TABLE DR1. SM-ND MODEL AGES IN THE FRONTENAC-ADIRONDACK SEGMENT OF THE GRENVILLE OROGEN

Sample Number*	T_{DM} (Ma)	ε_{Nd}	T_c	Rock Type	Location
Nd - Daly and McLelland (1991); Tc - McLelland et al. (1988)					
1	1403	3.98	1329+/-36	Tonalite	South Bay
2	1380	4.15	>1366	Tonalite	Canada Lake
3	1366	4.10	1307+/-2	Tonalite	L. Desolation
4	1430	2.15	1154+/-4	AMCG	Diana Complex
5	1495	1.50	1147+/-10	AMCG	Stark
6	1345	2.87	1134+/-4	AMCG	Tupper Lake
7	1436	2.99	1156+/-8	AMCG	Roster Hill
8	1346	1.75	1150+/-5	AMCG	Piseco Lake
9	1314	2.87	1098+/-4	HWKG	Tupper Lake
10	1576	0.86	1075+/-17	LMG	Tupper Lake
11	1351	2.47	ca. 1060	LMG	Schroon Lake
Nd - McLelland et al. (1993); Tc - McLelland et al. (1992)					
12	1440	4.5	ca. 1170	HSG	Wellesley Island
13	1210	5.7	ca. 1170	HSG	Fish Creek Body
	1378	3.2	ca. 1170	HSG	Fish Creek Body
14	1351	3.8	ca. 1170	HSG	Hyde School Body
	1369	3.5	ca. 1170	HSG	Hyde School Body
	1302	4.2	ca. 1170	HSG	Hyde School Body
15	1525	2.7	ca. 1170	HSG	Gouverneur Body
Nd – Marcantonio et al. (1990); Tc - Marcantonio et al. (1990)					
♦	1440	1.9	1166+/-3	AMCG	Perth Road
♦	1430	1.9	1165+/-3	AMCG	Battersea
♦	1480	1.4	1176+/-2	AMCG	Crow Lake
♦	1370	2.7	1166+/-3	AMCG	Lyndhurst
♦	1420	2.2	ca. 1165	AMCG	South Lake
♦	1380	2.6	ca. 1165	AMCG	Gananoque
This study					
A	1544	4.6	ca. 1365	UM	LC-03
	1445	4.6	ca. 1365	M	P06-8
	1471	5.2	ca. 1365	M	P06-7
	1500	5.2	ca. 1365	UM	PP
	1611	5.5	ca. 1365	UM	P06-4
	2258	2.1	ca. 1365	MG	PGAB
	2618	0.0	ca. 1365	LAMP	PLAMP
B	1552	4.2	ca. 1365	AMP	Stellaville
C	1735	3.5	ca. 1365	MG	Dana Hill
D	1508	4.6	ca. 1365	AMP	Potsdam
E	1552	4.4	ca. 1365	MG	N. Dekalb
F	1624	4.2	ca. 1365	AMP	Bigelow
G	1608	5.2	ca. 1365	AMP	Antwerp
H	1393	4.6	ca. 1210	AMP	Balmat
I	1360	4.7	ca. 1210	AMP	S. Balmat
J	1390	4.6	ca. 1210	MG	Geers Corners

*Refers to symbols on Figure 1
Rock Type Key: AMCG – Anorthosite-Mangerite-Charnockite-Granite Suite; AMP – amphibolite; HSG – Hyde School Gneiss; HWKG – Hawkeye Granite; LAMP – lamprophyre; LMG – Lyon Mountain Granite; MG – Metagabbro; Tonalite – Tonalitic Gneiss; UM - Ultramafic

TABLE DR2. MAJOR AND TRACE ELEMENT GEOCHEMISTRY OF THE PYRITES COMPLEX BY ICP-OES and ICP-MS.

