B–3 Geochemical Analyses of the Orange Area

B-3 Geochemical Analyses of the Orange Area (1)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
1	A 100	Gneiss, Qtz-Fd	Ngn	42	53	20	4.1	1.6	1.0	2.7	0.5	9.8	25	5	19	27	< 2	38	390	241	545	1.81	172
2	A 300	Gneiss, Qtz-Fd	Ngn	45	69	25	4.5	1.0	1.0	1.8	0.3	9.4	24	4	33	28	< 2	17	767	230	666	2.33	197
3	A 500	Gneiss, Qtz-Fd	Ngn	156	340	88	15.0	2.9	1.4	2.6	0.4	8.3	40	5	24	91	< 2	63	972	690	684	2.29	770
4	A 700	Gneiss, Qtz-Fd	Ngn	58	94	44	10.2	1.7	2.1	2.7	0.4	8.5	36	1	14	33	< 2	39	750	382	486	1.89	293
5	A 900	Gneiss, Qtz-Fd	Ngn	42	81	27	6.9	1.2	1.2	1.1	0.2	11.5	15	2	16	31	< 2	34	614	220	493	2.49	214
6	B 200	Gneiss, Qtz-Fd	Ngn	55	127	39	7.2	1.0	1.2	1.1	0.1	15.5	15	6	20	57	< 2	43	1450	260	441	5.56	302
7	B 400	Beforsite, Ank	Mcd	825	1605	308	39.2	10.3	4.4	3.0	0.4	2.6	49	15	73	848	5	42	28800	1130	575	8.61	3479
8	B 500	Beforsite vein, Hbl?	Mcd	215	426	143	41.4	10.7	3.8	6.4	1.0	< 0.5	83	< 1	1	131	< 2	< 3	7530	9800	3460	1.44	1109
9	B 600	Gneiss, Qtz-Fd	Ngn	62	150	46	7.2	2.1	1.5	1.5	0.2	8.6	22	22	8	235	5	252	1460	696	2090	4.65	354
10	B 700	Gneiss, Qtz-Fd	Ngn	71	107	35	6.5	1.9	1.4	1.5	0.2	42.0	42	1	4	38	< 2	116	1450	287	210	3.40	295
11	B 800	Gneiss, Qtz-Fd	Ngn	100	194	68	15.3	1.8	2.1	3.5	0.5	6.2	44	3	20	27	< 2	37	393	246	183	0.82	508
12	Ba310	Gneiss, Qtz-Fd	Ngn	68	142	48	5.5	1.6	0.8	1.0	0.2	25.1	17	3	29	51	< 2	63	2270	202	350	5.91	343
13	Ba320	Gneiss, Qtz-Fd	Ngn	53	88	25	4.3	1.5	0.8	1.2	0.2	9.4	14	23	28	27	< 2	194	413	174	243	1.73	226
14	Ba400	Gneiss, Qtz-Fd	Ngn	66	152	54	11.3	3.3	1.5	2.7	0.4	12.7	34	2	17	47	< 2	127	1450	428	385	3.47	384
15	Ba410	Syenite-albitite?	Mfn	41	54	16	3.9	0.9	0.7	0.9	< 0.1	< 0.5	4	13	17	477	16	33	424	200	290	1.93	153
16	Ba420	Syenite-albitite?	Mfn	38	63	21	4.3	1.4	0.9	1.4	0.2	3.6	9	18	16	498	22	34	727	366	370	2.62	173
17	Ba500	Gneiss, Qtz-Fd	Ngn	12	18	8	2.1	0.9	0.5	0.8	< 0.1	10.0	6	< 1	8	38	< 2	102	633	79	360	1.69	60
18	Ba510	Gneiss, Qtz-Fd	Ngn	38	78	31	5.9	1.9	1.3	2.5	0.4	13.3	20	1	20	95	< 2	243	1150	313	450	3.05	217
19	Ba520	Sovite, Hbl	Mcs	81	180	61	12.0	2.9	1.7	3.9	0.5	2.5	32	110	16	1030	47	857	2270	2560	541	5.92	453
20	Ba600	Sovite	Mcs	202	419	116	26.6	7.3	2.8	3.3	0.4	< 0.5	65	3	3	64	< 2	18	1050	4440	1500	1.08	1000
21	Ba610	Gneiss, Qtz-Fd	Ngn	72	151	42	8.9	2.1	1.2	1.1	0.2	4.7	14	1	10	107	< 2	80	4340	462	320	3.00	361
22	Ba620	Sovite, Hbl-Agt	Mcs	181	421	133	27.7	7.7	4.0	4.0	0.5	1.6	68	268	41	1930	67	114	1450	3900	7170	2.00	1019
23	Bb400	Beforsite	Mcbl	87	178	82	17.3	4.3	1.5	1.3	0.2	7.1	16	< 1	11	22	< 2	62	409	5902	409	2.35	484
24	Bb410	Syenite, fenitised	Msu	637	693	173	26.1	6.1	1.8	2.6	0.4	10.6	36	7	23	860	25	27	246	1817	246	2.62	1907
25	Bb420	Beforsite	Mcbl	138	195	62	9.7	2.1	0.6	0.6	< 0.1	4.3	8	3	15	2	< 2	40	276	4960	< 100	0.80	511
26	Bb500	Beforsite	Mcbl	200	368	168	30.0	7.3	2.2	2.0	0.3	7.2	23	1	29	9	5	158	312	5350	< 100	1.83	998
27	Bb510	Beforsite	Mcbl	660	760	178	18.4	3.0	1.1	0.5	< 0.1	4.8	7	9	8	21	8	747	2420	1639	197	6.36	1990
28	Bb515	Beforsite, Ank	Mcbl	10225	11962	2164	234.8	31.4	3.2	1.8	0.2	< 0.5	25	8	64	148	3	< 3	10231	5574	5795	6.27	29949
29	Bb520	Beforsite	Mcbl	10240	9232	2099	243.6	35.5	4.6	2.3	0.3	< 0.5	74	10	270	15	3	17	1035	8702	131	1.19	26599
30	Bb525	Beforsite, Ank	Mcbl	95	169	56	9.3	2.0	1.2	0.7	< 0.1	5.8	7	< 1	7	5	< 2	< 3	7819	5790	428	4.11	426
31	Bb600	Beforsite, Ank	Mcbl	97	141	37	8.6	2.0	1.1	0.9	< 0.1	6.3	11	3	16	30	< 2	5	7958	4922	4120	4.56	367
32	Bb605	Syenite	Msu	32	56	20	3.5	0.9	0.5	0.9	< 0.1	11.4	8	15	7	342	3	262	933	486	382	4.14	149
33	C 100	Gneiss, Qtz-Fd	Ngn	75	112	36	9.0	1.7	1.3	2.3	0.3	10.2	34	3	24	42	< 2	41	956	183	442	2.57	314
34	C 300	Gneiss, Qtz-Fd	Ngn	83	105	44	12.4	1.6	1.6	3.0	0.4	6.8	32	5	24	28	< 2	44	297	97	354	1.09	335
35	C 310	Gneiss, Qtz-Fd	Ngn	56	61	19	3.8	0.8	0.6	0.7	< 0.1	6.4	10	3	19	25	< 2	51	210	38	260	0.75	182
36	C 320	Gneiss, Qtz-Fd	Ngn	49	44	13	3.4	1.1	0.7	1.3	0.2	4.8	9	8	21	299	9	419	1430	418	806	3.72	149
37	C 325	Beforsite, Ank	Mcbl	108	176	56	8.2	1.5	1.0	0.8	< 0.1	5.2	6	2	10	4	< 2	< 3	7445	3412	< 100	4.05	446
38	C 400	Beforsite	Mcbl	47	73	14	3.0	0.9	0.6	0.6	< 0.1	6.2	6	1	3	62	< 2	< 3	7830	3360	138	4.32	179
39	C 405	Beforsite, Ank	Mcbl	201	216	50	7.6	1.5	1.0	0.8	< 0.1	6.5	8	2	13	164	< 2	< 3	8298	3942	< 100	5.84	595
40	C 410	Beforsite	Mcbl	100	187	52	9.5	2.3	1.1	1.0	< 0.1	4.0	12	1	16	18	< 2	< 3	7270	5330	131	4.02	451
41	C 415	Syenite	Msu	71	121	46	8.8	2.1	1.0	0.9	< 0.1	7.1	14	< 1	10	4	< 2	< 3	7967	7004	1565	4.18	324
42	C 420	Dolerite	Kdd	56	90	39	8.2	2.1	1.1	1.4	0.2	3.5	16	< 1	6	58	4	68	4150	1157	< 100	3.17	261
43	C 425	Beforsite	Mcbl	113	166	59	9.0	2.0	0.9	0.6	< 0.1	1.2	8	4	10	299	2	17	1393	6304	6312	2.06	444
44	C 500	Syenite, porphyritic	Mfn	12	30	13	3.0	0.9	0.7	1.7	0.3	1.2	10	21	7	359	12	1110	1260	458	535	5.52	88
45	C 505	Beforsite	Mcbl	105	152	65	10.0	2.0	1.0	0.6	< 0.1	8.6	7	8	13	78	4	38	936	4126	178	2.94	428

B-3 Geochemical Analyses of the Orange Area (2)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-B2O3 ppm
46	C 510	Beforsite, Phl	Mcbl	19	48	16	2.5	0.5	0.5	2.0	0.2	4.1	5	3	3	269	5	<3	5250	5010	499	2.82	120
47	C 515	Beforsite	Mcbl	103	133	54	10.2	2.6	0.7	0.6	<0.1	1.3	10	1	32	67	<2	1130	1487	6438	193	6.33	385
48	C 520	Beforsite	Mcbl	36	57	20	4.4	1.1	0.7	0.8	<0.1	4.9	6	<1	7	111	<2	<3	5360	5340	670	2.29	157
49	C 525	Beforsite	Mcbl	12760	11100	2522	364.4	65.6	13.5	2.7	0.3	2.4	130	14	656	29	5	9	100	9426	<100	0.47	32716
50	C 600	Sovite, Hbl-Agt	Mcs	153	276	92	21.6	5.2	3.7	4.5	0.5	5.1	48	5	2	112	3	61	2830	4240	1060	1.88	739
51	C 605	Sovite, Px-Phl	Mcs	115	194	90	17.2	4.4	2.5	2.3	0.3	0.5	33	165	12	634	21	28	1172	3178	4514	1.04	562
52	C 610	Sovite, Hbl-Agt	Mcs	190	321	108	22.0	5.8	2.8	3.2	0.4	<0.5	53	22	5	67	2	4	1120	4890	2700	0.45	846
53	C 620	Sovite, Hbl-Agt	Mcs	187	360	121	28.0	7.3	3.2	3.6	0.5	<0.5	55	4	6	74	2	37	845	3740	3990	0.53	926
54	C 700	Sovite, Hbl-Agt	Mcs	174	322	91	20.4	6.5	2.0	3.2	0.4	<0.5	50	1	2	32	<2	96	889	4330	3050	1.24	796
55	C 800	Gneiss, Qtz-Fd	Ngn	27	57	20	4.5	1.0	1.0	3.0	0.4	3.3	37	1	8	9	<2	11	171	109	220	0.40	158
56	C 900	Gneiss, Qtz-Fd	Ngn	36	87	34	9.2	1.0	1.4	2.4	0.3	2.1	24	1	10	20	<2	20	249	37	170	0.43	233
57	Ca300	Gneiss, Qtz-Fd	Ngn	36	48	23	5.7	0.7	1.2	2.4	0.3	5.8	17	3	26	42	<2	86	878	166	568	1.65	162
58	Ca310	Beforsite	Mcbl	111	206	59	14.5	4.6	2.1	1.5	0.3	5.4	8	2	61	34	<2	5	9310	3000	228	4.68	520
59	Ca315	Beforsite, Hbl-Agt-Phl-Ank	Mcbl	346	385	124	18.1	3.6	2.0	1.0	<0.1	6.5	13	2	19	7	<2	<3	8941	4786	<100	4.55	1102
60	Ca320	Gneiss, Qtz-Fd	Ngn	65	95	33	10.1	1.3	1.6	2.8	0.4	9.0	29	4	22	32	<2	37	454	167	480	2.13	282
61	Ca325	Beforsite, Hbl-Agt-Phl-Ank	Mcbl	111	186	95	19.7	5.0	2.5	1.0	<0.1	39.1	20	7	11	238	2	99	6363	5262	<100	4.33	552
62	Ca400	Syenite, porphyritic, banded	Mfn	18	38	15	4.3	0.9	0.7	2.1	0.4	10.7	8	16	6	384	4	733	2480	262	2730	7.05	111
63	Ca405	Beforsite, Hbl-Phl	Mcbl	415	483	134	18.0	3.8	1.9	0.6	<0.1	7.4	12	5	7	163	<2	<3	7384	5716	<100	4.25	1313
64	Ca410	Beforsite, Phl-Agt-Hbl-Dol, vei	Mcbl	185	452	158	38.2	9.7	4.0	2.4	0.3	4.7	38	5	7	147	4	<3	4090	3870	19300	2.89	1106
65	Ca415	Beforsite	Mcbl	46	70	31	4.7	1.2	1.0	1.0	<0.1	3.9	6	11	6	375	3	<3	5174	5652	1779	3.24	205
66	Ca420	Beforsite	Mcbl	244	436	102	19.9	3.8	1.9	2.2	0.3	5.7	13	1	31	236	<2	<3	5930	4630	132	3.00	1022
67	Ca425	Beforsite	Mcbl	104	126	50	7.2	1.8	0.9	0.6	<0.1	1.8	8	7	9	1351	<2	16	169	5518	<100	0.48	369
68	Ca500	Beforsite	Mcbl	70	165	60	14.0	4.8	1.9	2.0	0.2	5.8	9	22	21	4730	9	7	5140	4790	196	2.69	422
69	Ca505	Beforsite	Mcbl	2512	2317	566	111.0	18.8	3.4	0.7	<0.1	5.3	22	5	117	939	<2	5	9478	5220	<100	5.01	6766
70	Ca510	Beforsite	Mcbl	161	240	74	16.9	3.5	2.0	1.5	0.3	8.2	13	4	19	648	<2	<3	5790	5220	131	2.68	640
71	Ca515	Beforsite	Mcbl	595	618	209	25.4	4.6	1.5	0.9	<0.1	8.8	10	7	29	1742	<2	<3	4442	6722	20583	3.24	1801
72	Ca520	Beforsite	Mcbl	171	244	73	18.7	4.5	2.1	1.7	0.2	9.5	14	<1	33	14	<2	<3	6360	6060	<100	2.75	660
73	Ca525	Beforsite	Mcbl	706	763	320	46.5	9.1	2.4	0.9	<0.1	8.4	18	7	73	936	<2	36	573	6362	220	2.16	2303
74	Ca600	Beforsite	Mcbl	211	304	52	10.9	2.0	1.0	0.8	<0.1	5.0	14	5	24	2510	22	3	7660	5210	3290	3.57	721
75	Ca605	Beforsite	Mcbl	4328	5716	1286	164.2	28.3	6.3	1.5	0.2	2.3	42	2	179	12	<2	<3	12351	7796	207	7.62	14155
76	Ca620	Syenite, porphyritic	Msu	111	175	58	11.7	2.4	1.5	1.7	0.2	<0.5	23	63	22	570	32	338	879	1810	2030	2.04	466
77	Ca700	Syenite - albitite ?	Msu	75	99	46	8.8	2.3	1.3	1.7	0.2	0.9	24	85	22	772	22	112	1090	1750	3510	1.06	310
78	Ca710	Sovite, Agt-Phl-Hbl	Mcs	201	280	107	16.8	8.4	1.7	3.4	0.5	0.8	61	10	10	54	<2	25	1090	4090	10100	0.73	791
79	Ca720	Sovite, Agt-Phl-Hbl	Mcs	193	279	112	25.7	8.1	2.5	3.1	0.4	0.6	57	5	7	152	3	22	872	3390	11600	1.22	808
80	Cb310	Beforsite	Mcbl	240	215	89	13.0	2.8	1.2	1.0	<0.1	4.9	10	6	22	1152	<2	3	7370	4706	<100	7.93	705
81	Cb315	Beforsite, Phl-Px	Mcbl	126	218	117	22.7	5.5	2.4	1.3	0.2	7.3	25	2	5	325	5	9	6257	5288	13017	2.94	644
82	Cb325	Beforsite, Ank	Mcbl	114	159	72	14.4	3.5	1.8	0.9	<0.1	4.1	15	75	10	2415	48	7	5125	3662	2278	5.64	474
83	Cb400	Fenite, Agt-Phl	Mfn	108	172	104	24.2	6.5	2.2	1.7	0.2	0.9	32	12	11	182	6	48	1929	1428	2503	3.51	552
84	Cb405	Beforsite, Phl-Px	Mcbl	459	548	100	15.5	3.6	1.8	1.2	0.1	5.8	19	2	9	87	<2	<3	6982	5446	618	3.69	1395
85	Cb410	Beforsite	Mcbl	93	96	54	8.7	1.8	0.7	0.7	<0.1	0.5	8	13	8	960	11	764	1566	5214	7908	3.17	325
86	Cb415	Beforsite	Mcbl	18	28	18	3.6	0.8	0.8	0.5	<0.1	9.3	5	3	3	524	<2	102	4960	4110	1780	7.87	96
87	Cb420	Beforsite	Mcbl	1276	1472	365	88.3	13.4	3.1	1.3	0.2	10.3	26	7	129	513	<2	172	2913	4290	882	6.16	3972
88	Cb425	Beforsite	Mcbl	27	43	26	5.5	1.1	0.7	0.8	<0.1	11.0	8	2	4	728	<2	132	2822	5180	1540	5.69	140
89	Cb500	Beforsite	Mcbl	68	101	67	10.3	2.0	0.8	0.6	<0.1	2.9	8	5	16	890	7	16	207	4838	160	0.40	322
90	Cb510	Beforsite	Mcbl	95	124	61	8.0	1.8	0.8	0.5	<0.1	6.2	7	13	15	5384	<2	<3	10016	5010	<100	9.18	371

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91	Cb515	Beforsite, Phl-Agt	Mcbl	106	153	57	7.8	1.6	0.6	0.6	< 0.1	0.5	7	6	13	819	< 2	36	2338	5204	4960	3.71	412
92	Cb520	Beforsite	Mcbl	297	348	160	21.3	4.3	0.9	0.8	< 0.1	4.8	12	4	24	1011	< 2	< 3	4914	7226	1871	5.45	1040
93	Cb525	Beforsite	Mcbl	429	558	253	36.4	7.8	1.8	1.0	< 0.1	6.0	18	13	61	1905	< 2	4	7256	5780	< 100	4.95	1615
94	Cb600	Beforsite	Mcbl	60	74	56	10.4	2.4	0.8	0.7	< 0.1	4.2	9	1	6	365	< 2	< 3	6861	4790	< 100	3.73	266
95	Cb605	Beforsite, Ank	Mcbl	30	52	25	5.5	1.1	0.7	0.3	< 0.1	< 0.5	5	5	< 1	21	2	3	183	6542	1067	0.50	151
96	Cb610	Beforsite	Mcbl	1911	2420	563	88.5	13.5	2.8	1.4	0.2	7.3	26	7	93	523	3	102	1399	7222	209	2.19	6145
97	Cb615	Beforsite, Ank	Mcbl	56	69	38	6.2	1.5	0.8	0.6	< 0.1	< 0.5	6	< 1	4	38	< 2	608	2477	4160	1404	4.07	224
98	Cb620	Syenite, Agt-Hbl, fenitised	Msu	73	110	64	12.8	3.6	1.2	2.2	0.3	1.3	28	78	22	686	31	145	2332	1929	11372	4.07	352
99	Cc310	Gneiss, Qtz-Fd, fenitised	Ngn	65	106	64	11.2	2.0	1.4	1.5	0.2	3.9	15	3	25	70	< 2	3	10921	4462	< 100	9.64	332
100	Cc315	Beforsite, Px-Hbl	Mcbl	184	227	88	14.9	3.1	1.6	0.7	< 0.1	5.9	8	< 1	19	6	< 2	< 3	8678	4558	< 100	5.38	659
101	Cc320	Beforsite	Mcbl	246	323	120	17.7	3.7	1.2	0.8	< 0.1	5.2	12	5	27	17	< 2	< 3	7804	820	< 100	5.64	894
102	Cc325	Beforsite, Ank	Mcbl	106	160	57	11.1	2.7	1.5	0.9	< 0.1	7.2	13	2	15	37	< 2	< 3	8437	6798	955	4.82	437
103	Cc400	Beforsite	Mcbl	282	443	159	20.3	4.0	1.0	0.8	< 0.1	4.7	11	3	30	9	3	< 3	9690	3092	< 100	6.69	1138
104	Cc405	Beforsite, Hbl-Agt-Phl	Mcbl	61	96	44	9.0	2.0	1.0	0.7	< 0.1	7.4	10	35	5	733	18	7	6954	5098	4840	4.37	278
105	Cc410	Fenite	Mfn	75	118	77	18.3	4.5	2.0	1.0	< 0.1	4.5	14	2	10	118	< 2	< 3	6432	1409	< 100	4.79	394
106	Cc415	Beforsite	Mcbl	205	287	103	16.4	3.4	1.5	0.7	< 0.1	5.9	10	2	12	85	< 2	< 3	8117	5932	7201	4.75	779
107	Cc420	Beforsite, Ap	Mcbl	122	181	134	26.4	6.4	2.3	1.3	0.2	8.5	26	5	4	978	6	< 3	5482	5280	10445	3.92	621
108	Cc425	Beforsite, Phl	Mcbl	210	256	112	20.2	5.1	1.6	1.8	0.2	5.6	27	9	52	888	15	< 3	6844	6762	12911	3.63	772
109	Cc500	Beforsite	Mcbl	68	97	53	10.0	2.3	1.0	0.6	< 0.1	5.6	8	< 1	11	179	< 2	< 3	6238	7312	3100	2.96	301
110	Cc505	Beforsite, Agt-Phl	Mcbl	150	183	75	10.3	2.1	0.9	0.8	< 0.1	6.8	9	5	11	1414	< 2	< 3	6122	6150	< 100	3.33	533
111	Cc510	Beforsite	Mcbl	135	159	76	10.3	2.0	0.8	0.7	< 0.1	4.5	8	2	9	771	< 2	< 3	6143	5484	< 100	3.33	485
112	Cc515	Beforsite	Mcbl	154	199	96	16.2	3.5	1.0	1.0	< 0.1	7.5	14	4	17	737	< 2	< 3	6620	5054	< 100	3.86	597
113	Cc520	Beforsite	Mcbl	42	69	35	5.7	1.5	0.5	0.4	0.1	4.8	5	< 1	3	21	< 2	< 3	6405	6678	548	2.73	199
114	Cc525	Syenite, Agt-phl	Msu	96	120	35	7.5	1.5	0.6	0.6	< 0.1	4.9	6	3	6	497	< 2	11	7706	5358	< 100	4.33	329
115	Cc600	Beforsite	Mcbl	48	66	20	3.5	1.3	0.8	0.8	< 0.1	5.2	10	2	17	17	< 2	< 3	8968	7008	4025	3.49	183
116	Cc605	Beforsite, Ank	Mcbl	145	173	47	9.0	2.2	1.0	0.7	< 0.1	6.3	12	2	24	23	< 2	< 3	9151	6264	11659	4.92	475
117	Cc610	Beforsite	Mcbl	52	73	24	5.2	1.6	1.0	1.0	< 0.1	< 0.5	12	69	43	1243	34	84	1063	1297	182	2.00	208
118	D 100	Gneiss, Qtz-Fd	Ngn	42	62	32	8.2	0.6	1.2	1.5	0.2	9.7	16	3	14	24	< 2	41	571	168	435	1.75	200
119	D 200	Beforsite vein, Phl-Agt-Hbl	Mcd	742	1629	364	49.9	14.5	8.7	11.0	1.1	19.6	105	20	39	288	4	113	5880	13300	5370	3.77	3591
120	D 220	Gneiss, Qtz-Fd	Ngn	27	35	17	5.0	0.5	0.7	0.7	< 0.1	3.6	6	2	15	23	< 2	63	317	87	221	0.61	116
121	D 300	Syenite - albitite	Msu	21	37	12	2.6	0.9	0.5	0.7	< 0.1	1.9	7	5	8	127	3	93	789	123	929	1.42	99
122	D 305	Beforsite	Mcbl	146	174	65	11.1	2.1	1.2	1.3	0.2	7.1	11	8	12	1249	< 2	3	10501	3302	< 100	6.71	510
123	D 310	Beforsite	Mcd	4735	9218	2827	484.4	109.0	15.3	3.0	0.3	5.4	66	26	690	416	15	< 3	6260	2010	222	6.85	21657
124	D 400	Beforsite	Mcbl	31	47	16	3.0	0.9	0.4	0.7	< 0.1	5.3	6	1	2	16	< 2	< 3	6210	4690	127	2.85	129
125	D 405	Beforsite	Mcbl	181	194	76	10.2	2.3	0.9	1.0	< 0.1	5.2	15	15	15	2035	< 2	4	13799	4810	< 100	5.74	585
126	D 410	Beforsite	Mcbl	173	215	75	13.7	2.3	1.7	0.7	< 0.1	5.6	10	8	17	881	3	3	5930	3530	201	3.13	611
127	D 415	Beforsite	Mcbl	37	59	23	4.3	1.1	0.5	0.5	< 0.1	4.7	6	< 1	1	1280	< 2	< 3	6245	5970	< 100	2.87	162
128	D 420	Beforsite	Mcbl	50	67	22	4.3	1.1	0.6	0.8	< 0.1	6.0	11	2	4	391	< 2	5	5200	3830	213	2.79	188
129	D 500	Beforsite	Mcbl	39	53	15	4.3	0.9	0.6	0.7	< 0.1	5.5	5	2	< 1	35	< 2	< 3	4970	4610	104	2.90	148
130	D 505	Beforsite	Mcbl	2681	3415	927	165.0	30.3	7.0	1.6	0.2	6.1	55	11	228	939	< 2	< 3	6607	2696	< 100	5.84	8934
131	D 510	Beforsite	Mcbl	73	117	30	6.9	1.5	0.9	0.7	< 0.1	8.4	8	2	2	508	< 2	< 3	4990	4790	207	2.49	294
132	D 515	Beforsite, Ank	Mcbl	1112	1172	392	66.5	11.2	3.6	0.7	< 0.1	5.0	20	4	73	491	< 2	< 3	7734	5758	< 100	4.63	3420
133	D 520	Beforsite	Mcbl	91	152	37	7.6	1.6	1.0	0.8	< 0.1	7.1	9	3	6	430	< 2	< 3	5300	4810	< 100	2.71	371
134	D 525	Beforsite, Ank	Mcbl	273	291	84	15.1	3.0	1.1	1.3	0.2	5.7	16	17	9	1710	< 2	3	6994	5388	< 100	3.24	834
135	D 600	Beforsite	Mcbl	280	612	150	18.6	3.5	1.7	1.4	0.2	5.0	15	11	18	1190	< 2	18	6300	4050	142	4.30	1337

B-3 Geochemical Analyses of the Orange Area (4)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R203 ppm
136	D 605	Beforsite, Ank	Mcbl	122	167	65	10.5	2.3	1.0	0.8	< 0.1	4.3	7	7	16	2129	12	9	7670	5576	< 100	4.00	468
137	D 610	Beforsite	Mcbl	82	150	46	7.3	1.7	1.0	0.9	< 0.1	5.2	5	< 1	1	6	< 2	< 3	6440	5270	< 100	3.01	369
138	D 615	Beforsite, Ank	Mcbl	76	102	41	6.9	1.5	0.6	0.9	< 0.1	4.8	6	< 1	2	64	< 2	< 3	9194	6370	< 100	4.34	292
139	D 620	Beforsite	Mcbl	77	119	44	7.5	1.7	1.2	1.5	0.2	4.4	8	1	3	37	< 2	< 3	8540	4470	< 100	2.97	327
140	D 700	Beforsite	Mcbl	57	101	27	3.2	1.1	0.5	0.7	< 0.1	6.2	6	1	< 1	82	< 2	< 3	6700	4920	< 100	3.54	241
141	D 705	Beforsite, Ank	Mcbl	178	225	74	8.8	1.9	0.9	0.9	< 0.1	4.3	6	2	9	371	< 2	< 3	7717	5532	< 100	3.82	614
142	D 710	Sovite, Phl-Hbl,banded	Mcs	104	161	59	12.0	3.4	2.0	3.0	0.4	0.8	40	1	1	38	< 2	64	1320	2430	162	0.91	455
143	D 720	Sovite, Px-Hbl	Mcs	133	209	70	13.7	4.2	2.2	4.3	0.5	1.0	41	42	10	522	< 2	290	1730	2730	2650	2.92	574
144	D 800	Gneiss, Qtz-Fd, fenitised	Ngn	36	50	20	4.3	1.1	0.9	2.5	0.4	15.8	20	19	22	265	4	467	1280	277	632	3.70	157
145	Da220	Syenite - albitite	Msu	54	73	32	6.0	1.4	0.9	0.6	< 0.1	2.3	11	11	7	200	5	152	422	262	538	1.23	219
146	Da300	Gneiss, Qtz-Fd, fenitised	Ngn	156	383	152	45.0	14.0	7.2	7.9	1.0	< 0.5	99	31	15	662	26	907	1160	671	7960	2.35	1053
147	Da305	Fenite, Agt	Mfn	169	214	99	26.2	6.5	2.8	1.8	0.2	8.7	28	9	33	539	13	179	3311	795	1927	4.87	678
148	Da310	Syenite, bre.	Msu	223	510	181	45.4	11.6	5.4	2.7	0.3	5.6	22	23	76	1440	11	140	4120	861	2030	6.61	1282
149	Da320	Beforsite, banded	Mcbl	217	496	156	39.8	10.1	4.8	1.9	0.2	4.3	43	9	2	252	9	11	7290	3960	13000	3.86	1202
150	Da400	Beforsite, Agt	Mcbl	678	1381	430	89.3	21.5	9.7	2.8	0.3	4.4	20	2	101	31	< 2	< 3	7720	5090	171	4.61	3339
151	Da405	Beforsite	Mcbl	196	217	73	13.1	2.5	0.9	0.8	< 0.1	4.8	8	2	12	197	< 2	< 3	8750	5780	< 100	3.66	630
152	Da410	Beforsite	Mcbl	37	84	22	4.3	0.9	0.7	1.0	< 0.1	2.4	7	3	6	1190	2	< 3	6250	5290	210	4.99	195
153	Da415	Beforsite, Ap	Mcbl	62	95	29	4.5	1.3	0.6	1.0	< 0.1	4.9	8	8	7	2736	< 2	< 3	7294	5940	< 100	3.46	247
154	Da420	Beforsite	Mcbl	110	217	71	9.0	2.2	1.0	0.8	< 0.1	3.4	11	2	15	510	< 2	< 3	5340	6360	214	2.48	522
155	Da425	Beforsite	Mcbl	53	65	19	5.2	1.3	0.5	0.6	< 0.1	5.4	6	6	4	1558	< 2	< 3	7775	7010	< 100	4.55	185
156	Da500	Beforsite	Mcbl	49	110	28	4.3	1.0	0.7	0.7	< 0.1	3.0	9	5	6	1960	3	4	5740	5010	278	4.24	248
157	Da505	Beforsite, Ank	Mcbl	78	106	34	6.4	1.3	0.9	0.6	< 0.1	6.7	7	6	8	2589	< 2	< 3	7037	5690	< 100	4.09	291
158	Da510	Beforsite	Mcbl	55	134	34	4.3	1.1	0.7	0.7	< 0.1	4.6	7	2	6	202	< 2	< 3	7770	5780	144	5.02	292
159	Da515	Beforsite, Ank	Mcbl	123	158	56	9.6	2.1	1.1	0.7	< 0.1	6.3	9	3	10	1383	< 2	< 3	7578	5708	< 100	3.28	445
160	Da520	Beforsite	Mcbl	88	170	41	5.1	1.7	0.8	0.7	< 0.1	4.3	10	2	8	284	< 2	4	7580	4620	266	3.70	388
161	Da525	Beforsite, Ank	Mcbl	135	191	55	6.9	1.4	0.7	0.7	< 0.1	4.6	6	1	3	801	< 2	< 3	6498	5586	< 100	3.40	489
162	Da600	Beforsite	Mcbl	758	1207	228	45.2	10.6	4.8	1.2	0.1	3.9	20	1	95	20	< 2	< 3	8960	5760	134	5.00	2806
163	Da610	Beforsite	Mcbl	97	223	50	8.1	1.8	1.0	0.8	< 0.1	2.9	9	2	8	381	< 2	< 3	5650	5340	143	2.85	482
164	Da700	Beforsite	Mcbl	104	231	56	9.5	2.2	0.9	0.8	< 0.1	3.9	9	< 1	10	71	< 2	< 3	5790	5080	121	2.87	511
165	Da705	Beforsite, Ank	Mcbl	62	101	41	6.4	1.5	1.0	0.9	< 0.1	4.6	5	1	8	756	< 2	< 3	7637	5000	< 100	5.62	278
166	Da710	Beforsite	Mcbl	96	189	43	9.8	1.5	0.7	0.6	< 0.1	2.7	7	< 1	9	61	< 2	< 3	6890	6140	117	3.95	427
167	Da715	Beforsite, Ank	Mcbl	46	76	44	9.1	2.3	1.1	0.9	< 0.1	10.4	10	< 1	3	20	< 2	< 3	6294	5036	2154	2.69	238
168	Da720	Syenite, bre.	Mfn	52	109	63	8.1	1.3	1.3	1.5	0.2	6.9	10	1	5	45	< 2	186	1290	410	1440	3.20	313
169	Da800	Gneiss, Qtz-Fd, fenitised	Ngn	22	39	16	3.9	0.9	0.8	2.5	0.4	5.7	8	16	96	119	2	204	2170	231	1020	4.44	121
170	Da810	Gneiss, Qtz-Fd, fenitised	Ngn	32	74	26	5.7	0.9	1.2	3.2	0.5	6.6	15	2	31	59	< 2	164	2170	273	1700	4.29	197
171	Db305	Syenite, Agt-Hbl	Msu	112	124	50	8.1	1.9	0.8	0.8	< 0.1	< 0.5	6	18	19	1274	31	43	487	705	< 100	1.30	377
172	Db310	Syenite, Agt-Hbl	Msu	782	1397	570	117.7	23.5	6.3	1.0	< 0.1	1.0	16	16	142	1631	25	18	2686	887	1618	3.60	3663
173	Db315	Fenite	Mfn	146	214	93	18.3	4.8	2.2	1.8	0.2	1.2	27	3	10	498	38	128	3254	2312	7198	6.41	624
174	Db320	Beforsite	Mcbl	406	536	200	42.2	10.2	4.2	1.6	0.2	7.9	35	< 1	2	20	< 2	3	7356	4830	20346	3.02	1529
175	Db325	Beforsite	Mcbl	34	80	25	4.7	1.4	0.8	0.5	< 0.1	4.8	7	< 1	5	42	< 2	< 3	6682	6462	678	3.08	191
176	Db400	Beforsite	Mcbl	265	318	76	14.0	2.8	1.2	0.9	< 0.1	5.7	11	3	12	718	< 2	3	7662	4518	< 100	4.02	844
177	Db405	Beforsite	Mcbl	31	50	16	3.5	0.8	0.5	0.7	< 0.1	4.5	6	2	3	1047	< 2	< 3	6954	5354	< 100	4.82	134
178	Db410	Beforsite	Mcbl	49	76	21	5.1	1.1	0.9	0.5	< 0.1	4.4	7	4	6	1886	< 2	< 3	6259	6236	< 100	3.40	199
179	Db415	Beforsite	Mcbl	158	254	62	8.3	2.8	1.2	0.8	< 0.1	6.8	10	< 1	24	214	< 2	< 3	7113	7316	< 100	3.49	613
180	Db420	Beforsite, Ap	Mcbl	460	590	113	19.5	3.7	2.4	1.4	0.2	6.5	18	11	34	3376	< 2	< 3	6762	5950	254	3.69	1478

