73	3.41	3.06	26.97	28.46	16.28
Ti (ppm)	4121.11	188.78	279.90	233.17	2223.92	4429.69	684.52
V (ppm)	328.47	25.68	25.08	51.62	349.98	337.52	300.66
Cr (ppm)	12.08	2.47	5.52	6.69	42.89	60.28	15.69
Mn (ppm)	39.79	44.26	48.89	96.04	168.27	153.65	184.95
Co (ppm)	BDL	BDL	0.26	9.97	0.88	3.54	0.46
Cu(63) (ppm)	11.10	20.54	4.57	998.95	9.40	20.34	2.95
Cu(65)* (ppm)	13.20	27.13	6.28	977.86	7.01	23.49	2.66
Zn(66)* (ppm)	7.34	6.71	8.15	17.09	17.39	23.04	14.39
Zn(68) (ppm)	60.18	103.32	111.54	123.66	52.73	45.33	56.50
As (ppm)	BDL	BDL	0.63	5.50	0.49	1.73	BDL
Se(76) (ppm)	2.65	0.70	8.06	2.05	3.94	2.46	3.29
Se(77)* (ppm)	3.63	BDL	BDL	1.59	BDL	BDL	0.22
Rb (ppm)	218.26	150.97	195.74	194.65	361.35	323.39	422.03
Sr (ppm)	25.36	56.46	119.92	87.19	38.16	42.26	53.18
Mo (ppm)	0.11	0.15	0.11	22.87	0.45	2.98	0.35
Sn (ppm)	8.30	1.74	0.98	1.41	1.54	1.95	1.64
Te (ppm)	BDL	BDL	BDL	0.50	BDL	0.42	BDL
Cs (ppm)	1.40	1.97	2.36	2.48	3.26	3.24	3.05
Ba(137) (ppm)	2006.22	3453.35	3569.59	3816.04	915.86	503.68	1059.40
Ba(138)* (ppm)	2022.09	3548.04	3673.78	3890.51	915.91	515.20	1079.85
W (ppm)	4.28	1.68	1.19	2.97	1.98	3.46	2.49
Pb (ppm)	0.14	0.24	0.24	0.76	1.59	2.13	0.81
Bi (ppm)	0.00	BDL	0.00	0.11	0.08	0.59	BDL
Th (ppm)	BDL	BDL	0.03	4.01	BDL	5.14	1.64
U (ppm)	0.02	0.06	0.09	0.67	1.67	5.06	2.11
Tl (ppm)	1.09	0.88	0.91	1.13	1.60	1.51	1.58
SiO2 wt. %	48.02	48.02	48.02	48.02	50.02	50.02	50.02

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909155-6	G909155-7	G909155-8	G909155-9	G909157_1-1	G909157_1-3	G909157_10-1
Data Quality (1-3)	2.5	2.5	3	1.5	2.5	1.5	2.5
1 standard error (ppm) *							
Li	0.47	0.51	0.65	0.68	0.51	0.53	0.45
B	1.34	0.51	1.02	0.79	3.04	2.14	2.04
Si	4489.72	4489.72	4489.72	4489.72	4676.51	4676.51	4676.51
P	13.77	25.62	1.84	234.76	28.48	264.22	10.01
Sc	0.44	0.31	0.29	0.28	1.47	0.96	0.64
Ti	101.11	6.57	6.45	6.05	91.61	227.36	30.59
V	7.63	0.99	1.07	1.80	9.12	7.81	7.20
Cr	0.52	0.18	0.13	0.32	1.18	2.16	0.68
Mn	0.99	1.06	1.20	2.82	5.32	4.31	4.27
Co	BDL	BDL	0.04	1.55	0.07	0.15	0.10
Cu	0.48	5.31	0.48	37.98	1.19	0.74	0.48
Cu	0.53	10.02	0.31	34.91	0.75	1.08	0.21
Zn	0.56	0.49	0.54	1.41	0.69	0.71	0.65
Zn	3.13	2.86	3.15	4.38	2.98	1.53	2.64
As	BDL	BDL	0.16	0.81	0.09	0.13	BDL
Se	0.49	0.13	1.04	0.31	0.30	0.17	0.22
Se	1.20	BDL	BDL	0.60	BDL	BDL	0.95
Rb	5.52	3.34	4.15	4.52	8.50	10.85	9.82
Sr	0.75	1.75	2.52	2.25	1.38	2.95	2.35
Mo	0.10	0.06	0.03	0.99	0.10	0.18	0.13
Sn	0.66	0.07	0.09	0.16	0.14	0.08	0.07
Te	BDL	BDL	BDL	0.19	BDL	0.08	BDL
Cs	0.29	0.08	0.09	0.09	0.09	0.09	0.12
Ba	81.94	86.60	83.11	116.53	23.53	12.87	25.26
Ba	71.49	111.52	86.60	120.30	26.78	12.96	27.08
W	0.24	0.12	0.07	0.13	0.13	0.16	0.29
Pb	0.07	0.04	0.05	0.10	0.34	0.17	0.17
Bi	0.01	BDL	0.01	0.03	0.04	0.03	BDL
Th	BDL	BDL	0.01	0.32	BDL	0.35	0.36
U	0.03	0.05	0.02	0.04	1.62	0.19	0.47
Tl	0.03	0.05	0.04	0.08	0.08	0.16	0.11

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909155-6	G909155-7	G909155-8	G909155-9	G909157_1-1	G909157_1-3	G909157_10-1
Data Quality (1-3)	2.5	2.5	3	1.5	2.5	1.5	2.5
1 standard error (ppm)**							
Li	1.38	2.36	2.22	2.92	1.62	2.02	1.83
B	8.38	6.78	8.79	12.35	20.72	18.46	22.82
Si	7712.16	7712.16	7712.16	7712.16	8033.03	8033.03	8033.03
P	48.26	39.09	19.05	426.26	56.54	1145.80	32.66
Sc	0.80	0.32	0.32	0.31	1.93	1.63	0.99
Ti	399.56	18.89	27.03	22.69	228.86	475.60	71.44
V	16.89	1.54	1.57	2.97	18.69	17.56	15.75
Cr	2.47	0.53	1.11	1.38	8.67	12.26	3.22
Mn	1.70	1.86	2.08	4.36	7.99	6.94	7.82
Co	BDL	BDL	0.04	1.64	0.08	0.24	0.10
Cu	1.27	5.74	0.68	112.55	1.55	2.28	0.57
Cu	1.50	10.42	0.74	109.48	1.06	2.72	0.36
Zn	0.60	0.52	0.59	1.49	0.86	0.98	0.77
Zn	3.56	4.07	4.44	5.58	3.33	2.00	3.09
As	BDL	BDL	0.27	2.07	0.19	0.61	BDL
Se	2.18	0.57	6.53	1.67	3.17	1.98	2.65
Se	3.14	BDL	BDL	1.41	BDL	BDL	0.96
Rb	6.18	3.86	4.84	5.15	10.30	12.03	11.95
Sr	0.81	1.89	2.95	2.51	1.58	3.06	2.57
Mo	0.10	0.06	0.03	2.03	0.10	0.30	0.14
Sn	1.62	0.32	0.20	0.30	0.31	0.36	0.30
Te	BDL	BDL	BDL	0.21	BDL	0.11	BDL
Cs	0.30	0.15	0.18	0.18	0.23	0.23	0.24
Ba	86.86	99.81	97.66	128.79	27.68	15.16	30.36
Ba	76.20	120.75	98.98	130.57	30.87	15.57	32.57
W	0.56	0.23	0.16	0.37	0.26	0.44	0.41
Pb	0.07	0.04	0.06	0.10	0.36	0.23	0.18
Bi	0.01	BDL	0.01	0.04	0.04	0.06	BDL
Th	BDL	BDL	0.01	0.39	BDL	0.46	0.37
U	0.03	0.05	0.02	0.06	1.63	0.41	0.50
Tl	0.12	0.10	0.10	0.14	0.18	0.22	0.20

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909157_10-2	G909157_10-4	G909157_2-1	G909157_3-1	G909157_3-2	G909157_3-3	G909157_6-1
Data Quality (1-3)	3	1.5	1.5	2.5	2	2.5	1
1 standard error (ppm) *							
Li	0.71	0.41	0.64	0.49	0.41	0.64	0.78
B	3.25	1.18	2.63	4.50	1.22	2.05	9.62
Si	4676.51	4676.51	4676.51	4676.51	4676.51	4676.51	4676.51
P	3.20	306.95	291.38	10.43	23.91	29.03	2079.45
Sc	0.79	2.12	1.82	1.15	0.79	0.96	8.51
Ti	14.39	176.01	255.49	93.53	1088.47	243.35	204.43
V	7.77	16.98	18.06	11.95	5.46	9.41	43.65
Cr	0.46	4.87	2.12	1.82	1.46	2.24	9.07
Mn	4.52	9.14	11.65	5.07	2.31	4.42	33.83
Co	0.04	2.81	1.42	0.04	0.05	0.06	7.77
Cu	0.32	16.20	12.47	0.25	0.51	0.60	55.29
Cu	0.17	14.61	13.35	0.19	0.36	0.21	57.93
Zn	0.64	10.44	2.68	1.06	0.77	0.67	22.07
Zn	1.67	12.19	3.87	1.89	5.25	2.05	12.29
As	0.18	3.25	5.12	0.08	0.10	0.09	23.06
Se	0.36	1.17	0.24	0.16	0.29	0.40	BDL
Se	BDL	0.60	0.78	BDL	BDL	0.69	3.02
Rb	12.64	0.37	5.70	14.02	6.17	15.48	0.64
Sr	2.77	5.26	11.66	1.37	9.39	2.59	19.55
Mo	BDL	3.11	2.27	0.13	0.25	0.12	9.62
Sn	0.12	0.70	0.18	0.07	0.25	0.14	0.20
Te	BDL	1.01	0.58	0.15	0.37	0.08	1.97
Cs	0.09	0.09	0.14	0.17	0.10	0.10	BDL
Ba	23.64	5.02	21.93	22.21	125.14	34.46	15.29
Ba	25.53	4.64	21.78	22.82	169.18	38.02	13.71
W	0.19	0.58	0.37	0.18	0.22	0.26	1.55
Pb	0.04	1.09	0.78	0.10	0.31	0.19	3.79
Bi	0.01	0.25	0.24	0.02	0.15	0.06	0.84
Th	0.01	18.54	3.31	0.14	0.43	0.15	18.86
U	0.03	0.50	0.89	0.39	2.10	0.21	1.72
Tl	0.17	0.00	0.06	0.10	0.07	0.08	0.09

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909157_10-2	G909157_10-4	G909157_2-1	G909157_3-1	G909157_3-2	G909157_3-3	G909157_6-1
Data Quality (1-3)	3	1.5	1.5	2.5	2	2.5	1
1 standard error (ppm)**							
Li	2.08	1.18	1.81	1.73	1.26	1.93	1.08
B	24.66	8.65	18.48	25.76	7.92	19.64	22.47
Si	8033.03	8033.03	8033.03	8033.03	8033.03	8033.03	8033.03
P	11.67	2399.48	1759.10	32.13	65.23	221.68	13592.58
Sc	1.15	2.97	2.94	1.78	1.06	1.63	13.74
Ti	54.13	391.63	778.96	198.85	1209.65	301.06	811.42
V	17.46	29.17	33.80	21.31	9.49	19.64	93.53
Cr	2.79	21.99	16.30	12.74	9.37	15.27	56.49
Mn	7.96	12.56	17.17	8.03	3.55	7.58	56.60
Co	0.05	4.08	2.83	0.04	0.07	0.07	14.43
Cu	0.48	39.08	36.60	0.33	0.96	0.84	239.14
Cu	0.36	39.86	35.79	0.36	0.97	0.60	234.82
Zn	0.84	11.06	3.77	1.21	0.90	0.84	25.35
Zn	2.25	12.70	4.90	2.37	6.92	2.73	17.51
As	0.26	40.67	36.33	0.12	0.34	0.24	282.87
Se	3.93	7.27	2.70	2.12	2.27	2.09	BDL
Se	BDL	6.57	7.70	BDL	BDL	0.96	23.32
Rb	14.65	0.40	6.88	15.54	7.29	16.84	0.67
Sr	2.96	5.49	11.91	1.48	11.58	2.86	23.30
Mo	BDL	5.53	5.44	0.15	0.30	0.15	22.43
Sn	0.30	0.98	0.63	0.29	0.38	0.36	0.71
Te	BDL	1.55	1.54	0.19	0.43	0.10	6.69
Cs	0.23	0.11	0.23	0.28	0.16	0.21	BDL
Ba	27.37	5.37	23.08	26.12	139.76	39.48	17.83
Ba	29.38	5.09	23.08	26.96	189.06	43.24	16.77
W	0.38	1.30	1.28	0.37	0.31	0.46	6.33
Pb	0.04	1.53	1.09	0.11	0.43	0.21	5.47
Bi	0.01	0.59	0.54	0.04	0.17	0.07	3.29
Th	0.02	20.21	4.35	0.14	0.45	0.16	36.55
U	0.03	0.96	1.66	0.43	2.15	0.26	3.60
Tl	0.25	0.01	0.11	0.21	0.16	0.18	0.10

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909157_6-2	G909157_6-3	G909157_6-4	G909157_8-3	G909157_9-1	G909157_9-2	G909157_9-3
Data Quality (1-3)	3	2	1	1.5	1.5	1.5	1.5
1 standard error (ppm) *							
Li	0.61	0.60	0.84	2.11	0.58	0.46	0.50
B	1.92	2.02	0.92	2.07	1.74	2.06	1.43
Si	4676.51	4676.51	4676.51	4676.51	4676.51	4676.51	4676.51
P	20.65	59.17	1072.36	4649.41	680.48	265.61	624.65
Sc	0.80	1.51	2.00	2.05	1.13	0.93	0.75
Ti	29.55	92.52	472.54	463.64	66.23	27.49	311.29
V	5.82	8.63	15.66	5.19	8.73	7.92	5.33
Cr	1.93	2.62	2.93	3.46	1.79	1.60	1.94
Mn	3.89	6.85	8.95	23.13	4.05	4.23	2.97
Co	0.22	0.32	1.67	0.24	0.17	0.13	0.16
Cu	1.32	2.57	16.84	3.02	0.74	0.41	0.47
Cu	1.85	2.96	15.96	2.61	1.20	0.31	1.56
Zn	1.81	1.28	3.19	4.57	0.63	0.90	0.75
Zn	2.52	2.07	4.12	3.98	1.47	1.24	0.95
As	0.59	0.79	4.18	0.61	0.09	0.19	0.09
Se	0.80	0.45	0.29	0.81	0.36	0.19	0.30
Se	BDL	0.32	0.24	1.19	0.73	BDL	0.62
Rb	5.01	5.81	0.93	3.93	10.23	11.59	5.34
Sr	0.34	2.51	27.31	29.41	4.98	1.80	4.28
Mo	0.31	0.67	1.89	0.96	0.25	0.18	0.50
Sn	0.14	0.05	0.19	0.16	0.09	0.07	0.09
Te	BDL	0.18	0.44	0.17	0.07	BDL	0.13
Cs	0.11	0.10	0.08	0.33	0.12	0.10	0.09
Ba	9.87	27.05	19.37	17.01	18.46	17.64	11.73
Ba	9.68	19.84	18.00	17.59	17.43	16.67	11.54
W	0.13	0.21	0.54	0.10	0.22	0.45	0.14
Pb	0.12	0.23	0.88	1.07	0.07	0.08	0.15
Bi	0.05	0.09	0.12	0.06	0.03	0.02	0.08
Th	0.36	0.55	3.95	1.16	2.35	0.36	0.53
U	0.11	0.08	0.48	1.52	0.35	0.15	0.43
Tl	0.06	0.05	0.02	0.09	0.11	0.06	0.04

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909157_6-2	G909157_6-3	G909157_6-4	G909157_8-3	G909157_9-1	G909157_9-2	G909157_9-3
Data Quality (1-3)	3	2	1	1.5	1.5	1.5	1.5
1 standard error (ppm)**							
Li	2.00	1.80	1.41	8.20	1.78	1.75	1.89
B	12.65	12.57	5.97	9.58	14.93	21.02	13.23
Si	8033.03	8033.03	8033.03	8033.03	8033.03	8033.03	8033.03
P	113.14	418.65	4775.40	43619.82	3762.71	1257.07	3952.48
Sc	1.28	2.22	2.55	2.98	1.51	1.49	1.16
Ti	70.45	150.38	1183.79	1393.55	154.10	68.30	326.94
V	12.50	17.01	22.48	10.50	14.99	17.23	11.15
Cr	12.65	11.39	16.31	15.69	14.27	13.03	13.70
Mn	5.98	9.04	10.83	35.36	5.98	7.31	4.86
Co	0.30	0.64	2.38	0.60	0.24	0.17	0.30
Cu	4.97	9.88	34.42	10.95	2.15	1.16	2.10
Cu	4.67	10.14	34.33	10.79	2.22	1.05	2.84
Zn	2.16	1.79	3.75	5.91	0.76	1.05	0.85
Zn	2.98	2.84	4.95	5.68	1.76	1.68	1.22
As	1.84	6.99	33.36	1.50	0.28	0.31	0.41
Se	0.89	4.19	2.69	6.45	3.37	2.02	2.16
Se	BDL	2.15	2.95	14.43	2.07	BDL	1.82
Rb	6.00	6.76	1.13	4.47	11.01	12.90	6.30
Sr	0.40	2.75	28.06	36.23	5.23	1.90	4.60
Mo	0.35	1.31	3.70	1.67	0.30	0.19	0.52
Sn	0.34	0.33	0.39	0.51	0.49	0.43	0.46
Te	BDL	0.35	0.85	0.17	0.07	BDL	0.15
Cs	0.19	0.17	0.13	0.67	0.19	0.21	0.18
Ba	11.24	29.43	22.90	18.99	19.90	19.87	12.73
Ba	11.21	23.39	22.06	19.77	19.02	19.32	12.71
W	0.24	0.46	1.12	0.34	0.29	0.52	0.22
Pb	0.14	0.32	1.17	1.41	0.09	0.09	0.16
Bi	0.06	0.17	0.46	0.10	0.05	0.02	0.09
Th	0.43	1.10	5.72	2.04	2.50	0.39	0.58
U	0.12	0.19	0.98	3.85	0.41	0.17	0.51
Tl	0.10	0.12	0.03	0.13	0.14	0.16	0.11

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909163_20-2	G909163_20-3	G909163_20-4	G909163_21-1	G909163_21-2	G909163_22-2	G909163_22-3
Data Quality (1-3)	2	1.5	2.5	1.5	2.5	1.5	1.5
1 standard error (ppm) *							
Li	0.35	0.63	0.13	0.21	0.34	0.33	0.10
B	0.61	1.13	1.06	0.83	0.27	0.57	0.25
Si	4592.37	4592.37	4592.37	4592.37	4592.37	4592.37	4592.37
P	26.78	142.94	18.25	265.03	37.25	33.95	18.35
Sc	0.92	3.68	1.41	0.36	0.41	2.10	0.86
Ti	1129.33	5450.50	264.14	12.46	91.09	946.84	1459.67
V	5.83	14.21	4.34	2.62	2.59	6.03	5.49
Cr	2.38	3.83	3.29	1.51	0.88	1.83	1.08
Mn	1.33	8.68	0.62	5.81	0.76	0.66	0.27
Co	0.17	0.14	0.17	0.21	0.18	0.06	0.04
Cu	2.57	2.92	1.88	7.72	2.05	1.93	1.82
Cu	2.05	4.63	1.44	7.24	0.71	1.89	1.21
Zn	0.48	0.42	0.14	0.33	0.24	1.04	0.44
Zn	0.99	1.03	0.86	0.69	2.69	1.63	0.41
As	0.49	2.61	0.37	3.58	0.59	0.88	0.56
Se	0.23	0.39	BDL	1.46	0.64	0.23	0.10
Se	0.55	0.61	BDL	0.77	0.43	0.93	0.29
Rb	2.12	4.01	0.93	0.39	3.03	1.83	0.21
Sr	12.80	6.50	4.97	8.08	9.23	1.71	1.48
Mo	0.61	3.53	0.21	2.10	0.21	0.32	0.34
Sn	0.14	0.67	0.12	0.06	0.11	0.70	1.03
Te	0.05	0.77	0.13	0.16	0.03	0.35	0.32
Cs	0.08	0.11	0.03	0.05	0.12	0.08	0.08
Ba	8.35	11.70	13.32	9.38	37.23	6.01	2.17
Ba	8.88	17.20	13.44	11.26	35.59	6.72	2.61
W	0.88	2.02	0.23	0.02	0.05	0.55	0.22
Pb	1.10	1.80	0.42	0.83	0.58	0.98	0.92
Bi	0.47	1.14	0.34	0.49	0.13	0.20	0.17
Th	0.18	5.55	0.33	3.12	0.72	0.90	0.29
U	0.87	5.03	0.37	0.14	0.07	1.88	1.44
Tl	0.02	0.12	0.01	0.01	0.02	0.01	0.01

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909163_20-2	G909163_20-3	G909163_20-4	G909163_21-1	G909163_21-2	G909163_22-2	G909163_22-3
Data Quality (1-3)	2	1.5	2.5	1.5	2.5	1.5	1.5
1 standard error (ppm)**							
Li	0.88	1.20	0.22	0.47	0.49	0.48	0.23
B	4.49	7.32	2.20	3.57	2.44	2.80	1.99
Si	7888.49	7888.49	7888.49	7888.49	7888.49	7888.49	7888.49
P	161.73	966.40	98.16	1288.91	212.22	166.71	118.78
Sc	1.14	6.25	1.47	0.47	0.67	2.49	1.37
Ti	1216.27	16834.28	383.35	33.37	222.97	1749.58	3741.28
V	6.44	29.44	4.58	3.52	4.16	11.63	11.32
Cr	12.62	19.14	5.84	8.43	5.52	11.01	6.71
Mn	1.56	13.46	0.87	7.96	1.21	0.77	0.36
Co	0.20	0.22	0.18	0.33	0.19	0.09	0.06
Cu	5.96	10.43	3.55	22.68	3.29	5.89	5.01
Cu	5.63	10.86	3.53	22.55	2.84	5.96	4.98
Zn	0.51	0.59	0.17	0.44	0.25	1.08	0.50
Zn	1.14	1.19	1.03	0.81	2.93	1.69	0.53
As	0.95	23.91	0.74	28.52	3.17	3.91	1.96
Se	3.25	3.37	BDL	2.63	4.10	2.95	0.65
Se	1.19	4.72	BDL	7.33	1.40	2.34	0.98
Rb	2.22	4.49	1.03	0.40	3.28	1.87	0.25
Sr	13.15	7.18	6.23	8.37	10.10	2.20	1.92
Mo	0.63	5.16	0.25	2.61	0.25	0.55	0.50
Sn	0.40	2.99	0.24	0.19	0.33	1.45	1.73
Te	0.13	1.86	0.13	0.21	0.04	0.49	0.40
Cs	0.12	0.19	0.06	0.08	0.14	0.12	0.11
Ba	9.80	13.12	15.45	9.60	41.95	6.22	2.34
Ba	10.04	18.13	15.27	11.40	40.05	6.88	2.74
W	0.90	7.76	0.26	0.03	0.21	1.35	0.44
Pb	1.11	2.65	0.44	0.85	0.60	1.13	1.25
Bi	0.50	2.17	0.41	0.59	0.24	0.46	0.34
Th	0.27	7.72	0.39	5.40	0.84	1.29	0.43
U	1.02	9.06	0.48	0.26	0.11	2.33	1.83
Tl	0.03	0.15	0.01	0.01	0.03	0.01	0.01