SAMPLES	DL (%)	PGAB	PLAMP	P06-4	P06-7	P06-8	PP	LUP PY-A	LUP PY-K	LUP PY-B	LUP PO7-2
ICP-OES	(%)										
SiO2	0.01	52.09	33.74	39.47	48.9	49.44	41.59	40.46	40.28	40.34	41.00
TiO2	0.01	0.63	1.57	0.35	0.84	0.58	0.11	1.79	0.24	0.19	0.26
Al2O3	0.01	8.38	13.8	4.56	11.09	11.44	6.61	16.88	4.12	3.70	4.48
Fe2O3	0.04	7.97	16.78	6.57	9.38	9.27	6.29	11.63	7.67	7.46	7.21
MnO	0.01	0.12	0.13	0.13	0.16	0.16	0.04	0.12	0.15	0.17	0.13
MgO	0.01	15.22	20.46	27.1	14.67	13.5	32.07	12.37	27.11	30.84	27.37
CaO	0.01	8.66	1.13	7.58	6.81	8.23	1.27	1.05	6.75	3.60	6.95
K2O	0.01	2.14	2.82	0.49	2.03	1.39	1.64	6.90	0.55	0.58	0.52
Na2O	0.01	0.53	0.03	0.36	1.4	1.88	0.26	0.06	0.47	0.33	0.62
P2O5	0.01	0.48	0.52	0.17	0.42	0.07	0.08	0.59	0.26	0.34	0.40
S	0.2	0.24	0.19	0.04	0.12	0.21	0.11	0.04	0.04	0.12	0.00
LOI	0.1	3.4	8.8	12.5	4.1	3.8	9.8	5.96	11.13	10.49	9.69
SUM	%	99.85	99.85	99.88	99.97	99.84	99.94	97.86	98.77	98.16	98.66
Mg #		0.66	0.55	0.80	0.61	0.59	0.84	0.52	0.78	0.81	0.79
ICP-MS	(ppm)										
Ti	100	3776	9411	2098	5035	3477	659	10755	1412	1128	1579
P	100	2096	2270	742	1834	306	349	2597	1138	1485	1766
Cr	20	1451	253	3681	985	390	376	23	3367	3249	2961
Ga	0.5	11.4	19.5	5.3	16.5	14.8	8.6	19	6	6	7
Ni	0.1	191	220	483	166	103	488	60	782	994	685
Rb	0.1	76.7	121.1	14.5	54.8	27.1	68.3	199.33	14.46	18.65	16.25
Sr	0.5	119.1	23.2	172.1	167.9	169.1	81.4	122.31	186.73	155.33	246.81
Cs	0.1	2.7	6.5	0.8	1.7	0.9	4.3	7.54	0.84	1.08	0.58
Ba	1.0	632	945.9	159.4	694.7	547.3	539	2396.04	163.24	234.32	93.23
Sc	0.1	46	43	44	31	45	7	14.44	25.82	18.93	37.01
V	8.0	200	311	117	189	226	55	257	99	88	101
Ta	0.1	0.1	0.5	0.1	0.4	0.1	0.7	0.37	0.07	0.07	0.19
Nb	0.1	2.9	8.7	1.2	8.2	1.8	3.2	7.74	1.47	1.29	3.82
Zr	0.1	107.1	229.9	61.2	136	87.1	59	192.93	86.20	78.06	220.33
Hf	0.1	3.2	7.5	1.9	4.3	3.4	2.1	5.53	2.01	1.80	5.64
Th	0.2	8.4	6.1	3	2.5	2.4	29.4	7.89	8.00	8.23	8.95
U	0.1	2.3	2	0.8	1.7	0.9	2.6	2.01	2.63	2.44	2.81
Pb	0.1	2	1.7	1.3	8.3	13	2.5	1.42	3.05	2.86	7.89
Cu	0.1	54.7	2.2	19.6	18.8	43.7	17	2	2	15	39
Zn	1.0	104	93	47	62	149	27	104	65	76	59
Y	0.1	39.9	23.7	16	31.1	24.2	7.5	14.03	21.24	19.04	27.39
La	0.1	22.9	7.8	26.1	33.4	14.2	105.4	10.76	30.55	22.93	42.83
Ce	0.1	68.5	30.1	66.3	86.4	37.3	187.3	29.37	80.83	61.48	103.53
Pr	0.02	12.69	6.2	10.04	12.58	5.88	17.3	4.26	11.74	9.10	15.08
Nd	0.3	69.9	35.6	46.3	56.3	27.9	56.8	18.26	52.03	41.26	66.68
Sm	0.05	19.27	9.43	10	11.53	7.1	6.4	3.85	12.10	9.67	15.31
Eu	0.02	4.87	1.84	2.35	2.36	1.7	1.08	0.83	3.04	2.28	3.62
Gd	0.05	16.69	8.09	7.56	9.55	6.27	2.97	3.25	9.97	8.24	12.64
Tb	0.01	2.21	1.23	0.99	1.36	1.02	0.31	0.49	1.16	0.98	1.48
Dy	0.05	9.74	6.24	4.29	6.52	5.01	1.38	2.86	5.16	4.58	6.68
Ho	0.02	1.2	0.91	0.51	0.98	0.77	0.22	0.59	0.81	0.71	1.06
Er	0.03	3.13	2.71	1.25	2.9	2.17	0.72	1.75	1.72	1.58	2.28
Tm	0.01	0.38	0.4	0.16	0.37	0.3	0.13	0.27	0.21	0.19	0.29
Yb	0.05	2.08	2.48	0.92	2.44	1.88	0.76	1.80	1.14	1.04	1.53
Lu	0.01	0.29	0.36	0.12	0.36	0.29	0.09	0.28	0.17	0.15	0.22
Th/Ta		84	12	30	6	24	42	21	109	121	48
La/Yb		11	3	28	14	8	139	6	27	22	28

