

Figure DR1

Unfiltered whole-rock analyses in the Great Basin/Nevadaplano region from 200 Ma to 20 Ma compiled from NAVDAT (www.navdat.org) and Best et al. (2009). Dashed lines and shaded boxes show the limits to data filters used for Sr/Y analysis in this study. Solid gray line is an interpreted trend through the data. A: MgO-SiO₂ Harker variation diagram showing scatter in the relationship. B: Sr depletion by crystallization of feldspar during advanced magmatic differentiation (>~70 SiO₂ wt%) results in an increase in Rb/Sr and decrease in Sr/Y.

Best, M.G., Barr, D.L., Christiansen, E.H., Gromme, S., Deino, A.L., and Tingey, D.G., 2009, The Great Basin Altiplano during the middle Cenozoic ignimbrite flareup: Insights from volcanic rocks: *International Geology Review*, v. 51, p. 589–633, doi:10.1080/00206810902867690.

Table DR1

Data used to calculate Sr/Y for data subsets (Areas). These analyses have been filtered to remove SiO₂ wt. % < 55, SiO₂ wt. % > 70, MgO wt. % < 1, MgO wt. % > 6, and Sr/Y outliers using the Thomson Tau method. Data is from the Western North American Volcanic and Intrusive Rock Database (NAVDAT; <http://www.navdat.org/>, accessed April 2015), unless otherwise noted.

References for other data sources:

Best, M.G., Barr, D.L., Christiansen, E.H., Gromme, S., Deino, A.L., and Tingey, D.G., 2009, The Great Basin Altiplano during the middle Cenozoic ignimbrite flareup: Insights from volcanic rocks: *International Geology Review*, v. 51, p. 589–633, doi: 10.1080/00206810902867690.

Stuck, R.J., 1993, Petrology and geochemistry of a Late Cretaceous granitoid suite, Santa Rosa Mountain Range, Humboldt County, Nevada [M.S. thesis]: Miami University, 179 p.

Table DR2

Data Subsets (Areas) that are plotted in Figure 3 and shown in Figure 1 as squares. Age, Sr/Y, Rb/Sr, latitude, and longitude are calculated from the data presented in Table DR1. Moho depth is calculated using the equation presented in Figure 2.

Table DR3

Data Subsets (Areas) that were discarded based on Sr/Y uncertainty >10, avg. Rb/Sr <0.05, and Rb/Sr > 0.2. Location of data are shown in Figure 1 as circles. Age, Sr/Y, Rb/Sr, latitude, and longitude are calculated from the data presented in Table DR1. Moho depth is calculated using the equation presented in Figure 2.

Table DR4

Geochemical Data for Quaternary rock analyses used to calculate Sr/Y. These analyses have been filtered to remove SiO₂ wt. % < 55, SiO₂ wt. % > 70, MgO wt. % < 1, MgO wt. % > 6, Rb/Sr > 0.2, Rb/Sr < 0.05, and Sr/Y outliers using the Thomson Tau method. Data is from Geochemistry of Rocks of the Oceans and Continents database (GEOROC; <http://georoc.mpch-mainz.gwdg.de/georoc/>, accessed April 2015).

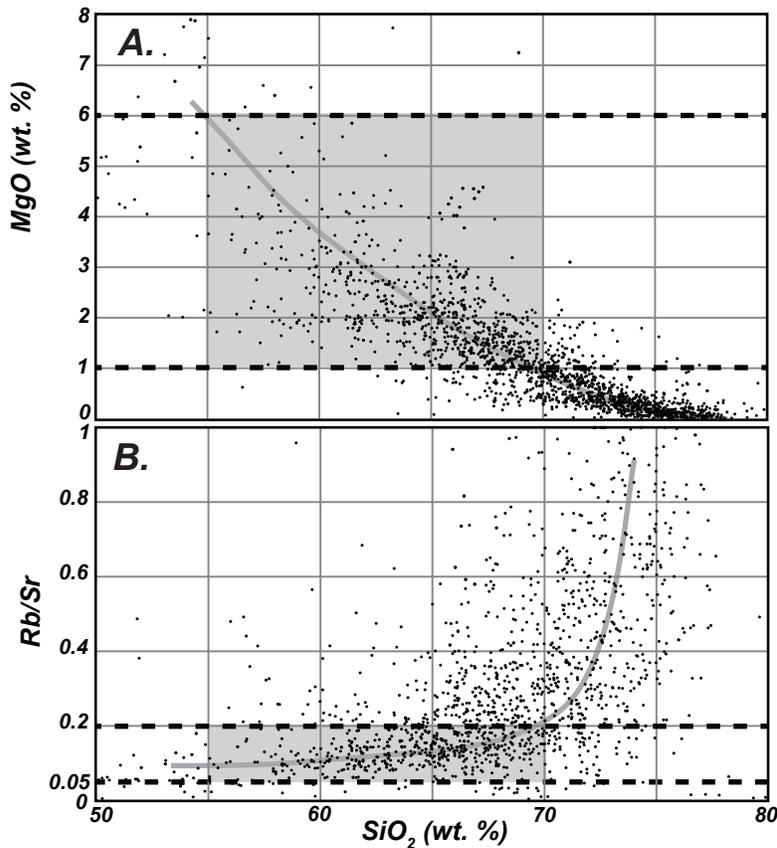
Table DR5

Compiled data for individual arcs, used to construct Figure 2. Sr/Y is calculated from data presented in Table DR4. Moho depth data is reported from the “Moho source” column. Zellmer (2008) is the same source of data that was used by Chiaradia (2015) for his correlation between Sr/Y and crustal thickness.

References for Moho data:

- Brown, S., and H. Gurrola, 2002, Receiver function analysis of the crust and upper mantle beneath Puerto Rico: *Eos Transactions, AGU*, 83(46), Fall Meet. Suppl., F957.
- Chamot-Rooke, N., Gaulier, J.M., and Jestin, F., 1999, Constraints on Moho depth and crustal thickness in the Liguro-Provençal basin from 3D gravity inversion: geodynamic implications: in: Derand, B., et al., eds., *The Mediterranean Basins: Tertiary Extension within the Alpine Orogen*. - Geological Society of London Special Publication 156, p. 37-62.
- Chiaradia, M., 2015, Crustal thickness control on Sr/Y signatures of recent arc magmas: an Earth scale perspective: *Scientific Reports*, v. 5, doi:10.1038/srep08115.
- Dimalanta, C., Taira, A., Yumul Jr., G.P., Tokuyama, H., and Mochizuki, K., 2002, New rates of western Pacific island arc magmatism from seismic and gravity data: *Earth and Planetary Science Letters*, v. 202, p. 105-115.
- Eberhart-Phillips, D., Christensen, D.H., Brocher, T.M., Hansen, R., Ruppert, N.A., Haeussler, P.J., and Abers, G.A., 2006, Imaging the transition from Aleutian subduction to Yakutat collision in central Alaska, with local earthquakes and active source data: *Journal of Geophysical Research*, v. 111, B11303, doi:10.1029/2005JB004240.
- Guillier, B., Chatelain, J.-L., Jaillard, É., Yepes, H., Poupinet, G., and Fels, J.-F., 2001, Seismological evidence on the geometry of the Orogenic System in central-northern Ecuador (South America): *Geophysical Research Letters*, v. 28, p. 3749–3752, doi:10.1029/2001GL013257.
- Janik, T., Grad, M., Guterch, A., Środa, P., 2014, The deep seismic structure of the Earth's crust along the Antarctic Peninsula—A summary of the results from Polish geodynamical expeditions: *Global and Planetary Change*, v. 123, p. 213-222, doi.org/10.1016/j.gloplacha.2014.08.018.
- Lucke, O.H., 2014, Moho structure of Central America based on three-dimensional lithospheric density modelling of satellite-derived gravity data: *International Journal of Earth Science*, v. 103, p. 1733-1745, DOI 10.1007/s00531-012-0787-y.
- Yuan, X., Asch, G., Bataille, K., Bock, G., Bohm, M., Ehtler, H., Kind, R., Oncken, O., and Wölbern, I., 2006, Deep seismic images of the Southern Andes, in Kay, S.M., and Ramos, V.A., eds., *Evolution of an Andean margin: A tectonic and magmatic view from the Andes to the Neuquén Basin (35°–39°S lat)*: Geological Society of America Special Paper 407, p. 61–72, doi: 10.1130/2006.2407(03).
- Zellmer, G.F., 2008, Some first-order observations on magma transfer from mantle wedge to upper crust at volcanic arcs: *Geological Society of London Special Publication* 304, p. 15–31.

Figure DR1



Unfiltered whole-rock analyses in the Great Basin/Nevadaplano region from 200 Ma to 20 Ma compiled from NAVDAT (www.navdat.org) and Best et al. (2009). Dashed lines and shaded boxes show the limits to data filters used for Sr/Y analysis in this study. Solid gray line is an interpreted trend through the data. A: MgO-SiO₂ Harker variation diagram showing scatter in the relationship. B: Sr depletion by crystallization of feldspar during advanced magmatic differentiation (>~70 SiO₂ wt%) results in an increase in Rb/Sr and decrease in Sr/Y.

Best, M.G., Barr, D.L., Christiansen, E.H., Gromme, S., Deino, A.L., and Tingey, D.G., 2009, The Great Basin Altiplano during the middle Cenozoic ignimbrite flareup: Insights from volcanic rocks: *International Geology Review*, v. 51, p. 589–633, doi:10.1080/00206810902867690.

Table DR1: Data used to calculate Sr/Y for individual subsets (Area)

Source	Area	Sample ID	Age (Ma)	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Rb/Sr	Sr (ppm)	Y (ppm)	Sr/Y
NAVDAT	Mountain City	GR- 29	90.0	41.82	-115.93	68.5	1.3	124	0.268	462	23	20.1
NAVDAT	Mountain City	GR- 30	90.0	41.85	-115.89	67.7	1.3	124	0.268	463	19	24.4
NAVDAT	Mountain City	16327	93.0	41.82	-115.95	68.8	1.2	125	0.252	496	18	27.9
NAVDAT	Mountain City	16329	90.0	41.99	-115.85	67.6	1.5	66	0.104	637	19	34.2
NAVDAT	Mountain City	16328	93.0	41.83	-115.84	66.1	1.5	112	0.184	610	17	35.7
NAVDAT	Mountain City	GR-31	149.5	41.68	-116.07	60.2	5.1	39	0.061	642	21	30.6
NAVDAT	Mountain City	16339	149.5	41.68	-116.08	56.4	5.7	26	0.042	624	18	34.7
NAVDAT	Mountain City	GR- 32	149.5	41.68	-116.08	61.6	3.5	50	0.062	811	21	38.6
NAVDAT	Needle Range	HFV-8-153-1BV	30.6	38.56	-113.86	65.9	2.3	141	0.442	319	31	10.3
NAVDAT	Needle Range	HFV-8-153-1CD	30.6	38.56	-113.86	65.9	1.8	141	0.394	358	19	18.8
NAVDAT	Needle Range	HFV-8-153-3CD	29.5	38.58	-113.86	68.5	1.5	158	0.416	380	19	20.0
NAVDAT	Needle Range	MINS-8-61-4BD	27.9	38.33	-113.93	65.1	2.1	114	0.217	525	23	22.8
NAVDAT	Needle Range	HAM-9-129-1P	29.5	38.40	-114.01	67.6	1.3	152	0.360	422	18	23.4
NAVDAT	Needle Range	BUCK-8-140-2	29.5	38.27	-113.86	61.4	3.3	80	0.134	597	12	49.8
NAVDAT	Needle Range	MIN-8-23-1	29.5	38.37	-113.94	63.3	2.6	131	0.229	572	11	52.0
NAVDAT	Maverick Springs	16181	33.4	40.07	-115.27	67.3	2.3	113	0.361	313	18	17.9
NAVDAT	Maverick Springs	881662	33.4	40.09	-115.26	67.5	1.6	100	0.286	350	11	31.8
NAVDAT	Maverick Springs	881663	33.4	40.08	-115.26	67.5	1.6	100	0.278	360	9	40.0
NAVDAT	Maverick Springs	881661	33.4	40.09	-115.26	67.9	1.8	110	0.333	330	7	47.1
NAVDAT	E. Humbolt Range	AL4898	33.4	41.03	-115.09	69.3	1.0	81	0.220	369	18	20.6
NAVDAT	E. Humbolt Range	AL4398	33.4	41.03	-115.09	69.9	1.1	63	0.193	326	12	27.9
NAVDAT	E. Humbolt Range	AL898	33.4	41.02	-115.09	68.7	1.2	73	0.246	297	15	19.3
NAVDAT	E. Humbolt Range	AL498	33.4	41.02	-115.09	67.6	1.3	65	0.148	440	14	30.8
NAVDAT	E. Humbolt Range	880806-1	40.0	40.95	-115.10	66.5	1.5	98	0.261	375	54	6.9
NAVDAT	E. Humbolt Range	890722-1A	40.0	40.96	-115.11	65.3	1.5	72	0.227	427	27	15.9
NAVDAT	E. Humbolt Range	880802-2	40.0	40.97	-115.10	57.6	3.1	154	0.323	477	28	17.3
NAVDAT	E. Humbolt Range	890710-3	40.0	40.97	-115.10	62.4	1.9	64	0.143	447	18	25.5
NAVDAT	E. Humbolt Range	RM-19	40.0	40.99	-115.09	62.6	1.8	55	0.117	472	15	31.5
NAVDAT	E. Humbolt Range	870712-3	40.0	41.02	-115.08	64.0	1.5	59	0.120	491	13	38.7
NAVDAT	Battle Mtn NE	1062	38.0	40.68	-117.09	69.0	1.6	82	0.162	506	13	37.8
NAVDAT	Battle Mtn NE	1463-898	37.0	40.61	-117.06	66.0	2.0	172	0.400	430	11	39.1
NAVDAT	Battle Mtn NE	203046	38.0	40.68	-117.09	69.3	1.7	100	0.165	605	15	40.6
NAVDAT	Battle Mtn NE	80BK61	38.0	40.63	-117.03	67.0	2.0	89	0.168	530	13	40.8
NAVDAT	Battle Mtn NE	80BK28	38.0	40.63	-117.05	69.3	2.0	74	0.137	540	13	41.5
NAVDAT	Battle Mtn NE	1064	39.3	40.64	-117.06	69.1	1.9	69	0.126	551	13	41.7
NAVDAT	Battle Mtn NE	1021	39.0	40.60	-117.06	69.3	2.0	89	0.183	487	12	42.3
NAVDAT	Battle Mtn NE	80BK29	38.0	40.63	-117.05	69.5	2.2	80	0.138	580	13	44.6
NAVDAT	Battle Mtn NE	80BK31	38.0	40.63	-117.04	69.3	2.1	20	0.034	590	13	45.4
NAVDAT	Battle Mtn NE	1468-811	37.0	40.61	-117.06	68.0	1.7	141	0.276	510	11	46.4
NAVDAT	Battle Mtn NE	80BK30	38.0	40.63	-117.04	69.7	2.1	19	0.033	570	12	47.5
NAVDAT	Battle Mtn NE	78C89	39.3	40.63	-117.06	68.8	2.2	530	0.11	48.2		
NAVDAT	Battle Mtn NE	1475-330	37.0	40.61	-117.05	67.9	2.0	129	0.205	630	13	48.5
NAVDAT	Battle Mtn NE	1061	37.0	40.66	-117.09	69.0	1.3	59	0.079	739	15	48.9
NAVDAT	Battle Mtn NE	78C119	38.0	40.63	-117.04	68.8	2.0	18	0.031	590	12	49.2
NAVDAT	Battle Mtn NE	78C90	39.0	40.63	-117.06	66.9	2.9	600	0.12	50.0		
NAVDAT	Battle Mtn NE	78C99	38.0	40.63	-117.05	69.0	1.9	32	0.057	560	11	50.9
NAVDAT	Battle Mtn NE	1463-396	37.0	40.61	-117.06	66.6	1.8	133	0.173	770	15	51.3
NAVDAT	Battle Mtn NE	1463-1134	88.0	40.61	-117.06	68.3	1.1	332	1.145	290	16	18.1
NAVDAT	Battle Mtn NE	KS0517	88.0	40.62	-117.03	65.2	2.8	396	0.13	30.5		
NAVDAT	Battle Mtn NE	1470-226	88.0	40.61	-117.06	67.8	1.4	127	0.174	730	23	31.7
NAVDAT	Battle Mtn NE	1453-428	88.0	40.61	-117.06	69.4	1.3	312	0.578	540	17	31.8
NAVDAT	Battle Mtn NE	1477-561	88.0	40.61	-117.06	61.6	1.6	312	0.503	620	19	32.6
NAVDAT	Battle Mtn NE	1470-238	88.0	40.61	-117.06	66.5	1.4	152	0.238	640	13	49.2
NAVDAT	Battle Mtn NE	1470-146	88.0	40.61	-117.06	64.4	2.0	152	0.192	790	15	52.7
NAVDAT	Battle Mtn NE	1470-130	88.0	40.61	-117.06	66.7	1.5	147	0.213	690	11	62.7
NAVDAT	Battle Mtn SW	Ap-80	35.0	40.56	-117.17	61.7	3.1	75	0.259	290	28	10.4
NAVDAT	Battle Mtn SW	AP-146	35.0	40.60	-117.25	69.2	1.1	91	0.249	365	19	19.2
NAVDAT	Battle Mtn SW	AP-126	35.0	40.60	-117.24	61.9	1.9	76	0.127	600	20	30.0
NAVDAT	Battle Mtn SW	Ap-14	35.0	40.60	-117.15	67.3	1.2	126	0.180	700	21	33.3
NAVDAT	Battle Mtn SW	Ap-148	35.0	40.60	-117.24	68.2	1.7	78	0.161	485	13	37.3
NAVDAT	Battle Mtn SW	Ap-6	35.0	40.57	-117.13	63.2	2.3	67	0.085	790	18	43.9
NAVDAT	Battle Mtn SW	Ap-52	35.0	40.57	-117.15	64.3	2.1	65	0.083	780	14	55.7
NAVDAT	Battle Mtn SW	AP-127	35.0	40.60	-117.24	63.8	1.9	41	0.054	760	12	63.3

Table DR1 (continued): Data used to calculate Sr/Y for individual subsets (Area)

Source	Area	Sample ID	Age (Ma)	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Rb/Sr	Sr (ppm)	Y (ppm)	Sr/Y
NAVDAT	Battle Mtn SW	2565-410	39.0	40.55	-117.13	65.4	4.1	120	1.307	92	6	15.3
NAVDAT	Battle Mtn SW	3101-975	39.0	40.55	-117.13	65.9	4.4	209	0.941	222	14	15.9
NAVDAT	Battle Mtn SW	1999-924	39.0	40.55	-117.13	66.4	4.6	200	0.816	245	15	16.3
NAVDAT	Battle Mtn SW	1996-569	39.0	40.55	-117.13	66.3	4.2	228	0.735	310	18	17.2
NAVDAT	Battle Mtn SW	1997-1050	39.0	40.55	-117.13	66.9	4.6	200	0.580	345	15	23.0
NAVDAT	Battle Mtn SW	2724-676	39.0	40.55	-117.13	66.1	4.0	187	0.454	412	17	24.2
NAVDAT	Battle Mtn SW	2724-683	39.0	40.55	-117.13	67.3	4.6	117	0.238	491	17	28.9
NAVDAT	Battle Mtn SW	1999-920	39.0	40.55	-117.13	65.8	4.3	181	0.417	434	14	31.0
NAVDAT	Battle Mtn SW	1996-548.5	39.0	40.55	-117.13	66.9	4.4	143	0.301	475	15	31.7
NAVDAT	Battle Mtn SW	6125-6	39.0	40.55	-117.13	66.0	4.0	180	0.625	288	9	32.0
NAVDAT	Battle Mtn SW	2723-938	39.0	40.55	-117.13	66.5	3.8	160	0.593	270	8	33.8
NAVDAT	Battle Mtn SW	1041	41.0	40.53	-117.18	64.9	4.0	70	0.128	546	16	34.6
NAVDAT	Battle Mtn SW	1040	41.0	40.53	-117.18	66.3	2.0	54	0.086	632	16	40.5
NAVDAT	Battle Mtn SW	1043	41.0	40.53	-117.18	67.7	2.7	13	0.017	756	13	57.3
NAVDAT	Battle Mtn SW	Ap-67	41.0	40.53	-117.18	65.3	2.0	65	0.094	690	10	69.0
NAVDAT	Battle Mtn SW	TC-25	89.0	40.63	-117.20	65.5	1.3	60	0.092	650	20	32.5
NAVDAT	Battle Mtn SW	87JH040	89.0	40.62	-117.20	64.7	2.7	193	0.297	650	17	38.2
NAVDAT	Battle Mtn SW	TC-25	89.0	40.63	-117.20	66.8	1.3	60	0.071	850	20	42.5
NAVDAT	Battle Mtn SW	TC-41	89.0	40.62	-117.20	66.2	1.4	110	0.120	920	20	46.0
NAVDAT	Battle Mtn SW	AP-108	89.0	40.62	-117.20	66.5	1.1	118	0.182	650	14	46.4
NAVDAT	Battle Mtn SW	16220	89.0	40.61	-117.20	67.5	1.3	97	0.136	714	14	51.7
NAVDAT	Cortez Mtn	GR-106	150.0	40.34	-116.39	63.0	4.3	47	0.089	530	26	20.4
NAVDAT	Cortez Mtn	GR-105	150.0	40.33	-116.40	64.7	3.0	79	0.129	613	30	20.4
NAVDAT	Cortez Mtn	16199	150.0	40.43	-116.45	63.1	2.7	71	0.108	660	20	32.8
NAVDAT	Cortez Mtn	16196	158.0	40.32	-116.27	69.1	1.4	47	0.110	426	26	16.5
NAVDAT	Cortez Mtn	202970	158.0	40.34	-116.38	63.4	3.3	38	0.084	455	20	22.8
NAVDAT	Cortez Mtn	202967	158.0	40.32	-116.42	65.5	4.0	22	0.058	380	16	23.8
NAVDAT	Cortez Mtn	16195	158.0	40.29	-116.33	65.4	2.3	105	0.161	652	27	24.5
NAVDAT	Cortez Mtn	16198	158.0	40.27	-116.45	63.2	4.5	106	0.172	615	22	28.2
NAVDAT	Cortez Mtn	881795	158.0	40.19	-116.57	66.2	1.8	100	0.182	550	16	34.4
NAVDAT	Cortez Mtn	881794	158.0	40.20	-116.58	66.6	2.0	100	0.182	550	15	36.7
NAVDAT	East Range	P4K4	134.0	40.57	-117.85	61.6	3.5	84	0.187	450	28	16.1
NAVDAT	East Range	P4K6	134.0	40.57	-117.85	63.8	2.1	100	0.222	450	26	17.3
NAVDAT	East Range	P4K5	134.0	40.57	-117.85	63.3	2.1	90	0.191	470	26	18.1
NAVDAT	East Range	P4K3	134.0	40.57	-117.85	64.8	1.8	98	0.218	450	22	20.5
NAVDAT	East Range	P4K11	134.0	40.57	-117.85	61.3	2.8	82	0.161	510	22	23.2
NAVDAT	East Range	P4K2	134.0	40.57	-117.85	64.7	1.6	94	0.184	510	20	25.5
NAVDAT	East Range	P4K1	134.0	40.57	-117.85	61.4	2.5	88	0.154	570	22	25.9
NAVDAT	East Range	15165	134.0	40.55	-117.84	65.2	2.8	152	0.244	624	20	31.4
NAVDAT	East Range	P4K12	175.0	40.57	-117.75	61.4	2.8	82	0.158	520	24	21.7
NAVDAT	East Range	P2K4	175.0	40.57	-117.76	60.9	4.4	122	0.200	610	24	25.4
NAVDAT	East Range	P2K3	175.0	40.57	-117.76	58.3	5.3	106	0.166	640	22	29.1
NAVDAT	N. Richmond Mtns	BS1004-504	44.3	40.96	-116.36	69.8	1.5	174	1.568	111	33	3.4
NAVDAT	N. Richmond Mtns	CN-3	44.3	40.98	-116.37	68.0	1.7	140	1.029	136	19	7.2
NAVDAT	N. Richmond Mtns	GB 720C-1744	44.3	40.99	-116.38	67.8	4.0	113	1.177	96	19	5.1
NAVDAT	N. Richmond Mtns	M8-0317-4-482	44.3	41.00	-116.38	68.7	1.7	110	0.973	113	29	3.9
NAVDAT	N. Richmond Mtns	PNC 213-1787	44.3	40.97	-116.37	66.1	1.6	139	1.299	107	19	5.6
NAVDAT	N. Richmond Mtns	RM97C-7-1336	44.3	40.96	-116.36	69.3	1.1	37	0.740	50	23	2.2
NAVDAT	N. Richmond Mtns	5	130.0	40.91	-116.32	58.5	4.1	x		700	30	23.3
NAVDAT	N. Richmond Mtns	1	130.0	40.95	-116.32	57.8	5.0	66	0.066	1000	30	33.3
NAVDAT	N. Richmond Mtns	2	130.0	40.92	-116.32	59.4	2.9	x		1000	30	33.3
NAVDAT	N. Richmond Mtns	98-Zia-7	139.8	40.94	-116.39	60.4	2.5	93	0.110	844	32	26.4
NAVDAT	Easy Ely	S-Sill-5	110.0	39.28	-114.96	59.0	1.9	134	0.126	1060	33	32.1
NAVDAT	Easy Ely	V-Sill-8	110.0	39.27	-114.93	59.7	1.5	121	0.104	1160	33	35.2
NAVDAT	Easy Ely	202985	111.0	39.26	-114.94	61.8	1.8	125	0.140	892	25	35.7
NAVDAT	Easy Ely	Union Pluton 3	110.0	39.26	-114.93	58.3	1.6	117	0.099	1180	33	35.8
NAVDAT	Easy Ely	O-Sill-8	110.0	39.26	-114.94	58.4	1.9	119	0.097	1230	34	36.2
NAVDAT	Easy Ely	V-Sill-12	110.0	39.27	-114.93	59.5	1.7	114	0.090	1260	34	37.1
NAVDAT	Easy Ely	Union Pluton 7	110.0	39.26	-114.93	59.1	2.0	117	0.099	1180	31	38.1
NAVDAT	Easy Ely	Prh-Sill-1	110.0	39.26	-114.93	58.2	1.1	176	0.147	1200	31	38.7
NAVDAT	Easy Ely	S-Sill-11	110.0	39.28	-114.96	59.3	1.8	118	0.091	1290	33	39.1
NAVDAT	Easy Ely	D-Sill-8	110.0	39.26	-114.94	57.9	1.9	111	0.085	1300	33	39.4
NAVDAT	Easy Ely	881540	111.0	39.29	-114.95	61.7	2.0	100	0.097	1035	24	43.1
NAVDAT	Easy Ely	16178	111.0	39.29	-114.95	61.5	1.8	115	0.092	1249	29	43.4
NAVDAT	Edna Mtn	GR-101	103.0	40.82	-117.43	64.3	2.3	87	0.158	552	19	29.1
NAVDAT	Edna Mtn	15155	104.0	40.82	-117.44	66.0	2.3	99	0.178	555	19	29.5
NAVDAT	Edna Mtn	GSC243	104.0	40.82	-117.43	65.8	2.2	100	0.194	515	16	32.2
NAVDAT	Edna Mtn	GR-102	103.0	40.82	-117.44	65.3	2.2	84	0.123	681	19	35.8
NAVDAT	Edna Mtn	GSC87	106.0	40.74	-117.52	69.1	1.4	81	0.196	414	11	37.6
NAVDAT	Edna Mtn	15110	105.0	40.79	-117.55	68.9	1.3	61	0.115	530	13	41.7

Table DR1 (continued): Data used to calculate Sr/Y for individual subsets (Area)