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909163_22-4	G909163_22-6	G909163_23-2	G909163_23-3	G909163_23-4	G909163_23-5	G909163_24-3
Data Quality (1-3)	2	2	1.5	1.5	2.5	2	2.5
1 standard error (ppm) *							
Li	0.21	0.18	0.99	0.35	0.20	0.21	0.19
B	0.31	0.50	2.00	0.84	0.55	0.58	0.20
Si	4592.37	4592.37	4592.37	4592.37	4592.37	4592.37	4592.37
P	19.08	13.30	485.12	139.87	23.74	78.37	12.30
Sc	2.12	1.71	2.26	0.24	0.35	0.47	0.74
Ti	20.58	15.74	360.13	75.19	18.49	25.40	177.20
V	3.26	3.39	36.50	1.76	2.68	3.35	4.83
Cr	1.90	1.06	2.30	0.84	0.45	0.98	1.27
Mn	0.52	0.15	10.84	2.07	1.17	2.90	0.92
Co	0.11	0.04	0.13	0.10	0.05	0.05	0.14
Cu	1.16	0.83	2.49	1.78	0.45	1.94	1.13
Cu	1.06	0.72	1.65	0.93	1.05	1.12	0.69
Zn	0.35	0.25	3.31	0.47	0.33	0.60	0.57
Zn	0.33	0.90	4.16	0.74	2.30	3.96	1.90
As	0.05	0.06	0.25	0.22	0.35	0.96	0.13
Se	0.16	0.12	0.68	0.20	0.28	0.60	0.36
Se	BDL	BDL	1.01	BDL	BDL	BDL	0.19
Rb	2.19	1.20	11.90	2.22	3.97	5.26	3.17
Sr	3.20	6.98	3.10	22.76	11.98	9.32	5.22
Mo	0.04	0.03	0.35	0.14	0.04	0.56	0.14
Sn	0.07	0.07	0.34	0.12	0.04	0.06	0.05
Te	0.10	BDL	0.13	BDL	BDL	BDL	0.05
Cs	0.08	0.14	0.36	0.10	0.08	0.08	0.06
Ba	0.84	2.16	46.10	6.01	61.35	127.29	48.18
Ba	0.84	1.43	57.45	5.73	62.45	203.83	48.08
W	0.03	0.01	0.99	0.13	0.04	0.18	0.11
Pb	0.48	0.33	1.00	0.17	0.14	0.46	0.43
Bi	0.06	0.09	0.45	0.14	0.03	0.25	0.20
Th	0.34	0.11	0.86	0.16	0.33	0.98	3.35
U	0.28	0.09	0.53	0.23	0.03	0.10	4.15
Tl	0.02	0.02	0.06	0.02	0.04	0.09	0.02

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909163_22-4	G909163_22-6	G909163_23-2	G909163_23-3	G909163_23-4	G909163_23-5	G909163_24-3
Data Quality (1-3)	2	2	1.5	1.5	2.5	2	2.5
1 standard error (ppm)**							
Li	0.38	0.45	3.15	0.44	0.55	0.56	0.33
B	2.72	2.78	13.46	4.53	2.69	3.07	1.28
Si	7888.49	7888.49	7888.49	7888.49	7888.49	7888.49	7888.49
P	66.61	84.30	3485.25	799.59	135.47	281.83	68.29
Sc	2.87	2.47	3.64	0.37	0.50	0.58	0.83
Ti	58.05	44.11	427.31	137.84	37.66	58.52	181.09
V	5.11	6.05	73.90	3.00	5.28	5.42	5.14
Cr	6.22	6.18	14.01	3.52	2.00	3.63	3.96
Mn	0.54	0.25	13.73	2.74	1.68	4.38	1.02
Co	0.12	0.05	0.16	0.11	0.06	0.08	0.15
Cu	3.59	2.92	7.10	2.78	0.86	3.36	1.91
Cu	3.61	3.10	6.84	2.20	1.30	3.01	1.70
Zn	0.37	0.31	4.08	0.61	0.40	0.71	0.59
Zn	0.40	0.94	5.68	0.94	3.03	5.49	2.56
As	0.17	0.29	2.69	1.36	0.64	4.90	0.83
Se	0.78	1.79	4.16	2.43	1.26	1.06	1.86
Se	BDL	BDL	2.79	BDL	BDL	BDL	0.56
Rb	2.27	1.37	15.30	2.51	5.14	6.52	4.00
Sr	3.36	7.67	3.66	27.40	15.32	11.92	6.59
Mo	0.04	0.03	0.38	0.15	0.05	0.71	0.15
Sn	0.30	0.33	1.09	0.22	0.09	0.17	0.18
Te	0.10	BDL	0.18	BDL	BDL	BDL	0.05
Cs	0.14	0.19	0.61	0.14	0.17	0.14	0.08
Ba	1.02	2.39	60.64	6.77	77.66	157.46	62.11
Ba	1.02	1.65	68.30	6.36	76.36	232.53	60.14
W	0.03	0.01	1.20	0.24	0.09	0.24	0.12
Pb	0.48	0.34	1.02	0.24	0.15	0.48	0.44
Bi	0.08	0.13	0.55	0.20	0.03	0.28	0.30
Th	0.34	0.12	0.95	0.22	0.34	1.47	3.45
U	0.30	0.14	0.93	0.33	0.04	0.13	4.37
Tl	0.02	0.03	0.19	0.03	0.08	0.13	0.06

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909158-11	G909158-12	G909158-13	G909158-14	G909158-15	ANN006002.018-1	ANN006002.018-11
Data Quality (1-3)	3	2	3	2	3	2.5	2.5
Li (ppm)	16.02	17.05	15.39	22.07	15.01	7.21	5.92
B (ppm)	60.12	67.21	66.75	67.81	64.02	42.13	51.81
Si (ppm)	234526.93	234526.93	234526.93	234526.93	234526.93	215477.75	215477.75
P (ppm)	36.19	45.31	36.24	32.27	39.67	56.76	39.18
Sc (ppm)	10.13	10.73	10.67	11.72	9.67	6.70	7.06
Ti (ppm)	815.60	828.76	547.27	739.04	479.80	2489.12	2603.83
V (ppm)	263.38	281.18	277.56	334.15	256.64	71.64	71.22
Cr (ppm)	7.53	9.57	7.28	10.68	7.53	3.72	6.06
Mn (ppm)	160.03	168.44	151.75	206.66	140.44	42.51	42.09
Co (ppm)	1.06	1.36	1.13	1.92	1.18	0.38	BDL
Cu(63) (ppm)	11.10	47.80	16.82	132.22	8.61	2.46	1.00
Cu(65)* (ppm)	11.26	47.21	16.97	126.35	8.49	3.68	0.46
Zn(66)* (ppm)	21.92	31.35	23.78	48.11	19.75	9.38	7.50
Zn(68) (ppm)	40.98	48.48	40.40	66.55	36.95	117.63	100.52
As (ppm)	0.45	0.17	0.40	0.59	0.17	BDL	0.80
Se(76) (ppm)	1.28	5.42	2.38	6.29	1.10	2.49	4.33
Se(77)* (ppm)	BDL	BDL	1.23	BDL	BDL	BDL	BDL
Rb (ppm)	556.24	538.99	535.12	605.99	513.64	292.07	280.25
Sr (ppm)	62.31	49.29	51.11	12.51	67.79	30.88	26.25
Mo (ppm)	0.21	BDL	0.49	BDL	BDL	0.04	457.79
Sn (ppm)	0.95	1.23	1.14	1.27	0.99	3.25	2.54
Te (ppm)	BDL	0.10	BDL	BDL	BDL	0.16	BDL
Cs (ppm)	5.07	4.95	4.49	5.46	4.31	2.00	2.49
Ba(137) (ppm)	700.56	688.25	674.88	692.54	654.26	2763.49	2451.84
Ba(138)* (ppm)	660.38	658.48	642.31	649.18	612.74	2729.66	2449.91
W (ppm)	3.10	3.29	2.83	3.55	2.75	9.77	7.47
Pb (ppm)	0.46	1.09	0.31	0.34	0.43	0.50	0.27
Bi (ppm)	0.01	0.02	0.02	0.02	0.02	BDL	0.12
Th (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	0.05
U (ppm)	0.22	0.51	0.09	0.11	0.07	BDL	0.05
Tl (ppm)	3.03	2.94	2.82	3.24	2.90	1.68	1.59
SiO2 wt. %	50.17	50.17	50.17	50.17	50.17	46.10	46.10

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909158-11	G909158-12	G909158-13	G909158-14	G909158-15	ANN006002.018-1	ANN006002.018-11
Data Quality (1-3)	3	2	3	2	3	2.5	2.5
1 standard error (ppm) *							
Li	1.68	0.98	0.60	2.54	1.00	0.36	0.65
B	4.34	3.05	2.60	2.71	2.14	1.80	1.92
Si	4690.54	4690.54	4690.54	4690.54	4690.54	4309.55	4309.55
P	2.02	4.63	2.79	2.29	22.44	5.40	3.21
Sc	0.44	0.25	0.38	0.46	0.36	0.19	0.38
Ti	41.17	59.34	17.18	35.81	15.88	71.47	61.54
V	10.91	11.83	12.70	16.61	11.38	1.68	1.61
Cr	0.57	1.01	0.43	1.46	0.59	0.31	0.18
Mn	5.53	6.95	6.21	5.80	3.87	1.40	1.05
Co	0.19	0.19	0.18	0.14	0.23	0.13	BDL
Cu	0.57	4.94	0.75	4.57	0.44	0.55	0.32
Cu	0.59	5.91	1.30	3.90	1.35	0.30	0.56
Zn	1.11	1.28	0.74	1.74	0.72	0.49	0.33
Zn	1.90	1.98	1.27	4.11	1.60	4.46	3.50
As	0.19	0.13	0.24	0.19	0.16	BDL	0.22
Se	0.78	1.28	0.28	4.42	0.63	0.38	0.36
Se	BDL	BDL	1.90	BDL	BDL	BDL	BDL
Rb	19.72	24.54	17.50	17.75	23.18	7.68	7.30
Sr	2.82	2.44	1.69	0.51	2.78	1.57	0.86
Mo	0.12	BDL	0.15	BDL	BDL	0.04	36.17
Sn	0.20	0.28	0.05	0.14	0.11	0.18	0.25
Te	BDL	0.19	BDL	BDL	BDL	0.13	BDL
Cs	0.27	0.33	0.17	0.23	0.24	0.07	0.14
Ba	29.38	40.00	28.62	31.40	22.22	105.72	84.33
Ba	25.78	35.33	33.72	28.77	29.89	93.39	72.90
W	0.31	0.69	0.59	0.43	0.09	0.50	0.33
Pb	0.09	0.07	0.13	0.06	0.04	0.09	0.08
Bi	0.02	0.02	0.01	0.01	0.01	BDL	0.05
Th	BDL	BDL	BDL	BDL	BDL	BDL	0.01
U	0.04	0.10	0.01	0.02	0.03	BDL	0.01
Tl	0.20	0.35	0.19	0.25	0.27	0.12	0.11

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909158-11	G909158-12	G909158-13	G909158-14	G909158-15	ANN006002.018-1	ANN006002.018-11
Data Quality (1-3)	3	2	3	2	3	2.5	2.5
1 standard error (ppm)**							
Li	2.81	2.59	2.25	4.01	2.34	1.08	1.06
B	22.32	24.67	24.45	24.85	23.41	15.47	19.00
Si	8057.12	8057.12	8057.12	8057.12	8057.12	7402.69	7402.69
P	10.58	13.81	10.77	9.54	25.17	17.20	11.72
Sc	0.58	0.47	0.55	0.64	0.51	0.33	0.47
Ti	88.06	98.88	54.99	79.11	48.47	244.50	252.22
V	17.19	18.46	18.90	23.66	17.23	3.71	3.66
Cr	1.61	2.16	1.52	2.59	1.62	0.81	1.23
Mn	8.25	9.48	8.50	9.81	6.63	2.09	1.86
Co	0.19	0.21	0.19	0.17	0.24	0.13	BDL
Cu	1.31	7.10	1.94	14.81	1.02	0.61	0.34
Cu	1.34	7.76	2.22	14.01	1.62	0.49	0.56
Zn	1.27	1.55	1.00	2.20	0.91	0.56	0.39
Zn	2.23	2.42	1.72	4.53	1.92	5.50	4.46
As	0.25	0.14	0.28	0.28	0.17	BDL	0.36
Se	1.29	4.53	1.93	6.71	1.09	2.03	3.49
Se	BDL	BDL	2.14	BDL	BDL	BDL	BDL
Rb	22.47	26.66	20.34	21.27	25.22	9.42	8.98
Sr	3.04	2.60	1.93	0.56	3.04	1.70	1.03
Mo	0.12	BDL	0.16	BDL	BDL	0.04	51.05
Sn	0.26	0.35	0.21	0.27	0.21	0.61	0.52
Te	BDL	0.19	BDL	BDL	BDL	0.14	BDL
Cs	0.44	0.47	0.35	0.43	0.37	0.15	0.22
Ba	30.51	40.80	29.69	32.43	23.50	133.85	111.43
Ba	30.98	39.26	37.63	33.36	33.88	115.16	94.72
W	0.47	0.79	0.68	0.59	0.33	1.26	0.94
Pb	0.09	0.08	0.13	0.06	0.04	0.10	0.09
Bi	0.02	0.02	0.01	0.01	0.01	BDL	0.05
Th	BDL	BDL	BDL	BDL	BDL	BDL	0.01
U	0.05	0.11	0.01	0.02	0.03	BDL	0.01
Tl	0.39	0.47	0.36	0.44	0.42	0.23	0.22

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	ANN006002.018-2	ANN006002.018-3	ANN006002.018-4	ANN006002.018-5	ANN006002.018-6	ANN006002.018-7	ANN006002.018-8
Data Quality (1-3)	2.5	3	3	3	2.5	2.5	3
1 standard error (ppm) *							
Li	0.47	0.52	0.37	0.46	0.42	0.96	0.31
B	2.66	1.61	5.27	3.29	3.80	6.09	2.60
Si	4309.55	4309.55	4309.55	4309.55	4309.55	4309.55	4309.55
P	2.78	2.05	2.63	2.87	3.58	7.39	10.19
Sc	0.50	0.47	0.25	0.27	0.52	0.29	0.21
Ti	70.50	78.12	58.27	69.35	64.04	58.03	63.47
V	1.60	1.72	1.64	1.76	2.50	1.96	2.32
Cr	0.58	0.37	0.28	0.43	0.29	0.44	0.23
Mn	1.29	1.21	1.39	1.17	1.20	1.16	1.79
Co	BDL	0.12	BDL	BDL	BDL	0.38	BDL
Cu	0.18	0.14	0.12	0.55	0.27	0.18	0.41
Cu	0.47	0.21	0.20	0.46	0.30	0.14	0.44
Zn	0.48	0.34	0.63	0.34	0.33	0.54	0.37
Zn	3.95	4.75	2.40	3.49	5.32	5.68	6.19
As	BDL	BDL	BDL	BDL	0.25	BDL	0.28
Se	BDL	BDL	0.22	BDL	BDL	BDL	0.40
Se	0.48	BDL	0.48	BDL	BDL	0.61	0.34
Rb	7.56	8.14	8.00	7.90	8.34	7.68	8.58
Sr	1.32	0.89	0.78	0.72	0.84	0.92	0.82
Mo	BDL	0.01	BDL	BDL	BDL	BDL	BDL
Sn	0.14	0.28	0.14	0.16	0.17	0.10	0.22
Te	BDL	0.17	BDL	BDL	BDL	0.67	BDL
Cs	0.14	0.11	0.38	0.18	0.15	0.11	0.12
Ba	93.28	99.66	74.95	97.32	101.40	86.76	99.54
Ba	77.49	85.45	65.92	85.45	85.02	83.30	94.26
W	0.31	0.41	0.47	0.37	0.32	0.34	0.31
Pb	0.07	0.11	0.16	0.10	0.04	0.14	0.09
Bi	BDL	0.07	BDL	BDL	0.01	0.08	BDL
Th	0.02	BDL	0.01	0.02	0.01	0.02	0.04
U	0.01	0.01	0.01	BDL	0.02	0.00	0.02
Tl	0.13	0.11	0.14	0.11	0.10	0.13	0.11

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	ANN006002.018-2	ANN006002.018-3	ANN006002.018-4	ANN006002.018-5	ANN006002.018-6	ANN006002.018-7	ANN006002.018-8
Data Quality (1-3)	2.5	3	3	3	2.5	2.5	3
1 standard error (ppm)**							
Li	1.31	1.21	1.21	1.39	1.05	1.50	1.18
B	26.11	15.74	39.64	32.21	32.10	24.23	20.04
Si	7402.69	7402.69	7402.69	7402.69	7402.69	7402.69	7402.69
P	15.02	13.91	15.09	12.19	12.13	18.75	19.83
Sc	0.55	0.55	0.34	0.44	0.59	0.39	0.36
Ti	251.25	294.99	207.14	286.39	231.23	243.09	263.38
V	3.71	3.89	3.51	3.77	3.92	3.58	4.09
Cr	1.18	1.47	0.98	2.67	1.27	2.01	1.11
Mn	2.10	2.03	2.29	2.12	2.01	1.97	2.48
Co	BDL	0.13	BDL	BDL	BDL	0.38	BDL
Cu	0.23	0.20	0.27	0.61	0.33	0.22	0.44
Cu	0.57	0.30	0.45	0.60	0.38	0.23	0.47
Zn	0.57	0.43	0.70	0.47	0.41	0.58	0.42
Zn	5.07	5.80	3.43	4.75	6.08	6.29	7.04
As	BDL	BDL	BDL	BDL	0.26	BDL	0.34
Se	BDL	BDL	1.51	2.60	BDL	BDL	5.32
Se	1.15	BDL	1.07	BDL	BDL	0.72	1.36
Rb	9.36	9.84	9.83	9.74	9.85	9.16	10.23
Sr	1.45	1.10	0.92	0.88	0.97	1.07	1.05
Mo	BDL	0.01	BDL	BDL	BDL	BDL	BDL
Sn	0.61	0.58	0.51	0.54	0.54	0.48	0.64
Te	BDL	0.19	BDL	BDL	BDL	0.82	BDL
Cs	0.24	0.19	0.50	0.31	0.28	0.23	0.21
Ba	120.36	128.96	98.16	127.28	122.02	110.20	132.24
Ba	100.03	109.46	85.01	109.86	102.01	100.97	119.73
W	1.10	1.20	0.93	0.95	0.79	0.98	1.01
Pb	0.09	0.13	0.18	0.12	0.05	0.20	0.11
Bi	BDL	0.08	BDL	BDL	0.01	0.08	BDL
Th	0.02	BDL	0.01	0.02	0.01	0.02	0.04
U	0.01	0.01	0.02	BDL	0.02	0.00	0.02
Tl	0.24	0.20	0.26	0.22	0.21	0.25	0.21

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	ANN006002.018-9	G909152_1-1	G909152_1-2	G909152_1-3	G909152_10-1	G909152_2-1	G909152_4-1
Data Quality (1-3)	3	3	1.5	3	1	3	2
1 standard error (ppm) *							
Li	0.33	0.32	0.41	0.40	0.59	0.69	0.21
B	2.23	4.45	1.80	2.95	1.55	1.28	1.05
Si	4309.55	4445.59	4445.59	4445.59	4445.59	4445.59	4445.59
P	2.63	2.11	163.07	3.55	304.36	4.20	15.77
Sc	0.40	0.21	0.21	0.23	0.24	0.33	0.35
Ti	73.82	23.72	30.17	57.75	91.10	93.32	63.60
V	1.80	1.25	1.68	2.52	4.63	3.82	2.09
Cr	0.44	0.41	0.81	0.47	1.22	0.76	0.34
Mn	1.70	0.66	0.79	0.75	1.08	0.69	0.88
Co	0.12	BDL	0.17	0.08	0.07	0.12	0.10
Cu	0.31	0.52	102.47	1.78	29.66	0.17	15.06
Cu	0.14	1.04	115.61	1.55	31.21	0.21	14.61
Zn	0.45	0.39	0.46	0.16	0.68	0.28	0.68
Zn	4.49	1.99	1.41	2.16	4.85	2.90	2.46
As	0.17	0.15	0.14	BDL	0.94	0.13	0.18
Se	0.26	0.12	0.76	0.46	0.35	0.21	1.05
Se	0.79	BDL	2.23	0.33	4.25	BDL	1.70
Rb	7.41	8.17	7.41	7.93	7.63	6.02	9.78
Sr	0.93	0.40	0.60	1.24	103.78	1.44	6.40
Mo	BDL	BDL	0.17	0.06	0.77	BDL	0.12
Sn	0.25	1.04	1.26	0.77	0.57	0.31	0.24
Te	BDL	BDL	0.31	BDL	1.20	0.22	0.27
Cs	0.15	0.11	0.14	0.06	0.28	0.05	0.15
Ba	108.79	24.54	28.52	49.28	103.57	72.51	51.94
Ba	96.91	23.94	32.80	54.74	155.53	65.31	50.32
W	0.42	0.84	0.53	0.42	0.35	0.43	0.10
Pb	0.11	0.04	0.06	0.04	5.49	0.03	0.03
Bi	0.01	0.01	0.02	0.01	0.31	BDL	0.22
Th	BDL	0.02	0.72	0.01	6.95	0.03	0.09
U	0.02	0.03	0.21	0.02	0.34	0.01	0.01
Tl	0.11	0.14	0.11	0.08	0.13	0.05	0.08

