

Table T1. Major and trace element analyses of volcanoclastic sediments. (See table notes.) (Continued on next three pages.)

Core, section: Interval (cm):	310-M0008A-4R-1 22–28	310-M0008A-5R-1 15–20	310-M0008A-6R-1 5–9	310-M0008A-7R-CC 4–13	310-M0008A-8R-1 42–51	310-M0008A-8R-1 61–80
Sample	Gray sand/silt	Gray sand/silt	Gray sand/silt	Boulder	Boulder	Cobble
Major element oxides (wt%)						
SiO ₂	32.79	29.86	40.32	42.15	42.68	42.32
TiO ₂	2.97	2.83	3.66	3.15	3.13	1.77
Al ₂ O ₃	13.22	11.92	11.67	15.56	15.83	8.51
FeO*	11.72	10.91	12.82	10.94	11.03	9.75
MnO	0.15	0.14	0.17	0.16	0.17	0.17
MgO	9.99	9.67	10.44	4.98	6.04	16.76
CaO	7.63	9.12	10.15	9.58	9.98	12.02
Na ₂ O	1.98	1.79	2.16	1.79	2.65	1.21
K ₂ O	0.81	0.71	1.11	1.21	1.07	0.44
P ₂ O ₅	0.30	0.26	0.36	0.69	0.66	0.14
LOI	10.36	11.56	6.45	1.90	2.18	1.88
Trace elements by XRF (ppm)						
Ni	241	248	244	50.9	54.1	381
Cr			732			
Sc			30			
V			327			
Ba	100	211	282	398	319	125
Rb	23.2	21.4	24	22.8	22.5	11.1
Sr	432	544	473	675	662	258
Zr			262			
Y			25			
Nb			38.7			
Ga			18			
Cu	54.1	61.2	58	93.9	88.2	45.2
Zn	104	97	127	95	94	68
Pb			2			
La			36			
Ce			62			
Th			2			
Nd			35			
U			5			
Trace elements by ICP-MS (ppm)						
Rb	26.1	21.9	23.4	9.6	16.0	4.5
Sr	570	636	504	365	770	185
Y	26.9	25.4	28.6	4.9	26.9	7.1
Ba	288	255	300	258	372	97
La	35.11	31.26	34.52	4.53	34.34	6.00
Ce	73.83	65.87	73.95	44.67	81.04	18.46
Pr	10.41	9.51	10.87	1.35	10.40	2.02
Nd	42.61	39.18	44.45	5.82	42.65	9.23
Sm	8.88	8.26	9.34	1.17	8.90	1.96
Eu	2.69	2.53	2.77	0.36	2.81	0.53
Tb	1.15	1.04	1.13	—	1.16	—
Dy	5.98	5.55	6.08	0.94	6.06	1.57
Ho	1.02	0.93	1.02	—	1.06	—
Er	2.44	2.32	2.53	0.31	2.64	0.48
Tm	0.34	0.31	0.34	—	0.37	—
Yb	1.87	1.83	2.07	0.15	2.13	0.21
Lu	0.29	0.26	0.28	—	0.31	—
Pb	3.5	2.8	3.7	5.4	3.5	2.0
Th	3.4	2.6	3.2	0.5	2.8	0.4
U	5.5	2.6	2.3	1.3	1.3	0.4
La/Sm _N	2.55	2.45	2.39	2.51	2.49	1.98
Carbon (wt%)						
Total	1.00	1.36	0.37			
Organic	0.68	0.66	0.22			
Inorganic	0.33	0.70	0.15			

Table T1 (continued). (Continued on next page.)