Source	Area	Sample ID	Age (Ma)	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Rb/Sr	Sr (ppm)	Y (ppm)	Sr/Y
NAVDAT	NW Copper Mtns	C38	104.0	41.88	-115.65	68.5	1.3	118	0.180	656	20	32.7
NAVDAT	NW Copper Mtns	C34	104.0	41.86	-115.67	67.6	1.4	130	0.182	714	24	30.1
NAVDAT	NW Copper Mtns	C23	104.0	41.81	-115.66	69.2	1.5	127	0.193	658	16	41.4
NAVDAT	NW Copper Mtns	C11	104.0	41.80	-115.64	69.7	1.5	98	0.145	672	18	36.7
NAVDAT	NW Copper Mtns	C56	104.0	41.85	-115.64	69.7	1.5	107	0.187	572	13	43.3
NAVDAT	NW Copper Mtns	C26	104.0	41.83	-115.68	69.7	1.6	107	0.176	608	16	38.0
NAVDAT	NW Copper Mtns	C25	104.0	41.83	-115.66	68.6	1.6	119	0.183	650	22	29.4
NAVDAT	NW Copper Mtns	C41	104.0	41.87	-115.65	66.9	1.7	98	0.137	720	24	29.6
NAVDAT	NW Copper Mtns	C29	104.0	41.84	-115.69	67.3	1.7	99	0.140	707	23	30.9
NAVDAT	NW Copper Mtns	C16	104.0	41.83	-115.69	68.2	1.8	82	0.135	609	16	38.8
NAVDAT	Paradise Range	16225	104.0	38.96	-117.90	66.5	2.2	111	0.215	516	16	32.9
NAVDAT	Paradise Range	880693	103.0	38.97	-117.91	64.8	2.0	88	0.181	485	13	37.3
NAVDAT	Paradise Range	16228	104.0	38.99	-117.75	60.9	2.9	177	0.217	814	19	43.1
NAVDAT	Paradise Range	16224	104.0	38.97	-117.90	58.5	3.2	70	0.093	756	17	43.7
NAVDAT	Pahute Mesa	SMQMA3	97.0	37.45	-116.29	64.1	1.1	97	0.097	1004	27	36.8
NAVDAT	Pahute Mesa	U15A31-1200	97.0	37.22	-116.06	66.1	1.2			828	19	43.5
NAVDAT	Pahute Mesa	U15A31-255	97.0	37.22	-116.06	66.2	1.2			828	19	43.5
NAVDAT	Pahute Mesa	U15A31-1100	97.0	37.22	-116.06	65.3	1.3			828	19	43.5
NAVDAT	Pahute Mesa	U15A31-930	97.0	37.22	-116.06	63.5	1.4			828	19	43.5
NAVDAT	Big Kasock Mtn	16253	90.0	39.01	-118.31	65.0	1.6	85	0.144	589	14	43.0
NAVDAT	Big Kasock Mtn	87-DJ-149	98.0	39.02	-118.32	65.1	1.5	114	0.174	656	13	50.5
NAVDAT	Big Kasock Mtn	87-DJ-148	98.0	39.02	-118.31	67.7	1.2	133	0.237	561	9	62.3
NAVDAT	Osgood Mtns	202971	95.0	41.14	-117.27	65.5	1.9	79	0.141	561	15	37.4
NAVDAT	Osgood Mtns	15154	95.0	41.21	-117.27	68.7	1.1	92	0.172	535	14	37.7
NAVDAT	Osgood Mtns	OP17A	95.0	41.20	-117.28	67.2	1.2	69	0.101	680	18	37.8
NAVDAT	Osgood Mtns	OP15B	95.0	41.21	-117.27	66.7	1.0	99	0.130	760	20	38.0
NAVDAT	Osgood Mtns	OP18A	95.0	41.14	-117.27	66.2	1.8	72	0.116	615	16	38.4
NAVDAT	Santa Rosa Range	16136	55.0	41.17	-117.74	65.7	1.8	78	0.132	593	14	43.3
NAVDAT	Santa Rosa Range	16135	55.0	41.17	-117.74	68.8	1.3	108	0.227	476	11	42.5
NAVDAT	Santa Rosa Range	15115	72.9	41.02	-118.30	66.2	1.9	78	0.160	487	14	36.1
NAVDAT	Santa Rosa Range	16140	72.9	41.57	-117.75	68.2	1.5	112	0.190	590	16	36.2
NAVDAT	Santa Rosa Range	16142	72.9	41.43	-117.66	65.6	2.2	62	0.117	528	14	36.7
NAVDAT	Santa Rosa Range	16139	72.9	41.42	-117.75	68.6	1.2	86	0.168	511	12	41.9
NAVDAT	Santa Rosa Range	16141	72.9	41.55	-117.60	67.8	1.6	57	0.105	543	13	43.4
NAVDAT	Santa Rosa Range	16138	72.9	41.26	-117.76	67.7	1.6	68	0.150	452	9	48.6
NAVDAT	Santa Rosa Range	15182	72.9	41.59	-117.48	57.9	4.4	96	0.078	1229	21	59.7
Stuck, 1993	Santa Rosa Range	RS91-15D	106.4	41.54	-117.63	68.5	1.3	65	0.141	462	13	35.5
Stuck, 1993	Santa Rosa Range	RS91-38A	106.4	41.60	-117.68	65.9	1.7	57	0.113	505	14	36.1
Stuck, 1993	Santa Rosa Range	RS91-18A	106.4	41.54	-117.63	67.0	1.5	75	0.137	548	15	36.5
Stuck, 1993	Santa Rosa Range	RS91-22	106.4	41.49	-117.63	67.5	1.6	58	0.112	518	14	37.0
Stuck, 1993	Santa Rosa Range	RS91-30	106.4	41.48	-117.65	66.8	1.7	52	0.108	482	12	40.2
Stuck, 1993	Santa Rosa Range	RS91-24A	106.4	41.46	-117.66	64.4	2.2	46	0.082	563	14	40.2
Stuck, 1993	Santa Rosa Range	RS91-27B	106.4	41.48	-117.65	65.6	1.8	53	0.092	578	14	41.3
Stuck, 1993	Santa Rosa Range	RS91-24B	106.4	41.46	-117.66	66.0	1.6	60	0.119	503	12	41.9
Stuck, 1993	Santa Rosa Range	RS91-28A	106.4	41.48	-117.67	68.9	1.3	53	0.111	477	11	43.4
Stuck, 1993	Santa Rosa Range	RS91-12	106.4	41.49	-117.64	67.7	1.5	57	0.109	524	12	43.7
Stuck, 1993	Santa Rosa Range	RS91-27A	106.4	41.48	-117.65	67.7	1.4	54	0.094	572	13	44.0
Stuck, 1993	Santa Rosa Range	RS91-17A	106.4	41.50	-117.64	67.6	1.5	39	0.073	535	12	44.6
Stuck, 1993	Santa Rosa Range	RS91-44A	106.4	41.52	-117.67	67.6	1.5	52	0.102	512	11	46.5

Table DR1 (continued): Data used to calculate Sr/Y for individual subsets (Area)

Source	Area	Sample ID	Age (Ma)	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Rb/Sr	Sr (ppm)	Y (ppm)	Sr/Y
NAVDAT	Creek Mtns	1137	42.0	40.32	-117.23	65.1	3.1	50	0.103	480	14	35.3
NAVDAT	Creek Mtns	1139	42.0	40.32	-117.22	67.7	2.6	32	0.074	437	13	33.6
NAVDAT	Creek Mtns	1141	40.0	40.32	-117.22	65.7	3.2	59	0.110	533	14	38.3
NAVDAT	Creek Mtns	4900-3 44	41.0	40.33	-117.22	66.5	2.6	76	0.136	559	15	37.3
NAVDAT	Creek Mtns	5040-2 8A	41.0	40.33	-117.22	64.9	3.2	74	0.148	501	15	33.4
NAVDAT	Creek Mtns	5040-2 8H	41.0	40.33	-117.22	65.4	3.2	82	0.165	497	15	33.1
NAVDAT	Creek Mtns	5040-2 9	41.0	40.33	-117.22	65.5	2.1	79	0.131	602	17	35.4
NAVDAT	Creek Mtns	5060-2 30	41.0	40.33	-117.22	65.2	2.1	102	0.165	619	19	32.6
NAVDAT	Creek Mtns	5060-2 39	41.0	40.33	-117.22	65.5	2.1	88	0.124	707	20	35.4
NAVDAT	Creek Mtns	5060-2 66	41.0	40.33	-117.22	61.5	5.9	34	0.062	547	15	36.5
NAVDAT	Creek Mtns	5080-2 16	41.0	40.33	-117.22	64.4	2.0	92	0.141	652	19	34.3
NAVDAT	Creek Mtns	5080-2 23	41.0	40.33	-117.22	56.3	4.2	114	0.144	790	20	39.5
NAVDAT	Creek Mtns	5080-2 24	41.0	40.33	-117.22	66.6	2.9	131	0.240	545	17	32.1
NAVDAT	Creek Mtns	5100-2 1	41.0	40.33	-117.22	66.1	1.9	87	0.143	609	20	30.5
NAVDAT	Creek Mtns	5100-2 10	41.0	40.33	-117.22	64.3	2.0	94	0.149	629	20	31.5
NAVDAT	Creek Mtns	5120-2 20	41.0	40.33	-117.22	64.7	2.1	100	0.155	646	20	32.3
NAVDAT	Creek Mtns	5160-3 2H	41.0	40.33	-117.22	66.5	2.2	44	0.071	620	17	36.5
NAVDAT	Creek Mtns	5200-3 1	41.0	40.33	-117.22	62.1	3.0	89	0.142	627	21	29.9
NAVDAT	Creek Mtns	C-118 197	41.0	40.33	-117.22	61.9	3.0	71	0.105	674	22	30.6
NAVDAT	Creek Mtns	GMC-16 397	41.0	40.32	-117.23	66.4	2.8	75	0.139	541	14	38.6
NAVDAT	Creek Mtns	GMC-6 450	41.0	40.33	-117.22	65.4	2.0	80	0.127	628	17	36.9
NAVDAT	Creek Mtns	GMC-6 818	41.0	40.33	-117.22	62.9	2.4	92	0.123	751	20	37.6
NAVDAT	Creek Mtns	MC 209	41.0	40.33	-117.22	64.5	2.9	82	0.126	651	18	36.2
NAVDAT	Creek Mtns	MC 212	41.0	40.33	-117.22	62.4	2.7	68	0.105	648	21	30.9
NAVDAT	Creek Mtns	MC 218	41.0	40.33	-117.22	60.9	3.1	98	0.143	686	23	29.8
NAVDAT	Creek Mtns	MC 6	41.0	40.33	-117.22	62.9	2.0	78	0.100	780	21	37.1
NAVDAT	Creek Mtns	MC 7	41.0	40.33	-117.22	63.8	1.9	84	0.128	658	21	31.3
NAVDAT	Tuscarora Mtns	DB-2-LSM	39.3	41.35	-116.20	64.2	1.4	98	0.143	683	20	34.2
NAVDAT	Tuscarora Mtns	H96-32	39.8	41.22	-116.25	63.8	1.5	89	0.117	759	20	38.0
NAVDAT	Tuscarora Mtns	H97-27	39.0	41.33	-116.23	64.0	1.9	89	0.132	674	21	32.1
NAVDAT	Tuscarora Mtns	DB-3-LSM	39.3	41.35	-116.20	63.6	1.9	105	0.158	665	21	31.7
NAVDAT	Tuscarora Mtns	203067	39.0	41.32	-116.36	64.6	2.0	104	0.178	585	18	33.1
NAVDAT	Tuscarora Mtns	H96-57	39.0	41.32	-116.27	64.5	2.0	103	0.167	618	20	30.9
NAVDAT	Tuscarora Mtns	H96-66	39.8	41.35	-116.33	62.5	2.1	80	0.117	686	18	38.1
NAVDAT	Tuscarora Mtns	16343	39.0	41.31	-116.34	64.5	2.2	86	0.135	639	21	30.9
NAVDAT	Tuscarora Mtns	H96-72A	39.4	41.32	-116.36	64.1	2.3	98	0.167	588	22	26.7
NAVDAT	Tuscarora Mtns	203068	39.0	41.33	-116.32	63.0	2.3	98	0.147	668	18	36.9
NAVDAT	Tuscarora Mtns	H96-31	39.8	41.22	-116.25	62.9	2.3	92	0.123	747	21	35.6
NAVDAT	Tuscarora Mtns	DB-31-LC	39.8	41.28	-116.37	63.0	2.4	103	0.157	657	22	29.9
NAVDAT	Tuscarora Mtns	H96-86	39.7	41.27	-116.35	62.0	2.4	62	0.082	758	20	37.9
NAVDAT	Tuscarora Mtns	H96-73	39.9	41.25	-116.32	60.8	2.4	97	0.115	845	23	36.7
NAVDAT	Tuscarora Mtns	H96-103	39.4	41.32	-116.22	63.1	2.7			596	20	29.8
NAVDAT	Tuscarora Mtns	16344	39.0	41.32	-116.33	63.4	2.7	86	0.131	657	21	31.6
NAVDAT	Tuscarora Mtns	H97-101	40.0	41.27	-116.41	61.8	2.7	90	0.132	680	22	30.9
NAVDAT	Tuscarora Mtns	16345	39.0	41.32	-116.34	63.6	2.8	104	0.161	647	22	30.0
NAVDAT	Tuscarora Mtns	DB-7-LSM	39.3	41.35	-116.18	61.3	2.8	86	0.124	693	20	34.7
NAVDAT	Tuscarora Mtns	DB-32NC	39.8	41.28	-116.37	60.3	3.4	65	0.106	612	21	29.1
NAVDAT	Tuscarora Mtns	DB-43-BH	39.4	41.30	-116.29	62.0	3.9	89	0.144	617	19	32.5
NAVDAT	Tuscarora Mtns	H96-63	39.6	41.36	-116.36	61.2	4.1	75	0.115	655	21	31.2
NAVDAT	Tuscarora Mtns	DB-35-MC	39.5	41.31	-116.29	61.5	4.5	65	0.093	697	18	38.7
NAVDAT	W. Mary Mtns	L340	37.4	40.79	-116.32	62.1	2.0			500	20	25.0
NAVDAT	W. Mary Mtns	WC-5	38.0	40.80	-116.30	63.1	2.1	69	0.121	571	22	26.0
NAVDAT	W. Mary Mtns	WC-4	38.0	40.80	-116.30	64.7	1.3	92	0.138	667	24	27.8
NAVDAT	W. Mary Mtns	16218	38.0	40.80	-116.30	63.8	1.9	100	0.144	694	25	28.0
NAVDAT	W. Mary Mtns	WC-3	38.0	40.80	-116.30	65.0	1.1	93	0.138	673	23	29.3
NAVDAT	W. Mary Mtns	WC-56	38.0	40.79	-116.32	63.0	2.3	70	0.098	716	24	29.8
NAVDAT	W. Mary Mtns	H98-20	37.4	40.68	-116.35	57.9	3.4	38	0.045	839	25	33.6
NAVDAT	W. Mary Mtns	WC-9	38.3	40.79	-116.32	62.2	2.5	61	0.092	660	19	34.7
NAVDAT	W. Mary Mtns	L404	37.4	40.80	-116.30	61.9	1.9			700	20	35.0
NAVDAT	W. Mary Mtns	H98-56	36.0	40.70	-116.30	68.5	1.2	111	0.207	536	14	38.3
NAVDAT	W. Mary Mtns	H97-21	38.6	40.80	-116.30	62.6	2.4	61	0.084	725	18	40.3
NAVDAT	W. Mary Mtns	H97-21	38.6	40.79	-116.32	62.6	2.4	61	0.084	725	18	40.3
NAVDAT	W. Mary Mtns	H98-109	37.8	40.72	-116.29	62.5	2.1	66	0.077	861	20	43.1
NAVDAT	W. Mary Mtns	WC-3	44.3	40.80	-116.30	65.0	1.1	93	0.138	673	23	29.3
NAVDAT	W. Mary Mtns	H98-96	44.3	40.75	-116.35	67.1	1.9	113	0.214	528	18	29.3
NAVDAT	W. Mary Mtns	H98-101	44.3	40.75	-116.29	65.9	1.1	94	0.141	668	21	31.8
NAVDAT	W. Mary Mtns	H98-68	44.3	40.69	-116.33	63.6	2.1	71	0.102	699	21	33.3
NAVDAT	W. Mary Mtns	H98-97	44.3	40.74	-116.33	59.8	2.8	64	0.086	740	22	33.6
NAVDAT	Shoshone Range	3	36.0	40.41	-116.86	66.2	1.0	-		300	10	30.0
NAVDAT	Shoshone Range	1055	36.0	40.37	-116.93	67.5	1.8	92	0.162	571	18	31.0
NAVDAT	Shoshone Range	1056	36.0	40.37	-116.94	67.2	1.9	105	0.174	602	18	32.7

Table DR1 (continued): Data used to calculate Sr/Y for individual subsets (Area)

Source	Area	Sample ID	Age (Ma)	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Rb/Sr	Sr (ppm)	Y (ppm)	Sr/Y
NAVDAT	Shoshone Range	1148	38.0	40.31	-116.69	67.2	1.5	38	0.077	494	18	27.8
NAVDAT	Shoshone Range	1149	38.0	40.31	-116.69	67.1	1.9	28	0.048	584	20	29.1
NAVDAT	Shoshone Range	1143	39.0	40.41	-116.78	65.1	2.4	42	0.090	469	16	29.7
NAVDAT	Shoshone Range	1150	38.0	40.31	-116.69	69.7	1.3	65	0.126	514	17	29.9
NAVDAT	Shoshone Range	203049	39.0	40.41	-116.77	66.4	2.4	45	0.076	596	20	30.4
NAVDAT	Shoshone Range	1154	38.0	40.31	-116.68	66.5	2.2	54	0.113	480	16	30.8
NAVDAT	Shoshone Range	203048	39.0	40.40	-116.75	67.6	1.7	105	0.216	486	16	31.0
NAVDAT	Shoshone Range	1146	39.0	40.40	-116.75	66.6	1.5	88	0.184	479	15	31.5
NAVDAT	Shoshone Range	203070	38.0	40.31	-116.68	68.7	2.0	9	0.020	456	14	33.3
NAVDAT	Shoshone Range	1145	39.0	40.41	-116.78	65.9	2.8	33	0.066	501	15	33.4
NAVDAT	Shoshone Range	16211	39.0	40.41	-116.77	65.4	2.7	102	0.165	619	18	34.6
NAVDAT	Shoshone Range	203073	38.0	40.31	-116.68	68.5	2.1	59	0.109	539	15	35.2
NAVDAT	Shoshone Range	1156	39.0	40.30	-116.68	69.1	2.0	28	0.050	560	16	35.4
NAVDAT	Shoshone Range	1144	39.0	40.41	-116.78	65.8	2.9	26	0.048	541	15	36.6
NAVDAT	Shoshone Range	1147	39.0	40.40	-116.75	66.4	1.6	85	0.159	536	14	38.3
NAVDAT	Shoshone Range	1155	39.0	40.31	-116.68	68.3	1.9	77	0.173	445	12	38.7
NAVDAT	Shoshone Range	203071	38.0	40.31	-116.68	68.3	2.4			599	15	39.2
Best et al., 2009	East Tintic Mtns.	ET-135	33.0	39.78	-112.09	59.8	2.9	93	0.156	598	30	19.9
Best et al., 2009	East Tintic Mtns.	TD-47B	34.0	39.78	-112.09	56.8	2.3	136	0.202	672	33	20.4
Best et al., 2009	East Tintic Mtns.	TJ-201	34.0	39.82	-112.07	62.5	1.2	167	0.227	735	34	21.6
Best et al., 2009	East Tintic Mtns.	ET-136	33.0	39.81	-112.08	61.1	2.5	145	0.209	693	31	22.4
Best et al., 2009	East Tintic Mtns.	TJ-108	34.0	39.82	-112.07	63.1	2.2	162	0.257	630	28	22.5
Best et al., 2009	East Tintic Mtns.	TJ-80A	34.0	39.80	-112.04	58.6	3.5	130	0.185	704	31	22.7
Best et al., 2009	East Tintic Mtns.	TD-7	34.0	39.79	-112.04	61.9	1.9	131	0.164	801	35	22.9
Best et al., 2009	East Tintic Mtns.	TD-10	34.0	39.80	-112.06	58.8	2.9	132	0.187	706	29	24.3
Best et al., 2009	East Tintic Mtns.	TD-64	34.0	39.82	-112.07	59.0	2.7	132	0.182	726	30	24.2
Best et al., 2009	East Tintic Mtns.	TD-68	34.0	39.82	-112.08	58.9	1.7	158	0.201	786	33	23.8
Best et al., 2009	East Tintic Mtns.	TD-66	34.0	39.82	-112.07	60.3	2.3	162	0.219	739	29	25.5
Best et al., 2009	East Tintic Mtns.	TD-58	34.0	39.80	-112.08	61.5	1.1	132	0.155	850	35	24.3
Best et al., 2009	East Tintic Mtns.	TJ-100	34.0	39.83	-112.12	57.7	2.5	132	0.154	857	34	25.2
NAVDAT	Stillwater Range	86-DJ-64	26.0	39.67	-118.21	68.7	1.0	126	0.210	600	22	27.3
NAVDAT	Stillwater Range	86-DJ-95	26.0	39.66	-118.21	65.9	1.6	120	0.194	620	22	28.2
NAVDAT	Stillwater Range	86-DJ-88	26.0	39.65	-118.24	67.4	1.2	118	0.197	600	20	30.0
NAVDAT	Stillwater Range	93DJ7	26.0	39.62	-118.23	67.9	1.1	146	0.281	520	16	32.5
NAVDAT	Stillwater Range	91DJ80	26.0	39.64	-118.19	65.1	2.3	152	0.281	540	15	36.0
NAVDAT	Stillwater Range	86-DJ-61	26.0	39.66	-118.22	66.4	1.3	100	0.147	680	18	37.8
NAVDAT	Stillwater Range	91DJ81	26.0	39.64	-118.19	67.8	1.6	158	0.298	530	13	40.8
NAVDAT	Stillwater Range	90-DJ-23	26.3	39.63	-118.25	59.6	2.5	80	0.105	760	18	42.2
NAVDAT	Stillwater Range	91DJ82	26.0	39.64	-118.20	63.9	2.2	140	0.219	640	14	45.7
NAVDAT	Stillwater Range	86-DJ-62	26.0	39.65	-118.20	63.3	1.9	68	0.081	840	16	52.5
NAVDAT	Stillwater Range	92DJ92	26.0	39.65	-118.19	60.5	3.3	93	0.119	780	14	55.7
NAVDAT	Stillwater Range	GR-44	28.0	39.64	-118.19	64.6	2.0	146	0.268	545	20	27.3
NAVDAT	Stillwater Range	86-DJ-64	28.0	39.67	-118.21	68.6	1.0	126	0.210	600	22	27.3
NAVDAT	Stillwater Range	86-DJ-88	28.0	39.65	-118.24	67.2	1.2	118	0.197	600	20	30.0
NAVDAT	Stillwater Range	88-DJ-30	28.5	39.63	-118.25	66.4	1.3	128	0.233	550	18	30.6
NAVDAT	Stillwater Range	91-DJ-19	27.3	39.63	-118.25	58.9	2.1	75	0.121	620	20	31.0
NAVDAT	Stillwater Range	86-DJ-61	28.0	39.66	-118.22	66.3	1.3	100	0.147	680	18	37.8
NAVDAT	Stillwater Range	91-DJ-79	27.8	39.63	-118.25	60.2	2.5	85	0.101	840	20	42.0
NAVDAT	Stillwater Range	GR-43	28.0	39.66	-118.21	64.0	1.9	114	0.162	704	16	44.0
NAVDAT	Indian Peak	STM-8-128-1	27.0	38.03	-113.83	63.9	2.7	212	0.288	736	38	19.4
Best et al., 2009	Indian Peak	STM-8-169-4	27.0	38.04	-113.82	57.7	4.9	95	0.133	712	31	23.0
NAVDAT	Indian Peak	STM-8-169-3	28.4	38.04	-113.81	61.1	3.3	25	0.026	948	32	29.6
Best et al., 2009	Indian Peak	STM-8-130-4	29.0	38.04	-113.84	60.1	3.4	39	0.047	827	28	30.0
NAVDAT	Indian Peak	STM-8-130-1	27.0	38.04	-113.84	60.1	3.4	61	0.071	865	28	30.9
Best et al., 2009	Indian Peak	BBS-5-32-1B	21.0	38.00	-113.68	59.9	3.1	79	0.116	682	36	19.0
Best et al., 2009	Indian Peak	BBS-5-32-1A	22.0	38.00	-113.68	60.0	3.1	88	0.138	640	34	19.0
Best et al., 2009	Indian Peak	BBS-7-88-2	21.0	38.01	-113.74	59.8	2.6	99	0.160	618	31	20.0
Best et al., 2009	Indian Peak	MSP-8-231-1	23.0	38.00	-113.59	62.4	1.9	76	0.119	639	32	20.0
Best et al., 2009	Indian Peak	BAN-8-165-1	22.0	37.97	-113.78	61.5	3.0	74	0.110	674	29	23.0
Best et al., 2009	Indian Peak	BAN-8-127-3	22.0	37.97	-113.86	62.9	2.1	162	0.254	639	27	24.0
Best et al., 2009	Indian Peak	MOD-1-67-1	23.0	37.87	-113.89	67.5	1.4	175	0.318	551	23	24.0
Best et al., 2009	Indian Peak	BAN-8-165-2	23.0	37.98	-113.79	56.1	5.4	134	0.192	699	28	25.0
Best et al., 2009	Indian Peak	MOD-1-61-1	22.0	37.89	-113.93	64.4	2.2	154	0.230	671	25	27.0
Best et al., 2009	Indian Peak	MSP-9-6-1	23.0	38.03	-113.60	60.1	2.6	52	0.056	923	34	27.0
Best et al., 2009	Indian Peak	BAN-8-127-1	22.0	37.98	-113.85	58.4	4.1	102	0.136	750	26	29.0

Table DR1 (continued): Data used to calculate Sr/Y for individual subsets (Area)