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	ANN006002.018-9	G909152_1-1	G909152_1-2	G909152_1-3	G909152_10-1	G909152_2-1	G909152_4-1
Data Quality (1-3)	3	3	1.5	3	1	3	2
1 standard error (ppm)**							
Li	1.07	1.23	1.13	1.11	1.70	1.42	0.62
B	19.94	14.84	18.91	16.60	12.24	9.38	7.56
Si	7402.69	7636.36	7636.36	7636.36	7636.36	7636.36	7636.36
P	13.69	13.05	448.79	11.03	1872.37	16.69	112.55
Sc	0.52	0.25	0.27	0.29	0.43	0.43	0.41
Ti	248.72	89.76	106.26	128.07	224.45	316.71	146.86
V	4.02	2.67	3.68	4.19	7.99	7.58	4.03
Cr	1.50	1.78	1.81	1.79	3.45	1.90	1.48
Mn	2.41	1.19	1.35	1.25	1.44	1.15	1.04
Co	0.13	BDL	0.18	0.08	0.10	0.12	0.11
Cu	0.34	0.88	135.37	2.24	124.51	0.33	59.35
Cu	0.31	1.27	145.92	2.10	124.53	0.38	58.56
Zn	0.51	0.44	0.51	0.23	0.78	0.31	0.69
Zn	5.61	2.24	1.93	2.67	6.22	3.73	2.96
As	0.26	0.19	0.36	BDL	2.98	0.20	0.35
Se	1.64	1.87	3.86	1.33	5.12	3.33	4.55
Se	1.60	BDL	20.52	0.85	76.41	BDL	24.98
Rb	9.18	9.58	8.85	9.17	8.49	7.07	9.98
Sr	1.14	0.44	0.63	1.27	111.91	1.54	6.63
Mo	BDL	BDL	0.19	0.06	0.88	BDL	0.13
Sn	0.65	7.60	4.49	2.92	1.57	2.22	1.06
Te	BDL	BDL	0.41	BDL	3.34	0.22	0.28
Cs	0.21	0.18	0.24	0.13	0.50	0.07	0.18
Ba	140.14	26.95	31.78	52.40	115.02	78.40	54.75
Ba	121.37	26.33	35.46	57.40	166.49	71.73	53.17
W	1.16	2.87	1.30	0.92	0.53	0.91	0.25
Pb	0.12	0.04	0.06	0.05	8.42	0.04	0.04
Bi	0.01	0.01	0.05	0.01	0.64	BDL	0.23
Th	BDL	0.02	0.74	0.01	8.53	0.03	0.10
U	0.02	0.03	0.23	0.02	0.41	0.01	0.01
Tl	0.20	0.23	0.19	0.16	0.19	0.14	0.10

**DOES include uncertainty
in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909152_4-2	G909152_4-3	G909152_4-4	G909152_6-1	G909152_7-1	G909152_7-2	G909152_7-3
Data Quality (1-3)	3	3	3	1	3	3	3
1 standard error (ppm) *							
Li	0.50	0.70	1.07	0.26	0.57	0.58	0.57
B	1.17	1.11	1.57	0.57	0.65	1.16	1.67
Si	4445.59	4445.59	4445.59	4445.59	4445.59	4445.59	4445.59
P	5.08	43.38	12.42	2.31	11.99	20.77	29.81
Sc	0.25	0.27	0.34	0.14	0.44	0.70	0.34
Ti	123.80	102.45	120.56	67.11	63.71	67.93	59.16
V	5.51	3.72	4.65	2.71	5.44	5.01	3.26
Cr	0.79	1.14	0.77	2.22	0.68	0.60	0.86
Mn	1.37	0.94	0.95	0.55	1.25	0.86	0.60
Co	0.05	0.12	0.11	0.08	0.08	0.15	0.06
Cu	5.79	67.20	7.36	0.64	1.18	1.64	1.47
Cu	5.28	60.00	7.43	0.80	1.19	1.11	1.70
Zn	0.39	0.65	0.96	0.09	0.22	0.32	0.46
Zn	4.26	5.44	2.44	1.61	4.20	4.19	2.45
As	BDL	BDL	BDL	0.09	0.06	0.18	0.14
Se	0.60	0.42	0.34	0.21	0.27	0.63	0.16
Se	0.61	3.29	0.54	BDL	BDL	0.31	0.54
Rb	8.20	8.10	6.11	3.60	7.07	5.70	7.78
Sr	1.11	1.08	1.43	1.09	1.42	1.23	0.89
Mo	0.06	BDL	0.14	0.12	0.15	0.09	0.09
Sn	0.37	0.26	0.28	0.13	0.72	0.47	0.43
Te	BDL	0.21	0.22	BDL	BDL	0.10	0.07
Cs	0.05	0.14	0.12	0.04	0.08	0.05	0.07
Ba	90.52	62.58	80.74	110.07	68.99	68.04	46.13
Ba	60.53	62.26	76.66	109.81	67.14	63.67	49.96
W	0.62	0.22	0.13	0.07	0.21	0.19	0.53
Pb	0.13	0.06	0.04	0.02	0.05	0.04	0.07
Bi	0.01	0.01	0.03	0.00	0.01	0.02	0.02
Th	0.01	0.09	0.14	0.05	0.20	0.38	0.35
U	0.02	0.02	0.26	0.10	0.07	0.04	0.02
Tl	0.10	0.07	0.16	0.03	0.07	0.10	0.07

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909152_4-2	G909152_4-3	G909152_4-4	G909152_6-1	G909152_7-1	G909152_7-2	G909152_7-3
Data Quality (1-3)	3	3	3	1	3	3	3
1 standard error (ppm)**							
Li	1.55	1.60	1.74	0.55	1.56	1.59	1.64
B	10.45	10.45	11.10	3.16	9.26	8.73	9.61
Si	7636.36	7636.36	7636.36	7636.36	7636.36	7636.36	7636.36
P	25.78	85.96	35.85	6.71	66.36	100.90	145.86
Sc	0.48	0.48	0.51	0.23	0.59	0.85	0.49
Ti	458.60	319.39	393.25	133.39	221.83	231.14	222.52
V	9.20	7.85	8.13	3.61	9.05	8.75	7.28
Cr	2.69	5.82	3.05	3.62	3.87	4.03	3.92
Mn	1.76	1.30	1.55	0.66	1.66	1.33	1.12
Co	0.06	0.13	0.11	0.09	0.08	0.15	0.06
Cu	9.68	76.80	10.35	0.74	1.80	2.96	3.52
Cu	9.57	70.64	10.25	1.02	1.60	2.62	3.56
Zn	0.44	0.74	0.98	0.12	0.29	0.36	0.48
Zn	5.06	6.01	3.45	2.04	4.84	4.97	3.23
As	BDL	BDL	BDL	0.12	0.22	0.26	0.17
Se	4.80	2.69	2.66	2.13	2.61	3.17	2.81
Se	5.91	16.75	2.72	BDL	BDL	1.21	1.42
Rb	9.21	8.85	7.48	3.80	8.16	6.96	8.74
Sr	1.22	1.18	1.49	1.12	1.50	1.35	0.99
Mo	0.06	BDL	0.16	0.12	0.15	0.10	0.09
Sn	2.10	1.70	1.76	0.57	2.45	2.25	2.36
Te	BDL	0.29	0.25	BDL	BDL	0.12	0.08
Cs	0.11	0.23	0.20	0.05	0.11	0.08	0.09
Ba	97.72	68.98	86.02	110.82	75.14	75.44	54.04
Ba	70.45	68.60	81.98	110.53	73.39	71.27	57.39
W	1.17	0.48	0.70	0.22	0.87	0.92	1.00
Pb	0.13	0.06	0.04	0.02	0.05	0.05	0.08
Bi	0.01	0.01	0.04	0.00	0.01	0.03	0.03
Th	0.02	0.09	0.14	0.05	0.22	0.44	0.50
U	0.02	0.02	0.27	0.11	0.08	0.05	0.06
Tl	0.18	0.15	0.21	0.05	0.17	0.16	0.14

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909152_7-4	G909152_8-1	G909152_8-2	G909152_9-1	G909152_9-2	G909152_9-3	G909152_9-4
Data Quality (1-3)	3	1.5	3	3	2.5	3	2.5
1 standard error (ppm) *							
Li	0.41	0.49	0.40	0.35	0.27	0.59	0.61
B	0.84	1.23	1.24	1.57	0.64	0.85	1.28
Si	4445.59	4445.59	4445.59	4445.59	4445.59	4445.59	4445.59
P	16.75	210.92	82.55	4.09	2.94	6.89	27.84
Sc	0.38	0.54	0.17	0.35	0.47	0.28	0.55
Ti	58.64	71.04	67.12	89.70	85.13	97.61	52.67
V	3.59	3.70	3.25	3.44	4.03	2.75	3.70
Cr	0.70	0.42	1.12	0.96	0.41	0.88	0.51
Mn	0.71	0.73	0.68	0.90	0.68	0.90	0.56
Co	0.05	0.13	0.14	0.11	0.04	0.08	0.10
Cu	0.98	2.26	1.28	0.40	0.28	0.62	0.34
Cu	0.89	2.26	1.66	0.41	0.41	0.31	0.28
Zn	0.25	0.25	0.42	0.42	0.20	0.46	0.35
Zn	3.89	3.48	4.46	4.58	4.05	3.27	4.01
As	0.07	0.33	0.17	BDL	BDL	BDL	BDL
Se	0.30	0.16	0.28	0.28	0.39	0.28	0.27
Se	0.39	0.60	0.67	BDL	0.61	BDL	BDL
Rb	7.37	6.72	7.06	9.35	5.63	6.56	4.52
Sr	1.79	1.59	1.82	0.97	1.47	0.91	1.13
Mo	0.11	0.53	0.30	BDL	BDL	BDL	BDL
Sn	0.52	0.28	0.36	0.64	0.40	0.37	0.31
Te	0.26	0.12	BDL	BDL	BDL	BDL	BDL
Cs	0.06	0.10	0.11	0.04	0.06	0.05	0.05
Ba	48.54	63.05	63.87	65.29	81.15	47.02	61.85
Ba	68.08	59.34	62.15	63.08	67.45	48.68	57.86
W	0.31	0.25	0.53	0.44	0.26	0.28	0.20
Pb	0.04	0.02	0.06	0.05	0.02	0.06	0.07
Bi	0.02	0.02	0.02	BDL	BDL	BDL	BDL
Th	0.20	0.53	0.35	0.03	0.02	0.03	0.06
U	0.05	0.22	0.05	BDL	BDL	0.04	0.03
Tl	0.06	0.05	0.09	0.05	0.05	0.10	0.08

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909152_7-4	G909152_8-1	G909152_8-2	G909152_9-1	G909152_9-2	G909152_9-3	G909152_9-4
Data Quality (1-3)	3	1.5	3	3	2.5	3	2.5
1 standard error (ppm)**							
Li	1.45	1.46	1.19	1.56	1.02	1.72	1.15
B	9.63	11.05	11.57	10.27	7.79	10.00	10.50
Si	7636.36	7636.36	7636.36	7636.36	7636.36	7636.36	7636.36
P	119.33	554.55	166.81	18.74	12.13	28.03	63.60
Sc	0.58	0.62	0.33	0.46	0.58	0.41	0.62
Ti	206.77	241.20	255.39	292.58	255.87	266.62	193.25
V	8.18	7.43	6.97	6.77	6.76	6.29	6.89
Cr	3.49	2.17	1.75	2.29	1.85	2.65	1.67
Mn	1.21	1.36	1.22	1.29	1.03	1.41	1.06
Co	0.05	0.13	0.14	0.11	0.05	0.09	0.12
Cu	2.89	3.74	2.35	0.58	0.32	0.79	0.61
Cu	2.98	3.65	2.38	0.57	0.43	0.53	0.77
Zn	0.32	0.31	0.52	0.49	0.24	0.53	0.42
Zn	4.60	4.41	5.10	5.19	4.67	4.00	4.94
As	0.23	0.34	0.27	BDL	BDL	BDL	BDL
Se	2.64	2.73	2.14	4.05	2.91	4.04	2.72
Se	1.63	1.56	0.93	BDL	0.85	BDL	BDL
Rb	8.39	7.83	8.16	10.12	6.49	7.72	5.53
Sr	1.85	1.69	1.89	1.08	1.56	1.00	1.26
Mo	0.11	0.55	0.30	BDL	BDL	BDL	BDL
Sn	2.25	1.82	2.16	2.35	1.91	2.14	1.61
Te	0.29	0.12	BDL	BDL	BDL	BDL	BDL
Cs	0.10	0.15	0.18	0.07	0.07	0.09	0.10
Ba	56.80	71.23	70.79	72.30	86.32	55.08	70.99
Ba	74.13	67.92	68.90	70.22	73.54	56.46	67.48
W	0.87	0.61	0.84	0.99	0.78	0.88	0.49
Pb	0.04	0.02	0.06	0.05	0.02	0.06	0.07
Bi	0.03	0.03	0.03	BDL	BDL	BDL	BDL
Th	0.34	0.55	0.37	0.03	0.02	0.04	0.07
U	0.06	0.23	0.06	BDL	BDL	0.04	0.03
Tl	0.16	0.14	0.17	0.12	0.12	0.16	0.14

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909154_19-1	G909154_19-2	G909154_19-3	G909154_19-5	G909154_21-1	G909154_22-1	G909154_22-2
Data Quality (1-3)	3	3	3	2.5	3	2	2.5
1 standard error (ppm) *							
Li	0.20	0.44	0.67	0.52	0.50	0.44	0.18
B	1.00	1.35	1.16	1.40	1.43	1.19	1.48
Si	4401.65	4401.65	4401.65	4401.65	4401.65	4401.65	4401.65
P	4.41	2.59	7.13	4.23	5.72	4.21	2.71
Sc	0.39	0.87	0.21	0.38	0.95	0.26	4.39
Ti	77.24	100.89	71.49	68.63	150.54	12.67	116.04
V	4.28	14.27	5.47	6.61	11.77	1.63	22.99
Cr	0.53	0.97	0.52	0.54	2.04	0.46	1.03
Mn	0.23	0.40	0.31	0.51	0.29	0.73	0.46
Co	BDL	BDL	BDL	0.06	BDL	BDL	0.08
Cu	0.20	0.53	0.22	1.89	3.36	5.26	0.29
Cu	0.24	0.39	0.26	1.01	3.36	5.73	0.32
Zn	0.08	0.14	0.26	0.25	0.17	0.23	0.17
Zn	0.78	1.79	0.89	0.97	0.98	1.78	0.83
As	BDL	0.17	BDL	0.37	0.44	0.11	BDL
Se	0.25	0.31	0.45	0.48	0.16	0.19	0.28
Se	BDL	0.44	0.45	BDL	BDL	BDL	BDL
Rb	8.13	9.57	15.22	15.12	11.52	5.86	16.45
Sr	2.02	1.49	1.24	2.74	1.04	3.17	0.73
Mo	0.09	BDL	BDL	0.28	2.39	0.21	0.13
Sn	0.40	0.28	0.17	0.30	0.73	0.30	1.01
Te	0.08	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.14	0.08	0.15	0.11	0.11	0.09	0.16
Ba	25.29	26.11	24.07	20.90	19.11	37.07	10.07
Ba	18.23	35.74	23.04	22.39	21.83	39.97	9.87
W	0.75	1.56	1.20	1.15	2.28	0.31	1.27
Pb	0.05	0.03	0.06	0.03	0.06	0.03	0.06
Bi	0.01	0.01	0.01	0.01	0.01	0.02	0.01
Th	BDL	0.01	BDL	0.08	0.21	0.12	BDL
U	0.02	0.08	0.05	0.07	0.11	0.13	0.01
Tl	0.07	0.09	0.08	0.08	0.29	0.04	0.12

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909154_19-1	G909154_19-2	G909154_19-3	G909154_19-5	G909154_21-1	G909154_22-1	G909154_22-2
Data Quality (1-3)	3	3	3	2.5	3	2	2.5
1 standard error (ppm)**							
Li	0.77	1.21	1.05	1.47	1.08	1.51	0.92
B	6.78	8.64	8.75	8.70	8.41	8.52	11.15
Si	7560.88	7560.88	7560.88	7560.88	7560.88	7560.88	7560.88
P	25.70	23.54	33.00	27.03	44.54	30.91	26.10
Sc	0.46	1.13	0.34	0.56	1.54	0.31	5.52
Ti	220.39	317.55	245.89	295.55	503.40	45.68	332.80
V	8.96	24.23	10.30	15.13	26.52	3.74	44.17
Cr	3.01	6.78	2.96	3.37	10.35	1.44	3.11
Mn	0.35	0.63	0.47	0.69	0.47	1.28	0.58
Co	BDL	BDL	BDL	0.06	BDL	BDL	0.08
Cu	0.23	0.86	0.34	2.67	7.26	17.68	0.42
Cu	0.28	0.59	0.38	1.98	7.08	17.75	0.43
Zn	0.09	0.16	0.27	0.29	0.19	0.27	0.18
Zn	1.01	2.05	1.22	1.22	1.17	2.34	0.96
As	BDL	0.25	BDL	0.95	0.72	0.25	BDL
Se	2.39	2.35	1.08	2.59	2.98	2.41	3.36
Se	BDL	1.56	1.09	BDL	BDL	BDL	BDL
Rb	9.46	11.14	16.19	16.27	13.58	6.75	18.57
Sr	2.06	1.61	1.44	2.78	1.18	3.36	0.81
Mo	0.09	BDL	BDL	0.31	3.22	0.23	0.14
Sn	0.95	2.07	1.24	1.59	3.88	1.67	6.78
Te	0.08	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.24	0.18	0.24	0.22	0.24	0.15	0.34
Ba	26.42	28.15	26.31	22.28	20.47	41.10	11.16
Ba	19.91	37.52	25.68	23.85	23.20	44.26	11.17
W	2.58	6.36	3.44	4.67	11.44	0.67	4.90
Pb	0.06	0.04	0.06	0.03	0.07	0.04	0.06
Bi	0.01	0.01	0.01	0.01	0.01	0.02	0.01
Th	BDL	0.01	BDL	0.08	0.22	0.13	BDL
U	0.02	0.09	0.06	0.09	0.12	0.13	0.01
Tl	0.16	0.19	0.19	0.22	0.37	0.12	0.29

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909154_22-4	G909154_23-2	G909154_23-3	G909154_23-4	G909154_23-5	G909154_25-1	G909154_25-2
Data Quality (1-3)	2.5	2	2.5	2.5	3	3	3
1 standard error (ppm) *							
Li	0.32	0.73	0.19	0.48	0.26	0.80	0.37
B	1.40	1.16	2.03	2.56	1.51	0.89	1.73
Si	4401.65	4401.65	4401.65	4401.65	4401.65	4401.65	4401.65
P	8.27	55.27	3.31	4.46	3.19	5.43	4.25
Sc	1.07	0.19	0.75	0.93	0.80	0.57	0.64
Ti	114.72	8.36	34.58	112.06	154.87	88.11	110.77
V	13.81	3.62	6.62	6.17	11.15	10.85	9.66
Cr	1.73	0.46	1.16	1.30	0.55	1.98	1.02
Mn	0.65	0.79	0.21	0.23	0.39	0.27	0.27
Co	BDL	0.04	BDL	BDL	BDL	BDL	BDL
Cu	0.27	1.57	1.03	0.18	0.14	0.20	0.30
Cu	0.37	1.40	1.76	0.66	0.30	BDL	0.46
Zn	0.07	0.52	0.45	0.11	0.19	0.31	0.25
Zn	2.29	2.16	1.30	1.19	1.10	0.81	0.86
As	0.19	BDL	BDL	BDL	0.44	0.09	0.11
Se	0.44	0.28	0.21	0.32	0.16	0.35	0.29
Se	0.53	0.81	BDL	BDL	0.44	0.63	BDL
Rb	11.33	7.46	10.45	9.94	17.00	14.28	9.73
Sr	0.99	15.09	0.81	1.46	0.94	0.94	0.62
Mo	0.15	0.12	BDL	BDL	BDL	0.15	BDL
Sn	0.82	0.16	0.32	0.28	0.63	0.44	0.31
Te	BDL	BDL	BDL	0.13	BDL	BDL	BDL
Cs	0.09	0.13	0.12	0.18	0.12	0.18	0.09
Ba	30.49	19.57	8.14	18.17	19.05	18.86	13.90
Ba	27.31	23.37	7.42	14.91	18.89	15.12	12.87
W	2.42	0.21	0.74	1.16	2.28	1.72	0.97
Pb	0.12	0.05	0.11	0.06	0.04	0.06	0.07
Bi	0.01	0.20	0.02	BDL	BDL	0.01	0.00
Th	BDL	0.08	0.02	BDL	BDL	BDL	BDL
U	BDL	0.01	0.01	BDL	BDL	BDL	BDL
Tl	0.20	0.07	0.06	0.14	0.09	0.12	0.09

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909154_22-4	G909154_23-2	G909154_23-3	G909154_23-4	G909154_23-5	G909154_25-1	G909154_25-2
Data Quality (1-3)	2.5	2	2.5	2.5	3	3	3
1 standard error (ppm)**							
Li	1.08	1.07	0.81	1.09	0.80	1.16	1.03
B	11.38	6.71	15.49	12.86	10.93	7.78	11.14
Si	7560.88	7560.88	7560.88	7560.88	7560.88	7560.88	7560.88
P	41.89	58.89	24.27	25.75	24.14	28.66	24.17
Sc	1.47	0.25	0.84	1.69	1.41	0.98	1.16
Ti	435.27	37.51	119.17	471.72	590.39	343.68	418.18
V	28.21	8.19	11.12	14.18	22.47	23.10	22.07
Cr	12.07	1.38	7.03	7.73	3.43	13.55	3.98
Mn	0.74	1.40	0.31	0.36	0.48	0.43	0.41
Co	BDL	0.04	BDL	BDL	BDL	BDL	BDL
Cu	0.55	1.68	3.13	0.32	0.45	0.21	0.78
Cu	0.66	1.46	3.28	0.78	0.43	BDL	0.99
Zn	0.09	0.62	0.46	0.12	0.19	0.32	0.26
Zn	2.57	2.54	1.37	1.36	1.26	0.96	1.12
As	0.21	BDL	BDL	BDL	0.53	0.20	0.17
Se	3.89	3.15	3.44	4.35	3.11	2.99	3.21
Se	1.56	0.93	BDL	BDL	1.84	1.21	BDL
Rb	13.17	8.88	11.87	11.91	18.42	15.95	11.42
Sr	1.17	15.13	0.92	1.53	1.06	1.00	0.76
Mo	0.15	0.12	BDL	BDL	BDL	0.15	BDL
Sn	2.97	0.35	1.40	1.63	2.91	2.46	1.58
Te	BDL	BDL	BDL	0.13	BDL	BDL	BDL
Cs	0.23	0.25	0.23	0.29	0.24	0.30	0.22
Ba	33.29	23.45	9.33	19.90	20.13	19.65	16.11
Ba	30.86	27.26	8.81	17.18	20.18	16.29	15.49
W	5.59	0.35	1.77	5.19	6.93	4.05	3.84
Pb	0.12	0.05	0.11	0.07	0.04	0.07	0.07
Bi	0.01	0.20	0.02	BDL	BDL	0.01	0.01
Th	BDL	0.09	0.02	BDL	BDL	BDL	BDL
U	BDL	0.01	0.02	BDL	BDL	BDL	BDL
Tl	0.34	0.21	0.19	0.23	0.26	0.25	0.22