B-3 Geochemical Analyses of the Orange Area (5)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R203 ppm
181	Db425	Beforsite	Mcbl	43	68	28	3.9	1.0	0.7	0.7	< 0.1	4.9	6	4	5	1244	< 2	< 3	6767	6404	< 100	4.23	189
182	Db505	Beforsite	Mcbl	77	134	35	6.8	1.5	0.9	0.9	< 0.1	7.8	8	4	8	1744	< 2	< 3	7967	4926	< 100	5.42	327
183	Db510	Beforsite	Mcbl	97	153	31	7.5	1.8	1.0	0.6	< 0.1	5.7	8	8	9	3355	< 2	< 3	8549	5334	< 100	6.67	369
184	Db515	Beforsite	Mcbl	403	553	103	23.4	4.9	2.8	1.3	0.2	9.8	18	< 1	18	76	< 2	< 3	7588	8496	< 100	3.71	1363
185	Db520	Beforsite, Ap	Mcbl	41	65	13	3.1	0.8	0.5	0.4	0.1	7.0	5	1	7	891	< 2	< 3	6206	5502	< 100	3.11	158
186	Db600	Beforsite	Mcbl	138	237	56	5.2	1.2	0.6	0.7	< 0.1	5.0	7	6	5	2976	< 2	< 3	9171	4676	< 100	7.28	547
187	Db610	Beforsite	Mcbl	189	275	54	9.0	1.8	1.1	0.6	< 0.1	5.2	8	3	6	152	< 2	< 3	7853	5304	< 100	5.14	661
188	Db620	Beforsite	Mcbl	73	75	14	3.6	< 0.5	0.9	1.0	< 0.1	4.7	2	< 1	11	613	< 2	< 3	6956	5730	< 100	3.98	215
189	Db700	Beforsite	Mcbl	253	342	59	12.4	2.4	0.8	0.5	< 0.1	4.6	7	1	8	383	< 2	< 3	7159	5682	< 100	3.78	826
190	Db705	Beforsite, Ank	Mcbl	71	111	42	5.9	1.1	0.8	0.5	< 0.1	4.7	5	1	4	1852	< 2	< 3	7035	4716	< 100	4.33	297
191	Db710	Beforsite	Mcbl	71	109	21	5.5	1.3	0.7	0.6	< 0.1	4.7	6	< 1	4	482	< 2	< 3	7759	5228	< 100	4.71	265
192	Db715	Beforsite, Ank	Mcbl	20	31	12	1.6	< 0.5	0.4	0.7	< 0.1	3.9	1	2	11	1036	< 2	< 3	8172	5424	227	5.25	87
193	Db720	Fenite	Mfn	54	77	15	4.3	0.5	1.2	3.1	0.5	< 0.5	20	17	53	176	21	145	121	6	< 100	1.30	208
194	Dc320	Fenite, Agt-Phl	Mfn	101	133	98	18.1	6.0	2.8	2.1	0.3	1.3	57	4	29	386	15	70	2009	2772	8116	4.00	487
195	Dc405	Beforsite	Mcbl	149	199	80	11.9	2.3	1.0	0.9	< 0.1	6.4	11	9	13	2123	< 2	< 3	6269	5556	108	3.41	562
196	Dc410	Beforsite	Mcbl	38	66	18	5.0	1.0	0.8	0.7	< 0.1	5.5	8	4	4	421	< 2	< 3	8285	4856	8818	4.83	170
197	Dc415	Beforsite	Mcbl	55	67	24	2.7	0.5	0.8	1.0	< 0.1	3.6	3	9	206	4421	< 2	< 3	7846	5304	< 100	5.86	196
198	Dc420	Beforsite	Mcbl	77	109	42	6.6	1.1	1.0	0.6	< 0.1	4.2	6	10	6	612	< 2	< 3	7006	5588	< 100	4.84	305
199	Dc425	Beforsite	Mcbl	44	78	32	4.9	1.0	1.0	0.5	< 0.1	4.3	5	2	3	1756	< 2	5	6102	5620	< 100	3.65	211
200	Dc500	Beforsite	Mcbl	12	18	8	1.6	< 0.5	0.5	0.7	< 0.1	4.9	2	3	19	299	< 2	< 3	6691	5724	< 100	4.10	58
201	Dc505	Beforsite	Mcbl	65	78	30	3.9	0.8	0.6	0.6	< 0.1	5.1	6	1	3	1751	< 2	< 3	5770	5330	< 100	2.98	228
202	Dc510	Beforsite	Mcbl	4065	5959	1688	182.4	31.4	8.1	1.1	0.1	6.5	45	3	6	505	2	< 3	8038	2012	652	6.43	14741
203	Dc515	Beforsite, Ank	Mcbl	100	122	42	8.0	2.2	0.9	1.0	< 0.1	9.7	13	7	12	4609	< 2	5	5359	3336	< 100	4.01	352
204	Dc520	Beforsite	Mcbl	213	303	112	13.2	2.6	1.6	1.0	< 0.1	6.4	12	3	14	1732	< 2	< 3	6537	4332	258	3.71	817
205	Dc525	Beforsite, Ank	Mcbl	92	105	42	6.3	1.6	0.8	0.7	< 0.1	5.1	8	5	7	1128	< 2	< 3	7802	5956	< 100	4.21	316
206	Dc600	Granophyre	Mgr	93	148	39	5.4	0.6	1.5	7.0	1.0	< 0.5	31	17	59	214	26	220	73	38	< 100	5.06	390
207	Dc605	Beforsite, Ank	Mcbl	150	190	60	11.5	2.4	1.0	0.8	< 0.1	6.1	10	2	44	504	< 2	< 3	8308	6970	< 100	3.68	524
208	Dc610	Beforsite	Mcbl	106	206	62	8.3	1.9	0.6	0.6	< 0.1	4.2	7	2	41	3178	< 2	14	5626	5386	< 100	3.17	484
209	Dc615	Beforsite, Ank	Mcbl	100	211	91	8.6	1.9	0.4	0.7	< 0.1	5.2	5	2	13	581	< 2	< 3	8390	5578	< 100	4.40	521
210	Dc620	Beforsite	Mcbl	54	108	38	5.9	1.2	0.5	0.8	< 0.1	4.1	4	< 1	7	260	< 2	< 3	5898	6398	< 100	2.59	266
211	Dc625	Beforsite, Ank	Mcbl	98	169	53	8.3	1.7	0.5	0.9	< 0.1	4.7	5	< 1	7	1031	< 2	< 3	6173	5796	< 100	2.88	417
212	Dc700	Beforsite	Mcbl	365	455	106	16.0	3.2	1.1	0.8	< 0.1	4.4	10	3	10	698	< 2	< 3	7010	4176	< 100	6.32	1171
213	Dc705	Beforsite, Ank	Mcbl	239	332	69	8.1	1.9	1.0	0.6	< 0.1	5.3	7	1	20	1762	< 2	< 3	5522	5082	< 100	3.10	808
214	Dc710	Beforsite	Mcbl	50	84	29	4.5	0.9	0.5	0.5	< 0.1	6.1	5	< 1	2	126	< 2	< 3	6179	5258	< 100	2.98	216
215	Dc715	Sovite, Px-Phl	Mcs	414	666	191	32.9	7.5	3.8	3.9	0.4	5.8	47	1	< 1	28	< 2	< 3	5314	10122	2634	2.02	1676
216	E 100	Gneiss, Qtz-Fd	Ngn	14	17	9	2.2	0.5	0.5	2.0	0.2	3.2	13	11	8	8	< 2	21	242	18	285	0.32	65
217	E 220	Syenite, banded	Msu	33	48	21	4.3	0.9	0.8	2.0	0.3	11.9	11	1	7	136	< 2	221	1570	346	1110	4.04	151
218	E 300	Beforsite, Ank	Mcbl	1225	1982	340	50.4	8.8	4.0	1.1	0.2	6.4	16	7	68	4	< 2	< 3	9110	2570	139	8.01	4448
219	E 305	Syenite	Msu	440	754	306	59.9	11.9	3.3	0.9	< 0.1	2.1	15	12	58	2734	23	22	3091	1097	156	3.29	1992
220	E 310	Syenite, banded	Msu	648	1112	391	80.8	21.8	7.5	1.8	0.2	0.9	24	41	156	3310	43	49	1860	886	4840	2.86	2881
221	E 315	Fenite	Mfn	1681	3263	1330	282.9	57.5	11.5	3.4	0.4	2.4	61	2	310	143	5	15	7464	2872	4675	7.79	8373
222	E 320	Beforsite, Phl-Hbl	Mcbl	66	133	41	9.0	1.4	1.2	1.3	< 0.1	5.2	8	5	7	1850	21	< 3	3650	3080	1860	4.14	329
223	E 325	Beforsite	Mcbl	427	592	127	16.4	3.4	1.5	1.3	0.2	4.5	17	1	4	735	< 2	< 3	7339	5294	< 100	5.12	1448
224	E 400	Beforsite	Mcbl	60	112	27	4.3	0.9	0.8	0.9	< 0.1	5.8	7	2	7	343	< 2	< 3	6290	4430	< 100	3.61	263
225	E 405	Beforsite	Mcbl	45	86	22	3.5	0.9	0.6	0.6	< 0.1	4.3	7	9	4	1289	< 2	< 3	5631	5556	< 100	2.88	203

B-3 Geochemical Analyses of the Orange Area (6)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
226	E 410	Beforsite	Mcbl	274	396	105	15.9	3.5	1.1	0.6	< 0.1	6.3	12	6	32	1600	< 2	< 3	5040	5080	129	2.56	990
227	E 415	Beforsite, Ap	Mcbl	2315	3849	1009	152.2	27.8	6.1	2.0	0.2	7.4	55	8	184	514	< 2	< 3	7036	4350	< 100	4.60	9121
228	E 420	Beforsite	Mcbl	53	84	24	4.3	1.0	0.6	0.6	< 0.1	5.9	10	6	7	2020	< 2	3	5390	4790	105	2.93	215
229	E 425	Beforsite	Mcbl	94	170	51	6.9	1.5	1.0	0.7	< 0.1	5.1	8	3	5	1637	< 2	< 3	6635	5762	< 100	4.47	413
230	E 500	Beforsite	Mcbl	63	76	22	3.9	1.1	0.6	0.7	0.1	3.2	8	10	5	997	< 2	3	6900	4440	< 100	4.52	213
231	E 505	Beforsite	Mcbl	72	131	35	6.0	1.1	0.8	0.8	< 0.1	5.7	6	3	5	1406	< 2	< 3	7459	6510	< 100	5.03	314
232	E 510	Beforsite	Mcd	1593	3063	593	83.8	18.3	7.2	2.5	0.2	3.2	48	18	160	507	4	7	6000	5980	149	3.85	6648
233	E 515	Beforsite	Mcbl	173	355	99	18.7	4.0	2.1	1.8	0.2	9.6	15	6	14	6124	< 2	< 3	6961	4996	< 100	3.35	835
234	E 520	Beforsite	Mcbl	153	215	67	11.9	2.8	1.2	0.8	< 0.1	4.5	12	< 1	16	13	< 2	< 3	5690	6890	114	2.27	572
235	E 600	Beforsite	Mcbl	68	133	34	5.8	1.1	0.7	0.8	< 0.1	2.5	7	4	7	2400	< 2	< 3	7680	4580	< 100	4.48	309
236	E 610	Beforsite	Mcbl	423	863	252	38.1	8.9	3.6	1.0	< 0.1	2.0	19	3	13	855	< 2	< 3	5860	4650	< 100	2.99	2003
237	E 620	Beforsite	Mcbl	64	111	31	4.7	1.5	0.8	0.6	< 0.1	2.2	6	< 1	4	307	< 2	< 3	6280	4660	< 100	2.97	273
238	E 700	Beforsite	Mcbl	171	322	112	13.5	1.2	1.5	0.6	< 0.1	2.4	7	1	8	245	< 2	< 3	7360	4560	< 100	3.29	785
239	E 705	Beforsite	Mcbl	734	986	193	25.9	4.6	1.3	0.6	< 0.1	3.9	10	3	16	1598	< 2	< 3	8000	5318	< 100	4.78	2388
240	E 710	Beforsite	Mcbl	69	131	35	5.1	1.4	0.7	0.9	< 0.1	2.3	5	< 1	4	153	< 2	< 3	6090	4850	< 100	3.25	309
241	E 715	Beforsite, Ank	Mcbl	230	375	79	14.2	2.6	1.6	0.8	< 0.1	5.1	9	2	19	656	< 2	4	7150	7606	< 100	4.29	880
242	E 720	Beforsite	Mcbl	62	148	53	13.1	3.5	1.8	1.4	0.2	3.8	14	1	2	117	< 2	< 3	4670	4500	2570	1.84	374
243	E 800	Syenite, bre.	Msu	60	87	28	4.8	1.7	0.8	0.7	< 0.1	0.5	8	30	18	302	5	79	700	840	720	1.30	236
244	E 810	Gneiss, Qtz-Fd, fenitised	Ngn	33	45	13	2.8	0.9	0.4	0.8	< 0.1	< 0.5	2	< 1	1	4	< 2	4	214	427	1110	0.38	124
245	E 900	Gneiss, Qtz-Fd	Ngn	73	128	40	7.1	2.0	0.9	2.6	0.4	4.1	22	2	20	56	< 2	108	1100	322	404	1.60	329
246	Ea220	Syenite	Msu	38	75	36	8.0	2.7	1.3	2.4	0.3	< 0.5	24	9	11	534	20	695	1910	923	1550	3.67	224
247	Ea300	Beforsite, Agt agregation	Mcbl	64	163	42	5.6	1.6	0.9	0.9	< 0.1	2.6	8	< 1	13	49	< 2	< 3	8170	5020	231	5.06	355
248	Ea305	Beforsite	Mcbl	8282	12082	2428	563.6	107.5	18.7	2.9	0.3	< 0.5	112	3	563	113	< 2	< 3	7720	7576	1731	6.78	28892
249	Ea310	Beforsite, Fd bearing	Mcd	1826	4389	1516	321.0	80.0	15.1	4.1	0.5	4.2	87	18	389	87	3	12	6520	2550	3900	6.12	10299
250	Ea313	Syenite, Agt-Hbl	Msu	183	352	94	21.9	5.5	2.9	1.9	0.2	< 0.5	31	3	13	80	< 2	37	2507	2102	8266	2.11	851
251	Ea317	Beforsite	Mcbl	1482	2038	420	85.2	17.4	4.4	0.9	< 0.1	5.0	20	< 1	106	8	< 2	< 3	9449	5426	< 100	5.81	4991
252	Ea320	Sovite, Ap	Msu	186	420	134	39.2	11.3	5.6	3.8	0.5	0.7	62	2	42	123	8	174	1930	3270	10300	3.10	1063
253	Ea325	Beforsite	Mcbl	234	406	84	15.3	2.8	1.1	0.8	< 0.1	6.8	9	< 1	13	41	< 2	< 3	6535	5612	< 100	3.56	926
254	Ea400	Beforsite	Mcbl	132	326	78	9.6	2.4	1.1	0.9	< 0.1	2.9	9	2	14	93	< 2	< 3	6080	5160	153	5.77	692
255	Ea405	Beforsite	Mcbl	55	105	25	5.8	1.1	0.6	0.6	< 0.1	3.8	4	2	6	368	< 2	< 3	6282	5508	< 100	4.16	246
256	Ea410	Beforsite	Mcbl	55	88	22	3.9	0.9	0.7	0.9	0.2	2.3	6	6	6	795	3	3	9450	4140	161	8.11	220
257	Ea415	Beforsite	Mcbl	505	794	132	27.4	5.4	1.9	0.8	< 0.1	4.8	11	4	41	1640	< 2	< 3	5974	5390	251	3.27	1810
258	Ea420	Beforsite	Mcbl	156	377	88	15.3	3.4	1.7	1.2	0.2	4.1	18	5	26	180	< 2	13	6990	4810	283	3.77	815
259	Ea425	Beforsite	Mcbl	478	701	126	19.6	3.8	1.5	0.9	< 0.1	5.6	16	10	42	4231	< 2	< 3	5954	6030	< 100	3.14	1641
260	Ea500	Beforsite	Mcbl	41	79	21	5.0	0.9	0.6	0.8	< 0.1	2.7	6	3	4	690	< 2	< 3	6160	5030	128	4.40	193
261	Ea505	Beforsite	Mcbl	194	352	75	17.6	3.5	1.5	0.8	< 0.1	5.2	10	7	22	1908	< 2	< 3	8352	6422	< 100	6.10	809
262	Ea510	Beforsite with Dol mega-crystal	Mcbl	115	224	59	7.3	2.2	0.9	0.8	< 0.1	4.4	10	2	14	317	< 2	< 3	7850	5080	216	5.69	517
263	Ea515	Beforsite	Mcbl	53	133	23	6.2	1.1	1.0	1.5	0.1	4.8	7	3	3	740	< 2	< 3	6980	6142	< 100	3.31	283
264	Ea520	Beforsite	Mcbl	89	179	49	5.1	1.5	0.7	1.0	< 0.1	3.0	8	8	12	1030	< 2	< 3	6560	4770	145	4.98	411
265	Ea525	Beforsite	Mcbl	236	408	83	15.6	3.1	1.8	0.6	< 0.1	6.0	10	4	22	1677	< 2	< 3	7787	4716	< 100	6.05	936
266	Ea600	Beforsite	Mcbl	50	114	28	4.3	1.0	0.6	1.2	0.2	3.2	7	4	9	1360	< 2	< 3	6650	4600	126	4.06	255
267	Ea605	Beforsite	Mcbl	218	283	43	8.8	2.0	1.2	0.8	< 0.1	6.8	8	2	14	964	< 2	< 3	6923	5336	< 100	4.08	691
268	Ea610	Beforsite with Dol mega-crystal	Mcbl	140	293	84	15.6	3.7	1.7	1.1	0.1	6.8	16	< 1	27	10	< 2	< 3	7380	7170	144	3.28	689
269	Ea620	Beforsite	Mcbl	90	156	42	5.1	1.6	0.9	0.9	< 0.1	2.8	6	1	9	185	< 2	< 3	6230	5270	116	3.58	377
270	Ea700	Beforsite	Mcbl	70	141	41	6.2	1.9	0.9	0.6	< 0.1	2.4	7	1	8	35	< 2	4	6130	4800	184	3.45	334

B-3 Geochemical Analyses of the Orange Area (7)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
271	Ea705	Beforsite, Ank	Mcbl	544	812	158	28.9	5.5	2.5	0.7	< 0.1	5.5	13	< 1	30	178	< 2	< 3	7940	5398	< 100	3.73	1922
272	Ea710	Beforsite	Mcbl	72	152	42	4.8	1.6	0.6	0.7	< 0.1	2.3	6	1	8	312	< 2	< 3	6430	5760	131	3.43	347
273	Ea715	Beforsite, Ank	Mcbl	73	131	27	5.2	1.3	0.7	0.6	< 0.1	4.4	6	3	19	2545	2	3	7204	6006	2370	3.69	302
274	Ea720	Beforsite	Mcbl	87	192	47	7.7	2.0	0.9	0.8	< 0.1	2.3	7	1	10	55	< 2	< 3	6280	5630	148	3.44	428
275	Ea800	Sovite	Mcs	189	373	110	16.8	8.4	2.0	4.0	0.6	2.6	62	2	4	107	< 2	< 3	2701	3570	2380	0.56	902
276	Ea810	Syenite, leuco-	Msu	27	33	9	2.1	0.9	0.5	0.8	< 0.1	0.8	4	7	20	359	8	154	266	201	173	1.33	97
277	Eb300	Syenite, Agt, fenitized	Msu	110	193	50	13.6	3.4	1.3	1.6	0.2	< 0.5	22	6	15	1426	137	859	1742	2238	3160	4.91	478
278	Eb305	Beforsite	Mcbl	329	426	73	13.5	2.2	0.8	0.7	< 0.1	4.5	9	< 1	12	28	< 2	7	8040	5424	< 100	5.05	1039
279	Eb310	Beforsite	Mcbl	6066	8190	1125	224.0	40.6	6.3	1.1	0.2	1.2	44	1	242	20	< 2	< 3	8910	5030	< 100	5.37	19050
280	Eb315	Beforsite, Gn bearing	Mcbl	4127	7049	2465	506.6	105.5	21.0	2.8	0.3	5.1	72	2	666	69	< 2	< 3	8464	20880	233	7.49	17877
281	Eb320	Syenite, Agt, fenitized	Msu	137	188	68	10.0	2.4	1.5	0.9	< 0.1	< 0.5	12	36	12	651	20	59	984	1074	2498	2.68	521
282	Eb325	Beforsite, Agt segregate	Mcbl	87	135	44	6.2	1.3	0.6	0.6	< 0.1	4.2	5	3	7	716	4	< 3	6726	4478	< 100	4.15	347
283	Eb400	Beforsite	Mcbl	47	92	28	5.0	1.0	0.9	0.7	< 0.1	4.5	6	3	4	1761	< 2	< 3	6172	5526	< 100	6.16	227
284	Eb405	Beforsite	Mcbl	54	106	29	5.9	1.1	0.5	0.4	0.1	4.1	4	1	8	230	< 2	< 3	7146	3930	< 100	4.73	250
285	Eb410	Beforsite	Mcbl	394	547	134	12.9	2.5	0.9	0.4	< 0.1	4.1	8	< 1	5	66	< 2	< 3	7139	6148	< 100	3.54	1347
286	Eb415	Beforsite	Mcbl	46	91	33	3.7	1.0	0.7	0.9	< 0.1	5.5	9	12	5	3834	< 2	< 3	7152	2950	< 100	3.84	228
287	Eb420	Beforsite	Mcbl	211	342	86	10.8	2.6	1.2	1.2	0.2	6.4	14	19	18	4603	< 2	5	7460	5380	< 100	3.94	820
288	Eb425	Beforsite	Mcbl	106	171	66	9.5	1.8	0.6	0.8	0.2	5.3	10	3	8	1123	< 2	< 3	7674	5212	< 100	3.37	449
289	Eb500	Beforsite	Mcbl	109	185	66	7.7	1.5	0.7	0.8	0.2	4.9	9	8	10	2493	< 2	< 3	7182	5200	896	4.38	468
290	Eb505	Beforsite	Mcbl	160	270	80	9.1	1.4	0.8	0.6	< 0.1	6.0	7	4	4	1160	< 2	< 3	7500	5196	< 100	5.36	653
291	Eb510	Beforsite	Mcbl	94	171	50	7.6	1.7	0.7	0.7	< 0.1	8.5	47	4	9	1691	< 2	< 3	8482	5196	< 100	6.19	411
292	Eb515	Beforsite, Agt?	Mcbl	2376	3669	1026	120.0	24.4	5.6	2.1	0.3	6.9	7	11	140	1190	< 2	< 3	8124	3642	< 100	6.57	8944
293	Eb520	Beforsite, Agt?	Mcbl	92	165	66	8.1	1.6	0.9	0.6	< 0.1	5.3	14	1	6	311	< 2	< 3	7489	5652	< 100	4.50	426
294	Eb525	Beforsite	Mcbl	253	402	108	14.3	3.0	1.2	0.9	< 0.1	8.1	14	1	15	289	< 2	< 3	6988	6430	< 100	3.40	977
295	Eb600	Beforsite	Mcbl	118	262	106	13.0	2.9	1.5	0.9	< 0.1	7.7	12	< 1	9	53	< 2	6	7585	9338	< 100	4.18	646
296	Eb605	Beforsite	Mcbl	208	396	160	19.8	4.2	2.0	0.9	0.2	8.2	13	4	21	1916	< 2	< 3	7202	7356	< 100	3.87	1005
297	Eb610	Beforsite	Mcbl	98	170	48	6.9	1.7	1.0	0.6	< 0.1	5.3	9	4	11	1749	< 2	< 3	6776	5824	< 100	3.40	414
298	Eb620	Beforsite	Mcbl	68	132	42	10.5	2.2	0.7	0.8	< 0.1	4.9	10	< 1	10	48	< 2	< 3	7246	6604	< 100	3.70	327
299	Eb700	Beforsite	Mcbl	200	344	108	12.7	2.7	1.2	0.8	< 0.1	4.5	11	2	14	313	< 2	4	11472	4340	< 100	5.69	841
300	Eb705	Beforsite, Ank	Mcbl	646	886	222	32.8	5.7	2.1	0.6	0.2	4.3	12	2	31	121	< 2	< 3	10532	7200	< 100	5.75	2222
301	Eb710	Beforsite	Mcbl	88	158	42	9.2	1.6	1.0	0.8	< 0.1	4.1	6	1	7	415	< 2	< 3	7862	6352	< 100	4.15	383
302	Eb715	Beforsite, Ank	Mcbl	139	221	60	10.5	1.9	1.0	0.9	< 0.1	4.2	6	1	10	303	< 2	< 3	8964	5218	< 100	5.16	547
303	Eb720	Beforsite	Mcbl	407	556	275	23.1	5.5	3.0	1.1	0.1	7.9	21	2	4	305	< 2	< 3	6688	4920	9456	2.87	1607
304	Ec300	Beforsite	Mcbl	3953	4897	1100	137.2	24.7	5.4	0.9	< 0.1	3.0	27	1	137	11	< 2	< 3	9462	4418	< 100	6.14	12404
305	Ec305	Syenite, cut by Ank vein	Msu	713	922	234	31.5	6.8	1.5	0.7	< 0.1	< 0.5	11	25	48	1506	28	1298	1575	953	808	2.74	2355
306	Ec310	Syenite	Msu	186	336	145	30.6	6.6	1.8	1.1	0.2	1.1	17	12	53	857	20	203	1592	941	1167	2.80	902
307	Ec315	Fenite, carbonatised	Mfn	341	497	192	45.9	10.2	3.6	1.9	0.3	< 0.5	32	3	48	462	24	881	3500	3456	6364	3.98	1395
308	Ec320	Beforsite, Agt-Phl	Mcbl	53	96	32	6.0	1.8	1.0	0.9	< 0.1	6.1	7	5	12	544	11	< 3	6588	6530	1365	3.86	249
309	Ec325	Beforsite	Mcbl	62	132	30	5.1	1.4	0.8	0.6	< 0.1	5.2	6	< 1	7	33	< 2	< 3	6094	4346	< 100	3.63	295
310	Ec400	Beforsite	Mcbl	139	236	64	12.2	2.6	1.0	0.6	< 0.1	5.9	8	2	16	372	< 2	< 3	6096	6236	128	3.23	573
311	Ec405	Beforsite	Mcbl	83	135	31	6.2	1.4	0.8	0.6	< 0.1	4.7	7	3	9	828	< 2	< 3	7046	5204	< 100	4.86	327
312	Ec410	Beforsite	Mcbl	75	117	23	4.6	1.2	0.6	0.6	< 0.1	6.7	6	10	9	5184	< 2	< 3	6240	5990	141	3.03	280
313	Ec415	Beforsite, Agt	Mcbl	130	194	39	8.1	2.0	0.8	0.9	0.2	6.8	12	8	14	2913	< 2	< 3	6292	5804	168	3.05	470
314	Ec420	Beforsite	Mcbl	262	411	94	19.0	3.6	1.2	1.0	< 0.1	6.4	11	4	22	1234	< 2	< 3	8198	4378	< 100	5.52	987
315	Ec425	Beforsite	Mcbl	479	630	133	16.6	3.4	1.0	0.7	< 0.1	4.7	12	2	17	877	< 2	< 3	5528	5898	100	2.76	1555

B-3 Geochemical Analyses of the Orange Area (8)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
316	Ec500	Beforsite	Mcbl	65	120	28	6.3	1.5	0.7	0.7	< 0.1	6.3	9	6	7	2487	< 2	< 3	6228	5464	< 100	3.89	283
317	Ec505	Beforsite	Mcbl	123	152	30	4.2	1.3	0.8	0.8	< 0.1	4.8	6	2	5	293	< 2	< 3	5928	6266	151	3.12	391
318	Ec510	Beforsite	Mcbl	106	190	47	10.6	2.4	1.2	0.7	< 0.1	7.9	9	3	14	574	< 2	< 3	6858	6538	< 100	5.95	455
319	Ec515	Beforsite	Mcbl	114	202	53	8.5	1.8	0.7	0.5	< 0.1	6.0	7	11	14	6147	< 2	< 3	6788	6154	< 100	3.88	477
320	Ec520	Beforsite	Mcbl	153	235	62	7.0	1.4	0.7	0.5	< 0.1	7.1	6	1	3	353	< 2	< 3	5518	9184	< 100	2.74	573
321	Ec525	Beforsite	Mcbl	82	126	40	6.6	1.7	0.6	0.5	< 0.1	5.5	7	2	8	596	< 2	< 3	6330	6566	< 100	3.43	325
322	Ec600	Beforsite, Agt	Mcbl	324	451	75	15.5	3.3	1.1	1.6	0.2	6.0	12	6	25	2815	< 2	< 3	7599	5006	< 100	4.57	1078
323	Ec605	Beforsite	Mcbl	127	196	48	8.5	2.0	0.8	0.7	< 0.1	5.7	8	1	14	240	< 2	< 3	7550	6254	< 100	5.22	481
324	Ec610	Beforsite	Mcbl	659	932	103	16.1	3.9	2.1	0.9	< 0.1	5.2	12	< 1	23	38	< 2	< 3	6856	7974	< 100	3.54	2100
325	Ec620	Beforsite	Mcbl	229	405	99	22.5	5.4	2.2	0.8	< 0.1	4.7	12	< 1	44	26	< 2	< 3	8144	4788	< 100	3.91	964
326	Ec700	Beforsite	Mcbl	127	156	40	4.4	1.3	0.6	0.5	< 0.1	4.6	6	< 1	12	53	< 2	< 3	6950	6000	< 100	4.35	411
327	Ec705	Beforsite	Mcbl	212	311	81	12.1	3.0	0.9	0.6	< 0.1	4.8	8	< 1	20	48	< 2	< 3	6564	6742	< 100	3.83	773
328	Ec710	Beforsite	Mcbl	154	241	63	10.1	2.2	0.8	0.5	< 0.1	4.0	6	< 1	11	320	< 2	< 3	6938	6528	< 100	3.83	590
329	Ec715	Beforsite, Ank	Mcbl	339	455	126	17.1	3.2	1.2	0.8	< 0.1	3.5	7	1	17	183	< 2	39	9074	5986	< 100	7.11	1171
330	Ec720	Beforsite	Mcbl	50	90	28	4.5	1.0	0.6	0.8	< 0.1	4.7	5	2	7	923	2	< 3	5982	5482	< 100	3.06	225
331	F 200	Gneiss, Qtz-Fd, fenitised	Ngn	30	74	28	5.7	1.3	0.9	1.7	0.2	7.2	15	10	6	147	3	514	1140	582	1350	2.95	190
332	F 300	Syenite, porphyritic	Msu	69	163	64	13.8	3.5	1.8	2.5	0.3	< 0.5	29	2	4	38	2	456	1720	2570	5960	4.27	423
333	F 310	Beforsite, Hbl	Mcbl	294	607	131	17.0	4.2	1.9	1.1	0.1	4.1	14	< 1	30	10	< 2	< 3	6960	5710	122	4.07	1320
334	F 320	Beforsite with Mag layers	Mcbl	186	316	99	15.4	3.6	1.5	0.8	< 0.1	3.2	8	< 1	25	17	< 2	< 3	8580	4170	179	5.71	786
335	F 400	Beforsite	Mcbl	169	388	88	9.8	2.4	1.1	0.7	< 0.1	2.6	6	1	14	251	< 2	< 3	5670	4960	131	4.03	825
336	F 410	Beforsite	Mcbl	75	122	40	5.3	2.0	0.9	0.8	< 0.1	2.8	6	< 1	19	132	2	8	5720	5860	166	3.00	314
337	F 415	Beforsite	Mcbl	72	119	40	6.3	1.3	0.4	0.6	< 0.1	5.2	6	14	6	2025	5	< 3	8000	6044	< 100	5.37	302
338	F 420	Beforsite	Mcbl	97	137	35	5.0	1.6	0.8	0.8	< 0.1	2.8	7	2	8	467	< 2	< 3	6010	5540	130	2.92	351
339	F 425	Beforsite	Mcbl	93	155	38	6.1	1.5	0.7	0.5	< 0.1	5.4	6	2	7	659	< 2	< 3	6430	6040	255	3.86	371
340	F 500	Beforsite	Mcbl	65	98	28	4.3	1.3	0.6	0.6	< 0.1	2.8	8	3	7	764	2	< 3	6140	5520	139	3.92	250
341	F 505	Beforsite	Mcbl	109	169	46	8.8	2.3	1.1	1.2	0.2	9.4	16	4	13	1059	< 2	< 3	6384	5572	4420	3.97	430
342	F 510	Beforsite	Mcbl	313	581	141	18.6	4.6	1.6	0.9	< 0.1	5.4	17	< 1	19	5	< 2	< 3	6840	4830	171	3.39	1324
343	F 515	Beforsite	Mcbl	69	162	34	4.5	1.4	0.7	0.6	< 0.1	5.7	7	5	8	1100	< 2	< 3	6462	5852	< 100	4.01	344
344	F 520	Beforsite	Mcbl	153	273	73	10.4	2.5	1.1	0.8	< 0.1	4.5	10	2	18	671	4	< 3	6960	4710	249	5.16	647
345	F 525	Beforsite	Mcbl	166	262	66	11.3	2.5	0.8	0.7	< 0.1	8.6	10	1	13	205	3	< 3	7094	5480	< 100	4.47	636
346	F 600	Beforsite	Mcbl	56	61	18	3.4	0.9	0.5	0.6	< 0.1	2.4	5	2	3	445	< 2	< 3	6180	4770	115	3.87	179
347	F 605	Beforsite	Mcbl	137	214	52	8.9	2.0	1.0	0.6	< 0.1	6.7	8	2	10	219	2	< 3	6360	5310	< 100	4.92	522
348	F 610	Beforsite	Mcbl	158	302	71	10.7	2.4	0.8	0.8	< 0.1	2.8	10	4	18	1230	< 2	< 3	5780	4050	116	3.17	683
349	F 615	Beforsite	Mcbl	107	165	38	7.9	1.8	0.9	0.6	< 0.1	4.7	7	< 1	10	23	2	< 3	6470	6006	< 100	3.11	405
350	F 620	Beforsite	Mcbl	79	140	39	5.1	1.4	1.1	1.7	0.2	2.4	7	5	7	1570	3	< 3	7860	4910	114	3.95	344
351	F 625	Beforsite	Mcbl	184	291	78	14.5	2.9	1.0	0.9	< 0.1	4.5	7	1	14	337	< 2	< 3	7610	5088	< 100	3.43	717
352	F 700	Beforsite	Mcbl	276	505	124	15.8	3.5	1.8	0.7	< 0.1	2.6	10	4	20	722	2	4	7600	4200	180	4.82	1158
353	F 705	Beforsite	Mcbl	282	448	116	21.1	3.9	1.2	0.6	< 0.1	3.6	9	3	18	425	4	145	9218	6466	< 100	7.23	1087
354	F 710	Beforsite	Mcbl	239	348	86	12.0	2.6	1.2	0.5	< 0.1	2.0	6	10	16	1200	3	5	6190	4560	132	3.83	857
355	F 715	Beforsite, Ap	Mcbl	294	406	84	11.6	2.5	1.0	0.7	< 0.1	5.0	11	1	13	104	2	3	6058	6948	< 100	3.15	989
356	F 720	Beforsite, Phl	Mcbl	434	662	146	25.3	6.6	2.5	0.8	< 0.1	3.8	19	2	25	1640	19	3	6590	4820	9070	3.03	1592
357	F 800	Syenite, Ne with Cal matrix	Msu	78	125	40	7.5	2.3	1.1	1.4	0.2	< 0.5	17	17	8	209	12	332	1220	1660	3310	2.92	331
358	F 810	Syenite, Ne with Cal matrix	Msu	181	327	115	19.8	6.2	3.2	2.6	0.4	< 0.5	37	5	14	339	30	653	1800	2870	10000	4.03	852
359	F 900	Gneiss, Qtz-Fd	Ngn	71	83	37	9.7	1.4	1.8	1.7	0.2	3.9	13	3	19	40	2	94	493	92	282	1.49	277
360	Fa310	Beforsite	Mcbl	77	152	37	5.5	1.3	0.8	0.9	< 0.1	4.2	9	1	6	88	2	54	6190	4440	174	4.04	349