TABLE DR2. CONTINUED

SAMPLES	LUP PY-J	LUP PY-2-1	LUP PY-11	LUP P07-5	LUP P07-4	LUP PY-4	LUP P07-3	LUP PY-2A	LUP PY-1A	LUP PY-1	LUP PY-2-2
SiO2	39.72	40.58	45.54	38.48	42.66	41.48	43.16	43.47	38.57	39.17	42.45
TiO2	0.36	0.38	0.65	0.25	1.65	0.38	0.41	0.57	0.22	0.25	0.66
Al2O3	11.66	5.61	7.21	2.93	18.88	4.02	5.05	5.57	3.19	3.33	6.61
Fe2O3	4.51	6.80	6.73	8.70	12.61	7.56	6.18	5.45	8.49	8.87	5.98
MnO	0.08	0.12	0.09	0.16	0.16	0.12	0.10	0.08	0.17	0.17	0.10
MgO	26.71	24.90	21.27	33.33	6.17	29.63	27.10	22.91	31.59	32.81	19.92
CaO	6.88	8.80	8.07	1.24	9.23	3.88	6.51	10.58	3.27	1.50	13.06
K2O	0.46	1.01	1.82	0.88	2.51	1.18	0.93	1.39	0.62	0.90	0.66
Na2O	1.16	0.70	0.85	0.18	2.27	0.39	0.62	0.65	0.30	0.25	1.00
P2O5	0.24	0.28	0.24	0.19	0.86	0.09	0.24	0.23	0.18	0.22	0.23
S	0.00	0.01	0.18	0.23	0.20	0.02	0.02	0.00	0.17	0.07	0.03
LOI	7.71	8.81	4.67	11.25	1.97	9.57	8.02	7.02	11.59	10.80	7.57
SUM	99.49	98.01	97.33	97.83	99.17	98.33	98.35	97.94	98.35	98.33	98.28
Mg #	0.86	0.79	0.76	0.79	0.33	0.80	0.81	0.81	0.79	0.79	0.77
Ti	2158	2264	3886	1517	9893	2297	2478	3402	1342	1492	3980
P	1033	1237	1067	842	3765	374	1043	1020	782	941	993
Cr	29	4012	1478	2976	19	3386	3252	4244	3289	3132	5441
Ga	16	5	7	4	24	4	6	7	4	4	9
Ni	4	1176	376	1588	4	1271	611	530	1364	1531	361
Rb	9.07	41.38	66.86	41.29	62.72	54.18	36.48	58.52	25.23	36.59	16.02
Sr	98.20	170.69	222.93	100.94	790.08	89.38	228.54	142.00	114.12	87.85	230.46
Cs	3.20	1.46	2.66	1.25	1.76	1.57	1.26	1.89	1.11	1.54	0.63
Ba	70.80	205.20	574.43	193.92	498.84	280.22	242.23	275.41	148.77	228.93	115.60
Sc	9.31	38.86	50.65	11.39	26.30	19.03	45.38	55.01	12.76	10.96	72.71