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909154_26-1	G909154_28-1	G909154_28-2	G909160_11-1	G909160_11-2	G909160_11-3	G909160_11-4
Data Quality (1-3)	3	2.5	2.5	3	2.5	3	3
Li (ppm)	7.14	6.49	8.93	9.14	12.17	9.09	8.72
B (ppm)	26.14	30.83	27.09	60.35	60.02	56.43	61.48
Si (ppm)	220082.27	220082.27	220082.27	222326.10	222326.10	222326.10	222326.10
P (ppm)	81.44	74.48	129.85	75.64	157.36	227.65	234.44
Sc (ppm)	20.45	127.12	21.31	9.77	13.32	9.57	9.30
Ti (ppm)	4236.08	3142.17	5355.35	768.95	850.27	1019.80	875.38
V (ppm)	267.26	837.29	468.19	87.91	95.70	94.65	93.39
Cr (ppm)	16.12	12.02	45.53	8.45	28.60	8.97	8.85
Mn (ppm)	10.42	8.99	10.27	149.68	154.90	165.71	170.08
Co (ppm)	BDL	BDL	BDL	BDL	BDL	0.53	BDL
Cu(63) (ppm)	2.51	1.06	15.58	4.31	8.96	20.61	17.37
Cu(65)* (ppm)	3.56	1.14	14.20	4.77	11.66	21.33	16.39
Zn(66)* (ppm)	2.10	2.42	1.39	15.91	6.59	16.89	21.04
Zn(68) (ppm)	26.20	14.39	25.03	134.76	154.49	155.27	153.63
As (ppm)	0.21	BDL	BDL	BDL	0.33	1.26	1.08
Se(76) (ppm)	2.47	4.01	3.75	4.38	3.92	3.52	3.16
Se(77)* (ppm)	1.62	1.53	BDL	1.76	0.50	0.81	2.97
Rb (ppm)	358.85	574.51	443.14	310.47	322.75	313.29	301.63
Sr (ppm)	24.90	16.20	34.07	80.75	82.43	86.24	82.29
Mo (ppm)	1.10	BDL	0.69	0.03	0.06	3.27	1.87
Sn (ppm)	7.41	30.80	13.15	1.40	1.56	1.27	1.30
Te (ppm)	BDL	BDL	0.27	0.11	0.14	0.25	BDL
Cs (ppm)	2.43	3.97	3.52	2.31	3.32	2.18	2.42
Ba(137) (ppm)	605.13	292.17	654.62	3135.23	2838.48	3659.86	3423.30
Ba(138)* (ppm)	614.79	282.83	652.83	3198.61	2918.38	4797.22	3800.61
W (ppm)	35.05	34.45	42.23	1.06	1.26	1.04	0.63
Pb (ppm)	0.65	0.42	0.71	1.35	1.15	1.53	1.76
Bi (ppm)	0.01	BDL	0.05	0.10	0.12	0.40	0.28
Th (ppm)	0.02	BDL	0.02	0.15	0.58	0.81	0.28
U (ppm)	0.04	0.04	0.24	0.29	0.36	0.65	0.64
Tl (ppm)	1.68	2.58	1.96	2.04	1.84	2.05	1.91
SiO2 wt. %	47.08	47.08	47.08	47.56	47.56	47.56	47.56

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909154_26-1	G909154_28-1	G909154_28-2	G909160_11-1	G909160_11-2	G909160_11-3	G909160_11-4
Data Quality (1-3)	3	2.5	2.5	3	2.5	3	3
1 standard error (ppm) *							
Li	0.31	0.29	0.49	0.31	0.51	0.31	0.39
B	1.69	0.94	0.95	3.56	2.35	1.84	2.34
Si	4401.65	4401.65	4401.65	4446.52	4446.52	4446.52	4446.52
P	11.88	5.83	6.50	95.06	8.09	27.01	9.94
Sc	0.60	2.94	0.91	0.37	0.67	0.39	0.41
Ti	92.41	69.96	242.39	19.25	20.54	34.05	21.46
V	6.49	19.12	11.40	2.11	2.57	2.64	2.10
Cr	0.88	0.56	1.73	0.27	2.29	0.68	0.35
Mn	0.28	0.24	0.31	4.06	3.77	4.19	4.12
Co	BDL	BDL	BDL	BDL	BDL	0.12	BDL
Cu	0.59	0.19	0.75	8.97	0.48	2.25	0.66
Cu	0.26	0.21	0.71	9.05	0.45	2.52	0.68
Zn	0.25	0.10	0.17	0.88	0.24	0.82	0.71
Zn	1.11	0.58	1.11	4.43	5.01	5.09	4.51
As	0.11	BDL	BDL	BDL	0.12	0.28	0.15
Se	0.19	0.63	0.39	0.25	0.25	0.18	0.12
Se	0.63	1.29	BDL	0.72	0.17	0.38	0.66
Rb	8.16	17.22	9.94	7.27	7.82	9.78	7.14
Sr	0.67	0.50	1.14	2.13	2.37	3.54	2.21
Mo	0.08	BDL	0.23	1.16	0.17	0.42	0.09
Sn	0.29	0.83	0.53	0.05	0.15	0.06	0.09
Te	BDL	BDL	0.11	0.27	0.11	0.12	BDL
Cs	0.11	0.14	0.19	0.07	0.14	0.10	0.09
Ba	14.14	7.50	15.21	72.71	68.81	127.76	80.40
Ba	15.94	7.48	15.77	77.06	81.88	361.18	429.94
W	1.05	1.33	1.98	0.03	0.09	0.19	0.02
Pb	0.04	0.05	0.08	0.11	0.09	0.12	0.24
Bi	0.01	BDL	0.03	0.10	0.01	0.05	0.02
Th	0.02	BDL	0.01	0.39	0.05	0.09	0.06
U	0.02	0.02	0.02	0.29	0.02	0.14	0.10
Tl	0.10	0.10	0.14	0.10	0.10	0.13	0.10

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909154_26-1	G909154_28-1	G909154_28-2	G909160_11-1	G909160_11-2	G909160_11-3	G909160_11-4
Data Quality (1-3)	3	2.5	2.5	3	2.5	3	3
1 standard error (ppm)**							
Li	1.05	0.96	1.35	1.33	1.80	1.32	1.29
B	9.67	11.26	9.91	22.28	22.00	20.64	22.53
Si	7560.88	7560.88	7560.88	7637.96	7637.96	7637.96	7637.96
P	26.16	22.10	37.73	97.50	45.81	70.60	67.91
Sc	1.00	5.78	1.24	0.58	0.91	0.59	0.59
Ti	407.06	302.26	556.71	75.03	82.77	102.02	85.30
V	14.02	43.38	24.58	4.61	5.15	5.14	4.83
Cr	3.35	2.48	9.30	1.71	6.17	1.92	1.81
Mn	0.48	0.41	0.49	6.68	6.65	7.21	7.29
Co	BDL	BDL	BDL	BDL	BDL	0.12	BDL
Cu	0.65	0.22	1.85	8.98	1.06	3.13	1.95
Cu	0.47	0.25	1.71	9.06	1.32	3.39	1.87
Zn	0.25	0.12	0.18	1.00	0.31	0.96	0.94
Zn	1.35	0.71	1.33	5.84	6.64	6.72	6.26
As	0.14	BDL	BDL	BDL	0.17	0.52	0.40
Se	1.98	3.27	3.03	3.51	3.15	2.82	2.53
Se	1.44	1.78	BDL	1.58	0.43	0.75	2.47
Rb	9.70	19.16	11.87	8.83	9.39	11.00	8.64
Sr	0.79	0.57	1.28	2.67	2.88	3.94	2.75
Mo	0.12	BDL	0.24	1.16	0.17	0.49	0.17
Sn	1.36	5.57	2.41	0.25	0.32	0.24	0.25
Te	BDL	BDL	0.13	0.27	0.11	0.13	BDL
Cs	0.19	0.30	0.30	0.17	0.26	0.17	0.18
Ba	16.56	8.58	17.84	88.17	82.31	140.41	97.11
Ba	18.45	8.62	18.61	93.86	95.37	370.01	434.63
W	4.21	4.23	5.30	0.13	0.17	0.22	0.08
Pb	0.05	0.05	0.08	0.15	0.12	0.17	0.27
Bi	0.01	BDL	0.03	0.10	0.02	0.07	0.04
Th	0.02	BDL	0.01	0.39	0.06	0.10	0.06
U	0.02	0.02	0.03	0.29	0.03	0.14	0.11
Tl	0.20	0.28	0.25	0.23	0.21	0.25	0.22

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909160_12-1	G909160_12-2	G909160_14-1	G909160_14-2	G909160_14-3	G909160_14-4	G909160_17-1
Data Quality (1-3)	2	1.5	3	3	3	2	1.5
1 standard error (ppm) *							
Li	0.37	0.36	0.41	0.42	0.47	0.57	0.55
B	3.64	8.37	2.25	2.08	2.31	2.52	2.09
Si	4446.52	4446.52	4446.52	4446.52	4446.52	4446.52	4446.52
P	17.19	137.66	12.90	3.31	16.57	111.14	281.86
Sc	0.69	0.87	0.47	0.70	0.61	0.54	0.35
Ti	118.31	25.96	28.97	49.32	39.13	33.61	33.80
V	7.10	6.57	2.46	2.78	2.50	2.79	3.00
Cr	1.44	1.00	0.32	1.09	0.91	0.56	0.80
Mn	3.62	3.71	3.41	6.18	3.31	3.82	11.30
Co	0.06	0.15	0.10	BDL	0.07	0.12	0.14
Cu	0.43	3.15	0.11	0.30	1.12	3.91	16.02
Cu	0.28	5.33	0.32	0.16	0.91	4.28	19.44
Zn	1.20	1.53	0.60	0.45	0.68	1.25	1.89
Zn	1.11	2.68	4.56	8.00	5.36	4.21	7.06
As	0.12	0.32	0.15	0.13	0.24	0.33	1.20
Se	0.20	0.18	0.20	0.24	0.47	0.60	0.35
Se	0.42	BDL	BDL	BDL	0.60	0.47	0.79
Rb	7.30	6.96	6.73	9.27	9.46	7.76	11.22
Sr	0.35	13.53	2.28	3.20	3.34	3.34	2.88
Mo	0.09	0.58	BDL	0.14	0.37	0.39	2.76
Sn	0.07	0.08	0.14	0.22	0.06	0.05	0.04
Te	0.11	1.26	BDL	BDL	0.11	0.14	0.45
Cs	0.10	0.25	0.10	0.14	0.10	0.07	0.19
Ba	8.16	44.65	77.14	121.49	76.17	67.94	113.70
Ba	7.12	40.32	80.78	162.20	77.62	66.92	94.75
W	0.08	0.25	0.11	0.07	0.10	0.14	0.38
Pb	0.06	4.97	0.21	0.20	0.16	0.19	0.31
Bi	0.01	0.23	BDL	0.01	0.07	0.03	0.23
Th	0.05	0.79	BDL	0.02	0.13	0.48	0.98
U	0.06	0.48	0.02	0.02	0.07	0.12	1.17
Tl	0.08	0.07	0.08	0.10	0.08	0.09	0.10

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909160_12-1	G909160_12-2	G909160_14-1	G909160_14-2	G909160_14-3	G909160_14-4	G909160_17-1
Data Quality (1-3)	2	1.5	3	3	3	2	1.5
1 standard error (ppm)**							
Li	0.59	0.89	1.24	1.66	1.23	1.41	1.84
B	38.54	46.07	19.90	22.81	24.82	24.82	20.70
Si	7637.96	7637.96	7637.96	7637.96	7637.96	7637.96	7637.96
P	87.16	1310.44	50.21	19.59	81.63	334.35	1118.29
Sc	1.14	1.23	0.65	0.90	0.77	0.70	0.54
Ti	148.48	73.99	109.98	125.82	132.50	119.97	88.41
V	15.77	14.25	5.18	5.70	5.37	5.69	6.19
Cr	9.39	8.59	1.97	2.45	3.62	2.29	2.84
Mn	5.96	6.36	6.13	8.21	5.96	6.60	13.98
Co	0.07	0.16	0.10	BDL	0.07	0.12	0.17
Cu	0.89	12.25	0.25	0.37	1.98	7.59	29.05
Cu	0.84	13.44	0.40	0.36	1.98	7.85	31.27
Zn	1.35	1.73	0.77	0.56	0.83	1.46	2.28
Zn	1.30	3.01	5.93	9.05	6.71	5.50	8.40
As	0.45	3.44	0.17	0.20	0.36	1.24	6.24
Se	2.45	2.66	3.29	2.86	3.40	2.65	0.55
Se	1.08	BDL	BDL	BDL	0.77	1.52	2.99
Rb	8.63	8.38	8.13	10.78	10.75	9.29	12.64
Sr	0.42	14.02	2.83	3.70	3.92	3.88	3.35
Mo	0.09	0.82	BDL	0.14	0.38	0.51	3.62
Sn	0.32	0.27	0.22	0.30	0.23	0.22	0.23
Te	0.12	1.87	BDL	BDL	0.15	0.15	0.63
Cs	0.21	0.33	0.18	0.24	0.20	0.17	0.26
Ba	8.50	45.51	92.20	133.21	91.47	81.27	124.90
Ba	7.55	41.19	97.63	173.14	95.14	82.19	110.16
W	0.10	0.47	0.15	0.14	0.19	0.24	0.45
Pb	0.08	5.66	0.25	0.23	0.20	0.25	0.40
Bi	0.02	0.39	BDL	0.01	0.08	0.10	0.41
Th	0.07	1.30	BDL	0.02	0.17	0.60	1.15
U	0.07	0.51	0.02	0.02	0.09	0.19	1.43
Tl	0.18	0.18	0.20	0.23	0.23	0.25	0.24

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909160_17-2	G909173-1	G909173-10	G909173-2	G909173-3	G909173-4	G909173-5
Data Quality (1-3)	3	3	1	2	2	3	3
1 standard error (ppm) *							
Li	0.40	0.54	0.80	0.72	1.17	0.99	0.45
B	2.27	3.11	1.33	2.13	5.01	2.21	2.12
Si	4446.52	4468.03	4468.03	4468.03	4468.03	4468.03	4468.03
P	21.74	29.28	202.69	38.94	36.90	30.45	24.67
Sc	0.44	0.48	0.16	0.29	1.04	0.63	0.53
Ti	24.18	40.96	8.79	40.99	53.08	33.14	36.83
V	2.13	1.98	0.13	5.01	5.44	3.90	4.68
Cr	0.37	0.67	0.60	1.16	1.46	0.60	0.59
Mn	3.93	0.74	1.18	0.87	0.77	0.57	0.83
Co	0.09	0.21	0.15	0.18	BDL	0.31	BDL
Cu	1.58	0.78	0.51	2.87	0.36	0.32	0.27
Cu	1.64	0.75	0.66	1.96	0.74	0.64	0.54
Zn	1.06	0.50	0.75	1.63	0.33	0.54	0.57
Zn	4.88	1.54	5.21	2.08	0.80	1.21	0.94
As	0.19	BDL	0.25	BDL	BDL	BDL	0.65
Se	0.13	0.90	BDL	0.66	BDL	BDL	1.03
Se	0.29	BDL	BDL	1.08	BDL	BDL	0.12
Rb	10.21	12.96	4.26	11.09	12.41	8.37	11.64
Sr	2.47	0.75	1.23	2.78	0.98	0.98	0.79
Mo	0.49	BDL	0.04	0.90	BDL	0.15	0.11
Sn	0.09	0.35	0.04	0.39	0.77	0.16	0.62
Te	0.16	BDL	BDL	0.35	BDL	BDL	BDL
Cs	0.10	0.19	0.06	0.16	0.11	0.18	0.14
Ba	90.03	21.57	196.67	22.82	17.40	16.93	10.40
Ba	96.80	17.66	194.76	25.36	24.55	17.19	12.54
W	0.09	0.19	0.12	0.46	0.45	0.10	0.19
Pb	0.13	0.03	0.04	0.86	0.03	0.05	0.04
Bi	0.03	BDL	0.01	0.04	0.02	BDL	0.02
Th	0.13	0.05	0.05	0.32	0.02	0.02	0.03
U	0.07	0.02	0.46	0.04	0.02	0.01	0.05
Tl	0.08	0.06	0.03	0.13	0.19	0.06	0.08

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909160_17-2	G909173-1	G909173-10	G909173-2	G909173-3	G909173-4	G909173-5
Data Quality (1-3)	3	3	1	2	2	3	3
1 standard error (ppm)**							
Li	1.27	1.01	1.31	1.20	1.54	1.29	1.34
B	22.81	14.60	6.67	19.57	22.38	15.57	15.81
Si	7637.96	7674.90	7674.90	7674.90	7674.90	7674.90	7674.90
P	150.29	131.74	280.59	148.40	175.11	88.81	79.49
Sc	0.60	0.53	0.19	0.36	1.07	0.69	0.60
Ti	57.01	80.12	14.12	80.36	95.15	70.16	78.35
V	4.31	4.16	0.14	6.53	6.95	5.35	5.96
Cr	1.45	1.36	0.72	1.60	1.55	1.42	1.13
Mn	6.52	0.99	1.35	1.02	0.95	0.79	1.03
Co	0.10	0.22	0.15	0.18	BDL	0.31	BDL
Cu	3.83	2.55	0.81	3.91	0.50	0.63	0.45
Cu	4.21	2.80	1.00	3.45	0.77	0.88	0.66
Zn	1.23	0.51	0.78	1.65	0.35	0.57	0.60
Zn	6.27	1.62	6.10	2.23	1.00	1.32	1.03
As	0.74	BDL	0.26	BDL	BDL	BDL	0.65
Se	1.96	1.27	BDL	1.25	BDL	3.55	1.99
Se	1.27	BDL	BDL	1.12	BDL	BDL	1.78
Rb	11.41	14.16	4.66	12.86	13.76	9.91	12.97
Sr	2.99	0.80	1.39	2.84	1.03	1.02	0.87
Mo	0.51	BDL	0.04	0.93	BDL	0.15	0.12
Sn	0.20	1.00	0.05	1.35	1.42	0.76	0.95
Te	0.16	BDL	BDL	0.35	BDL	BDL	BDL
Cs	0.18	0.21	0.08	0.20	0.13	0.20	0.17
Ba	102.63	24.08	214.51	26.59	21.03	19.08	13.20
Ba	110.19	20.44	213.21	28.74	27.16	19.19	14.90
W	0.17	0.31	0.19	0.57	0.60	0.28	0.33
Pb	0.17	0.04	0.04	0.89	0.03	0.05	0.04
Bi	0.04	BDL	0.01	0.04	0.02	BDL	0.02
Th	0.15	0.05	0.05	0.34	0.02	0.02	0.03
U	0.11	0.02	0.49	0.04	0.02	0.02	0.06
Tl	0.22	0.13	0.07	0.21	0.23	0.15	0.15

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909173-6	G909173-7	G909173-8	G909173-9	G909176-1	G909176-10	G909176-2
Data Quality (1-3)	1.5	1.5	1.5	1	2.5	2	2.5
Li (ppm)	17.50	18.05	16.51	0.15	11.88	7.12	14.46
B (ppm)	45.71	36.34	35.01	4.57	173.57	28.90	409.17
Si (ppm)	223401.27	223401.27	223401.27	223401.27	217277.49	217277.49	217277.49
P (ppm)	67.26	66.60	49.89	53.57	100.83	88.84	108.23
Sc (ppm)	30.14	27.17	23.03	2.40	56.64	28.56	66.64
Ti (ppm)	4203.42	10542.84	2617.80	21.90	2431.11	1342.35	2786.82
V (ppm)	287.06	260.79	248.95	0.64	513.55	260.93	562.34
Cr (ppm)	130.21	100.64	100.32	3.01	150.80	50.89	131.92
Mn (ppm)	19.18	19.40	17.36	5.90	34.27	20.94	35.28
Co (ppm)	BDL	0.02	BDL	0.10	0.16	0.07	0.13
Cu(63) (ppm)	15.48	9.13	13.37	3.22	3.29	3.66	4.27
Cu(65)* (ppm)	17.35	10.94	13.03	3.88	3.47	3.64	4.15
Zn(66)* (ppm)	6.66	5.84	6.17	3.00	7.75	4.82	7.60
Zn(68) (ppm)	39.63	37.67	41.83	9.51	27.22	15.76	23.98
As (ppm)	BDL	1.03	BDL	0.06	BDL	0.33	BDL
Se(76) (ppm)	1.35	2.94	BDL	BDL	BDL	4.70	0.33
Se(77)* (ppm)	BDL	1.80	BDL	BDL	BDL	1.45	2.40
Rb (ppm)	295.14	292.42	268.62	14.45	278.35	138.73	286.92
Sr (ppm)	39.57	36.25	43.25	377.66	36.09	30.48	48.61
Mo (ppm)	0.24	0.36	BDL	0.33	BDL	0.29	BDL
Sn (ppm)	10.80	13.09	10.97	0.14	2.22	1.21	2.59
Te (ppm)	BDL	BDL	0.23	0.10	BDL	BDL	BDL
Cs (ppm)	2.91	2.36	2.78	BDL	3.66	1.58	3.54
Ba(137) (ppm)	794.62	800.18	820.07	118.36	445.30	282.31	424.85
Ba(138)* (ppm)	805.40	829.41	850.89	117.96	449.45	288.07	438.40
W (ppm)	6.55	13.02	5.91	0.00	0.52	0.53	0.67
Pb (ppm)	0.33	0.28	0.31	0.26	0.16	0.33	0.22
Bi (ppm)	0.09	0.13	0.04	0.03	BDL	0.05	0.03
Th (ppm)	0.32	1.14	0.22	0.05	0.02	0.95	0.12
U (ppm)	0.43	1.83	0.56	0.03	0.13	0.74	0.23
Tl (ppm)	1.72	1.65	1.61	0.08	1.38	0.74	1.49
SiO2 wt. %	47.79	47.79	47.79	47.79	46.48	46.48	46.48