B-3 Geochemical Analyses of the Orange Area (9)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
361	Fa320	Beforsite	Mcbl	439	661	178	27.8	8.4	3.0	1.6	0.2	3.1	17	1	42	41	9	< 3	9270	3780	305	8.11	1657
362	Fa400	Beforsite, Bt	Mcbl	268	414	113	22.0	5.3	2.6	1.2	0.1	4.5	10	8	33	700	13	4	3570	3160	1490	4.53	1047
363	Fa410	Beforsite	Mcbl	64	109	32	4.7	1.1	0.5	0.5	0.2	3.0	5	1	8	341	4	< 3	5670	5100	128	3.56	269
364	Fa415	Beforsite	Mcbl	59	112	35	6.4	1.5	0.8	0.7	< 0.1	5.3	6	1	8	402	2	< 3	8046	7182	< 100	5.44	277
365	Fa420	Beforsite	Mcbl	62	94	27	5.1	1.1	0.6	0.5	0.1	2.8	6	2	7	762	2	< 3	5920	5200	127	3.67	242
366	Fa425	Beforsite	Mcbl	122	181	44	8.8	2.0	0.8	0.7	< 0.1	5.5	10	3	16	697	< 2	< 3	6544	6038	2916	3.93	451
367	Fa500	Beforsite	Mcbl	55	62	18	3.9	0.9	0.5	0.5	< 0.1	2.4	6	3	8	1320	4	4	6050	5250	108	4.04	179
368	Fa505	Beforsite	Mcbl	204	296	74	10.5	2.5	0.9	1.0	< 0.1	9.6	12	1	18	291	< 2	< 3	6442	6210	4338	3.99	735
369	Fa510	Beforsite	Mcbl	60	95	26	5.1	1.3	0.8	0.7	< 0.1	2.9	7	3	7	967	< 2	< 3	5510	5720	103	2.79	243
370	Fa515	Beforsite	Mcbl	63	109	28	3.6	1.3	0.6	0.8	< 0.1	5.8	9	3	8	1076	< 2	< 3	6610	6434	< 100	4.07	262
371	Fa520	Beforsite	Mcbl	57	69	20	5.4	0.9	0.9	1.0	0.2	2.5	6	2	3	658	3	< 3	5860	4900	122	4.26	201
372	Fa525	Beforsite	Mcbl	469	583	108	13.7	2.6	0.8	1.0	< 0.1	5.3	8	3	14	1033	2	< 3	6658	5286	< 100	3.75	1445
373	Fa600	Beforsite	Mcbl	2350	4389	1129	101.3	13.2	6.5	2.3	0.2	3.5	56	31	233	1030	10	< 3	6940	5120	127	5.14	9901
374	Fa605	Beforsite	Mcbl	40	71	20	5.1	1.2	0.6	0.8	< 0.1	4.8	5	3	5	1952	< 2	< 3	6756	5844	< 100	4.06	180
375	Fa610	Beforsite	Mcbl	71	135	34	4.3	1.1	0.7	0.6	< 0.1	3.2	7	5	5	1450	2	< 3	6460	4740	133	4.20	313
376	Fa615	Beforsite	Mcbl	181	266	64	10.5	2.3	0.9	1.0	< 0.1	4.2	7	7	12	2234	3	< 3	8660	3912	< 100	6.49	657
377	Fa620	Beforsite	Mcbl	141	215	53	8.9	2.0	0.8	0.7	< 0.1	2.6	7	1	18	36	2	< 3	6250	4410	115	3.58	528
378	Fa625	Beforsite	Mcbl	1248	1566	342	50.6	8.4	0.9	0.8	< 0.1	< 0.5	9	< 1	61	5	4	< 3	7138	6758	< 100	4.26	3937
379	Fa700	Beforsite	Mcbl	425	725	147	18.2	4.5	2.4	1.0	< 0.1	2.5	11	1	28	140	2	< 3	6410	5990	116	4.41	1647
380	Fa705	Beforsite	Mcbl	481	580	132	19.9	3.6	1.0	0.9	< 0.1	2.9	6	2	29	1163	< 2	< 3	7650	5134	< 100	4.63	1501
381	Fa710	Beforsite	Mcbl	66	121	36	5.3	1.6	0.7	0.8	< 0.1	2.6	7	< 1	5	4	< 2	< 3	5690	5350	164	3.05	296
382	Fa715	Beforsite	Mcbl	157	219	48	6.6	1.5	0.6	0.8	< 0.1	5.5	6	3	6	60	3	< 3	8106	2586	< 100	3.85	539
383	Fa720	Beforsite	Mcbl	136	241	68	9.7	2.4	1.1	0.9	< 0.1	3.9	10	1	15	2	2	< 3	6280	6210	166	4.02	580
384	Fa800	Syenite, Ne with Cal matrix	Msu	68	132	47	9.8	2.7	1.4	2.2	0.3	< 0.5	23	3	13	277	17	790	1620	1600	3900	4.34	348
385	Fa810	Syenite, Ne with Cal matrix	Msu	100	179	61	13.0	3.3	1.5	1.9	0.2	< 0.5	23	2	5	265	20	575	1450	2340	5250	3.48	468
386	Fb320	Beforsite	Mcbl	810	1330	512	130.3	27.4	6.2	1.3	0.2	< 0.5	25	19	188	1021	26	< 3	5128	6126	1510	5.39	3558
387	Fb400	Beforsite	Mcbl	61	118	28	5.2	1.3	0.7	0.5	< 0.1	4.8	6	7	7	2483	8	67	7044	5284	< 100	6.49	273
388	Fb410	Beforsite	Mcbl	65	112	30	6.6	1.5	0.8	1.0	0.2	4.3	5	9	10	3417	24	< 3	6130	6768	951	3.41	279
389	Fb415	Beforsite	Mcbl	202	292	66	10.5	2.5	0.7	0.8	< 0.1	4.7	9	6	44	2850	3	< 3	6784	6342	< 100	4.15	713
390	Fb420	Beforsite	Mcbl	70	113	26	6.0	1.5	1.1	0.6	< 0.1	4.9	7	3	9	1666	5	< 3	6796	6210	< 100	4.03	280
391	Fb425	Beforsite	Mcbl	54	90	24	4.0	0.9	0.7	0.8	< 0.1	4.6	5	4	4	1358	3	< 3	7018	6164	< 100	4.46	224
392	Fb500	Beforsite	Mcbl	3805	5021	1166	156.6	28.5	7.0	2.0	0.2	< 0.5	62	12	334	2937	2	< 3	6802	4774	1519	4.03	12530
393	Fb505	Beforsite	Mcbl	98	156	38	6.1	1.5	0.8	1.0	< 0.1	4.6	6	1	8	300	< 2	< 3	6544	7084	< 100	3.86	381
394	Fb510	Beforsite	Mcbl	347	477	118	21.4	4.0	0.9	1.0	< 0.1	6.7	10	2	41	90	6	549	8978	4812	< 100	12.41	1201
395	Fb515	Beforsite	Mcbl	85	143	38	7.3	1.8	0.8	1.0	< 0.1	5.1	6	5	16	1686	< 2	< 3	7064	6096	< 100	4.66	352
396	Fb520	Beforsite	Mcbl	51	77	22	5.6	1.5	0.8	0.5	< 0.1	4.3	6	4	10	891	2	< 3	7220	5488	< 100	4.62	205
397	Fb525	Beforsite	Mcbl	41	64	20	3.9	1.0	0.7	0.6	< 0.1	4.5	5	3	5	1510	< 2	< 3	6780	6152	< 100	3.82	171
398	Fb600	Beforsite	Mcbl	49	73	22	5.2	1.2	0.6	0.7	< 0.1	6.4	6	1	6	459	3	< 3	7820	4634	< 100	6.08	195
399	Fb605	Beforsite	Mcbl	50	82	22	5.7	1.0	0.8	0.8	< 0.1	4.3	4	2	5	82	3	< 3	7836	5268	< 100	5.99	210
400	Fb610	Beforsite	Mcbl	79	131	51	7.3	1.5	0.9	0.8	< 0.1	4.5	4	4	9	1233	6	< 3	7134	6206	< 100	5.15	348
401	Fb615	Beforsite	Mcbl	62	106	38	5.1	1.2	0.5	0.8	< 0.1	3.8	4	1	5	685	< 2	< 3	6096	5346	< 100	3.31	272
402	Fb620	Beforsite	Mcbl	547	834	309	48.7	8.6	2.3	0.8	< 0.1	5.3	13	< 1	52	27	< 2	< 3	8062	5452	< 100	6.27	2190
403	Fb625	Beforsite	Mcbl	402	621	215	32.3	6.4	1.5	0.9	< 0.1	8.1	12	4	37	1812	3	< 3	9832	4310	< 100	8.27	1598
404	Fb700	Beforsite	Mcbl	633	770	224	27.9	5.4	1.0	0.8	< 0.1	3.7	9	1	29	47	< 2	5	7590	4486	< 100	5.33	2050
405	Fb705	Beforsite	Mcbl	78	127	40	6.1	1.5	0.7	0.7	< 0.1	3.7	6	< 1	6	890	< 2	< 3	6206	5172	< 100	3.31	323

B-3 Geochemical Analyses of the Orange Area (10)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
406	Fb710	Beforsite	Mcbl	73	127	43	6.3	1.7	0.9	0.6	<0.1	6.5	6	2	7	51	<2	<3	6640	5278	<100	4.60	323
407	Fb715	Beforsite	Mcbl	97	143	44	7.5	2.0	0.8	0.7	<0.1	6.3	6	<1	8	10	<2	3	6838	7932	<100	3.18	374
408	Fb720	Fenite, Agt-Phl	Mfn	177	333	146	29.8	7.8	3.1	3.5	0.4	7.9	46	6	26	117	<2	7	2742	4774	3852	2.84	915
409	Fc310	Beforsite	Mcbl	107	190	87	17.2	3.7	0.9	0.7	<0.1	4.7	8	<1	30	13	<2	<3	8610	6348	<100	5.90	518
410	Fc320	Beforsite	Mcbl	1230	1262	464	68.7	12.0	3.5	1.4	0.2	7.6	20	<1	78	16	<2	<3	8446	7392	<100	5.93	3774
411	Fc400	Beforsite	Mcbl	4060	4922	983	119.6	20.8	4.2	1.1	0.1	5.4	33	2	135	63	<2	<3	7200	4212	<100	7.03	12357
412	Fc410	Beforsite	Mcbl	175	253	71	9.9	2.1	0.8	0.8	<0.1	3.8	6	3	14	956	<2	<3	6662	4373	<100	5.95	641
413	Fc415	Beforsite	Mcbl	91	128	31	5.7	1.4	1.0	0.6	<0.1	4.2	5	<1	6	57	<2	<3	5882	6422	<100	3.21	329
414	Fc420	Beforsite	Mcbl	67	110	28	3.6	1.3	0.7	0.6	<0.1	3.7	5	13	5	6611	<2	3	6702	5630	<100	4.65	269
415	Fc425	Beforsite	Mcbl	1428	1847	426	47.2	8.3	1.0	0.4	<0.1	3.3	12	3	46	1572	<2	<3	6738	5034	<100	4.71	4602
416	Fc500	Beforsite	Mcbl	140	220	51	8.5	2.1	1.3	0.9	<0.1	6.6	11	6	12	1885	<2	<3	5888	5914	<100	2.99	536
417	Fc505	Beforsite	Mcbl	254	368	92	13.8	3.2	1.5	0.9	<0.1	6.2	14	<1	33	336	<2	<3	6040	6430	<100	2.95	918
418	Fc510	Beforsite	Mcbl	83	143	43	7.6	1.9	1.0	0.8	<0.1	8.0	10	1	12	368	<2	<3	5924	6296	<100	2.96	359
419	Fc515	Beforsite	Mcbl	112	218	65	11.7	3.2	1.2	0.8	<0.1	10.1	13	<1	25	156	<2	<3	6308	6356	170	3.09	524
420	Fc520	Beforsite	Mcbl	95	169	45	7.8	2.1	1.0	1.1	0.2	7.4	12	3	13	1183	<2	<3	6200	5984	<100	3.04	409
421	Fc525	Beforsite	Mcbl	452	786	208	34.8	6.2	1.2	0.9	<0.1	6.3	15	3	33	58	<2	<3	8676	3646	<100	7.69	1849
422	Fc600	Beforsite	Mcbl	408	726	141	21.0	4.5	1.8	1.1	0.1	5.9	15	5	43	1407	<2	<3	6580	4848	<100	3.93	1618
423	Fc605	Beforsite	Mcbl	4022	4845	1075	193.5	34.1	7.2	1.7	0.2	6.5	55	17	244	671	5	<3	8834	7534	<100	7.26	12500
424	Fc610	Beforsite	Mcbl	53	97	22	3.9	1.2	0.7	0.8	<0.1	4.2	5	<1	3	613	<2	<3	6264	6182	<100	3.69	229
425	Fc615	Beforsite	Mcbl	126	247	45	9.9	2.1	0.9	0.6	<0.1	4.2	7	<1	9	261	<2	<3	6396	6744	<100	3.88	540
426	Fc620	Beforsite	Mcbl	206	409	87	20.7	4.5	1.0	0.9	<0.1	4.1	10	2	20	722	<2	<3	6688	6364	<100	4.23	910
427	Fc625	Beforsite	Mcbl	604	857	127	22.4	3.7	1.2	0.9	<0.1	3.2	8	12	35	2188	26	20	6258	4544	<100	12.63	1980
428	Fc700	Beforsite	Mcbl	4519	5744	1738	202.5	32.7	6.4	0.7	<0.1	0.7	31	8	212	1693	<2	<3	9474	4098	112	8.30	15086
429	Fc705	Beforsite	Mcbl	273	406	112	13.7	2.9	1.0	0.8	<0.1	4.2	6	4	26	3255	17	4	8350	4664	<100	6.40	1007
430	Fc710	Beforsite	Mcbl	133	221	66	8.9	1.9	0.9	0.9	<0.1	5.1	6	<1	7	198	<2	<3	7026	5420	<100	4.31	545
431	Fc715	Beforsite	Mcbl	272	411	117	15.3	3.7	1.4	0.9	<0.1	5.2	11	<1	26	42	<2	<3	7142	6572	4864	3.56	1027
432	Fc720	Beforsite	Mcbl	184	321	114	15.7	3.4	1.2	0.7	<0.1	7.0	9	<1	21	28	<2	<3	8174	8142	<100	3.75	807
433	G 200	Fenite (no quartz)	Ngn	75	133	52	9.0	2.4	1.5	2.3	0.3	7.8	13	10	13	211	6	303	1640	517	716	4.12	364
434	G 300	Syenite, Ne with Cal matrix	Msu	91	147	48	9.4	2.7	1.6	2.2	0.2	0.5	22	8	8	120	11	436	1660	2460	4050	4.17	395
435	G 310	Syenite, Ne	Msu	37	42	17	4.4	0.9	0.6	0.9	<0.1	<0.5	7	5	4	511	36	708	914	545	1290	2.80	136
436	G 320	Syenite(1), beforsite vein(2)	Msu	297	482	152	30.8	8.2	3.0	1.5	0.2	1.7	14	5	52	391	12	17	3570	3470	1280	3.90	1239
437	G 400	Beforsite, Phl	Mcbl	1130	1633	258	41.4	11.3	4.4	0.9	<0.1	2.9	16	20	76	146	7	<3	6480	7440	550	4.60	3790
438	G 410	Beforsite, Phl	Mcbl	224	324	81	12.7	2.2	1.4	0.8	<0.1	2.7	7	2	18	634	2	<3	5790	5970	729	3.17	810
439	G 415	Beforsite	Mcbl	324	403	98	10.0	2.4	0.9	1.0	<0.1	5.4	7	1	36	703	<2	9	6804	7022	482	6.78	1038
440	G 420	Beforsite	Mcbl	52	67	20	4.5	1.0	0.5	0.8	<0.1	2.4	5	1	3	293	<2	<3	5260	5840	107	2.51	186
441	G 425	Beforsite	Mcbl	62	110	32	5.3	1.5	0.8	0.5	<0.1	4.7	6	3	6	1300	<2	<3	6654	5764	<100	4.94	271
442	G 500	Beforsite	Mcbl	141	260	73	10.0	2.6	1.0	1.2	0.2	3.6	12	3	22	238	8	<3	5970	4110	155	6.87	617
443	G 505	Beforsite	Mcbl	65	112	38	4.7	1.5	0.9	0.8	<0.1	4.5	6	<1	4	68	<2	<3	6502	6894	<100	3.72	287
444	G 510	Beforsite	Mcbl	59	109	29	4.5	1.0	0.6	0.6	<0.1	2.5	6	5	13	3350	7	3	5380	5410	162	3.61	259
445	G 515	Beforsite	Mcbl	220	366	116	14.6	3.2	1.7	0.7	<0.1	6.1	10	8	23	3043	<2	<3	7838	5742	<100	6.23	910
446	G 520	Beforsite	Mcbl	52	79	23	4.3	1.0	0.5	0.8	<0.1	2.1	6	6	8	1400	10	<3	4680	4810	167	2.37	207
447	G 525	Beforsite	Mcbl	53	108	34	4.6	1.3	1.0	0.8	<0.1	4.5	5	2	9	1537	<2	<3	5712	5162	<100	3.11	263
448	G 600	Beforsite	Mcbl	58	89	25	6.0	0.9	0.7	0.6	<0.1	2.3	5	3	5	601	2	<3	6780	4670	161	4.05	229
449	G 605	Beforsite	Mcbl	77	139	56	7.3	1.7	1.0	0.9	<0.1	4.4	6	7	12	2546	2	<3	8302	4986	<100	5.47	364
450	G 610	Beforsite, Phl	Mcbl	572	912	218	31.1	7.4	3.8	0.6	<0.1	2.3	12	4	46	1390	4	<3	6780	3350	120	5.09	2178

B-3 Geochemical Analyses of the Orange Area (11)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
451	G 615	Beforsite	Mcbl	385	555	156	25.0	4.2	1.8	0.9	<0.1	4.1	8	2	24	430	<2	<3	7470	5162	<100	5.04	1407
452	G 620	Beforsite	Mcbl	107	176	37	7.1	1.8	0.7	0.7	<0.1	2.3	7	1	13	638	2	<3	6500	4630	141	3.89	415
453	G 625	Beforsite	Mcbl	143	266	64	8.0	2.2	0.6	0.6	<0.1	4.4	6	<1	9	46	<2	<3	7696	5484	<100	5.09	604
454	G 700	Beforsite	Mcbl	186	332	72	10.7	2.4	1.4	0.7	<0.1	2.6	8	3	38	2300	7	4	5840	4210	115	3.63	760
455	G 705	Beforsite	Mcbl	292	400	106	14.9	3.2	1.7	0.7	<0.1	6.4	10	<1	20	7	<2	<3	7648	6632	<100	4.12	1023
456	G 710	Beforsite, Phl	Mcbl	60	97	28	6.4	1.1	0.8	1.0	<0.1	3.7	8	3	5	246	3	7	6790	5240	135	3.39	250
457	G 715	Syenite, Agt	Msu	27	48	16	4.8	1.6	1.0	0.8	<0.1	1.1	11	31	17	183	23	164	1219	339	<100	2.58	135
458	G 720	Sovite-beforsite, Phl	Mcs	299	507	153	36.6	9.9	4.1	2.4	0.2	<0.5	54	9	16	23	<2	28	1230	3330	15700	2.23	1300
459	G 800	Syenite	Msu	38	42	19	3.9	0.9	0.7	1.3	0.2	2.6	9	5	4	555	15	797	1050	3450	725	2.87	141
460	G 900	Gneiss, Qtz-Fd, fenitised	Ngn	92	114	43	11.8	1.0	2.1	1.4	0.2	3.9	13	2	26	27	<2	87	460	97	293	1.15	350
461	Ga310	Syenite, Ne	Msu	19	31	10	3.4	0.9	0.6	0.5	<0.1	<0.5	3	12	8	207	11	405	554	309	496	1.94	88
462	Ga320	Syenite, Ne	Msu	49	62	22	2.9	1.0	0.5	0.9	<0.1	<0.5	10	34	28	1670	57	493	846	647	2100	2.98	179
463	Ga400	Beforsite dyke with Phl	Mcd	2560	5047	1778	279.5	80.9	13.1	2.3	0.3	3.1	52	4	716	88	5	3	7890	6210	1240	7.13	12232
464	Ga410	Syenite	Msu	52	110	52	13.6	4.7	2.6	1.6	0.2	<0.5	18	16	25	313	13	143	1120	991	3100	2.99	326
465	Ga415	Syenite, fenitised	Msu	130	268	98	22.0	5.0	2.9	0.7	<0.1	2.3	11	44	51	2903	41	99	1225	1172	2064	4.74	684
466	Ga420	Beforsite, Phl	Mcbl	159	284	84	12.6	3.3	1.3	0.8	<0.1	1.7	8	2	22	47	2	3	5200	2580	344	6.49	689
467	Ga425	Beforsite	Mcbl	284	446	152	27.5	5.9	2.1	1.0	<0.1	5.0	9	2	38	476	3	<3	8062	5612	1852	5.43	1160
468	Ga500	Beforsite	Mcbl	2414	4033	952	156.6	41.6	11.8	1.9	0.2	3.0	26	4	157	36	4	<3	7400	2900	2150	7.97	9463
469	Ga505	Beforsite	Mcbl	420	588	208	41.5	9.3	1.6	1.7	0.2	5.1	20	3	50	71	4	3	11088	2986	3374	12.90	1590
470	Ga510	Beforsite	Mcbl	112	184	55	8.5	2.2	1.2	0.7	<0.1	2.8	6	1	14	87	<2	<3	7100	4970	150	4.28	463
471	Ga515	Beforsite	Mcbl	210	328	112	22.1	4.6	1.7	0.7	<0.1	5.5	8	32	24	3649	47	<3	7434	4890	<100	5.93	859
472	Ga520	Beforsite	Mcbl	268	397	114	22.5	5.8	2.0	0.7	<0.1	3.5	11	29	35	2020	35	<3	8420	4910	144	5.60	1018
473	Ga525	Beforsite	Mcbl	1936	3322	1282	186.8	23.9	7.8	1.2	0.2	4.3	34	3	221	66	2	3	12412	3570	295	8.29	8455
474	Ga600	Beforsite	Mcbl	359	546	149	28.9	6.9	3.6	0.8	<0.1	3.4	11	27	44	1850	28	<3	7970	4860	155	5.44	1381
475	Ga605	Beforsite	Mcbl	233	342	92	11.8	2.7	0.9	0.7	<0.1	4.2	9	1	15	57	<2	<3	6782	5134	<100	4.54	850
476	Ga610	Beforsite	Mcbl	691	1132	262	43.8	9.0	4.1	0.9	<0.1	2.4	14	2	61	210	2	5	8140	4020	153	5.37	2670
477	Ga615	Beforsite	Mcbl	165	241	70	11.0	2.6	0.6	0.6	<0.1	5.2	8	<1	10	38	<2	<3	7050	6512	<100	4.00	612
478	Ga620	Sovite, Phl-Px	Mcs	503	906	162	22.3	4.6	3.0	1.4	0.2	3.1	17	6	32	1980	8	3	7380	4660	116	4.91	1993
479	Ga625	Syenite, Agt-Ne	Msu	83	155	61	13.1	4.0	2.0	1.8	0.2	<0.5	20	1	5	354	28	266	1688	1906	3418	4.76	424
480	Ga700	Syenite, Ne with Cal matrix	Msu	112	186	90	22.6	8.4	4.3	8.6	1.0	<0.5	105	5	8	214	19	949	1830	969	7120	5.09	606
481	Ga710	Sovite, Agt-Phl rich	Mcs	204	369	122	26.0	7.7	3.5	3.6	0.4	<0.5	55	2	11	20	<2	132	1430	2580	10120	2.99	957
482	Ga720	Sovite	Mcs	179	343	129	31.2	8.5	2.6	4.0	0.6	<0.5	61	26	17	88	<2	14	1380	4340	2140	1.15	906
483	Gb500	Beforsite	Mcbl	9385	8580	3192	551.4	91.1	16.1	1.2	0.2	<0.5	48	10	344	26	2	17	7928	1694	<100	7.29	26883
484	Gb505	Beforsite	Mcbl	1862	2032	650	95.5	19.8	5.6	2.8	0.3	3.8	42	5	137	37	2	<3	8560	7230	19666	6.66	5790
485	Gb510	Beforsite	Mcbl	3160	4050	1860	383.0	73.3	16.3	1.0	<0.1	3.1	41	6	256	689	8	<3	76444	2768	1242	6.75	11964
486	Gb515	Beforsite, Gn bearing	Mcbl	1307	2034	1066	221.3	44.5	8.3	1.5	0.2	4.0	35	6	233	180	4	6	10286	2412	<100	9.07	5916
487	Gb520	Beforsite	Mcbl	213	327	104	23.1	5.7	1.4	0.8	<0.1	5.4	12	<1	28	3	<2	<3	8632	5796	<100	5.85	850
488	Gb525	Beforsite	Mcbl	272	373	100	12.7	3.0	0.7	0.9	<0.1	6.8	10	3	15	71	<2	<3	7858	4932	<100	6.20	945
489	Gb600	Beforsite	Mcbl	1955	2066	636	72.4	12.5	4.7	1.1	0.1	4.9	24	3	97	3	<2	<3	8116	4620	<100	5.33	5859
490	Gb605	Beforsite	Mcbl	463	580	198	33.8	8.5	4.0	3.7	0.4	15.5	48	15	50	329	5	27	11102	1418	180	8.26	1642
491	Gb610	Beforsite	Mcbl	47	60	18	7.0	1.1	1.1	1.8	0.2	11.3	15	29	4	125	7	<3	9656	1855	<100	6.41	183
492	Gc400	Beforsite	Mcbl	1941	2064	1132	173.3	32.9	5.7	0.9	<0.1	2.6	37	2	228	17	<2	<3	8246	5306	<100	4.96	6675
493	Gc410	Beforsite	Mcbl	802	1150	517	106.5	21.1	2.9	0.8	<0.1	3.1	14	<1	127	398	<2	<3	10080	8100	<100	8.40	3255
494	Gc415	Beforsite	Mcbl	142	214	79	16.2	4.0	1.2	0.7	<0.1	5.4	10	<1	29	45	<2	<3	8034	5930	<100	5.99	580
495	Gc420	Beforsite	Mcbl	150	176	51	6.5	1.9	0.8	0.5	<0.1	3.8	7	<1	20	204	<2	<3	7100	7082	126	2.97	484

B-3 Geochemical Analyses of the Orange Area (12)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
496	Gc425	Beforsite	Mcb1	371	418	129	19.6	4.1	1.0	0.6	< 0.1	3.4	8	3	48	1229	6	< 3	7454	5396	< 100	4.06	1169
497	Gc500	Beforsite	Mcb1	87	120	39	5.0	1.3	0.7	0.6	< 0.1	2.9	5	2	10	1534	< 2	< 3	6668	5446	< 100	4.14	321
498	Gc505	Beforsite	Mcb1	171	363	78	11.8	2.4	0.9	0.7	< 0.1	6.0	9	4	18	1019	< 2	< 3	6652	5256	< 100	3.96	783
499	Gc510	Beforsite	Mcb1	123	185	61	9.0	2.0	0.6	0.5	< 0.1	2.9	5	3	18	601	< 2	< 3	5304	4336	< 100	5.31	478
500	Gc515	Beforsite	Mcb1	631	879	382	84.8	17.7	3.0	0.9	< 0.1	2.9	20	3	141	44	< 2	< 3	9226	2042	< 100	5.88	2509
501	Gc520	Beforsite	Mcb1	335	465	175	36.0	7.9	1.6	0.7	< 0.1	4.8	11	< 1	68	524	< 2	< 3	6984	5504	8398	3.68	1281
502	Gc525	Beforsite	Mcb1	216	331	113	20.4	4.4	1.2	0.6	< 0.1	3.8	7	1	35	1004	< 2	< 3	7390	4662	2462	4.41	862
503	Gc600	Beforsite	Mcb1	199	287	107	17.2	3.2	0.7	0.4	0.1	2.9	5	< 1	17	8	< 2	< 3	7312	6722	248	4.54	768
504	Gc605	Beforsite	Mcb1	330	454	151	25.2	4.3	1.0	0.6	< 0.1	2.9	8	< 1	27	76	< 2	< 3	9180	5604	239	4.81	1203
505	Gc610	Beforsite	Mcb1	190	271	101	19.8	4.1	1.2	0.8	< 0.1	4.2	9	< 1	26	15	< 2	< 3	9514	4884	172	5.87	742
506	Gc615	Beforsite	Mcb1	481	628	154	20.8	4.0	0.7	0.5	< 0.1	2.5	7	5	29	2381	< 2	< 3	7714	3896	< 100	4.99	1586
507	Gc620	Beforsite	Mcb1	157	440	67	12.7	3.1	1.0	0.9	< 0.1	2.9	11	5	29	1661	< 2	< 3	9304	3596	233	4.90	849
508	Gc625	Beforsite	Mcb1	69	105	28	2.1	1.1	0.4	0.5	< 0.1	3.5	6	4	5	800	< 2	< 3	7452	4920	164	6.51	259
509	Gc700	Beforsite	Mcb1	166	229	49	5.0	1.6	0.7	0.5	< 0.1	4.6	5	< 1	7	85	< 2	< 3	7006	6328	229	3.30	561
510	Gc705	Beforsite	Mcb1	97	142	45	3.5	1.1	0.7	0.5	< 0.1	6.4	5	3	4	22	< 2	< 3	7594	4842	212	5.14	365
511	Gc710	Granule conglomerate	Oth	31	46	13	1.6	0.8	0.5	0.4	< 0.1	0.6	4	2	5	35	< 2	16	989	57	258	3.83	121
512	H 200	Gneiss, Qtz-Fd, fenitised	Ngn	47	61	22	4.7	1.0	0.9	1.2	0.2	< 0.5	9	21	7	546	31	750	1340	877	1160	4.00	183
513	H 300	Sovite, Px-Phl-Ne	Mcs	148	238	95	17.8	4.8	2.0	2.4	0.3	< 0.5	47	10	5	595	26	242	783	3410	6340	1.22	658
514	H 400	Syenite, Ne	Msu	8	10	6	2.4	0.9	0.6	1.2	0.2	< 0.5	2	8	3	305	16	455	598	341	561	2.57	46
515	H 500	Sovite, Px-Ne-Phl	Mcs	155	242	85	14.8	4.8	3.9	3.3	0.4	< 0.5	42	8	8	176	15	365	1340	3150	3800	2.81	677
516	H 600	Sovite, Phl-Agt	Mcs	186	316	99	22.3	7.2	2.4	3.2	0.4	< 0.5	52	4	11	27	< 2	130	1370	2730	5580	2.02	823
517	H 700	Sovite, Px-Ne-Phl	Mcs	136	233	83	17.3	4.8	2.4	2.4	0.3	< 0.5	36	94	18	355	20	261	961	2170	6390	2.26	624
518	H 800	Px-Fd rock, coarse grained	Msu	50	71	28	4.9	1.3	0.9	1.8	0.2	2.8	12	21	10	398	15	788	1680	421	1640	4.29	209
519	I 100	Gneiss, Qtz-Fd, bre.	Ngn	62	85	37	8.9	1.4	2.3	2.2	0.4	5.0	19	2	11	21	< 2	128	830	326	478	2.24	274
520	I 300	Gneiss, Qtz-Fd	Ngn	70	125	43	9.2	1.8	1.4	2.3	0.3	7.0	13	2	4	25	2	133	1330	383	1240	3.25	334
521	I 500	Syenite, porphyritic	Msu	7	10	8	2.5	0.9	0.5	0.4	0.1	0.5	2	6	8	254	15	94	352	431	276	1.99	43
522	I 600	Sovite, banded	Mcs	266	540	159	30.9	11.6	3.5	5.9	1.0	7.0	90	2	1	61	< 2	3	3960	9160	3420	1.25	1311
523	I 700	Syenite - albitite	Msu	54	61	21	4.3	0.9	1.7	7.5	1.0	6.8	13	2	2	587	13	1620	1800	165	750	4.19	215
524	I 800	Syenite, porphyritic	Msr	45	61	23	4.2	1.4	1.1	1.5	0.3	< 0.5	13	9	11	639	14	849	1560	598	2220	3.74	186
525	I 900	Gneiss, Qtz-Fd	Ngn	109	198	46	7.4	1.7	1.1	1.4	0.2	4.2	12	5	11	80	2	155	591	346	317	1.99	464
526	Ia710	Syenite, Hbl-Ne	Msu	174	318	115	22.3	6.1	2.9	2.7	0.4	< 0.5	37	4	10	113	5	236	1610	3080	11500	3.63	833
527	Ia720	Gneiss, Qtz-Fd, fenitised	Ngn	51	83	34	5.7	1.7	1.0	2.1	0.3	16.9	13	2	7	73	< 2	140	1620	587	1080	3.15	237
528	Ia800	Gneiss, Qtz-Fd	Ngn	19	31	8	2.2	0.9	0.6	0.6	< 0.1	1.2	2	< 1	3	24	< 2	31	232	27	173	1.00	85
529	Ia810	Gneiss, Qtz-Fd	Ngn	16	23	10	2.8	0.9	0.5	0.7	< 0.1	1.1	3	3	19	27	< 2	81	329	82	178	0.77	74
530	Ia820	Gneiss, Qtz-Fd	Ngn	52	68	26	3.6	1.1	0.8	1.2	0.2	5.7	8	2	7	37	< 2	189	1230	416	476	2.55	201
531	Ia900	Beforsite	Mcb2	64	99	39	8.4	2.5	1.2	0.9	< 0.1	2.0	13	< 1	1	57	< 2	4	5080	3730	2480	2.89	282
532	J 200	Gneiss, Qtz-Fd	Ngn	70	95	44	10.6	1.9	2.0	2.2	0.3	4.0	18	1	17	22	< 2	101	543	190	436	1.49	307
533	J 400	Sovite	Mcs	188	294	98	23.2	8.7	3.0	4.8	0.6	1.0	70	4	35	32	< 2	< 3	1160	5390	821	0.56	812
534	J 500	Sovite, Hbl	Mcs	154	291	89	20.0	7.6	3.1	2.8	0.3	< 0.5	45	5	5	382	24	767	1980	2720	7800	4.87	743
535	J 600	Sovite, Phl	Mcs	157	266	90	18.4	5.9	1.9	3.5	0.4	< 0.5	52	6	10	28	< 2	80	948	5030	780	0.59	703
536	J 700	Gneiss, Qtz-Fd	Ngn	19	37	8	2.6	0.9	0.5	0.7	< 0.1	3.2	3	3	4	66	< 2	111	1030	209	790	2.98	92
537	J 710	Sovite-beforsite	Mcs	95	138	62	12.0	3.2	2.0	1.1	0.2	< 0.5	18	1	< 1	111	< 2	4	7600	3700	3530	2.80	412
538	J 720	Gneiss, Qtz-Fd	Ngn	102	180	66	11.8	3.2	1.7	1.7	0.3	6.4	22	2	13	71	< 2	243	1440	424	1620	4.85	477
539	J 800	Gneiss, Qtz-Fd	Ngn	43	49	18	2.4	0.9	0.6	0.7	0.2	3.2	6	2	10	22	< 2	107	466	217	352	1.70	150
540	J 820	Granitic rock, leuco-	Mgr	258	692	357	159.8	52.9	30.3	54.4	7.6	< 0.5	860	1	294	10	< 2	7	48	1270	40400	0.14	2480

B-3 Geochemical Analyses of the Orange Area (13)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
541	J 900	Granitic rock	Mgr	37	59	17	3.6	1.3	0.8	0.7	< 0.1	< 0.5	3	2	6	53	< 2	6	28	15	226	1.15	157
542	Ja710	Gneiss, Qtz-Fd	Ngn	6	8	6	2.6	0.9	0.5	0.7	< 0.1	2.0	2	1	1	14	< 2	100	376	6	249	1.70	38
543	Ja715	Granophyre	Mgr	116	226	94	19.6	5.1	1.3	2.0	0.3	1.7	27	2	42	66	< 2	120	974	504	318	2.47	597
544	Ja720	Sovite, Phl-Hbl	Mcs	250	495	165	42.5	12.9	4.5	7.0	1.3	< 0.5	105	27	48	2520	54	9	4020	6210	11900	1.95	1280
545	Ja725	Granophyre	Mgr	392	1062	260	19.4	4.7	1.0	1.0	< 0.1	< 0.5	16	4	5	210	< 2	< 3	1168	409	5106	2.13	2162
546	Ja800	Beforsite	Mcb2	226	451	149	32.5	9.5	3.5	1.8	0.2	1.3	42	1	14	3170	< 2	6	5140	3930	13710	2.24	1125
547	Ja805	Syenite, cut by green network	Msu	122	223	111	32.4	11.0	7.4	9.3	1.1	66.2	176	2	38	130	< 2	85	964	305	8815	10.44	747
548	Ja810	Gneiss, Qtz-Fd, fenitised	Ngn	89	168	48	6.8	2.1	1.7	3.0	0.4	6.6	23	2	29	40	< 2	186	692	269	243	2.10	418
549	Ja815	Beforsite, Ap	Mcb2	259	571	139	27.9	7.4	3.5	1.5	0.2	< 0.5	29	1	26	1583	< 2	< 3	4896	276	11854	2.23	1285
550	Ja820	Beforsite, Agt-Dol	Mcb2	486	972	190	30.5	7.4	2.8	1.1	0.1	0.6	21	< 1	9	661	< 2	< 3	6900	8620	7980	2.96	2103
551	Ja825	Beforsite, Ap	Mcb2	190	509	218	41.2	10.2	3.2	1.6	0.2	< 0.5	36	< 1	2	430	< 2	< 3	8572	5788	15762	3.51	1255
552	Ja900	Beforsite, Ank	Mcb2	123	264	92	18.3	6.0	2.3	1.4	0.2	1.7	28	< 1	4	2000	< 2	< 3	6340	5370	12360	2.90	658
553	Ja905	Beforsite, Ap	Mcb2	245	378	158	29.4	7.4	1.6	1.5	0.2	< 0.5	28	< 1	7	1147	< 2	7	6074	4808	11324	3.82	1040
554	Jb720	Sovite, Ap-Agt	Mcs	262	526	200	42.8	11.4	4.5	6.5	0.9	< 0.5	83	5	17	1834	17	< 3	4582	5980	5692	1.58	1376
555	Jb725	Beforsite, Ap	Mcb2	156	377	151	34.1	8.6	4.2	1.7	0.2	< 0.5	34	< 1	2	141	< 2	< 3	9446	4038	10975	3.55	960
556	Jb800	Beforsite, Agt	Mcb2	97	207	74	14.6	3.8	1.4	1.1	0.1	< 0.5	17	< 1	1	23	< 2	< 3	8792	5154	4767	3.81	513
557	Jb805	Beforsite, Ap	Mcb2	231	440	112	23.4	5.3	3.0	2.2	0.3	0.8	29	< 1	8	2000	< 2	< 3	5412	3820	15711	2.24	1043
558	Jb810	Beforsite, Ap	Mcb2	239	491	166	38.9	10.2	4.6	2.2	0.3	1.8	44	< 1	17	635	< 2	< 3	5282	4472	17777	2.58	1233
559	Jb815	Beforsite	Mcb2	145	321	139	28.9	7.2	2.9	2.2	0.3	< 0.5	38	< 1	21	733	< 2	< 3	6692	4906	11889	3.17	843
560	Jb820	Beforsite	Mcb2	378	730	281	73.3	17.3	4.9	2.5	0.3	< 0.5	59	< 1	5	1553	< 2	< 3	7526	6034	29183	3.29	1906
561	Jb825	Quartzite	Nsh	34	77	46	5.8	1.4	0.9	0.8	< 0.1	< 0.5	7	3	3	50	< 2	18	322	213	2807	0.56	219
562	Jb900	Beforsite	Mcb2	355	770	272	82.9	20.6	7.7	2.9	0.3	< 0.5	73	< 1	3	1448	< 2	< 3	5496	5006	34175	3.66	1964
563	Jb910	Beforsite, Ap	Mcb2	259	574	250	62.8	15.3	5.3	2.7	0.3	1.6	62	< 1	3	580	< 2	< 3	4976	3790	27201	2.46	1521
564	K 400A	Sovite, Bt	Mcs	147	257	83	16.4	4.9	2.8	3.5	0.4	< 0.5	49	8	9	358	6	259	1020	4080	3870	1.88	675
565	K 100	Gneiss, Qtz-Fd	Ngn	49	76	28	4.5	1.7	1.0	2.5	0.4	4.4	20	3	11	64	< 2	207	1100	271	376	1.78	217
566	K 200	Gneiss, Qtz-Fd, fenitised	Ngn	69	116	35	5.6	2.0	1.2	1.4	0.2	18.0	21	5	5	164	< 2	257	1050	462	1050	3.87	299
567	K 300	Sovite, Phl	Mcs	138	240	94	18.1	5.7	3.0	4.0	0.4	0.6	50	4	2	390	< 2	11	2140	5400	484	1.37	665
568	K 500	Syenite, Agt-Phl-Ne	Msu	4	9	5	2.4	0.9	0.7	0.9	0.2	< 0.5	2	29	12	249	6	116	637	154	681	2.85	37
569	K 600	Sovite, Agt?	Mcs	175	298	103	25.0	6.7	2.5	4.6	0.4	2.1	61	12	12	278	4	72	2380	4410	1290	0.96	800
570	K 700	Sovite-beforsite	Mcs	192	365	125	25.2	9.3	2.7	5.3	0.8	< 0.5	75	1	2	40	< 2	< 3	3140	5610	1170	1.04	940
571	K 710	Gneiss, Qtz-Fd	Ngn	74	138	42	5.5	1.6	0.9	2.2	0.3	4.9	10	3	10	27	< 2	182	953	176	273	2.92	340
572	K 720	Gneiss, Qtz-Fd	Ngn	52	99	37	3.9	< 0.5	1.6	2.7	0.3	3.2	11	4	9	60	< 2	223	881	289	470	2.44	261
573	K 725	Gneiss, Qtz-Fd, fenitised	Ngn	139	262	82	15.1	3.6	2.7	3.1	0.6	9.5	23	2	17	40	< 2	236	1235	482	485	3.81	663
574	K 800	Beforsite, Ap	Mcb2	258	615	261	59.8	13.5	5.5	2.5	0.4	1.7	45	2	20	4800	10	3	5660	4380	22600	3.14	1580
575	K 805	Beforsite, Ap	Mcb2	125	277	111	23.4	5.5	2.4	1.1	0.1	< 0.5	21	< 1	9	826	< 2	< 3	5938	3896	9137	2.79	707
576	K 810	Beforsite, Dol	Mcb2	52	95	37	6.0	2.4	1.2	0.8	< 0.1	0.8	11	< 1	< 1	26	< 2	< 3	6660	4810	2490	2.28	256
577	K 815	Beforsite	Mcb2	80	217	110	15.7	5.6	3.3	4.4	0.6	1.3	74	1	32	440	< 2	< 3	9222	3950	3094	5.61	592
578	K 820	Beforsite, Dol	Mcb2	59	80	29	5.9	2.0	1.0	0.6	< 0.1	0.6	8	< 1	< 1	3	< 2	< 3	6420	2660	1240	2.29	231
579	K 825	Trachyte	Ktd	272	511	135	24.0	1.3	4.1	8.4	1.2	0.8	73	15	63	214	2	502	891	120	214	3.03	1233
580	K 900	Beforsite,cut by Carbonate vein	Mcb2	114	244	87	21.7	6.1	2.7	1.3	0.2	0.6	27	< 1	8	66	< 2	< 3	6800	3860	6320	2.60	623
581	Ka110	Syenite-albitite, bre.	Msw	289	585	147	23.2	5.2	1.9	1.1	0.2	< 0.5	8	38	21	776	11	22	1740	910	260	1.35	1320
582	Ka120	Syenite-albitite, bre.	Msw	30	34	16	2.6	0.9	0.7	0.7	< 0.1	< 0.5	7	8	11	83	2	83	653	1420	228	2.49	114
583	Ka200	Syenite, porphyritic	Msp	117	261	71	9.5	2.7	1.0	1.4	0.3	1.8	13	20	17	409	5	159	1310	582	490	1.65	588
584	Ka210	Syenite, porphyritic	Msp	83	174	50	8.1	2.2	1.2	3.4	0.4	3.1	22	3	9	62	3	422	1340	915	655	2.68	418
585	Ka220	Syenite, porphyritic	Msw	44	96	38	8.4	2.9	1.2	2.4	0.4	< 0.5	22	10	16	187	7	449	1150	1760	691	3.16	259

