

American Mineralogist: February 2017 Deposit AM-17-25864
 CHALLENGER AND GLAZNER: IGNEOUS OR METAMORPHIC?

Supplementary Table 2: Spot Analyses of Biotite and Whole Crystal Analyses

	Biotite Spot Analyses								Whole-Crystal Chemical Analyses							
	B1	B2	B3	B4	B5	B6 ^b	B7	B8	HBL-07	HBL-08	HBL-09	HBL-10	HBL-11	HBL-12	HBL-13	HBL-14
CaO ^a	0	0.024	0.012	0.027	0	0.002	0	0.027	10.27	10.68	8.97	9.43	9.18	10.01	10.02	10.34
TiO ₂	2.789	2.51	3.083	2.587	2.513	1.636	2.576	2.791	1.36	1.31	1.36	1.56	1.52	1.45	1.49	1.3
Na ₂ O	0.09	0.055	0.074	0.064	0.071	0.089	0.093	0.066	0.77	1.03	1.15	1.08	1.03	1.22	1.04	0.98
MgO	12.468	11.804	13.327	13.263	13.364	20.005	13.232	12.762	13.21	12.73	12.42	12.29	12.81	12.5	12.44	12.66
Al ₂ O ₃	13.641	15.864	14.311	14.598	14.78	15.049	14.962	14.584	7.38	7.45	9.37	8.41	8.84	8.32	8.21	7.72
SiO ₂	36.837	37.152	37.652	37.737	37.994	38.125	38.253	38.319	45.64	45.80	46.03	45.26	46.92	47.18	45.47	45.74
MnO	0.769	0.625	0.694	0.546	0.641	0.01	0.656	0.684	0.64	0.63	0.66	0.62	0.665	0.655	0.659	0.678
FeO	17.054	17.001	18.52	18.754	18.875	10.434	19.419	19.26	16.93	16.89	14.62	15.43	16.15	15.61	17.07	17.01
Cl	0.019	0.045	0.024	0.036	0.043	0.008	0.026	0.019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K ₂ O	8.614	8.056	9.362	8.952	9.704	10.394	9.413	7.446	1.54	1.12	2.00	2.07	2.23	1.7	1.66	1.27
P ₂ O ₅	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.71	0.6	0.56	0.66	0.575	0.585	0.689	0.614

^a All analyses in wt%.

^b Biotite analysis B6 is anomalously phlogopitic, and was excluded from average biotite composition calculations.