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909173-6	G909173-7	G909173-8	G909173-9	G909176-1	G909176-10	G909176-2
Data Quality (1-3)	1.5	1.5	1.5	1	2.5	2	2.5
1 standard error (ppm) *							
Li	1.02	1.23	0.91	0.50	0.63	0.78	0.53
B	1.43	3.26	4.03	0.65	5.32	1.18	27.73
Si	4468.03	4468.03	4468.03	4468.03	4345.55	4345.55	4345.55
P	4.40	4.89	9.27	7.81	6.98	5.96	6.60
Sc	1.21	1.49	0.75	0.40	1.68	0.77	2.72
Ti	333.87	701.78	168.00	1.58	153.34	109.02	171.25
V	10.33	6.56	8.96	0.09	23.54	13.45	16.79
Cr	5.23	2.58	2.63	0.83	6.46	1.60	3.33
Mn	0.55	0.88	0.53	0.44	1.80	0.56	1.22
Co	BDL	0.16	BDL	0.09	0.08	0.11	0.10
Cu	1.30	0.38	0.83	0.14	0.33	1.39	0.25
Cu	1.19	0.68	1.37	0.86	0.30	0.62	0.46
Zn	0.59	0.27	0.38	0.35	0.92	0.30	0.29
Zn	1.56	2.13	2.21	0.54	2.67	1.60	1.20
As	BDL	0.12	BDL	0.25	BDL	0.04	BDL
Se	0.96	0.52	BDL	BDL	BDL	0.53	1.16
Se	BDL	0.17	BDL	BDL	BDL	0.41	0.69
Rb	15.94	11.35	7.31	1.22	9.63	6.28	8.54
Sr	2.21	1.78	1.37	15.29	1.48	3.08	1.77
Mo	0.15	0.07	BDL	0.17	BDL	0.10	BDL
Sn	0.51	0.71	0.75	0.08	0.19	0.13	0.33
Te	BDL	BDL	0.07	0.15	BDL	BDL	BDL
Cs	0.28	0.39	0.13	BDL	0.20	0.11	0.17
Ba	45.64	26.45	53.36	14.48	17.43	12.01	21.34
Ba	46.65	30.18	58.39	13.73	19.30	13.32	21.56
W	0.56	0.86	0.35	0.03	0.14	0.10	0.10
Pb	0.09	0.07	0.11	0.05	0.01	0.07	0.03
Bi	0.02	0.06	0.01	0.01	BDL	0.01	0.01
Th	0.07	0.23	0.04	0.06	0.04	0.46	0.06
U	0.07	0.22	0.05	0.02	0.04	0.33	0.02
Tl	0.29	0.14	0.15	0.03	0.09	0.07	0.12

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909173-6	G909173-7	G909173-8	G909173-9	G909176-1	G909176-10	G909176-2
Data Quality (1-3)	1.5	1.5	1.5	1	2.5	2	2.5
1 standard error (ppm)**							
Li	2.67	2.82	2.50	0.50	1.79	1.27	2.10
B	16.71	13.63	13.37	1.79	63.44	10.59	151.58
Si	7674.90	7674.90	7674.90	7674.90	7464.52	7464.52	7464.52
P	20.09	20.01	17.24	17.46	30.20	26.57	32.22
Sc	1.70	1.84	1.18	0.41	2.79	1.36	3.78
Ti	560.04	1328.29	326.56	2.83	301.90	180.29	343.79
V	17.03	13.94	14.77	0.10	33.78	18.23	31.40
Cr	26.61	20.33	20.27	1.03	30.90	10.32	26.64
Mn	0.88	1.12	0.82	0.49	2.18	0.94	1.75
Co	BDL	0.16	BDL	0.09	0.08	0.11	0.10
Cu	2.10	1.05	1.65	0.37	0.48	1.45	0.52
Cu	2.20	1.35	1.95	0.96	0.48	0.73	0.64
Zn	0.61	0.31	0.41	0.36	0.94	0.33	0.34
Zn	1.86	2.34	2.45	0.59	2.76	1.65	1.35
As	BDL	0.38	BDL	0.25	BDL	0.12	BDL
Se	1.44	2.41	BDL	BDL	BDL	3.80	1.19
Se	BDL	1.45	BDL	BDL	BDL	1.23	2.04
Rb	16.96	12.72	9.02	1.25	11.07	6.84	10.23
Sr	2.32	1.89	1.56	16.64	1.61	3.12	1.96
Mo	0.16	0.07	BDL	0.17	BDL	0.10	BDL
Sn	2.02	2.47	2.12	0.09	0.44	0.26	0.57
Te	BDL	BDL	0.08	0.15	BDL	BDL	BDL
Cs	0.34	0.43	0.23	BDL	0.32	0.16	0.30
Ba	50.60	34.40	57.93	14.84	21.30	14.30	24.33
Ba	51.40	37.48	62.68	14.09	22.75	15.39	24.55
W	0.97	1.80	0.80	0.03	0.15	0.12	0.13
Pb	0.09	0.07	0.11	0.05	0.01	0.07	0.03
Bi	0.03	0.06	0.01	0.01	BDL	0.01	0.01
Th	0.07	0.25	0.04	0.06	0.04	0.47	0.06
U	0.08	0.26	0.07	0.02	0.04	0.33	0.02
Tl	0.34	0.23	0.24	0.03	0.18	0.11	0.20

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909176-3	G909176-4	G909176-5	G909176-6	G909176-7	G909176-8	YD08-19C_area2-1
Data Quality (1-3)	2	2	1.5	3	3	3	3
1 standard error (ppm) *							
Li	0.55	0.54	0.64	0.46	0.56	0.58	BDL
B	3.60	1.96	1.68	3.83	4.21	4.38	5.04
Si	4345.55	4345.55	4345.55	4345.55	4345.55	4345.55	4440.91
P	7.66	8.24	35.58	7.09	6.20	12.89	11.43
Sc	1.03	1.95	3.13	1.17	1.28	1.45	0.83
Ti	111.23	157.13	1560.67	134.75	130.69	139.70	31.23
V	15.59	11.88	16.99	11.15	10.29	13.81	6.27
Cr	2.76	4.07	4.36	1.59	1.74	2.23	7.09
Mn	0.98	0.88	1.11	1.31	0.78	1.05	0.35
Co	0.06	0.26	0.26	0.05	BDL	0.05	BDL
Cu	0.45	0.64	1.22	0.57	0.19	0.25	BDL
Cu	0.58	1.30	0.95	0.57	0.12	0.56	BDL
Zn	0.65	0.55	0.81	0.45	0.36	0.77	BDL
Zn	1.83	0.86	1.66	0.71	0.71	1.53	0.97
As	0.23	0.28	0.26	BDL	0.39	BDL	BDL
Se	1.31	BDL	4.02	BDL	0.29	BDL	BDL
Se	BDL	BDL	0.65	BDL	BDL	0.93	BDL
Rb	8.18	5.33	7.00	8.51	6.52	9.08	3.67
Sr	0.83	1.35	6.15	0.88	1.06	0.88	BDL
Mo	BDL	0.11	0.24	BDL	0.09	BDL	0.36
Sn	0.11	0.11	0.31	0.11	0.17	0.10	0.26
Te	BDL	0.32	0.12	BDL	0.15	0.08	BDL
Cs	0.22	0.18	0.11	0.13	0.21	0.16	0.10
Ba	20.03	17.42	20.00	21.47	13.59	13.78	2.94
Ba	21.10	15.94	18.32	16.46	11.46	13.41	0.28
W	0.13	0.20	0.84	0.12	0.12	0.10	BDL
Pb	0.05	0.11	0.93	0.07	0.02	0.05	BDL
Bi	0.02	0.08	0.34	BDL	BDL	0.02	BDL
Th	0.11	0.59	0.12	0.07	0.03	0.15	
U	0.07	0.26	0.17	0.03	0.05	0.08	
Tl	0.08	0.09	0.08	0.14	0.14	0.17	0.18

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	G909176-3	G909176-4	G909176-5	G909176-6	G909176-7	G909176-8	YD08-19C_area2-1
Data Quality (1-3)	2	2	1.5	3	3	3	3
1 standard error (ppm)**							
Li	1.58	1.43	1.68	1.91	1.68	1.58	BDL
B	17.62	13.51	16.94	22.30	18.32	20.23	9.02
Si	7464.52	7464.52	7464.52	7464.52	7464.52	7464.52	5409.16
P	27.02	30.78	126.09	26.86	26.19	40.06	27.09
Sc	2.00	2.55	3.75	2.03	2.10	2.53	0.88
Ti	222.44	311.94	2874.69	272.18	281.44	292.60	88.68
V	24.91	23.61	28.58	20.13	21.88	29.03	23.92
Cr	18.21	24.39	18.48	8.50	14.62	17.32	25.24
Mn	1.49	1.36	1.61	1.88	1.39	1.58	0.36
Co	0.06	0.28	0.27	0.05	BDL	0.06	BDL
Cu	0.58	1.30	1.90	0.64	0.41	0.40	BDL
Cu	0.68	1.69	1.76	0.65	0.38	0.67	BDL
Zn	0.68	0.59	0.88	0.49	0.39	0.79	BDL
Zn	1.95	1.08	1.83	0.92	0.85	1.62	1.04
As	0.29	0.28	0.91	BDL	0.41	BDL	BDL
Se	1.77	BDL	5.37	2.65	1.92	BDL	BDL
Se	BDL	BDL	2.11	BDL	BDL	1.06	BDL
Rb	9.67	6.50	8.35	10.21	8.09	10.42	4.31
Sr	0.91	1.45	6.40	1.02	1.19	1.02	BDL
Mo	BDL	0.11	0.29	BDL	0.09	BDL	0.36
Sn	0.47	0.41	0.99	0.44	0.44	0.38	0.27
Te	BDL	0.33	0.43	BDL	0.15	0.08	BDL
Cs	0.27	0.25	0.23	0.21	0.28	0.22	0.12
Ba	25.20	20.62	23.77	24.27	16.45	17.13	2.94
Ba	25.86	19.39	22.33	19.90	14.74	16.75	0.30
W	0.16	0.22	1.48	0.13	0.14	0.13	BDL
Pb	0.06	0.11	1.06	0.07	0.02	0.05	BDL
Bi	0.02	0.08	0.41	BDL	BDL	0.02	BDL
Th	0.12	0.62	0.21	0.07	0.03	0.16	
U	0.09	0.29	0.27	0.04	0.05	0.10	
Tl	0.16	0.16	0.16	0.21	0.20	0.22	0.20

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD08-19C_area2-2	YD08-19C_area2-3	YD08-19C_area2-4	YD08-19C_area2-5	YD08-19Carea1-1	YD08-19Carea1-2	YD08-19Carea1-3
Data Quality (1-3)	2.5	3	3	3	1	1	1
Li (ppm)	1.09	BDL	1.29	1.47	BDL	BDL	BDL
B (ppm)	79.52	74.40	82.24	78.47	15.77	BDL	58.68
Si (ppm)	222045.62	222045.62	222045.62	222045.62	224382.95	224382.95	224382.95
P (ppm)	390.42	141.49	196.10	223.27	BDL	BDL	498.95
Sc (ppm)	4.19	1.92	3.49	2.04	BDL	BDL	BDL
Ti (ppm)	773.98	766.17	619.05	645.94	624.72	556.26	613.50
V (ppm)	233.63	220.98	210.34	208.88	202.67	209.16	203.42
Cr (ppm)	304.33	252.23	275.05	284.18	173.62	304.38	145.97
Mn (ppm)	2.58	BDL	2.14	BDL	BDL	21.10	BDL
Co (ppm)	0.47	BDL	BDL	0.97	0.26	15.79	BDL
Cu(63) (ppm)	4.33	0.62	2.32	BDL	BDL	BDL	BDL
Cu(65)* (ppm)	0.69	BDL	BDL	BDL	29.45	BDL	BDL
Zn(66)* (ppm)	3.53	0.98	1.89	2.48	BDL	6.32	BDL
Zn(68) (ppm)	148.78	5.82	6.38	BDL	31.79	59.63	BDL
As (ppm)	BDL	BDL	0.05	BDL	BDL	BDL	BDL
Se(76) (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Se(77)* (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	127.55
Rb (ppm)	150.12	146.99	151.79	146.60	null	null	null
Sr (ppm)	160.55	0.53	0.75	1.15	null	null	null
Mo (ppm)	BDL	BDL	BDL	BDL	BDL	224.04	BDL
Sn (ppm)	1.83	1.79	1.32	1.39	5.16	1.86	BDL
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	9.21
Cs (ppm)	0.83	1.06	0.31	BDL	BDL	BDL	1.57
Ba(137) (ppm)	4781.68	8.43	51.24	4.49	4.02	261.63	22.62
Ba(138)* (ppm)	4781.66	9.07	49.56	4.13	2.35	306.80	26.42
W (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (ppm)	0.36	BDL	0.16	1.91	BDL	BDL	10.24
Bi (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Th (ppm)	null	null	null	null	null	null	null
U (ppm)	null	null	null	null	null	null	null
Tl (ppm)	1.09	0.85	1.54	1.23	BDL	BDL	1.19
SiO2 wt. %	47.50	47.50	47.50	47.50	48.00	48.00	48.00

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD08-19C_area2-2	YD08-19C_area2-3	YD08-19C_area2-4	YD08-19C_area2-5	YD08-19Carea1-1	YD08-19Carea1-2	YD08-19Carea1-3
Data Quality (1-3)	2.5	3	3	3	1	1	1
1 standard error (ppm) *							
Li	0.42	BDL	0.37	0.23	BDL	BDL	BDL
B	3.69	4.99	3.85	2.63	18.04	BDL	10.97
Si	4440.91	4440.91	4440.91	4440.91	4487.66	4487.66	4487.66
P	21.35	14.22	12.11	17.97	BDL	BDL	71.33
Sc	0.52	0.63	0.57	0.54	BDL	BDL	BDL
Ti	32.98	35.48	25.43	27.87	23.49	62.19	74.93
V	7.29	6.03	6.16	5.59	6.84	7.52	7.66
Cr	12.07	6.50	6.55	7.40	23.49	42.66	52.02
Mn	1.01	BDL	0.20	BDL	BDL	10.81	BDL
Co	0.29	BDL	BDL	0.35	7.09	3.97	BDL
Cu	0.82	0.78	0.49	BDL	BDL	BDL	BDL
Cu	0.65	BDL	BDL	BDL	26.02	BDL	BDL
Zn	1.27	0.32	0.56	0.64	BDL	4.34	BDL
Zn	7.37	1.14	1.25	BDL	7.76	20.32	BDL
As	BDL	BDL	1.15	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	33.79
Rb	3.89	4.26	3.53	3.36			
Sr	7.61	0.15	0.29	0.08			
Mo	BDL	BDL	BDL	BDL	BDL	62.01	BDL
Sn	0.44	0.36	0.22	0.22	1.06	3.02	BDL
Te	BDL	BDL	BDL	BDL	BDL	BDL	14.43
Cs	0.19	0.05	0.06	BDL	BDL	BDL	0.51
Ba	220.49	2.22	13.60	0.57	2.76	30.95	8.85
Ba	159.06	1.71	13.48	0.50	0.65	22.84	5.99
W	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb	0.17	BDL	0.12	0.45	BDL	BDL	0.86
Bi	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Th							
U							
Tl	0.16	0.09	0.38	0.26	BDL	BDL	0.51

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD08-19C_area2-2	YD08-19C_area2-3	YD08-19C_area2-4	YD08-19C_area2-5	YD08-19Carea1-1	YD08-19Carea1-2	YD08-19Carea1-3
Data Quality (1-3)	2.5	3	3	3	1	1	1
1 standard error (ppm)**							
Li	0.43	BDL	0.38	0.25	BDL	BDL	BDL
B	7.78	8.12	8.07	7.25	18.04	BDL	11.09
Si	5409.16	5409.16	5409.16	5409.16	4667.24	4667.24	4667.24
P	53.16	22.66	27.29	33.14	BDL	BDL	105.42
Sc	0.67	0.66	0.66	0.57	BDL	BDL	BDL
Ti	96.97	96.99	77.24	81.05	33.04	65.54	78.32
V	25.28	23.68	22.65	22.35	20.87	21.69	21.22
Cr	28.29	22.18	24.04	25.02	27.55	49.56	53.40
Mn	1.01	BDL	0.21	BDL	BDL	10.83	BDL
Co	0.29	BDL	BDL	0.35	7.09	4.07	BDL
Cu	0.90	0.78	0.53	BDL	BDL	BDL	BDL
Cu	0.65	BDL	BDL	BDL	26.08	BDL	BDL
Zn	1.33	0.33	0.59	0.69	BDL	4.34	BDL
Zn	17.57	1.30	1.43	BDL	7.88	20.47	BDL
As	BDL	BDL	1.15	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	34.50
Rb	4.50	4.80	4.20	4.01			
Sr	8.10	0.15	0.29	0.08			
Mo	BDL	BDL	BDL	BDL	BDL	64.05	BDL
Sn	0.45	0.38	0.24	0.23	1.08	3.02	BDL
Te	BDL	BDL	BDL	BDL	BDL	BDL	14.44
Cs	0.20	0.09	0.06	BDL	BDL	BDL	0.59
Ba	279.32	2.24	13.72	0.60	2.77	34.22	8.94
Ba	190.07	1.72	13.52	0.51	0.66	28.04	6.15
W	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb	0.17	BDL	0.12	0.45	BDL	BDL	0.86
Bi	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Th							
U							
Tl	0.17	0.10	0.39	0.27	BDL	BDL	0.51

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD08-21_area1-1	YD08-21_area1-2	YD08-21_area1-3	YD08-21_area2-4	YD08-21_area2-5	YD08-21_area2-6	YD09-06area2-1
Data Quality (1-3)	3	3	3	3	3	2.5	3
1 standard error (ppm) *							
Li	BDL	1.39	2.39	1.19	2.28	1.77	0.53
B	14.00	6.80	9.72	12.27	24.24	7.63	4.06
Si	4412.86	4412.86	4412.86	4412.86	4412.86	4412.86	4440.91
P	BDL	21.50	20.33	28.02	BDL	88.42	16.82
Sc	1.40	1.18	BDL	1.16	BDL	1.27	0.57
Ti	272.87	290.66	284.24	258.57	197.83	205.64	51.64
V	7.35	6.86	7.84	12.30	7.95	9.38	6.61
Cr	4.40	3.17	3.14	3.68	3.64	BDL	2.04
Mn	1.61	1.47	1.58	3.52	1.01	2.33	2.46
Co	BDL	BDL	BDL	BDL	BDL	0.73	BDL
Cu	5.83	BDL	13.67	186.81	210.33	2755.75	2.76
Cu	4.43	3.50	17.23	181.94	184.77	562.37	2.22
Zn	BDL	1.81	3.40	BDL	BDL	2.32	1.35
Zn	5.37	7.93	3.49	5.41	4.62	6.07	3.84
As	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb	11.86	12.10	14.71	13.84	11.98	12.03	
Sr	1.74	1.16	1.44	1.90	1.09	1.79	
Mo	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sn	BDL	BDL	BDL	BDL	BDL	BDL	0.72
Te	BDL	BDL	BDL	BDL	BDL	BDL	0.49
Cs	0.34	0.72	0.23	0.29	BDL	BDL	46.40
Ba	90.74	96.47	94.57	93.00	56.21	107.03	38.00
Ba	71.42	70.55	72.76	80.56	43.05	122.67	0.14
W	1.07	BDL	BDL	0.08	BDL	BDL	0.15
Pb	BDL	BDL	BDL	BDL	BDL	BDL	0.03
Bi	BDL	BDL	BDL	BDL	BDL	BDL	0.23
Th							
U							
Tl	BDL	0.33	0.17	0.26	0.42	0.55	

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD08-21_area1-1	YD08-21_area1-2	YD08-21_area1-3	YD08-21_area2-4	YD08-21_area2-5	YD08-21_area2-6	YD09-06area2-1
Data Quality (1-3)	3	3	3	3	3	2.5	3
1 standard error (ppm)**							0.61
Li	BDL	1.41	2.42	1.28	2.34	1.83	7.75
B	19.49	12.04	12.93	16.34	28.64	13.75	5409.16
Si	5375.00	5375.00	5375.00	5375.00	5375.00	5375.00	18.52
P	BDL	23.02	24.36	28.89	BDL	88.56	1.38
Sc	1.46	1.32	BDL	1.32	BDL	1.92	129.61
Ti	425.41	450.97	441.57	393.86	309.11	320.73	23.27
V	25.43	25.40	26.03	25.11	23.58	21.63	2.97
Cr	4.45	3.17	3.23	4.07	3.72	BDL	3.34
Mn	1.79	1.67	1.78	3.56	1.10	2.48	BDL
Co	BDL	BDL	BDL	BDL	BDL	0.75	2.79
Cu	8.58	BDL	17.83	308.25	350.42	2840.76	2.33
Cu	7.48	3.59	21.04	306.84	328.85	944.61	1.42
Zn	BDL	1.89	3.41	BDL	BDL	2.57	10.97
Zn	7.31	10.56	6.22	7.35	6.28	8.23	BDL
As	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb	15.85	15.97	18.03	16.78	15.36	14.97	
Sr	1.76	1.20	1.46	1.94	1.13	1.87	
Mo	BDL	BDL	BDL	BDL	BDL	BDL	0.90
Sn	BDL	BDL	BDL	BDL	BDL	BDL	0.54
Te	BDL	BDL	BDL	BDL	BDL	BDL	58.58
Cs	0.36	0.73	0.24	0.29	BDL	BDL	41.76
Ba	117.23	118.85	117.86	119.88	72.62	137.01	0.14
Ba	90.83	87.89	89.80	101.79	54.71	141.34	0.15
W	1.11	BDL	BDL	0.12	BDL	BDL	0.03
Pb	BDL	BDL	BDL	BDL	BDL	BDL	0.26
Bi	BDL	BDL	BDL	BDL	BDL	BDL	
Th							
U							
Tl	BDL	0.34	0.17	0.27	0.43	0.58	