B-3 Geochemical Analyses of the Orange Area (14)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
586	Ka610	Syenite, Phl-Px	Msu	22	39	16	2.6	0.9	0.6	0.6	< 0.1	< 0.5	5	210	39	1810	63	280	874	333	241	2.33	109
587	Ka620	Sovite, Phl-Px	Mcs	248	418	133	30.9	8.9	4.4	3.5	0.5	< 0.5	62	13	9	105	5	14	1310	1640	11500	2.64	1102
588	Ka700	Sovite, Phl, banded	Mcs	276	541	174	38.6	12.2	3.8	6.6	1.0	3.1	95	1	1	145	< 2	< 3	5240	4250	8140	1.35	1361
589	Ka710	Beforsite-sovite(?), Phl	Mcb2	93	120	49	9.6	2.1	1.8	2.8	0.3	10.6	35	1	2	84	< 2	67	1450	269	4390	5.89	368
590	Ka715	Fenite, gneiss origin?	Mfn	156	267	60	9.9	2.6	0.6	1.4	0.3	9.7	14	2	9	74	< 2	260	1244	517	916	5.63	620
591	Ka720	Beforsite, Phl-Ap-Dol	Mcb2	76	108	38	5.7	2.2	0.9	0.8	< 0.1	0.6	10	< 1	5	2770	< 2	9	7850	1840	1880	3.03	298
592	Ka725	Beforsite	Mcb2	174	360	146	32.4	7.9	3.4	1.5	0.2	0.6	32	1	9	1536	< 2	< 3	6346	4530	14578	2.43	941
593	Ka800	Beforsite, Ap-Dol	Mcb2	170	282	104	20.2	6.6	3.3	2.2	0.2	4.3	46	2	33	2350	< 2	< 3	5540	1570	7400	3.57	768
594	Ka805	Beforsite	Mcb2	109	261	83	20.7	5.9	3.2	2.2	0.3	< 0.5	41	< 1	13	164	< 2	< 3	6770	4082	4662	3.22	641
595	Ka810	Beforsite, Cal bearing Phl	Mcb2	277	590	234	36.6	14.3	5.3	2.7	0.2	< 0.5	55	< 1	2	14	< 2	< 3	5900	2320	21400	2.19	1505
596	Ka815	Beforsite, Ap	Mcb2	203	464	176	41.3	10.6	4.1	2.2	0.3	1.1	43	< 1	8	2533	< 2	< 3	6910	4610	16055	3.04	1170
597	Ka820	Beforsite, Phl	Mcb2	69	86	27	4.5	1.7	0.9	0.7	< 0.1	< 0.5	9	< 1	2	2	< 2	< 3	6230	6340	191	2.36	245
598	Ka825	Beforsite, Ap	Mcb2	126	275	100	21.4	5.7	2.1	1.2	0.1	< 0.5	23	< 1	5	2562	< 2	< 3	7018	4046	9646	2.85	686
599	Ka900	Beforsite	Mcb2	172	262	100	22.7	6.7	3.2	1.1	0.2	0.6	28	< 1	2	102	< 2	< 3	6150	4040	8950	3.09	737
600	Kb610	Syenite, Agt	Msu	68	160	42	5.2	1.4	0.7	1.1	0.2	< 0.5	13	3	31	2742	38	136	763	873	2877	3.62	354
601	Kb620	Beforsite, Cal bearing	Mcb2	92	206	90	18.3	4.7	1.2	1.1	0.2	< 0.5	20	< 1	3	1156	< 2	< 3	9160	3538	8297	3.40	532
602	Kb700	Shale, black hard	Nsh	75	171	62	15.2	3.3	3.5	3.9	0.6	19.7	43	1	8	36	< 2	33	1233	498	4396	7.35	459
603	Kb710	Fenite, gneiss origin?	Mfn	85	156	39	9.1	2.5	1.0	0.9	0.2	12.3	13	3	6	236	< 2	27	1308	690	1565	8.42	375
604	Kb715	Beforsite	Mcb2	140	344	149	33.1	8.2	2.7	1.5	0.2	0.7	31	< 1	1	56	< 2	< 3	7176	4484	16084	3.29	880
605	Kb720	Beforsite	Mcb2	117	291	129	24.2	6.3	2.3	1.3	0.2	2.0	24	< 1	9	1236	< 2	< 3	7354	3930	10220	4.84	741
606	Kb725	Beforsite	Mcb2	126	199	101	28.1	7.3	4.2	3.3	0.5	6.7	58	4	41	1327	< 2	< 3	7514	3766	13709	3.37	636
607	Kb800	Beforsite	Mcb2	36	76	19	4.2	1.0	1.0	1.6	0.3	2.3	14	14	11	4277	< 2	11	10698	1682	145	5.91	185
608	Kb805	Beforsite	Mcb2	165	424	206	35.9	8.8	4.0	1.6	0.2	1.0	35	< 1	3	809	< 2	< 3	5934	4460	16899	2.52	1102
609	Kb810	Beforsite	Mcb2	176	424	215	37.7	9.7	4.8	1.8	0.2	0.6	40	< 1	5	4789	< 2	< 3	6852	4444	16302	3.18	1140
610	Kb815	Beforsite	Mcb2	162	382	189	35.1	8.8	2.6	1.6	0.2	< 0.5	35	< 1	5	1610	< 2	< 3	5812	3706	19090	3.01	1009
611	Kb820	Beforsite	Mcb2	118	267	132	23.1	5.8	2.6	1.3	0.2	1.3	25	< 1	4	1014	< 2	< 3	7192	4202	9820	2.95	717
612	Kc720	Beforsite	Mcb2	58	146	75	9.7	3.0	1.0	0.8	< 0.1	0.5	14	< 1	< 1	10	< 2	< 3	6134	5642	3130	1.98	380
613	Kc725	Beforsite	Mcb2	200	394	180	30.2	7.5	2.2	1.8	0.2	< 0.5	33	1	6	1367	< 2	< 3	7346	4036	9311	3.01	1045
614	Kc800	Beforsite	Mcb2	124	288	117	23.5	6.2	2.7	1.3	0.2	0.7	26	< 1	2	221	< 2	< 3	6450	4066	11130	2.67	732
615	Kc805	Beforsite	Mcb2	162	245	89	15.7	3.7	1.8	1.1	0.1	1.3	18	< 1	4	656	< 2	5	5628	4800	5574	2.45	662
616	Kc810	Beforsite	Mcb2	27	50	24	4.1	0.6	1.0	1.8	0.2	3.1	16	4	5	708	< 2	< 3	8224	3888	< 100	2.34	149
617	Kc815	Beforsite	Mcb2	105	222	122	23.2	5.1	2.6	1.3	0.1	1.3	24	< 1	2	572	< 2	< 3	6288	5374	7690	2.59	632
618	Kc820	Beforsite	Mcb2	90	159	101	20.1	4.2	1.4	1.4	0.2	3.0	21	< 1	4	951	< 2	< 3	6867	4700	5628	3.18	491
619	Kc825	Beforsite	Mcb2	309	551	338	63.3	14.5	5.9	2.4	0.2	1.1	54	< 1	4	339	< 2	< 3	6602	6988	30060	2.66	1672
620	Kc900	Beforsite	Mcb2	168	307	161	33.5	7.3	3.5	1.9	0.2	1.8	33	< 1	8	1310	< 2	< 3	5952	3640	9783	2.60	892
621	L 100	Gneiss, Qtz-Fd, fenitised	Ngn	97	218	77	10.8	3.1	1.9	3.9	0.5	15.2	45	2	21	46	7	135	1820	730	1550	5.80	541
622	L 110	Syenite, porphyritic	Msw	23	66	34	10.5	4.0	1.7	2.3	0.4	3.5	20	7	16	39	< 2	122	585	139	509	1.74	203
623	L 120	Syenite, porphyritic	Msw	102	251	72	23.2	12.1	1.7	2.5	0.4	10.0	60	6	25	58	3	153	698	224	341	3.30	601
624	L 200	Syenite, porphyritic	Msp	36	36	12	2.6	0.9	0.7	0.5	< 0.1	< 0.5	4	10	9	127	< 2	53	430	698	237	1.74	115
625	L 210	Syenite, porphyritic	Msp	47	78	29	4.7	1.3	1.0	2.0	0.4	1.4	15	5	9	955	15	512	1580	819	691	3.88	216
626	L 220	Syenite - albitite	Msp	59	108	35	6.5	2.2	1.2	2.4	0.3	< 0.5	30	79	56	259	< 2	700	1280	1270	388	2.82	283
627	L 600	Sovite, Px	Mcs	204	319	102	24.0	7.3	2.5	3.7	0.5	< 0.5	63	9	35	733	23	22	1060	4100	4160	0.75	854
628	L 610	Syenite ?	Msu	28	52	14	3.4	0.9	0.6	0.8	< 0.1	11.4	6	1	1	68	< 2	270	1160	332	1180	4.61	132
629	L 615	Sovite	Mcs	309	647	230	52.3	11.9	3.3	4.0	0.5	0.5	64	4	3	218	< 2	18	1194	6428	22120	1.82	1608
630	L 620	Beforsite-sovite	Mcb2	229	430	179	35.0	11.2	4.4	2.6	0.3	< 0.5	48	1	14	5280	3	< 3	6150	4100	18400	3.36	1160

B-3 Geochemical Analyses of the Orange Area (15)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
631	L 625	Dolerite	Kdd	51	80	40	10.4	2.3	2.4	3.0	0.4	21.9	29	< 1	4	38	< 2	138	1170	1195	2376	6.70	266
632	L 700	Gneiss, Qtz-Fd	Ngn	93	256	81	12.9	3.1	1.4	1.3	0.1	8.5	15	1	9	108	2	345	1400	277	539	6.66	575
633	L 705	Beforsite/sovite	Mcb2	483	822	475	77.0	15.9	8.3	3.9	0.5	1.2	71	2	6	347	< 2	< 3	6288	10736	22320	2.21	2447
634	L 710	Beforsite	Mcb2	234	468	192	37.4	11.6	5.1	2.4	0.3	0.6	46	1	6	1680	< 2	< 3	4580	4800	15500	2.44	1242
635	L 715	Beforsite, Ap	Mcb2	78	144	61	15.3	2.5	2.1	0.9	< 0.1	1.0	14	< 1	3	896	< 2	< 3	7598	4980	3106	3.86	400
636	L 720	Beforsite	Mcb2	10	25	9	2.7	< 0.5	0.7	2.3	0.4	3.0	26	24	5	3870	6	10	11900	958	138	6.65	75
637	L 725	Beforsite	Mcb2	184	255	133	27.0	6.9	4.9	4.0	0.4	2.9	73	3	32	949	< 2	7	7614	3760	2846	4.56	823
638	L 800	Beforsite	Mcb2	215	435	167	32.1	9.9	5.4	2.6	0.2	0.6	44	< 1	4	18	< 2	< 3	6200	5470	14200	2.64	1139
639	L 805	Beforsite	Mcb2	71	98	55	9.9	2.0	2.2	0.9	< 0.1	1.5	12	< 1	3	106	< 2	< 3	7294	6030	2062	2.62	319
640	L 810	Beforsite	Mcb2	159	312	125	27.8	7.8	4.3	2.3	0.3	1.8	37	< 1	2	292	< 2	< 3	5540	3910	11400	2.35	843
641	L 820	Beforsite, Dol	Mcb2	169	329	129	24.3	7.1	3.6	1.8	0.3	1.2	30	< 1	3	1540	< 2	< 3	6190	4990	12400	2.66	865
642	L 900	Shale, black hard	Nsh	93	126	45	8.7	3.0	1.8	4.9	0.4	11.4	67	5	56	40	< 2	96	1210	362	417	4.70	377
643	La120	Syenite, porphyritic	Msp	30	24	9	1.8	0.9	0.7	1.1	0.2	< 0.5	5	30	8	103	< 2	94	355	551	584	0.93	91
644	La200	Syenite, porphyritic	Msp	31	28	11	2.8	0.9	0.7	0.9	0.2	< 0.5	4	10	4	514	< 2	40	463	2310	652	1.44	101
645	La210	Syenite, porphyritic	Msp	112	166	55	6.6	2.6	1.5	1.9	0.3	< 0.5	22	39	9	2	< 2	286	1230	1900	1530	0.97	446
646	La220	Sovite	Mcs	212	378	113	22.4	7.2	3.5	4.8	0.4	< 0.5	68	1	< 1	257	< 2	< 3	1290	6960	< 100	0.22	964
647	La610	Sovite-beforsite, Px-Phl	Mcs	253	421	135	32.7	10.6	4.0	6.4	0.9	< 0.5	92	1	1	228	< 2	< 3	4620	2660	2710	0.91	1124
648	La615	Beforsite	Mcb2	144	272	173	35.3	7.7	3.7	1.5	0.1	3.1	30	1	7	1683	< 2	3	6666	4762	11216	3.13	839
649	La620	Sovite-beforsite, Px-Phl	Mcs	347	604	201	45.3	14.2	7.8	5.7	0.8	< 0.5	93	4	90	8770	38	11	3450	1870	19500	6.64	1609
650	La625	Beforsite	Mcb2	12	18	12	3.0	< 0.5	1.3	2.6	0.3	6.0	22	8	3	577	< 2	< 3	12688	1250	< 100	6.73	79
651	La700	Beforsite, Ap	Mcb2	154	253	95	20.2	6.8	3.5	1.8	0.2	1.0	36	< 1	5	922	3	< 3	5810	1600	8650	2.49	701
652	La710	Beforsite	Mcb2	338	587	184	31.7	9.3	5.4	2.3	0.6	1.8	41	7	28	2610	2	< 3	8480	1420	3710	5.10	1490
653	La715	Beforsite	Mcb2	157	277	157	30.1	7.1	3.9	2.6	0.3	2.0	40	7	26	1978	< 2	12	7116	4008	2928	4.48	839
654	La720	Beforsite	Mcb2	?	13	7	2.0	< 0.5	0.8	2.3	0.4	6.9	25	27	4	1630	4	15	12500	629	149	6.15	51
655	La725	Beforsite	Mcb2	128	253	152	27.1	6.3	1.9	1.4	0.1	1.6	28	< 1	6	689	< 2	7	5746	4264	12166	3.84	738
656	La800	Beforsite, Ap	Mcb2	181	350	133	26.9	8.1	3.6	1.9	0.2	1.9	35	< 1	5	1300	< 2	< 3	5400	4000	12400	2.50	916
657	La805	Beforsite	Mcb2	170	314	182	34.4	8.1	4.0	1.8	0.2	1.3	33	< 1	3	286	< 2	< 3	7286	6258	10264	3.01	938
658	La810	Quartzite, bre.	Nsh	80	120	49	10.7	3.1	1.4	3.1	0.4	7.2	41	4	5	104	3	243	1780	956	1600	3.56	353
659	La900	Shale, black hard	Nsh	61	73	30	6.4	1.3	1.5	3.2	0.5	12.2	42	4	12	32	< 2	114	912	204	316	4.19	240
660	Lb605	Beforsite	Mcb2	238	495	295	69.8	21.7	12.4	12.1	1.4	3.6	240	13	50	2784	< 2	< 3	7346	4460	19992	3.77	1594
661	Lb610	Beforsite	Mcb2	138	274	149	32.9	7.5	2.3	1.6	0.2	2.9	29	< 1	7	2247	< 2	7	6312	5216	10098	2.87	786
662	Lb615	Beforsite	Mcb2	114	183	125	23.0	5.5	3.2	1.6	0.2	0.7	25	< 1	7	1045	< 2	22	6244	4296	7312	3.29	606
663	Lb620	Beforsite	Mcb2	86	149	88	15.7	3.2	1.0	1.1	0.2	1.3	16	< 1	4	562	< 2	< 3	7468	5674	3618	3.23	444
664	Lb625	Beforsite, Ap-Agt	Mcb2	124	223	136	30.8	6.2	3.6	1.1	0.1	1.1	25	< 1	5	1187	< 2	< 3	6088	5166	9888	2.65	694
665	Lb700	Beforsite	Mcb2	170	304	142	22.4	5.6	1.7	2.5	0.3	1.7	41	< 1	17	1054	< 2	7	7532	5346	4408	4.58	832
666	Lb705	Beforsite	Mcb2	65	103	67	10.6	3.1	1.9	1.7	0.2	3.2	23	4	57	667	< 2	< 3	6872	6500	1494	3.30	339
667	Lb710	Beforsite	Mcb2	115	163	131	25.6	6.5	4.4	2.4	0.2	1.9	35	1	30	1351	< 2	8	6608	3638	4832	3.16	610
668	Lb715	Beforsite	Mcb2	95	141	104	20.2	4.2	3.6	1.3	0.1	3.1	22	< 1	9	827	< 2	7	6352	4568	5688	4.62	498
669	Lb720	Beforsite	Mcb2	84	119	85	17.1	2.9	3.0	0.7	< 0.1	3.8	12	1	25	5164	< 2	12	5934	5090	13608	6.97	417
670	Lb725	Beforsite	Mcb2	104	151	120	21.5	5.0	3.1	1.3	0.1	2.2	21	< 1	7	1722	< 2	6	6652	5142	7658	3.38	542
671	Lb800	Beforsite	Mcb2	61	82	59	12.4	1.7	1.6	0.8	< 0.1	2.4	10	< 1	15	171	< 2	< 3	6874	4484	1721	3.07	290
672	Lb805	Beforsite	Mcb2	69	86	52	9.0	1.5	1.0	1.0	< 0.1	1.5	13	3	8	424	2	4	9944	5844	6090	4.41	286
673	Lc610	Sovite	Mcs	183	282	135	21.7	5.7	4.1	3.8	0.5	1.4	53	94	9	1421	7	6	1795	6462	5346	1.78	840
674	Lc615	Sovite	Mcs	207	275	190	38.5	10.5	8.4	6.8	0.9	0.6	83	4	11	1212	5	4	6110	7738	4048	2.44	1019
675	Lc620	Beforsite	Mcb2	82	106	80	14.2	3.3	1.1	1.5	0.2	0.5	21	1	6	1411	< 2	< 3	6014	7874	5054	1.88	376

B-3 Geochemical Analyses of the Orange Area (16)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
676	Lc625	Beforsite	Mcb2	205	305	197	45.6	12.2	5.2	7.1	1.1	< 0.5	92	< 1	4	707	18	4	7436	4092	3378	4.91	1045
677	Lc700	Beforsite	Mcb2	153	306	165	32.5	6.8	4.5	1.6	0.1	1.0	30	< 1	9	935	< 2	< 3	7482	4646	11860	3.49	884
678	Lc705	Beforsite	Mcb2	97	194	122	22.7	4.9	2.9	0.9	< 0.1	0.7	21	< 1	2	454	15	< 3	8970	4020	8442	6.09	587
679	Lc710	Beforsite	Mcb2	87	218	87	17.0	3.8	1.3	1.2	0.1	2.0	19	< 1	5	252	< 2	< 3	8386	5126	3350	3.74	535
680	Lc715	Beforsite	Mcb2	17	36	23	5.3	2.2	1.8	3.9	0.5	6.4	78	27	6	1755	< 2	3	14598	1390	2112	8.32	139
681	Lc720	Beforsite	Mcb2	185	275	130	19.8	3.9	1.4	2.0	0.2	3.0	21	16	32	2194	< 2	16	12248	2614	< 100	6.65	786
682	Lc725	Beforsite	Mcb2	46	73	41	9.4	2.0	2.0	1.6	0.2	22.1	19	12	12	4493	< 2	28	6124	4896	1880	3.51	242
683	Lc800	Beforsite	Mcb2	464	662	374	63.4	16.5	10.5	7.8	0.9	3.7	145	4	74	974	< 2	< 3	7592	5680	15778	3.72	2115
684	Lc805	Beforsite	Mcb2	90	127	69	13.6	2.6	1.4	0.8	< 0.1	3.7	14	< 1	3	185	20	< 3	7304	5302	2412	3.45	395
685	M 100	Syenite-albitite, bre.	Msw	68	100	37	9.7	1.5	1.7	1.2	0.2	0.9	13	14	11	859	6	57	740	427	973	1.34	291
686	M 110	Syenite-albitite, bre.	Msw	87	147	35	4.9	1.4	0.8	0.8	< 0.1	< 0.5	10	78	19	268	2	27	660	438	1620	1.48	351
687	M 120	Syenite, porphyritic, bre.	Msw	208	334	77	10.2	2.2	1.3	0.8	< 0.1	< 0.5	17	91	14	900	3	23	1610	1340	2260	1.69	792
688	M 200	Syenite	Msp	56	70	25	4.3	1.1	0.9	0.9	< 0.1	1.2	13	34	18	496	5	320	861	1230	2560	3.86	206
689	M 210	Syenite	Msp	144	233	67	15.8	2.5	2.2	1.2	0.2	< 0.5	24	286	30	3170	15	25	2180	3020	1220	1.51	597
690	M 220	Sovite, Hbl	Mcd	1306	3344	798	126.6	27.6	10.4	4.2	0.5	5.1	79	1	147	13	< 2	< 3	10200	12810	613	6.74	7051
691	M 300	Sovite	Mcs	79	126	42	10.0	3.3	1.1	1.7	0.2	< 0.5	26	10	4	134	< 2	11	801	2410	773	0.25	341
692	M 400	Sovite-beforsite, Px-Phl	Mcs	193	361	150	24.5	6.8	2.9	4.6	0.6	0.7	77	4	5	2100	< 2	19	1460	4390	3200	1.37	966
693	M 500	Sovite	Mcs	228	351	98	20.9	7.2	2.1	4.4	0.5	< 0.5	71	1	1	8	< 2	16	1250	6040	370	0.31	909
694	M 600	Sovite	Mcs	203	328	105	22.7	6.7	2.7	4.5	0.5	< 0.5	66	1	4	856	< 2	7	1240	5440	2040	1.19	870
695	M 605	Beforsite	Mcb2	90	158	80	15.8	3.4	2.1	0.9	< 0.1	1.5	16	1	2	1001	< 2	< 3	7676	7476	3992	2.99	459
696	M 610	Beforsite	Mcb2	93	110	49	9.4	2.5	1.2	0.6	< 0.1	1.3	12	< 1	< 1	126	< 2	< 3	6250	6290	2880	2.20	343
697	M 615	Beforsite	Mcb2	149	218	110	25.7	6.0	3.7	1.3	0.1	1.5	25	< 1	2	487	< 2	< 3	7986	7384	8680	3.35	677
698	M 620	Beforsite, Ap-Ank	Mcb2	92	108	50	10.3	2.8	1.5	0.8	< 0.1	0.5	16	< 1	4	768	< 2	4	5700	3810	3180	2.49	345
699	M 625	Beforsite	Mcb2	181	298	201	40.5	10.0	5.5	3.1	0.3	4.0	55	< 1	13	2272	22	9	6522	4424	16120	2.89	988
700	M 700	Beforsite, Hbl	Mcb2	159	362	142	28.8	8.8	5.2	2.0	0.3	2.8	37	< 1	8	1980	< 2	< 3	4990	4070	13900	2.38	937
701	M 705	Beforsite	Mcb2	291	402	268	51.6	11.9	6.3	2.2	0.2	3.2	46	< 1	11	3661	24	13	6984	5396	18914	3.29	1356
702	M 710	Beforsite, Phl-Ank	Mcb2	193	317	118	26.3	8.5	4.5	1.8	0.5	0.8	40	1	47	4090	5	4	5130	3740	12600	5.17	877
703	M 715	Beforsite	Mcb2	181	266	175	40.2	9.3	3.2	2.0	0.2	0.7	39	< 1	4	837	21	< 3	6840	6274	16056	2.99	884
704	M 720	Beforsite, Ank	Mcb2	218	434	152	30.9	8.8	4.1	1.3	0.2	1.2	38	< 1	4	1480	< 2	< 3	5180	5210	12200	2.63	1096
705	M 725	Beforsite	Mcb2	399	659	408	86.5	18.7	4.2	2.6	0.3	0.7	61	< 1	7	578	20	< 3	9514	6992	25660	3.44	2025
706	M 800	Beforsite	Mcb2	167	294	78	10.2	2.5	1.7	1.3	0.2	6.0	16	28	14	3520	3	4	8750	4030	142	4.45	704
707	M 805	Beforsite, Cal bearing	Mcb2	434	630	269	51.4	9.7	6.0	2.0	0.2	8.8	25	20	61	2357	22	4	9092	6152	178	4.78	1799
708	M 810	Shale, black hard	Nsh	68	109	39	5.1	1.7	1.2	2.6	0.5	9.8	32	4	17	51	2	101	994	510	415	4.90	299
709	M 900	Quartzite-grit	Nsh	55	125	54	13.2	4.5	2.2	1.4	0.1	0.5	29	< 1	2	44	< 2	33	287	82	429	0.53	346
710	Ma120	Syenite, porphyritic	Msw	121	178	51	8.1	2.3	1.6	1.0	0.2	< 0.5	19	109	14	1170	5	16	1830	910	2640	1.73	465
711	Ma200	Syenite, porphyritic	Msp	68	126	35	4.7	1.1	0.9	0.8	< 0.1	0.7	13	14	11	309	3	64	1170	724	1770	4.42	302
712	Ma210	Syenite, porphyritic	Msp	81	129	35	6.5	2.2	1.1	1.7	0.2	0.8	25	56	8	519	2	46	1670	3030	2120	3.08	332
713	Ma220	Syenite, porphyritic	Msp	58	97	30	5.5	1.5	0.9	0.9	< 0.1	< 0.5	14	2	7	124	< 2	156	1150	2550	790	2.94	251
714	Ma510	Sovite	Mcs	208	367	99	20.8	6.3	2.6	3.2	0.3	< 0.5	65	1	< 1	9	< 2	< 3	1260	8620	504	0.30	906
715	Ma520	Sovite, Hbl	Mcs	195	331	94	22.1	5.8	2.8	3.4	0.3	< 0.5	63	4	1	60	< 2	110	1330	6960	216	1.28	845
716	Ma525	Beforsite, Cal bearing	Mcb2	66	73	24	4.9	0.6	0.6	0.7	< 0.1	5.1	10	7	13	612	16	< 3	7846	4628	< 100	5.89	216
717	Ma600	Beforsite, Cal bearing	Mcb2	182	293	88	17.2	5.1	2.6	1.2	< 0.1	1.5	16	10	41	2200	< 2	7	5530	6220	305	3.63	756
718	Ma605	Beforsite	Mcb2	195	306	161	36.9	8.7	6.2	1.5	0.2	0.7	35	< 1	5	941	< 2	< 3	7166	7252	14282	3.84	951
719	Ma610	Beforsite, Cal bearing	Mcb2	119	218	73	13.5	4.1	2.0	1.0	< 0.1	< 0.5	23	1	3	916	< 2	< 3	5650	9340	8450	6.13	557
720	Ma615	Beforsite	Mcb2	102	183	96	23.2	5.1	3.0	1.2	0.1	0.7	25	< 1	5	686	21	< 3	7974	7518	8158	3.06	548

B–3 Geochemical Analyses of the Orange Area (17)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
721	Ma620	Beforsite, Dol	Mcb2	127	214	69	15.2	4.7	2.0	0.7	<0.1	0.8	21	1	3	737	<2	3	5430	6940	7070	3.37	557
722	Ma625	Beforsite	Mcb2	210	378	167	35.7	7.8	2.2	2.2	0.2	1.6	38	5	18	1621	<2	<3	7712	5040	8030	4.12	1029
723	Ma700	Beforsite, Dol-Ank	Mcb2	141	254	60	12.1	3.2	1.5	1.8	0.2	1.1	27	<1	4	14	<2	5	7270	5500	1060	3.31	603
724	Ma710	Beforsite-sovite, Dol	Mcb2	8590	11633	1804	268.5	41.0	7.9	1.0	<0.1	0.9	22	1	29	354	<2	<3	7880	20120	6600	2.88	27224
725	Ma715	Beforsite, Ap-Cal bearing	Mcb2	5398	5603	2041	271.3	41.5	7.5	1.4	0.1	<0.5	35	<1	42	33	<2	<3	15468	21140	<100	6.69	16476
726	Ma720	Shale, siliceous-calcareous	Nsh	131	242	65	12.7	3.1	1.9	4.1	0.5	6.7	59	4	11	32	<2	181	2330	430	1150	4.66	596
727	Ma800	Gneiss, Qtz-Fd	Ngn	82	124	30	7.5	1.6	2.0	3.3	0.4	5.9	48	4	16	18	<2	65	791	465	671	1.98	335
728	Ma820	Quartzite-chert	Nsh	53	80	25	5.5	1.1	0.9	1.0	<0.1	1.2	4	<1	3	22	<2	86	210	180	134	1.14	217
729	Mb525	Beforsite	Mcb2	77	102	55	14.1	3.2	1.2	1.1	<0.1	2.1	18	<1	99	46	20	<3	7376	11896	<100	2.76	331
730	Mb600	Beforsite	Mcb2	123	147	43	10.3	1.0	2.7	1.0	<0.1	5.2	9	14	12	3849	22	<3	7990	5520	<100	4.86	426
731	Mb605	Beforsite	Mcb2	64	69	37	7.8	0.8	1.8	1.0	<0.1	5.8	10	11	9	2609	<2	<3	8144	4800	<100	5.37	242
732	Mb610	Beforsite, Ap?	Mcb2	265	409	263	56.5	13.2	7.3	2.3	0.2	0.5	51	<1	6	1972	23	<3	6540	9656	22040	3.83	1346
733	Mb615	Beforsite	Mcb2	84	126	52	13.4	4.0	2.9	1.3	0.1	2.7	28	6	225	1613	21	<3	7806	8184	4152	4.35	383
734	Mb620	Beforsite	Mcb2	94	121	31	5.9	1.0	0.6	1.1	0.2	6.2	12	2	4	2856	26	<3	8064	9910	29520	4.64	321
735	Mb625	Beforsite	Mcb2	347	658	261	38.9	8.0	2.0	1.2	0.1	4.3	23	<1	2	100	<2	<3	7574	12236	3582	2.47	1659
736	Mb700	Beforsite	Mcb2	246	368	95	13.2	2.6	1.0	0.9	<0.1	4.5	14	2	30	1413	2	3	7998	13818	11662	3.42	905
737	Mb705	Beforsite	Mcb2	2557	3273	1311	194.2	38.1	10.7	2.3	0.3	6.2	75	<1	220	20	4	<3	11434	22060	421	6.23	9226
738	Mc525	Sovite	Mcs	227	417	199	38.4	9.2	3.2	3.9	0.5	<0.5	63	8	6	315	<2	17	1309	8512	13758	1.24	1163
739	Mc600	Beforsite	Mcb2	83	179	75	11.9	3.0	1.1	0.7	<0.1	0.9	12	<1	2	106	<2	<3	6408	17214	2734	2.52	454
740	Mc605	Beforsite/sovite	Mcb2	176	386	177	32.4	7.8	1.5	1.4	0.2	1.5	29	1	2	1093	<2	<3	5980	13738	11240	2.18	996
741	Mc610	Beforsite	Mcb2	249	569	282	59.9	13.4	4.1	2.5	0.3	<0.5	53	<1	13	2027	<2	15	5458	7752	25680	3.45	1526
742	Mc615	Beforsite	Mcb2	76	184	73	14.0	3.1	1.2	0.8	<0.1	2.1	13	2	4	1777	<2	15	5170	12418	3406	4.00	454
743	Mc620	Beforsite	Mcb2	116	237	68	11.5	3.2	0.7	0.7	<0.1	1.5	12	<1	3	1092	<2	4	6236	13506	3134	3.39	550
744	Mc625	Beforsite	Mcb2	71	181	78	18.1	3.8	1.9	0.9	<0.1	2.5	15	<1	6	1167	<2	12	6154	7910	5246	3.50	465
745	Mc700	Beforsite	Mcb2	146	344	134	30.1	6.8	3.5	1.3	0.1	1.1	28	<1	9	414	<2	3	6086	12140	13010	2.19	867
746	Mc705	Beforsite	Mcb2	59	125	45	11.7	2.9	1.2	1.1	0.1	3.3	19	<1	24	268	<2	<3	6878	12302	866	2.91	321
747	Mc710	Beforsite	Mcb2	148	363	151	34.8	8.0	3.1	1.5	0.2	0.5	31	<1	2	94	<2	<3	6464	10666	15396	2.43	922
748	Mc715	Beforsite	Mcb2	71	148	53	11.1	2.2	0.8	0.6	<0.1	3.9	9	<1	2	372	<2	<3	7354	10864	3940	3.36	366
749	Mc720	Beforsite	Mcb2	722	1063	257	37.0	6.3	1.1	0.7	<0.1	5.0	12	2	11	920	<2	<3	8584	16114	3938	3.77	2571
750	Mc725	Beforsite	Mcb2	464	934	374	86.5	19.1	4.2	5.7	0.7	7.6	89	2	6	905	<2	<3	5700	14326	7700	3.48	2409
751	Mc800	Beforsite	Mcb2	484	935	278	52.6	10.1	3.2	2.1	0.3	6.7	31	6	65	1161	<2	5	8018	13336	889	3.98	2221
752	Mc805	Sovite	Mcs	1338	2121	663	175.2	34.6	9.3	10.4	1.4	3.5	134	<1	28	126	2	<3	10154	15640	5512	3.45	5500
753	N 200	Syenite, porphyritic	Msw	58	71	22	4.3	0.9	0.7	0.9	<0.1	0.7	14	17	10	353	4	241	1340	1190	2050	4.15	204
754	N 210	Syenite	Msp	62	101	28	5.1	1.4	1.0	1.1	0.2	1.6	16	60	8	504	4	148	1110	2110	3930	4.35	257
755	N 220	Syenite	Msp	61	86	23	3.9	0.9	0.8	0.9	<0.1	2.1	14	34	9	688	6	169	939	1820	2440	4.61	227
756	N 400	Sovite, Hbl	Mcs	262	480	124	28.6	10.4	2.5	3.4	0.4	0.5	83	37	16	1530	<2	6	1460	7120	13300	0.83	1159
757	N 525	Beforsite, Py bearing	Mcb2	871	1579	409	101.4	30.4	10.0	6.5	0.7	6.6	115	3	181	605	4	<3	9018	8348	5354	8.13	3829
758	N 600	Beforsite, Dol	Mcb2	329	476	69	15.9	3.4	0.5	0.7	<0.1	4.2	9	3	29	911	<2	<3	8552	10746	<100	3.83	1094
759	N 605	Beforsite	Mcb2	122	204	37	8.4	1.6	0.7	0.7	<0.1	5.3	7	8	9	2179	<2	<3	7978	10452	<100	3.94	467
760	N 610	Beforsite	Mcb2	94	226	86	19.4	5.4	2.6	2.0	0.3	3.6	19	1	5	3020	<2	<3	7310	6450	13600	3.20	574
761	N 615	Beforsite	Mcb2	230	448	166	30.0	6.1	3.2	1.5	0.2	4.2	26	2	10	820	<2	<3	8376	16216	10934	3.40	1134
762	N 620	Beforsite	Mcb2	118	250	118	17.3	3.8	1.6	0.8	<0.1	9.4	13	<1	6	676	<2	4	10278	12142	1807	3.43	654
763	N 625	Beforsite	Mcb2	504	913	450	85.5	21.8	10.4	10.0	1.1	4.9	175	1	90	298	<2	<3	7592	11126	10482	4.05	2622
764	N 700	Beforsite	Mcb2	484	886	427	67.1	15.0	3.6	3.9	0.5	5.5	66	<1	86	32	2	<3	14258	12858	367	5.04	2400
765	N 705	Syenite, bre., carbonatised	Msu	1131	1559	498	99.0	23.3	9.2	8.5	1.0	2.3	143	3	41	268	<2	5	4696	8450	14024	3.91	4218