Source	Area	Sample ID	Age (Ma)	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Rb/Sr	Sr (ppm)	Y (ppm)	Sr/Y
NAVDAT	Southern Ruby Range	BB-98-94	36.0	40.34	-115.53	56.7	3.3	87	0.159	548	29	18.6
NAVDAT	Southern Ruby Range	HP-34-95	36.0	40.34	-115.50	63.8	1.7	120	0.189	635	27	24.0
NAVDAT	Southern Ruby Range	HP-6-95	36.0	40.34	-115.57	57.3	4.1	170	0.211	805	33	24.2
NAVDAT	Southern Ruby Range	BB-70-94	36.0	40.36	-115.54	60.7	2.2	139	0.226	616	27	23.2
NAVDAT	Southern Ruby Range	HP-27-95	36.0	40.39	-115.52	65.6	1.7	119	0.230	517	29	17.7
NAVDAT	Southern Ruby Range	HP-32-95	36.0	40.36	-115.50	67.1	1.5	122	0.255	478	23	20.5
NAVDAT	Southern Ruby Range	CB-3	36.0	40.34	-115.56	59.4	4.3	155	0.257	602	32	18.9
NAVDAT	Southern Ruby Range	CB-2	36.0	40.31	-115.47	67.9	1.0	123	0.280	440	30	14.7
NAVDAT	Southern Ruby Range	HP-2-95	36.0	40.34	-115.50	60.1	2.3	149	0.297	502	27	18.6
NAVDAT	Southern Ruby Range	HP-36-95	36.0	40.31	-115.47	69.6	1.1	120	0.301	399	31	12.8
NAVDAT	Southern Ruby Range	HP-24-95	36.0	40.30	-115.54	65.6	1.5	113	0.319	354	15	23.0
NAVDAT	Southern Ruby Range	HP-13-95	36.0	40.34	-115.56	64.3	1.7	152	0.321	474	21	23.1
NAVDAT	Southern Ruby Range	HP-5-95	36.0	40.34	-115.57	69.5	1.0	174	0.418	416	31	13.6
NAVDAT	Central Ruby Range	B100	29.0	40.61	-115.39	68.5	1.2	221	0.548	403	23	17.5
NAVDAT	Central Ruby Range	LEE-12L	29.0	40.60	-115.39	65.1	1.6	191	0.401	476	23	20.7
NAVDAT	Central Ruby Range	RD-27	29.4	40.59	-115.39	56.1	3.7	328		152	30	5.1
NAVDAT	Central Ruby Range	RD-3B	29.4	40.60	-115.38	68.2	1.2	224	0.515	435	22	19.8
NAVDAT	Central Ruby Range	RD-78	29.4	40.60	-115.39	66.6	1.5	198	0.464	427	24	17.8
NAVDAT	Central Ruby Range	RD-80	29.4	40.60	-115.39	67.4	1.2	235	0.577	407	23	17.7
NAVDAT	Central Ruby Range	RD-92	29.4	40.61	-115.38	68.3	1.2	228	0.770	296	28	10.6
NAVDAT	Central Ruby Range	RL-44	29.4	40.65	-115.44	58.7	2.9	73	0.132	555	31	17.9
NAVDAT	Central Ruby Range	RDS0-117	33.4	40.57	-115.41	67.6	1.1	192	0.651	295	15	19.7
NAVDAT	Central Ruby Range	B100	33.4	40.60	-115.39	69.1	1.2	221	0.548	403	23	17.2
NAVDAT	Central Ruby Range	RD-3B	33.4	40.60	-115.38	69.1	1.2	224	0.515	435	22	20.1
NAVDAT	Central Ruby Range	RD-80	33.4	40.60	-115.39	67.7	1.2	235	0.577	407	22	18.1
NAVDAT	Central Ruby Range	RL-42B	33.4	40.65	-115.44	63.9	1.5	131	0.310	423	22	19.1
NAVDAT	Central Ruby Range	RD-78	33.4	40.60	-115.39	66.9	1.5	162	0.399	406	24	16.9
NAVDAT	Central Ruby Range	LEE-12L	33.4	40.60	-115.39	66.2	1.6	191	0.401	476	23	20.7
NAVDAT	Central Ruby Range	RDS0-112	33.4	40.57	-115.41	59.8	2.6	120	0.205	584	27	21.5
NAVDAT	Central Ruby Range	RL-44	33.4	40.65	-115.44	59.6	3.0	73	0.132	555	31	18.0
NAVDAT	Central Ruby Range	RDS3-68	33.4	40.57	-115.42	56.7	3.4	98	0.165	595	39	15.1
NAVDAT	White Rock Mtn.	MLLR-9-164-3	27.0	38.26	-114.22	66.6	1.2	212	0.531	399	35	11.4
NAVDAT	White Rock Mtn.	MLLR-6-64-2X	29.5	38.31	-114.15	65.8	2.3	145	0.334	434	29	15.0
Best et al., 2009	White Rock Mtn.	MLLR-9-164-2	26.0	38.25	-114.22	62.0	2.7	63	0.088	719	38	19.0
Best et al., 2009	White Rock Mtn.	GLE-6-96-1	26.0	38.25	-114.10	61.3	2.9	99	0.145	684	34	20.0
NAVDAT	White Rock Mtn.	MLLR-6-63-1P	29.5	38.31	-114.15	66.5	2.2	155	0.349	444	22	20.2
Best et al., 2009	White Rock Mtn.	MLLR-9-164-1	28.0	38.25	-114.21	65.5	2.1	130	0.230	564	23	25.0
NAVDAT	White Rock Mtn.	GLE-6-98-1X	29.5	38.30	-114.11	66.1	2.0	137	0.302	454	18	25.2
NAVDAT	N. Pahrog Range	201466	27.0	37.75	-115.18	63.4	1.1	211	0.411	513	52	9.9
NAVDAT	N. Pahrog Range	201732	27.0	37.75	-115.18	63.6	1.3	238	0.466	512	47	10.9
NAVDAT	N. Pahrog Range	201723	27.3	37.88	-115.00	68.3	1.1	147	0.357	410	32	12.9
NAVDAT	N. Pahrog Range	201460	27.6	37.91	-115.02	61.6	1.9	84	0.135	624	44	14.0
NAVDAT	N. Pahrog Range	201459	27.6	37.91	-115.02	63.8	1.4	123	0.219	558	34	16.3
NAVDAT	N. Pahrog Range	201721	27.3	37.88	-115.00	67.5	1.1	136	0.326	416	25	16.4
NAVDAT	N. Pahrog Range	201392	27.9	37.91	-115.02	66.3	1.0	183	0.354	516	27	19.3
NAVDAT	N. Pahrog Range	201383	27.9	37.91	-115.02	63.0	1.9	137	0.192	711	33	21.5
NAVDAT	N. Pahrog Range	201720	27.3	37.88	-115.00	66.9	1.3	133	0.279	479	22	22.2
NAVDAT	N. Pahrog Range	201461	27.3	37.88	-115.00	65.2	1.5	119	0.277	431	19	22.6
NAVDAT	N. Pahrog Range	201376	27.3	37.88	-115.00	68.6	1.0	155	0.371	419	17	25.4
NAVDAT	N. Pahrog Range	201719	27.3	37.88	-115.00	65.7	1.4	142	0.287	496	19	26.0
NAVDAT	N. Pahrog Range	201457	27.9	37.91	-115.02	65.7	1.0	144	0.252	572	22	26.5
NAVDAT	N. Pahrog Range	201456	27.9	37.91	-115.02	61.6	1.9	156	0.218	717	23	31.3
NAVDAT	N. Simpson Park Mtns.	GR-96	33.0	39.91	-116.57	67.9	1.4	164	0.342	479	24	20.0
NAVDAT	N. Simpson Park Mtns.	16191	34.0	39.91	-116.55	66.1	2.1	221	0.477	463	22	20.8
NAVDAT	N. Simpson Park Mtns.	GR-95	33.0	39.92	-116.56	68.2	1.4	139	0.291	478	23	20.8
NAVDAT	N. Simpson Park Mtns.	2033	34.0	39.90	-116.53	62.2	3.4	72	0.143	504	23	21.4
NAVDAT	Pancake Range	16111	110.0	39.24	-115.76	63.9	1.9	106	0.182	582	27	21.3
NAVDAT	Pancake Range	881530	110.0	39.25	-115.77	64.6	1.8	100	0.211	475	21	22.6
NAVDAT	Pancake Range	881531	110.0	39.25	-115.77	64.7	1.7	100	0.198	505	20	25.3
NAVDAT	Pancake Range	880121	106.0	39.50	-115.99	57.2	2.8	230	0.414	555	28	19.8
NAVDAT	Winnemucca Mtn.	16134	135.0	40.99	-117.76	63.8	2.6	103	0.212	485	20	24.6
NAVDAT	Winnemucca Mtn.	GSC245	135.0	41.00	-117.77	66.4	2.2	93	0.209	444	13	34.2
NAVDAT	Winnemucca Mtn.	GSC244	135.0	41.00	-117.76	67.4	1.9	120	0.293	410	14	29.3
NAVDAT	Confusion Range	BRN-1-M	29.5	38.81	-113.46	65.1	2.2	120	0.237	507	23	22.0
NAVDAT	Confusion Range	BRN-1-P	29.5	38.81	-113.46	67.6	1.8	165	0.397	416	22	18.9
NAVDAT	Confusion Range	BRN-2-M	30.6	38.82	-113.48	64.7	2.3	128	0.315	406	15	27.1
NAVDAT	Confusion Range	BRN-2-P	30.6	38.82	-113.47	69.4	1.5	158	0.537	294	19	15.5

Table DR1 (continued): Data used to calculate Sr/Y for individual subsets (Area)

Source	Area	Sample ID	Age (Ma)	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Rb/Sr	Sr (ppm)	Y (ppm)	Sr/Y
Best et al., 2009	Wah Wah Range	4	32.0	38.22	-113.53	67.6	1.1	155	0.375	413	41	10.0
NAVDAT	Wah Wah Range	TET-9-75-1	32.3	38.22	-113.53	67.6	1.1	155	0.375	413	41	10.1
Best et al., 2009	Wah Wah Range	FRSC-3-34-4	33.0	38.30	-113.25	60.5	3.1	58	0.114	507	39	13.0
Best et al., 2009	Wah Wah Range	LAM-9-71-3	32.0	38.31	-113.50	62.6	1.6	114	0.217	525	31	17.0
Best et al., 2009	Wah Wah Range	MIL-3-11-5	32.0	38.30	-113.19	58.4	3.2	185	0.314	590	35	17.0
Best et al., 2009	Wah Wah Range	MIL-1	32.0	38.30	-113.22	58.4	3.3	67	0.105	640	32	20.0
Best et al., 2009	Wah Wah Range	MIL-3-35-3	33.0	38.31	-113.22	67.0	2.2	226	0.393	575	24	24.0
Best et al., 2009	Wah Wah Range	LAM-9-71-2	32.0	38.31	-113.50	60.8	3.0	80	0.089	898	37	24.0
NAVDAT	Wah Wah Range	TET-9-13-2	32.3	38.22	-113.57	57.5	6.6	63	0.125	506	20	25.3
NAVDAT	Wah Wah Range	TET-9-77-4B	32.3	38.18	-113.51	60.0	5.3	78	0.111	703	26	27.0
Best et al., 2009	Wah Wah Range	FRSC-2-43C-4	34.0	38.43	-113.28	62.8	3.4	113	0.159	710	23	31.0
Best et al., 2009	Wah Wah Range	FRSC-2-43C-5	24.0	38.45	-113.26	59.2	3.6	64	0.093	686	27	25.0
Best et al., 2009	Wah Wah Range	FRSC-2-45C-3	24.0	38.38	-113.27	59.5	3.3	89	0.101	883	32	28.0
Best et al., 2009	Wah Wah Range	FRSC-2-62-2	24.0	38.39	-113.32	59.2	4.1	141	0.214	658	30	22.0
Best et al., 2009	Wah Wah Range	FRSC-2-62-3	24.0	38.39	-113.33	60.8	3.1	186	0.306	608	32	19.0
Best et al., 2009	Wah Wah Range	FRSC-2-7-1	24.0	38.37	-113.34	60.6	3.6	161	0.245	656	26	25.0
Best et al., 2009	Wah Wah Range	FRSC-3-40-3	24.0	38.45	-113.26	59.9	3.7	69	0.106	653	27	24.0
Best et al., 2009	Wah Wah Range	LAM-1894-1	24.0	38.39	-113.47	60.7	3.6	166	0.252	660	28	24.0
Best et al., 2009	Wah Wah Range	LAM-1894-2	24.0	38.38	-113.47	60.5	3.7	163	0.242	674	27	25.0
Best et al., 2009	Wah Wah Range	LAM-9-69-1	24.0	38.38	-113.49	59.2	4.3	105	0.158	664	27	25.0
Best et al., 2009	Wah Wah Range	LAM-9-74-6	24.0	38.31	-113.51	55.4	4.9	74	0.130	570	32	18.0
Best et al., 2009	Wah Wah Range	MIL-3-11-1	24.0	38.28	-113.18	62.3	2.7	187	0.262	713	34	21.0
Best et al., 2009	Wah Wah Range	MIL-3-11-4	24.0	38.30	-113.19	66.5	1.7	185	0.390	474	26	18.0
Best et al., 2009	Wah Wah Range	MIL-3-34-1	24.0	38.28	-113.23	58.0	3.9	148	0.178	830	32	26.0
Best et al., 2009	Wah Wah Range	MIL-3-34-2	24.0	38.28	-113.23	63.1	1.4	195	0.303	644	34	19.0
Best et al., 2009	Wah Wah Range	MIL-3-35-6	24.0	38.27	-113.24	62.6	2.9	178	0.248	718	34	21.0
Best et al., 2009	Honeycomb Hills	GRANMT-4	33.0	39.69	-113.61	58.0	5.9	126	0.300	419	32	13.0
Best et al., 2009	Honeycomb Hills	GRANMT-1	33.0	39.66	-113.53	59.4	4.2	150	0.332	452	32	14.0
Best et al., 2009	Honeycomb Hills	GRANMT-5	33.0	39.66	-113.65	57.1	5.8	128	0.311	410	27	15.0
Best et al., 2009	Honeycomb Hills	GRANMT-2	33.0	39.70	-113.55	60.9	2.8	149	0.334	446	30	15.0
Best et al., 2009	Honeycomb Hills	GRANMT-3	33.0	39.72	-113.58	60.6	2.8	150	0.331	452	30	15.0
Best et al., 2009	Honeycomb Hills	SPNE-2	40.0	39.63	-113.62	65.4	3.7	92	0.217	423	28	15.0
Best et al., 2009	Honeycomb Hills	GRANMT-7	33.0	39.66	-113.70	57.7	3.8	159	0.317	501	29	17.0
Best et al., 2009	Honeycomb Hills	GRANMT-6	33.0	39.64	-113.74	57.9	3.3	176	0.325	542	30	18.0
NAVDAT	Toano Range	M84TR63	157.0	40.90	-114.30	69.4	1.5	90	22.000	810	0	36.8
NAVDAT	Toano Range	M83TR39	157.0	40.90	-114.30	69.4	1.5	78	18.000	810	0	45.0
NAVDAT	Toano Range	16296	157.0	40.91	-114.30	67.4	1.9	104	16.300	783	0	48.0
NAVDAT	Toano Range	M90PR181	157.0	40.91	-114.31	68.2	1.5	64	16.000	1020	0	63.8

Table DR2: Subsets plotted in Figure 4; square symbols in Figure 2

Area	Mean Age	median Sr/Y	Sr/Y uncertainty	Rb/Sr	Moho (km)	Moho uncertainty (km)	avg. latitude	avg. longitude
Battle Mtn. NE	37.98	45.87	4.31	0.15	59.71	10.79	40.63	-117.05
Battle Mtn. SW	89.00	44.25	6.79	0.15	57.88	13.45	40.62	-117.20
Big Kasock Mtn.	95.33	50.46	9.75	0.19	64.86	17.23	39.01	-118.31
Cortez Mtn	150.00	20.43	7.17	0.11	31.12	12.18	40.36	-116.42
Cortez Mtn	158.00	24.51	6.99	0.14	35.70	12.27	40.28	-116.43
Creek Mtns.	41.04	33.97	2.90	0.13	46.32	8.34	40.32	-117.22
E Tintic Mtns	33.85	23.00	1.78	0.19	34.00	6.30	39.81	-112.07
East Ely	110.25	37.56	3.24	0.11	50.37	8.99	39.26	-114.94
East Range	175.00	25.42	3.71	0.17	36.72	8.64	40.57	-117.76
East Range	134.00	21.82	5.22	0.20	32.67	10.08	40.57	-117.85
Edna Mtn.	104.17	34.01	4.66	0.16	46.38	10.32	40.81	-117.46
Indian Peak	27.68	25.00	4.84	0.11	36.25	9.88	38.04	-113.83
Indian Peak	22.18	23.50	3.57	0.17	34.56	8.34	37.98	-113.76
N. Richmond Mtns.	132.45	29.85	5.05	0.09	41.70	10.47	40.93	-116.34
NW Copper Mtns.	104.00	34.70	5.18	0.17	47.15	10.96	41.84	-115.66
Osgood Range	95.00	37.78	0.39	0.13	50.61	5.80	41.17	-117.27
Pahute Mesa	97.00	40.14	4.68	0.10	53.27	10.79	37.34	-116.17
Paradise Rng	103.75	40.19	5.13	0.18	53.32	11.30	38.97	-117.86
Santa Rosa Range	106.40	41.29	3.62	0.11	54.55	9.68	41.50	-117.65
Santa Rosa Range	72.90	41.89	8.61	0.14	55.22	15.33	41.41	-117.76
Santa Rosa Range	55.00	42.89	0.55	0.18	56.36	6.35	41.17	-117.74
Shoshone Range	38.59	33.28	3.58	0.11	45.56	9.07	40.36	-116.72
Shoshone Range	36.00	31.03	1.37	0.17	43.03	6.42	40.38	-116.91
Stillwater Range	27.95	30.78	7.08	0.18	42.74	12.82	39.65	-118.22
Stillwater Range	26.03	37.78	9.53	0.19	50.61	16.07	39.65	-118.21
Tuscarora Mtns.	39.44	31.67	3.49	0.13	43.74	8.84	41.31	-116.30
W. Marys Mtn	37.81	33.56	6.00	0.11	45.87	11.80	40.77	-116.31
W. Marys Mtn	44.25	31.81	2.09	0.14	43.90	7.28	40.75	-116.32

Table DR3: Subsets discarded based on Sr/Y uncertainty or Rb/Sr, circles in Figure 2.

Area	Mean Age	median Sr/Y	Sr/Y uncertainty	Rb/Sr	Moho (km)	Moho uncertainty (km)	avg. latitude	avg. longitude
Battle Mtn. NE	88.00	32.20	14.68	0.43	44.34	21.45	40.61	-117.05
Battle Mtn. SW	39.00	24.24	7.32	0.64	35.39	12.61	40.55	-117.13
Battle Mtn. SW	41.00	57.27	15.97	0.08	72.52	24.71	40.53	-117.18
Battle Mtn. SW	35.00	35.32	17.64	0.15	47.85	25.01	40.59	-117.19
Central Ruby Range	33.40	18.57	1.95	0.39	29.02	6.17	40.60	-115.41
Central Ruby Range	29.26	17.74	5.30	0.49	28.09	9.87	40.61	-115.39
Confusion Rng	30.05	20.48	4.92	0.37	31.16	9.65	38.82	-113.46
E. Hombolt Range	33.40	24.24	5.56	0.20	35.39	10.64	41.03	-115.09
E. Hombolt Range	40.00	21.41	11.52	0.19	32.22	17.13	40.98	-115.10
Honeycomb Hills	33.88	15.00	1.58	0.31	25.01	5.50	39.67	-113.62
Maverick Springs	33.40	35.91	12.56	0.31	48.51	19.34	40.08	-115.27
Mountain City	91.20	27.87	6.57	0.22	39.47	12.03	41.86	-115.89
Mountain City	149.50	34.67	4.02	0.05	47.11	9.66	41.68	-116.08
N. Pahrog Range	27.46	20.43	6.49	0.30	31.11	11.40	37.87	-115.03
N. Richmond Mtns.	44.25	4.47	1.77	1.13	13.18	4.96	40.98	-116.37
N. Simpson Park Mtns.	33.50	20.77	0.61	0.31	31.50	4.82	39.91	-116.55
Needle Range	29.68	20.00	14.87	0.31	30.63	20.80	38.41	-113.90
Pancake Rng	109.00	21.97	2.30	0.25	32.84	6.81	39.31	-115.82
Southern Ruby Range	36.00	18.93	4.10	0.27	29.43	8.61	40.34	-115.52
Toano Range	157.00	46.52	11.28	0.10	60.43	18.66	40.91	-114.30
Wah Wah Range	24.00	24.00	3.18	0.22	35.12	7.94	38.35	-113.32
Wah Wah Range	32.38	17.00	6.66	0.22	27.26	11.35	38.27	-113.41
White Rock Mtn.	27.93	20.00	5.00	0.28	30.63	9.70	38.28	-114.16
Winnemucca Mtn	135.00	29.29	4.77	0.24	41.06	10.11	41.00	-117.76

Table DR4: Geochemical data for Quaternary rock analyses

Arc: Bismarck; New Britain

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 28	-4.90	149.16	59.5	2.8	35	325	40	8.13	0.106
samp. 40922	-5.60	150.20	64.5	2.1	20	252	29	8.69	0.079
samp. 40924	-5.60	150.20	64.4	2.2	14	175	20	8.75	0.077
samp. SMD29 268	-5.71	150.02	57.2	3.5	30	285	31	9.19	0.105
samp. SER 48	-4.22	152.18	62.2	2.2	33	352	38	9.19	0.095
samp. 40946	-5.60	150.20	55.4	4.3	38	212	23	9.22	0.177
samp. RAB11A	-4.22	152.18	59.6	2.1	49	335	36	9.31	0.146
samp. SER 395	-4.22	152.18	62.3	2.1	32	345	36	9.46	0.092
samp. 26	-4.90	149.16	57.5	2.4	26	404	42	9.62	0.064
samp. SER 416A	-4.22	152.18	62.4	2.0	29	342	35	9.71	0.086
samp. 8016	-4.22	152.18	62.3	2.0	35	353	35	10.09	0.099
samp. SKB10	-5.72	150.01	57.7	2.6	29	296	29	10.21	0.098
samp. SER 228	-4.22	152.18	59.3	3.9	31	365	34	10.60	0.085
samp. SER 225	-4.22	152.18	60.0	3.5	23	326	29	11.19	0.071
samp. TAVQ-817	-4.22	152.18	60.1	2.8	29	390	34	11.47	0.074
samp. SER 382	-4.22	152.18	58.8	3.5	25	362	31	11.61	0.069

Arc: Sulawesi, Sangihe

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. PJ-96	3.53	125.52	58.5	2.6	30	431	51	8.45	0.070
samp. MIN6	1.36	124.79	60.9	3.0	53	308	35	8.87	0.171
samp. K32007-4	1.47	125.00	57.7	3.2	17	321	36	8.92	0.053
samp. L3907-2	1.36	124.79	60.9	2.7	46	309	33	9.36	0.149
samp. L3307-5	1.36	124.79	60.5	2.9	48	309	31	9.97	0.155
samp. L3307-4	1.36	124.79	60.3	2.9	47	317	30	10.57	0.148
samp. MIN16	1.32	124.90	57.8	4.0	37	335	29	11.53	0.111
samp. T30308-3	1.25	124.87	57.8	4.5	36	317	26	12.19	0.114
samp. L3907-6	1.36	124.79	57.7	3.7	29	354	27	13.11	0.082
samp. MIN31	0.85	124.70	60.3	3.5	14	256	19	13.74	0.053
samp. PJ-98	3.70	125.45	55.3	3.4	20	373	26	14.35	0.054
samp. PJ-65	2.72	125.38	61.1	2.5	25	346	22	15.73	0.072
samp. MIN27	0.85	124.70	59.0	2.9	16	295	18	15.96	0.053
samp. KR31707-1	2.78	125.40	55.5	3.7	24	429	26	16.50	0.056

Arc: Sunda

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. B28	-8.17	114.80	59.6	2.1	42	402	38	10.52	0.105
samp. G07	-6.71	106.92	56.3	2.5	54	336	31	10.84	0.162
samp. 27-10-1	-8.54	123.59	60.1	2.6	17	295	27	10.93	0.056
samp. AK.XLC-03	-6.10	105.42	55.1	4.0	26	367	33	11.12	0.071
samp. G52	-6.74	107.07	58.8	3.0	53	306	27	11.33	0.173
samp. G11	-6.71	106.92	56.7	3.7	57	287	25	11.48	0.199
samp. B7	-8.24	115.38	58.2	2.4	32	384	33	11.64	0.083
samp. B7	-8.17	114.80	58.2	2.4	32	384	33	11.71	0.082
samp. G37A	-6.71	106.92	56.2	2.0	55	342	29	11.79	0.161
samp. G31	-6.71	106.92	56.1	2.0	45	367	31	11.84	0.123
samp. B4215	-8.34	123.26	59.4	2.3	61	548	43	12.74	0.111
samp. AK.CS-2	-6.10	105.42	55.2	4.2	25	371	29	12.79	0.067
samp. SJ.K	-9.55	119.12	60.1	3.7	32	334	26	12.85	0.096
samp. G51	-6.70	107.03	55.4	4.0	52	297	23	12.91	0.173
samp. PC-34	-7.00	108.50	58.5	3.0	21	310	24	12.92	0.068
samp. G38	-6.71	106.92	55.4	3.3	43	351	27	13.00	0.124
samp. KV99-884	-7.80	114.00	57.5	3.0	75	394	30	13.13	0.190
samp. G49	-6.78	107.06	59.9	2.8	56	342	26	13.15	0.164
samp. KI 202	-8.57	114.24	58.0	2.6	63	342	26	13.15	0.184
samp. G04	-6.71	106.92	56.1	3.6	53	331	25	13.24	0.161
samp. G45	-6.71	106.92	57.6	2.7	53	334	25	13.36	0.157
samp. G19	-6.79	106.98	55.5	2.9	51	337	25	13.48	0.150
samp. N5C	13.42	94.27	61.6	3.1	57	338	25	13.52	0.169
samp. G10	-6.75	107.04	55.1	2.9	47	357	26	13.73	0.131
samp. KI 85	-8.57	114.24	57.3	2.6	43	484	35	13.83	0.089
samp. KI 29D	-8.57	114.24	58.5	2.1	64	346	25	13.84	0.184
samp. G44	-6.76	107.02	55.1	3.1	50	376	27	13.93	0.133
samp. LT20	-8.55	122.80	60.1	3.3	39	446	32	13.94	0.087
samp. B7	-8.34	123.26	59.1	2.1	66	671	48	13.98	0.098
samp. G43	-6.71	106.92	55.6	3.6	55	366	26	14.08	0.149
samp. G40	-6.74	107.01	57.5	3.0	49	370	26	14.23	0.131
samp. CIA-204	-9.55	119.12	55.4	4.3	41	430	30	14.33	0.095
samp. G17	-6.79	106.99	61.1	2.5	59	317	22	14.41	0.185
samp. 41622	-8.42	116.47	55.5	3.1	35	433	30	14.43	0.081
samp. G03	-6.71	106.92	55.2	4.0	50	334	23	14.52	0.151
samp. AG 49-1	-8.42	115.50	58.4	3.5	41	423	29	14.59	0.097
samp. G01A	-6.70	107.03	55.0	4.0	50	323	22	14.68	0.154
samp. KI 34	-8.57	114.24	55.2	3.2	76	474	32	14.81	0.160
samp. N5B	13.42	94.27	61.1	3.3	57	326	22	14.82	0.175
samp. G47	-6.71	106.92	58.9	2.8	53	386	26	14.85	0.137
samp. CIA-132	-9.55	119.12	59.4	3.3	45	404	27	14.96	0.111
samp. KI 28	-8.57	114.24	57.9	2.8	61	346	23	15.04	0.175
samp. 7422	-8.10	112.80	57.2	2.4	26	399	26	15.35	0.065
samp. KV99-844B	-7.80	114.00	56.9	3.6	63	415	27	15.37	0.152
samp. N5A	13.42	94.27	61.6	3.2	55	339	22	15.41	0.162
samp. 61293	-8.00	120.00	59.6	2.8	20	310	20	15.50	0.065
samp. AG 43	-8.42	115.50	56.1	4.4	34	437	28	15.61	0.078
samp. KI 194	-8.57	114.24	57.2	2.9	67	440	28	15.71	0.153
samp. KV99-075	-7.80	114.00	59.0	2.7	75	412	26	15.78	0.182
samp. SEM41C	-8.10	112.80	57.4	2.1	28	405	26	15.82	0.070
samp. KV99-017	-7.80	114.00	58.9	2.9	66	412	26	15.85	0.160
samp. AG 26	-8.42	115.50	56.2	4.2	31	430	27	15.93	0.072

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. SEM41D	-8.10	112.80	58.6	2.4	24	446	28	15.99	0.053
samp. SEM41A	-8.10	112.80	58.4	2.4	24	442	27	16.31	0.053
samp. AG 23	-8.42	115.50	57.6	3.6	38	442	27	16.37	0.086
samp. SEM41B	-8.10	112.80	57.3	2.1	28	412	25	16.48	0.069
samp. G06	-6.71	106.92	55.5	2.4	36	397	24	16.54	0.091
samp. LT1	-8.55	122.80	57.7	4.2	35	497	30	16.57	0.070
samp. G54	-6.71	106.92	58.2	2.8	56	382	23	16.61	0.146
samp. LT3	-8.55	122.80	57.2	4.5	33	471	28	16.81	0.070
samp. KI 162	-8.57	114.24	58.3	2.7	69	455	27	16.85	0.152
samp. 61318	-8.87	120.33	56.0	4.1	28	304	18	16.89	0.092
samp. 41622	-8.42	116.47	55.1	3.2	37	495	29	17.07	0.075
samp. NAR/1	13.42	94.27	61.7	3.1	54	326	19	17.16	0.166
samp. G21	-6.78	106.98	55.1	3.6	37	362	21	17.24	0.102
samp. JM-49	-7.00	108.50	60.4	2.9	36	311	18	17.28	0.116
samp. N5D	13.42	94.27	61.6	3.1	58	346	20	17.30	0.168
samp. SEM1409	-8.10	112.80	56.5	2.2	28	417	24	17.52	0.067
samp. SEM1607	-8.10	112.80	56.3	2.3	28	416	24	17.55	0.068
samp. E3A	-8.53	122.78	62.9	2.6	49	354	20	17.70	0.138
samp. CIA-202	-9.55	119.12	57.0	3.7	37	408	23	17.74	0.091
samp. PC-1	-7.00	108.50	57.8	3.1	19	320	18	17.78	0.059
samp. PC-3	-7.00	108.50	58.5	3.9	18	307	17	18.06	0.059
samp. M99-189	-7.53	110.43	55.6	2.4	56	560	31	18.06	0.100
samp. E5A	-8.53	122.78	57.9	4.2	49	331	18	18.39	0.148
samp. MB-22	-7.36	110.46	58.3	2.3	39	431	23	18.50	0.089
samp. 41636	-8.42	116.47	58.9	2.3	31	483	26	18.58	0.064
samp. CIA-115	-9.55	119.12	58.1	3.5	32	409	22	18.59	0.078
samp. N4	13.42	94.27	61.8	3.1	58	336	18	18.67	0.173
samp. B71	-8.24	115.38	55.5	2.8	23	382	20	19.10	0.060
samp. M96-187	-7.53	110.43	55.8	2.6	62	562	29	19.38	0.110
samp. E5A	-8.53	122.78	57.9	4.2	49	350	18	19.44	0.140
samp. M99-015	-7.53	110.43	56.1	2.2	61	555	28	19.82	0.110
samp. KV99-822	-7.80	114.00	56.5	2.4	52	499	25	19.96	0.104
samp. M96-142	-7.53	110.43	55.8	2.4	53	563	28	20.11	0.094
samp. M96-191	-7.53	110.43	55.0	2.6	51	568	28	20.29	0.090
samp. LT13	-8.55	122.80	55.2	4.4	33	532	26	20.46	0.062
samp. N7	13.42	94.27	62.3	2.5	56	350	17	20.59	0.160
samp. CIA-348	-9.55	119.12	56.4	2.7	36	610	30	20.68	0.059
samp. R14	-8.32	121.71	60.3	2.2	110	626	30	20.87	0.176
samp. LT13	-8.55	122.80	55.2	4.4	33	545	26	20.98	0.061
samp. M99-190	-7.53	110.43	55.6	2.4	53	569	27	21.07	0.093
samp. N3	13.42	94.27	61.3	3.3	55	339	16	21.19	0.162
samp. R18	-8.32	121.71	59.9	2.1	110	643	30	21.43	0.171
samp. N3A	13.42	94.27	61.2	3.0	56	344	16	21.50	0.163
samp. JPM-2	-7.53	110.43	56.0	2.4	54	603	28	21.54	0.090

