

Magmatic and Hydrothermal Controls of LREE Mineralization of the St.-Honoré Carbonatite, Québec

by

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A thesis submitted to
the faculty of Graduate Studies and Research
in partial fulfillment of the requirements for
the degree of *Master of Science*

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Table 8 Whole rock chemical analyses of rocks from the Main Zone. See text for sample description.

C. do ADK *Nb gone* *C. do MAS* *C. do (Chlor)* *perovskite*

Sample	ALSY	AP	DO	DO2	MT	PH	8B
Major oxides (Wt%)							
SiO2	20.29	2.04	3.73	3.02	2.16	15.94	4.24
Al2O3	7.16	0.12	0.59	0.4	0.01	4.12	0.01
Fe2O3*	12.7	4.63	22.57	17.73	33.36	12.59	23.54
MgO	15.56	15.71	20.24	17.02	15.05	11.38	10.87
CaO	16	33.25	17.68	26.38	16.37	21.1	25.85
Na2O	0.19	0.19	0.13	0.26	0.16	0.13	0.37
K2O	3.35	0.2	0.2	0.19	0.1	4.56	0.09
TiO2	0.4	0.09	0.29	0.35	0.88	0.89	1.61
P2O5	4.43	7.43	0.15	7.59	3.21	7.66	9.04
MnO	0.5	0.78	0.65	1.23	0.58	0.95	0.9
LOI	18.7	34.5	32.8	24	26.7	18.6	20.5
CO2	16.6	21	23.3	16.9	19.2	16.9	18.4
SUM	99.28	98.94	99.03	98.17	98.58	97.92	97.02

Trace elements (P.P.M.)							
Au (P.P.B.)	5	5	5	5	5	5	5
Ag	5	5	5	5	5	5	5
As	7	11	5	20	2	14	29
Ba	715	71	82	342	216	241	242
Br	10	13	17	12	19	13	8
Ca (%)	11	22	14	19	12	14	13
Co	5	6	9	19	6	20	19
Cr	20	30	60	70	40	20	140
Cs	3	2	2	2	2	2	2
Hf	29	8	1	16	8	8	47
Hg	1	1	1	1	1	1	1
Ir (P.P.B.)	5	5	5	5	5	5	5
Mo	5	5	7	7	5	5	5
Na	1180	855	744	1290	1150	696	1870
Nb	107	456	2916	5042	5140	1688	12040
Ni	50	50	50	50	50	50	210
Rb	37	30	30	30	30	30	30
Sb	0.8	1	0.6	1	0.5	0.9	2.5
Sc	20	4	4	30	5	3	36
Se	5	5	5	5	5	5	5
Sn (%)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sr	1144	1848	317	2275	742	1354	2551
Ta	15	5	11	17	45	29	25
Th	130	28	50	170	150	33	170
U	12	2.6	6.3	11	24	290	9.5
W	4	4	4	4	4	17	4
Y	184	142	78	348	74	90	424
Zn	120	50	50	67	50	920	150
Zr	130	105	50	644	570	488	1620
Nd	170	410	170	140	170	250	270
La	160	440	220	140	200	250	320
Ce	350	860	440	330	410	510	700
Sm	31	61	28	36	29	43	61
Eu	11.7	20	9.2	14.6	9.6	15.2	24.3
Tb	5.4	5.5	0.5	8.9	0.5	4.1	10
Yb	17.9	7.8	6.6	28.4	7.4	4.9	27.8
Lu	2.3	1.08	0.85	0.84	0.05	3.3	0.5
REE sum	578.3	1395.38	705.15	558.74	656.55	830.5	1143.6

Major elements analyzed by XRF method and trace elements using NAA
 except Ba, Nb, Y, Cr done by XRF
 Fe2O3* - total iron as Fe2O3