V	121	97	182	62	300	74	123	143	69	66	163
Ta	0.22	0.22	0.18	0.15	0.26	0.19	0.17	0.19	0.11	0.11	0.25
Nb	2.09	3.53	3.03	2.30	4.09	2.58	2.98	3.06	1.97	2.08	3.84
Zr	137.31	148.62	167.33	117.34	59.18	95.32	171.10	105.46	96.26	87.70	132.03
Hf	3.79	3.87	4.74	3.08	2.35	2.60	4.73	3.76	2.76	2.44	4.91
Th	2.23	7.31	5.39	2.88	1.18	4.16	3.22	2.07	3.20	3.51	6.60
U	0.52	1.93	1.95	1.14	0.38	1.60	1.08	1.00	1.38	1.10	1.39
Pb	1.70	8.64	3.30	6.83	4.58	6.51	7.17	4.73	3.20	3.89	5.57
Cu	6	46	30	6	14	10	36	23	22	22	17
Zn	68	58	68	78	115	34	75	41	61	107	52
Y	14.35	18.44	29.55	12.04	49.05	12.67	23.73	21.21	14.40	13.65	28.41
La	6.01	30.81	34.71	19.12	26.13	15.82	28.06	24.89	22.81	22.23	22.52
Ce	15.40	71.03	88.97	44.35	69.79	38.31	73.53	65.64	53.31	51.15	71.93
Pr	2.48	10.13	13.85	6.28	11.32	5.62	11.26	10.31	7.56	7.13	12.76
Nd	11.98	45.01	65.63	27.46	55.64	25.34	52.56	48.64	33.01	30.62	62.63
Sm	3.25	10.33	16.62	6.21	13.47	5.98	13.19	12.02	7.66	6.97	15.85
Eu	0.79	2.46	4.55	1.39	3.24	1.44	3.22	2.76	1.69	1.53	4.01
Gd	3.04	8.31	14.16	5.01	11.96	4.95	10.92	9.70	6.37	5.74	12.82
Tb	0.50	0.98	1.66	0.62	1.82	0.61	1.31	1.17	0.74	0.70	1.54
Dy	2.85	4.47	7.51	2.85	10.21	2.90	5.91	5.36	3.40	3.21	7.14
Ho	0.58	0.71	1.16	0.47	1.99	0.48	0.94	0.84	0.55	0.53	1.13
Er	1.58	1.58	2.42	1.05	5.08	1.12	2.02	1.81	1.19	1.18	2.48
Tm	0.24	0.20	0.29	0.13	0.69	0.14	0.24	0.22	0.14	0.15	0.31
Yb	1.48	1.10	1.50	0.72	3.97	0.81	1.29	1.23	0.82	0.82	1.68
Lu	0.23	0.16	0.22	0.11	0.56	0.12	0.19	0.18	0.12	0.12	0.24
Th/Ta	10	33	30	20	5	22	19	11	29	33	26
La/Yb	4	28	23	26	7	20	22	20	28	27	13