B-3 Geochemical Analyses of the Orange Area (18)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
766	N 710	Syenite, bre., carbonatised	Msu	790	1590	654	145.7	31.3	8.5	2.8	0.4	9.8	47	40	111	5389	2	9	7832	9660	< 100	6.99	4105
767	N 720	Beforsite, Phl	Mcb2	156	335	94	16.3	3.4	2.1	1.3	0.2	4.1	12	6	10	1020	2	< 3	4640	1990	8020	7.27	777
768	N 820	Bre. rock with Cal network	Nsh	480	833	405	105.2	39.9	14.4	13.7	1.2	4.8	469	11	70	330	6	16	9090	1700	12900	4.04	2546
769	N 900	Gneiss, Qtz-Fd	Ngn	35	48	13	4.3	1.9	1.1	1.2	0.2	25.9	18	3	10	72	< 2	51	869	295	5250	2.73	143
770	Na110	Syenite, leuco-	Msw	59	61	20	4.3	1.2	0.7	0.6	< 0.1	< 0.5	10	118	8	1030	3	12	958	2880	3560	1.44	190
771	Na120	Syenite, with Fd mega-crystal	Msw	11	23	9	2.1	0.9	0.6	0.6	< 0.1	1.1	4	38	7	538	5	93	803	1610	2110	3.95	66
772	Na200	Syenite, Hbl	Msw	19	50	17	3.8	0.9	0.8	2.1	0.2	0.8	6	110	20	1900	11	43	1650	1460	1950	3.06	129
773	Na210	Syenite cut by Cal network	Msw	51	64	23	8.0	1.2	1.0	0.6	< 0.1	< 0.5	8	109	53	3020	7	21	858	1670	5630	1.17	195
774	Na220	Syenite, Bt-(Ne?)	Msp	80	127	41	6.5	2.2	0.8	1.4	0.2	< 0.5	21	10	14	339	3	347	1250	1810	2350	3.97	333
775	Na510	Syenite ?	Msw	293	749	428	117.6	87.9	30.3	84.5	11.0	< 0.5	1280	6	332	45	< 2	4	47	3140	87400	0.07	2763
776	Na520	Beforsite, Cal bearing	Mcb2	101	253	67	9.0	2.2	2.3	4.2	0.6	12.4	41	13	12	685	6	< 3	12400	1330	302	9.73	575
777	Na600	Bre. rock cut by Cal veins	Msw	84	125	45	9.3	2.6	1.2	0.8	< 0.1	< 0.5	10	2	6	177	4	41	780	508	941	2.50	345
778	Na610	Beforsite cut by Ank network	Mcb2	55	68	27	7.7	5.4	2.0	5.4	0.6	7.8	151	8	25	149	3	4	10500	991	1470	5.79	244
779	Na620	Syenite, leuco-	Msw	59	91	31	5.8	1.8	1.1	1.6	0.2	< 0.5	17	10	9	257	10	382	1210	1210	510	2.80	252
780	Na700	Syenite, porphyritic	Msw	80	118	35	6.1	2.0	1.1	1.8	0.2	< 0.5	20	6	8	218	7	180	1120	1490	901	2.36	315
781	Na710	Green Hbl-Agt rock	Nsh	99	259	82	15.9	7.4	2.8	3.6	0.5	66.1	72	33	36	420	8	631	1380	366	2960	12.50	623
782	Na720	Syenite,leuco-,cut by Ank vien	Nsh	897	1594	405	88.2	31.2	10.7	6.2	0.5	1.8	202	38	119	822	7	8	3060	1410	3110	2.58	3862
783	Na800	Hbl-Agt rock cut by An network	Nsh	261	334	220	37.7	15.2	10.1	10.6	1.2	46.3	227	2	60	234	7	249	1590	344	5180	12.40	1236
784	Na820	Hbl-Agt rock cut by An network	Ngn	275	526	173	33.9	11.6	4.3	8.4	0.9	66.4	190	5	92	356	9	156	3450	410	4240	18.30	1345
785	Nc520	Beforsite, Cal bearing	Mcb2	494	947	392	87.3	16.0	3.4	3.3	0.4	6.1	56	5	86	1230	3	< 3	11266	10178	1886	7.30	2463
786	Nc600	Beforsite, Cal bearing	Mcb2	719	1297	702	113.4	27.6	10.1	7.2	0.8	12.3	151	16	147	1300	4	< 3	12614	11360	13208	7.41	3716
787	Nc610	Syenite	Msu	805	1434	870	71.5	13.8	3.6	3.2	0.3	3.5	79	17	74	1069	10	5	5252	1539	3060	3.79	4043
788	Nc620	Beforsite, Cal bearing Bt	Mcb2	965	1518	746	102.7	19.7	5.6	4.8	0.7	0.8	74	5	11	779	3	< 3	5856	14572	10214	7.41	4252
789	Nc700	Syenite	Msu	184	377	155	24.2	5.7	1.6	2.2	0.3	0.9	39	4	13	341	12	56	1308	1547	< 100	4.04	956
790	O 100	Syenite, Ne porphyritic	Msw	34	64	22	5.2	1.4	0.7	1.1	0.1	1.3	12	2	6	152	6	354	1530	1300	1340	4.48	169
791	O 200	Syenite, Ne porphyritic	Msw	82	129	44	12.6	1.7	2.9	1.7	0.3	< 0.5	22	8	26	271	16	415	1770	1210	1300	3.86	369
792	O 300	Syenite, Ne?-Bt-Aug	Msw	67	126	35	8.4	2.3	1.2	1.9	0.3	1.6	24	10	32	226	12	328	1650	1480	1990	4.76	317
793	O 400	Syenite, Bt, porphyritic	Msw	18	27	8	2.6	0.9	0.5	0.6	< 0.1	< 0.5	3	3	4	71	< 2	23	535	1460	447	1.77	77
794	O 500	Syenite, leuco-	Msw	95	155	72	20.3	7.6	3.1	1.3	0.2	1.6	103	1	9	63	< 2	41	837	338	4900	0.83	476
795	O 600	Syenite, leuco-	Msw	36	36	24	5.0	2.1	0.9	0.6	< 0.1	0.5	22	22	33	432	5	11	470	148	1900	0.43	140
796	O 610	Hbl-Agt rock cut by An network	Ngn	21	28	11	4.3	0.9	1.0	1.6	0.4	56.5	15	3	10	208	16	142	1440	133	983	17.94	97
797	O 620	Beforsite cut by Ank veins	Mcb2	72	132	55	15.7	7.0	1.5	2.3	0.3	2.9	21	3	17	27	< 2	< 3	2030	816	390	1.29	378
798	O 700	Gneiss, Qtz-Fd	Ngn	64	125	46	16.0	9.3	3.3	6.6	1.0	< 0.5	174	28	141	952	2	4	413	594	18240	0.43	388
799	O 800	Gneiss, Qtz-(Fd)	Ngn	63	103	24	5.1	1.6	1.0	1.5	0.3	6.8	19	2	21	37	< 2	30	634	232	649	3.81	259
800	P 100	Syenite, Ne	Msw	27	39	14	3.6	1.1	0.8	0.7	< 0.1	< 0.5	6	7	10	170	5	118	1000	932	601	2.42	116
801	P 200	Syenite,leuco-,cut by Cal veins	Msw	94	123	39	6.9	2.3	1.4	1.6	0.2	< 0.5	20	17	13	404	3	24	2530	3540	3080	2.08	348
802	P 400	Gneiss, cut by brown Cal veins	Ngn	111	183	36	7.2	2.2	1.2	1.6	0.2	5.7	20	5	28	57	2	70	1200	434	1330	4.41	437
803	P 600	Gneiss, Qtz-Fd,cut by Cal veins	Ngn	30	44	12	3.0	1.0	0.8	1.1	0.2	4.9	12	7	25	19	< 2	654	472	296	698	2.30	123
804	P 800	Gneiss, Bt-Qtz-Fd	Ngn	24	43	13	3.7	1.1	0.8	1.8	0.3	5.7	17	4	20	8	< 2	12	501	123	465	1.87	120
805	T 1A	Beforsite, Ank	Mcd	3933	7912	2905	324.8	57.8	10.3	2.7	0.3	15.3	40	< 1	101	14	73	4	37700	12900	519	8.19	18892
806	T 2A	Sovite	Mcs	218	315	144	29.3	4.1	5.7	4.8	0.5	2.2	49	7	8	2	< 2	698	1880	3890	200	2.33	959
807	T 4A	Beforsite, Ank	Mcb1	75	97	42	8.9	3.0	1.4	1.2	0.2	5.7	10	< 1	13	2	< 2	< 3	7920	5310	215	3.50	300
808	T 5A	Beforsite, Ank	Mcb1	100	116	52	9.9	0.5	1.9	0.9	0.2	8.1	14	6	9	7	< 2	< 3	6140	5470	156	2.78	365
809	T 6A	Gneiss, Qtz-Fd, fenitised	Ngn	100	143	40	11.8	2.2	2.5	2.5	0.3	15.6	8	3	5	6	< 2	494	1610	160	1690	7.67	402
810	T 7A	Syenite, Ne, porphyritic	Msp	262	467	184	39.4	2.7	2.4	0.9	< 0.1	0.8	12	56	36	1290	< 2	10	1290	1700	567	0.90	1215

B-3 Geochemical Analyses of the Orange Area (19)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
811	T 8A	Beforsite, Ank	Mcd	3790	5230	1810	186.0	29.4	9.9	10.0	1.3	9.6	119	1	16	5	4	6	12800	12000	4830	4.72	13761
812	T 9A	Sovite, Hbl	Mcs	189	267	117	21.5	6.0	2.2	3.2	0.5	1.6	51	3	14	4	< 2	708	1260	6140	< 100	0.85	783
813	T 10A	Gneiss, Qtz-Fd, fenitised	Ngn	60	111	54	7.5	1.5	1.5	2.3	0.4	3.0	18	7	117	2	< 2	55	258	212	258	0.56	316
814	T 11A	Syenite	Msu	22	41	12	3.0	0.9	0.6	0.6	< 0.1	0.8	1	4	5	48	< 2	291	544	295	334	2.01	107
815	T 12A	Gneiss, Qtz-Fd, fenitised	Ngn	32	69	21	4.5	1.3	0.8	0.8	< 0.1	2.3	4	1	4	24	< 2	70	372	61	383	1.56	170
816	T 13A	Sovite-beforsite	Mcs	346	552	219	38.7	13.5	3.4	5.0	0.6	2.2	111	3	18	462	3	< 3	3120	7340	7770	0.72	1509
	MJNO−1																						
817	1- 0	Beforsite, weathered	Mcbl	42	79	22	5.2	0.9	0.7	0.9	0.1	7.4	9	4	3	56	< 2	< 3	9188	8360	< 100	5.71	196
818	1- 5	Beforsite, weathered	Mcbl	142	228	66	8.4	1.2	1.6	0.7	0.1	6.4	8	5	9	167	4	< 3	8560	8710	< 100	7.83	568
819	1- 10	Beforsite	Mcbl	55	91	28	4.9	0.8	0.8	0.6	0.1	5.5	8	28	6	269	8	4	8534	10008	625	4.85	233
820	1- 15	Beforsite	Mcbl	10930	10023	1556	270.1	39.7	7.4	1.0	0.1	< 0.5	41	14	123	955	18	< 3	8500	10194	24240	5.41	27662
821	1- 20	Beforsite	Mcbl	79	108	35	3.1	2.0	0.6	0.5	0.1	4.7	7	7	7	331	9	3	9636	11458	6070	5.39	289
822	1- 25	Beforsite	Mcbl	79	165	31	2.0	1.5	0.5	0.4	< 0.1	2.6	4	15	6	872	18	< 3	5918	7526	100	6.58	349
823	1- 30	Beforsite	Mcbl	36	110	37	4.9	1.6	0.7	0.5	< 0.1	4.7	7	3	11	149	7	< 3	8546	11780	2406	4.95	246
824	1- 35	Beforsite, weathered	Mcbl	150	292	71	7.8	2.2	1.0	1.2	0.2	5.1	11	6	13	132	5	33	7158	1783	< 100	4.69	660
825	1- 40	Beforsite	Mcbl	1020	1617	840	110.6	17.1	5.1	2.0	0.2	12.7	32	10	124	199	8	31	9778	3062	4364	8.58	4553
826	1- 45	Beforsite	Mcbl	51	118	42	5.0	1.4	0.7	0.7	0.1	8.9	8	2	10	31	< 2	< 3	10296	1771	< 100	5.48	281
827	1- 50	Beforsite	Mcbl	987	1312	366	51.3	11.0	2.6	0.9	0.1	3.6	16	10	53	850	15	12	5276	9282	17520	10.20	3380
828	1- 55	Arkose, Bre. & carbonated	Nsh	1561	1862	682	103.7	25.1	9.2	13.4	1.9	11.2	188	24	155	1617	87	60	10004	4682	16386	10.52	5377
829	1- 60	Arkose, Bre., cut by beforsite	Nsh	4105	4485	1222	155.3	32.4	11.6	16.1	2.2	10.1	187	31	89	822	30	85	8904	5280	17242	10.62	12428
830	1- 65	Arkose, Bre. & carbonated	Nsh	598	1019	401	80.3	23.5	11.4	28.0	3.9	22.4	314	42	260	739	31	303	2840	4026	43780	10.08	2874
831	1- 70	Arkose, Bre. & carbonated	Nsh	1309	2341	1047	271.8	80.3	37.3	36.5	4.3	10.0	710	24	657	344	13	44	1090	3414	67040	5.93	6882
832	1- 75	Arkose, Bre. & carbonated	Nsh	125	217	70	9.6	3.3	1.5	0.9	0.1	0.7	15	14	14	163	11	37	191	4230	5412	2.89	546
833	1- 80	Arkose, Bre. & carbonated	Nsh	143	266	108	21.8	5.2	2.4	2.5	0.3	15.2	30	12	10	118	6	221	468	260	6606	6.12	715
834	1-110	Syenite, carbonated	Msu	188	346	156	30.0	7.5	3.7	1.9	0.2	4.7	38	100	41	627	58	127	1242	411	11612	11.84	956
835	1-115	Syenite, carbonated	Msu	693	1328	429	118.2	30.6	12.6	8.0	1.0	1.7	171	88	79	576	33	233	836	2864	66440	9.31	3402
836	1-117	Syenite, carbonated	Msu	445	923	313	81.4	21.4	10.2	4.4	0.5	1.3	97	128	45	696	48	141	1023	2558	56520	11.17	2349
837	1-120	Syenite, carbonated	Msu	261	464	165	43.8	12.0	6.1	8.2	1.0	4.8	110	45	73	325	27	14	4704	4524	15464	2.25	1278
838	1-122	Syenite, carbonated	Msu	524	900	339	76.5	19.7	5.4	5.3	0.7	2.5	98	15	27	611	69	498	2471	3626	25700	8.09	2394
839	1-125	Syenite, carbonated	Msu	526	948	306	67.3	16.0	7.7	4.0	0.5	3.1	74	22	56	433	47	70	5476	4528	16688	2.27	2411
840	1-130	Syenite, carbonated	Msu	810	1250	346	133.1	34.5	9.9	6.7	0.8	5.9	155	54	52	1199	65	414	456	2366	54740	4.82	3318
841	1-132	Syenite, carbonated	Msu	331	669	496	52.7	15.2	4.3	5.4	0.7	2.4	88	133	29	532	42	359	889	1840	41680	11.44	2038
842	1-135	Syenite, carbonated	Msu	995	1882	692	185.1	46.9	15.8	10.5	1.2	0.7	190	175	87	624	35	125	1705	3780	77380	10.61	4953
843	1-137	Syenite, carbonated	Msu	222	340	156	26.2	7.9	3.3	5.4	0.7	0.7	73	21	5	164	10	104	4064	6998	7778	3.40	995
844	1-140	Syenite, carbonated	Msu	267	483	170	35.9	10.0	4.5	7.2	1.0	1.1	105	81	51	1545	98	402	1940	3060	30500	5.27	1280
845	1-145	Syenite, carbonated	Msu	102	206	74	14.7	4.0	1.5	1.6	0.2	0.5	26	8	6	363	32	207	1115	2358	6684	3.21	522
846	1-147	Syenite, carbonated	Msu	344	784	272	51.8	13.5	4.3	5.4	0.7	0.5	90	14	30	278	31	42	3060	3886	20320	4.35	1895
847	1-150	Syenite, carbonated	Msu	962	1316	367	65.6	14.7	5.4	6.2	0.8	0.5	96	13	30	189	13	643	3558	2856	12380	3.74	3438
	MJNO−2																						
848	2- 0	Beforsite, An	Mcbl	229	360	108	19.6	4.1	1.8	0.7	0.1	5.9	15	3	17	103	5	10	8300	6414	2356	4.17	912
849	2- 5	Beforsite, An	Mcbl	522	780	238	38.3	10.2	2.2	1.7	0.2	7.3	35	3	26	279	6	16	7658	5778	15006	5.68	1990
850	2- 10	Beforsite, An	Mcbl	566	943	230	29.7	6.3	2.1	0.7	0.1	5.8	14	2	32	260	5	8	8190	7586	< 100	4.60	2206
851	2- 15	Beforsite, An	Mcbl	60	106	32	5.9	1.6	0.9	1.0	0.1	4.9	13	3	15	1312	4	6	7216	7740	5124	3.92	268
852	2- 17	Beforsite, An	Mcbl	86	173	48	7.0	1.8	0.9	0.7	0.1	5.4	9	2	14	345	< 2	10	7730	6672	2908	4.58	403
853	2- 20	Beforsite, An	Mcbl	156	275	80	15.6	4.0	1.4	0.7	0.1	6.3	9	< 1	17	21	2	6	8146	6348	5934	3.91	674

B-3 Geochemical Analyses of the Orange Area (20)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
854	2- 22	Beforsite, An	Mcbl	131	264	64	9.7	2.9	0.9	0.7	0.1	5.2	11	1	53	310	3	9	8175	7130	2780	4.19	594
855	2- 25	Beforsite, An	Mcbl	263	567	132	16.9	3.6	1.5	1.3	0.2	5.6	17	6	29	1689	11	16	10970	6616	5254	7.23	1233
856	2- 27	Beforsite, An	Mcbl	172	270	82	17.9	4.6	1.5	1.8	0.2	8.9	28	17	52	1901	24	20	11222	6686	23360	5.43	700
857	2- 30	Beforsite, An	Mcbl	133	179	65	11.3	4.5	1.4	1.8	0.2	8.9	27	3	18	477	8	9	11352	7032	25660	6.06	509
858	2- 32	Beforsite, weathered	Mcbl	184	293	36	4.4	1.0	0.4	0.8	0.1	3.6	6	7	16	992	21	17	5762	3606	4010	6.62	637
859	2- 35	Beforsite, weathered	Mcbl	285	358	82	12.0	1.9	1.0	1.0	0.1	3.9	9	3	6	173	4	9	4616	4242	10918	5.79	918
860	2- 37	Beforsite, weathered	Mcbl	225	311	88	12.3	2.0	1.4	1.0	< 0.1	3.9	7	2	6	297	8	7	8180	7332	3952	4.40	804
861	2- 40	Beforsite, weathered	Mcbl	172	414	70	8.8	1.1	0.8	0.5	0.1	2.4	7	3	8	368	10	14	4994	3284	1935	5.53	827
862	2- 42	Beforsite, weathered	Mcbl	174	237	56	11.6	2.4	1.5	2.2	0.3	7.6	7	4	20	371	7	25	8516	8108	20180	5.74	615
863	2- 45	Beforsite, weathered	Mcbl	158	255	92	18.4	3.8	0.9	0.8	0.1	4.3	11	4	31	697	15	21	6324	4186	5244	5.27	667
864	2- 47	Beforsite, weathered	Mcbl	168	219	54	8.0	1.4	1.1	0.7	0.1	4.8	9	9	12	1538	19	23	14984	5432	8646	5.14	566
865	2- 50	Beforsite, weathered	Mcbl	215	334	70	10.9	1.8	1.2	0.8	0.1	3.7	10	3	10	234	6	41	6304	5050	4448	4.93	790
866	2- 55	Beforsite, weathered	Mcbl	275	349	104	16.0	4.7	1.3	1.3	0.2	7.5	19	2	40	244	5	29	10026	5810	2472	6.05	940
867	2- 60	Beforsite, weathered	Mcbl	168	223	66	9.7	2.0	1.2	1.6	0.2	3.8	19	3	7	114	2	54	1499	4630	3084	4.18	596
868	2- 65	Beforsite, weathered	Mcbl	23	35	24	5.8	0.6	1.4	2.7	0.4	4.7	17	17	1	247	16	848	1488	788	< 100	18.81	135
869	2- 67	Beforsite, weathered	Mcbl	103	190	48	7.3	1.3	1.2	1.7	0.2	5.7	13	12	32	432	13	519	4525	3150	102	14.85	451
870	2- 70	Beforsite, weathered	Mcbl	299	517	139	25.9	6.2	1.8	0.8	0.1	8.6	16	2	121	791	6	13	8864	5872	1478	5.78	1240
871	2- 72	Beforsite, An	Mcbl	108	189	51	12.2	3.5	1.5	1.8	0.3	7.2	23	17	55	3957	51	33	8022	7284	17070	4.78	474
872	2- 75	Beforsite, An	Mcbl	225	283	76	10.9	2.4	1.0	0.9	0.1	6.4	14	7	18	935	19	11	7528	7314	7030	5.02	747
873	2- 77	Beforsite, fractured	Mcbl	107	210	48	7.6	1.6	1.0	1.4	0.2	6.7	16	5	11	1657	4	21	7596	6610	4190	4.03	477
874	2- 80	Beforsite, fractured	Mcbl	360	494	135	19.5	4.2	1.8	1.9	0.2	4.6	22	8	20	535	14	157	8762	2838	8316	8.18	1272
875	2- 95	Beforsite, fractured	Mcbl	206	302	74	10.1	2.4	0.9	1.2	0.2	5.1	17	6	34	2256	14	34	5984	4714	8518	5.05	745
876	2-109	Beforsite, fractured	Mcbl	185	466	69	8.7	2.4	1.1	0.5	< 0.1	3.3	9	3	3	805	11	15	5020	3666	12580	5.10	909
877	2-122	Beforsite, fractured	Mcbl	76	113	32	4.3	1.2	0.6	0.6	< 0.1	2.1	6	4	4	616	13	26	2888	1370	412	5.94	288
878	2-135	Beforsite, fractured	Mcbl	58	83	26	4.3	1.0	0.6	0.6	< 0.1	8.0	7	< 1	3	60	2	10	9560	8202	2798	3.29	222
	MJNO−3																						
879	3- 0	Beforsite, weathered	Mcbl	93	142	52	8.4	2.1	0.6	0.5	< 0.1	9.0	8	< 1	3	13	< 2	< 3	6796	9050	< 100	2.71	377
880	3- 5	Beforsite, An	Mcbl	233	410	142	20.8	4.1	2.0	1.0	0.1	7.7	14	3	53	147	7	13	10756	4420	< 100	8.42	1029
881	3- 10	Beforsite, sulfide rich	Mcbl	71	115	45	9.8	1.7	1.0	0.6	< 0.1	7.8	7	6	8	799	< 2	5	7686	7514	< 100	4.92	315
882	3- 15	Beforsite, sulfide rich	Mcbl	100	166	68	11.7	2.3	1.2	0.7	< 0.1	8.7	9	1	7	12	< 2	4	8302	7774	< 100	3.61	448
883	3- 20	Beforsite, sulfide rich	Mcbl	128	200	90	16.4	3.3	1.1	0.6	< 0.1	7.7	13	< 1	14	3	< 2	3	6320	12022	< 100	2.38	559
884	3- 25	Beforsite, weathered	Mcbl	157	223	88	10.0	3.2	1.0	0.6	< 0.1	5.9	8	< 1	18	4	< 2	6	8140	7770	< 100	4.71	609
885	3- 30	Beforsite, sulfide rich	Mcbl	74	134	50	6.9	1.7	0.7	0.5	< 0.1	10.3	6	< 1	8	21	3	6	8128	10056	< 100	5.13	341
886	3- 35	Beforsite, weathered	Mcbl	120	207	94	13.2	2.6	0.8	0.5	< 0.1	10.6	7	< 1	15	15	3	8	9554	5983	< 100	5.93	555
887	3- 40	Beforsite, weathered	Mcbl	100	147	51	8.5	1.6	0.9	0.5	< 0.1	9.7	6	14	8	1737	< 2	8	7292	17174	< 100	4.47	393
888	3- 45	Beforsite, weathered	Mcbl	101	191	59	8.1	1.8	0.8	0.5	< 0.1	8.0	7	14	13	3039	< 2	6	8160	10082	< 100	4.70	457
889	3- 50	Beforsite, sulfide rich	Mcbl	228	343	109	14.4	2.5	1.2	1.0	< 0.1	7.8	8	< 1	26	86	< 2	6	7498	10838	< 100	3.55	877
890	3- 55	Beforsite, sulfide rich	Mcbl	82	162	62	9.9	2.1	1.1	0.7	< 0.1	6.9	7	< 1	22	10	< 2	6	7134	9124	< 100	3.14	411
891	3- 60	Beforsite, weathered	Mcbl	91	154	71	9.8	2.1	1.0	0.8	< 0.1	5.1	6	3	6	1104	< 2	3	6410	8370	< 100	3.24	423
892	3- 65	Beforsite, weathered	Mcbl	68	142	46	6.2	1.4	0.8	0.9	< 0.1	6.4	6	9	13	2520	< 2	3	7500	8346	< 100	4.42	340
893	3- 70	Beforsite, sulfide rich	Mcbl	51	97	31	7.2	1.2	0.7	0.5	< 0.1	5.4	5	5	5	919	< 2	4	6298	6834	< 100	3.97	242
894	3- 75	Beforsite, sulfide rich	Mcbl	57	122	37	4.9	1.2	0.5	0.4	< 0.1	7.9	5	8	9	945	2	3	8089	8816	< 100	6.16	282
895	3- 80	Beforsite, sulfide rich	Mcbl	78	181	49	8.9	1.5	0.7	0.4	< 0.1	5.2	6	2	7	533	< 2	8	6403	8050	< 100	3.38	404
896	3- 85	Beforsite, weathered	Mcbl	48	105	33	5.6	1.0	0.5	0.4	< 0.1	4.4	5	7	5	1573	4	3	16630	6704	< 100	6.75	246
897	3- 90	Beforsite, weathered	Mcbl	69	162	50	7.2	1.4	0.7	0.4	< 0.1	4.3	6	1	4	449	< 2	11	5961	6814	< 100	4.35	369

B-3 Geochemical Analyses of the Orange Area (21)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
898	3- 95	Beforsite, weathered	Mcbl	408	741	307	41.5	7.2	3.0	0.7	< 0.1	4.1	13	6	216	680	6	7	8564	12522	< 100	11.18	1904
899	3-100	Beforsite, Fe oxide rich	Mcbl	117	204	61	7.9	1.9	0.7	0.6	< 0.1	6.9	8	2	5	28	2	14	8296	7996	< 100	5.51	494
900	3-105	Beforsite, Fe oxide rich	Mcbl	274	744	343	45.3	7.6	1.6	0.5	< 0.1	6.6	10	3	94	1266	< 2	8	6122	7310	< 100	3.95	1789
901	3-110	Beforsite, An	Mcbl	48	95	30	4.6	1.0	0.6	0.5	< 0.1	6.0	6	3	3	1416	< 2	6	7964	7484	< 100	4.36	230
902	3-115	Beforsite, weathered	Mcbl	535	807	187	20.3	3.4	1.0	0.6	< 0.1	7.7	9	< 1	99	53	< 2	< 3	6980	11596	217	3.31	1916
903	3-120	Beforsite, weathered	Mcbl	43	114	30	5.2	1.0	0.7	0.6	< 0.1	6.1	6	3	2	716	< 2	6	7828	6682	< 100	4.41	250
904	3-125	Beforsite, sulfide rich	Mcbl	475	806	255	34.7	6.9	2.0	0.5	< 0.1	5.6	12	6	51	370	6	< 3	7715	5984	< 100	12.99	1972
905	3-130	Beforsite, sulfide rich	Mcbl	90	187	59	9.3	2.1	1.0	0.4	< 0.1	5.8	7	1	5	70	< 2	< 3	5511	6578	< 100	2.79	443
906	3-135	Beforsite, sulfide rich	Mcbl	198	326	55	7.7	1.9	0.9	0.5	< 0.1	5.9	7	1	6	162	< 2	< 3	5456	6870	< 100	3.06	730
907	3-140	Beforsite, sulfide rich	Mcbl	120	276	74	10.2	2.2	0.8	0.6	< 0.1	6.5	8	2	21	780	< 2	< 3	6154	6706	< 100	3.07	608
908	3-145	Beforsite, sulfide rich	Mcbl	58	115	31	6.6	1.2	0.8	0.4	< 0.1	4.9	6	3	5	369	< 2	< 3	6330	6154	< 100	4.93	272
909	3-150	Beforsite, sulfide rich	Mcbl	119	236	71	11.3	2.3	0.9	0.6	< 0.1	7.3	9	< 1	12	292	< 2	< 3	5895	7415	< 100	2.73	557
	MJNO−4																						
910	4- 0	Beforsite, weathered	Mcbl	46	107	28	5.4	0.8	0.7	0.8	< 0.1	4.4	5	< 1	2	33	< 2	< 3	5490	5812	< 100	2.74	243
911	4- 5	Beforsite, weathered	Mcbl	38	74	28	4.7	0.9	0.7	0.4	< 0.1	4.5	5	3	15	1574	13	4	6274	5460	< 100	3.91	190
912	4- 10	Beforsite, weathered	Mcbl	46	84	30	3.7	0.8	0.6	0.5	< 0.1	4.4	6	1	7	835	< 2	< 3	6992	5726	< 100	3.01	213
913	4- 15	Beforsite, sulfide rich	Mcbl	98	201	75	17.6	4.2	1.1	0.5	< 0.1	5.7	14	2	49	2831	11	14	5855	6318	6564	3.07	507
914	4- 20	Beforsite, sulfide rich	Mcbl	30	62	26	4.5	1.0	0.7	0.6	< 0.1	9.3	5	11	140	7391	113	23	4559	4956	10026	5.42	164
915	4- 25	Beforsite, Fe oxide rich	Mcbl	29	64	22	5.2	1.0	0.7	0.4	< 0.1	14.8	5	7	74	4598	94	8	4349	4756	6500	8.82	160
916	4- 30	Beforsite, Fe oxide rich	Mcbl	25	72	17	4.8	1.0	0.7	0.4	< 0.1	5.2	5	14	114	6098	103	44	5973	4602	< 100	5.18	158
917	4- 35	Beforsite, sulfide rich	Mcbl	99	178	41	6.9	1.5	0.7	0.5	< 0.1	6.2	7	13	12	5678	< 2	4	5716	5194	< 100	3.10	411
918	4- 40	Beforsite, Fe oxide rich	Mcbl	931	1384	277	53.3	10.0	1.2	0.7	< 0.1	6.3	15	< 1	71	116	< 2	< 3	6107	5212	< 100	3.34	3262
919	4- 45	Beforsite, weathered	Mcbl	373	544	116	14.4	2.5	1.3	0.8	< 0.1	6.8	10	5	10	1879	< 2	< 3	5528	5314	< 100	3.02	1302
920	4- 50	Beforsite, weathered	Mcbl	112	199	75	12.6	2.9	1.0	0.6	< 0.1	8.7	11	5	14	1037	2	< 3	5348	5834	< 100	2.81	512
921	4- 55	Beforsite, weathered	Mcbl	129	230	47	8.9	2.0	1.1	0.9	< 0.1	8.3	13	4	11	216	3	< 3	6800	3860	< 100	4.26	528
922	4- 60	Beforsite, weathered	Mcbl	116	201	46	8.1	2.1	1.1	0.5	< 0.1	5.8	9	12	14	6177	< 2	< 3	5952	5392	< 100	3.02	473
923	4- 65	Beforsite	Mcbl	132	230	55	11.3	2.9	0.7	0.8	< 0.1	9.9	11	< 1	15	36	< 2	< 3	6746	4160	< 100	3.45	542
924	4- 70	Beforsite	Mcbl	105	202	49	7.1	2.1	0.7	0.7	< 0.1	7.5	10	2	11	300	< 2	< 3	5616	6292	< 100	2.86	461
925	4- 75	Beforsite, weathered	Mcbl	146	268	55	11.1	2.5	1.2	0.5	< 0.1	6.0	9	< 1	11	5	< 2	< 3	6026	7220	< 100	3.00	608
926	4- 80	Beforsite	Mcbl	86	160	34	7.6	1.7	1.0	0.6	< 0.1	7.2	10	12	12	1570	< 2	< 3	5812	5630	< 100	2.73	369
927	4- 85	Beforsite	Mcbl	562	764	142	28.8	5.7	1.8	1.1	0.2	6.4	16	4	43	568	< 2	< 3	6173	5112	< 100	3.28	1858
928	4- 90	Beforsite	Mcbl	190	324	64	11.4	2.5	1.2	1.0	< 0.1	6.5	13	11	24	3298	< 2	< 3	5745	5644	< 100	3.00	743
929	4- 95	Beforsite, weathered	Mcbl	387	580	110	21.3	5.3	1.8	1.0	0.1	6.6	16	6	52	1965	< 2	< 3	6200	4484	< 100	3.57	1373
930	4-100	Beforsite, weathered	Mcbl	493	752	219	30.6	6.6	1.6	1.0	0.1	6.5	15	2	52	434	< 2	< 3	5822	5638	< 100	3.13	1870
931	4-105	Beforsite	Mcbl	80	165	64	8.5	1.7	0.8	0.8	< 0.1	5.3	11	28	13	7358	< 2	3	5298	6010	< 100	2.65	409
932	4-110	Beforsite, weathered	Mcbl	154	256	92	10.6	2.5	0.9	1.0	0.1	7.3	13	2	14	777	< 2	< 3	6058	5978	< 100	4.15	652
933	4-115	Beforsite, weathered	Mcbl	214	351	102	15.4	3.5	1.5	0.9	< 0.1	7.5	13	< 1	31	17	< 2	< 3	5995	7432	< 100	2.87	866
934	4-120	Beforsite, weathered	Mcbl	276	382	130	10.7	2.3	0.9	0.7	< 0.1	6.5	11	2	14	414	< 2	< 3	6768	4996	< 100	3.72	999
935	4-125	Beforsite	Mcbl	49	87	34	7.0	1.2	0.7	0.6	< 0.1	5.9	9	5	4	1121	< 2	< 3	6400	5634	< 100	3.14	232
936	4-130	Beforsite, weathered	Mcbl	56	83	20	4.0	0.9	0.6	0.7	< 0.1	4.0	7	5	43	6324	< 2	13	5998	4930	< 100	6.53	211
937	4-135	Beforsite	Mcbl	81	145	46	6.6	1.1	1.1	0.6	< 0.1	5.6	7	< 1	3	126	< 2	< 3	5890	6234	< 100	2.93	360
938	4-140	Beforsite, weathered	Mcbl	25	45	18	5.4	0.7	0.7	0.5	< 0.1	4.9	6	< 1	1	225	< 2	< 3	6580	4934	< 100	4.39	127
939	4-145	Beforsite, sulfide rich	Mcbl	92	146	49	9.4	1.2	1.2	0.7	< 0.1	7.3	8	< 1	4	8	< 2	< 3	6243	5556	< 100	2.92	383
940	4-150	Beforsite, sulfide rich	Mcbl	62	142	42	4.9	1.3	0.7	0.5	< 0.1	5.3	7	5	11	2577	< 2	3	6242	5890	< 100	3.49	322
	MJNO−5																						