Arc: Scotia; South Sandwich

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. WX.33	-55.96	-29.50	59.0	2.9	16	191	47	4.11	0.083
samp. SSB.13.1	-59.42	-27.08	56.7	2.8	8	132	32	4.13	0.061
samp. SSW.10.4	-56.72	-27.25	56.3	3.2	18	145	35	4.14	0.124
samp. SST.8.6	-59.45	-27.37	56.9	3.2	20	150	36	4.17	0.133
samp. SSB.1.2	-59.42	-27.08	56.2	3.5	13	121	29	4.17	0.107
samp. SSB.18.1	-59.42	-27.08	56.7	3.6	11	127	30	4.23	0.087
samp. SST.5.1	-59.42	-27.27	55.7	3.6	18	145	34	4.26	0.124
samp. SS.93.13	-57.08	-26.72	58.3	3.1	8	125	29	4.31	0.066
samp. SST.4.1	-59.47	-27.30	56.7	3.2	19	148	34	4.35	0.128
samp. SST.4.1	-59.47	-27.30	56.7	3.2	19	148	34	4.35	0.128
samp. SSB.9.1	-59.42	-27.08	56.8	3.3	12	130	29	4.48	0.092
samp. SSB.17.2	-59.48	-27.23	56.9	2.9	9	135	30	4.50	0.067
samp. SSB.18.1	-59.42	-27.08	56.9	3.6	10	126	28	4.50	0.079
samp. SSB.3.4	-59.42	-27.08	57.3	3.6	14	126	28	4.50	0.111
samp. SSB.19.1	-59.43	-27.08	56.6	3.2	14	131	29	4.52	0.107
samp. SSB.19.1	-59.43	-27.08	56.6	3.2	14	131	29	4.52	0.107
samp. SST.6.2	-59.45	-27.37	55.7	3.4	19	142	31	4.58	0.134
samp. SS17.10	-59.42	-27.08	56.6	3.2	12	131	29	4.60	0.091
samp. SS17.10	-59.42	-27.08	56.6	3.2	12	131	29	4.60	0.091
samp. SSB.10.1	-59.42	-27.08	56.5	3.2	11	129	28	4.61	0.085
samp. SSB.13.4	-59.42	-27.08	56.6	2.8	7	131	28	4.68	0.053
samp. SSB.3.5	-59.42	-27.08	56.6	3.5	13	122	26	4.69	0.107
samp. SSB.17.1	-59.42	-27.08	56.0	3.2	11	132	28	4.71	0.083
samp. SSB.11.1	-59.48	-27.23	56.3	3.3	12	133	28	4.75	0.090
samp. SSB.6.1	-59.42	-27.08	56.3	3.1	10	134	28	4.79	0.075
samp. SSB.2.1	-59.42	-27.08	56.6	3.5	12	130	27	4.81	0.092
samp. SSC.48.1	-57.08	-26.72	56.2	3.4	6	117	24	4.88	0.051
samp. SSF.1.3	-59.03	-26.58	59.9	2.6	19	167	34	4.91	0.114
samp. SSF.1.3	-59.03	-26.58	59.9	2.6	19	167	34	4.91	0.114
samp. SSB.7.1	-59.42	-27.08	56.2	3.4	10	131	26	5.04	0.076
samp. SSB.14.1	-59.42	-27.08	55.8	3.4	14	131	26	5.04	0.107

Arc: Scotia; South Shetland

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. LI-1	-62.58	-60.00	55.5	3.6	21	260	29	8.97	0.081
samp. P.1251.7	-62.58	-60.00	57.2	4.3	25	363	35	10.37	0.069
samp. 98-27A	-62.63	-61.58	57.5	2.2	30	457	41	11.24	0.066
samp. P.404.3	-63.20	-62.00	60.4	2.1	58	380	33	11.52	0.153
samp. P.1251.1	-62.58	-60.00	56.0	4.8	25	372	32	11.63	0.067
samp. P.917.1	-62.35	-59.60	59.4	3.9	28	374	32	11.69	0.075
samp. 98012301	-62.58	-60.00	58.0	2.4	25	438	36	12.17	0.057

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Scotia; South Shetland (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. LI-15	-62.58	-60.00	58.0	2.4	25	438	36	12.17	0.057
samp. P.433.5	-62.05	-58.40	59.7	4.0	65	390	31	12.58	0.167
samp. LI-9	-62.58	-60.00	61.0	2.4	18	302	24	12.58	0.060
samp. LI-10	-62.58	-60.00	60.9	2.5	22	329	26	12.65	0.067
samp. HY-4	-62.50	-59.80	60.7	2.6	79	412	30	13.73	0.192
samp. P.535.2	-62.05	-58.40	63.1	2.5	56	374	27	13.85	0.150
samp. P.2459.1	-62.05	-58.40	57.6	2.4	45	382	27	14.15	0.118
samp. P.535.3	-62.05	-58.40	61.7	2.9	46	374	26	14.38	0.123
samp. P.681.3	-62.05	-58.40	61.2	3.0	53	403	28	14.39	0.132
samp. 45D	-62.66	-60.27	57.5	3.5	42	428	27	15.85	0.098
samp. HA23.2	-62.54	-59.54	56.7	3.6	54	428	27	15.85	0.126
samp. P.681.1	-62.05	-58.40	62.1	3.5	58	362	22	16.45	0.160
samp. HA9.1	-62.54	-59.54	57.5	3.3	54	425	26	16.67	0.128
samp. P.681.3	-62.05	-58.40	61.4	4.0	51	372	22	16.91	0.137
samp. P.682.1	-62.05	-58.40	63.2	3.2	62	358	21	17.05	0.173
samp. P.411.3	-63.00	-60.50	58.4	3.4	53	361	21	17.19	0.147
samp. P.676.1	-62.05	-58.40	61.7	4.0	57	400	23	17.39	0.143
samp. HA7.3	-62.54	-59.54	57.9	3.3	28	413	24	17.50	0.069
samp. P.440.1	-62.05	-58.40	55.7	5.4	74	494	28	17.64	0.150
samp. 8.2A	-62.54	-59.54	57.3	3.2	47	476	26	18.24	0.098
samp. P.1458.2	-62.05	-58.40	57.9	3.6	29	552	30	18.40	0.053
samp. 80A	-62.66	-60.27	55.9	3.8	28	453	24	18.88	0.062
samp. KG-3	-62.17	-58.90	57.2	3.1	42	472	25	18.88	0.089
samp. HA-19.1	-62.54	-59.54	56.2	4.8	25	491	26	18.88	0.051
samp. A141	-62.05	-58.40	61.9	2.4	57	480	25	19.20	0.119
samp. HA-20	-62.54	-59.54	63.8	2.2	57	443	22	20.14	0.129
samp. P.1259.2	-62.58	-60.00	61.1	2.6	32	487	24	20.29	0.066
samp. HA8.1.1	-62.54	-59.54	58.0	3.1	52	454	22	20.83	0.114
samp. P.1458.3	-62.05	-58.40	56.4	3.5	34	642	30	21.40	0.053
samp. P.318.2	-62.05	-58.40	56.7	5.4	41	537	25	21.48	0.076
samp. P.1411.1	-62.05	-58.40	59.0	4.3	49	498	23	21.65	0.098
samp. 258B	-62.66	-60.27	58.3	3.2	35	597	27	22.11	0.059
samp. 16572	-62.58	-60.00	62.1	3.6	23	409	18	22.72	0.056
samp. P.680.1	-62.05	-58.40	60.0	5.6	42	414	18	23.00	0.101
samp. 20	-62.54	-59.54	63.7	2.0	54	428	18	23.65	0.126
samp. HA-8.2A	-62.54	-59.54	58.7	2.9	45	570	24	23.75	0.079
samp. A500	-62.05	-58.40	57.3	4.0	29	526	22	23.91	0.055
samp. P.1427.1	-62.05	-58.40	57.8	5.4	40	579	24	24.13	0.069
samp. P.685.4	-62.05	-58.40	56.5	4.3	40	547	22	24.86	0.073
samp. 258A	-62.66	-60.27	59.8	3.1	38	575	23	25.00	0.066
samp. A202	-62.05	-58.40	58.2	3.8	47	528	21	25.14	0.089
samp. P.1409.1	-62.05	-58.40	56.8	5.2	56	608	24	25.33	0.092
samp. HA18.1	-62.54	-59.54	63.4	2.1	45	466	18	26.48	0.096
samp. P.1187.4	-62.05	-58.40	56.9	5.0	32	560	21	26.67	0.057

Arc: Ryukyu

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 940914-10	32.50	130.10	55.3	4.4	48	498	42	11.86	0.096
samp. 970719-10X	32.75	130.30	56.5	4.0	57	386	32	12.06	0.148
samp. S-2	32.67	130.18	56.5	3.3	44	484	39	12.41	0.091
samp. 980323-2	32.50	130.10	56.0	3.8	34	548	43	12.74	0.062
samp. BA12-8	32.60	129.90	55.1	4.5	37	439	34	12.91	0.084
samp. 21018-6	32.60	129.90	55.3	5.1	47	418	32	13.06	0.112
samp. 980217-2	32.74	130.28	65.0	2.6	65	327	25	13.08	0.199
samp. KDI-06	32.75	130.30	56.7	3.5	42	415	31	13.39	0.101
samp. R2	31.50	130.00	57.7	5.3	37	444	33	13.45	0.083
samp. AS060	32.92	131.03	58.1	3.0	61	479	35	13.69	0.127
samp. 199.10-E	32.75	130.30	57.3	3.9	51	418	30	13.88	0.122
samp. 98MS177	32.00	130.58	58.0	3.1	70	389	28	13.89	0.180
samp. 98MS193	32.00	130.58	58.7	3.5	67	354	25	14.00	0.189
samp. 153.85-E	32.75	130.30	56.9	3.3	50	467	33	14.03	0.107
samp. UZN-1663	32.75	130.30	57.1	4.5	51	338	24	14.13	0.151
samp. SK58	32.00	130.30	55.5	5.0	25	385	27	14.26	0.065
samp. SK57	32.00	130.30	56.0	5.0	31	388	27	14.37	0.080
samp. BCPA42	32.75	130.95	57.0	3.6	57	428	29	14.76	0.133
samp. 980217-1	32.75	130.30	57.8	4.3	46	366	24	15.25	0.126
samp. 21107-3	32.60	129.90	61.2	4.0	68	377	24	15.71	0.180
samp. 40439	32.00	130.58	60.6	3.1	75	409	26	15.73	0.183
samp. F	32.75	130.30	57.6	4.3	54	364	23	15.83	0.148
samp. 1	32.69	130.28	56.6	4.4	46	509	32	15.91	0.090
samp. SK55	32.00	130.30	57.1	2.3	36	467	29	16.10	0.077
samp. 970719-4X	32.75	130.30	61.7	3.2	75	387	24	16.13	0.194
samp. 1663LAVA	32.75	130.30	58.0	4.3	55	371	23	16.13	0.148
samp. R31	31.50	130.00	60.5	3.6	48	339	21	16.14	0.142
samp. U3A-E	32.75	130.30	57.7	4.6	41	366	22	16.36	0.112
samp. U5A-E	32.75	130.30	57.3	4.5	41	371	22	16.53	0.111
samp. OA10-7	32.60	129.90	59.0	4.7	64	419	25	16.76	0.153
samp. 980217-7	32.76	130.30	58.7	4.0	57	406	24	16.92	0.140
samp. 950727-2	32.78	130.24	61.7	3.3	71	440	26	16.92	0.161
samp. 13507	32.00	130.58	62.1	3.2	71	390	23	16.96	0.182
samp. KDI-07	32.75	130.30	56.3	4.2	70	391	23	17.00	0.179
samp. R27	31.60	130.50	60.6	2.4	36	307	18	17.06	0.117
samp. 980217-12X	32.75	130.30	57.8	4.2	42	395	23	17.17	0.106
samp. OA10-5	32.60	129.90	57.2	5.6	33	448	26	17.23	0.074
samp. TTPA48	32.75	130.95	58.1	3.4	70	485	28	17.32	0.144
samp. OA22-7	32.60	129.90	61.6	3.8	62	400	23	17.39	0.155
samp. 2TK-612T	32.77	130.95	59.1	2.4	86	489	28	17.46	0.176
samp. SK65	32.00	130.30	56.7	4.5	25	437	25	17.48	0.057

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Ryukyu (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. U4A-E	32.75	130.30	58.6	3.9	53	373	21	17.62	0.142
samp. U2A-E	32.75	130.30	58.7	4.1	45	378	21	17.86	0.119
samp. PRAS26	32.75	130.95	56.2	3.7	54	525	29	18.10	0.103
samp. 602.80-E	32.75	130.30	57.9	3.0	64	470	26	18.16	0.136
samp. KOPA38	32.75	130.95	56.2	4.0	47	439	24	18.29	0.107
samp. 980324-1X	32.75	130.30	61.0	2.2	76	532	29	18.34	0.143
samp. 950726-4	32.78	130.27	61.6	3.6	69	443	24	18.46	0.156
samp. 2TK-612TB	32.77	130.95	56.8	2.2	86	550	30	18.64	0.156
samp. PRAS11	32.75	130.95	58.9	3.3	64	416	22	18.91	0.154
samp. 262.80-H	32.75	130.30	61.8	3.0	70	376	20	19.07	0.186
samp. R5	31.50	130.00	61.8	2.6	53	350	18	19.44	0.151
samp. TTPA44U	32.75	130.95	58.1	3.8	62	531	27	19.67	0.117
samp. PRAS18	32.75	130.95	56.4	3.6	49	513	26	19.73	0.096
samp. 950727-3	32.75	130.30	60.7	3.9	48	457	23	19.87	0.105
samp. BCPA54	32.75	130.95	61.6	2.1	61	539	27	19.96	0.113
samp. 11092203	32.77	130.83	57.6	3.5	55	541	27	20.04	0.102
samp. ASO30	32.92	131.03	57.5	3.2	68	481	24	20.04	0.141
samp. DAIKANBO	32.75	130.95	58.7	2.8	65	502	25	20.08	0.129
samp. ASO35	32.92	131.03	60.7	2.1	92	526	26	20.23	0.175
samp. ASO38	32.92	131.03	60.6	2.2	93	497	24	20.71	0.187
samp. ASO1.8	32.77	130.95	56.9	3.0	87	562	27	20.81	0.154
samp. ASO27	32.77	130.95	55.5	3.7	81	479	23	20.83	0.169
samp. BCPA41	32.75	130.95	58.8	3.7	63	438	21	20.86	0.144
samp. 910928 01	32.77	130.95	55.8	3.1	66	659	31	20.98	0.100
samp. ASO37	32.92	131.03	60.1	2.3	89	486	23	21.13	0.183
samp. PRAS15	32.75	130.95	55.7	4.1	37	488	23	21.22	0.076
samp. R46	31.50	130.00	60.6	3.6	66	575	27	21.30	0.115
samp. 950729-5	32.69	130.28	55.2	4.3	40	490	23	21.30	0.082
samp. TTPA46	32.75	130.95	56.0	4.1	56	576	27	21.33	0.097
samp. 3TK-60	32.77	130.95	56.1	3.2	51	572	27	21.34	0.089
samp. TTPA44	32.75	130.95	58.2	3.4	47	472	22	21.45	0.100
samp. ASO 3C	32.77	130.95	55.7	2.6	63	633	29	21.68	0.100
samp. HYP A 51	32.75	130.95	56.4	3.7	45	526	24	21.92	0.086
samp. ASO41	32.85	131.05	58.6	2.5	83	550	25	22.00	0.151
samp. BCPA43	32.75	130.95	58.6	3.9	61	441	20	22.05	0.138
samp. ASO1.1	32.77	130.95	56.8	3.8	43	471	21	22.64	0.090
samp. 437.15-H	32.75	130.30	62.5	2.7	68	431	19	22.71	0.158
samp. 390.00-E	32.75	130.30	58.9	3.3	54	493	22	22.90	0.110
samp. TTPA45	32.75	130.95	56.2	4.1	60	573	25	22.92	0.105
samp. KC01S	32.77	130.95	55.3	3.4	60	719	31	23.20	0.083
samp. HYP A 52	32.75	130.95	56.5	3.7	41	537	23	23.35	0.076
samp. 103.80-H	32.75	130.30	61.8	2.7	63	408	17	23.42	0.154
samp. ASO1.1B	32.77	130.95	57.1	3.8	42	496	21	23.51	0.085
samp. HYP A 35	32.75	130.95	55.2	3.5	48	525	22	23.86	0.091
samp. BCPA40	32.75	130.95	58.4	4.3	54	483	20	24.15	0.112
samp. R29	31.88	130.92	58.3	4.2	49	390	16	24.38	0.126
samp. PRAS13	32.75	130.95	58.7	3.2	63	465	19	24.47	0.135
samp. 931015-4	32.50	130.10	60.2	4.2	32	445	18	24.72	0.072
samp. 911208 08-2	32.77	130.95	55.3	3.4	58	777	31	25.14	0.075

Arc: New Hebrides

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 68577	-15.38	167.83	56.0	2.5	38	438	49	8.94	0.087
samp. 60A	-16.10	167.92	60.8	2.5	38	335	34	9.85	0.113
samp. 57C	-16.10	167.92	58.4	3.0	32	360	34	10.75	0.089
samp. ANA4311	-20.52	170.01	60.1	2.0	25	408	36	11.33	0.061
samp. TA5B	-19.33	169.25	58.7	2.0	56	443	35	12.66	0.126
samp. 59	-16.10	167.92	55.5	3.6	24	398	31	12.84	0.060
samp. PUMICE	-19.50	169.33	59.7	2.0	57	443	33	13.53	0.129
samp. SPATTER	-19.50	169.33	59.3	2.1	56	440	32	13.67	0.128
samp. TAN 24	-19.52	169.45	60.2	2.0	53	436	31	14.20	0.122
samp. TAN 9	-19.52	169.45	58.8	2.1	61	485	34	14.22	0.126
samp. TAN 23	-19.52	169.45	59.9	2.0	60	489	34	14.26	0.123
samp. 71049	-16.89	168.30	57.3	3.0	31	473	32	14.78	0.066
samp. TAN 18	-19.52	169.45	56.4	2.8	53	452	30	14.92	0.117
samp. TA3B	-19.33	169.25	59.8	2.0	47	476	31	15.61	0.099
samp. 71061	-16.89	168.30	56.4	2.9	32	484	31	15.61	0.066
samp. 12B	-16.10	167.92	59.5	2.1	67	514	31	16.58	0.130
samp. TA22A	-19.33	169.25	55.2	3.7	32	495	29	17.07	0.065
samp. TA22B	-19.33	169.25	58.8	2.4	48	536	31	17.29	0.090
samp. TAN 21	-19.52	169.45	56.8	3.0	44	431	24	17.96	0.102
samp. TAN 3	-19.52	169.45	55.5	2.6	42	469	26	18.11	0.090
samp. TA23B	-19.33	169.25	58.6	2.6	44	530	29	18.28	0.083
samp. TA16	-19.33	169.25	57.3	2.6	38	537	27	20.04	0.071
samp. TA22C	-19.33	169.25	57.3	2.9	42	583	29	20.10	0.072
samp. TA5C	-19.33	169.25	56.3	3.1	31	547	27	20.26	0.057
samp. TA23G	-19.33	169.25	57.0	3.2	39	548	27	20.30	0.071
samp. CAMB39A	-16.25	168.13	55.0	3.6	54	488	24	20.33	0.111
samp. 39A	-16.10	167.92	56.1	3.7	54	488	24	20.33	0.111
samp. YASUR ^93	-19.53	169.27	56.0	2.8	44	597	28	21.32	0.074
samp. TA23C	-19.33	169.25	55.8	3.5	46	567	25	22.68	0.081
samp. TAN 17	-19.52	169.45	56.4	2.9	49	633	27	23.10	0.077
samp. TAN 1	-19.52	169.45	55.3	3.0	49	653	28	23.32	0.075
samp. TAN 25	-19.52	169.45	58.1	2.1	48	640	27	23.36	0.075
samp. 13/1-B	-19.52	169.45	55.6	4.0	46	643	27	24.17	0.072
samp. SM22	-14.25	167.50	57.0	2.4	59	660	27	24.44	0.089
samp. SM1C	-14.25	167.50	55.2	2.7	54	745	30	24.83	0.072
samp. SM14A	-14.25	167.50	55.6	2.8	53	770	31	24.84	0.069

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: New Hebrides (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. TAN 6	-19.52	169.45	55.7	4.1	34	522	21	25.10	0.065
samp. SM30A	-14.25	167.50	58.0	2.3	62	680	27	25.19	0.091
samp. SM21	-14.25	167.50	56.7	2.5	43	710	28	25.36	0.061
samp. SM63	-14.25	167.50	56.6	2.4	60	685	27	25.37	0.088
samp. HR11A	-22.38	172.08	61.0	5.7	22	354	13	27.66	0.062
samp. HR16	-22.38	172.08	63.9	3.8	16	319	11	28.48	0.050
samp. HR9	-22.31	172.06	61.9	4.2	19	376	13	28.92	0.051
samp. SM16	-14.25	167.50	55.4	2.5	54	925	31	29.84	0.058

Arc: Mexican

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. P2	19.50	-97.25	61.9	2.1	69	369	28	13.06	0.186
samp. 104	19.09	-99.14	55.0	4.6	36	510	39	13.08	0.071
samp. AN179	19.14	-99.82	64.5	2.1	52	466	36	13.09	0.111
samp. LDC-2	21.25	-104.69	62.4	2.2	42	554	42	13.19	0.076
samp. 133	21.12	-104.33	60.4	2.4	49	534	40	13.35	0.092
samp. 387	21.41	-105.18	56.2	2.6	28	521	39	13.36	0.054
samp. P2	19.50	-97.33	60.4	2.0	62	388	29	13.38	0.160
samp. P4	19.50	-97.33	60.7	2.1	66	418	31	13.48	0.158
samp. LH-45	19.52	-97.41	59.1	2.9	57	427	31	13.77	0.133
samp. 96332	19.11	-98.87	55.8	5.9	35	384	28	13.91	0.091
samp. 26-840	19.78	-100.65	58.9	3.8	59	336	24	14.00	0.176
samp. CH-07-15	19.09	-99.14	56.7	3.3	29	510	36	14.01	0.057
samp. 52-200	19.83	-100.68	59.2	2.3	38	367	26	14.12	0.104
samp. S1	19.09	-99.14	56.5	3.2	30	518	37	14.15	0.057
samp. CH-07-17	19.14	-99.14	57.0	3.3	29	509	36	14.18	0.057
samp. BHC-59	19.90	-100.76	60.9	2.2	56	442	31	14.26	0.127
samp. BHC-28	19.97	-101.77	57.4	3.7	36	473	33	14.33	0.076
samp. P-6	19.00	-98.60	62.0	3.0	53	420	29	14.48	0.126
samp. CHG05	19.95	-98.31	55.1	4.5	36	452	31	14.49	0.080
samp. CH-07-16	19.09	-99.14	57.3	3.3	30	508	35	14.51	0.058
samp. CH60	19.50	-97.33	55.0	3.8	38	451	30	14.84	0.084
samp. Z-739	19.91	-100.53	60.2	3.7	56	417	28	14.89	0.134
samp. BHC-58	19.89	-100.90	60.5	2.2	52	447	30	14.90	0.116
samp. CG-6A	19.37	-97.64	58.7	2.4	33	373	25	14.92	0.088
samp. C2-03	18.98	-99.22	56.2	4.5	33	523	35	14.94	0.063
samp. ZAV-3	19.00	-98.60	61.4	5.0	54	359	24	14.96	0.150
samp. 95110	19.16	-98.86	56.5	5.5	39	434	29	15.07	0.090
samp. 96335	19.10	-98.81	57.7	4.7	41	458	30	15.11	0.090
samp. P-7	19.00	-98.60	62.2	3.5	64	410	27	15.19	0.156
samp. CAM21	20.10	-100.16	56.7	5.2	33	441	29	15.20	0.076
samp. R16	18.00	-96.00	59.4	3.3	84	427	28	15.25	0.197
samp. 1000	19.09	-101.64	56.4	4.6	33	461	30	15.37	0.072
samp. 228	19.15	-99.93	57.8	4.7	49	461	30	15.37	0.106
samp. R18	18.00	-96.00	60.3	3.2	90	485	31	15.65	0.186
samp. LH56	19.50	-97.33	57.1	3.1	41	376	24	15.67	0.109
samp. 0508	19.16	-98.94	56.5	5.1	70	442	28	15.79	0.158
samp. U40.1	18.00	-96.00	59.0	3.5	80	429	27	15.89	0.186
samp. 0509	19.18	-98.94	56.8	5.0	50	445	28	15.89	0.112
samp. LDC-5	21.25	-104.69	62.4	2.1	39	559	35	15.97	0.070
samp. LDC-5	21.43	-104.73	62.4	2.0	37	559	35	15.97	0.066
samp. 0504	19.19	-98.93	56.3	5.0	80	448	28	16.00	0.179
samp. M2	19.50	-97.25	59.8	2.6	61	417	26	16.02	0.146
samp. Z-230	19.69	-100.46	55.6	3.1	32	529	33	16.03	0.060
samp. LH55	19.50	-97.33	57.3	3.1	49	467	29	16.10	0.105
samp. 0525	19.21	-98.94	58.6	4.5	30	435	27	16.11	0.069
samp. PE-8	19.00	-98.60	64.1	2.9	62	419	26	16.12	0.148
samp. 1	21.12	-104.33	60.9	2.2	26	500	31	16.13	0.052
samp. 0503	19.16	-98.93	56.0	4.4	80	452	28	16.14	0.177
samp. LH78	19.50	-97.33	56.4	3.5	36	372	23	16.17	0.097
samp. NT49	18.50	-96.00	57.0	4.4	42	535	33	16.21	0.079
samp. P-16	19.00	-98.60	63.2	2.7	62	440	27	16.30	0.141
samp. BHC-60	19.89	-100.73	58.4	2.8	39	506	31	16.32	0.077
samp. 969	19.46	-101.68	58.5	2.7	28	555	34	16.32	0.050
samp. MQ56	20.87	-102.60	58.0	4.4	42	458	28	16.36	0.092
samp. P-13	19.00	-98.60	62.8	3.6	56	394	24	16.42	0.142
samp. P-8	19.00	-98.60	62.5	3.5	61	427	26	16.42	0.143
samp. 0502	19.15	-98.93	57.2	5.0	70	445	27	16.48	0.157
samp. U40.2	18.00	-96.00	59.1	3.6	77	429	26	16.50	0.179
samp. 0507	19.15	-98.93	57.5	4.8	40	446	27	16.52	0.090
samp. NT23	18.00	-96.00	61.1	2.7	66	413	25	16.52	0.160
samp. 0527	19.17	-98.87	59.6	4.3	50	430	26	16.54	0.116
samp. 0526	19.19	-98.88	58.7	4.9	50	430	26	16.54	0.116
samp. 3-700	19.80	-100.69	58.2	4.0	43	350	21	16.67	0.123
samp. PE-9	19.00	-98.60	63.6	3.1	60	435	26	16.73	0.138
samp. P-3	19.00	-98.60	61.8	4.5	58	403	24	16.79	0.144
samp. LH45	19.52	-97.41	58.5	2.9	59	420	25	16.80	0.140
samp. 9476	19.02	-98.82	59.4	4.0	50	424	25	16.90	0.119
samp. LH84	19.50	-97.33	60.3	2.3	52	355	21	16.90	0.146
samp. 156	20.78	-103.83	60.5	2.3	47	474	28	16.93	0.099
samp. PE-2	19.00	-98.60	62.4	3.9	68	424	25	16.96	0.160
samp. A3-03-II	19.12	-99.16	55.1	5.1	29	459	27	17.00	0.063
samp. BHC-29	19.99	-101.80	55.7	4.4	29	493	29	17.00	0.059
samp. BHC-57	19.89	-100.98	57.2	3.2	36	511	30	17.03	0.070
samp. 26-780	19.78	-100.65	58.1	3.2	56	393	23	17.09	0.142
samp. BHC-30	19.97	-101.74	57.8	4.0	35	479	28	17.11	0.073
samp. 33	21.12	-104.33	60.4	2.3	34	514	30	17.13	0.066
samp. PE-12	19.00	-98.60	61.7	4.2	36	377	22	17.14	0.095