TABLE DR3. COMPILATION OF Nd ISOTOPIC DATA FROM ULTRAMAFIC AND MAFIC ROCKS OF THE ADIRONDACK LOWLANDS

Symbol Table 2 Figure 1	Location	Latitude	Longitude	Rock Type	Nd (ppm)	Sm (ppm)	$^{147}Sm/^{144}Sm$	$^{143}Nd/^{144}Nd$	(t) 1.365 Ga	TDM (Ga)
A - PLAMP	Pyrites	N 44°31.29 W	75°11.47	LAMP	33.73	9.8	0.1753	0.512449	0.0	2.62
A - PGAB	Pyrites	N 44°31.29 W	75°11.47	GAB	66.08	19.5	0.1778	0.512578	2.1	2.26
A - P06-4	Pyrites	N 44°31.29 W	75°11.47	UM	27.72	7.3	0.1595	0.512539	5.5	1.61
A - P06-7	Pyrites	N 44°31.29 W	75°11.47	M	51.04	11.4	0.1341	0.512345	5.2	1.47
A - P06-8	Pyrites	N 44°31.29 W	75°11.47	M	39.87	9.2	0.1394	0.512409	4.6	1.44
A - PP	Pyrites	N 44°31.29 W	75°11.47	UM	58.69	14.4	0.1480	0.512466	4.8	1.5
A - LC-03	Pyrites	N 44°31.29 W	75°11.47	UM	40.15	9.3	0.1390	0.512356	4.6	1.54
B Stellavi	Ile	N 44°28.81 W	75°14.74	AMP	30.76	6.5	0.1263	0.512223	4.2	1.55
C	Dana Hill	N 44°22.24 W	75°09.71	MGAB	24.59	6.3	0.1535	0.512427	3.5	1.74
D Potsdam		N 44°40.10 W	75°59.36	AMP	37.38	7.5	0.1203	0.512190	4.6	1.51
E	N. Dekalb	N 44°30.70 W	75°22.16	MGAB	14.95	3.3	0.1333	0.512297	4.4	1.55
F Bigelow		N 44°24.92 W	75°20.00	AMP	30.18	7.6	0.1508	0.512443	4.2	1.62
G Antwerp		N 44°11.71 W	75°37.47	AMP	16.99	5.0	0.1786	0.512742	5.2	1.61
H Balmat		N 44°15.21 W	75°23.27	MGAB	137.68	28.2	0.1232	0.512287	4.6*	1.39
I	S. Balmat	N 44°12.43 W	75°21.45	AMP	50.76	9.8	0.1166	0.512244	4.7*	1.37
J	Geers Crs	N 44°10.70 W	75°20.71	MGAB	35.69	7.4	0.1249	0.512303	4.6*	1.39

*** = E(t) = 1.21 Ga**

Nd and Sm concentratio

TABLE DR4. Nd MODEL AGES AND ε_{Nd} AVERAGES

Rock Unit	**Nd/Hf T_{DM} (Ma)**	ε_{Nd}	**Source**
Frontenac Terrane - AMCG Granites	1420+/-41	2.12+/-0.49	Marcantonio et al. (1990)
Adirondack Lowlands - Hyde School Gneiss	1394+/-78	3.65+/-0.66	McLelland et al. (1993)
Adirondack Lowlands - Pyrites Complex Ultramafic/Mafic rocks	1514+/-65	5.15+/-0.41	This study
Adirondack Lowlands - Amphibolites	1597+/-80	4.40+/-0.54	This study
Adirondack Lowlands - A-R mafic equivalents	1381+/-18	4.63+/-0.10	This study
Adirondack Highlands - AMCG and younger granitoids	1412+/-90	1.67+/-0.76	Daly and McLelland (1991)
Adirondack Highlands - Tonalitic Gneisses	1383+/-19	4.08+/-0.09	Daly and McLelland (1991)
Adirondack Highlands - AMCG Hf isotopes of zircon	1385+/-30	na	Bickford et al. (2008)