B-3 Geochemical Analyses of the Orange Area (22)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
941	5- 0	Beforsite, weathered	Mcb1	177	292	93	18.5	3.6	1.5	0.7	0.1	6.3	11	4	9	175	4	< 3	7414	5418	100	6.91	742
942	5- 5	Beforsite, weathered	Mcb1	321	496	101	16.9	3.5	1.3	0.9	< 0.1	3.8	9	7	13	1347	9	9	5764	4314	2572	5.14	1167
943	5- 10	Beforsite, weathered	Mcb1	232	342	96	15.1	3.3	1.2	0.5	< 0.1	5.1	7	2	15	403	8	< 3	8584	6274	< 100	6.40	862
944	5- 15	Beforsite, weathered	Mcb1	291	397	72	12.8	2.6	0.9	1.0	< 0.1	3.7	8	1	28	21	< 2	< 3	6706	5172	< 100	3.28	960
945	5- 20	Beforsite, weathered	Mcb1	184	290	106	14.5	2.3	0.7	0.8	< 0.1	3.7	6	5	13	1180	4	< 3	6535	5358	< 100	4.36	750
946	5- 25	Beforsite, Phl rich	Mcb1	151	231	94	10.7	2.6	1.3	0.9	< 0.1	3.7	6	3	13	903	4	4	6519	5302	407	3.01	624
947	5- 30	Beforsite, Phl rich	Mcb1	102	166	50	11.4	2.2	0.7	0.4	0.1	3.9	5	1	5	182	3	< 3	7298	5784	130	4.45	419
948	5- 34	Beforsite, Phl rich	Mcb1	205	359	110	15.3	4.3	1.5	0.6	< 0.1	3.6	9	< 1	6	158	2	< 3	7743	6390	4504	2.94	876
949	5- 40	Beforsite, Phl rich	Mcb1	166	286	76	15.2	3.0	1.1	0.7	< 0.1	3.9	10	7	20	632	7	10	7147	5618	4480	3.56	689
950	5- 45	Beforsite, Phl rich	Mcb1	163	287	76	15.6	2.8	1.2	0.4	< 0.1	4.5	6	4	21	813	7	3	7297	4500	1119	5.12	686
951	5- 47	Beforsite, Phl rich	Mcb1	207	403	83	15.7	3.2	1.5	0.5	< 0.1	3.5	7	19	21	1009	11	6	5744	4232	2180	4.65	893
952	5- 50	Beforsite, Phl rich	Mcb1	143	280	64	14.5	2.5	1.0	0.4	< 0.1	4.2	6	8	33	3023	6	7	5408	4568	1688	4.77	633
953	5- 55	Beforsite, Phl rich	Mcb1	139	222	64	14.8	2.9	1.2	0.5	< 0.1	4.8	10	10	8	714	13	13	3056	4990	5860	5.85	561
954	5- 60	Beforsite, Phl rich	Mcb1	132	216	75	12.1	2.2	1.0	0.4	< 0.1	3.7	6	60	17	1594	14	17	5994	4234	1330	5.06	554
955	5- 65	Beforsite, Fe oxide rich	Mcb1	77	191	72	8.9	1.7	0.7	0.4	< 0.1	4.7	5	26	39	3590	8	9	6808	4734	< 100	4.28	446
956	5- 67	Beforsite, Fe oxide rich	Mcb1	45	87	34	6.6	1.2	0.7	0.4	< 0.1	4.9	5	2	4	482	< 2	< 3	5552	5382	< 100	2.34	226
957	5- 70	Beforsite, Fe oxide rich	Mcb1	64	103	38	7.3	1.0	0.7	0.4	< 0.1	5.3	4	14	20	1579	12	7	5420	3900	< 100	4.69	274
958	5- 75	Beforsite, Fe oxide rich	Mcb1	80	129	46	9.7	1.3	0.8	0.4	< 0.1	4.0	5	< 1	1	34	< 2	< 3	6303	5556	< 100	2.94	340
959	5- 80	Beforsite, Fe oxide rich	Mcb1	84	130	40	6.7	1.2	0.6	0.4	< 0.1	3.8	5	3	9	459	2	< 3	3626	5010	< 100	4.31	331
960	5- 85	Beforsite, sulfide rich	Mcb1	77	118	60	12.5	2.3	1.0	0.5	< 0.1	4.6	8	7	18	603	7	9	5944	5342	3076	3.08	350
961	5- 90	Beforsite, sulfide rich	Mcb1	164	185	68	13.1	2.4	1.0	0.5	< 0.1	4.3	6	< 1	9	91	< 2	< 3	6958	5694	< 100	4.44	546
962	5- 92	Beforsite, sulfide rich	Mcb1	92	117	46	8.3	1.5	0.8	0.4	< 0.1	4.1	5	< 1	6	181	< 2	< 3	6683	6712	< 100	4.15	338
963	5- 95	Beforsite, sulfide rich	Mcb1	79	97	36	7.4	1.4	0.8	0.4	< 0.1	4.4	5	< 1	16	25	< 2	< 3	7372	6916	< 100	3.78	283
964	5-100	Beforsite, sulfide rich	Mcb1	96	130	64	9.8	1.9	0.7	0.6	< 0.1	6.8	8	18	25	4611	12	4	5856	5620	4786	4.11	385
965	5-105	Beforsite, sulfide rich	Mcb1	318	422	146	20.7	3.8	1.2	1.1	0.1	5.1	15	6	37	5756	4	< 3	5300	4750	1588	7.37	1140
	MJNO-6																						
966	6- 0	Beforsite, weathered	Mcb2	467	914	540	110.2	27.6	8.4	4.6	0.5	< 0.5	104	< 1	5	1278	< 2	< 3	3868	8076	45520	4.44	2698
967	6- 5	Beforsite, sulfide rich	Mcb2	926	1302	852	160.9	36.4	10.3	10.5	1.1	7.6	185	16	127	15090	< 2	< 3	2734	8062	40720	6.38	4259
968	6- 10	Beforsite, sulfide rich	Mcb2	212	359	180	43.5	10.5	2.9	2.5	0.3	1.0	46	< 1	10	1057	< 2	< 3	5998	8294	12532	2.90	1049
969	6- 15	Beforsite, sulfide rich	Mcb2	63	97	34	8.0	1.6	0.7	0.8	0.1	3.9	9	5	15	3511	< 2	< 3	6014	6386	< 100	4.13	263
970	6- 20	Beforsite, sulfide rich	Mcb2	66	88	32	5.1	0.8	0.8	0.8	< 0.1	7.4	7	11	8	4532	< 2	< 3	6318	5054	< 100	4.88	249
971	6- 25	Beforsite, sulfide rich	Mcb2	62	71	28	4.6	1.5	0.6	0.7	0.1	3.9	9	< 1	20	29	< 2	< 3	6730	7398	< 100	3.39	216
972	6- 30	Beforsite, sulfide rich	Mcb2	73	85	26	5.0	0.8	0.7	0.9	0.1	9.2	7	4	11	1094	< 2	< 3	6516	3968	< 100	4.87	244
973	6- 35	Beforsite, sulfide rich	Mcb2	52	60	26	4.6	1.0	0.7	0.7	0.1	4.5	8	4	17	2503	< 2	< 3	6188	7518	< 100	3.32	188
974	6- 40	Beforsite, sulfide rich	Mcb2	125	130	50	8.6	2.0	1.0	0.6	< 0.1	4.5	9	4	44	1563	< 2	< 3	6636	7062	< 100	2.95	402
975	6- 45	Beforsite, Phl rich	Mcb2	177	200	76	13.4	2.4	0.6	0.6	< 0.1	< 0.5	6	4	28	502	4	< 3	1800	2522	5030	6.28	587
976	6- 50	Beforsite, Phl rich	Mcb2	59	76	32	8.2	2.2	0.9	0.9	0.1	1.9	19	2	96	582	< 2	< 3	6876	11502	4036	2.91	234
977	6- 55	Beforsite, sulfide rich	Mcb2	84	105	40	9.4	2.3	0.9	0.7	< 0.1	3.0	15	2	50	1055	< 2	< 3	7266	11596	12378	2.83	311
978	6- 60	Beforsite, sulfide rich	Mcb2	46	69	28	6.9	1.9	1.0	0.6	0.1	2.2	12	2	30	655	< 2	< 3	8284	8368	9606	3.14	202
979	6- 65	Beforsite, sulfide rich	Mcb2	65	110	50	13.4	2.8	1.0	0.7	0.1	3.3	12	4	53	1819	< 2	< 3	8034	7180	10424	4.36	315
980	6- 70	Beforsite, sulfide rich	Mcb2	407	622	240	45.9	14.6	4.0	0.9	0.1	5.0	26	6	330	1508	< 2	< 3	5258	5932	496	4.64	1694
981	6- 75	Beforsite, Phl rich	Mcb2	168	196	74	14.0	3.4	1.5	0.8	0.1	2.9	15	6	50	484	2	< 3	6738	9340	4238	3.12	582
982	6- 80	Beforsite	Mcb2	112	149	50	10.9	2.5	1.2	0.7	0.1	4.1	11	4	48	2645	< 2	< 3	7650	7908	1991	3.63	417
983	6- 85	Beforsite	Mcb2	166	265	56	10.1	2.4	0.8	0.7	< 0.1	3.9	15	1	43	102	< 2	< 3	7788	9226	5144	3.01	624
984	6- 90	Beforsite, sulfide rich	Mcb2	41	52	22	7.7	2.1	0.9	1.1	0.1	5.6	21	4	41	1297	< 2	< 3	7638	10098	21520	3.30	170

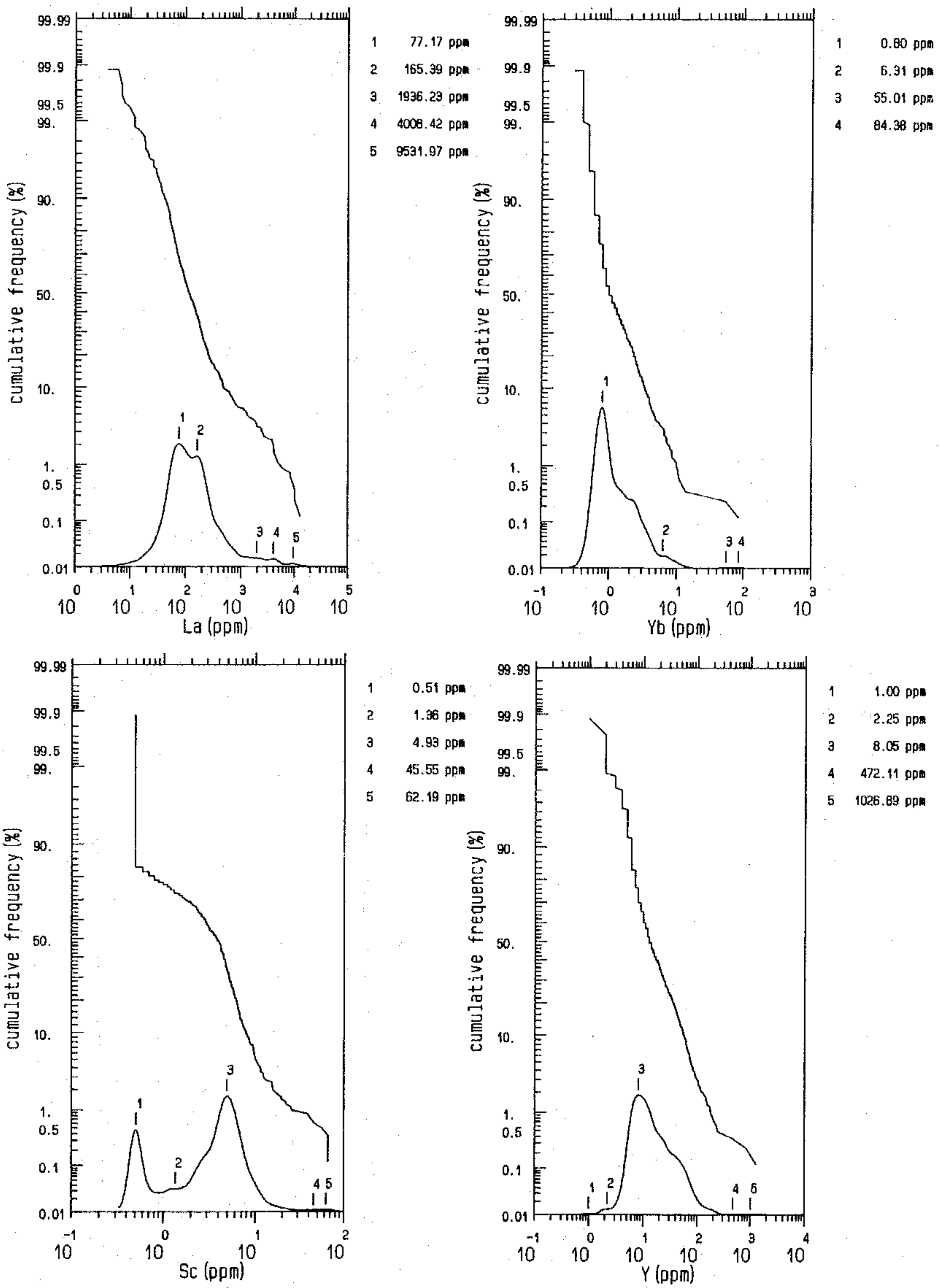
B-3 Geochemical Analyses of the Orange Area (23)

No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R2O3 ppm
985	6- 95	Beforsite, sulfide rich	Mcb2	190	220	80	15.9	3.4	1.5	3.2	0.4	9.0	31	1	7	1477	< 2	5	7182	9588	25600	3.31	657
986	6-100	Beforsite, sulfide rich	Mcb2	253	363	172	31.7	7.4	1.8	1.2	0.1	5.8	28	< 1	5	588	< 2	< 3	6948	9534	7014	2.16	1053
987	6-105	Beforsite, sulfide rich	Mcb2	174	299	146	38.2	9.8	2.4	1.9	0.2	7.0	36	< 1	4	892	< 2	< 3	6444	6462	11086	2.60	869
988	6-110	Beforsite, Ap rich	Mcb2	188	281	154	36.8	9.3	2.7	2.9	0.3	13.1	43	< 1	4	3622	< 2	3	6816	11540	6932	3.33	879
989	6-115	Beforsite, Ap rich	Mcb2	188	264	154	30.0	9.9	2.6	2.3	0.3	7.3	43	< 1	7	2360	< 2	< 3	6222	7312	12660	2.51	846
990	6-120	Beforsite, Ap rich	Mcb2	112	159	86	20.7	5.7	2.6	2.4	0.3	4.6	32	< 1	3	216	< 2	< 3	6470	7502	4056	2.07	518
991	6-125	Beforsite, Ap rich	Mcb2	307	499	228	61.7	15.9	5.1	6.2	0.7	9.0	89	< 1	3	3508	< 2	< 3	4516	9756	11490	2.33	1471
992	6-130	Beforsite, Ap rich	Mcb2	330	472	266	74.8	19.4	5.8	7.3	0.8	5.9	104	< 1	7	6388	< 2	< 3	3590	10600	15492	2.17	1549
993	6-135	Beforsite, Ap rich	Mcb2	139	206	144	32.0	14.4	4.6	4.5	0.4	3.1	73	1	10	10660	< 2	< 3	4440	8054	23700	3.65	744
994	6-142	Beforsite, Phl rich	Mcb2	368	744	325	63.2	16.5	8.7	7.4	1.0	1.8	111	< 1	8	163	< 2	< 3	6038	13392	3040	1.40	2023
995	6-145	Beforsite, Phl rich	Mcb2	218	444	188	36.4	8.7	5.0	3.6	0.5	1.0	54	4	3	639	< 2	< 3	3346	8678	1581	2.29	1188
996	6-150	Syenite	Msu	890	1425	482	74.2	15.2	7.2	6.0	0.8	1.6	73	1	10	4065	< 2	< 3	5572	13214	5064	2.40	3675
	MJNO-7																						
997	7- 0	Beforsite, weathered	Mcb2	179	474	221	50.5	12.3	5.5	2.6	0.3	0.6	51	2	30	5587	5	< 3	5274	5336	20640	2.06	1248
998	7- 5	Beforsite, Ap rich	Mcb2	249	505	218	43.5	9.9	4.5	3.6	0.4	3.4	59	1	44	773	< 2	4	10734	3480	6782	5.93	1346
999	7- 10	Beforsite, Ap rich	Mcb2	125	303	109	30.9	8.0	4.1	3.2	0.4	2.0	53	3	27	3566	< 2	23	7152	4186	6226	3.57	779
1000	7- 15	Beforsite, Ap rich	Mcb2	28	49	18	5.0	0.6	1.0	2.4	0.4	6.8	17	4	4	1015	4	4	15122	1243	< 100	7.79	144
1001	7- 20	Beforsite, Ap rich	Mcb2	79	177	56	8.3	1.7	0.6	1.2	0.2	6.5	10	53	94	52200	< 2	210	11330	2454	< 100	9.03	411
1002	7- 25	Dolerite	Kdd	140	271	68	11.2	2.5	1.2	1.8	0.3	5.3	14	3	15	1340	3	< 3	14184	1773	< 100	7.38	628
1003	7- 30	Beforsite	Mcb2	141	341	139	32.0	8.1	3.0	1.7	0.2	1.1	33	< 1	9	1558	< 2	< 3	6500	5528	11974	3.58	868
1004	7- 35	Beforsite, Fe oxide rich	Mcb2	88	198	57	11.5	2.9	1.1	0.5	0.1	1.2	11	< 1	3	325	< 2	< 3	7208	5828	3346	2.99	457
1005	7- 40	Beforsite, Fe oxide rich	Mcb2	107	231	64	16.0	3.3	1.5	0.7	0.2	0.9	14	< 1	7	101	< 2	< 3	7820	5856	4392	2.93	541
1006	7- 45	Beforsite, Fe oxide rich	Mcb2	73	166	56	13.1	3.1	1.3	0.8	0.2	0.9	14	< 1	1	144	< 2	< 3	7122	5834	3478	2.72	405
1007	7- 50	Beforsite, Ap rich	Mcb2	192	482	165	45.4	11.9	6.0	1.8	0.2	2.7	43	< 1	4	672	< 2	< 3	5338	5124	19272	2.41	1189
1008	7- 55	Beforsite, Ap rich	Mcb2	292	698	250	74.2	18.9	6.9	3.5	0.4	1.1	83	< 1	20	447	< 2	< 3	5614	6198	30720	2.26	1756
1009	7- 60	Beforsite, Ap rich	Mcb2	246	584	306	49.9	11.7	5.0	1.9	0.2	< 0.5	47	< 1	5	1262	< 2	< 3	5310	6188	23060	2.01	1565
1010	7- 65	Beforsite, Ap rich	Mcb2	201	459	224	43.1	10.7	4.0	1.7	0.2	4.4	41	< 1	4	1884	< 2	< 3	6196	5984	15084	3.23	1226
1011	7- 70	Beforsite, Ap rich	Mcb2	184	418	260	43.5	10.8	4.8	1.9	0.2	2.7	42	< 1	5	1223	< 2	< 3	6050	5720	16856	2.40	1213
1012	7- 75	Beforsite, Ap rich	Mcb2	303	639	372	72.0	17.9	7.1	2.5	0.3	0.8	62	< 1	8	4165	< 2	< 3	5688	6192	30640	2.54	1851
1013	7- 80	Beforsite, Ap rich	Mcb2	67	121	48	7.5	1.9	1.1	0.7	0.1	1.1	10	< 1	1	127	< 2	< 3	7522	6176	448	2.64	320
1014	7- 85	Beforsite, Ap rich	Mcb2	212	389	202	49.8	12.0	6.1	1.6	0.2	7.1	42	2	5	1985	< 2	7	4668	5186	20840	4.04	1153
1015	7- 90	Beforsite, Ap rich	Mcb2	148	371	152	35.6	9.0	4.8	1.6	0.2	2.0	34	< 1	2	146	< 2	< 3	6608	6532	14628	2.48	953
1016	7- 95	Beforsite, Ap rich	Mcb2	116	225	92	20.0	5.4	2.7	1.0	0.1	2.2	21	< 1	3	821	< 2	< 3	6942	4926	7036	3.18	605
1017	7-100	Beforsite, Ap rich	Mcb2	109	247	104	25.4	6.2	2.4	1.1	0.1	2.7	23	< 1	4	936	< 2	< 3	6544	4862	9252	2.82	646
1018	7-105	Beforsite, Ap rich	Mcb2	254	565	216	59.2	14.9	6.8	2.1	0.2	1.1	52	< 1	2	200	< 2	< 3	6358	6462	26560	2.52	1466
1019	7-110	Beforsite, Ap rich	Mcb2	47	87	30	6.3	1.9	0.9	0.6	0.1	0.7	10	< 1	1	18	< 2	< 3	7632	5914	1364	2.90	226
1020	7-115	Beforsite, Ap rich	Mcb2	204	445	168	47.9	11.4	6.2	1.8	0.2	1.0	42	< 1	2	82	< 2	< 3	6180	5646	19030	2.24	1166
1021	7-120	Beforsite, Ap rich	Mcb2	219	394	174	50.3	12.5	4.2	1.9	0.2	1.1	46	< 1	3	276	< 2	< 3	6492	5792	19086	2.91	1115
1022	7-125	Beforsite, Ap rich	Mcb2	188	375	146	42.8	10.7	4.2	1.7	0.2	0.6	39	1	7	1557	< 2	< 3	5498	5012	15140	3.96	1004
1023	7-130	Beforsite, Ap rich	Mcb2	247	486	190	56.6	13.4	4.9	2.0	0.2	1.3	50	< 1	2	701	< 2	< 3	6944	6594	22440	3.09	1300
1024	7-135	Beforsite, Ap rich	Mcb2	166	305	128	37.2	9.5	3.3	1.4	0.2	1.2	35	< 1	2	218	< 2	4	3192	4086	17102	4.00	848
1025	7-140	Beforsite, Ap rich	Mcb2	201	373	156	47.0	11.4	3.0	1.8	0.2	1.1	41	< 1	2	453	< 2	< 3	5706	6218	17576	3.16	1025
1026	7-145	Beforsite, Ap rich	Mcb2	122	203	84	24.1	6.1	2.6	1.1	0.1	2.2	22	< 1	1	95	< 2	< 3	6760	6554	9036	2.41	580
1027	7-150	Beforsite, Ap rich	Mcb2	208	405	156	47.1	11.0	2.7	3.2	0.4	2.7	42	< 1	2	1549	< 2	< 3	6038	7190	15360	2.81	1075
	MJNO-8																						

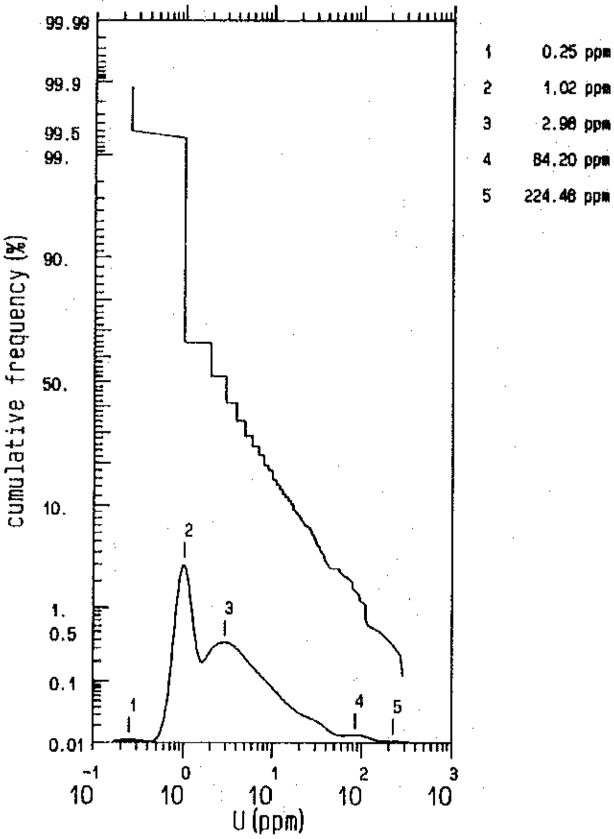
B-3 Geochemical Analyses of the Orange Area (24)

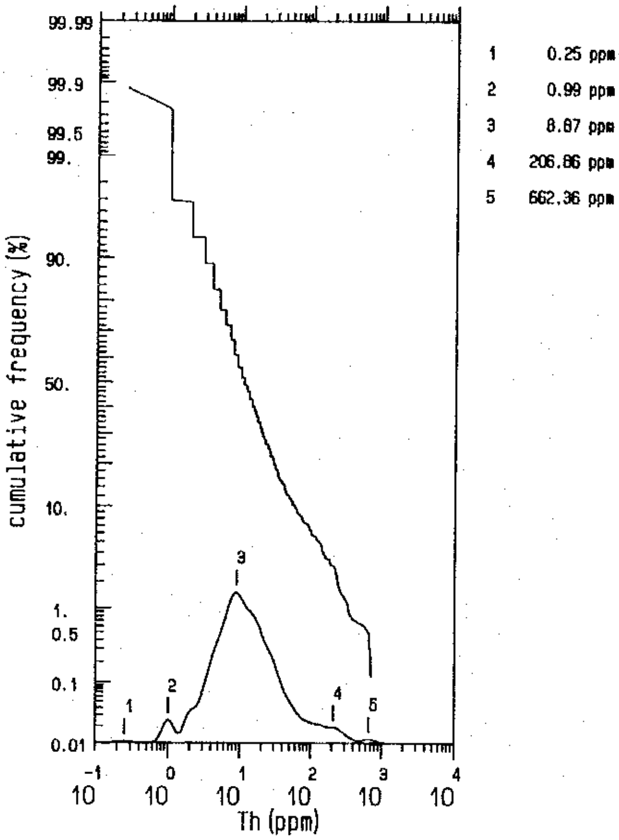
No.	Sample No.	Rock Name	Rock Code	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Sc ppm	Y ppm	U ppm	Th ppm	Nb ppm	Ta ppm	Zr ppm	Mn ppm	Sr ppm	P ppm	Fe %	T-R203 ppm
1028	8- 0	Beforsite, weathered	Mcb2	98	168	68	20.9	5.2	1.8	1.0	0.1	0.8	22	< 1	1	1134	< 2	< 3	7824	6538	8204	2.98	473
1029	8- 3	Beforsite, weathered	Mcb2	225	393	158	49.0	11.7	6.6	2.1	0.2	1.4	45	2	6	424	< 2	< 3	6212	6538	24200	4.68	1121
1030	8- 12	Beforsite	Mcb2	34	53	18	4.0	1.5	1.3	4.1	0.5	10.6	27	< 1	6	40	< 2	< 3	6852	1920	733	7.66	166
1031	8- 15	Beforsite	Mcb2	5	12	6	2.0	0.5	0.8	2.9	0.4	7.9	19	3	1	455	< 2	< 3	11044	1152	< 100	6.74	50
1032	8- 20	Slate, Bre. & carbonated	Nsh	34	54	18	4.6	2.0	0.7	1.7	0.3	3.1	22	2	9	74	< 2	14	10974	631	4130	4.22	154
1033	8- 25	Slate, Bre. & carbonated	Nsh	51	83	28	6.7	2.3	1.0	1.0	0.1	2.2	13	< 1	1	73	< 2	< 3	7416	6270	779	3.77	228
1034	8- 30	Beforsite, Phl rich	Mcb2	229	362	160	47.3	11.4	4.1	1.9	0.2	4.0	45	2	3	569	< 2	13	2014	4284	26980	5.03	1062
1035	8- 35	Beforsite, Phl rich	Mcb2	169	274	114	31.2	8.1	4.2	1.5	0.2	1.7	33	14	7	2135	5	31	7392	1502	17436	6.81	794
1036	8- 40	Beforsite, Phl rich	Mcb2	191	310	124	35.2	8.9	3.7	1.6	0.2	4.1	33	6	5	1245	2	26	2096	1652	18498	7.74	880
1037	8- 45	Beforsite, Phl rich	Mcb2	40	65	26	6.3	1.8	0.7	0.7	0.1	20.6	8	< 1	2	660	< 2	172	7048	3918	8652	5.51	184
1038	8- 50	Beforsite, Phl rich	Mcb2	47	77	32	6.9	2.6	1.0	0.8	0.1	26.5	10	< 1	1	61	< 2	183	1005	401	5174	7.15	221
1039	8- 55	Beforsite, Phl rich	Mcb2	73	126	52	12.0	3.8	1.0	0.7	0.1	19.3	16	< 1	2	65	< 2	273	1364	534	6892	7.98	346
1040	8- 61	Beforsite, Phl rich	Mcb2	264	465	208	54.1	16.8	5.5	2.7	0.3	14.4	65	3	6	3552	< 2	22	3024	3820	34280	4.85	1331
1041	8- 65	Beforsite, Ap rich	Mcb2	65	99	42	11.6	3.1	1.0	0.8	0.1	1.1	13	< 1	2	1010	< 2	3	8124	6242	5238	3.12	289
1042	8- 67	Beforsite, Ap rich	Mcb2	128	214	100	27.3	7.1	3.1	1.4	0.2	2.4	27	< 1	3	904	< 2	< 3	7300	6254	10170	2.72	635
1043	8- 70	Beforsite, Ap rich	Mcb2	204	408	206	46.1	11.0	3.7	2.0	0.3	5.4	44	< 1	6	3128	< 2	15	5596	14024	17220	3.70	1146
1044	8- 75	Beforsite, Ap rich	Mcb2	296	445	224	69.1	17.3	7.7	2.7	0.3	1.3	64	< 1	3	759	< 2	< 3	4992	5998	34880	2.33	1407
1045	8- 80	Beforsite, Ap rich	Mcb2	171	267	126	40.0	9.8	4.0	1.6	0.2	1.5	35	< 1	5	1137	< 2	< 3	5430	5364	12524	1.21	816
1046	8- 85	Beforsite, Ap rich	Mcb2	206	335	156	43.6	11.3	6.9	1.9	0.2	24.1	41	< 1	6	640	< 2	20	2794	3088	21380	4.28	1018
1047	8- 90	Beforsite, Ap rich	Mcb2	160	240	116	36.6	9.3	4.5	1.5	0.2	6.2	34	< 1	4	1641	< 2	17	5326	5260	19330	3.55	756
1048	8- 95	Beforsite, Ap rich	Mcb2	59	80	36	10.2	2.7	1.4	0.6	0.1	1.6	11	< 1	3	1783	< 2	4	6982	6068	4116	2.64	251
1049	8-100	Beforsite, Phl rich	Mcb2	183	282	136	43.1	10.9	2.2	1.8	0.2	0.8	40	< 1	2	84	< 2	< 3	6232	6330	17712	4.17	849
1050	8-	105		92	146	64	18.0	4.7	2.4	1.0	0.1	2.7	19	< 1	3	1542	< 2	4	7158	6330	8176	3.53	435
1051	8-	110		137	219	92	27.8	7.4	4.6	1.3	0.1	2.7	28	< 1	5	3873	< 2	5	6920	6142	8942	1.90	655
1052	8-	115		45	65	28	6.9	2.1	1.0	0.6	0.1	1.6	10	< 1	2	303	< 2	< 3	7974	6952	15644	2.76	196
1053	8-	120		145	170	74	15.8	4.2	1.2	0.9	0.1	0.9	14	< 1	3	52	< 2	< 3	8112	5860	1418	3.15	524
1054	8-	125		69	90	40	11.0	2.8	1.4	0.7	0.1	1.2	12	< 1	2	154	< 2	< 3	7522	6300	2418	2.90	283
1055	8-	130		165	242	112	24.4	9.0	2.3	1.6	0.2	1.4	33	< 1	3	444	< 2	< 3	6505	5954	14778	3.02	720
1056	8-	135		194	240	142	47.8	12.5	3.6	1.9	0.2	1.4	44	< 1	2	194	< 2	< 3	6618	6712	20220	2.10	843
1057	8-	137		91	129	72	23.6	5.7	3.2	1.1	0.1	2.9	23	< 1	2	618	< 2	8	7120	5536	10208	3.30	440
1058	8-	145		60	73	40	9.9	3.0	1.4	1.2	0.2	1.4	17	< 1	1	110	< 2	4	7374	4970	4408	2.94	252
1059	8-	150		186	312	124	36.6	9.1	3.6	1.8	0.2	2.0	34	< 1	3	1470	< 2	< 3	6720	5880	15536	3.04	879

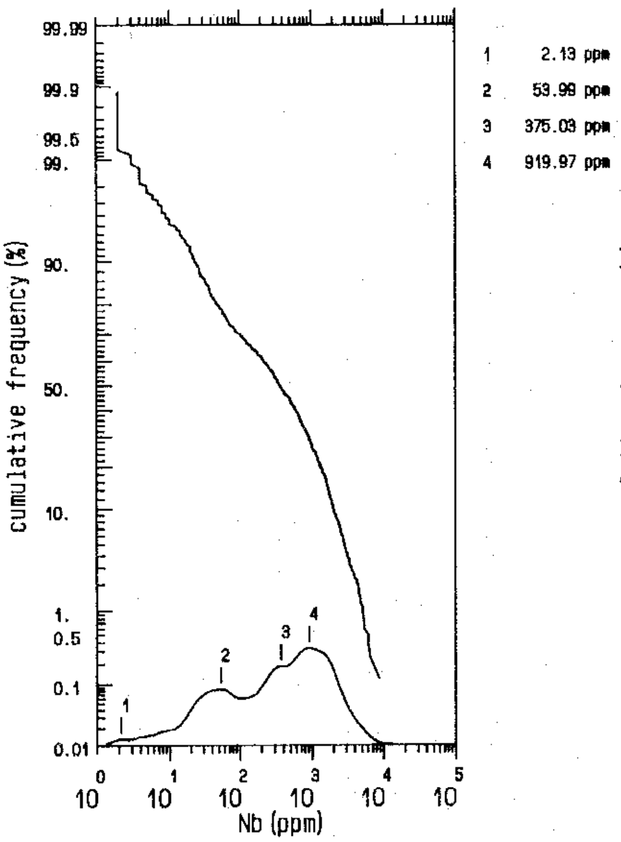
B–4 Scatter Diagrams for Geochemical Analyses of the Orange Area

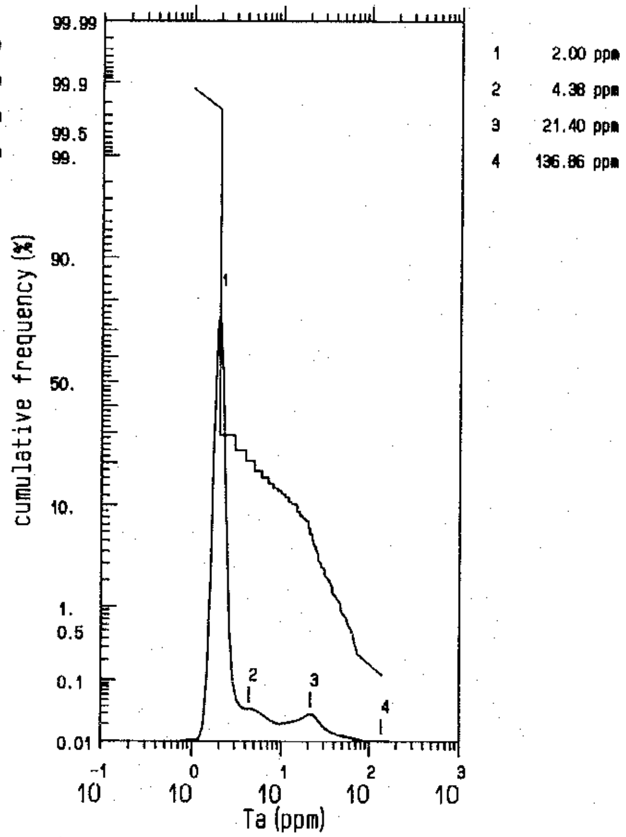


B-4 Frequency and Cumulative Frequency for Geochemical Analyses of the Orange Area (1)

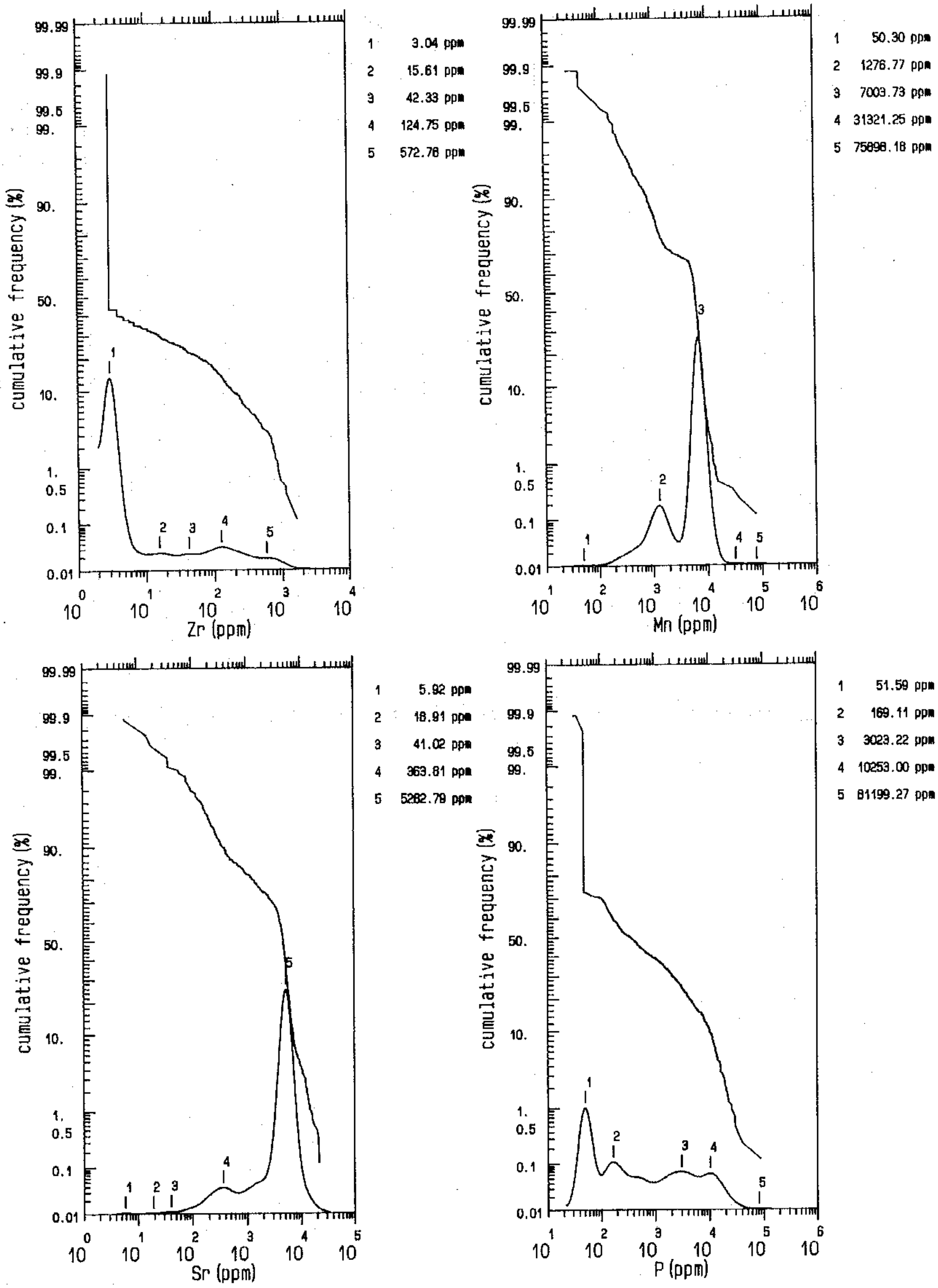




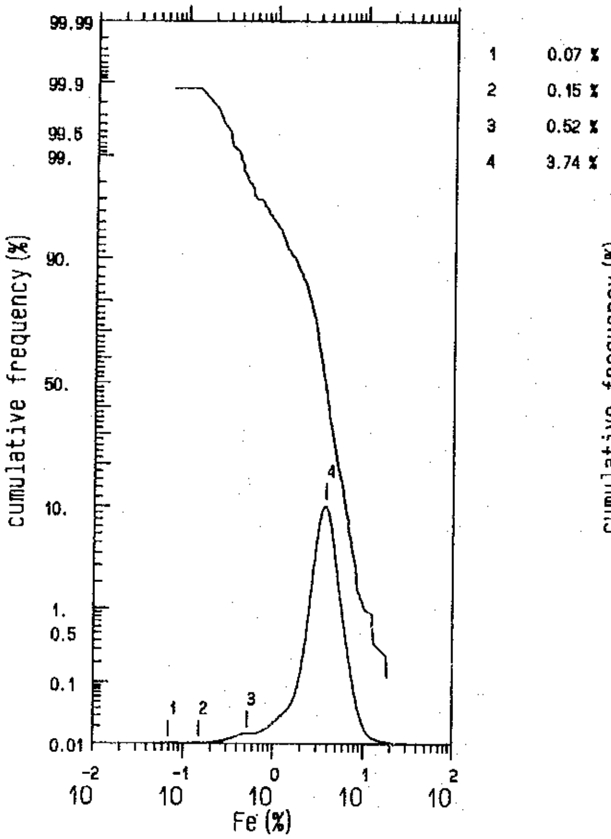


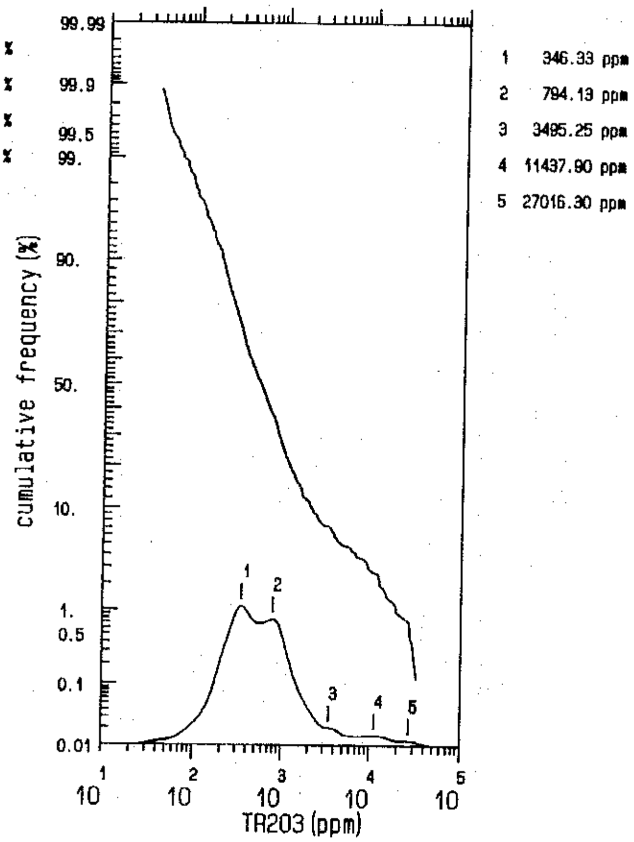


B-4 Frequency and Cumulative Frequency for Geochemical Analyses of the Orange Area (2)