Core, section: Interval (cm):	310-M0008A-8R-1 84–89	Duplicate	310-M0008A-8R-1 107–111	Duplicate	310-M0008A-9R-CC 0–5	310-M0008A-10R-1 27–30	310-M0008A-14R-1 0–10
Sample	Gray sand/silt		Brown sand/silt		Pebble	Pebble	Pebble
Major element oxides (wt%)							
SiO ₂	41.23	41.42	41.26		41.01	37.80	44.03
TiO ₂	3.95	3.97	3.86		3.46	2.90	4.07
Al ₂ O ₃	10.97	11.06	11.27		15.87	9.69	16.50
FeO*	14.71	14.57	14.55		11.14	11.61	9.29
MnO	0.15	0.15	0.15		0.18	0.17	0.13
MgO	10.82	10.90	11.57		4.33	14.22	3.07
CaO	6.17	6.21	6.84		8.96	9.12	8.89
Na ₂ O	2.02	2.00	1.72		3.19	1.56	2.14
K ₂ O	0.96	0.96	0.77		1.45	0.95	2.01
P ₂ O ₅	0.29	0.29	0.31		0.51	0.25	0.90
LOI	8.22	8.22	7.46	7.35	3.83	9.74	5.77
Trace elements by XRF (ppm)							
Ni	403	405	448		66.1	453	90.9
Cr	862	875	778				
Sc	32	31	32				
V	320	326	308				
Ba	256	256	255		503	320	750
Rb	18	18	14		30.9	23.2	40.1
Sr	307	304	323		646	414	754
Zr	242	236	246				
Y	23	24	25				
Nb	40.8	40.3	42.4				
Ga	18	19	19				
Cu	65	64	52		113	67.8	51.1
Zn	145	147	129		99	98	89
Pb	1	3	2				
La	35	34	37				
Ce	63	68	66				
Th	3	9	3				
Nd	35	37	39				
U	2	1	1				
Trace elements by ICP-MS (ppm)							
Rb	15.0		10.9		45.3	18.1	17.5
Sr	369		357		887	419	612
Y	30.8		28.4		34.1	15.9	12.0
Ba	282		281		595	323	648
La	37.34		36.98		45.96	27.65	14.13
Ce	81.74		81.42		103.00	59.17	31.86
Pr	11.56		11.62		12.88	8.34	4.40
Nd	46.34		47.60		52.13	33.87	18.43
Sm	9.83		10.11		10.62	6.93	3.78
Eu	3.00		3.09		3.35	2.12	1.24
Tb	1.17		1.19		1.45	0.89	0.62
Dy	6.38		6.50		7.66	4.41	2.50
Ho	1.05		1.05		1.36	0.73	—
Er	2.67		2.62		3.39	1.61	0.90
Tm	0.35		0.34		0.48	0.24	—
Yb	2.12		2.04		2.78	1.18	0.58
Lu	0.29		0.28		0.41	0.19	—
Pb	3.2		2.9		5.3	2.6	5.5
Th	3.7		3.6		4.2	1.8	1.5
U	1.9		1.1		1.8	1.0	1.0
La/Sm _N	2.45		2.36		2.80	2.58	2.42
Carbon (wt%)							
Total	0.07		0.03	0.03			
Organic	0.05		0.02	0.02			
Inorganic	0.02		0.01	0.01			

Table T1 (continued). (Continued on next page.)

Core, section: Interval (cm):	310-M0008A-14R-1 24–28	310-M0008A-16R-1 55–60	310-M0008A-16R-1 115–120	310-M0008A-17R-1 0–5	310-M0008A-17R-1 10–15	310-M0008A-17R-1 18–23	310-M00010A-1R-1 22–26
Sample	Brown sand/silt	Brown sand/silt	Brown clay/sand	Pebble	Pebble	Pebble	Gray sand
Major element oxides (wt%)							
SiO ₂	41.44	38.90	31.37	43.59	45.15	47.06	37.88
TiO ₂	3.22	3.39	3.84	3.33	3.69	3.64	2.91
Al ₂ O ₃	12.04	14.80	13.88	14.85	14.96	16.66	11.12
FeO*	14.20	14.44	14.93	10.96	10.51	10.25	11.06
MnO	0.16	0.21	0.36	0.15	0.16	0.16	0.14
MgO	4.96	5.15	2.95	5.59	4.48	5.08	10.50
CaO	1.36	1.60	1.44	9.37	7.63	9.98	12.77
Na ₂ O	1.91	1.97	2.02	1.57	3.36	2.46	2.14
K ₂ O	0.73	0.76	0.84	1.48	2.04	1.81	1.01
P ₂ O ₅	0.05	0.23	0.32	0.58	0.88	0.88	0.32
LOI	21.07	16.98	21.72	2.13	2.38	1.37	10.30
Trace elements by XRF (ppm)							
Ni	230	305	286	100	30.8	73.3	243
Cr							646
Sc							29
V							266
Ba	288	279	324	361	523	480	262
Rb	35.8	29.6	37.5	31.2	56.8	40.5	22
Sr	287	370	422	609	808	722	782
Zr							223
Y							21
Nb							33.7
Ga							17
Cu	51.3	66.0	70.6	69.1	72.7	69.0	43
Zn	113	124	122	103	120	116	103
Pb							1
La							31
Ce							60
Th							2
Nd							33
U							3
Trace elements by ICP-MS (ppm)							
Rb	45.9	37.7	45.7	13.4	78.6	45.1	23.8
Sr	357	474	656	281	1166	773	803
Y	35.2	39.2	42.7	8.0	46.6	36.3	21.5
Ba	367	581	852	192	684	484	258
La	42.93	50.21	55.05	9.22	67.17	47.85	27.81
Ce	89.93	114.58	112.55	21.13	148.39	104.19	57.87
Pr	13.12	14.92	16.51	2.70	21.42	14.77	8.38
Nd	52.45	59.42	64.94	11.24	81.78	58.43	34.56
Sm	11.00	12.14	13.23	2.28	15.83	11.65	7.20
Eu	3.29	3.76	4.14	0.65	4.87	3.59	2.18
Tb	1.29	1.40	1.51	0.45	1.70	1.34	0.93
Dy	7.24	7.79	8.55	1.56	9.75	7.39	4.80
Ho	1.20	1.28	1.38	0.35	1.49	1.19	0.83
Er	3.16	3.40	3.66	0.54	3.95	3.03	2.03
Tm	0.41	0.44	0.47	—	0.48	0.39	0.29
Yb	2.58	2.81	3.03	0.33	3.17	2.44	1.57
Lu	0.34	0.37	0.39	—	0.39	0.32	0.24
Pb	4.3	4.4	4.6	3.8	6.2	4.0	2.6
Th	4.3	5.5	5.7	1.2	5.8	4.6	2.5
U	1.9	2.9	6.2	1.4	1.9	1.7	1.9
La/Sm _N	2.52	2.67	2.69	2.62	2.74	2.66	2.50
Carbon (wt%)							
Total	0.01	0.03	0.01				1.20
Organic	0.01	0.01	0.01				0.19
Inorganic	0.00	0.02	0.00				1.01

