TABLE 1. GEOCHEMISTRY[1] AND EMPLACEMENT TEMPERATURES[2] FOR ABITIBI RHYOLITES.

	GROUP I						
	1	2	3	4	5	6	7
n=	7	8	1	4	1	1	1
wt.%							
SiO_2	75.48	74.21	74.49	72.87	75.86	76.00	76.70
TiO_2	0.20	0.27	0.43	0.27	0.40	0.12	0.12
Al_2O_3	11.29	11.05	10.27	11.02	12.16	11.50	11.50
Fe_2O_3	2.67	2.60	7.12	5.27	3.88	2.52	2.13
MgO	1.07	0.61	3.21	0.44	1.08	1.07	2.37
MnO	0.04	0.04	0.09	0.16	0.00	0.04	0.04
CaO	1.09	0.69	1.36	1.31	1.43	1.65	2.59
Na_2O	2.50	0.92	2.65	5.21	3.91	1.42	1.47
K_2O	3.31	7.64	0.31	0.64	0.64	3.38	1.36
P_2O_5	0.03	0.03	0.07	0.04	0.10	0.03	0.03
LOI[3]	2.37	1.54	2.95	1.93	0.54	2.20	1.45
Total	100.0	99.6	100.0	99.1	100.0	100.0	99.7
ppm							
Rb	64	111	n.a.[4]	12	120	117	67
Sr	28	15	n.a.	54	69	77	138
Zr	317	335	256	498	310	220	229
Y	98	118	52	179	67	103	117
La	54.3	52.7	24.6	n.a.	45.4	44.5	46.4
Yb	12.3	13.0	8.6	n.a.	12.4	5.2	9.0
T_{Zr} °(C)	899	898	882	926	898	852	858

Table ~~2~~ 1, continued.

	---GROUP II---		---GROUP III--		-------GROUP IV-------		
	8	9	10	11	12	13	14
n=	5	1	5	3	5	5	2
wt.%							
SiO_2	75.47	71.54	76.27	72.72	67.43	68.76	68.20
TiO_2	0.43	0.16	0.16	0.36	0.41	0.23	0.17
Al_2O_3	11.96	13.99	11.07	13.50	16.97	15.90	15.10
Fe_2O_3	4.47	1.02	2.63	2.36	4.03	2.65	1.49
MgO	0.09	0.19	0.98	0.41	2.40	1.00	0.69
MnO	2.60	0.02	0.22	0.05	0.07	0.04	0.00
CaO	0.26	1.37	1.06	1.98	3.13	2.28	2.75
Na_2O	3.71	5.75	1.41	3.58	3.59	5.84	7.04
K_2O	0.93	1.42	3.96	2.15	2.05	1.94	1.27
P_2O_5	0.10	0.16	0.03	0.13	0.13	0.10	0.05
LOI	0.15	1.80	2.45	2.79	n.a.	0.84	3.39
Total	100.0	97.8	100.2	100.0	100.0	99.6	100.1
ppm							
Rb	15	30	69	n.a.	49	n.a.	29
Sr	17	113	36	67	312	422	366
Zr	293	230	177	165	123	84	103
Y	49	30	28	15	7	5	2
La	17.1	16.1	28.1	n.a.	11.5	n.a.	6.0
Yb	6.1	2.3	2.8	n.a.	0.7	n.a.	0.2
T_{Zr} (^{o}C)	908	854	850	823	786	753	753

Table 2, continued.

[1]Geochemistry for samples 6-8 and 10 by fused glass XRF (major elements), pressed powder XRF (Rb, Sr, Zr, Y), INAA (Ce, Yb) and Leco titration (F) at Actlabs, Ancaster, Ontario and XRAL Lab, Don Mills, Ontario.
See Barrie (1993) for analytical techniques and error estimation.

[2]Emplacement temperatures calculated using equation for solubility of Zr in silicate melts (Watson and Harrison, 1983); see text for discussion.
[3] LOI: loss on ignition.
[4] n.a.: not analyzed.

1. Kamiskotia rhyolite flow - autobreccia (Hart, 1984,. Barrie et al., 1993).
2. Kamiskotia potassic rhyolite flow (Hart, 1984).
3. Phelps Dodge least altered rhyodacite (MacLean, 1988).
4. Matagami District, Watson Lake rhyolite (Costa et al., 1983).
5. Chibougamau area, Wachonichi Formation rhyolite (Ludden et al., 1984).
6. Kidd Creek area, Carnegie township quartz phyric (5%) rhyolite flow.
7. Kidd Creek area, massive (north) rhyolite.
8. Noranda mine sequence rhyolites (Ujike and Goodwin, 1987).
9. Val D'Or Louvicourt sequence quartz and feldspar-phyric (15%) rhyolite
10. Selbaie mine sequence quartz and feldspar phyric (15-25%) rhyolite tuffs (Barrie et al., 1993)
11. Halliday dome area quartz, feldspar and biotite- phyric (15-20%) rhyolite tuff.
12. Kirkland Lake south area, Upper Skead Group dacite-rhyolite tuff (A. M. Goodwin, unpubl. data, anhydrous).
13. Cunningham Township (Shunsby) quartz and feldspar phyric (10-30%) coarse fragmental rhyolite tuff.
14. Kidd Creek area sodic rhyolite porphyry, 30% feldspar and quartz.

REFERENCES FOR TABLE ACCOMPANYING MS G11918

GSA DATA REPOSITORY

MS G11918: Barrie, C. T., 1995, Zircon thermometry of high temperature rhyolites near volcanic associated masssive sulfide deposits, Abibiti Subprovince, Canada

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