

(Major element content in per cent; minor elements in ppm.)

	No. of Analysis Unit*	Analysis Unit																
		SiO ₂	TiO ₂	Al ₂ O ₃	FeO ₂	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O	P ₂ O ₅	Cu	Zn	Ni	Cr	Sr	Rb	
Brent	18	a	68.4	0.21	15.9	4.31	1.05	1.45	0.05	3.52	4.33	1.29	0.08	11	70	5	13	1300
	11	b	58.8	0.04	14.7	6.60	2.73	0.09	2.69	9.70	1.22	0.00	0.00	..	..	..	..	78
	6	c	58.8	0.04	14.7	6.60	2.73	0.09	2.69	9.70	1.22	0.00	0.00	..	..	..	..	78
New Quebec	4	a	32.2	4.31	17.1	0.24	2.28	1.03	0.09	3.47	9.13	0.43	0.31	13	25	65	40	360
	1	b	63.6	0.47	15.4	14.8	8.3	15.9	0.17	0.80	3.74	0.2	0.27	..	..	..	..	140
	1	b	68.6	0.47	15.4	14.8	8.3	15.9	0.17	0.80	3.74	0.2	0.27	..	..	..	..	140
Mistatin	10	a	65.5	0.50	15.8	4.3	1.8	3.2	0.06	3.7	0.08	0.1	..	..	..	..	..	..
	4	b	56.5	1.20	17.8	7.2	1.8	3.0	0.05	4.1	5.0	0.6	0.17	..	..	..	..	..
	4	b	56.5	1.20	17.8	7.2	1.8	3.0	0.05	4.1	5.0	0.6	0.17	..	..	..	..	..
Lake St. Martin	3	c	61.4	0.36	15.5	5.5	3.7	6.3	0.08	4.6	2.2	1.3	0.8	31	33	..	..	151
Elst Clairwater	6	a	63.2	0.51	15.6	4.8	3.1	1.8	0.05	4.34	4.25	..	..	..	..	..	..	..
	3	b	63.5	0.89	21.0	4.8	3.1	3.3	0.08	3.8	3.1	0.9	0.21	20	50	12	10	20
West Clairwater	12	a	62.8	0.70	15.8	4.6	2.8	5.8	2.1	1.14	1.65	6.40	4.21	0.41	3	40	10	..
	16	b	62.8	0.71	16.7	5.25	2.38	4.82	0.09	4.31	3.31	0.76	0.25	20	25	780	290	..
	8	b	57.2	0.89	16.2	5.0	2.07	4.00	0.08	3.91	3.41	0.26	0.30	67	295	<5	510	70
	12	c	60.4	0.73	15.9	6.30	2.67	4.48	0.05	3.12	3.00	1.33	0.30	19	70	20	30	80
Carwell	14	a	58.7	0.54	11.9	17.0	5.8	15.7	3.2	0.61	1.1	10.9	0.30	..	..	..	..	110
	4	b	57.2	0.32	12.2	6.0	2.90	4.02	0.16	2.17	5.17	4.2	0.3	0.11	25	80	35	..
	7	b	60.8	0.89	16.2	6.0	2.90	4.02	0.16	2.17	5.17	4.2	0.3	0.11	25	80	35	..
Steen River	3	a	66.70	0.42	15.30	4.10	1.24	2.54	5.08	..	2.47	2.61	6.41	0.27	..	..	..	..
	3	a	66.70	0.42	15.30	4.10	1.24	2.54	5.08	..	2.47	2.61	6.41	0.27	..	..	..	..
	3	b	64.76	0.42	14.49	3.74	1.51	2.22	4.44	..	2.82	5.27	3.48	0.12	..	..	..	..
Sandbury	34	a	55.2	0.8	16.9	8.4	7.4	4.1	7.4	4.1	..	..	..	..	..	..	..	..
	0	a	70.0	0.40	13.21	5.1	2.2	2.8	0.03	4.2	2.6	1.4	1.3	0.2	..	..	..	..
	0	a	66.9	0.27	13.73	6.2	2.3	2.9	0.09	4.3	2.2	1.4	1.3	0.2	..	..	..	..
	1	b	58.9	0.40	15.56	8.7	4.8	5.5	0.28	4.2	3.5	2.2	0.09	..	..	..	..	..
Matounguan	38	a	58.0	0.00	20.4	4.3	2.6	5.9	0.09	4.7	2.7	1.4	0.25	..	..	..	..	..
	18	b	55.1	0.74	19.0	6.4	3.7	4.8	0.14	3.3	3.5	2.7	1.4	0.25	..	..	..	..
	37	a	57.5	0.74	18.3	6.3	3.6	5.7	0.17	3.1	3.0	1.4	0.25	..	..	..	..	..
	4	c	58.9	1.16	17.6	9.3	5.4	4.4	0.80	0.18	3.9	1.4	1.5	0.29	..	..	..	..
Chateaux	3	c	61.7	0.39	16.5	6.3	3.0	2.4	0.08	2.5	5.1	0.80	0.17	..	..	..	..	..
Average country rock	6		59.05	0.09	16.5	4.07	1.82	3.34	0.08	3.83	5.83	0.5	0.51	..	..	..	..	..
Average Precambrian	6		60.4	0.06	17.2	4.65	1.85	3.03	0.08	3.26	4.22	1.72	0.28	..	..	..	..	..
	6		60.4	0.06	17.2	4.65	1.85	3.03	0.08	3.26	4.22	1.72	0.28	..	..	..	..	..

* a, country rock; b, igneous breccia; c, saline igneous rock; c₁, basaltic igneous rock; c₂, pseudotachylite.
† After Zaidi et al. (1980).

a, country rock; b, igneous breccia; c₁, salt igneous rock; c₂, basic igneous rock; c₃, pseudotachylite
† After Eade et al. [1966].

ORIGIN OF IGNEOUS ROCKS

[illegible]

1. Average leucocratic garnet gneiss (4 analyses).
2. Average garnet gneiss (8 analyses).
3. Average granite (6 analyses).
4. Average Precambrian rock in the center (18 analyses).
5. Average trachyte (6 analyses).
6. Average monchuluite (4 analyses).
7. Average non-metamorphosed breccia (6 analyses).
8. Average metamorphosed breccia (11 analyses).

East Clearwater Lake crater is crudely uplifted

quadrilateral, roughly 22 km on a side, cut relative to Archean granulitic rocks ranging from gabbroic to granitic composition. Beneath the in dis-

lake, a central core of shocked Precambrian rocks [Dence, 1968] is surrounded by a ring of igneous rocks grading downward from igneous meta-

metre into massive, green dactyl with radio-
metric age 265 m.y. (Shalgulish, unpublished
data). In Table 4 the average composition of

the basement rocks as computed by *Leake et al.* [1966] and by *Bostock* [1969] is compared with (m.y.)

though the compositions are all very similar, and with the igneous rocks. Al-
though the compositions are all very similar,
the igneous rocks contain more potassium, much

more zinc, nickel and chromium, and less sodium than the country rocks. The rocks of the central