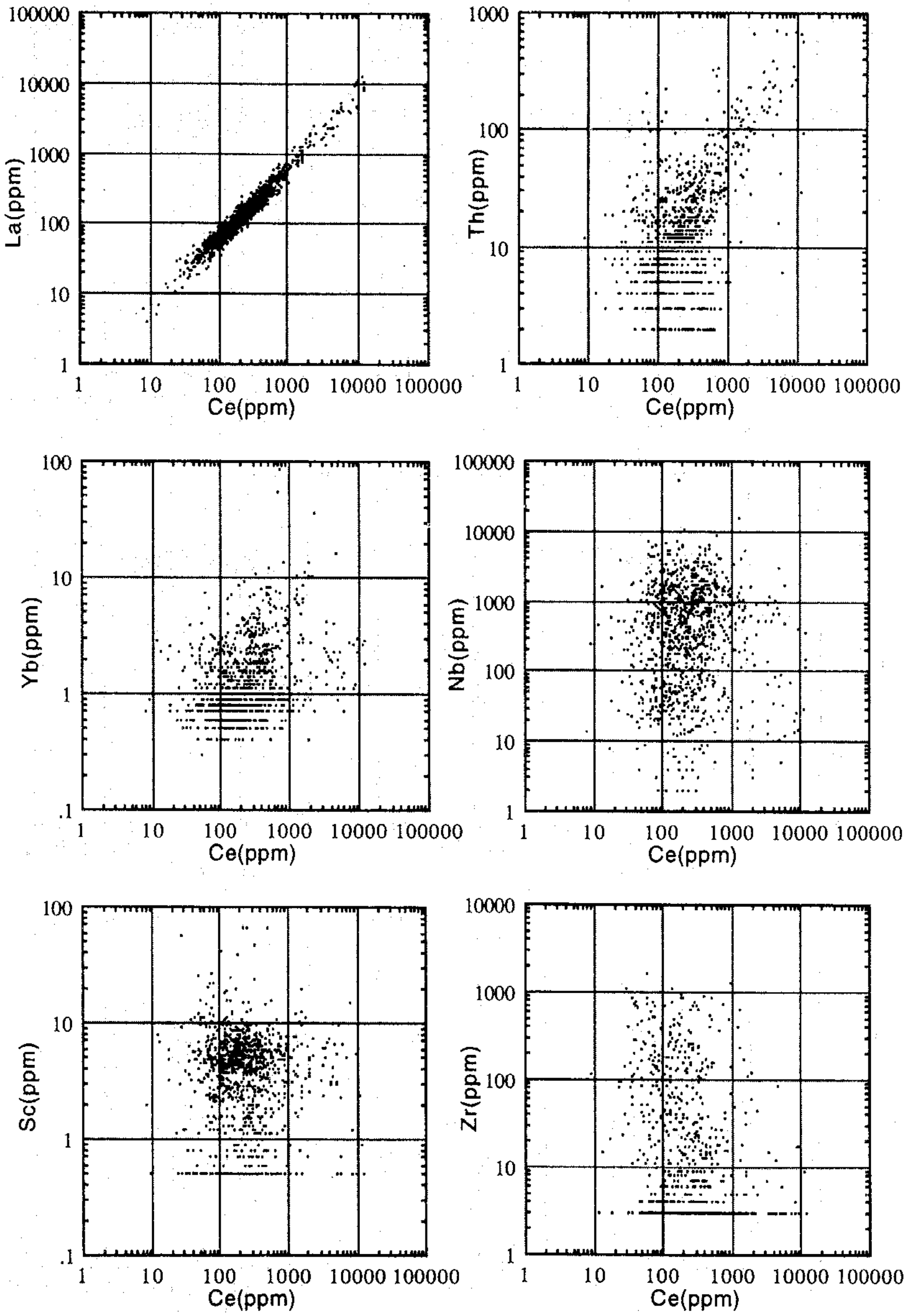
B–4 Frequency and Cumulative Frequency for Geochemical Analyses of the Orange Area (3)



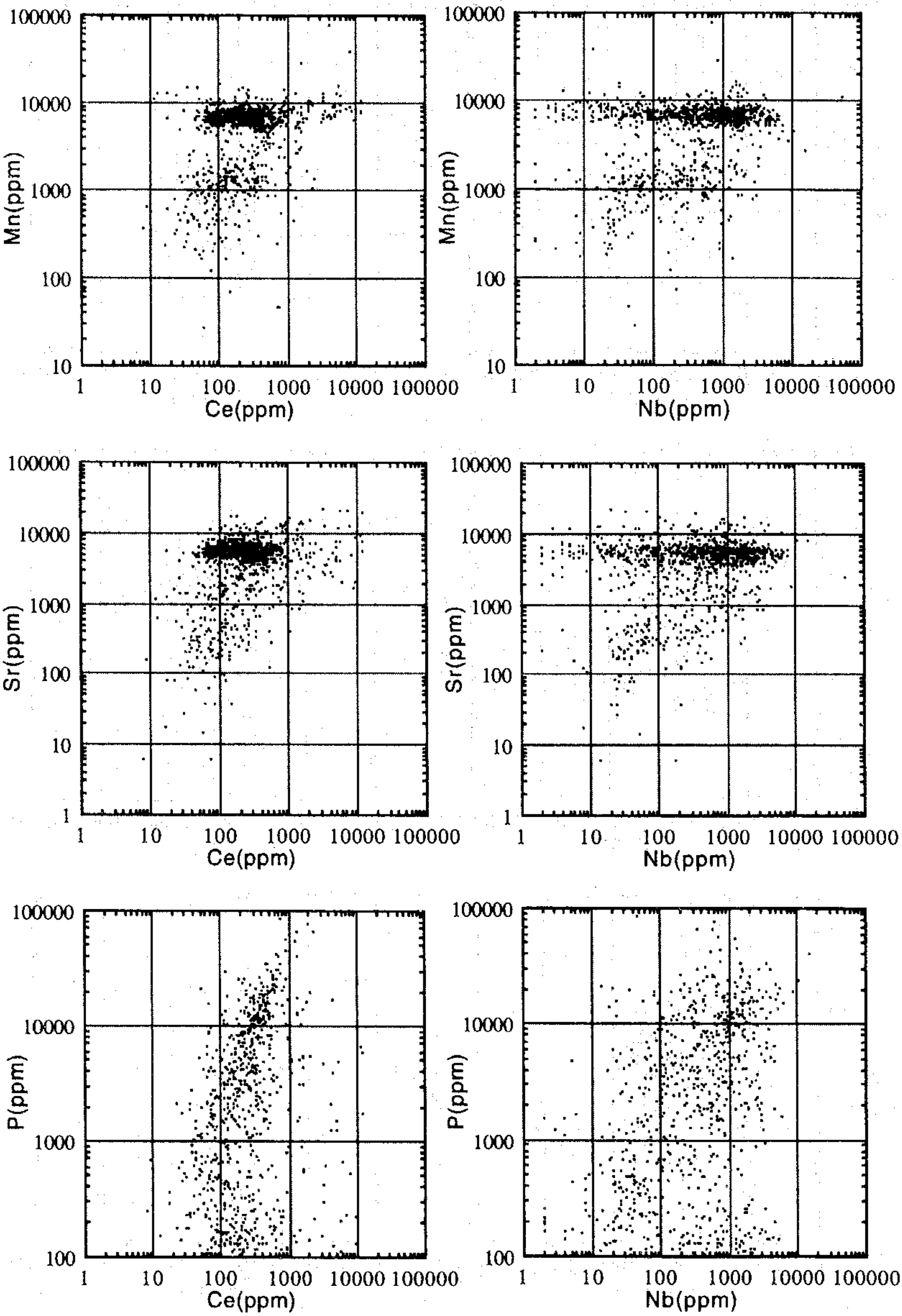


B-4 Frequency and Cumulative Frequency for Geochemical Analyses of the Orange Area (4)

B-5 Frequency and Cumulative Frequency for Geochemical Analyses of the Orange Area



B-5 Scatter Diagrams for Geochemical Analyses of the Orange Area (1)



B-5 Scatter Diagrams for Geochemical Analyses of the Orange Area (2)

B-6 Drilling Logs of the Orange Area

Depth (m)	Geologic Colum	Rock Name & (Rock Code)	Description	Weathering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
5		weathered beforsite (Mcbl)	0.0m-6.5m light brown (5YR 5/6)to light brownish gray (5YR 6/1) beforsite(ϕ=2 to 3mm) with brownish Fe hydroxides	2	1-5(G)	5.0	5.5	0.5
10			6.5-35.0m very light gray (N8) beforsite(ϕ=2 to 3mm) with dark green, dusky brown, and black minrals which are impregnated(ϕ=2 to		1-10(G)	10.0	10.5	0.5
15			3 mm) and scattered(d=3 to 5cm) clear flow banding(∠ 60 to 70°)		1-15(G)	15.0	15.5	0.5
20				0	1-20(G,W)	20.0	20.5	0.5
25		beforsite (Mcbl)	24.5-28.0m rich in scattered dusky brown (5YR 2/2) minerals(ϕ=2 to 5cm)		1T-1(T) 1-25(G) 1X-1(X)	25.0 25.0 26.0	25.1 25.5 26.1	0.1 0.5 0.1
30			30.4-31.4m rich in impregnated pyrite(ϕ=1 to 2mm)		1-30(G,W)	30.0	30.5	0.5
35					1-35(G)	35.0	35.5	0.5
40		weathered beforsite (Mcbl)	35.0-40.5m light brownish gray (5YR 6/1) to brownish gray (5YR 4/1) beforsite(ϕ=2 to 3mm) with brownish Fe hydroxides	1	1-40(G)	40.0	40.5	0.5
45		beforsite (Mcbl)	40.5-52.0m very light gray (N8) beforsite (ϕ=2 to 3mm) with black, dusky brown, and dark green minerals which are dotted(d=2 to 3mm and spotted(d=5 to 30 cm), and with a few pyrites(ϕ= 1 to 2mm) ∠60°	0	1-45(G,W) 1R-1(I)	45.0 45.0	45.5 45.1	0.5 0.1
50			40.5-42.0m & 48.0-50.6m rich in dark green, dusky brown, and black minerals(ϕ=1 to 3mm) clear boundary (∠45°)		1-50(G)	50.0	50.5	0.5
55			52.0-66.0m very light gray(N8) brecciated arkose (ϕ=1 to 2mm) with beforsite networks which matrix is rich in black and dusky minerals		1-55(G)	55.0	55.5	0.5
60					1-60(G,W) 1X-2(X)	60.0 60.0	60.5 60.1	0.5 0.1
65		brecciated arkose (Nsh)		1	1-65(G)	65.0	65.5	0.5
70			66.0-81.5m light gray(N7) brecciated arkose (ϕ=1 to 2mm) with a few light gray beforsite veinlets (10 to 30 cm wide) which contain a few black and dusky brown minerals		1-70(G)	70.0	70.5	0.5
75					1-75(G)	75.0	75.5	0.5
80			67.0-70.6m & 76.5-80.5m brown to light brown fractured arkose		1-80(G)	80.0	80.5	0.5
85			81.5-91.5m light gray(N7) massive arkose (ϕ=1 to 2mm) with pyrite dissemination		1T-3(T)	85.0	85.1	0.1
90		arkose (Nsh)	84.0m & 87.5m calcite veinlets(5mm wide)	1				
95			91.5-95.5m pale red(10R 6/2) massive arkose with pale red Fe oxides dissemination 95.5-109.6m light gray(N7) arkose (ϕ=1 to 2mm max. 5mm) with pyrite dissemination					
100								

Remarks: (G):Geochemical Analysis, (W):Whole Rock Analysis, (T):Polished Thin Section, (E):EPMA Analysis
(X):X-ray Diffraction Analysis, (I):Oxygen and Carbon Isotope Analysis
Weathering: 0:fresh, 1:weakly altered, 2:moderately altered 3:strongly altered

B-6 Drilling Logs of the Orange Area (1)

Q-1 100～150m

	Geologic Column	Rock Name & (Rock Code)	Description	Weathering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
			95.5-109.6m					
			light gray(N7) arkose (ϕ=1 to 2mm max.					
5		arkose (Nsh)	5mm) with pyrite dissemination	1				
			clear boundary ($\angle$60°)					
0			109.6-114.7m		1-110(G)	110.0	110.5	0.5
			very light gray(N8) carbonated syenite					
			(ϕ=2 to 3mm) with calcite(sovite),					
			pyrite, black, and dusky brown minerals					
5			109.6-118.7m		1-115(G)	115.0	115.5	0.5
			very light gray(N8) carbonated syenite					
			(ϕ=2 to 3mm) with black minerals		1-117(G)	117.3	117.8	0.5
0			118.7-122.5m very light gray carbonated		1-120(G,W)	120.0	120.5	0.5
			syenite with calcite(sovite)					
			122.5-123.5m very light gray(N8)		1-122(G)	122.3	122.8	0.5
			carbonated syenite with black minerals					
5					1-125(G)	125.0	125.5	0.5
			123.5-125.5m very light gray carbonated		1X-3(X)	126.0	126.1	0.1
			syenite with calcite(sovite)	0	1-127(G)	127.3	127.8	0.5
0		carbonated	125.5-129.5m very light gray carbonated		1-130(G,W)	130.0	130.5	0.5
		syenite	syenite with abundant black and sufides		1T-4(T)	131.5	131.6	0.1
		(Wsu)	minerals		1-132(G)	132.3	132.8	0.5
			130.0-131.0m clear flow banding($\angle$45°)					
5			very light gray carbonated syenite		1-135(G)	135.0	135.5	0.5
			with calcite(sovite)					
			131.0-138.0m		1-137(G)	137.3	137.8	0.5
			very light gray(N8) carbonated syenite					
0			(ϕ=2 to 3mm) with abundant black and		1-140(G,W)	140.0	140.5	0.5
			sulfides minerals					
			138.0-150.4m					
5			very light gray(N8) carbonated syenite		1-145(G)	145.0	145.5	0.5
			(ϕ=2 to 3mm) with abundant dark green,		1-147(G)	147.3	147.8	0.5
			pale green, brown, and sulfides minerals		1T-5(T)	148.4	148.5	0.1
					1X-4(X)	148.4	148.5	0.1
0			150.4m		1-150(G,W)	150.0	150.5	0.5

B-6 Drilling Logs of the Orange Area (2)

MJNO-2 0～100m

Depth (m)	Geologic Colum	Rock Name & (Rock Code)	Description	Weath-ering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
					2-0(G)	0.0	0.3	0.3
5			0.0-9.0m dusky brown(5YR 2/2) to grayish brown (5YR 3/2) ankeritic beforsite(φ=2 to 3 mm) with dark green blocks (d=2 to 3mm, max.10cm) which contain pale green clayey mineral, black Fe oxide, and brown hydroxide(φ=1 to 2mm)		2-5(G)	5.0	5.5	0.5
10					2-10(G)	10.0	10.5	0.5
			9.0-31.0m dusky brown(5YR 2/2) to grayish brown, (5YR 3/2) partly dusky red(5R 3/4) ankeritic beforsite(φ=2 to 3mm max.5mm) with dusky red to black Fe oxides and brown minerals(φ=1 to 2mm)		2T-1(T)	15.0	15.1	0.1
15		ankeritic beforsite (Mcbl)		1	2-15(G)	15.0	15.5	0.5
					2-17(G)	17.3	17.8	0.5
20					2-20(G,W)	20.0	20.5	0.5
					2-22(G)	22.3	22.8	0.5
25					2-25(G)	25.0	25.5	0.5
					2-27(G)	27.3	27.8	0.5
30					2-30(G,W)	30.0	30.5	0.5
			31.0-49.0m light brownish gray(5YR 6/1) beforsite (φ=2 to 3mm) with black, dusky brown minerals rich part(d=3 to 5cm max.20cm) partly contain dark to pale green rich parts		2-32(G)	32.3	32.8	0.5
					2X-1(X)	32.2	32.3	0.1
35					2-35(G)	35.0	35.5	0.5
					2-37(G)	37.3	37.8	0.5
40					2-40(G,W)	40.0	40.5	0.5
					2-42(G)	42.3	42.8	0.5
45					2-45(G)	45.0	45.5	0.5
			46.5-49.0m fractured zone		2-47(G)	47.3	47.8	0.5
50					2-50(G,W)	50.0	50.5	0.5
		weathered beforsite (Mcbl)	49.0-68.5m grayish brown(5YR 3/2) to dusky brown (5YR 2/2) beforsite(φ=1 to 2mm), fractured with brown Fe hydroxides(φ=1 2mm) and partly black Fe oxides	1				
55					2-55(G)	55.0	55.5	0.5
60					2-60(G,W)	60.0	60.5	0.5
65					2-65(G,W)	65.0	65.5	0.5
			68.5-71.5m light brownish gray beforsite with black and dusky brown minerals					
70					2-70(G,W)	70.0	70.5	0.5
		ankeritic beforsite (Mcbl)	71.5-77.5m grayish brown to dusky brown ankeritic beforsite(φ=1 to 2mm)	1	2-72(G)	72.3	72.8	0.5
75					2-75(G,W)	75.0	75.5	0.5
					2T-2(T)	75.0	15.0	0.1
					2-77(G)	77.3	77.8	0.5
80					2-80(G)	80.0	80.5	0.5
85		fractured beforsite (Mcbl)	77.5-120.0m light gray(N7) to brownish gray(5YR 4/1) to dark gray(N4) beforsite(φ=1 to 2mm) with black Fe oxide, brown phlogopite and white mica fractured(clayey, sandy to powdery)	1				
90								
95					2-95(G)	95.0	95.5	0.5
100								

B-6 Drilling Logs of the Orange Area (3)

Depth (m)	Geologic Column	Rock Name (Rock Code)	Description	Weathering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
	# # # # #		77.5-120.0m					
105	# # # # #		light gray(N7) to brownish gray(5YR 4/1) to dark gray(N4) beforsite(ϕ =1 to 2mm) with black Fe oxide, brown phlogopite and white mica fractured(clayey, sandy to powdery)					
110	# # # # #				2-109(G)	109.0	109.5	0.5
115	# # # # #							
	# # # # #	fractured beforsite (Mcbl)		1	2X-2(X)	118.0	118.1	0.1
120	# # # # #		120.0-136.0m very light gray (N8) to light brownish gray(5YR 5/6) beforsite(ϕ =1 to 2mm) fractured(clayey, powdery and sandy)		2-122(G)	122.0	122.5	0.5
125	# # # # #				2X-3(X)	127.0	127.1	0.1
130	# # # # #							
135	# # # # #				2-135(G)	135.0	135.5	0.5
	# # # # #				2X-4(X)	135.0	135.1	0.1
140	V V V V V		136.0-150.4m very light gray quartz(ϕ =1 to 2mm) trachyte dyke, altered siliciously	1				
145	V V V V V	trachyte dyke (Ktd)						
150	V V V V V		150.4m					

B-6 Drilling Logs of the Orange Area (4)

MJNO-3 0～100m

Depth (m)	Geologic Column	Rock Name & (Rock Code)	Description	Weathering	Sampling Number	Sampling Interval From (m)	to (m)	Width (m)
	#·#·#·#·#	weathered beforsite (Mcbl)	0.0-4.5m 1 gray(N7) to light brwonish gray beforsite(φ=2mm max.5mm) with Fe oxides spots(d=2 to 3cm) to networks	1	3-0(G)	0.0	0.3	0.3
5	#+#+#+#+#	ankeritic beforsite (Mcbl)	4.5-9.4m grayish brown(5YR 3/2) ankeritic beforsite(φ=2 to 3mm max.5mm)	1	3-5(G) 3X-1(X)	5.0 5.7	5.5 5.8	0.5 0.1
10 15 20	#1#1#1#1#	sulfides-rich beforsite (Mcbl)	9.4-12.5m very light gray beforsite with sulfides, black and dusky red Fe oxides 12.5-13.3m light brwnish gray beforsite 13.3-16.0m very light gray beforsite with sulfides dissemination 16.0-17.4m light brwonish gray beforsite 17.4-20.4m very light gray(N8) beforsite (φ=5 to 15mm) with sulfides and grayish brown Fc hydroxides(d=5 to 15mm) 20.4-25.4m very light gray(N8) beforsite (φ=5 to 15mm) with sulfides, black Fe oxides, brownish gray Fe hydroxides(d= 5 to 15mm)	0 to 1	3-10(G) 3-15(G) 3-20(G,W) 3R-1(I) 3X-2(X) 3T-1(T)	10.0 15.0 20.0 23.2 23.2 23.4	10.5 15.5 20.5 23.4 23.3 23.5	0.5 0.5 0.5 0.1 0.1 0.1
25	#·#·#·#·#	weathered beforsite(Mcbl)	25.4-27.3m light brownish gray beforsite (φ= 5 to 15mm)	1	3-25(G)	25.0	25.5	0.5
30	#1#1#1#1#	sulfides-rich beforsite(Mcbl)	27.3-30.3m very light gray beforsite (φ= 5 to 15mm) with sulfides and Fe oxide.	0	3-30(G)	30.0	30.5	0.5
35 40 45	#·#·#·#·#	weathered beforsite (Mcbl)	30.3-46.0m light brownish gray(5YR 6/1) beforsite (φ=1 to 2mm max.10mm) with gray brown Fe hydroxides(d= 3 to 5cm)	1	3-35(G) 3-40(G,W) 3-45(G)	35.0 40.0 45.0	35.5 40.5 45.5	0.5 0.5 0.5
50	#1#1#1#1#	sulfides-rich beforsite (Mcbl)	46.0-52.0m very light gray(N8) beforsite(φ=2 to 3 mm max.20mm) with sulfides and black Fe oxides	0	3-50(G)	50.0	50.5	0.5
	#·#·#·#·#	weathered beforsite(Mcbl)	52.0-53.3m light brownish gray beforsite (φ= 3 to 5mm max.30mm)	1				
55	#1#1#1#1#	sulfides-rich beforsite(Mcbl)	53.3-56.1m very light gray beforsite(φ= 3 to 50mm) with sulfides and Fe oxide	0	3-55(G)	55.0	55.5	0.5
60	#·#·#·#·#	weathered beforsite (Mcbl)	56.1-60.1m light brownish gray(5YR 6/1) beforsite (φ= 2 to 3mm) with brown Fe hydoxides	1	3-60(G,W)	60.0	60.5	0.5
	#1#1#1#1#	sulfides-rich beforsite (Mcbl)	60.1-63.0m very light gray(N8) beforsite (φ=2 to 3mm) with sulfides, Fe oxide, light brown and pale green minerals	0				
65	#·#·#·#·#	weathered beforsite (Mcbl)	63.0-69.0m clear flow banding (∠70°) light brownish gray(5YR 6/1) beforsite (φ= 2 to 3mm max.20mm) with grayish brown Fe hydoxides	1	3-65(G)	65.0	65.5	0.5
70 75 80	#1#1#1#1#	sulfides-rich beforsite (Mcbl)	69.0-82.3m clear flow banding (∠70°) very light gray(N8) beforsite(φ=3 to 5mm max.20mm) with dotted sulfides, black Fe oxides, light brown and pale green minerals clear flow baniding(∠80-90°)	0	3-70(G) 3T-3(T) 3-75(G) 3T-4(T,E) 3-80(G,W)	70.0 70.0 75.0 77.0 80.0	70.5 70.1 75.5 7.1 80.5	0.5 0.1 0.5 0.1 0.5
85	#·#·#·#·#	weathered beforsite (Mcbl)	82.3-85.5m light brownish gray(5YR 6/1) beforsite (φ=1 to 2mm) with brwon Fe oxides	1	3-85(G)	85.0	85.5	0.5
90	#1#1#1#1#	sulfides-rich beforsite (Mcbl)	85.5-90.0m very light gray(N8) beforsite (φ=1 to 2mm) with dotted sulfides, black Fe oxides, light brown and pale green minerals	0	3R-3(I) 3-90(G)	89.1 90.0	89.2 90.5	0.1 0.5
95	#·#·#·#·#	weathered beforsite (Mcbl)	90.0-98.2m light brownish gray(5YR 6/1) beforsite (φ=1 to 2mm) with grayish brown Fe oxides	1	3-95(G)	95.0	95.5	0.5
100	#2#2#2#2#	Fe oxides-rich beforsite(Mcbl)	98.2-106.9m light bwnish gray beforsite with Fe oxide and Fe hydroxides	1	3-100(G,W)	100.0	105.5	0.5

B-6 Drilling Logs of the Orange Area (5)

Depth (m)	Geologic Colum	Rock Name & (Rock Code)	Description	Weath-ering	Sampling Number	Sampling Interval From (m)	to (m)	Width (m)
100	#2#2#2#2#	Fe oxides-rich beforsite (Mcbl)	98.2-106.9m light brownish gray(5YR 5/6) beforsite (φ=1 to 2mm)with dotted black Fe oxides, grayish brown Fe hydroxides	1				
105	#2#2#2#2#				3-105(G)	105.0	105.5	0.5
	#+#+#+#+#	ankeritic beforsite (Mcbl)	106.9-112.0m graysih brownish(5YR 3/2) to yellowish brown(10YR 4/2) ankeriteic beforsite(φ= 1 to 2mm max. 5mm) with graysih brown Fe oxides	1				
110	#+#+#+#+#				3-110(G)	110.0	110.5	0.5
	#·#·#·#·#	weathered beforiste (Mcbl)	112.0-120.6m light brwonish gray(5YR 6/1) to brownish gray(5YR 4/1) beforsite(φ=1 to 2mm) with graysih brown Fe hydroxides, black Fe oxides, and sulfides	1				
115	#·#·#·#·#				3-115(G)	115.0	115.5	0.5
120	#·#·#·#·#				3-120(G,W)	120.0	120.5	0.5
	#1#1#1#1#	sulfides-rich beforsite(Mcbl)	120.6-121.8m very light gray beforsite (φ=1 to 2mm) with sulfides and Fe oxide	0				
125	#1#1#1#1#				3-125(G)	125.0	125.5	0.5
130	#1#1#1#1#				3-130(G)	130.0	130.5	0.5
	#1#1#1#1#	weathered and sulfides-rich beforsite (Mcbl)	112.0-120.6m 1 brwonish gray(5YR 6/1) to brownish gray(5YR 4/1) beforsite(φ=1 to 2mm) with graysih brown Fe hydroxies, black Fe oxides, and sulfides	1				
135	#·#·#·#·#				3-135(G) 3X-3(X)	135.0 135.0	135.5 135.1	0.5 0.1
140	#1#1#1#1#				3-140(G,W)	140.0	140.5	0.5
145	#·#·#·#·#				3-145(G) 3T-5(T) 3R-5(I)	145.0 146.7 146.7	145.5 146.8 146.8	0.5 0.1 0.1
150	#1#1#1#1#		150.3m		3-150(G)	150.0	150.5	0.5

B-6 Drilling Logs of the Orange Area (6)

Depth (m)	Geologic Colum	Rock Name & (Rock Code)	Description	Weath-ering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
					4-0(G)	0.0	0.3	0.3
5		weathered beforsite (Mcbl)	0.0-14.3m light brownish gray(5YR 5/6) to very light gray(N8) beforsite(ϕ=1 to 2mm) with spots(5×20cm) by graysih brown Fe hydroxides	1	4-5(G)	5.0	5.5	0.5
10					4-10(G)	10.0	10.5	0.5
15		sulfides-rich beforsite (Mcbl)	14.3-20.3m clear flow banding(∠70°) very light gray(N8) beforsite(ϕ=1 to 2 mm) with dotted to spotted(d=2 to 3cm) sulfides, brownish black Fe oxides, and a few yellowish brown minerals	0	4-15(G) 4T-4(T)	15.0 15.0	15.5 15.1	0.5 0.1
20					4-20(G,W) 4X-1(X) 4T-1(T)	20.0 20.6 20.6	20.5 20.7 20.7	0.5 0.1 0.1
25		Fe oxides-rich beforiste (Mcbl)	20.3-30.5m clear flow banding(∠70°) very light gray(N8) beforsite(ϕ=1 to 2 mm) with dotted to spotted(d=2 to 3cm) black Fe oxides, yellowish brown minerals and a few sulfides	0	4-25(G)	25.0	25.5	0.5
30					4-30(G,W) 4T-2(T)	30.0 30.0	30.5 30.1	0.5 0.1
35		sulfides-rich beforsite (Mcbi)	30.5-37.5m very light gray(N8) beforsite(ϕ=1 to 2 mm) with dotted sulfides and black Fe oxides(ϕ=1 to 2mm)	0	4-35(G) 4R-1(I)	35.0 35.0	35.5 35.1	0.5 0.1
40		Fe oxides-rich beforiste (Mcbl)	37.5-45.0m very light gray(N8) beforsite(ϕ=2 to 3 mm max.10mm) with dotted black Fe oxides (1 to 2mm)and a few sulfides(d=1 to 2mm) partly light grayish brown weathered beforsite with Fe hydoroxides spots	0 to 1	4-40(G,W)	40.0	40.5	0.5
45					4-45(G)	45.0	45.5	0.5
50		weathered beforsite (Mcbl)	45.0-66.0m light brownish gray(5YR 6/1) to light gray(N7) beforsite(ϕ=1 to 2mm, max10mm) with grayish brown Fe hydroxides spots (d=5 to 10cm)	1	4-50(G)	50.0	50.5	0.5
55					4-55(G)	55.0	55.5	0.5
60					4-60(G,W)	60.0	60.5	0.5
65		beforsite (Mcbl)	66.0-72.0m very light gray(N8) beforsite(ϕ=2 to 3 mm max.10mm) with a few dotted sulfides and black Fe oxides(ϕ=1 to 2mm)	0	4-65(G)	65.0	65.5	0.5
70					4-70(G)	70.0	70.5	0.5
75		weathered beforsite (Mcbl)	72.0-78.5m light brownish gray(5YR 6/1) to light gray(N7) beforsite(ϕ=1 to 2mm,max.50mm) with grayish brown Fe hydroxides spots (d=5 to 10cm)	1	4-75(G)	75.0	75.5	0.5
80		beforsite (Mcbl)	78.5-84.0m very light gray(N8) beforsite(ϕ=2 to 3 mm max.20mm) with a few dotted sulfides and black Fe oxides(ϕ=1 to 2mm) 84.0-86.0m light brownish gray beforsite (ϕ=2 to 3mm max.20mm) with Fe hydroxide 86.0-93.0m very light gray(N8) beforsite(ϕ=2 to 3 mm max.10mm) with a few dotted sulfides and black Fe oxides(ϕ=1 to 2mm)	0	4-80(G,W)	80.0	80.5	0.5
85					4-85(G)	85.0	85.5	0.5
90					4-90(G)	90.0	90.5	0.5
95		weathered beforsite (Mcbl)	93.0-101.5m light brownish gray(5YR 6/1) to light gray(N7) beforsite(ϕ=2 to 3mm,max.10mm) with grayish brown Fe hydroxides spots (d=5 to 10cm)	1	4-95(G)	95.0	95.5	0.5
100					4-100(G,W)	100.0	105.5	0.5

B-6 Drilling Logs of the Orange Area (7)

NO－4　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　100～150m

Depth (m)	Geologic Column	Rock Name & (Rock Code)	Description	Weathering	Sampling Number & (Type of Test)	Sampling Interval From (m)	Sampling Interval to (m)	Sampling Interval Width (m)
00								
05		beforiste (Mcbl)	101.5-106.0m very light gray(N8) beforsite(ϕ=1 to 2 mm max.30mm) with a few dotted sulfides and black Fe oxides(ϕ=1 to 2mm)	0	4-105(G)	105.0	105.5	0.5
10		weathered beforsite (Mcbl)	106.0-122.0m light brownish gray(5YR 6/1) to light gray(N7) beforsite(ϕ=2 to 3mm, max.50mm) with grayish brown Fe hydroxides spots (d=5 to 10cm)	1	4-110(G)	110.0	110.5	0.5
15					4-115(G)	115.0	115.5	0.5
20					4-120(G,W)	120.0	120.5	0.5
25		beforsite (Mcbl)	122.0-127.0m very light gray(N8) beforsite(ϕ=1 to 2 mm max.5mm) with a few dotted sulfides and black Fe oxides(ϕ=1 to 2mm)	0	4-125(G)	125.0	125.5	0.5
30		weathered beforsite (Mcbl)	127.0-132.5m light brownish gray(5YR 6/1) to light gray(N7) beforsite(ϕ=1 to 2mm, max.5mm) with grayish brown Fe hydroxides spots (d=5 to 10cm)	1	4-130(G)	130.0	130.5	0.5
35		beforsite (Mcbl)	132.5-136.5m very light gray beforsite (ϕ=1 to 2mm max.5mm) with a few dotted sulfides and black Fe oxide(ϕ=1 to 2mm)	0	4-135(G)	135.0	135.5	0.5
40		weathered beforsite (Mcbl)	136.5-143.0m light brownish gray(5YR 6/1) to light gray(N7) beforsite(ϕ=1 to 2mm, max.5mm) with grayish brown Fe hydroxides spots (d=5 to 10cm) clear flow banding (∠60 to 70°)	1	4-140(G,W)	140.0	140.5	0.5
45		sulfides-rich beforsite (Mcbl)	143.0-150.2m very light gray(N8) beforsite(ϕ=1 to 2 mm max.30mm) with dotted sulfides, green clayey, greenish gray minerals(ϕ=1 to 3 mm)	0	4-145(G)	145.0	145.5	0.5
					4T-3(T)	146.9	147.0	0.1
					4X-2(X)	148.7	148.8	0.1
50					4-150(G)	150.0	150.5	0.5

B-6 Drilling Logs of the Orange Area (8)

