

Appendix 1 Table 5

Table 5. Representative microprobe data for biotite grains analyzed from samples

**Weight. % Oxides**

Sample	11-22 C2B1	11-22 C2B2	11-22 C2 B2P1	11-22 C4 B1P1
SiO <sub>2</sub>	35.83	36.27	34.67	35.71
TiO <sub>2</sub>	3.74	3.75	2.91	3.62
Al <sub>2</sub> O <sub>3</sub>	15.97	16.62	14.50	15.53
FeO	20.61	19.84	20.44	20.98
MnO	0.45	0.43	0.41	0.40
MgO	9.90	9.74	8.70	9.29
CaO	0.02	0.02	0.88	0.05
Na <sub>2</sub> O	0.21	0.26	0.07	0.33
K <sub>2</sub> O	9.58	9.64	8.56	9.40
F	0.87	0.88	0.70	0.63
Cl	0.19	0.25	0.15	0.23
Cr <sub>2</sub> O <sub>3</sub>	0.00	0.01	0.01	0.03
NiO	0.00	0.00	0.00	0.00
Total	96.96	97.29	91.69	95.88

**Cations per 12 Oxygens**

Si	5.47	5.49	5.60	5.51
Al <sup>iv</sup>	2.54	2.52	2.40	2.49
Al <sup>vi</sup>	0.34	0.45	0.36	0.34
Ti	0.43	0.43	0.35	0.42
Cr	0.00	0.00	0.00	0.00
Fe	2.63	2.51	2.76	2.71
Mn	0.06	0.06	0.06	0.05
Mg	2.25	2.20	2.10	2.14
Ni	0.00	0.00	0.00	0.00
Ca	0.00	0.00	0.15	0.01
Na	0.06	0.08	0.02	0.10
K	1.86	1.86	1.76	1.85
OH*	3.53	3.51	3.60	3.63
F	0.42	0.42	0.36	0.31
Cl	0.05	0.07	0.04	0.06
TOTAL	19.64	19.57	19.56	19.63
Al total	2.87	2.96	2.76	2.83
Fe/Fe+Mg	0.46	0.47	0.43	0.44

11-22 C4 B2P1 20-23 C2 B1P1 20-23 C2 B1P2 20-23 C3 B1P1 20-23 C4 B1P1

37.17	35.98	35.79	36.86	35.89
3.00	3.84	3.45	2.59	2.55
16.45	17.40	17.51	18.66	18.52
20.61	16.83	15.62	15.44	16.72
0.43	0.25	0.25	0.37	0.31
9.49	11.77	11.79	12.62	11.32
0.08	0.02	0.05	0.02	0.02
0.27	0.12	0.15	0.15	0.11
8.97	9.93	9.79	9.89	9.57
0.84	0.93	0.84	1.08	0.68
0.19	0.01	0.01	0.00	0.00
0.00	0.02	0.04	0.00	0.02
0.00	0.01	0.05	0.00	0.00
97.10	96.71	94.99	97.22	95.43

5.61	5.39	5.43	5.44	5.42
2.39	2.61	2.57	2.56	2.58
0.54	0.46	0.56	0.68	0.71
0.34	0.43	0.39	0.29	0.29
0.00	0.00	0.00	0.00	0.00
2.60	2.11	1.98	1.91	2.11
0.06	0.03	0.03	0.05	0.04
2.14	2.63	2.67	2.78	2.55
0.00	0.00	0.01	0.00	0.00
0.01	0.00	0.01	0.00	0.00
0.08	0.03	0.04	0.04	0.03
1.73	1.90	1.89	1.86	1.84
3.55	3.55	3.60	3.50	3.68
0.40	0.44	0.40	0.50	0.32
0.05	0.00	0.00	0.00	0.00
19.49	19.61	19.58	19.60	19.58
2.93	3.07	3.13	3.25	3.30
0.45	0.56	0.57	0.59	0.55

20-23 C4 B1P2

37.53
2.71
18.38
16.73
0.35
11.07
0.01
0.09
10.04
0.84
0.00
0.01
0.01
97.41

5.54
2.46
0.74
0.30
0.00
2.07
0.04
2.44
0.00
0.00
0.03
1.89
3.61
0.40
0.00
19.51
3.20
0.54