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD09-06area2-2	YD09-06area2-3	YD09-06area2-4	YD09-06area2-5	YD09-06area4-1	YD09-06area4-2	YD09-06area4-3
Data Quality (1-3)	3	3	3	3	3	3	3
1 standard error (ppm) *							
Li	0.38	0.22	0.34	0.50	0.49	0.32	0.57
B	33.12	32.97	4.72	3.28	2.65	12.39	14.64
Si	4440.91	4440.91	4440.91	4440.91	4440.91	4440.91	4440.91
P	BDL	BDL	8.68	20.77	BDL	71.73	8.65
Sc	0.76	0.65	0.55	0.73	0.63	1.17	0.90
Ti	54.03	25.10	51.55	50.54	90.62	5479.70	154.81
V	8.46	6.75	8.78	7.65	4.52	7.38	3.64
Cr	2.59	3.14	3.04	1.46	2.48	3.92	8.25
Mn	2.57	2.50	2.18	2.54	1.00	1.66	8.78
Co	0.26	BDL	BDL	BDL	BDL	0.33	0.18
Cu	4.32	1.31	4.67	1.81	BDL	4.73	9.93
Cu	BDL	BDL	BDL	BDL	1.40	4.90	4.11
Zn	0.75	1.12	0.38	0.79	0.98	1.72	1.07
Zn	6.78	5.57	5.40	3.87	3.43	4.25	3.90
As	BDL	BDL	1.00	BDL	BDL	4.33	BDL
Se	BDL	BDL	BDL	BDL	9.62	22.02	17.45
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb							
Sr							
Mo	BDL	BDL	BDL	5.04	BDL	BDL	BDL
Sn	0.56	0.43	0.57	0.32	0.38	0.78	1.43
Te	0.25	0.68	0.51	0.23	BDL	BDL	1.42
Cs	44.49	36.56	54.18	63.27	0.07	0.36	0.13
Ba	34.20	20.75	42.74	43.39	22.45	44.56	32.07
Ba	0.23	0.23	0.53	0.10	42.00	49.68	44.95
W	0.10	0.09	0.05	0.15	0.29	BDL	0.37
Pb	0.05	BDL	BDL	0.05	0.12	BDL	0.15
Bi	0.14	0.25	0.35	0.26	BDL	BDL	0.04
Th							
U							
Tl					0.23	0.69	0.08

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD09-06area2-2	YD09-06area2-3	YD09-06area2-4	YD09-06area2-5	YD09-06area4-1	YD09-06area4-2	YD09-06area4-3
Data Quality (1-3)	3	3	3	3	3	3	3
1 standard error (ppm)**	0.61	0.34	0.49	0.64			
Li	50.26	63.07	9.98	7.37	0.55	0.39	0.70
B	5409.16	5409.16	5409.16	5409.16	2.95	12.86	19.32
Si	BDL	BDL	12.58	20.97	4618.62	4618.62	4618.62
P	1.52	1.23	1.45	1.41	BDL	71.73	16.10
Sc	136.90	77.41	149.53	138.79	0.77	1.27	0.99
Ti	26.35	21.74	31.06	25.96	154.77	5480.65	184.45
V	4.74	5.27	4.13	2.14	16.12	17.67	13.90
Cr	3.44	3.20	3.19	3.50	2.85	8.44	8.75
Mn	0.26	BDL	BDL	BDL	1.18	1.95	9.32
Co	4.68	1.48	4.95	2.28	BDL	0.34	0.19
Cu	BDL	BDL	BDL	BDL	BDL	4.86	10.09
Cu	1.07	1.39	1.29	1.17	1.44	4.90	4.15
Zn	12.33	7.99	12.81	10.77	1.01	1.72	1.31
Zn	BDL	BDL	1.19	BDL	4.40	5.02	5.20
As	BDL	BDL	BDL	BDL	BDL	4.33	BDL
Se	BDL	BDL	BDL	BDL	9.97	22.58	17.71
Se	BDL	BDL	BDL	5.05	BDL	BDL	BDL
Rb							
Sr							
Mo	0.62	0.44	0.60	0.47	BDL	BDL	BDL
Sn	0.33	0.72	0.91	0.32	0.41	0.84	1.60
Te	54.90	40.90	69.64	75.43	BDL	BDL	1.42
Cs	38.09	22.58	48.21	47.79	0.10	0.40	0.29
Ba	0.23	0.23	0.53	0.10	53.15	70.98	55.56
Ba	0.10	0.09	0.05	0.15	73.39	86.44	71.86
W	0.05	BDL	BDL	0.05	0.31	BDL	0.39
Pb	0.18	0.28	0.39	0.29	0.12	BDL	0.15
Bi					BDL	BDL	0.04
Th							
U							
Tl					0.23	0.70	0.10

**DOES include uncertainty in calibration standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD09-06area4-4	YD09-06area4-5	99017-1	99017-11	99017-2	99017-3	ANN007006.017-10
Data Quality (1-3)	2.5	3	2.5	1.5	3	3	1
Li (ppm)	8.30	6.90	4.13	2.02	2.63	2.96	8.12
B (ppm)	943.12	115.30	47.15	23.74	38.94	40.84	24.75
Si (ppm)	222045.62	222045.62	216249.07	216249.07	216249.07	216249.07	212182.12
P (ppm)	312.58	113.45	42.16	124.68	45.05	49.15	46.20
Sc (ppm)	16.51	21.39	7.83	23.83	9.68	9.92	8.11
Ti (ppm)	1967.52	3427.57	900.87	1300.80	1051.65	1114.19	186.99
V (ppm)	128.96	134.36	236.50	170.76	258.07	254.37	70.40
Cr (ppm)	20.38	39.94	6.17	27.42	7.54	7.81	9.10
Mn (ppm)	217.12	93.58	155.03	57.26	147.02	153.53	1632.15
Co (ppm)	1.20	1.13	3.48	3.10	3.45	3.27	BDL
Cu(63) (ppm)	13.15	33.54	2.39	1.90	1.22	1.81	3.55
Cu(65)* (ppm)	19.92	7.28	3.27	1.91	2.12	3.33	3.59
Zn(66)* (ppm)	18.37	15.37	42.87	14.12	37.93	40.28	16.52
Zn(68) (ppm)	51.84	80.21	112.33	47.99	105.50	107.38	99.01
As (ppm)	9.31	BDL	BDL	1.25	0.23	0.30	BDL
Se(76) (ppm)	46.11	25.40	BDL	0.74	3.51	3.35	4.37
Se(77)* (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	2.75
Rb (ppm)	null	null	303.29	217.18	284.97	286.73	125.45
Sr (ppm)	null	null	25.61	17.17	28.49	27.43	1917.49
Mo (ppm)	10.23	BDL	BDL	0.10	BDL	BDL	BDL
Sn (ppm)	16.56	28.42	0.97	0.81	1.22	0.88	3.05
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	0.22
Cs (ppm)	1.50	1.63	2.82	2.70	2.42	2.43	2.57
Ba(137) (ppm)	803.02	1180.16	1948.85	1023.42	2065.54	2086.87	2326.88
Ba(138)* (ppm)	730.45	1156.02	1989.68	1031.21	2072.98	2111.09	2359.09
W (ppm)	1.07	2.88	0.98	0.66	0.85	0.76	2.07
Pb (ppm)	1.61	2.16	1.18	1.06	1.26	1.22	4.31
Bi (ppm)	0.36	0.12	0.08	0.08	0.12	BDL	BDL
Th (ppm)	null	null	0.08	5.05	0.03	BDL	2.22
U (ppm)	null	null	0.14	0.22	0.09	BDL	0.02
Tl (ppm)	1.35	2.03	4.18	2.29	3.41	3.57	0.81
SiO2 wt. %	47.50	47.50	46.26	46.26	46.26	46.26	45.39

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD09-06area4-4	YD09-06area4-5	99017-1	99017-11	99017-2	99017-3	ANN007006.017-10
Data Quality (1-3)	2.5	3	2.5	1.5	3	3	1
1 standard error (ppm) *							
Li	0.78	0.36	0.95	0.16	0.55	0.20	1.23
B	63.56	74.93	5.95	0.66	4.10	2.55	2.81
Si	4440.91	4440.91	4324.98	4324.98	4324.98	4324.98	4243.64
P	59.16	12.97	7.32	16.53	2.71	5.60	5.81
Sc	0.41	1.20	0.63	0.91	1.09	0.44	1.14
Ti	145.57	172.05	33.45	305.07	42.06	28.12	14.15
V	3.78	9.39	5.31	4.49	5.98	5.35	2.47
Cr	1.27	1.75	0.53	0.58	0.37	0.50	0.92
Mn	6.05	3.91	5.57	1.39	4.58	4.00	124.19
Co	0.17	0.19	0.29	0.32	0.25	0.35	BDL
Cu	3.75	3.14	0.45	0.10	0.65	0.61	0.43
Cu	2.68	1.83	0.41	0.28	0.50	0.69	0.46
Zn	1.29	2.48	1.89	1.88	1.24	1.66	0.84
Zn	2.27	6.42	4.62	4.39	2.63	2.72	4.56
As	1.53	BDL	BDL	0.31	0.31	0.12	BDL
Se	8.35	15.03	BDL	0.46	1.64	0.59	0.66
Se	BDL	BDL	BDL	BDL	BDL	BDL	1.61
Rb			13.49	6.01	8.03	8.24	4.37
Sr			0.72	0.51	0.77	0.83	132.48
Mo	2.18	BDL	BDL	0.17	BDL	BDL	BDL
Sn	1.50	3.86	0.12	0.19	0.15	0.18	0.32
Te	BDL	BDL	BDL	BDL	BDL	BDL	0.15
Cs	0.10	0.19	0.35	0.14	0.15	0.14	0.26
Ba	21.14	35.65	63.06	35.14	70.01	61.45	114.51
Ba	39.11	62.82	57.54	39.67	67.67	60.81	108.51
W	0.73	0.21	0.20	0.14	0.24	0.20	0.15
Pb	0.52	0.33	0.13	0.11	0.15	0.16	0.42
Bi	0.10	0.04	0.03	0.01	0.04	BDL	BDL
Th			0.05	0.45	0.03	BDL	0.25
U			0.06	0.05	0.03	BDL	0.02
Tl	0.23	0.18	0.39	0.14	0.28	0.21	0.06

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	YD09-06area4-4	YD09-06area4-5	99017-1	99017-11	99017-2	99017-3	ANN007006.017-10
Data Quality (1-3)	2.5	3	2.5	1.5	3	3	1
1 standard error (ppm)**							
Li	0.86	0.48	1.11	0.33	0.66	0.46	1.68
B	72.82	75.06	18.16	8.67	14.75	15.08	9.43
Si	4618.62	4618.62	7429.19	7429.19	7429.19	7429.19	7289.47
P	77.41	22.28	14.18	39.53	13.26	15.23	14.52
Sc	0.55	1.29	0.72	1.40	1.17	0.63	1.19
Ti	160.67	208.89	91.06	328.67	107.44	108.45	22.57
V	13.27	16.25	12.04	9.00	13.22	12.79	4.06
Cr	2.05	3.61	1.35	5.52	1.55	1.64	2.04
Mn	7.59	4.38	7.76	2.43	6.87	6.68	136.57
Co	0.18	0.20	0.35	0.36	0.31	0.39	BDL
Cu	3.82	3.66	0.51	0.22	0.66	0.64	0.57
Cu	2.90	1.87	0.54	0.35	0.55	0.77	0.60
Zn	1.52	2.57	2.13	1.90	1.52	1.90	0.93
Zn	3.45	7.57	5.29	4.53	3.58	3.67	5.10
As	1.57	BDL	BDL	0.53	0.32	0.16	BDL
Se	8.62	15.07	BDL	0.75	3.25	2.75	3.56
Se	BDL	BDL	BDL	BDL	BDL	BDL	2.73
Rb			14.29	6.88	9.17	9.36	4.78
Sr			0.86	0.60	0.93	0.97	136.99
Mo	2.30	BDL	BDL	0.17	BDL	BDL	BDL
Sn	1.69	4.08	0.21	0.24	0.27	0.24	0.63
Te	BDL	BDL	BDL	BDL	BDL	BDL	0.15
Cs	0.30	0.36	0.40	0.23	0.22	0.21	0.31
Ba	47.43	71.87	73.49	40.35	80.63	73.55	123.06
Ba	61.63	98.13	69.78	44.64	79.19	73.85	118.18
W	0.73	0.27	0.23	0.16	0.26	0.22	0.29
Pb	0.52	0.33	0.14	0.13	0.16	0.17	0.48
Bi	0.11	0.05	0.03	0.01	0.04	BDL	BDL
Th			0.05	0.54	0.03	BDL	0.28
U			0.06	0.06	0.03	BDL	0.02
Tl	0.23	0.19	0.59	0.28	0.45	0.43	0.10

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	ANN007006.017-4	ANN007006.017-6	ANN007006.017-7	ANN007006.017-8	ANN007006.017-9	YD01-13A-11	YD01-13A-12
Data Quality (1-3)	2	1	2.5	2.5	2.5	3	2
Li (ppm)	8.21	1.90	12.80	3.75	11.51	1.81	7.21
B (ppm)	28.85	2.79	28.25	15.68	24.24	56.41	7.48
Si (ppm)	212182.12	212182.12	212182.12	212182.12	212182.12	216529.54	216529.54
P (ppm)	27.46	BDL	37.47	35.75	37.45	35.86	336.16
Sc (ppm)	4.61	2.92	6.62	2.99	6.06	30.41	8.26
Ti (ppm)	338.31	110.94	382.85	242.06	224.76	252.56	56.95
V (ppm)	133.43	9.00	116.75	49.77	83.02	232.55	37.04
Cr (ppm)	4.70	2.78	5.12	6.08	4.11	22.81	12.42
Mn (ppm)	82.01	67.79	128.20	62.42	363.78	37.55	211.39
Co (ppm)	0.75	BDL	0.39	BDL	0.28	1.25	3.47
Cu(63) (ppm)	154.58	7.01	0.84	22.87	0.34	2.08	1.61
Cu(65)* (ppm)	164.72	7.69	1.67	15.78	1.23	3.05	1.42
Zn(66)* (ppm)	14.65	1.08	8.09	7.67	13.84	9.06	36.32
Zn(68) (ppm)	65.80	7.91	49.42	41.61	89.15	121.67	45.83
As (ppm)	0.25	BDL	BDL	BDL	BDL	1.42	2.32
Se(76) (ppm)	2.82	BDL	BDL	1.62	4.58	7.98	1.11
Se(77)* (ppm)	BDL	BDL	BDL	BDL	2.49	4.85	0.63
Rb (ppm)	195.21	11.86	258.28	131.40	149.52	304.10	27.13
Sr (ppm)	109.66	177.49	226.08	323.65	483.07	16.88	7.91
Mo (ppm)	0.14	0.13	BDL	BDL	BDL	BDL	BDL
Sn (ppm)	2.88	0.36	4.12	1.03	3.64	1.15	0.09
Te (ppm)	BDL	0.01	BDL	BDL	BDL	BDL	BDL
Cs (ppm)	2.01	0.33	3.91	1.71	2.81	4.65	0.57
Ba(137) (ppm)	1561.63	163.62	1518.02	1021.60	2600.45	4190.13	309.04
Ba(138)* (ppm)	1576.40	163.55	1509.78	1019.75	2598.78	4388.56	306.91
W (ppm)	2.26	0.17	2.13	0.54	3.53	0.08	0.04
Pb (ppm)	0.28	0.95	1.06	BDL	0.76	1.53	7.93
Bi (ppm)	0.15	0.01	BDL	BDL	BDL	0.05	BDL
Th (ppm)	0.19	0.12	0.51	BDL	1.65	0.02	6.16
U (ppm)	0.04	0.15	0.08	BDL	0.05	0.04	2.09
Tl (ppm)	1.08	0.12	1.86	0.77	1.10	9.20	0.91
SiO2 wt. %	45.39	45.39	45.39	45.39	45.39	46.32	46.32

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	ANN007006.017-4	ANN007006.017-6	ANN007006.017-7	ANN007006.017-8	ANN007006.017-9	YD01-13A-11	YD01-13A-12
Data Quality (1-3)	2	1	2.5	2.5	2.5	3	2
1 standard error (ppm) *							
Li	0.46	0.35	1.22	0.55	1.43	1.22	0.84
B	1.95	0.80	3.61	1.25	5.50	3.09	1.17
Si	4243.64	4243.64	4243.64	4243.64	4243.64	4330.59	4330.59
P	4.53	BDL	2.18	5.26	2.56	2.49	174.20
Sc	0.26	0.28	0.33	0.51	0.27	0.80	0.44
Ti	11.90	13.69	10.83	8.24	7.84	9.21	2.56
V	2.81	1.51	3.97	2.08	2.74	8.97	1.54
Cr	0.84	0.75	0.30	0.89	0.96	1.41	1.03
Mn	4.12	5.37	9.82	3.12	11.28	1.49	9.44
Co	0.07	BDL	0.10	BDL	0.18	0.10	0.13
Cu	8.70	0.34	0.11	9.23	0.19	0.42	0.26
Cu	16.92	0.99	0.45	4.53	0.31	0.50	0.24
Zn	0.61	0.08	0.34	0.40	0.83	0.29	2.82
Zn	2.29	0.44	4.12	1.60	3.76	5.26	2.31
As	0.17	BDL	BDL	BDL	BDL	0.91	0.36
Se	0.16	BDL	BDL	BDL	1.01	0.72	0.32
Se	BDL	BDL	BDL	BDL	1.06	1.81	0.53
Rb	5.04	1.16	6.07	4.93	7.67	11.35	0.76
Sr	3.40	8.68	22.26	11.98	14.62	0.85	0.98
Mo	0.09	0.13	BDL	BDL	BDL	BDL	BDL
Sn	0.22	0.03	0.16	0.26	0.37	0.24	0.06
Te	BDL	0.17	BDL	BDL	BDL	BDL	BDL
Cs	0.06	0.11	0.30	0.23	0.13	0.17	0.13
Ba	76.59	13.64	84.64	58.76	90.70	112.06	12.96
Ba	68.98	13.00	82.40	47.11	91.28	132.23	10.57
W	0.32	0.04	0.10	0.11	0.22	0.08	0.05
Pb	0.19	0.18	0.08	BDL	0.22	0.17	0.58
Bi	0.03	0.00	BDL	BDL	BDL	0.02	BDL
Th	0.03	0.05	0.03	BDL	0.12	0.02	1.71
U	0.02	0.03	0.04	BDL	0.04	0.01	0.56
Tl	0.06	0.04	0.09	0.03	0.18	0.94	0.17

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc	Musc
LA-ICP-MS Spot ID	ANN007006.017-4	ANN007006.017-6	ANN007006.017-7	ANN007006.017-8	ANN007006.017-9	YD01-13A-11	YD01-13A-12
Data Quality (1-3)	2	1	2.5	2.5	2.5	3	2
1 standard error (ppm)**							
Li	1.24	0.44	2.17	0.76	2.16	1.24	1.32
B	10.68	1.29	10.90	5.84	10.40	20.76	2.96
Si	7289.47	7289.47	7289.47	7289.47	7289.47	7438.82	7438.82
P	9.12	BDL	11.01	11.56	11.09	10.74	199.84
Sc	0.33	0.31	0.44	0.53	0.38	1.43	0.54
Ti	33.96	17.21	37.58	24.20	22.54	25.49	5.94
V	6.71	1.56	6.65	3.08	4.68	14.25	2.34
Cr	1.26	0.94	1.07	1.51	1.26	4.79	2.70
Mn	5.01	5.86	10.78	3.80	16.96	2.07	12.41
Co	0.08	BDL	0.10	BDL	0.18	0.12	0.22
Cu	18.50	0.82	0.14	9.54	0.19	0.48	0.31
Cu	24.29	1.28	0.49	4.83	0.34	0.59	0.28
Zn	0.70	0.08	0.39	0.44	0.89	0.35	2.94
Zn	2.74	0.47	4.27	1.87	4.28	5.98	2.55
As	0.19	BDL	BDL	BDL	BDL	1.04	0.88
Se	2.26	BDL	BDL	1.63	3.80	6.44	0.94
Se	BDL	BDL	BDL	BDL	2.26	4.28	0.73
Rb	5.88	1.18	7.27	5.33	8.01	12.56	0.90
Sr	3.94	9.26	22.63	13.35	17.06	0.88	0.99
Mo	0.09	0.13	BDL	BDL	BDL	BDL	BDL
Sn	0.56	0.07	0.76	0.32	0.75	0.31	0.06
Te	BDL	0.17	BDL	BDL	BDL	BDL	BDL
Cs	0.15	0.11	0.40	0.25	0.23	0.36	0.13
Ba	82.35	14.00	89.60	62.00	103.75	138.83	14.30
Ba	75.75	13.40	87.68	51.27	104.84	153.76	11.91
W	0.42	0.05	0.27	0.13	0.47	0.08	0.05
Pb	0.19	0.19	0.10	BDL	0.23	0.18	0.67
Bi	0.04	0.00	BDL	BDL	BDL	0.02	BDL
Th	0.03	0.05	0.04	BDL	0.16	0.02	1.74
U	0.02	0.03	0.04	BDL	0.04	0.01	0.58
Tl	0.13	0.04	0.21	0.09	0.21	1.54	0.21

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc?	Musc?
LA-ICP-MS Spot ID	YD01-13A-13	YD01-13A-6	YD01-13A-7	YD08-22area1-2	YD08-22area1-3	YD08-22area3-1	YD08-22area3-2
Data Quality (1-3)	1.5	1.5	3	3	3	3	2.5
Li (ppm)	2.54	34.10	6.80	BDL	BDL	BDL	14.90
B (ppm)	6.07	33.52	47.11	147.70	151.87	126.32	89.87
Si (ppm)	216529.54	216529.54	216529.54	226720.27	226720.27	226720.27	226720.27
P (ppm)	779.02	56.87	34.39	BDL	BDL	BDL	BDL
Sc (ppm)	6.21	29.06	36.32	33.27	13.82	31.19	7.46
Ti (ppm)	590.46	324.91	254.09	446.52	399.71	316.53	365.25
V (ppm)	25.53	277.32	331.14	780.44	839.33	650.11	239.68
Cr (ppm)	9.97	119.61	67.63	468.17	294.89	BDL	BDL
Mn (ppm)	79.41	960.33	162.29	68.88	78.91	67.12	53.25
Co (ppm)	1.36	14.07	3.18	BDL	BDL	17.61	BDL
Cu(63) (ppm)	1.21	17.20	2.55	BDL	BDL	BDL	BDL
Cu(65)* (ppm)	1.24	16.19	2.95	58.76	40.09	BDL	BDL
Zn(66)* (ppm)	10.82	182.99	31.90	16.71	7.58	13.68	14.61
Zn(68) (ppm)	19.13	238.66	118.30	63.42	BDL	68.56	72.45
As (ppm)	1.66	1.11	0.10	BDL	BDL	24.70	BDL
Se(76) (ppm)	BDL	4.75	0.59	224.17	50.73	BDL	BDL
Se(77)* (ppm)	0.61	2.54	4.00	BDL	BDL	75.91	BDL
Rb (ppm)	16.73	216.28	272.99	null	null	null	null
Sr (ppm)	8.12	17.28	16.36	null	null	null	null
Mo (ppm)	BDL	0.25	BDL	BDL	BDL	BDL	BDL
Sn (ppm)	0.33	1.18	1.11	BDL	BDL	BDL	BDL
Te (ppm)	BDL	0.40	BDL	BDL	BDL	BDL	BDL
Cs (ppm)	0.31	3.35	3.63	4.98	6.96	6.21	4.81
Ba(137) (ppm)	172.99	1981.30	3094.48	456.41	332.10	320.70	978.27
Ba(138)* (ppm)	171.80	1984.79	3153.50	535.25	365.54	311.05	930.99
W (ppm)	0.25	BDL	0.09	BDL	BDL	BDL	BDL
Pb (ppm)	4.04	2.59	2.02	BDL	BDL	BDL	BDL
Bi (ppm)	BDL	0.01	0.02	BDL	BDL	BDL	BDL
Th (ppm)	0.39	0.47	0.06	null	null	null	null
U (ppm)	0.16	0.35	0.04	null	null	null	null
Tl (ppm)	0.65	7.31	8.27	2.05	1.10	1.26	0.32
SiO2 wt. %	46.32	46.32	46.32	48.50	48.50	48.50	48.50