Depth (m)	Geologic Colum	Rock Name & (Rock Code)	Description	Weath-ering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
 5 10 15 20	#·#·#·#·#	weathered beforiste (Mcbl)	0.0-24.0m grayish brown(5YR 3/2) to brownish gray (5YR 4/1) beforsite(ϕ=1 to 2mm, max.3 cm) with dark green rock breccia(d=3 to 5cm max.10cm) white calcite veinlets(W=1 to 2mm)	1	5-0(G) 5-5(G) 5-10(G) 5-15(G) 5-20(G)	0.0 5.0 10.0 15.0 20.0	0.3 5.5 10.5 15.5 20.5	0.3 0.5 0.5 0.5 0.5
25 30	#3#3#3#3#	phlogopite-rich beforiste (Mcbl)	24.0-34.0m light gray(N7) beforsite(ϕ=1 to 3mm) with irregular spots(d= 2 to 3cm max.10 cm) by dark green minerals, and with dots(d=1 to 2 mm) by yellowish brown, and pale green minerals	0	5-25(G) 5-30(G,W)	25.0 30.0	25.5 30.5	0.5 0.5
35	L L L L L	dolerite dyke (Kdd)	34.0-39.0m dark green dolerite dyke	1	5-34(G) 5X-1(X)	34.0 35.0	34.5 35.1	0.5 0.1
40 45 50 55 60	#3#3#3#3#	phlogopite-rich beforiste (Mcbl)	39.0-41.5m light greenish gray beforsite with pale to dark green .and brownish black Fe oxide minerals 41.5-55.0m light greenish gray(5GY 8/1) beforsite (ϕ=1 to 2mm, max.10mm) with spots(d=3 to 5cm, max 40cm) of dark green, black, pale to dark green, and dark yellowish minerals clear flow banding($\angle$70°) 55.0-59.7m light greenish gray beforsite(ϕ=1 to 2mm max.10mm) with spots(d=3 to 30cm max.1m) of dark green and black minerals	0	5-40(G,W) 5-45(G) 5-47(G) 5-50(G,W) 5-55(G) 5X-2(X) 5-60(G,W)	40.0 45.0 47.3 50.0 55.0 55.0 60.0	40.5 45.5 47.8 50.5 55.5 55.1 60.5	0.5 0.5 0.5 0.5 0.5 0.1 0.5
65 70 75 80	#2#2#2#2#	Fe oxide-rich beforiste (Mcbl)	59.7-83.8m clear flow banding($\angle$70°) very light gray(N8) beforsite(ϕ=1 to 2mm) with black Fe oxides and sulfides, bearing spots(d=1 to 5cm) of dark green minerlas clear flow banding($\angle$70°) weak flow banding($\angle$60°)	0	5-65(G) 5-67(G) 5-70(G,W) 5-75(G) 5-80(G,W)	65.0 67.3 70.0 75.0 80.0	65.5 67.8 70.5 75.5 80.5	0.5 0.5 0.5 0.5 0.5
85	#1#1#1#1#	sulfides-rich beforsite (Mcbl)	83.8-86.2m very light gray beforiste(ϕ = 1 to 2mm) with dotted sulfides and dark green brecciated syenite(d=5 30cm)	0	5E-1(T) 5-85(G)	84.7 85.0	84.8 85.5	0.1 0.5
	#2#2#2#2#	Fe oxide-rich beforiste(Mcbl)	86.2-88.7m very light gray beforsite(ϕ = 1 to 2mm) with bk Fe ox and sulfides	0	5T-1(T)	88.5	88.6	0.1
90 95 100	#1#1#1#1#	sulfides-rich beforsite (Mcbl)	88.7-105.1m clear flow banding($\angle$0°) very light gray(N8) to light gray(N7) beforsite(ϕ=1 to 2mm) with dotted sulfides(pyrite, pyrhotite) 96.1-96.2m sulfides veinlets(W=2cm)	0	5-90(G,W) 5E-2(T) 5-92(G) 5-95(G) 5T-2(T) 5-100(G,W)	90.0 92.2 92.3 95.0 96.1 100.0	90.5 92.3 92.8 95.5 96.2 105.5	0.5 0.1 0.5 0.5 0.1 0.5

B-6 Drilling Logs of the Orange Area (9)

h	Geologic Colum	Rock Name & (Rock Code)	Description	Weath-ering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
0 5	#1#1#1#1#	sulfides-rich beforsite (Mcbl)	88.7-105.1m very light gray(N8) to light gray(N7) beforsite(φ=1 to 2mm) with dotted sulfides(pyrite, pyrhotite)	0	5-105(G)	105.0	105.5	0.5
	> > > > >	syenite (Msu)	105.1-108.4m dark green metamorhosed syenite with sulfides(pyrite, pyrhotite)	0				
0 5 .0 :5 i0 i5 i0 i5 i0	+ + + + +	micro-granite (Mgr)	108.4-150.3m very light gray quartz(φ= 1 to 2mm) beraing micro-granite with dotted sulfides(pyrhotite) and black Fe oxide 150.3m	1				

B-6 Drilling Logs of the Orange Area (10)

MJNO-6 | 0～100m

Depth (m)	Geologic Colum	Rock Name & (Rock Code)	Description	Weath-ering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
	#·#·#·#·#	weathered beforsite (Mcb2)	0.0-3.8m grayish brown(5YR 3/2) beforiste (φ=1 to 2mm)	2	6-0(G)	0.0	0.3	0.3
5	#1#1#1#1#		3.8-20.0m very light gray(N8) beforsite(φ=1 to 2 mm max.5mm) with dotted sulfide(pyrite) and black Fe oxide minerals(φ=1 to 2mm) partly light brwonish gray weathered		6-5(G)	5.0	5.5	0.5
10					6-10(G,W)	10.0	10.5	0.5
15					6-15(G)	15.0	15.5	0.5
		sulfides-rich beforsite (Mcb2)	clear flow banding(∠60°)	0 to 1	6T-1(T)	17.5	17.6	0.1
20					6-20(G)	20.0	20.5	0.5
25			20.0-41.0m clear flow banding(∠70°) very light gray(N8) beforsite(φ=1 to 2 mm max.5mm) with dotted sulfide(pyrite) and black Fe oxide minerals(φ=1 to 2mm)		6-25(G)	25.0	25.5	0.5
30					6-30(G,W)	30.0	30.5	0.5
35					6-35(G)	35.0	35.5	0.5
40					6-40(G)	40.0	40.5	0.5
	#3#3#3#3#		41.0-53.0m very light gray(N8) beforsite(φ=5 to 10mm) with dotted pale green minerals (φ=5 to 7mm), dark brown minerals(φ = 5 to 10mm), brown minerals(φ = 3 to 5mm), black Fe oxide(φ=1 to 2mm), and sulfides (marcasite, pyrite)		6X-1A(X)	42.2	42.3	0.1
					6X-1B(X)	42.3	43.4	0.1
45		phlogopite-rich beforiste (Mcb2)		0	6-45(G)	45.0	45.5	0.5
50					6-50(G,W)	50.0	50.5	0.5
55	#1#1#1#1#		53.0-73.0m very light gray(N8) beforsite(φ=1 to 2 mm max.5mm) with dotted sulfide(pyrite) and black Fe oxide minerals(φ=1 to 2mm)		6-55(G)	55.0	55.5	0.5
60					6-60(G)	60.0	60.5	0.5
		sulfides-rich beforsite (Mcb2)		0				
65			clear flow banding(∠60 to 70°)		6-65(G)	65.0	65.5	0.5
70					6-70(G,W)	70.0	70.5	0.5
75	#3#3#3#3#	phlogopite-rich beforiste (Mcb2)	73.0-77.0m very ligh gray beforsite with dotted pale green, dark brown, brown minerals, black Fe oxide, and sulfides with black sltate breccia(d=2 to 3m)	0	6-75(G)	75.0	75.5	0.5
80	# # # # #	beforiste (Mcb2)	77.0-85.5m very light gray(N8) beforsite(φ=1 to 2 mm max.5mm) with a few dotted sulfide and black Fe oxide minerals(φ=1 to 2mm)	0	6-80(G)	80.0	80.5	0.5
85					6-85(G)	85.0	85.5	0.5
	#3#3#3#3#	phlogopite-rich beforiste (Mcb2)	85.5.0-88.0m very light gray beforsite with pale green, brown minerals, Fe oxide and sulfides(pyrite), with slate breccia	0				
90	#1#1#1#1#				6-90(G,W)	90.0	90.5	0.5
		sulfides-rich beforsite (Mcb2)	88.0-101.0m clear flow banding(∠60°) very light gray(N8) beforsite(φ=1 to 2 mm max.5mm) with dotted sulfide(pyrite) and black Fe oxide minerals(φ=1 to 2mm)	0				
95					6-95(G)	95.0	95.5	0.5
100			clear flow banding(∠60°)		6-100(G)	100.0	105.5	0.5

B-6 Drilling Logs of the Orange Area (11)

NO－6 100～150m

th)	Geologic Colum	Rock Name & (Rock Code)	Description	Weath-ering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
00	#1#1#1#1#							
05	#4#4#4#4#	apatite-rich beforiste (Mcb2)	101.0-109.0m very light gray(N8) beforsite(φ=1 to 2 mm max.5mm) with spots(d=1 to 3cm max. 30cm) of dark brown minerlas(phlogopite) and pale green apatite(φ=1 to 5mm)	0	6-105(G) 6X-2(X)	105.0 105.5	105.5 105.6	0.5 0.1
10	L L L L L	dolerite(Kdd)	109.0-110.3m black hard dorelite dyke	0	6-110(G,W)	110.0	110.5	0.5
15 20	#4#4#4#4#	apatite-rich beforiste (Mcb2)	110.3m-121.5m clear flow banding(∠60°) very light gray(N8) beforsite(φ=1 to 2 mm max.5mm) with dotted pale green, brown to dark brown(phlogopite), pale to dark green, and sulfides(pyrrhotite) minerals(φ=1 to 2 max.5mm) clear flow banding(∠60°)	0	6-115(G) 6R-1(I) 6T-2(T,E) 6-120(G) 6T-3(T)	115.0 115.0 117.0 120.0 121.3	115.5 115.1 117.1 120.5 121.4	0.5 0.1 0.1 0.5 0.1
	L L L L L	dolerite dyke(Kdd)	121.5-124.0m black hard to soft(fractured) dolerite	1				
25 30	#4#4#4#4#	apatite-rich beforiste (Mcb2)	124.0-130.0m very light gray(N8) beforsite(φ=1 to 2 mm max.5mm) with dotted apatite, sulfide phlogopite, and phlogoite, later calcite clear boundary(∠70°)	0	6-125(G) 6-129(G,W)	125.0 129.0	125.5 129.5	0.5 0.5
	L L L L L	dolerite(Kdd)	130.0-131.0m black hard dolerite dyke	0				
	#4#4#4#4#	apatite-rich beforiste(Mcb2)	131.0-132.8m very light gray beforsite with apatite, sulfide, phlogopite	0				
35	L L L L L	dolerite(Kdd)	132.8-135.5m black hard dolerite dyke	0	6-135(G)	135.0	135.5	0.5
	#4#4#4#4#	apatite-rich beforiste(Mcb2)	135.5-136.8m very light gray beforsite with apatite, sulfide, phlogopite	0				
40	L L L L L	dolerite (Kdd)	136.3-141.8m black hard dolerite dyke clear boundary(∠70°)	0	6-140(G)	140.0	140.5	0.5
45	#3#3#3#3#	phlogopite-rich beforisite (Mcb2)	141.8-145.8m very light gray beforsite with phlogopite and sulfides clear boundary(∠70°)	0	6-142(G) 6-145(G)	142.3 145.0	142.8 145.5	0.5 0.5
	L L L L L	dolerite(Kdd)	145.8-147.2m black hard dolerite dyke	0				
50	＞＞＞＞＞	syenite (Msu)	147.2-150.5m very light gray syenite with phlogopite and sulfides 150.5m	0	6T-4(T) 6-150(G,W)	148.7 150.0	148.8 150.5	0.1 0.5

B-6 Drilling Logs of the Orange Area (12)

MJNO-7 0～100m

Depth (m)	Geologic Colum	Rock Name & (Rock Code)	Description	Weath-ering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
	#·#·#·#·#	weathered beforsite(Mcb2)	0.0-2.0m very light gray to light brownish gray beforsite(φ=1 to 2mm)	I	7-0(G)	0.0	0.3	0.3
5	#1#1#1#1#				7-5(G)	5.0	5.5	0.5
10	#1#1#1#1#	sulfides-rich beforsite (Mcb2)	2.0-24.5m very light gray(N8) beforsite(φ=1 to 2 mm) with dotted sulfides(pyrite), black Fe oxide minerals(φ=1 to 2mm)	0	7-10(G,W)	10.0	10.5	0.5
15	#1#1#1#1#				7-15(G)	15.0	15.5	0.5
20	#1#1#1#1#		clear boundary(∠50°)		7-20(G)	20.0	20.5	0.5
25	L L L L L	dolerite dyke (Kdd)	24.5-30.5m black hard dolerite dyke	0	7-25(G)	25.0	25.5	0.5
30	L L L L L				7-30(G,W)	30.0	30.5	0.5
35	#2#2#2#2#	Fe oxide-rich beforsite (Mcb2)	30.5-48.0m very light gray(N8) beforsite(φ= 1 to 2mm) with black Fe oxides and sulfide minerals(φ=1 to 2mm)		7-35(G)	35.0	35.5	0.5
40	#2#2#2#2#				7-40(G)	40.0	40.5	0.5
45	#2#2#2#2#				7-45(G)	45.0	45.5	0.5
	#2#2#2#2#				7T-2(T,E)	46.0	46.1	0.1
50	#4#4#4#4#				7-50(G,W)	50.0	50.5	0.5
55	#4#4#4#4#				7-55(G)	55.0	55.5	0.5
60	#4#4#4#4#	apatite-rich beforsite (Mcb2)	48.0-71.5m very light gray(N8) beforsite(φ=2 to 3mm max.5mm) with dotted pale green apatite(φ=3 to 5mm), sulfide(pyrite) (φ<1mm), black Fe oxide(φ<1mm), and pale to blusih green minerals(φ=3 to 5mm)	0	7-60(G)	60.0	60.5	0.5
65	#4#4#4#4#				7-65(G)	65.0	65.5	0.5
70	#4#4#4#4#				7-70(G,W)	70.0	70.5	0.5
	#3#3#3#3#	phlogopite-rich beforsite(Mcb2)	71.5-72.5m very light gray beforsite with spots(d=2 to 5cm) of phlogopite	0				
75	#4#4#4#4#		72.5-79.0m very light gray beforsite with dotted pale green apatite(φ=3 to 5mm), sulfide (φ<1mm), black Fe oxide(φ<1mm), and pale to blusih green minerals(φ=3 to 5 mm)		7-75(G)	75.0	75.5	0.5
80	#4#4#4#4#		79.0-83.0m very light gray beforsite with dotted pale green apatite, and black Fe oxide		7-80(G)	80.0	80.5	0.5
85	#4#4#4#4#	apatite-rich beforsite (Mcb2)	83.0-86.0m clear flow banding(∠60°) very light gray beforsite with dotted apatite, phlogopite, and amphibole	0	7-85(G)	85.0	85.5	0.5
	#4#4#4#4#				7X-3(X)	85.0	85.1	0.1
90	#4#4#4#4#		86.0-93.0m very light gray beforsite with dotted pale green apatite(φ=3 to 5mm), and a few sulfides(pyrite)		7-90(G,W)	90.0	90.5	0.5
	#4#4#4#4#				7T-3(T)	93.0	93.1	0.1
95	#1#1#1#1#	sulfides-rich beforsite(Mcb2)	93.0-95.0m very light gray beforsite with dotted pyrite, phlogopite and apatite	0	7-95(G)	95.0	95.5	0.5
100	#4#4#4#4#	apatite-rich beforsite (Mcb2)	95.0-101.0m very light gray to light brwonish gray beforsite with apatite, Fe oxides, pyrite and phlogopite	0	7-100(G)	100.0	105.5	0.5

B-6 Drilling Logs of the Orange Area (13)

NO－7 100～150m

Depth (m)	Geologic Colum	Rock Name	Description	Weath-ering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
100	#4#4#4#4#							
105	#4#4#4#4#		101.0-120.0m very light gray(N8) beforsite(φ=2 to 3mm max.5mm) with dotted pale green apatite(φ=3 to 5mm), sulfide(pyrite)(φ<1mm), black Fe oxide(φ<1mm), and pale to blusih green minerals(φ=3 to 5mm)		7-105(G)	105.0	105.5	0.5
110	#4#4#4#4#				7-110(G,W)	110.0	110.5	0.5
115	#4#4#4#4#				7-115(G)	115.0	115.5	0.5
120	#4#4#4#4#		120.0-128.5m very light gray(N8) beforsite(φ=2 to 3mm max.5mm) with dotted pale green apatite(φ=3 to 5mm), and spots(d=3 to 5 cm max.20cm) of dark brown phlogopite, dark green amphibole		7-120(G)	120.0	120.5	0.5
125	#4#4#4#4#	apatite-rich beforsite (Mcb2)	128.5-133.0m very light gray to light brwonish gray beforsite with apatite, Fe oxide, pyrite, phlogopite	0	7-125(G)	125.0	125.5	0.5
130	#4#4#4#4#		133.0-139.0m very light gray beforsite(φ=2 to 3mm, max 5mm) with apatite(φ=3 to 5mm), and spots(d=5 to 10cm max.20cm) of phlogopite and amphibole		7-130(G,W) 7T-4(T)	129.0 129.3	129.5 129.4	0.5 0.1
135	#4#4#4#4#				7-135(G) 7X-1A(X) 7X-1B(X)	135.0 136.6 136.7	135.5 136.7 136.8	0.5 0.1 0.1
140	#4#4#4#4#		139.0-146.0m clear flow banding(∠65°) very light gray to light brwonish gray beforsite with apatite, Fe oxides, pyrite, phlogopite		7-140(G)	140.0	140.5	0.5
145	#4#4#4#4#		146.0-150.5m very light gray beforiste with apatite, pyrite, phlogopite, and dark green mineral		7-145(G) 7R-1(I) 7X-2(X)	145.0 145.0 148.0	145.5 145.1 148.1	0.5 0.1 0.1
150	#4#4#4#4#		150.5m		7-150(G,W)	150.0	150.5	0.5

B-6 Drilling Logs of the Orange Area (14)

MJNO-8 0~100m

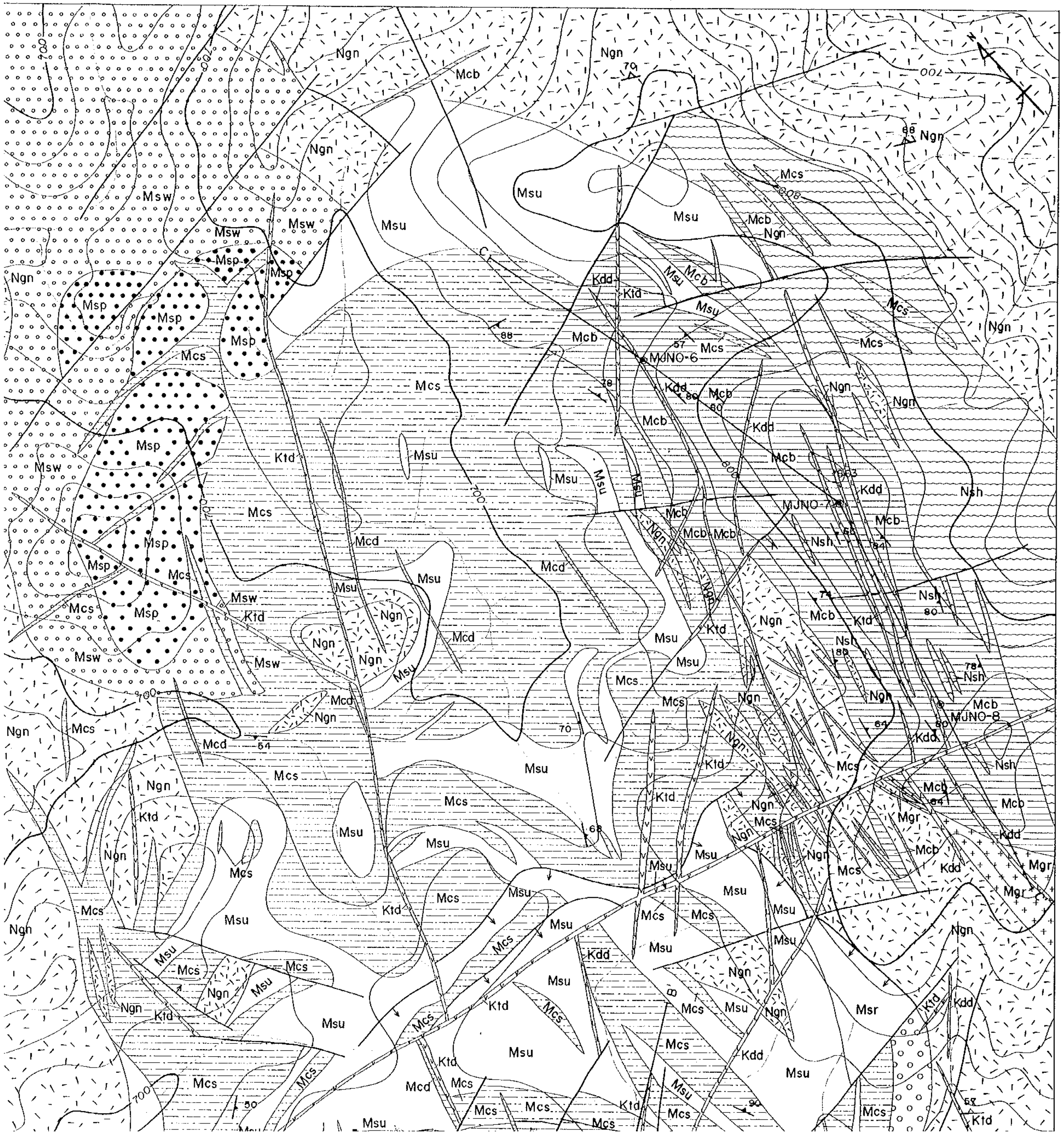
Depth (m)	Geologic Colum	Rock Name & (Rock Code)	Description	Weathering	Sampling Number & (Type of Test)	From (m)	to (m)	Width (m)
5	#·#·#·#·#	weathered beforsite (Mcb2)	0.0-4.0m light brownish gray beforsite(1-2mm) with dusky brown and black minerals	1	8-0(G) 8-3(G)	0.0 3.0	0.3 3.5	0.3 0.5
10	(horizontal lines)	slate (Nsh)	4.0-12.2m dark green well foliated slate with abundant dark green and black metamorphic minerals	1				
15	# # # # #	beforsite (Mcb2)	12.2-17.0m clear flow banding(∠0°) light gray(N7) to very light gray(N8) beforsite(φ=1 to 2mm) with pyrite dissemination	0	8-12(G) 8-15(G)	12.0 15.0	12.5 15.5	0.5 0.5
20 25	△ △ △	brecciated slate (Nsh)	17.0-27.3m dark gray to black brecciated slate with very light gray(N8) beforsite networks and later stage brown to dark brown, and dark green minerals veinlets (W=5 t 30cm)	1	8-20(G) 8-25(G, W)	20.0 25.0	20.5 25.5	0.5 0.5
30 35 40 45 50 55	#3#3#3#3#	phlogopite-rich beforsite (Mcb2)	27.3-43.0m clear flow banding(∠60°) very light gray(N8) beforsite(φ=1 to 2mm) accompanied with brown to dark brown rich parts and pale to dark green rich parts in irregular by amphibole and phlogopite weak pyrite dissemination 43.0-56.5m very light gray(N8) beforsite(φ=1 to 2mm) accompanied with brown mineral rich parts and dark green rich parts in irregular by amphibole and phlogopite weak pyrite dissemination	0	8-30(G) 8-35(G) 8X-1(X) 8-40(G) 8-45(G) 8-50(G, W) 8-55(G) 8T-2(T) 8X-2(X)	30.0 35.0 35.0 40.0 45.0 50.0 55.0 55.0 55.0	30.5 35.5 35.1 40.5 45.5 50.5 55.5 55.1 55.1	0.5 0.5 0.1 0.5 0.5 0.5 0.5 0.1 0.1
60	L L L L L	dolerite dyke (Kdd)	56.5-61.5m black to dark green dolerite	0	8-61(G)	60.0	60.5	0.5
	#3#3#3#3#	phlogopite-rich beforsite(Mcb2)	61.5-62.5m very light gray beforsite with dark brown mineral(phlogopite)	0				
65 70	#4#4#4#4#	apatite-rich beforsite (Mcb2)	62.5-70.2m very light gray(N8) beforsite(φ=2 to 3 mm) rich in pale green apatite and with pale to dark green, black minerals and sulfides(pyrite, pyrrhotite)	0	8-65(G) 8-67(G, W) 8-70(G)	65.0 67.3 70.0	65.5 67.8 70.5	0.5 0.5 0.5
	#3#3#3#3#	phlogopite-rich beforsite(Mcb2)	70.2-72.5m very light gray beforsite with brown phlogopite and amhibole	0				
75 80 85 90	#4#4#4#4#	apatite-rich beforsite (Mcb2)	72.5-90.5m very light gray(N8) beforsite(φ=3 to 5 mm) rich in pale green apatite(φ=5mm max 5cm) and with palel to dark green minerals and sulfides (pyrite and pyrrhotite) 84.5-84.8m: dark green to black slate breccia	0	8-75(G) 8T-3(T) 8-80(G, W) 8-85(G) 8T-4(T) 8-90(G, W)	75.0 75.0 80.0 85.0 87.3 90.0	75.5 75.1 80.5 85.5 87.4 90.5	0.5 0.1 0.5 0.5 0.1 0.5
	#3#3#3#3#	phlogopite-rich beforsite (Mcb2)	90.5-93.8m very light gray beforsite with brown, dark green, and black minerals patches (d=10 to 50cm)	0				
95	#4#4#4#4#	apatite-rich beforsite (Mcb2)	93.8-97.5m very light gray(N8) beforsite (φ=3 to 5mm) with pale green apatite (φ=5mm, max 3 to 5cm) and sulfides	0	8-95(G)	95.0	95.5	0.5
100	#3#3#3#3#	phlogopite-rich beforsite(Mcb2)	97.5-99.5m very light gray beforsite with phlogopite, amphibole, magnetite	0	8-100(G, W)	100.0	105.5	0.5

B-6 Drilling Logs of the Orange Area (15)

MJNO-8 100～150m

Depth (m)	Geologic Colum	Rock Name & (Rock Code)	Description	Weath-ering	Sampling Number & (Type of Test)	Sampling Interval From (m)	to (m)	Width (m)
100	#4#4#4#4#		99.5-137.5m					
	#4#4#4#4#							
	#4#4#4#4#		very light gray(N8) beforsite(ϕ=2 to 3					
105	#4#4#4#4#		mm) rich in pale green apatite and with		8-105(G)	105.0	105.5	0.5
	#4#4#4#4#		pale to dark green, black minerals,					
	#4#4#4#4#		and sulfides(pyrite, and pyrrhotite)					
	#4#4#4#4#							
110	#4#4#4#4#		102.0-103.0m		8-110(G)	110.0	110.5	0.5
	#4#4#4#4#		pale green apatite rich parts					
	#4#4#4#4#							
	#4#4#4#4#		104.0 to 106.0m					
115	#4#4#4#4#		sulfides (pyrite and pyrrhotite) rich		8-115(G)	115.0	115.5	0.5
	#4#4#4#4#		parts					
	#4#4#4#4#							
	#4#4#4#4#		116.2 to 116.8m					
120	#4#4#4#4#	apatite-rich	brown, dark green and black minerals	0	8-120(G,W)	120.0	120.5	0.5
	#4#4#4#4#	beforsite	rich parts		8R-1(I)	120.0	120.1	0.1
	#4#4#4#4#	(Mcb2)						
	#4#4#4#4#							
125	#4#4#4#4#				8-125(G)	125.0	125.5	0.5
	#4#4#4#4#							
	#4#4#4#4#							
	#4#4#4#4#							
130	#4#4#4#4#				8-130(G)	129.0	129.5	0.5
	#4#4#4#4#							
	#4#4#4#4#							
	#4#4#4#4#							
135	#4#4#4#4#				8-135(G)	135.0	135.5	0.5
	#4#4#4#4#							
	#4#4#4#4#		clear contact boundary (∠60°)		8-137(G,W)	137.3	137.8	0.5
	V V V V V		137.5-145.5m					
140	V V V V V							
	V V V V V	trachyte	light gray trachyte dyke	0				
	V V V V V	dyke			8T-5(T)	142.8	142.9	0.1
	V V V V V	(Ktd)						
145	V V V V V		clear contact boundary (∠60°)		8-145(G)	145.0	145.5	0.5
	#3#3#3#3#		145.5-150.4m					
	#3#3#3#3#	phlogopite-rich	very light gray beforsite(ϕ= 2 to 3mm	0				
	#3#3#3#3#	beforsite	max.1 to 2cm) with phlogopite, magnetite					
150	#3#3#3#3#	(Mcb2)	150.4m		8-150(G)	150.0	150.5	0.5

B-6 Drilling Logs of the Orange Area (16)



The Mineral Exploration
in the Orange and Kalkfeld Areas,
the Republic of Namibia

Phase 2

Fig. II − 1 − 2
Geological Map of the Orange Area

JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

February 1995

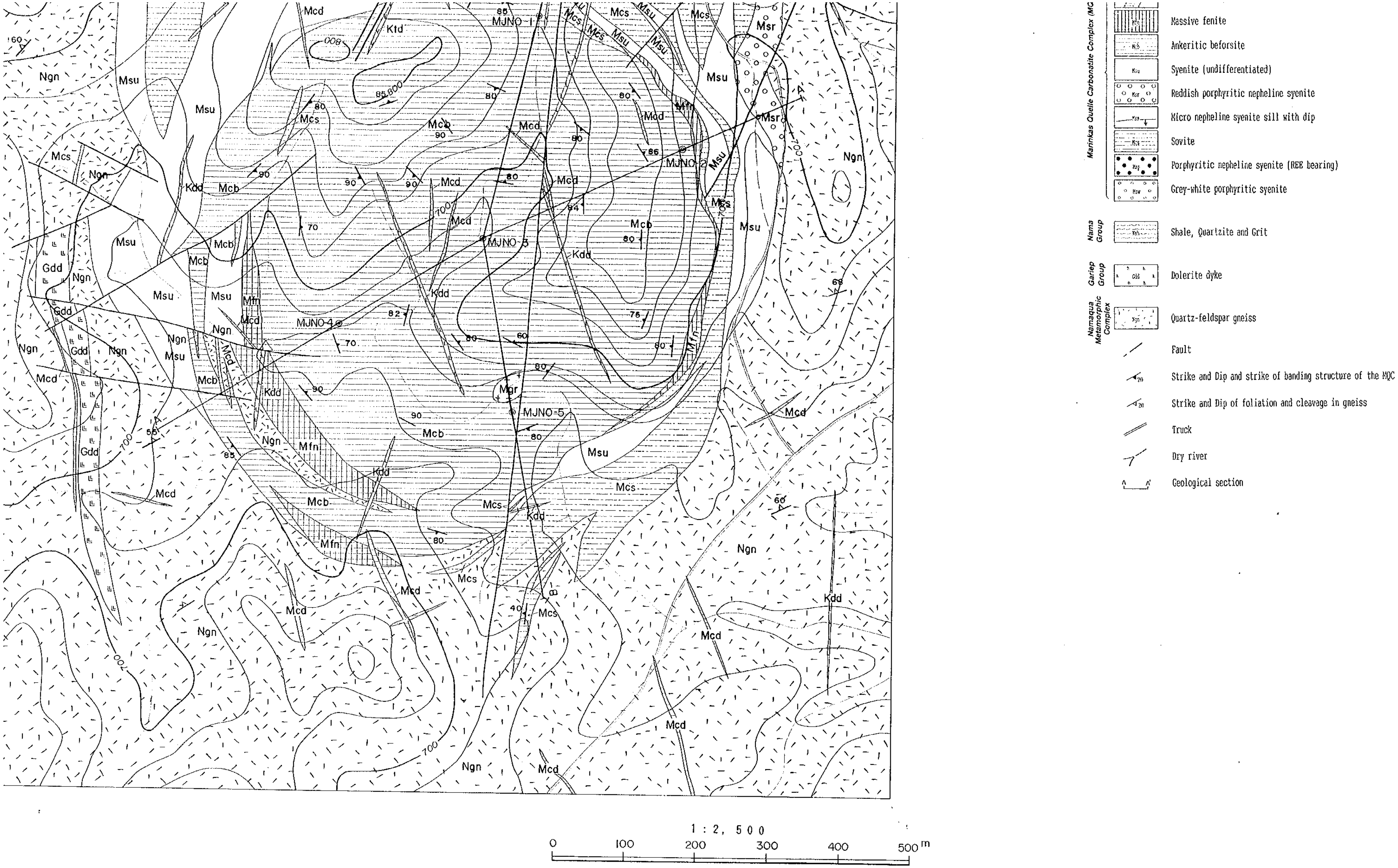
LEGEND

Post- to Syn-Karoo Intrusions

Ktd — Trachyte dyke

Kdd — Dolerite dyke

Mgr — Granophyres and Micro-granite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Msu
Mcs
Mcd
Mcb
Mfn
Msr
Kdd
Ktd
Gdd
Mgr
MJNO-1
MJNO-2
MJNO-3
MJNO-4
MJNO-5
700
800
Marinkas Quelle Carbonatite Complex (MG
Massive fenite
Ankeritic beforsite
Syenite (undifferentiated)
Reddish porphyritic nepheline syenite
Micro nepheline syenite sill with dip
Sovite
Porphyritic nepheline syenite (REE bearing)
Grey-white porphyritic syenite
Nama Group
Shale, Quartzite and Grit
Gariep Group
Dolerite dyke
Namaqua Metamorphic Complex
Quartz-feldspar gneiss
Fault
Strike and Dip and strike of banding structure of the MQC
Strike and Dip of foliation and cleavage in gneiss
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Dry river
Geological section
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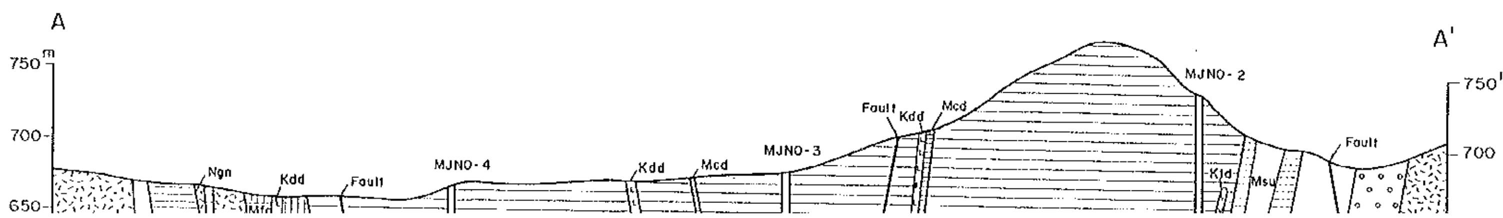
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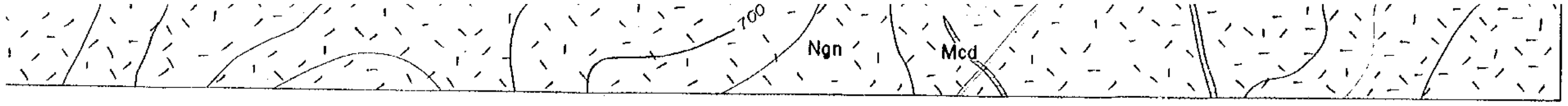
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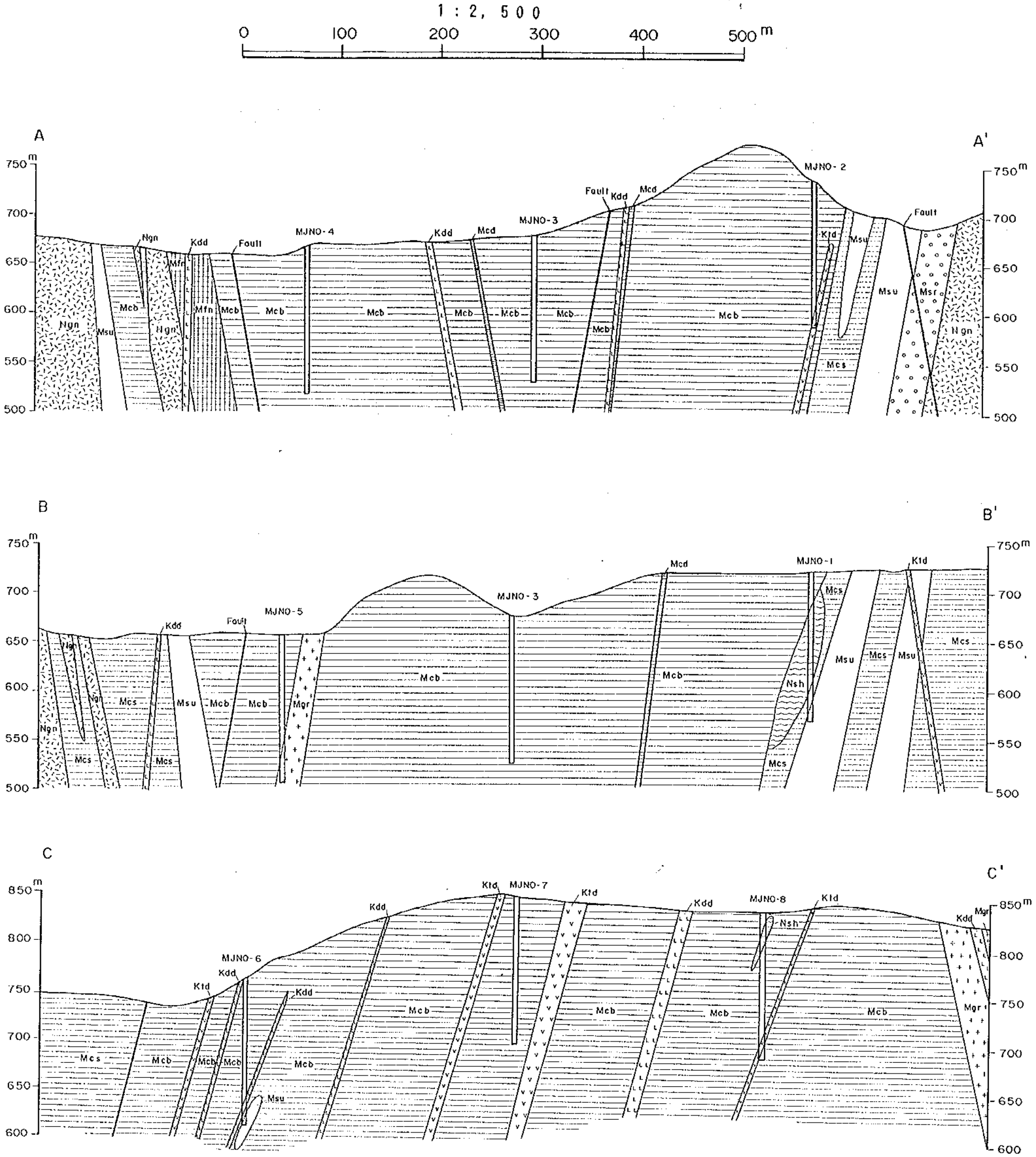
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Msr
Mcb
Mcs
B
B'
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Nsh
C
C'
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800
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MJNO-7
MJNO-8