Table T1 (continued).

Core, section: Interval (cm):	310-M0010A-2R-1 23–27	310-M0021B-18R-1 32–33	310-M0021B-18R-1 55–58	310-M0021B-19R-1 11–13	310-M0021B-20R-1 83–85	310-M0021B-20R-1 116–118
Sample	Gray sand	Gray sand	Calcareous sand	Gray sand	Light brown sand	Light brown sand
Major element oxides (wt%)						
SiO ₂	38.12		7.91			
TiO ₂	3.10		0.79			
Al ₂ O ₃	11.04		2.41			
FeO*	11.22		2.77			
MnO	0.15		0.04			
MgO	10.20		5.07			
CaO	12.82		43.23			
Na ₂ O	2.13		0.62			
K ₂ O	1.02		0.22			
P ₂ O ₅	0.32		0.13			
LOI	9.42	35.23	36.92	25.75	16.98	22.10
Trace elements by XRF (ppm)						
Ni	230		47			
Cr	656		140			
Sc	30		7			
V	277		74			
Ba	260		49			
Rb	23		9			
Sr	751		3571			
Zr	232		68			
Y	21		5			
Nb	34.1		9.6			
Ga	16		3			
Cu	44		14			
Zn	106		26			
Pb	1		1			
La	28		1			
Ce	54		7			
Th	2		5			
Nd	33		7			
U	3		3			
Trace elements by ICP-MS (ppm)						
Rb	25.7	7.8	4.8	10.5	13.2	14.7
Sr	877	1893	2238	1435	580	751
Y	22.2	3.4	4.2	4.6	9.8	11.2
Ba	283	20	26	38	98	126
La	30.82	2.82	3.34	4.95	11.21	10.64
Ce	64.49	5.98	7.12	10.47	24.77	23.92
Pr	9.34	0.84	1.00	1.46	3.37	3.20
Nd	38.47	3.87	4.50	6.33	14.04	13.53
Sm	7.96	0.74	0.90	1.23	2.81	2.89
Eu	2.42	0.14	0.21	0.28	0.78	0.84
Tb	1.02	—	—	—	0.52	0.54
Dy	5.40	0.65	0.77	0.95	1.99	2.10
Ho	0.92	—	—	—	—	—
Er	2.26	0.12	0.20	0.24	0.72	0.77
Tm	0.31	—	—	—	—	—
Yb	1.79	—	0.02	0.04	0.46	0.52
Lu	0.26	—	—	—	—	—
Pb	2.8	0.8	0.7	1.5	2.1	2.1
Th	1.4	0.5	0.5	0.5	1.5	1.5
U	2.5	2.2	1.7	1.9	2.0	2.6
La/Sm _N	2.50	2.46	2.39	2.59	2.58	2.38
Carbon (wt%)						
Total	1.23	11.46	5.99	7.31	3.83	4.18
Organic	0.17	0.20	0.96	0.19	0.05	0.13
Inorganic	1.06	11.26	5.02	7.12	3.78	4.05

Notes: LOI = loss on ignition, XRF = X-ray diffraction, ICP-MS = inductively coupled-mass spectrometry. — = below detection limit, empty cells = not analyzed.