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Mexican (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. LH63	19.50	-97.33	56.2	3.6	35	412	24	17.17	0.085
samp. H-674	19.83	-101.89	66.0	3.8	57	309	18	17.17	0.184
samp. 219	19.22	-99.03	55.5	5.2	28	447	26	17.19	0.063
samp. TL57	19.37	-98.66	62.5	3.3	63	414	24	17.25	0.152
samp. P-9	19.00	-98.60	61.3	4.3	58	398	23	17.30	0.146
samp. PE-5	19.00	-98.60	61.8	4.4	56	433	25	17.32	0.129
samp. M2	19.50	-97.33	58.3	2.5	55	451	26	17.35	0.122
samp. CEB	21.15	-104.50	61.1	2.4	33	521	30	17.37	0.064
samp. Z-728	19.82	-100.33	56.2	4.4	33	556	32	17.38	0.059
samp. TL53	19.34	-98.76	59.9	4.5	62	435	25	17.40	0.143
samp. CP3	18.00	-96.00	61.9	2.8	62	419	24	17.46	0.148
samp. TL51	19.34	-98.78	64.9	2.3	64	386	22	17.55	0.166
samp. LH57	19.57	-97.46	55.6	3.7	31	387	22	17.59	0.080
samp. LDC-6	21.25	-104.69	62.6	2.2	35	563	32	17.59	0.062
samp. LH-57	19.57	-97.46	59.2	2.9	52	458	26	17.62	0.114
samp. LH60	19.50	-97.33	59.0	2.6	48	407	23	17.70	0.118
samp. R-10	19.00	-98.60	61.9	4.1	56	443	25	17.72	0.126
samp. LH89	19.50	-97.33	59.0	2.6	41	373	21	17.76	0.110
samp. P-15	19.00	-98.60	58.8	5.5	42	393	22	17.86	0.107
samp. PE-11	19.00	-98.60	62.2	3.9	59	429	24	17.88	0.138
samp. P-11	19.00	-98.60	63.3	3.2	60	394	22	17.91	0.152
samp. 183-72	19.15	-99.75	62.4	4.0	48	448	25	17.92	0.108
samp. BHC-25	19.99	-101.87	59.5	3.4	41	484	27	17.93	0.085
samp. 118	19.16	-99.09	61.6	3.4	45	449	25	17.96	0.100
samp. 96349	19.03	-98.88	60.1	4.7	39	381	21	17.99	0.102
samp. P-14	19.00	-98.60	63.3	2.8	64	486	27	18.00	0.132
samp. BHC-51	19.89	-100.75	56.3	3.6	33	540	30	18.00	0.061
samp. Z-611	20.03	-100.53	58.1	3.2	34	470	26	18.08	0.072
samp. P-2	19.00	-98.60	63.1	4.2	62	398	22	18.09	0.156
samp. TL74	19.35	-98.76	60.7	4.4	67	362	20	18.10	0.185
samp. 9598	19.13	-98.82	60.1	4.6	43	407	22	18.17	0.107
samp. 0536	19.21	-98.98	58.9	4.4	50	492	27	18.22	0.102
samp. 114	19.15	-99.22	59.0	4.8	35	493	27	18.26	0.071
samp. LDC-1	21.25	-104.69	62.8	2.2	45	549	30	18.30	0.082
samp. Z-729	19.87	-100.11	56.2	5.1	35	641	35	18.31	0.055
samp. 152	19.22	-99.04	60.9	4.7	43	403	22	18.32	0.107
samp. 26-700	19.78	-100.65	59.6	2.4	38	406	22	18.45	0.094
samp. 617	19.62	-101.37	59.0	3.6	55	443	24	18.46	0.124
samp. C-1	19.00	-98.60	63.0	3.4	55	425	23	18.48	0.129
samp. 201	20.78	-103.83	60.1	2.9	44	537	29	18.52	0.082
samp. 1005	19.96	-101.37	55.8	5.4	37	445	24	18.54	0.083
samp. U16	18.90	-97.30	55.9	4.7	36	501	27	18.56	0.072
samp. BHC-27	19.99	-101.84	59.9	3.4	40	483	26	18.58	0.083
samp. U38	18.00	-96.00	55.2	4.6	44	502	27	18.59	0.088
samp. TL58	19.38	-98.66	61.9	3.3	52	428	23	18.61	0.121
samp. TL65	19.35	-98.83	59.7	4.2	48	447	24	18.63	0.107
samp. BHC-26	19.99	-101.85	59.3	3.5	40	486	26	18.69	0.082
samp. C-2	19.00	-98.60	62.8	3.5	57	430	23	18.70	0.133
samp. CH102	19.05	-99.54	60.9	3.2	53	404	22	18.79	0.130
samp. 223	19.14	-99.06	64.0	2.8	51	395	21	18.81	0.129
samp. Z-604	19.77	-100.54	56.8	3.3	31	471	25	18.84	0.066
samp. PE-4	19.00	-98.60	65.8	2.9	66	396	21	18.86	0.167
samp. 3-502	19.80	-100.69	58.9	2.5	59	415	22	18.86	0.142
samp. TL32	19.33	-98.78	66.1	2.3	58	359	19	18.89	0.162
samp. P-12	19.00	-98.60	64.3	2.9	72	380	20	19.00	0.189
samp. U41.2	18.00	-96.00	56.7	4.9	41	496	26	19.08	0.083
samp. 117	21.12	-104.33	60.9	2.2	33	554	29	19.10	0.060
samp. LDC-7	21.25	-104.69	62.5	2.3	35	574	30	19.13	0.061
samp. PE-3	19.00	-98.60	64.6	3.5	63	421	22	19.14	0.150
samp. TL50	19.33	-98.77	64.7	2.4	64	383	20	19.15	0.167
samp. STA1	19.16	-99.45	60.5	3.9	44	448	23	19.20	0.098
samp. Z-602	19.77	-100.50	56.6	3.4	32	481	25	19.24	0.067
samp. SPC 143	21.16	-104.57	63.8	2.5	33	502	26	19.31	0.066
samp. 225	19.11	-99.02	63.0	3.5	44	425	22	19.32	0.104
samp. BHC-24	20.02	-101.91	60.8	3.3	40	464	24	19.33	0.086
samp. NT11	18.00	-96.00	57.2	5.0	39	484	25	19.36	0.081
samp. LH70	19.50	-97.33	57.8	2.8	40	407	21	19.38	0.098
samp. 209	19.15	-99.22	60.4	4.0	43	470	24	19.58	0.091
samp. 15	21.12	-104.33	60.6	2.4	35	531	27	19.67	0.066
samp. SPC 47	21.14	-104.48	61.7	2.2	38	531	27	19.67	0.072
samp. 96350A	19.03	-98.95	59.4	5.0	30	390	20	19.71	0.076
samp. R-8	19.00	-98.60	62.2	4.1	54	473	24	19.71	0.114
samp. PE-1	19.00	-98.60	63.9	3.7	64	434	22	19.73	0.147
samp. CG-11A	19.57	-97.83	57.3	4.0	30	513	26	19.73	0.058
samp. 52-60	19.83	-100.68	61.2	2.0	56	474	24	19.75	0.118
samp. C-4	19.00	-98.60	63.6	3.4	57	415	21	19.76	0.137
samp. 96344	19.19	-98.87	59.5	5.0	41	465	24	19.77	0.087
samp. 52-940	19.83	-100.68	59.0	2.3	67	435	22	19.77	0.154
samp. Z-601	19.76	-100.50	57.1	3.5	33	475	24	19.79	0.069
samp. TL68	19.39	-98.73	61.8	2.8	45	416	21	19.81	0.108
samp. U71	18.00	-96.00	55.3	3.2	53	595	30	19.83	0.089
samp. 95284	19.06	-98.57	63.9	2.8	50	418	21	19.88	0.120
samp. 95106	19.07	-98.86	59.3	5.4	30	382	19	19.92	0.079
samp. PE-13	19.00	-98.60	64.6	2.8	55	419	21	19.95	0.131
samp. MGV13	19.00	-101.00	60.1	5.2	37	380	19	20.00	0.097
samp. R-11	19.00	-98.60	63.8	4.0	58	400	20	20.00	0.145
samp. PE-10	19.00	-98.60	64.4	3.0	62	420	21	20.00	0.148
samp. Z-733	19.89	-100.11	56.8	4.8	38	580	29	20.00	0.066

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Mexican (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. Z-732	19.88	-100.13	56.0	5.1	35	623	31	20.10	0.056
samp. NT27	18.00	-96.00	58.1	4.0	74	503	25	20.12	0.147
samp. A2-21	19.16	-99.18	58.5	4.9	37	483	24	20.13	0.077
samp. R-3	19.00	-98.60	65.3	2.6	63	423	21	20.14	0.149
samp. LH61	19.50	-97.33	58.7	2.9	46	423	21	20.14	0.109
samp. 9310W	18.86	-98.70	58.9	2.2	55	377	19	20.18	0.146
samp. LH80	19.50	-97.33	60.6	2.4	53	404	20	20.20	0.131
samp. 26-740	19.78	-100.65	57.2	3.5	61	427	21	20.33	0.143
samp. 134	18.40	-94.90	58.9	2.6	56	529	26	20.35	0.106
samp. 134	18.57	-95.17	58.9	2.6	56	529	26	20.35	0.106
samp. BHC-10	20.20	-102.32	61.9	2.5	30	510	25	20.40	0.059
samp. U41.1	18.00	-96.00	57.1	4.9	33	551	27	20.41	0.060
samp. R-1	19.00	-98.60	65.5	2.9	60	429	21	20.43	0.140
samp. NT24	18.00	-96.00	62.1	3.2	74	454	22	20.64	0.163
samp. 250	19.21	-99.31	61.7	4.3	41	435	21	20.71	0.094
samp. TL72-A	19.39	-98.75	63.2	2.9	52	373	18	20.72	0.139
samp. R-7	19.00	-98.60	65.4	2.5	61	394	19	20.74	0.155
samp. 26-1000	19.78	-100.65	63.0	2.5	60	458	22	20.82	0.131
samp. C-5	19.00	-98.60	63.4	3.4	56	417	20	20.85	0.134
samp. TL52	19.33	-98.77	62.8	2.3	55	355	17	20.88	0.155
samp. PE-6	19.00	-98.60	65.6	2.6	68	397	19	20.89	0.171
samp. XICO CONE	19.40	-96.98	55.6	4.3	43	547	26	21.04	0.079
samp. TL62	19.34	-98.81	62.8	2.7	49	380	18	21.11	0.129
samp. NT 27	18.90	-96.50	58.1	4.0	73	528	25	21.12	0.138
samp. U42	18.00	-96.00	57.7	5.1	38	529	25	21.16	0.072
samp. LH35	19.50	-97.33	58.7	3.5	39	381	18	21.17	0.102
samp. SP060	19.09	-98.86	58.9	5.4	37	434	21	21.17	0.085
samp. Z-620	19.85	-100.47	57.5	4.1	41	468	22	21.27	0.088
samp. R-4	19.00	-98.60	65.3	2.7	62	426	20	21.30	0.146
samp. TL63	19.34	-98.81	57.1	5.9	33	426	20	21.30	0.077
samp. 259	19.04	-98.87	61.9	4.4	68	406	19	21.37	0.167
samp. TL69	19.38	-98.73	63.1	3.5	49	407	19	21.42	0.120
samp. 123	20.78	-103.83	63.8	2.3	59	450	21	21.43	0.131
samp. TL61	19.32	-98.79	64.8	2.8	59	408	19	21.47	0.145
samp. TP6	19.04	-98.63	62.9	3.4	58	445	21	21.50	0.131
samp. C-3	19.00	-98.60	63.5	3.4	56	430	20	21.50	0.130
samp. NH28	18.00	-96.00	55.0	5.2	39	539	25	21.56	0.072
samp. TL42	19.32	-98.75	61.6	3.4	52	432	20	21.60	0.120
samp. TL73	19.35	-98.77	66.2	2.1	55	389	18	21.61	0.141
samp. 3-1900	19.80	-100.69	55.2	3.5	35	563	26	21.65	0.062
samp. NH29	18.00	-96.00	55.3	5.7	36	520	24	21.67	0.069
samp. 95281	19.05	-98.49	62.1	3.8	50	438	20	21.67	0.113
samp. TL71	19.39	-98.74	64.4	2.6	54	391	18	21.72	0.138
samp. CHI05	19.14	-99.17	60.5	3.9	40	494	23	21.76	0.081
samp. 96339	19.19	-98.81	58.5	5.6	36	618	28	21.77	0.057
samp. 3-806	19.80	-100.69	56.7	2.9	62	545	25	21.80	0.114
samp. CHI12	18.84	-99.41	58.0	5.9	34	466	21	21.88	0.073
samp. 52-1480	19.83	-100.68	61.2	2.8	66	483	22	21.95	0.137
samp. 230	19.09	-99.26	61.9	3.3	43	484	22	22.00	0.089
samp. A1-01	19.12	-99.27	59.8	4.3	34	485	22	22.05	0.070
samp. 95249	18.90	-98.56	62.1	4.3	62	466	21	22.07	0.132
samp. BHC-08	20.17	-102.16	62.0	2.7	30	530	24	22.08	0.057
samp. 233	19.16	-99.25	60.2	5.1	40	508	23	22.09	0.079
samp. R-6	19.00	-98.60	62.1	4.5	52	464	21	22.10	0.112
samp. A2-07	19.15	-99.19	60.0	4.4	38	442	20	22.10	0.086
samp. A2-23	19.09	-99.19	55.5	5.8	32	531	24	22.13	0.060
samp. M32	19.06	-99.73	62.4	3.7	43	549	25	22.24	0.078
samp. R17	18.00	-96.00	57.7	4.9	33	556	25	22.24	0.059
samp. TL47	19.33	-98.75	59.0	4.4	30	445	20	22.25	0.067
samp. A2-04	19.11	-99.20	60.4	3.9	51	490	22	22.27	0.104
samp. P-1	19.00	-98.60	61.1	5.4	56	558	25	22.32	0.100
samp. 251	19.15	-99.31	60.8	3.9	34	472	21	22.48	0.072
samp. TL44	19.34	-98.69	64.9	2.4	50	383	17	22.53	0.131
samp. 96336B	19.18	-98.80	61.6	4.7	41	471	21	22.56	0.086
samp. 143	20.78	-103.83	62.2	2.3	57	498	22	22.64	0.114
samp. NT30	19.14	-99.80	61.9	2.7	40	514	23	22.65	0.077
samp. LH64	19.50	-97.33	55.7	3.5	34	409	18	22.72	0.083
samp. A2-22	19.15	-99.22	61.7	4.4	36	458	20	22.90	0.079
samp. 124	19.09	-99.26	59.2	5.1	35	505	22	22.95	0.069
samp. MG-05-5	20.72	-100.81	59.6	3.5	30	449	20	22.97	0.066
samp. 30	21.12	-104.33	61.1	2.2	33	530	23	23.04	0.062
samp. U44	18.50	-96.00	57.2	5.5	36	484	21	23.05	0.074
samp. R-14	19.00	-98.60	65.3	2.5	56	438	19	23.05	0.128
samp. NT55	18.50	-96.00	57.3	5.7	36	485	21	23.10	0.074
samp. 95296	18.98	-98.46	61.9	3.7	49	469	20	23.22	0.104
samp. A2-25	19.14	-99.17	59.7	4.4	24	466	20	23.30	0.052
samp. 131	18.98	-99.05	64.0	2.9	46	420	18	23.33	0.110
samp. R-2	19.00	-98.60	64.5	2.7	66	420	18	23.33	0.157
samp. 9485	19.05	-98.44	61.2	3.7	53	470	20	23.39	0.112
samp. A2-24	19.09	-99.21	60.5	5.1	38	468	20	23.40	0.081
samp. 52-1120	19.83	-100.68	60.5	2.8	59	540	23	23.48	0.109
samp. A2-16	19.16	-99.23	61.9	4.4	39	470	20	23.50	0.083
samp. MQ35	20.85	-103.33	58.7	2.9	73	564	24	23.50	0.129
samp. 52-1600	19.83	-100.68	62.2	2.9	70	494	21	23.52	0.142
samp. CG-8C	19.56	-97.63	59.7	2.6	39	471	20	23.55	0.083
samp. CG-8A	19.56	-97.63	59.1	3.1	39	471	20	23.55	0.083
samp. B2-03	19.08	-99.21	59.7	5.4	43	449	19	23.63	0.096
samp. NT54	18.50	-96.00	56.3	5.9	34	497	21	23.67	0.068

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Mexican (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. TIZ02	19.97	-98.78	62.4	2.6	47	614	26	23.71	0.077
samp. A2-08	19.15	-99.21	61.5	4.5	35	452	19	23.79	0.077
samp. LDC-8	21.25	-104.69	61.6	2.1	36	571	24	23.79	0.063
samp. 108	20.78	-103.83	62.9	2.9	52	504	21	24.00	0.103
samp. 95112LP	19.03	-98.63	61.0	4.1	41	426	18	24.08	0.095
samp. 154	19.22	-99.03	59.7	4.0	39	530	22	24.09	0.074
samp. Q-88	20.78	-103.83	62.4	2.6	53	482	20	24.10	0.110
samp. 260	19.10	-99.32	65.9	2.2	52	434	18	24.11	0.120
samp. CHG01	19.87	-98.10	55.0	4.8	31	580	24	24.17	0.053
samp. U36	18.00	-96.00	55.8	5.5	32	582	24	24.25	0.055
samp. 0102S	19.05	-98.62	59.3	5.5	36	485	20	24.25	0.074
samp. R8	18.00	-96.00	60.5	3.5	48	558	23	24.26	0.086
samp. 95367	19.08	-98.33	59.3	5.1	39	482	20	24.32	0.081
samp. 96341A	19.18	-98.81	62.4	4.6	42	477	20	24.32	0.087
samp. 0104P	19.05	-98.62	62.7	3.7	55	438	18	24.33	0.126
samp. TL45	19.36	-98.76	63.7	3.0	37	438	18	24.33	0.084
samp. 3-1700	19.80	-100.69	57.2	4.7	34	487	20	24.35	0.070
samp. 456	21.00	-104.80	59.2	3.0	35	609	25	24.36	0.057
samp. A2-06	19.21	-99.18	61.3	4.0	36	463	19	24.37	0.078
samp. 117	19.14	-99.07	64.2	3.2	49	512	21	24.38	0.096
samp. 52-1640	19.83	-100.68	60.1	4.0	57	512	21	24.38	0.111
samp. R-13	19.00	-98.60	65.6	2.5	54	440	18	24.44	0.123
samp. Z-621	19.90	-100.47	55.8	3.9	27	538	22	24.45	0.050
samp. 9490B	19.09	-98.64	60.3	5.2	45	452	18	24.56	0.100
samp. PE-7	19.00	-98.60	62.2	3.9	56	565	23	24.57	0.099
samp. 96352	19.01	-98.81	64.3	3.9	68	418	17	24.59	0.163
samp. 144	19.16	-99.11	60.0	3.9	39	541	22	24.59	0.072
samp. 285	19.09	-99.44	64.4	2.6	48	492	20	24.60	0.098
samp. R-5	19.00	-98.60	59.9	5.6	48	592	24	24.67	0.081
samp. BHC-42	19.80	-100.91	59.0	4.0	40	518	21	24.67	0.077
samp. P-10	19.00	-98.60	65.7	2.5	55	445	18	24.72	0.124
samp. 102	20.78	-103.83	61.2	3.0	49	521	21	24.81	0.094
samp. R-17	19.00	-98.60	65.4	2.5	55	448	18	24.89	0.123
samp. 96333A	19.08	-98.85	63.5	3.4	45	387	16	24.94	0.117
samp. 247	19.21	-99.28	61.6	2.6	28	501	20	25.05	0.056
samp. 9450P	19.09	-98.64	61.7	3.4	53	480	19	25.13	0.110
samp. 173	20.78	-103.83	62.1	3.0	50	504	20	25.20	0.099
samp. C-6	19.00	-98.60	63.3	3.7	56	530	21	25.24	0.106
samp. 204	20.78	-103.83	63.5	2.7	54	505	20	25.25	0.107
samp. 9326	19.00	-97.25	61.6	2.1	54	506	20	25.30	0.107
samp. 95385	19.12	-98.72	57.8	3.6	31	557	22	25.32	0.056
samp. QRO-99-35	20.82	-100.51	63.0	2.1	34	485	19	25.33	0.071
samp. 96D4-A1	19.06	-98.57	62.1	3.8	51	459	18	25.33	0.112
samp. QR-06-4	20.91	-100.19	62.8	2.1	31	533	21	25.40	0.059
samp. 96359	18.92	-98.88	64.1	3.5	75	433	17	25.45	0.174
samp. A1-02	19.09	-99.26	62.8	3.1	39	459	18	25.50	0.085
samp. PEL49	19.40	-100.25	62.8	2.1	34	561	22	25.50	0.061
samp. CHI03	19.11	-99.19	61.7	5.2	38	454	18	25.51	0.084
samp. 9594	19.09	-98.61	61.9	3.5	41	434	17	25.51	0.094
samp. 96D3-3	19.05	-98.56	62.6	3.8	48	447	18	25.51	0.108
samp. 0103D	19.05	-98.62	61.4	4.3	42	460	18	25.56	0.091
samp. QRO-04-14	20.75	-100.71	60.5	2.8	29	483	19	25.56	0.061
samp. 130	20.78	-103.83	57.5	3.8	38	588	23	25.57	0.065
samp. 91-72	19.15	-99.75	59.4	4.9	28	537	21	25.57	0.053
samp. PS118	19.53	-96.92	57.5	5.6	35	509	20	25.58	0.069
samp. 22.JAN.01	19.02	-98.62	59.0	5.6	32	499	20	25.59	0.065
samp. 52-1080	19.83	-100.68	60.3	3.1	81	487	19	25.63	0.166
samp. 152	20.78	-103.83	63.1	2.8	55	488	19	25.68	0.113
samp. 305	19.26	-99.21	60.8	4.5	50	591	23	25.70	0.085
samp. 206	19.13	-99.29	64.6	2.8	46	514	20	25.70	0.089
samp. GAM-13	20.50	-103.60	63.1	2.9	63	489	19	25.74	0.129
samp. PLM-33	20.44	-103.56	59.5	2.5	39	567	22	25.77	0.069
samp. PZJR-99	20.35	-103.58	65.1	2.0	62	439	17	25.82	0.141
samp. RAM215	19.11	-99.71	64.0	2.3	45	529	20	25.85	0.086
samp. 96D3-COM	19.05	-98.56	63.2	3.4	54	466	18	25.87	0.116
samp. A2-17	19.15	-99.23	63.2	3.6	38	466	18	25.89	0.082
samp. TL46	19.37	-98.74	63.4	3.2	43	441	17	25.94	0.098
samp. CHI07	18.84	-99.41	59.7	4.8	48	678	26	25.98	0.071
samp. 26-1080	19.78	-100.65	61.5	3.1	62	546	21	26.00	0.114
samp. M69	19.02	-99.77	62.3	3.6	45	680	26	26.05	0.066
samp. 202	20.78	-103.83	60.2	2.9	44	547	21	26.05	0.080
samp. 171	20.78	-103.83	62.2	2.7	55	495	19	26.05	0.111
samp. PAR-12	19.49	-102.25	59.7	3.6	25	460	18	26.15	0.055
samp. 288	19.05	-99.41	63.5	2.7	37	471	18	26.17	0.079
samp. 96D3-2	19.05	-98.56	62.8	3.0	53	450	17	26.19	0.117
samp. PS-99-2	19.66	-96.90	56.4	5.5	33	610	23	26.29	0.054
samp. 26-800	19.78	-100.65	59.0	3.8	48	500	19	26.32	0.096
samp. 96351	19.05	-98.87	62.7	4.4	45	461	18	26.36	0.096
samp. 30.APR.96	19.02	-98.62	63.2	3.9	45	462	18	26.40	0.098
samp. 101	19.10	-99.32	66.3	2.6	50	449	17	26.41	0.111
samp. 146	19.20	-99.09	60.1	4.6	38	555	21	26.43	0.068
samp. LH65	19.50	-97.33	56.1	3.2	31	476	18	26.44	0.065
samp. 94790	19.09	-98.63	57.4	2.5	31	405	15	26.45	0.077
samp. 96D3B	19.05	-98.56	63.1	2.1	60	448	17	26.52	0.133
samp. RAM22	19.12	-99.66	64.3	2.0	45	537	20	26.56	0.084
samp. PAR-11	19.49	-102.25	59.7	3.6	27	517	19	26.57	0.051
samp. LDC-11	21.25	-104.69	60.5	2.7	37	585	22	26.59	0.063
samp. 286	19.06	-99.44	57.7	5.9	28	559	21	26.62	0.050

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Mexican (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. Z-707	19.85	-99.46	60.3	4.6	44	615	23	26.74	0.072
samp. 96D4-COM	19.05	-98.56	63.2	3.4	53	454	17	26.84	0.118
samp. 9603K	18.91	-98.56	63.0	2.6	42	464	17	26.95	0.090
samp. 9428	18.94	-98.83	61.3	4.6	55	440	16	27.00	0.125
samp. ZIT51	19.40	-100.25	64.9	2.4	38	513	19	27.00	0.074
samp. 100	20.78	-103.83	61.9	2.7	54	513	19	27.00	0.105
samp. 30.DEC.96	19.02	-98.62	64.5	2.6	51	473	18	27.03	0.108
samp. 96D3-1	19.05	-98.56	60.8	3.5	48	444	16	27.09	0.108
samp. TL37	19.37	-98.80	64.0	3.1	43	434	16	27.13	0.099
samp. 52-720	19.83	-100.68	58.1	3.8	35	489	18	27.17	0.072
samp. BHC-03	20.22	-102.36	60.8	3.1	37	517	19	27.21	0.072
samp. 903	19.59	-102.04	59.9	2.7	42	490	18	27.22	0.086
samp. BHC-41	19.80	-100.89	58.7	4.0	40	518	19	27.26	0.077
samp. 95142C	19.09	-98.62	63.3	3.8	49	431	16	27.27	0.114
samp. ZEM30-DL	18.81	-99.23	62.9	2.9	37	709	26	27.27	0.052
samp. 280	19.09	-99.48	61.6	4.2	36	573	21	27.29	0.063
samp. QRO-04-8	20.78	-100.56	64.6	2.1	44	406	15	27.30	0.110
samp. MX33	19.22	-99.44	61.0	4.9	26	465	17	27.35	0.056
samp. NT7	19.00	-97.25	60.6	2.8	39	578	21	27.52	0.067
samp. TL64	19.36	-98.83	65.3	2.4	47	468	17	27.53	0.100
samp. QRO-04-12	20.78	-100.77	60.0	2.7	30	476	17	27.55	0.062
samp. 151	19.21	-99.07	60.2	4.6	36	580	21	27.62	0.062
samp. MQ6	20.87	-102.60	64.3	2.0	48	442	16	27.63	0.109
samp. 96345	19.06	-98.89	60.4	4.8	39	551	20	27.68	0.071
samp. ZA09	20.91	-100.20	62.4	2.4	31	532	19	27.71	0.059
samp. NT 7	18.90	-96.50	60.6	2.8	37	585	21	27.86	0.063
samp. 52-1680	19.83	-100.68	61.5	2.8	54	586	21	27.90	0.092
samp. PAR-10	19.49	-102.25	59.1	3.8	29	544	19	27.98	0.053
samp. Z-706	18.85	-99.46	60.3	5.5	33	532	19	28.00	0.062
samp. 3-598	19.80	-100.69	56.8	3.4	64	561	20	28.05	0.114
samp. 3-1202	19.80	-100.69	60.6	3.5	58	590	21	28.10	0.098
samp. BHC-04	20.20	-102.35	60.2	3.6	38	506	18	28.11	0.075
samp. 97D2	19.05	-98.63	62.9	3.6	44	479	17	28.18	0.092
samp. 133	20.78	-103.83	57.0	3.9	37	620	22	28.18	0.060
samp. PEL45	19.40	-100.25	65.9	2.2	35	536	19	28.21	0.065
samp. BHC-37	19.88	-101.45	61.2	2.8	36	508	18	28.22	0.071
samp. B2-02	19.08	-99.22	59.5	4.6	40	593	21	28.24	0.067
samp. 9430	18.96	-98.81	61.4	3.9	56	447	16	28.32	0.125
samp. Z-740	19.88	-101.45	61.3	2.9	38	510	18	28.33	0.075
samp. SPO38	19.06	-98.68	59.5	5.6	35	442	16	28.33	0.079
samp. 96346	19.06	-98.89	63.4	3.8	47	496	18	28.34	0.094
samp. U17	18.00	-96.00	61.4	3.4	32	567	20	28.35	0.056
samp. 9602K	19.04	-98.63	62.9	2.4	38	436	15	28.48	0.087
samp. 9501	19.06	-98.63	61.4	2.7	43	453	16	28.48	0.095
samp. R-12	19.00	-98.60	59.9	5.5	48	657	23	28.57	0.073
samp. 208	19.13	-99.29	64.4	2.9	45	516	18	28.67	0.087
samp. QRO-04-9A	20.86	-100.70	61.0	2.9	29	563	20	28.81	0.051
samp. QRO-04-10	20.85	-100.75	62.8	2.4	32	597	21	28.87	0.054
samp. C2SP	18.00	-96.00	62.7	2.4	40	522	18	29.00	0.077
samp. ZA07	20.93	-100.18	63.4	2.1	35	557	19	29.01	0.062
samp. ZIT103	19.40	-100.25	65.0	3.1	38	494	17	29.06	0.077
samp. R-16	19.00	-98.60	63.2	4.0	59	586	20	29.30	0.101
samp. 40	19.03	-97.27	63.4	2.4	50	560	19	29.47	0.089
samp. CHI09	19.11	-99.53	61.0	4.2	34	555	19	29.52	0.061
samp. 343	21.43	-104.73	62.3	2.4	33	621	21	29.57	0.053
samp. RL-343	21.43	-104.73	63.2	2.4	33	621	21	29.57	0.053
samp. PDLA82-37	19.81	-100.63	58.0	4.5	46	651	22	29.59	0.071
samp. Z-133	19.38	-100.33	63.9	2.2	37	506	17	29.76	0.073
samp. MX45	19.10	-99.43	63.9	2.4	54	477	16	29.81	0.113
samp. ZIT-99-17	19.10	-100.13	61.2	3.0	45	471	16	30.00	0.095
samp. Z-348	19.19	-100.19	62.0	4.5	30	544	18	30.22	0.055
samp. Z-348	19.20	-100.17	62.0	4.5	30	544	18	30.22	0.055
samp. JAJ1	19.12	-99.56	59.5	4.4	33	611	20	30.32	0.054
samp. R-15	19.00	-98.60	62.0	4.0	58	669	22	30.41	0.087
samp. MGVI0	19.00	-101.00	57.6	4.2	30	548	18	30.44	0.055