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc?	Musc?
LA-ICP-MS Spot ID	YD01-13A-13	YD01-13A-6	YD01-13A-7	YD08-22area1-2	YD08-22area1-3	YD08-22area3-1	YD08-22area3-2
Data Quality (1-3)	1.5	1.5	3	3	3	3	2.5
1 standard error (ppm) *							
Li	0.35	1.79	0.50	BDL	BDL	BDL	4.89
B	0.70	2.47	2.25	22.44	18.25	32.56	68.29
Si	4330.59	4330.59	4330.59	4534.41	4534.41	4534.41	4534.41
P	238.57	8.22	9.10	BDL	BDL	BDL	BDL
Sc	0.30	1.01	1.13	2.45	4.88	3.25	15.93
Ti	56.67	12.48	12.90	48.35	31.71	37.75	52.47
V	1.40	7.84	10.07	40.77	74.08	42.74	20.83
Cr	0.94	5.43	2.68	20.76	19.19	BDL	BDL
Mn	4.16	38.99	7.93	11.77	16.38	9.16	16.86
Co	0.07	0.39	0.19	BDL	BDL	5.75	BDL
Cu	0.13	1.71	0.45	BDL	BDL	BDL	BDL
Cu	0.36	0.87	0.88	5.38	25.40	BDL	BDL
Zn	0.49	7.46	2.29	5.21	4.31	12.72	4.13
Zn	1.78	15.75	6.17	15.89	BDL	16.71	17.03
As	0.43	0.27	0.70	BDL	BDL	11.07	BDL
Se	BDL	0.31	0.86	72.07	160.36	BDL	BDL
Se	1.20	1.75	1.27	BDL	BDL	27.63	BDL
Rb	0.67	7.07	8.96				
Sr	1.58	0.84	0.58				
Mo	BDL	0.15	BDL	BDL	BDL	BDL	BDL
Sn	0.08	0.06	0.27	BDL	BDL	BDL	BDL
Te	BDL	0.32	BDL	BDL	BDL	BDL	BDL
Cs	0.12	0.20	0.44	1.04	1.67	1.36	0.95
Ba	5.69	89.19	108.45	25.07	16.25	22.22	34.36
Ba	7.19	95.76	142.49	17.49	10.51	27.94	37.39
W	0.04	BDL	0.06	BDL	BDL	BDL	BDL
Pb	0.47	0.52	0.12	BDL	BDL	BDL	BDL
Bi	BDL	0.02	0.00	BDL	BDL	BDL	BDL
Th	0.15	0.10	0.07				
U	0.02	0.13	0.02				
Tl	0.10	0.69	0.83	0.93	0.46	0.67	1.21

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc	Musc	Musc	Musc	Musc	Musc?	Musc?
LA-ICP-MS Spot ID	YD01-13A-13	YD01-13A-6	YD01-13A-7	YD08-22area1-2	YD08-22area1-3	YD08-22area3-1	YD08-22area3-2
Data Quality (1-3)	1.5	1.5	3	3	3	3	2.5
1 standard error (ppm)**							
Li	0.50	5.15	1.08	BDL	BDL	BDL	4.94
B	2.32	12.45	17.29	22.72	18.61	32.69	68.32
Si	7438.82	7438.82	7438.82	4715.85	4715.85	4715.85	4715.85
P	329.27	18.49	13.53	BDL	BDL	BDL	BDL
Sc	0.38	1.52	1.81	2.56	4.89	3.33	15.93
Ti	79.37	33.03	27.17	50.75	34.59	39.30	53.97
V	1.85	15.36	18.71	87.79	111.71	77.59	31.69
Cr	2.21	24.61	13.83	43.34	30.70	BDL	BDL
Mn	5.14	53.46	10.05	11.87	16.48	9.29	16.91
Co	0.10	0.84	0.26	BDL	BDL	5.85	BDL
Cu	0.18	2.49	0.53	BDL	BDL	BDL	BDL
Cu	0.39	1.92	0.93	6.59	25.54	BDL	BDL
Zn	0.54	8.53	2.40	5.28	4.32	12.74	4.19
Zn	1.84	16.71	6.76	16.13	BDL	16.97	17.32
As	0.72	0.47	0.70	BDL	BDL	11.12	BDL
Se	BDL	3.82	0.98	72.46	160.37	BDL	BDL
Se	1.29	2.69	3.45	BDL	BDL	28.03	BDL
Rb	0.74	8.03	10.17				
Sr	1.58	0.87	0.62				
Mo	BDL	0.15	BDL	BDL	BDL	BDL	BDL
Sn	0.10	0.22	0.33	BDL	BDL	BDL	BDL
Te	BDL	0.33	BDL	BDL	BDL	BDL	BDL
Cs	0.12	0.31	0.51	1.41	2.13	1.81	1.32
Ba	6.62	97.25	124.20	35.85	24.73	28.60	64.79
Ba	7.82	102.12	153.24	33.27	22.00	32.42	61.82
W	0.05	BDL	0.06	BDL	BDL	BDL	BDL
Pb	0.50	0.53	0.15	BDL	BDL	BDL	BDL
Bi	BDL	0.02	0.01	BDL	BDL	BDL	BDL
Th	0.15	0.10	0.07				
U	0.02	0.14	0.02				
Tl	0.13	1.19	1.37	0.94	0.46	0.67	1.21

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Mu + Pa	Mu + Pa	Mu + Pa	Musc	Musc	Musc	Musc?
LA-ICP-MS Spot ID	YD02-02-area1_2	YD02-02-area1_3	YD02-02-area2_6	YD02-02-area1_1	YD02-02-area2_4	YD02-02-area2_5	YD02-02-area3_10
Data Quality (1-3)	0	2.5	2.5	2.5	2.5	2.5	2
Li (ppm)	11.30	25.73	7.83	10.33	1.34	1.19	BDL
B (ppm)	31.59	32.81	24.74	25.66	24.08	29.69	24.83
Si (ppm)	222045.62	222045.62	220175.77	222045.62	220175.77	220175.77	220175.77
P (ppm)	8054.65	113.40	89.81	91.61	87.61	82.90	85.06
Sc (ppm)	4.11	3.30	3.39	2.42	3.54	2.88	11.76
Ti (ppm)	324.07	248.08	362.41	329.45	337.01	442.84	191.68
V (ppm)	137.24	122.85	138.83	159.32	125.14	127.74	537.76
Cr (ppm)	21.56	22.11	8.33	11.32	8.94	6.15	76.12
Mn (ppm)	5.24	2.87	3.36	5.66	5.43	5.43	1.08
Co (ppm)	0.63	BDL	BDL	BDL	BDL	BDL	BDL
Cu(63) (ppm)	2.19	BDL	0.95	BDL	BDL	BDL	1.07
Cu(65)* (ppm)	BDL	0.17	0.69	BDL	BDL	BDL	BDL
Zn(66)* (ppm)	1.90	0.78	BDL	1.03	1.71	BDL	0.59
Zn(68) (ppm)	34.72	4.55	2.91	6.46	3.76	4.91	39.10
As (ppm)	4.08	BDL	BDL	2.21	1.09	2.88	2.53
Se(76) (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Se(77)* (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb (ppm)	159.62	110.75	179.57	174.00	180.05	188.77	214.84
Sr (ppm)	13750.02	13.44	1.34	1.36	1.29	1.49	88.95
Mo (ppm)	1.98	BDL	0.16	BDL	BDL	BDL	BDL
Sn (ppm)	0.53	BDL	0.60	1.42	0.46	2.27	1.47
Te (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs (ppm)	1.14	1.05	1.51	1.30	1.80	2.15	2.31
Ba(137) (ppm)	792.17	43.83	34.61	25.97	34.86	31.69	1048.06
Ba(138)* (ppm)	788.77	48.52	39.41	23.11	40.14	38.31	1032.87
W (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (ppm)	8423.39	54.89	9.60	7.08	5.89	5.34	28.16
Bi (ppm)	1.01	BDL	BDL	BDL	BDL	BDL	BDL
Th (ppm)	null	null	null	null	null	null	null
U (ppm)	null	null	null	null	null	null	null
Tl (ppm)	3.16	2.59	3.26	3.94	3.74	3.81	3.00
SiO2 wt. %	47.50	47.50	47.10	47.50	47.10	47.10	47.10

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Mu + Pa	Mu + Pa	Mu + Pa	Musc	Musc	Musc	Musc?
LA-ICP-MS Spot ID	YD02-02-area1_2	YD02-02-area1_3	YD02-02-area2_6	YD02-02-area1_1	YD02-02-area2_4	YD02-02-area2_5	YD02-02-area3_10
Data Quality (1-3)	0	2.5	2.5	2.5	2.5	2.5	2
1 standard error (ppm) *							
Li	1.74	2.46	1.12	0.55	0.30	0.17	BDL
B	1.72	1.65	1.79	0.79	2.32	1.32	1.09
Si	4440.91	4440.91	4403.52	4440.91	4403.52	4403.52	4403.52
P	422.85	10.92	5.91	4.85	8.82	8.16	4.40
Sc	0.42	0.38	0.29	0.66	0.24	0.60	0.77
Ti	15.58	20.82	15.63	14.73	16.87	16.94	14.65
V	4.13	4.02	5.05	4.99	3.99	4.34	20.17
Cr	1.44	1.06	0.46	0.91	1.69	0.79	2.83
Mn	0.31	0.22	0.65	0.42	0.44	0.32	0.17
Co	0.29	BDL	BDL	BDL	BDL	BDL	BDL
Cu	0.45	BDL	0.70	BDL	BDL	BDL	0.23
Cu	BDL	0.76	0.29	BDL	BDL	BDL	BDL
Zn	0.37	0.21	BDL	0.34	0.26	BDL	0.53
Zn	3.04	0.50	0.67	0.36	0.92	0.96	1.96
As	1.37	BDL	BDL	0.45	0.38	0.74	0.92
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb	4.78	2.94	4.81	5.30	5.06	4.97	9.79
Sr	2120.84	4.71	0.08	0.13	0.25	0.15	4.83
Mo	0.44	BDL	0.20	BDL	BDL	BDL	BDL
Sn	0.20	BDL	0.32	0.18	0.24	0.97	0.29
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.24	0.17	0.19	0.21	0.10	0.16	0.23
Ba	33.25	4.13	2.45	1.51	1.34	1.48	48.52
Ba	87.22	3.96	1.61	1.35	1.90	2.27	42.13
W	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb	431.53	15.53	0.53	0.36	0.46	0.36	1.55
Bi	0.19	BDL	BDL	BDL	BDL	BDL	BDL
Th							
U							
Tl	0.26	0.21	0.16	0.33	0.30	0.33	0.24

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Mu + Pa	Mu + Pa	Mu + Pa	Musc	Musc	Musc	Musc?
LA-ICP-MS Spot ID	YD02-02-area1_2	YD02-02-area1_3	YD02-02-area2_6	YD02-02-area1_1	YD02-02-area2_4	YD02-02-area2_5	YD02-02-area3_10
Data Quality (1-3)	0	2.5	2.5	2.5	2.5	2.5	2
1 standard error (ppm)**							
Li	1.92	3.09	1.26	0.93	0.32	0.19	BDL
B	3.24	3.30	2.80	2.37	3.13	2.91	2.43
Si	5409.16	5409.16	5363.61	5409.16	5363.61	5363.61	5363.61
P	1074.76	17.69	12.50	12.24	13.90	13.04	11.32
Sc	0.59	0.50	0.45	0.70	0.43	0.66	1.40
Ti	40.81	35.60	44.99	41.08	42.70	54.26	26.69
V	14.92	13.45	15.36	17.37	13.67	14.03	59.69
Cr	2.37	2.20	0.86	1.35	1.86	0.95	7.24
Mn	0.35	0.24	0.66	0.45	0.46	0.36	0.17
Co	0.29	BDL	BDL	BDL	BDL	BDL	BDL
Cu	0.49	BDL	0.71	BDL	BDL	BDL	0.25
Cu	BDL	0.76	0.29	BDL	BDL	BDL	BDL
Zn	0.42	0.23	BDL	0.36	0.32	BDL	0.54
Zn	4.81	0.70	0.74	0.78	1.00	1.09	4.64
As	1.57	BDL	BDL	0.62	0.43	0.93	1.04
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb	5.63	3.59	5.85	6.21	6.06	6.08	10.57
Sr	2129.84	4.72	0.08	0.13	0.26	0.15	5.00
Mo	0.45	BDL	0.20	BDL	BDL	BDL	BDL
Sn	0.21	BDL	0.32	0.20	0.24	0.98	0.31
Te	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cs	0.26	0.19	0.23	0.23	0.17	0.23	0.29
Ba	38.20	4.26	2.59	1.63	1.57	1.66	54.52
Ba	89.31	4.14	1.88	1.46	2.14	2.45	49.08
W	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb	498.33	15.61	0.60	0.41	0.49	0.39	1.76
Bi	0.28	BDL	BDL	BDL	BDL	BDL	BDL
Th							
U							
Tl	0.30	0.24	0.23	0.38	0.35	0.38	0.28

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc?	Pa	Pa	Pa	Pa	Pa	Pa
LA-ICP-MS Spot ID	YD02-02-area3_8	H437119-1	H437119-10	H437119-11	H437119-2	H437119-3	H437119-4
Data Quality (1-3)	2	2.5	2.5	2.5	3	3	3
1 standard error (ppm) *							
Li	0.18	1.79	1.39	1.08	0.69	2.53	0.91
B	1.36	2.55	1.31	1.09	1.15	0.96	1.74
Si	4403.52	4469.90	4469.90	4469.90	4469.90	4469.90	4469.90
P	7.84	5.38	7.75	4.68	6.63	9.79	8.39
Sc	0.58	0.48	0.52	0.36	0.22	0.10	0.09
Ti	10.58	1.83	3.96	3.75	3.98	3.81	1.87
V	18.79	1.58	1.66	2.13	2.18	2.31	1.39
Cr	1.50	0.77	0.90	1.93	0.97	0.48	0.47
Mn	0.53	0.48	0.30	0.11	0.33	0.02	0.18
Co	BDL	BDL	BDL	BDL	BDL	0.10	BDL
Cu	0.36	0.23	0.52	0.23	1.07	0.10	0.33
Cu	BDL	0.32	0.44	0.49	0.76	0.38	0.50
Zn	0.29	1.12	0.34	0.57	0.68	0.17	0.24
Zn	1.61	0.75	0.77	1.35	1.45	0.41	0.46
As	BDL	BDL	0.69	1.00	0.14	0.32	BDL
Se	BDL	0.57	0.72	0.63	0.32	1.35	0.54
Se	BDL	BDL	1.30	BDL	0.93	0.43	0.88
Rb	4.68	0.89	2.23	1.47	1.35	0.36	0.50
Sr	4.68	0.15	0.29	0.11	0.05	0.04	0.03
Mo	BDL	BDL	4.13	2.85	1.19	0.12	0.31
Sn	0.22	0.31	0.03	0.20	0.13	0.09	0.14
Te	BDL	BDL	0.48	0.19	0.38	0.02	0.06
Cs	0.14	0.08	0.07	0.09	0.13	0.07	0.07
Ba	39.15	0.53	0.47	0.65	0.79	0.43	0.25
Ba	47.65	0.35	0.25	0.09	0.16	0.17	0.16
W	BDL	BDL	0.05	0.07	0.04	0.06	0.05
Pb	3.00	0.07	0.22	0.11	0.12	0.15	0.11
Bi	BDL	BDL	0.08	0.01	0.03	0.01	0.02
Th		BDL	BDL	BDL	BDL	BDL	BDL
U		BDL	0.04	0.02	0.02	0.02	0.01
Tl	0.22	0.13	0.14	0.25	0.09	0.14	0.16

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Musc?	Pa	Pa	Pa	Pa	Pa	Pa
LA-ICP-MS Spot ID	YD02-02-area3_8	H437119-1	H437119-10	H437119-11	H437119-2	H437119-3	H437119-4
Data Quality (1-3)	2	2.5	2.5	2.5	3	3	3
1 standard error (ppm)**							
Li	0.21	3.58	5.75	1.83	2.18	4.21	2.49
B	1.77	10.11	9.16	11.47	7.14	8.11	6.94
Si	5363.61	7678.11	7678.11	7678.11	7678.11	7678.11	7678.11
P	16.97	17.43	30.62	23.17	16.35	19.76	16.01
Sc	1.30	0.48	0.52	0.39	0.26	0.15	0.13
Ti	29.35	3.36	5.15	6.10	5.35	4.36	2.69
V	65.23	3.72	3.62	4.62	3.87	3.40	2.59
Cr	3.40	3.86	8.29	13.22	5.80	3.61	3.95
Mn	0.54	0.48	0.31	0.11	0.33	0.03	0.18
Co	BDL	BDL	BDL	BDL	BDL	0.10	BDL
Cu	0.39	0.36	0.59	0.50	1.16	0.25	0.37
Cu	BDL	0.37	0.48	0.60	0.82	0.46	0.52
Zn	0.32	1.12	0.34	0.58	0.68	0.17	0.24
Zn	3.75	0.75	0.78	1.36	1.45	0.42	0.47
As	BDL	BDL	0.96	1.15	0.28	0.40	BDL
Se	BDL	1.33	0.74	0.83	1.30	1.86	1.15
Se	BDL	BDL	1.55	BDL	1.10	1.04	1.53
Rb	5.63	0.98	2.26	1.61	1.43	0.43	0.55
Sr	4.82	0.15	0.29	0.12	0.05	0.04	0.04
Mo	BDL	BDL	4.69	3.35	1.23	0.14	0.32
Sn	0.25	0.32	0.12	0.27	0.17	0.12	0.17
Te	BDL	BDL	0.49	0.34	0.38	0.05	0.07
Cs	0.23	0.09	0.07	0.10	0.13	0.07	0.07
Ba	46.90	0.54	0.47	0.65	0.80	0.43	0.25
Ba	54.37	0.36	0.25	0.11	0.18	0.17	0.17
W	BDL	BDL	0.06	0.07	0.04	0.06	0.05
Pb	3.33	0.07	0.23	0.14	0.13	0.15	0.12
Bi	BDL	BDL	0.08	0.02	0.03	0.01	0.02
Th		BDL	BDL	BDL	BDL	BDL	BDL
U		BDL	0.04	0.02	0.02	0.02	0.01
Tl	0.28	0.17	0.16	0.31	0.14	0.16	0.17

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Pa	Pa	Pa	Pa	Pa	Pa	Pa?
LA-ICP-MS Spot ID	H437119-5	H437119-6	H437119-7	H437119-8	H437119-9	YD02-02-area2_7	YD02-02-area3_9
Data Quality (1-3)	3	3	2.5	2.5	2.5	2.5	2
Li (ppm)	13.39	21.67	10.97	22.43	17.83	107.39	154.98
B (ppm)	30.78	29.90	31.10	26.52	25.95	28.19	35.50
Si (ppm)	223494.76	223494.76	223494.76	223494.76	223494.76	220175.77	220175.77
P (ppm)	52.41	54.47	73.34	63.05	63.50	132.64	107.79
Sc (ppm)	2.27	1.94	BDL	2.96	2.57	0.91	4.72
Ti (ppm)	34.38	41.29	31.86	37.74	40.68	200.19	125.84
V (ppm)	74.73	79.87	81.22	81.90	80.37	116.17	268.69
Cr (ppm)	42.02	55.86	51.87	41.53	38.02	11.81	41.90
Mn (ppm)	0.46	0.92	BDL	0.92	0.64	3.29	2.00
Co (ppm)	BDL	0.06	BDL	0.22	BDL	BDL	BDL
Cu(63) (ppm)	2.21	2.49	BDL	2.78	2.89	BDL	1.18
Cu(65)* (ppm)	2.41	2.29	BDL	2.25	2.23	BDL	1.71
Zn(66)* (ppm)	2.79	3.07	BDL	2.45	2.72	1.32	1.87
Zn(68) (ppm)	5.15	4.56	2.35	4.02	5.77	3.48	11.53
As (ppm)	BDL	BDL	BDL	0.53	1.27	BDL	BDL
Se(76) (ppm)	BDL	3.40	2.92	0.56	1.22	BDL	BDL
Se(77)* (ppm)	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb (ppm)	39.75	37.30	39.84	30.20	36.85	89.41	78.59
Sr (ppm)	0.82	1.15	BDL	1.19	1.88	11.58	44.00
Mo (ppm)	0.10	0.66	BDL	3.07	6.04	BDL	BDL
Sn (ppm)	0.91	0.92	BDL	0.74	0.94	BDL	0.89
Te (ppm)	BDL	BDL	BDL	BDL	0.37	BDL	BDL
Cs (ppm)	0.62	0.51	BDL	0.29	0.75	0.68	0.79
Ba(137) (ppm)	2.11	3.84	4.17	3.00	2.82	40.06	248.90
Ba(138)* (ppm)	2.51	3.67	4.60	2.50	3.22	40.90	285.80
W (ppm)	0.02	0.01	BDL	BDL	0.08	BDL	BDL
Pb (ppm)	0.57	0.75	BDL	1.17	1.09	19.68	33.18
Bi (ppm)	BDL	0.03	BDL	0.05	0.05	BDL	BDL
Th (ppm)	BDL	BDL	BDL	BDL	BDL	null	null
U (ppm)	BDL	BDL	BDL	BDL	0.02	null	null
Tl (ppm)	1.26	1.40	1.40	0.99	1.61	1.62	1.95
SiO2 wt. %	47.81	47.81	47.81	47.81	47.81	47.10	47.10

