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Title of article Compositional Variations Caused by Phenocryst Sorting at Cerro Negro Volcano, Nicaragua

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TABLE A

MODAL ANALYSES OF CERRO NEGRO LAVAS, VOLUME %

Age	Sample	Plagioclase	Augite	Olivine	Opaques	Groundmass
1923	CN-12	31.5	2.9	2.9	0.0	62.7
1947	CN-11	26.9	4.0	3.9	0.2	65.0
1947	CN-10	26.3	3.9	6.3	0.3	63.2
1957-60	CN-5	16.6	12.1	7.1	0.0	64.2
1957-60	CN-3	20.4	6.0	10.6	0.1	62.9
1957-60	CN-4	17.7	10.1	7.8	0.0	64.4
1957-60	CN-9	24.4	4.8	4.3	0.2	66.3
1957-60	CN-8	28.2	2.0	5.9	0.3	63.6
1957-60	CN-1	30.2	2.4	4.1	0.6	62.7
1957-60	CN-7	26.2	0.6	1.8	0.2	71.2
1968	CN-6	30.3	1.0	1.3	0.3	67.1
1968	CN-2	29.5	2.5	4.2	0.5	63.3
1971	CN-13	36.3	4.0	2.3	0.4	57.0

Notes:

A minimum of 1000 pts. counted

TABLE B

REPRESENTATIVE MICROPROBE ANALYSES OF SILICATE PHENOCRYSTS IN CERRO NEGRO LAVAS, WT%

	plagioclase		olivine		clinopyroxene	
	1	2	3	4	5	6
SiO_2	46.08	45.49	37.67	36.96	51.78	52.86
TiO_2	--	--	--	--	0.36	0.14
Al_2O_3	34.19	33.94	--	--	1.73	0.59
FeO	0.62	0.66	25.58	23.45	8.89	8.38
MnO	--	--	0.32	0.37	0.37	0.62
MgO	0.00	0.05	36.85	38.10	15.66	15.29
CaO	17.70	18.19	0.20	0.22	20.69	22.22
Na_2O	0.98	1.09	--	--	0.00	0.00
K_2O	0.00	0.04	--	--	0.00	0.00
NiO	--	--	0.00	0.00	--	--
Cr_2O_3	--	--	--	--	0.00	0.09
Total	99.57	99.46	100.61	99.10	99.48	100.19

Notes: Microprobe analyses were done on an energy dispersive elctron microbe system at Dalhousie University (Clarke, 1976)

1) plagioclase phenocryst core, 1923 lava, $An_{90.0}$ $Ab_{9.1}$
2) plagiocalse phenocryst core, 1968 lava, $An_{90.0}$ $Ab_{9.8}$ $Or_{0.2}$
3) olivine phenocryst core, 1923 lava, $Fo_{71.7}$ $Fa_{28.3}$
4) olivine phenocryst core, 1957-1960 lava, $Fo_{74.0}$ $Fa_{26.0}$
5) clinopyroxene phenocryst core, 1923 lava, $Wo_{41.9}$ $En_{44.1}$ $Fs_{14.0}$
6) clinopyroxene phenocryst core, 1968 lava, $Wo_{44.4}$ $En_{42.5}$ $Fs_{13.1}$

TABLE C

WHOLE-ROCK ANALYSES
A. CERRO NEGRO

Age	1923	1947	1947	1957@	1957@	1957@
Sample	CN-12	CN-11	CN-10	CN-5	CN-3	CN-4
Wt%						
SiO_2	48.80	49.30	49.40	48.90	49.40	48.60
TiO_2	0.74	0.73	0.73	0.65	0.70	0.65
Al_2O_3	18.00	19.30	18.80	15.30	16.90	14.40
FeO*	10.00	9.90	10.40	10.80	10.20	11.00
MnO	0.19	0.19	0.19	0.20	0.19	0.20
MgO	6.46	5.21	6.00	9.59	7.58	9.97
CaO	12.00	12.30	11.90	11.50	11.30	11.30
Na_2O	2.04	1.99	2.00	1.85	2.03	1.78
K_2O	0.34	0.35	0.37	0.35	0.42	0.35
P_2O_5	0.11	0.12	0.11	0.11	0.08	0.06
H_2O+	0.22	0.22	0.18	0.10	0.10	0.08
Total	98.90	99.61	100.08	99.35	98.90	98.39
ppm						
Rb	6	6	5	7	8	5
Ba	357	352	350	322	370	318
Sr	461	485	462	379	412	381
V	316	325	331	292	281	283
Cr	77	43	54	124	92	108
Ni	30	24	27	68	49	262
K/Rb	470	484	614	415	436	581
K/Ba	8	8	9	9	9	9

TABLE C (cont.)

1957@	1957@	1957@	1957@	1968	1968	1971
CN-9	CN-8	CN-1	CN-7	CN-6	CN-2	CN-13
50.10	50.20	50.80	49.70	50.40	50.10	48.90
0.74	0.78	0.77	0.75	0.83	0.76	0.75
17.90	18.80	19.50	20.40	20.00	19.90	19.00
10.40	10.10	9.70	9.30	9.60	9.90	9.50
0.19	0.18	0.18	0.17	0.18	0.18	0.19
6.38	4.95	4.73	3.89	3.69	4.48	4.77
11.40	11.40	11.50	11.80	11.40	11.80	12.00
2.12	2.26	2.20	2.19	2.38	2.23	2.17
0.42	0.46	0.46	0.44	0.47	0.41	0.40
0.12	0.16	0.08	0.14	0.14	0.07	0.11
0.24	0.11	0.25	0.19	0.32	0.14	0.35
100.01	99.40	100.17	98.97	99.41	99.97	98.14
5	11	9	5	6	10	9
391	429	421	403	448	393	388
440	474	491	509	517	496	498
308	302	319	299	319	304	333
57	41	37	23	13	27	31
32	28	28	117	22	138	11
697	347	424	730	650	340	369
9	9	9	9	9	9	9

Notes: Whole-rock analyses by DC plasma emission spectrometry at Rutgers University (Carr and Walker, 1981)

*total Fe as FeO

@1957-1960 lavas