Arc: Marianas

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 5	16.35	145.67	61.1	2.1	28	351	39	9.00	0.080
samp. HPD1148R16	17.99	145.63	59.3	2.3	39	305	34	9.05	0.126
samp. 5894	17.94	144.84	55.6	2.6	34	299	33	9.06	0.114
samp. 5894	17.94	144.84	55.6	2.6	34	299	33	9.06	0.114
samp. HPD1148R19	17.99	145.64	59.5	2.3	38	308	34	9.10	0.124
samp. 104	16.36	145.69	61.2	2.1	28	356	39	9.13	0.079
samp. HPD1148R18	17.99	145.63	59.6	2.5	38	309	34	9.21	0.121
samp. 106	16.36	145.69	60.8	2.2	25	360	39	9.23	0.069
samp. 18	16.36	145.69	60.7	2.2	25	361	39	9.26	0.069
samp. EC-5	16.35	145.67	59.8	2.1	29	380	41	9.29	0.076
samp. ANAT8-P	16.36	145.63	61.0	2.1	27	356	38	9.30	0.076
samp. ANAT6-P	16.36	145.63	61.0	2.0	28	362	39	9.33	0.077
samp. ANAT12-P	16.36	145.63	59.9	2.1	28	366	39	9.36	0.076
samp. TM-06-907	18.06	145.71	61.6	2.0	27	326	35	9.37	0.082
samp. HPD1148R15	17.99	145.63	59.1	2.3	38	309	33	9.38	0.121
samp. ANAT10-S	16.36	145.63	59.8	2.2	28	370	39	9.46	0.075
samp. ANAT8-S	16.36	145.63	59.9	2.2	27	368	39	9.53	0.073
samp. TM-06-906	18.06	145.71	57.6	3.3	29	298	31	9.55	0.097
samp. ANAT10-P	16.36	145.63	59.7	2.0	27	356	37	9.57	0.075
samp. ANAT12-S	16.36	145.63	61.0	2.1	27	363	38	9.58	0.074

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Marianas (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. ANAT7-S	16.36	145.63	59.7	2.1	28	367	38	9.66	0.075
samp. SA89-1	15.20	145.72	55.7	2.3	14	177	18	9.67	0.077
samp. 17	16.36	145.69	60.6	2.3	25	358	37	9.68	0.070
samp. ANAT6-S	16.36	145.63	60.4	2.2	27	369	38	9.81	0.074
samp. ANAT-26-01	16.34	145.66	60.3	2.3	28	345	35	9.86	0.082
samp. ANAT5	16.36	145.63	59.8	2.2	26	360	36	9.94	0.072
samp. HPD1148R14	17.99	145.63	59.0	2.6	36	316	32	10.00	0.114
samp. SAP	16.72	145.78	60.5	2.6	18	352	35	10.06	0.051
samp. ANAT11	16.36	145.63	58.9	2.2	25	365	36	10.11	0.070
samp. 17	16.36	145.69	60.4	2.2	24	364	36	10.11	0.066

Arc: Luzon

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. MNO89-26A	6.40	125.50	55.4	3.4	10	198	30	6.60	0.601
samp. MNO89-26A	6.40	125.50	55.4	3.4	10	198	30	6.60	0.051
samp. 9	10.50	122.98	62.3	2.2	62	519	72	7.21	0.119
samp. 12	14.72	120.43	61.0	2.4	25	304	41	7.41	0.082
samp. CW32	13.50	123.70	60.6	2.6	56	580	71	8.17	0.097
samp. 77	14.72	120.43	58.3	3.3	24	188	23	8.17	0.128
samp. ARC-12	14.53	120.50	55.1	3.4	36	434	50	8.75	0.083
samp. TUDELA	8.50	123.50	58.6	3.0	48	628	71	8.85	0.076
samp. TT8.2	14.00	120.99	59.8	2.3	49	290	32	9.06	0.169
samp. BC3	14.00	120.99	56.5	3.1	50	268	28	9.57	0.187
samp. BC2	14.00	120.99	57.0	3.0	50	265	27	9.81	0.189
samp. TC 185	14.00	121.00	58.5	2.8	50	311	27	11.35	0.161
samp. TC 162	14.00	121.00	58.3	2.9	51	317	28	11.38	0.160
samp. M16	14.13	121.20	57.7	3.0	54	370	32	11.56	0.146
samp. TC 173BX	14.00	121.00	58.6	2.8	51	321	28	11.62	0.160
samp. 79	14.72	120.43	55.6	3.3	22	291	25	11.64	0.076
samp. ARC-2	15.67	120.65	58.6	3.1	26	390	34	11.64	0.067
samp. TC 24	14.00	121.00	58.0	2.8	49	326	28	11.76	0.151
samp. B3	14.00	120.99	55.0	3.9	45	297	25	11.88	0.152
samp. TC 47	14.00	121.00	57.9	2.9	48	323	27	12.07	0.149
samp. TC 22A	14.00	121.00	57.9	2.8	45	333	28	12.10	0.135
samp. TC 21	14.00	121.00	57.8	2.9	47	319	26	12.13	0.148
samp. BC4	14.00	120.99	55.9	4.1	38	280	23	12.17	0.136
samp. TC 40	14.00	121.00	57.8	2.9	47	326	27	12.21	0.144
samp. TC 102	14.00	121.00	57.8	2.9	47	324	26	12.23	0.146
samp. TC 133	14.00	121.00	57.9	3.1	47	323	26	12.25	0.145
samp. TC 60	14.00	121.00	58.0	2.8	48	318	26	12.26	0.149
samp. PH92-16	7.08	125.63	61.7	2.0	53	295	24	12.29	0.180
samp. PH92-16	7.08	125.63	61.7	2.0	53	295	24	12.29	0.180
samp. TT1	14.00	120.99	57.2	2.8	51	295	24	12.29	0.173
samp. NP2	14.00	120.99	56.7	3.1	47	301	24	12.54	0.156
samp. TC 98	14.00	121.00	57.8	2.9	47	319	25	12.59	0.146
samp. TC 45	14.00	121.00	57.6	3.0	46	326	26	12.68	0.140
samp. TC 101	14.00	121.00	58.1	3.0	46	330	26	12.69	0.139
samp. TC 127	14.00	121.00	56.0	3.8	39	323	25	12.83	0.121
samp. TC 100	14.00	121.00	57.0	3.0	45	325	25	12.85	0.137
samp. TC 118	14.00	121.00	56.0	3.1	40	336	26	12.97	0.120
samp. NP1	14.00	120.99	56.0	3.1	47	300	23	13.04	0.157
samp. P90-99	6.90	121.90	56.7	3.4	75	400	30	13.33	0.188
samp. MNO89-12	8.00	125.00	55.3	3.9	20	320	24	13.33	0.063
samp. MNO89-12	8.00	125.00	55.3	3.9	20	320	24	13.33	0.063
samp. TT4	14.00	120.99	57.2	2.9	50	320	24	13.33	0.156
samp. TC 66	14.00	121.00	56.0	3.1	38	323	24	13.37	0.116
samp. TC 56	14.00	121.00	56.8	3.2	43	331	25	13.43	0.128
samp. BH07-03-P3	14.03	121.05	61.2	2.3	77	465	34	13.84	0.166
samp. 040303-2A	14.03	121.05	60.7	2.2	83	489	35	13.92	0.170
samp. 30	14.72	120.43	57.7	3.8	29	300	21	14.29	0.097
samp. B-220	12.77	124.05	58.3	2.2	60	602	42	14.33	0.100
samp. 020520-7	14.13	121.20	60.0	2.9	67	391	27	14.48	0.171
samp. TT3	14.00	120.99	56.0	3.4	32	307	21	14.62	0.104
samp. 040303-3E	14.03	121.05	58.7	2.5	85	536	37	14.63	0.159
samp. SP338	14.22	120.65	56.9	3.6	39	359	24	14.96	0.109
samp. BH07-03-A	14.03	121.05	58.8	2.6	78	523	35	14.98	0.149
samp. BH07-03-S1	14.03	121.05	59.5	2.5	82	535	35	15.11	0.153
samp. 31	14.72	120.43	57.8	3.7	25	291	19	15.32	0.086
samp. 51	10.57	123.13	57.8	3.6	40	453	29	15.62	0.088
samp. 73	14.72	120.43	56.8	2.2	33	404	25	16.16	0.082
samp. 040303-1N	14.03	121.05	56.1	2.3	78	662	41	16.24	0.118
samp. 34	14.72	120.43	57.7	3.7	24	309	19	16.26	0.078
samp. 33	14.72	120.43	55.2	3.9	28	314	19	16.53	0.089
samp. 187	14.13	121.20	61.4	2.0	71	382	23	16.61	0.186
samp. SP60	14.13	121.20	60.4	2.6	63	370	22	16.82	0.170
samp. DO 60	14.13	121.20	60.4	2.6	63	370	22	16.82	0.170
samp. BH07-03-C	14.03	121.05	57.4	3.0	68	586	35	16.86	0.116
samp. 72	14.72	120.43	56.2	2.2	34	415	24	17.29	0.082
samp. CNV8	10.41	123.13	58.9	2.3	57	514	29	17.72	0.111
samp. 040303-1D	14.03	121.05	58.9	2.1	92	635	35	17.96	0.145
samp. 114	14.53	120.50	55.9	4.2	48	446	24	18.58	0.108
samp. CNV9	10.41	123.13	60.1	2.5	60	508	27	18.81	0.118
samp. P90-75B	8.50	123.20	57.5	5.0	59	435	23	18.91	0.136
samp. PIVS1-9-28-B	14.03	121.05	59.5	2.1	95	695	37	18.92	0.137
samp. B-184	12.77	124.05	55.1	4.0	25	423	22	19.23	0.059
samp. 90-05	12.77	124.05	56.1	3.4	30	405	21	19.29	0.074
samp. 113	14.53	120.50	57.2	4.0	49	431	22	19.59	0.114
samp. CAN02	10.65	123.25	58.5	3.4	46	451	23	19.61	0.102

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Luzon (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 30	10.50	122.98	58.5	2.7	69	575	29	19.83	0.120
samp. 020520-3	14.13	121.20	57.6	4.0	64	449	22	20.32	0.143
samp. PH92-173	10.00	124.66	57.0	2.4	44	550	27	20.37	0.080
samp. PH92-151	7.40	124.30	55.8	5.7	27	335	16	20.43	0.080
samp. PH92-151	7.40	124.30	55.8	5.7	27	335	16	20.43	0.080
samp. CNV4	10.41	123.13	59.4	2.3	66	470	23	20.43	0.140
samp. 186	14.00	121.20	60.2	2.3	72	497	24	20.71	0.145
samp. PH92-50	6.40	125.50	65.0	2.1	19	273	13	20.84	0.071
samp. PH92-50	6.40	125.50	65.0	2.1	19	273	13	20.84	0.071
samp. 37	10.50	122.98	58.7	2.6	74	551	26	21.19	0.134
samp. P90-9	8.10	124.30	60.9	2.3	62	403	19	21.21	0.154
samp. CNV11	10.41	123.13	60.1	2.4	76	447	21	21.29	0.170
samp. B-128A	12.77	124.05	58.1	3.5	28	511	24	21.29	0.055
samp. B-68	12.77	124.05	59.0	3.2	30	366	17	21.53	0.082
samp. 36	10.50	122.98	59.0	2.6	76	547	25	21.88	0.139
samp. B-126A	12.77	124.05	59.8	3.1	40	419	19	22.05	0.095
samp. 43	10.50	122.98	58.4	2.7	60	531	24	22.13	0.113
samp. CW16	13.50	123.70	55.8	4.4	37	598	27	22.15	0.062
samp. 56A	10.57	123.13	58.0	2.8	68	646	29	22.28	0.105
samp. 115	14.53	120.50	55.8	4.6	48	496	22	22.55	0.097
samp. P1-71	16.62	120.88	55.9	4.8	32	429	19	22.58	0.075
samp. PH 92-145	7.00	123.00	56.5	4.3	58	476	21	22.67	0.122
samp. MC331	13.50	120.00	56.9	3.2	47	532	23	23.13	0.088
samp. CNV5	10.41	123.13	56.7	3.9	55	582	25	23.28	0.095
samp. AM36	8.39	123.63	55.9	4.0	34	606	26	23.31	0.056
samp. PH 93-60	7.00	123.00	64.1	2.3	60	393	17	23.39	0.153
samp. PH 93-56	7.00	123.00	57.3	5.8	38	565	24	23.54	0.067
samp. CRN1	9.25	123.17	55.5	3.8	32	520	22	23.64	0.062
samp. CNV12	10.41	123.13	58.4	2.7	83	497	21	23.67	0.167
samp. CW33	13.50	123.70	62.1	2.2	60	672	28	24.00	0.089
samp. MC331	13.50	120.00	57.8	3.3	44	529	22	24.05	0.083
samp. B-118A	12.77	124.05	59.1	3.1	39	437	18	24.28	0.089
samp. 2	10.50	122.98	57.9	2.9	73	540	22	24.55	0.135
samp. NEG96-06	10.75	122.98	58.0	2.9	29	500	20	24.63	0.058
samp. ARC-35	15.13	120.35	63.0	2.2	37	568	23	24.70	0.065
samp. 4	10.50	122.98	58.6	3.0	74	549	22	24.95	0.135
samp. SP375	13.50	120.00	56.9	3.2	68	476	19	25.05	0.143
samp. B-70	12.77	124.05	57.7	3.6	30	384	15	25.60	0.078
samp. B-120A	12.77	124.05	59.4	3.1	35	385	15	25.67	0.091
samp. B-168	12.77	124.05	58.2	2.5	85	726	28	25.93	0.117
samp. 45	10.50	122.98	55.7	4.5	56	600	23	26.09	0.093
samp. B-41	12.77	124.05	59.3	3.1	44	419	16	26.19	0.105
samp. NEG96-05	10.75	122.98	57.3	2.9	36	580	22	26.36	0.061
samp. LEY90-37A	10.00	124.66	57.5	2.8	33	585	22	26.59	0.056
samp. NEG96-02	10.75	122.98	56.5	3.2	28	527	20	26.62	0.052
samp. B-125	12.77	124.05	59.6	2.9	41	453	17	26.65	0.091
samp. G004	9.10	125.20	59.2	3.7	42	653	25	26.65	0.065
samp. B-119	12.77	124.05	59.5	3.1	37	427	16	26.69	0.087
samp. CRN12	9.25	123.17	56.7	3.7	33	509	19	26.79	0.065
samp. CRN13	9.25	123.17	56.9	2.6	51	617	23	26.83	0.083
samp. 18	10.50	122.98	56.5	2.7	66	647	24	26.96	0.102
samp. ALORAN	7.00	123.00	56.9	3.8	41	652	24	27.17	0.063
samp. ALORAN	8.50	123.50	56.9	3.8	41	652	24	27.17	0.063
samp. 81-22	13.50	121.23	61.7	2.3	71	600	22	27.27	0.118
samp. 16	10.50	122.98	61.5	2.0	79	628	23	27.30	0.126
samp. B-169	12.77	124.05	57.7	3.0	34	582	21	27.71	0.058
samp. CAN04	10.65	123.25	62.9	2.2	60	508	18	28.22	0.118
samp. AM15A	8.39	123.63	56.0	3.9	74	512	18	28.44	0.145
samp. B-64	12.77	124.05	60.1	2.8	43	431	15	28.73	0.100
samp. PIN6	15.11	120.31	59.7	5.1	34	490	17	28.82	0.069
samp. 145	14.72	120.43	59.9	2.9	63	525	18	29.17	0.120
samp. B-12A	12.77	124.05	57.7	3.3	43	448	15	29.87	0.096
samp. B-34	12.77	124.05	59.1	3.0	41	419	14	29.93	0.098
samp. NEG96-01	10.75	122.98	57.0	2.5	33	630	21	30.00	0.052
samp. B-45	12.77	124.05	59.4	2.7	41	452	15	30.13	0.091
samp. 27	10.50	122.98	55.1	3.8	46	701	23	30.48	0.066
samp. CW19	13.50	123.70	60.0	2.9	54	671	22	30.50	0.080
samp. CRN7	9.25	123.17	58.2	2.5	36	584	19	30.74	0.062
samp. 50	10.50	122.98	55.7	4.3	55	587	19	30.89	0.094
samp. B-192	12.77	124.05	57.5	2.9	50	654	21	31.14	0.076
samp. 52	10.67	123.15	63.3	2.2	59	567	18	31.50	0.104
samp. 81/B2	13.50	123.50	60.7	2.8	58	630	20	31.50	0.092
samp. ARC-5	14.53	120.50	60.2	2.4	29	379	12	31.58	0.077
samp. 54	10.72	123.17	62.3	2.4	59	569	18	31.61	0.104
samp. B-40A	12.77	124.05	58.9	3.0	44	412	13	31.69	0.107
samp. CW02	13.50	123.70	58.3	3.2	46	636	20	31.80	0.072
samp. MC382	14.13	121.20	58.4	4.5	39	484	15	31.84	0.080
samp. CRN3	9.25	123.17	61.4	2.0	45	577	18	32.06	0.078
samp. 020520-2	14.13	121.20	58.0	3.9	60	448	14	32.23	0.134
samp. 56B	10.57	123.13	58.8	2.7	44	680	21	32.38	0.065
samp. 5	10.50	122.98	55.1	3.1	63	728	22	33.09	0.087
samp. P 90-85	8.50	123.20	61.9	2.4	40	465	14	33.21	0.086
samp. 39	10.50	122.98	57.5	3.1	84	908	27	33.63	0.093
samp. PT6	15.13	120.37	65.2	2.6	43	473	14	33.79	0.091
samp. M26	14.13	121.20	60.3	3.0	44	610	18	33.89	0.072
samp. PH90-61	7.00	122.00	55.0	4.1	68	950	28	33.93	0.072
samp. P90-61	7.80	122.50	55.0	4.1	68	950	28	33.93	0.072
samp. P90-61	7.80	122.50	55.0	4.1	68	950	28	33.93	0.072

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Luzon (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. C001	9.10	125.20	65.0	2.3	50	523	15	33.96	0.095
samp. CRN2	9.25	123.17	58.1	2.4	38	614	18	34.11	0.062
samp. NEG96-03	10.75	122.98	56.8	2.6	33	642	19	34.15	0.051
samp. B005	9.10	125.20	60.7	2.7	43	705	20	34.73	0.061
samp. SP80	13.50	120.00	56.7	3.8	50	731	21	34.81	0.068
samp. CRN6	9.25	123.17	60.0	2.3	42	632	18	35.11	0.066
samp. NEG96-04	10.75	122.98	57.8	3.1	42	660	19	35.29	0.064
samp. 74	9.28	123.23	57.6	2.2	50	708	20	35.40	0.071
samp. ARC-39	15.13	120.35	63.9	2.4	38	566	16	35.60	0.067
samp. CW44III	13.50	123.70	62.4	2.0	56	680	19	35.79	0.082
samp. CW20	13.50	123.70	59.6	2.9	54	683	19	35.95	0.079
samp. 13	10.50	122.98	55.2	3.7	48	719	20	35.95	0.067
samp. 90-15	12.77	124.05	58.8	3.1	41	437	12	36.42	0.094
samp. 191	13.43	121.87	56.8	3.6	91	999	27	37.00	0.091
samp. PT50	15.13	120.37	60.4	4.4	47	558	15	37.20	0.084
samp. AM39	8.39	123.63	59.9	4.5	34	564	15	37.60	0.060
samp. MD 171	14.08	121.50	57.2	4.0	58	942	25	37.68	0.062
samp. PT41	15.16	120.32	60.2	4.0	44	568	15	37.87	0.077
samp. CRN11	9.25	123.17	59.4	2.3	43	683	18	37.94	0.063
samp. USNM116534-2	15.13	120.35	64.2	2.4	39	535	14	38.21	0.073
samp. B-116A	12.77	124.05	57.5	3.8	36	427	11	38.82	0.084
samp. USNM116534-1	15.13	120.35	64.1	2.6	40	544	14	38.86	0.074
samp. 49	10.50	122.98	56.1	3.3	77	894	23	38.87	0.086
samp. CW21	13.50	123.70	59.3	3.1	51	741	19	39.00	0.069
samp. MR52	8.23	123.65	59.7	3.5	36	512	13	39.38	0.070
samp. M28	14.13	121.20	62.5	2.6	56	710	18	39.44	0.079
samp. 90-02	12.77	124.05	61.2	2.4	44	435	11	39.55	0.101
samp. AM28	8.39	123.63	62.5	3.2	32	603	15	40.20	0.053
samp. PIN4	15.11	120.31	63.6	2.5	37	565	14	40.36	0.065
samp. PT9A	15.13	120.37	64.9	2.4	45	485	12	40.42	0.093
samp. PT51	15.13	120.37	59.8	4.3	47	566	14	40.43	0.083
samp. 195	13.00	121.48	56.6	2.7	73	1020	25	40.80	0.072
samp. 65	9.32	123.18	57.0	2.1	50	657	16	41.06	0.076
samp. PT52	15.16	120.32	64.7	2.2	40	536	13	41.23	0.075
samp. KL 143B	7.00	123.00	62.3	2.7	42	539	13	41.46	0.078
samp. AY-60	15.67	120.65	57.0	3.1	81	793	19	41.74	0.102
samp. 76	9.25	123.20	59.1	2.8	37	710	17	41.76	0.052
samp. PT40	15.16	120.32	64.7	2.2	40	543	13	41.77	0.074
samp. PT48	15.19	120.49	63.9	2.5	39	544	13	41.85	0.072
samp. PT31	15.13	120.37	64.6	2.2	40	547	13	42.08	0.073
samp. PIN3	15.11	120.31	64.4	2.5	39	548	13	42.15	0.071
samp. B-140A	12.77	124.05	59.2	2.6	35	675	16	42.19	0.052
samp. P2	15.19	120.49	63.8	2.4	47	550	13	42.31	0.085
samp. P4	15.15	120.60	65.2	2.3	52	519	12	43.25	0.100
samp. PIN7	15.11	120.31	63.8	2.8	39	563	13	43.31	0.069
samp. B007	9.10	125.20	58.2	3.9	44	704	16	43.46	0.063
samp. P3	15.07	120.55	64.7	2.4	50	530	12	44.17	0.094
samp. PIN9	15.11	120.31	64.5	2.6	39	538	12	44.83	0.072

Arc: Liguria

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 131I	39.70	8.80	56.7	5.9	51	516	73	7.07	0.099
samp. ST62	39.58	8.55	55.5	4.0	51	259	32	8.02	0.197
samp. 133I	39.70	8.80	59.1	3.2	57	442	50	8.84	0.129
samp. AR114	39.58	8.55	55.7	3.6	39	271	29	9.34	0.144
samp. ST81	39.58	8.55	56.5	5.3	47	263	28	9.39	0.177
samp. ST38	39.58	8.55	55.7	3.7	29	250	27	9.43	0.115
samp. AR159	39.58	8.55	57.6	2.7	35	269	28	9.61	0.130
samp. AR255	39.58	8.55	56.1	2.7	30	309	32	9.66	0.097
samp. ST42	39.58	8.55	55.1	3.4	28	245	25	9.92	0.113
samp. AR45	39.58	8.55	56.0	2.9	29	322	31	10.39	0.090
samp. KB28	39.63	8.87	56.1	3.1	64	332	31	10.71	0.193
samp. A69	39.58	8.55	55.5	5.4	41	227	21	10.81	0.181
samp. AR219	39.58	8.55	55.8	4.2	39	250	23	10.87	0.156
samp. F41	39.58	8.55	55.0	5.6	38	231	21	11.00	0.165
samp. 127I	39.70	8.80	56.0	4.9	52	562	49	11.47	0.093
samp. L38	39.58	8.55	55.5	4.7	39	200	17	11.76	0.195
samp. SH-41	39.06	9.10	56.5	3.8	30	277	22	12.59	0.108
samp. SIN15	40.30	8.65	55.4	3.5	62	357	27	13.22	0.174
samp. AR256	39.58	8.55	55.7	3.6	25	427	30	14.23	0.059
samp. SH-59	39.06	9.10	56.6	4.2	39	342	23	14.87	0.114
samp. SIN33	40.30	8.65	55.9	4.5	51	315	21	15.00	0.162
samp. SH-48	39.06	9.10	60.2	2.2	54	315	21	15.00	0.171
samp. SH-51	39.06	9.10	56.7	3.6	45	324	20	16.20	0.139
samp. V1226	39.17	8.68	56.0	2.8	76	398	24	16.58	0.191
samp. V1066	39.17	8.68	57.5	2.1	69	361	21	17.19	0.191
samp. V1346	39.17	8.68	56.0	2.1	59	443	25	17.72	0.133
samp. SIN30	40.30	8.65	58.8	2.7	80	457	25	18.28	0.175
samp. 238AI	39.70	8.80	57.6	3.0	76	537	28	19.18	0.142
samp. SIN37	40.30	8.65	59.7	2.7	88	534	27	19.78	0.165
samp. 230	39.70	8.80	61.5	2.1	106	536	27	19.85	0.198
samp. SH-55	39.06	9.10	55.5	3.8	33	367	18	20.39	0.090
samp. V1433	39.17	8.68	55.2	3.1	66	370	18	20.56	0.178
samp. SH-44	39.06	9.10	57.9	3.0	52	415	20	20.75	0.125
samp. V1580	39.17	8.68	55.9	2.6	63	423	20	21.15	0.149
samp. A167	39.70	8.80	60.5	4.2	68	391	18	21.72	0.174
samp. SH-25	39.06	9.10	60.6	2.7	34	356	15	23.73	0.096
samp. 21I	39.70	8.80	57.1	3.5	61	583	24	24.29	0.105

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Liguria (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 106	39.70	8.80	55.1	4.7	44	557	22	25.32	0.079
samp. FDCB	40.53	8.37	63.0	2.5	29	392	15	25.42	0.074
samp. SH-7	39.06	9.10	55.3	4.2	27	282	11	25.64	0.096
samp. 108I	39.70	8.80	55.9	3.9	52	596	23	25.91	0.087
samp. SH-13	39.06	9.10	56.1	3.1	50	337	13	25.92	0.148
samp. SH-26	39.06	9.10	55.0	3.0	34	322	12	26.83	0.106
samp. TR14	38.86	8.41	56.3	2.8	98	809	30	26.97	0.121
samp. 227	39.70	8.80	55.4	2.4	72	839	30	27.97	0.086