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Pa	Pa	Pa	Pa	Pa	Pa	Pa?
LA-ICP-MS Spot ID	H437119-5	H437119-6	H437119-7	H437119-8	H437119-9	YD02-02-area2_7	YD02-02-area3_9
Data Quality (1-3)	3	3	2.5	2.5	2.5	2.5	2
1 standard error (ppm) *							
Li	2.08	1.29	0.76	1.88	0.92	3.30	13.94
B	2.15	3.99	1.31	1.26	1.38	3.06	2.16
Si	4469.90	4469.90	4469.90	4469.90	4469.90	4403.52	4403.52
P	3.42	7.88	6.31	5.10	4.91	7.96	5.45
Sc	0.29	0.30	BDL	0.15	0.21	1.29	0.56
Ti	0.98	2.12	3.68	2.34	5.69	13.25	13.80
V	2.29	1.80	2.22	1.96	2.04	4.22	9.31
Cr	1.55	1.35	1.92	1.17	1.42	1.12	3.39
Mn	0.13	0.06	BDL	0.18	0.22	0.28	0.53
Co	BDL	0.13	BDL	0.16	BDL	BDL	BDL
Cu	0.27	0.35	BDL	0.67	0.41	BDL	0.84
Cu	0.45	0.06	BDL	0.15	0.64	BDL	0.71
Zn	0.21	0.24	BDL	0.92	0.29	0.29	0.58
Zn	0.54	0.10	0.40	0.73	0.84	0.25	1.34
As	BDL	BDL	BDL	0.10	0.51	BDL	BDL
Se	BDL	0.28	0.39	0.76	1.06	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb	1.14	1.17	1.00	1.65	0.98	3.25	3.21
Sr	0.05	0.22	BDL	0.16	0.53	0.58	2.64
Mo	0.24	0.27	BDL	0.71	0.84	BDL	BDL
Sn	0.16	0.09	BDL	0.13	0.19	BDL	0.22
Te	BDL	BDL	BDL	BDL	0.51	BDL	BDL
Cs	0.08	0.14	BDL	0.06	0.09	0.06	0.08
Ba	0.57	0.24	0.76	0.29	0.45	1.61	20.78
Ba	0.19	0.26	0.47	0.11	0.23	2.24	27.30
W	0.05	0.02	BDL	BDL	0.04	BDL	BDL
Pb	0.05	0.05	BDL	0.18	0.11	1.09	2.51
Bi	BDL	0.02	BDL	0.02	0.02	BDL	BDL
Th	BDL	BDL	BDL	BDL	BDL		
U	BDL	BDL	BDL	BDL	0.01		
Tl	0.09	0.15	0.12	0.11	0.08	0.16	0.21

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Pa	Pa	Pa	Pa	Pa	Pa	Pa?
LA-ICP-MS Spot ID	H437119-5	H437119-6	H437119-7	H437119-8	H437119-9	YD02-02-area2_7	YD02-02-area3_9
Data Quality (1-3)	3	3	2.5	2.5	2.5	2.5	2
1 standard error (ppm)**							
Li	2.80	3.31	1.72	3.67	2.67	8.46	17.91
B	11.41	11.59	11.39	9.73	9.54	3.92	3.78
Si	7678.11	7678.11	7678.11	7678.11	7678.11	5363.61	5363.61
P	15.48	17.56	22.05	18.86	18.94	18.11	14.30
Sc	0.31	0.31	BDL	0.20	0.24	1.30	0.73
Ti	3.38	4.42	4.75	4.25	6.85	26.81	20.13
V	4.11	4.07	4.32	4.22	4.20	12.85	29.57
Cr	8.55	11.26	10.56	8.39	7.74	1.53	5.00
Mn	0.13	0.07	BDL	0.18	0.22	0.29	0.53
Co	BDL	0.13	BDL	0.16	BDL	BDL	BDL
Cu	0.36	0.44	BDL	0.73	0.51	BDL	0.85
Cu	0.52	0.25	BDL	0.28	0.68	BDL	0.72
Zn	0.22	0.25	BDL	0.93	0.30	0.32	0.62
Zn	0.55	0.14	0.40	0.74	0.85	0.45	1.83
As	BDL	BDL	BDL	0.21	0.68	BDL	BDL
Se	BDL	2.73	2.37	0.88	1.44	BDL	BDL
Se	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Rb	1.30	1.30	1.17	1.71	1.13	3.65	3.53
Sr	0.06	0.23	BDL	0.16	0.53	0.60	2.72
Mo	0.24	0.28	BDL	0.75	0.97	BDL	BDL
Sn	0.23	0.19	BDL	0.19	0.25	BDL	0.23
Te	BDL	BDL	BDL	BDL	0.52	BDL	BDL
Cs	0.09	0.15	BDL	0.06	0.11	0.08	0.10
Ba	0.57	0.25	0.77	0.30	0.45	1.87	21.60
Ba	0.20	0.27	0.48	0.12	0.24	2.46	28.18
W	0.05	0.02	BDL	BDL	0.05	BDL	BDL
Pb	0.06	0.06	BDL	0.19	0.12	1.24	2.70
Bi	BDL	0.02	BDL	0.02	0.02	BDL	BDL
Th	BDL	BDL	BDL	BDL	BDL		
U	BDL	BDL	BDL	BDL	0.01		
Tl	0.16	0.21	0.19	0.15	0.19	0.18	0.23

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Pyr	Pyr	Pyr	Pyr	Pyr	Pyr	Pyr
LA-ICP-MS Spot ID	H437113_25-1	H437113_25-2	H437113_25-3	H437113_25-4	H437113_25-6	H437113_25-7	H437113_26-2
Data Quality (1-3)	1.5	1	1.5	1.5	1.5	1.5	3
1 standard error (ppm) *							
Li	0.09	2.68	3.61	0.26	0.15	BDL	BDL
B	0.43	9.43	2.29	0.54	0.49	0.78	0.74
Si	6243.46	6243.46	6243.46	6243.46	6243.46	6243.46	6243.46
P	198.36	1087.52	473.72	73.56	200.76	325.04	40.57
Sc	0.31	0.97	0.23	0.27	0.27	0.26	0.34
Ti	296.77	89.77	86.04	35.64	77.71	12.09	66.26
V	4.12	10.48	7.73	3.94	3.99	3.70	4.39
Cr	0.56	15.82	4.80	0.58	0.62	1.14	0.36
Mn	0.98	32.08	10.04	0.71	2.53	0.77	0.36
Co	0.05	0.84	0.40	0.08	0.30	0.10	0.08
Cu	2.54	67.64	23.19	1.41	7.61	2.81	1.17
Cu	1.98	45.07	23.44	1.72	6.03	2.21	1.13
Zn	0.45	14.71	0.58	0.45	0.35	1.52	0.57
Zn	0.68	13.75	1.45	0.57	0.81	0.82	0.25
As	0.27	7.68	1.85	1.09	0.84	0.51	0.79
Se	0.69	1.32	1.45	BDL	0.56	0.58	0.33
Se	BDL	10.27	2.82	1.32	1.20	1.03	BDL
Rb	0.18	0.81	0.24	0.11	0.18	0.10	0.09
Sr	11.93	164.02	32.96	2.46	13.02	4.79	12.96
Mo	0.31	14.73	4.57	1.32	3.33	0.96	1.64
Sn	0.15	1.66	0.32	0.06	0.03	0.10	BDL
Te	0.40	3.15	1.81	0.18	0.19	0.33	0.08
Cs	0.05	0.28	BDL	0.04	BDL	BDL	BDL
Ba	5.92	50.88	12.32	3.45	7.63	10.07	1.00
Ba	8.55	55.32	11.66	3.50	12.21	9.71	0.59
W	0.99	0.95	0.20	0.04	0.27	0.05	0.11
Pb	0.97	5.40	0.88	0.19	1.17	0.22	0.51
Bi	0.01	0.10	0.15	0.01	0.05	0.01	0.01
Th	1.37	5.42	3.89	0.64	0.81	1.57	1.51
U	0.05	0.60	0.18	0.03	0.09	0.14	0.08
Tl	BDL	BDL	BDL	0.02	BDL	BDL	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Pyr	Pyr	Pyr	Pyr	Pyr	Pyr	Pyr
LA-ICP-MS Spot ID	H437113_25-1	H437113_25-2	H437113_25-3	H437113_25-4	H437113_25-6	H437113_25-7	H437113_26-2
Data Quality (1-3)	1.5	1	1.5	1.5	1.5	1.5	3
1 standard error (ppm)**							
Li	0.17	6.13	4.65	0.27	0.39	BDL	BDL
B	2.21	26.96	9.07	4.44	2.01	2.66	2.26
Si	10724.62	10724.62	10724.62	10724.62	10724.62	10724.62	10724.62
P	1232.72	4795.24	2111.49	493.09	1482.48	2268.08	289.39
Sc	0.41	1.00	0.30	0.37	0.34	0.37	0.43
Ti	306.57	94.11	93.22	36.49	79.21	12.31	68.48
V	8.03	19.71	10.40	8.01	8.16	7.59	7.59
Cr	1.78	68.01	19.32	1.08	2.40	1.79	1.50
Mn	1.33	41.49	12.32	0.87	3.64	1.30	0.47
Co	0.06	0.89	0.41	0.08	0.30	0.11	0.08
Cu	7.23	167.63	53.01	3.46	25.68	8.28	2.78
Cu	6.76	156.93	52.24	4.00	24.80	8.07	2.63
Zn	0.50	14.80	0.64	0.46	0.41	1.54	0.59
Zn	0.79	13.97	1.68	0.61	0.93	0.96	0.31
As	3.08	43.29	12.22	4.41	8.32	3.32	3.30
Se	2.15	15.13	7.11	BDL	5.41	1.85	1.01
Se	BDL	50.39	13.41	3.52	9.84	2.41	BDL
Rb	0.18	0.82	0.25	0.11	0.18	0.10	0.09
Sr	13.06	166.02	35.87	2.50	13.38	5.06	13.21
Mo	0.60	30.35	8.08	2.47	7.54	2.40	3.00
Sn	0.18	1.87	0.42	0.07	0.04	0.10	BDL
Te	0.40	4.15	2.00	0.19	0.46	0.35	0.11
Cs	0.05	0.28	BDL	0.04	BDL	BDL	BDL
Ba	6.05	54.85	14.05	3.54	8.45	10.49	1.06
Ba	8.62	58.53	13.65	3.60	12.75	10.08	0.71
W	1.03	1.02	0.29	0.06	0.35	0.10	0.12
Pb	1.05	5.41	0.97	0.19	1.18	0.23	0.52
Bi	0.01	0.11	0.16	0.01	0.05	0.01	0.01
Th	1.97	6.31	5.56	0.65	0.95	1.57	1.68
U	0.07	0.72	0.20	0.04	0.14	0.15	0.08
Tl	BDL	BDL	BDL	0.02	BDL	BDL	BDL

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Pyr	Pyr	Pyr	Pyr	Pyr	Pyr	Pyr
LA-ICP-MS Spot ID	H437113_27-2	H437113_27-4	H437113_27-5	H437113_28-1	H437113_28-2	H437113_28-3	H437113_28-4
Data Quality (1-3)	2.5	3	2	2.5	2	3	2.5
1 standard error (ppm) *							
Li	0.49	0.21	1.10	0.14	0.16	0.23	0.34
B	0.71	2.24	2.31	0.74	0.14	3.50	2.61
Si	6243.46	6243.46	6243.46	6243.46	6243.46	6243.46	6243.46
P	46.52	50.02	78.36	38.38	71.35	25.51	118.85
Sc	0.31	0.21	0.47	0.15	0.47	0.15	0.22
Ti	13.60	103.08	1.82	3.26	56.33	3.18	1.89
V	3.42	3.52	3.21	3.53	2.71	2.30	3.04
Cr	0.77	0.77	10.35	0.35	0.32	0.25	1.46
Mn	0.25	1.98	0.50	0.11	0.71	0.27	1.27
Co	BDL	0.20	0.14	0.04	BDL	0.06	BDL
Cu	0.12	2.32	2.09	0.41	0.15	0.75	1.35
Cu	0.57	1.76	1.43	0.31	0.13	0.43	0.73
Zn	0.40	0.97	0.36	0.38	0.18	0.25	2.72
Zn	0.28	1.73	0.72	0.44	0.28	0.20	2.23
As	0.32	0.59	0.38	0.24	0.11	0.09	BDL
Se	0.57	0.98	BDL	0.19	0.71	0.42	BDL
Se	0.26	BDL	BDL	0.60	BDL	0.97	BDL
Rb	0.15	0.09	0.31	0.06	BDL	0.17	0.09
Sr	16.38	4.48	12.92	37.15	47.36	7.97	8.94
Mo	BDL	0.35	0.27	BDL	BDL	0.08	BDL
Sn	BDL	0.13	BDL	0.08	0.06	0.01	0.15
Te	BDL	0.12	0.38	BDL	BDL	BDL	BDL
Cs	0.12	0.04	BDL	0.04	0.11	0.04	BDL
Ba	0.78	1.32	12.12	6.75	2.88	0.56	1.49
Ba	0.74	2.07	3.83	10.43	2.71	1.54	2.75
W	0.03	0.28	0.07	0.03	0.17	BDL	0.05
Pb	0.94	0.43	0.58	0.67	1.39	1.01	0.47
Bi	BDL	0.03	0.03	0.01	0.03	0.01	0.01
Th	0.72	0.71	1.09	1.73	2.15	0.16	0.67
U	0.03	0.04	0.04	0.02	0.11	0.02	0.02
Tl	BDL	BDL	BDL	BDL	BDL	BDL	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Pyr	Pyr	Pyr	Pyr	Pyr	Pyr	Pyr
LA-ICP-MS Spot ID	H437113_27-2	H437113_27-4	H437113_27-5	H437113_28-1	H437113_28-2	H437113_28-3	H437113_28-4
Data Quality (1-3)	2.5	3	2	2.5	2	3	2.5
1 standard error (ppm)**							
Li	0.53	0.27	1.33	0.17	0.34	0.25	0.59
B	3.24	13.37	4.17	1.91	0.87	3.76	4.98
Si	10724.62	10724.62	10724.62	10724.62	10724.62	10724.62	10724.62
P	177.47	264.35	304.81	241.48	448.67	123.69	258.10
Sc	0.41	0.28	0.48	0.54	0.23	0.23	0.31
Ti	14.08	103.09	2.00	3.38	58.86	4.57	2.34
V	6.67	6.21	5.84	6.66	5.61	4.82	5.46
Cr	2.16	1.47	19.30	1.39	1.32	1.54	2.33
Mn	0.25	2.02	0.62	0.15	0.82	0.34	1.30
Co	BDL	0.20	0.14	0.04	BDL	0.07	BDL
Cu	0.29	2.68	2.41	0.58	0.29	0.81	1.49
Cu	0.69	2.04	1.73	0.49	0.27	0.56	1.09
Zn	0.40	1.01	0.37	0.38	0.19	0.26	2.74
Zn	0.33	1.76	0.75	0.51	0.35	0.24	2.26
As	2.54	1.56	0.79	0.93	0.51	0.55	BDL
Se	3.22	3.54	BDL	3.81	2.30	3.23	BDL
Se	1.48	BDL	BDL	1.60	BDL	1.85	BDL
Rb	0.15	0.09	0.31	0.07	BDL	0.17	0.09
Sr	16.53	5.04	13.26	37.75	51.64	8.00	9.30
Mo	BDL	0.36	0.30	BDL	BDL	0.09	BDL
Sn	BDL	0.14	BDL	0.12	0.07	0.02	0.16
Te	BDL	0.12	0.42	BDL	BDL	BDL	BDL
Cs	0.13	0.04	BDL	0.04	0.11	0.04	BDL
Ba	0.80	1.53	12.23	7.91	3.41	0.60	1.59
Ba	0.76	2.19	3.92	11.06	3.16	1.55	2.82
W	0.04	0.29	0.07	0.03	0.17	BDL	0.06
Pb	0.95	0.48	0.58	0.73	1.59	1.01	0.52
Bi	BDL	0.03	0.03	0.01	0.03	0.01	0.01
Th	0.78	0.73	1.13	1.89	3.26	0.17	0.70
U	0.04	0.05	0.04	0.02	0.15	0.02	0.03
Tl	BDL	BDL	BDL	BDL	BDL	BDL	BDL

****DOES include uncertainty
in calibration standard**

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Pyr	Pyr	Pyr	Pyr	Pyr
LA-ICP-MS Spot ID	H437113_29-1	H437113_29-2	H437113_29-3	H437113_29-4	H437113_29-5
Data Quality (1-3)	1.5	3	3	1.5	3
Li (ppm)	2.00	BDL	BDL	0.20	0.99
B (ppm)	332.00	10.15	63.04	3.46	8.74
Si (ppm)	312172.77	312172.77	312172.77	312172.77	312172.77
P (ppm)	2384.29	412.19	796.76	2493.34	305.32
Sc (ppm)	4.73	6.74	5.82	4.63	5.35
Ti (ppm)	176.10	12.02	12.59	10.61	70.17
V (ppm)	122.27	121.47	119.46	125.23	126.81
Cr (ppm)	7.91	7.60	7.03	8.90	7.38
Mn (ppm)	7.96	4.16	5.14	12.67	6.55
Co (ppm)	0.36	BDL	0.09	0.38	0.13
Cu(63) (ppm)	20.99	11.26	8.83	29.47	6.09
Cu(65)* (ppm)	22.17	11.57	8.85	35.12	5.96
Zn(66)* (ppm)	5.79	5.61	6.57	3.26	1.92
Zn(68) (ppm)	10.14	9.14	7.05	16.03	5.27
As (ppm)	8.12	5.85	5.08	7.05	6.53
Se(76) (ppm)	3.90	3.21	5.95	4.15	1.63
Se(77)* (ppm)	4.95	BDL	3.78	6.44	BDL
Rb (ppm)	1.10	1.12	1.31	1.19	1.31
Sr (ppm)	375.02	7.88	9.39	18.65	1.99
Mo (ppm)	60.06	36.41	24.06	46.48	13.89
Sn (ppm)	0.50	0.25	0.27	BDL	0.25
Te (ppm)	1.02	1.12	0.12	1.02	0.12
Cs (ppm)	BDL	BDL	BDL	BDL	0.13
Ba(137) (ppm)	47.91	5.37	6.22	142.74	15.33
Ba(138)* (ppm)	49.89	4.32	6.67	133.60	19.25
W (ppm)	0.98	0.32	0.24	0.46	0.35
Pb (ppm)	37.11	0.72	0.35	0.26	0.10
Bi (ppm)	0.20	0.10	0.03	0.04	0.01
Th (ppm)	68.25	1.57	1.63	0.59	0.02
U (ppm)	1.18	0.11	0.14	1.38	0.07
Tl (ppm)	BDL	BDL	BDL	BDL	BDL
SiO2 wt. %	66.78	66.78	66.78	66.78	66.78

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Pyr	Pyr	Pyr	Pyr	Pyr
LA-ICP-MS Spot ID	H437113_29-1	H437113_29-2	H437113_29-3	H437113_29-4	H437113_29-5
Data Quality (1-3)	1.5	3	3	1.5	3
1 standard error (ppm) *					
Li	0.21	BDL	BDL	0.21	0.22
B	22.78	1.68	5.72	0.29	0.76
Si	6243.46	6243.46	6243.46	6243.46	6243.46
P	104.28	19.57	32.35	108.34	16.31
Sc	0.18	0.44	0.27	0.24	0.19
Ti	36.64	1.46	1.00	0.62	5.71
V	3.79	3.23	3.24	3.77	3.48
Cr	0.74	0.53	0.43	0.50	0.38
Mn	0.38	0.36	0.26	0.93	0.48
Co	0.06	BDL	0.02	0.09	0.09
Cu	0.98	0.58	0.39	1.28	0.32
Cu	0.90	1.02	0.41	3.60	0.22
Zn	0.80	1.74	0.32	0.49	0.11
Zn	0.70	1.67	1.07	2.36	0.30
As	0.28	0.30	0.21	0.63	0.28
Se	0.75	0.18	0.61	0.41	0.28
Se	0.75	BDL	0.66	0.53	BDL
Rb	0.12	0.03	0.27	0.22	0.08
Sr	13.57	0.74	4.47	2.46	0.43
Mo	3.72	1.99	1.13	2.35	0.69
Sn	0.09	0.12	0.09	BDL	0.03
Te	0.22	0.32	0.08	0.17	0.19
Cs	BDL	BDL	BDL	BDL	0.02
Ba	2.02	0.50	0.84	30.69	1.79
Ba	1.97	0.22	0.77	29.82	2.94
W	0.21	0.03	0.03	0.06	0.08
Pb	2.98	0.24	0.10	0.05	0.02
Bi	0.03	0.02	0.01	0.01	0.01
Th	3.45	0.39	0.64	0.06	0.07
U	0.09	0.03	0.04	0.09	0.01
Tl	BDL	BDL	BDL	BDL	BDL

*does NOT include
uncertainty in calibration
standard

Table F1. Trace element concentrations (ppm) in minerals determined by LA-ICP-MS (continued)

Mineral	Pyr	Pyr	Pyr	Pyr	Pyr
LA-ICP-MS Spot ID	H437113_29-1	H437113_29-2	H437113_29-3	H437113_29-4	H437113_29-5
Data Quality (1-3)	1.5	3	3	1.5	3
1 standard error (ppm)**					
Li	0.35	BDL	BDL	0.21	0.27
B	123.02	4.06	23.66	1.29	3.27
Si	10724.62	10724.62	10724.62	10724.62	10724.62
P	693.55	120.14	231.40	725.17	89.30
Sc	0.28	0.53	0.38	0.32	0.31
Ti	40.35	1.86	1.57	1.19	8.83
V	7.03	6.70	6.63	7.13	7.05
Cr	1.76	1.62	1.48	1.86	1.53
Mn	0.49	0.39	0.33	1.05	0.54
Co	0.06	BDL	0.03	0.09	0.09
Cu	2.47	1.34	1.03	3.43	0.73
Cu	2.52	1.60	1.02	5.18	0.67
Zn	0.82	1.75	0.39	0.50	0.12
Zn	0.77	1.69	1.10	2.41	0.35
As	2.83	2.05	1.77	2.52	2.28
Se	3.21	2.58	4.80	3.35	1.34
Se	4.04	BDL	3.10	5.19	BDL
Rb	0.12	0.04	0.28	0.22	0.08
Sr	16.80	0.77	4.48	2.51	0.43
Mo	6.08	3.53	2.24	4.41	1.31
Sn	0.13	0.13	0.10	BDL	0.05
Te	0.28	0.38	0.08	0.25	0.19
Cs	BDL	BDL	BDL	BDL	0.02
Ba	2.47	0.52	0.86	30.98	1.85
Ba	2.39	0.25	0.79	30.04	2.98
W	0.24	0.05	0.04	0.08	0.09
Pb	3.40	0.25	0.10	0.05	0.02
Bi	0.04	0.02	0.01	0.01	0.01
Th	5.32	0.40	0.65	0.07	0.07
U	0.13	0.03	0.04	0.14	0.01
Tl	BDL	BDL	BDL	BDL	BDL

****DOES include uncertainty
in calibration standard**