Arc: Kamchatka

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 4-01L	54.07	159.60	57.4	3.5	24	250	38	6.58	0.096
samp. 10-01L	54.07	159.60	59.0	2.6	25	257	38	6.76	0.097
samp. GOR-60	52.45	158.12	56.6	2.3	57	295	43	6.88	0.195
samp. KOM-11	55.03	160.72	61.0	2.8	36	235	33	7.12	0.153
samp. 11G-16	52.58	158.09	61.2	2.0	45	348	48	7.25	0.129
samp. N82	52.57	158.00	60.4	2.2	43	354	48	7.38	0.121
samp. N59	52.56	157.97	57.8	2.9	53	362	48	7.54	0.146
samp. KLV 5/24	56.09	160.48	57.0	2.6	62	321	43	7.55	0.194
samp. N92	52.52	157.95	57.3	2.9	53	364	48	7.58	0.146
samp. N86	52.55	158.06	57.6	2.8	55	361	47	7.68	0.152
samp. N61	52.55	158.00	57.2	2.9	51	372	47	7.91	0.137
samp. N60	52.55	157.99	57.2	2.9	53	368	46	8.00	0.144
samp. GOR-60	52.45	158.12	59.1	2.2	58	349	43	8.12	0.167
samp. N64	52.55	158.01	57.3	2.9	53	366	45	8.13	0.145
samp. N90	52.52	157.96	56.8	3.2	48	373	44	8.48	0.129
samp. GOR-60	52.45	158.12	57.6	2.4	52	347	41	8.53	0.151
samp. 1926/2	60.00	163.00	57.6	3.9	35	221	25	8.74	0.159
samp. 11G-4	52.59	158.01	56.2	4.9	44	366	39	9.38	0.120
samp. N54-B	57.88	162.54	55.3	2.9	29	377	39	9.67	0.077
samp. N95	52.47	158.16	60.1	2.1	35	357	35	10.20	0.098
samp. N55	52.58	158.02	55.9	4.3	41	404	39	10.36	0.101
samp. 88203/1	52.45	158.12	57.0	3.1	58	424	38	11.10	0.136
samp. N68	52.55	158.03	58.1	2.8	41	411	37	11.11	0.100
samp. 5-90	56.00	160.50	56.7	3.0	43	374	33	11.33	0.115
samp. N84	52.59	158.00	55.3	4.4	39	416	36	11.56	0.094
samp. N52	57.88	162.54	55.3	3.2	21	378	32	11.81	0.056
samp. 99IPE8	54.07	159.60	61.8	2.0	21	374	32	11.87	0.057
samp. N57	52.56	158.02	55.3	4.5	35	408	34	12.00	0.086
samp. N80	52.57	158.01	56.9	3.1	35	424	35	12.11	0.083
samp. N54-C	57.88	162.54	55.4	3.1	28	377	31	12.16	0.074
samp. 99IPE9	54.07	159.60	61.8	2.0	20	376	30	12.44	0.054
samp. 11G-21	52.54	157.98	57.1	4.0	36	411	32	12.84	0.088
samp. 11G-24	52.56	158.06	56.7	4.6	36	425	33	12.88	0.085
samp. K3-97	54.07	159.60	61.0	2.4	20	366	28	13.07	0.055
samp. N34-A	57.89	162.53	55.5	3.1	25	394	30	13.27	0.063
samp. 11G-17	52.58	158.09	56.2	4.6	35	444	33	13.45	0.079
samp. 11G-20	52.59	158.05	55.0	4.8	32	441	32	13.78	0.073
samp. 9504-3	59.50	163.50	56.2	4.6	21	340	23	14.78	0.062
samp. BAK13	53.93	158.07	61.9	2.9	33	446	30	14.87	0.074
samp. N37	57.91	162.53	58.0	3.7	32	374	25	14.96	0.086
samp. 1940	60.00	163.00	57.0	3.8	51	403	27	15.02	0.127
samp. 11G-18	52.59	158.05	55.1	4.7	27	468	31	15.10	0.058
samp. 11G-13	52.59	158.06	56.5	4.1	32	469	31	15.13	0.068
samp. G-3246	58.00	161.19	55.5	3.4	25	456	30	15.20	0.055
samp. 8868	55.00	160.00	55.2	2.5	46	419	27	15.52	0.110
samp. N36	57.90	162.53	57.0	4.0	30	388	25	15.52	0.077
samp. N54-A	57.88	162.54	60.4	3.0	37	345	22	15.61	0.107
samp. B1981	55.97	160.58	58.3	3.7	22	348	22	15.82	0.063
samp. B1977	55.97	160.58	58.3	3.6	23	350	22	15.91	0.066
samp. P124/87	61.00	165.00	55.8	4.3	58	495	31	15.97	0.117
samp. 9501-5	59.50	163.50	55.6	5.2	21	340	21	16.19	0.062
samp. B1986	55.97	160.58	58.0	3.8	22	344	21	16.38	0.064
samp. KIZ-05	55.17	160.53	56.2	4.0	26	330	20	16.50	0.079
samp. B1989-1	55.97	160.58	57.4	3.9	21	348	21	16.57	0.060
samp. J4662	55.17	160.53	55.3	4.5	20	349	21	16.62	0.057
samp. N41-C	57.93	162.56	58.3	3.9	28	383	23	16.65	0.073
samp. B1990	55.97	160.58	57.5	3.9	22	350	21	16.67	0.063
samp. 8	53.00	157.00	58.4	3.5	62	397	24	16.75	0.156
samp. 1486	60.00	163.00	57.1	2.8	42	444	26	16.88	0.095
samp. N40	57.91	162.55	57.7	3.8	25	398	24	16.94	0.063
samp. ES888	56.08	158.38	58.1	2.3	55	561	33	17.00	0.098
samp. BAK40	53.93	158.07	60.7	3.4	38	471	27	17.44	0.081
samp. B1991	55.97	160.58	57.7	3.7	22	350	20	17.50	0.063
samp. J4688	55.17	160.53	63.5	2.3	36	319	18	17.72	0.113
samp. 2U-PLATEAU-04-02	56.77	160.23	55.7	5.6	23	408	23	17.74	0.056
samp. 9503-2	59.50	163.50	61.9	2.1	69	550	31	17.74	0.125
samp. 8117-4	59.00	161.00	56.2	4.2	33	381	21	17.75	0.087
samp. B1956-1	55.97	160.58	60.5	2.8	25	355	20	17.75	0.070
samp. B1987	55.97	160.58	60.1	2.7	24	360	20	18.00	0.067
samp. N48	57.88	162.53	57.2	4.1	21	416	23	18.09	0.050
samp. 5738	56.63	161.32	56.8	5.9	17	316	17	18.59	0.054
samp. 27	57.35	161.75	66.3	2.4	36	296	16	18.62	0.120
samp. AB0284	57.39	160.12	60.2	2.8	41	449	24	18.71	0.091
samp. 44	57.35	161.75	64.5	2.8	35	322	17	18.94	0.107
samp. N41-D	57.93	162.56	58.4	3.9	27	381	20	19.05	0.071
samp. 22K/2	55.17	160.53	58.1	3.8	30	351	18	19.39	0.085
samp. N49	57.88	162.53	61.2	2.5	38	356	18	19.67	0.108

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Kamchatka (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. KIZ-01	55.17	160.53	63.6	2.4	38	319	16	19.94	0.119
samp. C712/9M	57.35	161.75	56.4	5.7	22	369	18	20.27	0.059
samp. 3683-6	57.00	157.50	55.3	4.3	21	367	18	20.37	0.058
samp. 1651	59.00	161.00	63.1	3.4	77	404	19	20.71	0.191
samp. 442/1	57.32	160.19	60.4	2.4	30	499	24	20.79	0.060
samp. K-5	55.97	160.58	57.6	3.8	23	373	18	20.84	0.060
samp. 32	57.35	161.75	63.2	2.7	36	350	17	21.08	0.102
samp. 34	57.35	161.75	62.7	3.1	33	377	17	21.67	0.086
samp. 175/87	58.92	164.33	61.6	2.4	37	487	22	22.34	0.076
samp. 27077	53.55	158.17	58.8	3.8	22	431	19	22.68	0.051
samp. 26107	53.68	157.83	63.5	2.8	36	372	16	23.25	0.097
samp. 6325OB77	55.72	157.75	63.9	2.3	45	411	17	23.62	0.109
samp. 3883	57.00	157.50	58.8	4.5	28	327	14	23.67	0.087

Arc: Lesser Antilles

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 04GW22	16.04	-61.68	57.0	3.6	18	224	24	9.44	0.082
samp. 01GU65	15.98	-61.63	58.7	3.1	19	207	22	9.44	0.092
samp. PBMO-46	16.68	-62.20	59.4	2.9	15	274	29	9.45	0.055
samp. PBMO-48	16.68	-62.20	59.0	3.1	15	276	29	9.52	0.054
samp. 98GU05	16.04	-61.67	57.2	3.7	14	212	22	9.53	0.066
samp. MO29	16.70	-62.15	56.3	3.8	13	259	27	9.59	0.050
samp. PBMO-29	16.73	-62.17	57.0	3.8	13	259	27	9.59	0.050
samp. PBMO-43	16.68	-62.20	60.3	2.8	15	269	28	9.61	0.056
samp. LSGU5	16.04	-61.67	57.5	4.6	18	196	20	9.66	0.090
samp. MVO0135	16.71	-62.15	61.4	2.5	18	263	27	9.74	0.068
samp. E-03	17.55	-63.00	59.2	3.3	13	249	25	9.78	0.053
samp. PBMO-02	16.68	-62.20	62.0	2.5	21	267	27	9.89	0.079
samp. PBMO-15	16.68	-62.20	61.2	2.5	18	287	29	9.90	0.063
samp. SAM58	16.04	-61.67	56.9	3.5	18	219	22	9.94	0.084
samp. SM9006	18.06	-63.05	63.8	2.6	33	270	27	10.00	0.122
samp. 06MT20	14.73	-61.12	56.9	2.0	38	218	22	10.05	0.176
samp. PBMO-05	16.68	-62.20	60.6	2.7	20	263	26	10.12	0.076
samp. PBMO-56	16.68	-62.20	60.4	2.9	22	263	26	10.12	0.084
samp. MVO0108	16.72	-62.18	55.0	3.6	14	263	26	10.12	0.053
samp. PBMO-45	16.68	-62.20	60.3	2.9	18	274	27	10.15	0.066
samp. E-04	17.55	-63.00	60.6	2.8	16	264	26	10.19	0.059
samp. D001	15.20	-61.30	61.7	2.3	38	204	20	10.20	0.186
samp. MVO 154	16.71	-62.16	59.7	3.1	17	250	25	10.21	0.067
samp. PBMO-33	16.68	-62.20	61.4	2.5	16	266	26	10.23	0.060
samp. KIT65	17.37	-62.81	58.9	3.1	13	247	24	10.25	0.054
samp. KIT62A	17.38	-62.78	62.3	2.6	16	239	23	10.26	0.068
samp. MVO0831	16.77	-62.17	60.8	2.9	16	277	27	10.26	0.058
samp. E-11	17.55	-63.00	58.8	3.0	17	271	26	10.27	0.064
samp. D-JL-38	15.20	-61.30	60.4	2.8	28	226	22	10.27	0.124
samp. D-JL-76	15.33	-61.30	61.8	2.5	36	217	21	10.33	0.166
samp. D147	15.20	-61.30	63.4	2.2	40	218	21	10.38	0.183
samp. 04GW24	16.03	-61.69	57.3	3.5	17	232	22	10.38	0.072
samp. E-28	17.55	-63.00	56.4	3.6	16	291	28	10.39	0.055
samp. PBMO-40	16.68	-62.20	59.1	2.7	16	272	26	10.46	0.059
samp. D-JL-34	15.20	-61.30	63.3	2.2	41	220	21	10.48	0.186
samp. MVO0244	16.68	-62.18	59.8	2.9	17	273	26	10.50	0.062
samp. PBMO-81	16.68	-62.20	60.3	2.9	19	273	26	10.50	0.070
samp. E-28	17.55	-63.00	56.4	3.6	16	291	28	10.53	0.055
samp. PBMO-19	16.73	-62.17	56.3	3.9	15	295	28	10.54	0.051
samp. 06MT13	14.73	-61.08	58.8	3.1	43	241	23	10.57	0.177
samp. MVO0693A	16.71	-62.18	58.6	2.9	16	244	23	10.61	0.066
samp. STV316	13.35	-61.13	55.1	4.3	12	202	19	10.63	0.059
samp. MVO0288	16.71	-62.18	60.7	2.6	17	234	22	10.64	0.073
samp. MVO0057	16.70	-62.15	58.4	3.2	14	256	24	10.67	0.055
samp. MVO0051	16.71	-62.18	58.3	3.0	16	279	26	10.73	0.057
samp. MVO0050	16.71	-62.18	59.7	3.0	17	248	23	10.78	0.069
samp. 06MT29	14.75	-61.09	57.0	3.5	30	232	22	10.79	0.131
samp. PBMO-53	16.68	-62.20	62.6	2.5	21	259	24	10.79	0.081
samp. STV318	13.38	-61.14	55.1	3.6	15	206	19	10.84	0.073
samp. 07MT87	14.48	-61.07	59.0	2.4	19	249	23	10.87	0.075
samp. PBMO-17	16.68	-62.20	60.7	2.6	24	272	25	10.88	0.088
samp. MVO0241	16.71	-62.18	59.1	3.0	17	272	25	10.88	0.063
samp. MVO1227-4	16.71	-62.18	59.9	2.7	18	283	26	10.88	0.064
samp. MVO1137	16.68	-62.20	63.0	2.1	22	251	23	10.91	0.088
samp. PBMO-16	16.68	-62.20	59.1	2.9	18	262	24	10.92	0.069
samp. MVO1215	16.71	-62.18	58.4	2.8	16	284	26	10.92	0.056
samp. MVO0752	16.72	-62.18	58.1	3.0	16	284	26	10.92	0.056
samp. K101	17.25	-62.60	55.8	3.6	18	295	27	10.93	0.061
samp. SE8243	17.48	-62.96	58.8	3.0	13	251	23	10.94	0.052
samp. MVO1091A	16.68	-62.20	59.6	2.7	16	274	25	10.96	0.058
samp. MVO0092	16.68	-62.20	58.7	3.3	17	274	25	10.96	0.062
samp. MVO0245	16.71	-62.18	58.4	3.2	15	274	25	10.96	0.055
samp. MVO1174	16.71	-62.18	60.3	2.6	19	274	25	10.96	0.069
samp. 07MT91	14.52	-61.05	56.5	2.8	40	200	18	10.99	0.199
samp. MVO1151	16.71	-62.18	58.1	3.0	15	275	25	11.00	0.055
samp. MVO0665L	16.71	-62.18	60.3	2.9	20	264	24	11.00	0.076
samp. MVO0047	16.72	-62.18	60.0	3.0	16	253	23	11.00	0.063
samp. MVO47	16.72	-62.18	60.1	3.0	16	253	23	11.00	0.063
samp. MVO1227-8	16.71	-62.18	59.7	2.7	19	276	25	11.04	0.069
samp. MVO1227-2	16.71	-62.18	59.8	2.6	17	277	25	11.08	0.061
samp. MVO1216	16.71	-62.18	59.6	2.6	18	277	25	11.08	0.065
samp. MVO0159	16.68	-62.20	61.5	2.5	15	266	24	11.08	0.056

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Lesser Antilles (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. MVO0665D	16.71	-62.18	59.8	2.7	17	266	24	11.08	0.064
samp. MVO237	16.72	-62.18	59.6	2.8	17	266	24	11.08	0.064
samp. MVO0237	16.72	-62.18	60.2	2.8	17	266	24	11.08	0.064
samp. MVO0694L	16.71	-62.18	59.1	3.0	16	244	22	11.09	0.066
samp. MVO1227-12	16.71	-62.18	59.2	2.8	18	278	25	11.12	0.065
samp. PBMO-51	16.68	-62.20	61.3	2.7	20	267	24	11.13	0.075
samp. SVE116	13.33	-61.18	55.6	3.9	12	212	19	11.16	0.057
samp. MVO0040	16.71	-62.18	58.7	2.9	16	279	25	11.16	0.057
samp. SSH5A	16.69	-62.15	64.1	2.1	25	216	19	11.18	0.114
samp. MVO1072	16.71	-62.18	59.4	2.7	17	269	24	11.21	0.063
samp. STV313	13.34	-61.12	55.7	3.7	18	213	19	11.21	0.085
samp. D-JL-4	15.30	-61.30	62.1	2.5	36	213	19	11.21	0.169
samp. SL126	13.75	-60.90	58.9	3.2	42	277	25	11.21	0.152
samp. OXFORD18654	16.68	-62.20	62.6	2.5	17	258	23	11.22	0.066
samp. MVO1136	16.68	-62.20	58.7	3.2	17	258	23	11.22	0.066
samp. SM9023	18.06	-63.05	64.2	2.4	48	292	26	11.23	0.164
samp. MVO1214	16.71	-62.18	58.4	2.9	17	281	25	11.24	0.060
samp. SM9020A	18.06	-63.05	64.3	2.5	26	315	28	11.25	0.083
samp. MVO0711	16.71	-62.18	59.4	2.9	14	259	23	11.26	0.054
samp. STV376(L)	13.29	-61.25	59.6	2.3	28	237	21	11.29	0.118
samp. CN54	12.75	-61.29	56.2	2.7	34	461	41	11.30	0.074
samp. D-JL-68	15.20	-61.30	61.4	2.6	38	226	20	11.30	0.168
samp. PBMO-72	16.68	-62.20	62.3	2.4	19	260	23	11.30	0.073
samp. PBMO-10	16.73	-62.17	60.9	2.5	14	260	23	11.30	0.054
samp. SM9029	18.06	-63.05	61.6	2.4	29	283	25	11.32	0.102
samp. SM9025	18.06	-63.05	60.5	2.6	43	283	25	11.32	0.152
samp. PB18610	16.68	-62.20	59.7	2.7	15	272	24	11.33	0.055
samp. 18610W.J.R.	16.72	-62.18	59.7	2.7	15	272	24	11.33	0.055
samp. MVO1209	16.72	-62.15	58.1	3.0	16	272	24	11.33	0.059
samp. PBMO-22	16.73	-62.17	60.6	2.7	17	272	24	11.33	0.063
samp. 04GW02	16.01	-61.25	58.4	3.3	18	248	22	11.36	0.072
samp. E-R6	17.55	-63.00	57.8	3.8	14	253	22	11.36	0.056
samp. E-06	17.55	-63.00	57.7	3.9	14	253	22	11.36	0.056
samp. MVO1210	16.71	-62.18	57.2	3.1	16	285	25	11.40	0.056
samp. MVO0175	16.71	-62.18	58.1	3.3	14	251	22	11.41	0.056
samp. SE8223	17.48	-62.96	59.7	2.7	13	249	22	11.43	0.052
samp. MVO0045	16.71	-62.18	59.1	3.1	17	263	23	11.43	0.065
samp. D-JL-41	15.20	-61.30	58.9	3.5	29	206	18	11.44	0.141
samp. PBMO-07	16.68	-62.20	59.6	3.0	19	309	27	11.44	0.061
samp. MVO1091B	16.71	-62.18	58.6	3.1	14	275	24	11.46	0.051
samp. D-JL-47	15.20	-61.30	63.0	2.3	39	218	19	11.47	0.179
samp. MVO0216	16.71	-62.18	59.2	2.8	14	276	24	11.50	0.051
samp. MVO1090A	16.71	-62.18	58.6	3.0	15	276	24	11.50	0.054
samp. MVO0171	16.71	-62.18	59.5	2.9	15	277	24	11.54	0.054
samp. MVO1227-11	16.71	-62.18	59.6	2.6	18	277	24	11.54	0.065
samp. MONT153	16.72	-62.18	60.1	2.9	15	277	24	11.54	0.054
samp. MVO0231	16.72	-62.18	58.8	3.0	16	277	24	11.54	0.058
samp. MVO231	16.72	-62.18	59.2	3.1	16	277	24	11.54	0.058
samp. MVO0790	16.67	-62.19	63.3	2.3	27	231	20	11.55	0.117
samp. D-JL-52	15.20	-61.30	60.6	2.8	37	208	18	11.56	0.178
samp. MVO0292	16.71	-62.18	59.0	2.8	16	278	24	11.58	0.058
samp. MVO1227-10	16.71	-62.18	59.6	2.7	17	279	24	11.63	0.061
samp. MVO1227-5	16.71	-62.18	60.0	2.5	19	279	24	11.63	0.068
samp. SM9013B	18.06	-63.05	65.7	2.3	49	268	23	11.65	0.183
samp. SE8216	17.48	-62.96	59.8	2.7	13	251	22	11.66	0.052
samp. D-JL-78	15.26	-61.30	61.2	2.4	39	210	18	11.67	0.186
samp. MVO0201	16.71	-62.18	59.0	2.9	16	280	24	11.67	0.057
samp. MVO201	16.72	-62.18	59.1	2.9	16	280	24	11.67	0.057
samp. MVO0065	16.68	-62.20	60.3	2.5	17	257	22	11.68	0.066
samp. E-25	17.55	-63.00	57.6	3.3	18	287	25	11.69	0.061
samp. MVO0174	16.71	-62.18	58.9	2.9	16	269	23	11.70	0.059
samp. MVO1227-3	16.71	-62.18	59.9	2.6	18	281	24	11.71	0.064
samp. MVO0694D	16.71	-62.18	59.1	2.8	16	246	21	11.71	0.065
samp. D-JL-77	15.26	-61.30	59.4	2.4	33	211	18	11.72	0.156
samp. MVO1004	16.71	-62.18	59.3	2.8	16	247	21	11.76	0.065
samp. MVO0104	16.71	-62.17	59.3	3.0	15	259	22	11.77	0.058
samp. MVO1227-7	16.71	-62.18	60.2	2.5	16	271	23	11.78	0.059
samp. MVO1227-1	16.71	-62.18	60.3	2.6	19	283	24	11.79	0.067
samp. MVO 127	16.74	-62.15	59.7	3.0	20	239	20	11.81	0.084
samp. MVO0034	16.72	-62.18	58.7	2.9	15	260	22	11.82	0.058
samp. MVO34	16.72	-62.18	59.1	2.9	15	260	22	11.82	0.058
samp. PB18595	16.67	-62.19	58.5	2.3	17	331	28	11.82	0.051
samp. PBMO-76	16.68	-62.20	59.6	3.0	16	272	23	11.83	0.059
samp. D-JL-8	15.20	-61.30	62.0	2.4	42	213	18	11.83	0.197
samp. 14789	17.25	-62.60	61.9	2.4	15	284	24	11.83	0.053
samp. STV376(L)	13.29	-61.25	59.6	2.3	28	237	20	11.85	0.118
samp. MVO1003	16.71	-62.18	58.0	3.1	15	238	20	11.90	0.063
samp. MVO0693B	16.71	-62.18	61.5	2.4	20	250	21	11.90	0.080
samp. MVO0056	16.71	-62.18	59.7	2.7	16	262	22	11.91	0.061
samp. MVO1091C	16.71	-62.18	58.9	2.9	15	274	23	11.91	0.055
samp. MVO1063	16.71	-62.18	58.9	3.0	15	274	23	11.91	0.055
samp. MVO1217	16.68	-62.20	56.8	3.1	15	286	24	11.92	0.052
samp. MVO1212	16.71	-62.18	61.0	2.2	20	286	24	11.92	0.070
samp. D-JL-49	15.20	-61.30	63.1	2.3	41	215	18	11.94	0.191
samp. MVO 131	16.76	-62.17	57.3	3.9	15	284	24	11.95	0.051
samp. MVO 147	16.78	-62.21	60.5	2.6	13	245	21	11.95	0.051
samp. MVO1090B	16.68	-62.20	58.6	3.0	15	275	23	11.96	0.055
samp. MVO0242	16.71	-62.18	58.5	2.9	15	287	24	11.96	0.052

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Lesser Antilles (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. D-JL-55	15.20	-61.30	61.9	2.4	41	216	18	12.00	0.190
samp. MVO0094	16.71	-62.18	59.1	2.8	16	276	23	12.00	0.058
samp. MVO0098	16.71	-62.18	59.5	2.8	16	276	23	12.00	0.058
samp. MONT128	16.72	-62.18	59.7	2.8	16	276	23	12.00	0.058
samp. 04GW31	16.00	-61.67	56.3	3.5	17	281	23	12.04	0.061
samp. PBMO-74	16.68	-62.20	59.6	2.6	20	289	24	12.04	0.069
samp. MVO1227-9	16.71	-62.18	59.7	2.6	18	277	23	12.04	0.065
samp. D-JL-65	15.20	-61.30	60.0	2.8	18	229	19	12.05	0.079
samp. MVO1122	16.71	-62.18	58.2	3.0	17	278	23	12.09	0.061
samp. MVO0037	16.72	-62.18	62.6	2.4	19	254	21	12.10	0.075
samp. MVO37	16.72	-62.18	63.0	2.4	19	254	21	12.10	0.075
samp. MVO0243	16.71	-62.18	59.8	2.5	16	279	23	12.13	0.057
samp. D-JL-57	15.20	-61.30	63.0	2.4	38	219	18	12.17	0.174
samp. MVO1201	16.68	-62.20	63.4	2.4	19	244	20	12.20	0.078
samp. MMON17	16.72	-62.18	63.4	2.4	19	244	20	12.20	0.078
samp. SM9022	18.06	-63.05	62.3	2.9	42	293	24	12.21	0.143
samp. MVO0819	16.73	-62.15	60.0	2.9	16	257	21	12.24	0.062
samp. D-JL-70	15.20	-61.30	61.2	2.6	36	221	18	12.28	0.163
samp. SB61	17.63	-63.23	60.8	4.0	31	248	20	12.40	0.125
samp. MVO0160	16.71	-62.18	59.0	2.8	14	273	22	12.41	0.051
samp. MONT140	16.72	-62.18	59.5	2.8	14	273	22	12.41	0.051
samp. SB42	17.63	-63.23	59.4	3.6	30	273	22	12.41	0.110
samp. MVO0053	16.71	-62.18	58.9	3.0	16	262	21	12.48	0.061
samp. MVO0127	16.74	-62.15	59.7	3.0	16	287	23	12.48	0.056
samp. M8218	14.50	-61.00	59.1	2.8	25	265	21	12.48	0.094
samp. D-JL-62	15.43	-61.35	60.1	3.1	37	225	18	12.50	0.164
samp. MVO1227-6	16.71	-62.18	59.7	2.8	17	275	22	12.50	0.062
samp. SB61A	17.63	-63.23	59.7	3.7	33	250	20	12.50	0.132
samp. STV345	13.29	-61.14	55.0	5.4	13	238	19	12.53	0.055
samp. MVO1078	16.71	-62.18	62.0	2.4	21	289	23	12.57	0.073
samp. MVO0206	16.71	-62.18	58.4	3.1	15	264	21	12.57	0.057
samp. D-JL-75	15.33	-61.30	62.2	2.5	39	214	17	12.59	0.182
samp. M8222	14.50	-61.00	59.1	2.9	25	274	22	12.60	0.091
samp. MS8223	16.68	-62.20	58.6	3.0	16	285	23	12.61	0.055
samp. STV3771	13.29	-61.26	55.4	5.6	18	240	19	12.63	0.075
samp. MP-107	14.80	-61.10	60.4	2.5	27	292	23	12.70	0.092
samp. SE8237	17.48	-62.96	60.4	2.5	13	247	19	12.70	0.053
samp. D054	15.20	-61.30	63.0	2.2	42	216	17	12.71	0.194
samp. MP-434	14.80	-61.10	57.5	3.1	19	267	21	12.71	0.071
samp. MVO0025	16.72	-62.18	59.5	2.7	19	268	21	12.76	0.071
samp. MVO25	16.72	-62.18	59.5	2.7	19	268	21	12.76	0.071
samp. MVO0096A	16.68	-62.20	60.0	2.9	15	256	20	12.80	0.059
samp. MP-435	14.80	-61.10	57.8	3.0	23	282	22	12.82	0.082
samp. MS8207	16.73	-62.17	56.3	4.0	15	287	22	12.82	0.052
samp. D-JL-46	15.20	-61.30	63.4	2.3	40	218	17	12.82	0.183
samp. M8246	14.50	-61.00	57.7	3.2	25	284	22	12.83	0.088
samp. D-JL-58	15.20	-61.30	60.7	2.8	21	231	18	12.83	0.091
samp. MVO0148	16.73	-62.17	57.1	3.9	16	309	24	12.88	0.052
samp. D-JL-1	15.30	-61.30	60.7	2.9	32	219	17	12.88	0.146
samp. STV377(L)	13.29	-61.26	58.1	3.3	21	258	20	12.90	0.081
samp. MP-429	14.80	-61.10	58.8	3.2	25	284	22	12.91	0.088
samp. MVO1202	16.68	-62.20	62.7	2.5	19	259	20	12.95	0.073
samp. MVO 152	16.72	-62.19	58.6	4.1	19	295	23	13.01	0.064
samp. MVO0152	16.72	-62.19	58.6	4.1	17	287	22	13.05	0.059
samp. MVO0096B	16.68	-62.20	63.0	2.2	18	274	21	13.05	0.066
samp. MVO1203	16.68	-62.20	61.5	2.5	18	249	19	13.11	0.072
samp. BQ20	12.50	-61.50	59.2	2.3	30	305	23	13.15	0.098
samp. M8237	14.50	-61.00	62.9	2.2	31	276	21	13.17	0.112
samp. D-JL-56	15.20	-61.30	63.4	2.2	40	225	17	13.24	0.178
samp. 01GU60	16.01	-61.64	55.8	3.8	16	257	19	13.26	0.063
samp. MVO0777	16.71	-62.15	61.4	2.7	15	293	22	13.32	0.051
samp. M8220	14.50	-61.00	57.9	2.9	21	279	21	13.33	0.075
samp. MVO0234	16.71	-62.18	58.7	2.8	16	280	21	13.33	0.057
samp. M8226	14.50	-61.00	62.1	2.2	28	275	21	13.34	0.102
samp. M8214	14.50	-61.00	61.1	2.6	23	284	21	13.38	0.081
samp. D-JL-60	15.20	-61.30	58.0	3.4	32	228	17	13.41	0.140
samp. 04GW30	16.02	-61.66	56.6	3.4	17	313	23	13.41	0.056
samp. M8221	14.50	-61.00	58.1	3.0	21	281	21	13.42	0.075
samp. 06MT52	14.81	-61.16	61.4	2.3	22	296	22	13.45	0.075
samp. M8228	14.50	-61.00	62.1	2.2	28	276	20	13.50	0.101
samp. 06MT47	14.85	-61.21	61.3	2.1	26	282	21	13.56	0.093
samp. D-JL-26	15.20	-61.30	62.5	2.4	42	217	16	13.56	0.194
samp. M8217	14.50	-61.00	58.9	2.8	25	284	21	13.57	0.088
samp. MVO 777	16.71	-62.15	61.4	2.7	21	270	20	13.58	0.076
samp. M8247	14.50	-61.00	55.1	5.0	18	279	20	13.64	0.065
samp. MP-536A	14.80	-61.10	56.1	3.6	24	301	22	13.68	0.080
samp. M8225	14.50	-61.00	60.3	2.5	26	284	21	13.69	0.092
samp. CN41	12.75	-61.29	56.6	2.5	46	612	45	13.75	0.075
samp. MVO1209	16.72	-62.15	59.3	2.9	16	274	20	13.79	0.059
samp. M8230	14.50	-61.00	58.5	2.9	30	296	21	13.80	0.101
samp. SB5	17.63	-63.23	58.1	4.7	25	305	22	13.86	0.082
samp. D-JL-16	15.20	-61.30	62.1	2.3	42	222	16	13.88	0.189
samp. M8218	14.50	-61.00	59.1	2.8	25	265	19	13.95	0.094
samp. MVO0099	16.68	-62.20	63.3	2.2	15	279	20	13.95	0.054
samp. 09MT126	14.82	-61.17	56.8	5.5	19	240	17	13.96	0.079
samp. 06MT50	14.81	-61.17	62.0	2.3	26	277	20	13.99	0.095
samp. MP-411	14.80	-61.10	60.8	2.8	25	294	21	14.00	0.085
samp. MVO1134	16.68	-62.20	59.4	2.9	16	308	22	14.00	0.052

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Lesser Antilles (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 06MT51	14.81	-61.17	62.7	2.1	26	280	20	14.07	0.094
samp. MP-279	14.80	-61.10	57.0	3.3	22	296	21	14.10	0.074
samp. MP-257	14.80	-61.10	56.0	3.4	23	340	24	14.17	0.068
samp. MP-527A	14.80	-61.10	58.4	3.1	26	284	20	14.20	0.092
samp. MP-271	14.80	-61.10	62.1	2.2	33	270	19	14.21	0.122
samp. M8213	14.50	-61.00	55.7	3.6	15	293	21	14.24	0.051
samp. MP-287	14.80	-61.10	57.9	3.2	25	299	21	14.24	0.084
samp. M8215	14.50	-61.00	60.7	2.5	25	286	20	14.26	0.087
samp. SL121	13.75	-60.90	60.7	2.6	60	320	22	14.29	0.188
samp. MP-319A	14.80	-61.10	58.0	3.1	26	300	21	14.29	0.087
samp. MP-39	14.80	-61.10	59.4	2.9	23	286	20	14.30	0.080
samp. 01GU66	16.00	-61.69	55.7	3.5	16	272	19	14.32	0.060
samp. SB95A	17.63	-63.23	55.2	4.8	19	258	18	14.33	0.074
samp. 06MT43	14.86	-61.19	59.6	2.1	28	294	21	14.34	0.094
samp. MP-270	14.80	-61.10	60.0	2.4	22	287	20	14.35	0.077
samp. MP-355	14.80	-61.10	57.5	3.3	23	287	20	14.35	0.080
samp. D228	15.45	-61.35	61.6	2.2	26	287	20	14.35	0.091
samp. SB59	17.63	-63.23	58.3	4.2	21	244	17	14.35	0.086
samp. MP-570.1	14.80	-61.10	56.2	3.6	24	288	20	14.40	0.083
samp. M8277	14.50	-61.00	60.5	2.4	27	285	20	14.41	0.095
samp. M8222	14.50	-61.00	59.1	2.9	25	274	19	14.42	0.091
samp. MP-322	14.80	-61.10	55.0	3.9	19	304	21	14.48	0.063
samp. MP-324	14.80	-61.10	55.1	3.9	20	304	21	14.48	0.066
samp. MP-441	14.80	-61.10	61.0	2.4	24	304	21	14.48	0.079
samp. M8235	14.50	-61.00	56.4	3.5	22	302	21	14.48	0.073
samp. MP-406	14.80	-61.10	61.3	2.6	30	291	20	14.55	0.103
samp. MP-250	14.80	-61.10	58.5	2.7	25	306	21	14.57	0.082
samp. MP-266	14.80	-61.10	57.6	3.4	20	307	21	14.62	0.065
samp. MP-276	14.80	-61.10	56.1	3.8	21	307	21	14.62	0.068
samp. M8229	14.50	-61.00	55.7	3.6	22	325	22	14.68	0.068
samp. MP-566.1	14.80	-61.10	56.1	3.6	24	294	20	14.70	0.082
samp. MP-581	14.80	-61.10	60.7	2.4	21	309	21	14.71	0.068
samp. MP-568.2	14.80	-61.10	57.8	3.2	21	309	21	14.71	0.068
samp. MP-567.2	14.80	-61.10	56.1	3.6	21	309	21	14.71	0.068
samp. MP-407	14.80	-61.10	61.0	2.4	23	309	21	14.71	0.074
samp. SL52	13.75	-60.90	62.1	2.9	49	293	20	14.72	0.167
samp. MP-580	14.80	-61.10	60.5	2.7	24	295	20	14.75	0.081

Arc: Kurile

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. P-136/16	43.00	145.00	60.8	4.2	15	197	28	6.94	0.076
samp. SK03	44.02	143.25	60.6	2.6	41	261	36	7.25	0.157
samp. PV-33	43.00	142.00	56.6	3.2	30	337	44	7.66	0.088
samp. SK04	44.40	142.50	55.9	4.1	37	219	28	7.82	0.169
samp. SK08	44.63	142.80	55.2	4.4	31	197	25	7.88	0.157
samp. 060820-01 C	43.77	144.44	62.6	2.7	23	277	34	8.03	0.082
samp. 060820-04D	43.83	144.57	61.8	2.6	21	308	38	8.04	0.069
samp. AB955	44.02	143.25	59.5	2.9	38	287	35	8.20	0.132
samp. GG-59	44.00	142.50	61.4	3.0	33	308	37	8.26	0.107
samp. MO1	44.67	144.40	57.8	3.9	25	322	38	8.40	0.078
samp. 101604	43.70	143.00	56.9	2.9	33	331	39	8.44	0.100
samp. YA2	43.74	143.35	57.0	2.6	34	295	33	8.94	0.115
samp. SK06	44.05	143.82	56.4	5.1	32	248	26	9.54	0.129
samp. 060820-03 C	43.82	144.48	57.5	3.7	17	281	29	9.54	0.060
samp. GG-66	44.02	143.25	56.2	4.9	25	298	31	9.61	0.084
samp. Y-03	43.00	141.00	61.0	2.8	25	252	26	9.82	0.101
samp. TH-14	43.00	143.00	59.0	3.0	32	256	26	9.85	0.125
samp. Y-09	43.00	141.00	59.0	3.3	34	224	22	10.05	0.152
samp. S-02	43.50	142.00	56.9	5.8	18	252	24	10.50	0.070
samp. P-69/7	43.00	145.00	60.6	2.9	24	308	29	10.73	0.078
samp. S-03	43.50	142.00	56.8	5.6	29	247	23	10.83	0.117
samp. 070922-03A	44.67	144.40	61.7	2.2	30	360	33	10.87	0.085
samp. 90103	44.67	144.40	61.7	2.2	27	357	32	11.00	0.076
samp. SA951	44.67	144.40	62.3	2.2	29	388	35	11.01	0.075
samp. P-75/7	43.00	145.00	60.8	2.9	23	273	25	11.05	0.084
samp. IM060915FC	43.58	144.31	59.2	3.6	26	317	28	11.15	0.082
samp. IM060915FA	43.58	144.32	59.4	3.6	18	335	30	11.17	0.054
samp. P-75/10	43.00	145.00	57.0	3.9	23	305	27	11.17	0.074
samp. SK09	44.67	144.40	61.7	2.4	26	376	33	11.44	0.069
samp. PV-94	43.50	142.50	58.0	2.3	39	372	32	11.63	0.104
samp. 060823-04 C	43.59	144.40	58.4	3.0	17	328	28	11.74	0.052
samp. P-82/2	43.00	145.00	57.6	4.1	15	256	22	11.80	0.059
samp. IM060915FB	43.58	144.32	56.4	4.5	18	314	25	12.54	0.059
samp. Y-07	43.00	141.00	56.7	4.4	42	285	22	12.89	0.149

Arc: Izu-Bonin

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 1186-11	34.35	138.75	56.9	3.1	33	223	37	6.09	0.149
samp. 1186-2	34.35	138.75	59.4	3.1	39	239	39	6.13	0.163
samp. 780/131	26.30	142.00	59.4	4.4	14	179	29	6.26	0.078
samp. 1186-14	34.35	138.75	58.1	3.2	34	234	36	6.50	0.147
samp. D460-1	31.00	140.00	57.9	3.4	12	178	27	6.59	0.069
samp. 1186-2,9703-1, U98491	34.35	138.75	59.4	3.1	42	243	36	6.79	0.171
samp. 1186-2	34.35	138.75	59.4	3.1	42	243	36	6.79	0.171
samp. D-40	27.30	142.30	62.5	2.7	17	116	17	6.82	0.147
samp. MD-58	27.30	142.30	57.3	5.5	13	98	14	7.00	0.133
samp. MD-62	27.30	142.30	57.2	5.3	13	101	14	7.21	0.129
samp. 51	34.50	138.70	57.1	3.2	13	241	33	7.30	0.054

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc. Izu-Bonin (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 334-1	34.50	138.70	57.1	3.0	17	285	39	7.31	0.060
samp. 1393R6	31.50	140.00	58.0	3.0	10	170	23	7.47	0.058
samp. 125-782/23A-35X-3,53-59, 5	30.86	141.31	58.0	3.8	15	191	25	7.58	0.079
samp. 190	34.50	138.70	61.4	2.6	14	259	34	7.62	0.054
samp. MK-09	26.60	142.13	58.3	5.5	13	206	27	7.77	0.063
samp. 780/122	26.30	142.00	59.1	4.3	14	212	27	7.82	0.067
samp. 329	34.50	138.70	63.0	2.1	21	227	29	7.83	0.093
samp. 126-792E-71R-2,89-92101	30.40	140.38	57.4	3.6	10	166	21	7.98	0.062
samp. 125-782/26A-37X-2,100-106,	30.86	141.31	57.6	3.2	13	239	30	8.07	0.056
samp. 780/117	26.30	142.00	58.9	4.7	15	217	27	8.19	0.068
samp. MD-46	27.30	142.30	56.9	5.5	14	99	12	8.25	0.141
samp. MZ-89D(NMS107166)	34.50	138.50	56.6	4.4	30	286	34	8.41	0.105
samp. MZ-86(NMS107163)	34.50	138.50	57.4	3.1	25	331	39	8.49	0.076
samp. 125-782A-39X-2-73-74	30.86	141.31	58.5	2.7	17	269	31	8.74	0.064
samp. 1184-12	34.21	138.84	56.0	3.7	17	247	28	8.76	0.068
samp. 126-793B-113R-4,35-41088	31.11	139.89	58.8	3.3	31	195	22	8.90	0.161
samp. 126-793B-113R-3,130-13508	31.11	139.89	57.8	3.5	35	197	22	9.00	0.180
samp. 324	34.50	138.70	62.3	2.1	18	254	28	9.07	0.071
samp. 126-793B-113R-3,137-1415-	31.11	139.89	59.3	3.2	32	196	22	9.07	0.161
samp. 1184-41	34.21	138.84	55.4	3.9	14	207	23	9.12	0.067
samp. 1184-11	34.21	138.84	56.7	3.0	18	284	31	9.16	0.063
samp. MD-48	27.30	142.30	57.1	5.3	12	101	11	9.18	0.119
samp. 126-793B-110R-5,128-13207	31.11	139.89	56.7	4.2	33	191	21	9.23	0.173
samp. MD-60	27.30	142.30	57.2	5.2	11	102	11	9.27	0.108
samp. 1184-11,9703-1, U98489	34.21	138.84	56.7	3.0	20	305	32	9.53	0.065
samp. 1184-11	34.21	138.84	56.7	3.0	20	305	32	9.53	0.065
samp. MK15	26.60	142.13	57.2	5.9	12	198	21	9.64	0.061
samp. JH206F	34.50	139.00	57.6	3.7	20	253	26	9.66	0.079
samp. 125-782A-37X-6-105-107 (PUM)	30.86	141.31	60.2	2.6	15	267	28	9.69	0.057
samp. IZ26-12	35.01	138.98	55.1	3.8	24	406	42	9.71	0.060
samp. 125-782A-39X-2-16-18	30.86	141.31	60.2	2.4	18	286	29	9.72	0.063
samp. MD-65	27.30	142.30	61.4	3.0	13	117	12	9.75	0.111
samp. 125-782A-37X-6-105-107 (SCO)	30.86	141.31	59.2	2.6	15	271	27	9.88	0.056
samp. IZ26-12	35.01	138.98	55.3	3.7	22	376	38	9.92	0.058
samp. MZ-70(NMS107147)	34.50	138.50	57.1	3.4	30	298	30	9.93	0.101
samp. MZ-90(NMS107167)	34.50	138.50	56.4	4.4	30	295	28	10.54	0.102
samp. 1129-4	27.30	142.30	59.7	5.7	11	86	8	10.71	0.130
samp. MZ-91(NMS107168)	34.50	138.50	55.2	4.6	26	286	26	11.00	0.091
samp. 81301(NMS107186)	34.50	138.50	56.0	3.8	25	276	25	11.04	0.091

Arc: Honshu

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. SKV-1	38.00	140.00	62.7	2.7	12	233	38	6.13	0.052
samp. 980501	37.00	137.00	56.4	2.8	25	404	62	6.52	0.062
samp. I8	38.00	140.00	58.8	3.3	22	257	37	6.95	0.086
samp. E-2-1	37.00	138.00	55.5	3.5	31	329	47	6.97	0.095
samp. SNA-1	38.00	140.00	60.9	2.5	14	258	36	7.17	0.054
samp. YUL-2	38.00	140.00	64.4	2.4	14	246	33	7.45	0.057
samp. YUL-1	38.00	140.00	62.7	2.8	13	247	33	7.48	0.053
samp. L361	38.00	139.00	56.5	2.5	56	379	50	7.58	0.148
samp. 00704	38.00	140.00	55.3	3.5	50	402	51	7.88	0.125
samp. ON-F3	38.00	140.00	57.0	3.7	15	270	33	8.18	0.056
samp. M354	38.00	139.00	56.9	3.3	66	340	41	8.29	0.194
samp. NN894	36.00	138.00	59.3	3.3	20	262	31	8.40	0.074
samp. M2	38.00	139.00	57.7	2.4	59	346	40	8.65	0.171
samp. L293	38.00	139.00	55.8	3.5	50	355	40	8.88	0.141
samp. KUR-13	36.00	138.00	57.8	4.7	23	222	25	8.88	0.104
samp. IO117	36.00	138.00	56.4	4.3	38	219	24	9.13	0.172
samp. L294	38.00	139.00	56.5	3.3	49	370	40	9.25	0.132
samp. BN-BC	38.00	140.00	55.1	3.5	16	284	30	9.47	0.056
samp. M56	38.00	139.00	56.3	2.2	62	413	43	9.60	0.150
samp. M217	38.00	139.00	57.4	3.4	34	342	35	9.77	0.099
samp. MA210	36.00	138.00	59.5	2.1	24	289	30	9.80	0.084
samp. M191	38.00	139.00	57.7	2.2	57	355	35	10.14	0.161
samp. M92	38.00	139.00	55.5	3.3	62	325	32	10.16	0.191
samp. ANVA1	38.00	140.00	57.0	4.8	15	296	29	10.21	0.051
samp. L105	38.00	139.00	60.7	2.1	65	363	35	10.37	0.179
samp. M157	38.00	139.00	56.6	3.3	66	358	34	10.53	0.184
samp. E-2-3	37.00	138.00	57.3	3.6	25	326	30	11.05	0.077
samp. M154	38.00	139.00	57.8	2.9	69	355	32	11.09	0.194
samp. 980702	37.00	137.00	56.6	2.8	21	392	35	11.20	0.054
samp. L123	38.00	139.00	56.1	3.7	56	364	32	11.38	0.154
samp. L-6	37.00	138.00	60.8	2.4	32	314	27	11.63	0.103
samp. E-2-5	37.00	138.00	58.0	3.5	24	335	29	11.71	0.072
samp. IK201	36.00	138.00	56.5	3.7	19	271	23	11.89	0.069
samp. L136	38.00	139.00	57.0	2.5	50	423	35	12.09	0.118
samp. 12NT13	37.00	140.00	56.4	4.1	25	291	24	12.13	0.086
samp. E-1-1	37.00	138.00	60.1	2.8	28	341	27	12.58	0.081
samp. OHTAKI1908	35.00	137.00	55.2	3.6	37	530	40	13.18	0.070
samp. SKW1904	35.00	137.00	58.4	2.8	55	512	37	13.80	0.107
samp. NMG1551	35.00	137.00	62.2	2.4	56	368	26	13.99	0.153
samp. 981028	37.00	137.00	60.5	3.7	71	381	27	14.11	0.186
samp. L^	37.00	138.00	55.4	4.5	24	375	26	14.53	0.065
samp. 10402	38.00	140.00	57.5	2.9	21	406	26	15.62	0.051
samp. 980709	37.00	137.00	59.1	4.4	61	391	25	15.64	0.156
samp. 981027	37.00	137.00	56.7	4.1	65	376	24	15.67	0.173
samp. 981029	37.00	137.00	56.0	5.0	41	395	25	15.80	0.104
samp. L-4	37.00	138.00	56.7	4.0	28	418	26	15.89	0.067

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Honshu (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 41001	38.00	140.00	57.8	2.9	22	400	25	16.00	0.054
samp. MOM	35.00	137.00	55.7	5.3	27	474	29	16.34	0.057
samp. SKS-2	35.00	137.00	55.2	5.4	28	484	29	16.63	0.058
samp. 980718	37.00	137.00	57.4	4.4	49	383	23	16.65	0.128
samp. 10701	38.00	140.00	58.9	2.2	31	450	27	16.67	0.069
samp. 17AS5	35.00	138.00	57.1	4.4	18	357	21	17.00	0.050
samp. 40504	38.00	140.00	58.3	3.1	25	388	22	17.64	0.064
samp. 03102	38.00	140.00	56.6	2.8	26	465	26	17.88	0.056
samp. 80901	38.00	140.00	58.5	2.3	23	431	24	17.96	0.052
samp. 40203	38.00	140.00	59.2	2.1	22	414	23	18.00	0.054
samp. OU750412-1-9	34.00	134.00	57.1	2.6	35	383	21	18.24	0.091
samp. 980515	37.00	137.00	60.7	3.5	67	370	20	18.50	0.181
samp. 17AS1	35.00	138.00	56.5	4.4	19	371	20	18.55	0.051
samp. 980705	37.00	137.00	61.1	3.9	68	373	20	18.65	0.182
samp. 80501	38.00	140.00	56.6	4.3	26	393	21	18.71	0.067
samp. 980405	37.00	137.00	60.0	3.9	66	375	20	18.75	0.176
samp. TB-4	36.00	138.00	57.9	2.4	57	524	26	20.15	0.108

Arc: Greater Antilles

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. TO15	18.47	-64.00	61.4	3.2	27	191	28	6.82	0.141
samp. DT 200	20.60	-75.38	61.0	2.9	10	112	16	7.00	0.089
samp. FG-9	17.90	-65.75	65.8	2.8	16	241	29	8.31	0.066
samp. DG-16	17.90	-65.75	65.7	2.2	21	275	33	8.33	0.076
samp. Q 204	20.34	-74.67	58.3	3.8	17	218	23	9.48	0.078
samp. AV 55	18.25	-66.25	59.9	2.0	52	290	31	9.50	0.179
samp. AHWG19	18.06	-76.72	69.4	2.1	6	97	10	10.00	0.062
samp. PRP-16	17.90	-65.75	59.9	3.0	31	234	22	10.64	0.132
samp. A-8	17.90	-65.75	55.3	4.6	18	280	25	11.20	0.064
samp. HH8003	18.77	-70.65	63.9	3.4	20	225	20	11.25	0.089
samp. SL-1	17.90	-65.75	62.8	2.4	39	319	28	11.39	0.122
samp. PRP-12	17.90	-65.75	61.1	2.9	31	232	20	11.60	0.134
samp. VP-211	17.90	-65.75	57.2	5.1	35	298	25	11.92	0.117
samp. PRP-17	17.90	-65.75	59.9	3.1	28	239	20	11.95	0.117
samp. VP-57	17.90	-65.75	55.7	4.7	19	120	10	12.00	0.158
samp. AHWG18	18.06	-76.72	69.3	2.1	7	117	10	12.06	0.057
samp. 6358	17.90	-65.75	61.0	2.7	29	246	20	12.30	0.118
samp. PRP-14	17.90	-65.75	60.1	2.8	27	248	20	12.40	0.109
samp. 6513	17.90	-65.75	61.0	2.8	25	265	20	13.25	0.094
samp. MAT4	22.20	-79.90	56.6	3.7	25	437	33	13.36	0.056
samp. 8690	17.90	-65.75	61.4	2.8	25	302	22	13.73	0.083
samp. TUST 77	18.34	-64.88	57.0	2.9	20	401	28	14.31	0.051
samp. LL35	18.00	-66.20	55.8	2.6	53	272	19	14.33	0.194
samp. RAB4241	18.12	-66.10	56.2	4.9	19	344	24	14.33	0.056
samp. UFJ9885.0A	17.90	-65.75	58.9	3.2	29	332	22	15.01	0.086
samp. LL37C	18.00	-66.20	55.6	2.6	57	294	20	15.06	0.192
samp. B-5	17.90	-65.75	55.3	4.9	16	200	13	15.38	0.080
samp. AV-159	18.25	-66.25	57.6	3.1	69	430	28	15.43	0.161
samp. VP-161	17.90	-65.75	57.2	2.6	21	268	16	16.75	0.078
samp. PRP-104	17.90	-65.75	60.1	3.0	33	413	24	17.21	0.080
samp. MAT1	22.20	-79.90	56.5	2.8	27	427	25	17.22	0.063
samp. HH8005	18.77	-70.65	62.2	2.2	18	231	13	17.77	0.078
samp. VP-166	17.90	-65.75	63.6	2.7	32	288	16	18.00	0.111
samp. LFJ985/3.6A	17.90	-65.75	58.3	3.4	23	300	17	18.16	0.076
samp. MUL1	21.60	-77.40	61.4	2.5	40	421	23	18.55	0.095
samp. VP-88	17.90	-65.75	57.1	4.0	65	356	19	18.74	0.183

Arc: Central America (El Salvador, Honduras, Nicaragua, Costa Rica)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. ES 64	13.83	-89.86	57.5	2.6	34	347	31	11.19	0.098
samp. ES 60	13.95	-89.79	59.1	2.4	50	329	29	11.34	0.152
samp. MT004	12.42	-86.53	60.4	2.2	40	399	34	11.82	0.099
samp. M17	11.45	-85.52	56.3	2.4	51	509	41	12.41	0.100
samp. 4	10.00	-84.50	58.7	5.4	54	412	33	12.48	0.131
samp. C-92-2	11.58	-85.63	59.9	2.5	47	491	39	12.49	0.096
samp. P-58A	13.03	-87.59	59.2	2.2	30	406	32	12.73	0.073
samp. TO 1	14.00	-89.70	60.6	3.0	36	381	29	13.14	0.094
samp. RV64	10.83	-85.33	56.9	3.7	29	540	41	13.20	0.053
samp. P-47A	12.40	-86.66	57.8	2.7	36	400	30	13.33	0.091
samp. C922	11.53	-85.62	58.8	3.7	51	589	44	13.34	0.087
samp. TO 1	14.00	-89.70	60.9	2.5	42	347	26	13.35	0.121
samp. MT003	12.42	-86.53	60.5	2.2	41	392	29	13.49	0.104
samp. TO 1	14.00	-89.70	60.2	2.9	47	392	29	13.52	0.120
samp. 15	10.47	-84.73	59.7	5.1	59	440	32	13.75	0.134
samp. M16	11.45	-85.52	57.8	2.6	63	470	34	13.82	0.134
samp. MB104	12.50	-86.50	59.4	2.5	38	422	30	13.84	0.089
samp. P-46A	12.44	-86.67	56.9	3.0	34	406	29	13.90	0.083
samp. ES 52	13.94	-89.78	60.0	2.2	52	348	25	13.92	0.149
samp. CH-020406-5	10.58	-84.18	60.6	2.7	29	365	26	14.03	0.079
samp. 6	10.00	-84.50	61.2	4.8	63	449	32	14.03	0.140
samp. MB9	12.50	-86.50	58.8	3.1	39	385	27	14.10	0.102
samp. COS-A-5A	13.04	-87.60	58.0	2.1	27	397	28	14.18	0.068
samp. MB10	12.50	-86.50	58.7	3.2	39	395	28	14.18	0.098
samp. ES 53	13.94	-89.78	60.3	2.2	48	341	24	14.21	0.141
samp. 5	10.00	-84.50	59.2	5.0	60	458	32	14.31	0.131
samp. COS-C-11	13.04	-87.60	58.4	2.1	27	403	28	14.39	0.067
samp. MB2	12.50	-86.50	57.4	3.5	35	369	26	14.48	0.094
samp. COS-N-75	12.98	-87.58	57.6	2.1	25	406	28	14.50	0.062

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Central America (El Salvador, Honduras, Nicaragua, Costa Rica) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. COS9A	12.98	-87.57	58.9	2.2	23	446	30	14.67	0.052
samp. COS-M-50	13.03	-87.55	58.0	2.1	26	413	28	14.75	0.063
samp. COS3	12.98	-87.57	59.0	2.2	24	419	28	14.88	0.057
samp. MB3	12.50	-86.50	57.8	3.3	34	372	25	14.98	0.091
samp. ES 65	13.81	-89.86	58.1	2.7	29	360	24	15.00	0.081
samp. ES035A	13.55	-88.43	58.4	2.5	30	526	35	15.11	0.058
samp. ES 8	13.53	-88.50	58.0	2.4	29	513	34	15.13	0.056
samp. MT005	12.42	-86.53	56.1	3.8	30	396	26	15.18	0.075
samp. P40	10.20	-84.23	57.0	3.6	42	505	33	15.30	0.083
samp. TO 1	14.00	-89.70	59.1	4.4	36	385	25	15.40	0.094
samp. COS-A-8	13.04	-87.60	57.2	2.2	25	417	27	15.44	0.060
samp. 040705-5C	10.65	-85.65	60.6	2.2	49	553	36	15.52	0.089
samp. COS5	12.98	-87.57	57.8	2.3	23	426	27	15.57	0.053
samp. 010627-4D	10.72	-85.40	61.0	2.4	61	459	29	15.60	0.134
samp. COS9A	12.98	-87.57	58.9	2.2	23	428	27	15.62	0.053
samp. ES 59	13.96	-89.76	55.7	3.3	37	391	25	15.64	0.095
samp. RV57	10.83	-85.33	56.3	4.2	43	508	32	15.88	0.084
samp. C-06-NIC-14	12.20	-86.00	58.7	2.8	22	366	23	15.93	0.060
samp. ES 51	13.94	-89.78	55.4	3.2	34	400	25	16.00	0.085
samp. 836	12.11	-86.32	56.0	3.3	21	414	26	16.01	0.052
samp. M15	11.45	-85.52	57.2	3.3	61	482	30	16.07	0.127
samp. SV-5	13.62	-88.85	57.3	3.2	23	421	26	16.17	0.054
samp. 010627-4B	10.72	-85.40	61.0	2.7	57	489	30	16.18	0.116
samp. COS-A-5B	13.04	-87.60	56.9	2.3	23	422	26	16.23	0.055
samp. N-92-2	12.11	-86.32	56.0	3.4	21	421	26	16.25	0.050
samp. P26	10.20	-84.23	56.2	3.4	35	498	30	16.60	0.070
samp. OR53	10.98	-85.47	60.1	3.6	31	393	23	16.75	0.078
samp. M8	11.45	-85.52	57.3	2.1	52	537	32	16.78	0.097
samp. TO 1	14.00	-89.70	59.6	3.1	31	403	24	16.79	0.077
samp. TE122	12.60	-86.85	57.3	2.7	42	453	27	16.97	0.094
samp. SV-1	13.62	-88.85	59.3	2.6	23	403	23	17.44	0.057
samp. C-06-NIC-13	12.20	-86.00	57.8	2.9	23	361	21	17.58	0.064
samp. 010627-4C	10.72	-85.40	61.3	2.8	51	501	28	17.61	0.102
samp. M7	11.45	-85.52	57.0	2.1	53	546	31	17.61	0.097
samp. RV65	10.83	-85.33	58.4	3.3	35	453	25	17.79	0.077
samp. 010628-3M	10.65	-85.65	60.1	2.1	51	615	34	18.16	0.083
samp. P06	10.20	-84.22	58.4	2.8	58	487	27	18.18	0.120
samp. RV49	10.83	-85.33	56.2	4.1	21	404	22	18.24	0.053
samp. MV5	10.75	-85.15	58.0	3.5	52	541	29	18.61	0.096
samp. P80B	10.20	-84.23	55.4	3.2	42	492	26	18.92	0.085
samp. OR03_4C	10.98	-85.47	57.9	3.5	28	423	22	19.63	0.067
samp. 124	13.56	-88.78	60.6	3.4	18	356	18	19.78	0.051
samp. P09	10.20	-84.22	56.6	3.1	62	554	28	19.78	0.112
samp. MV45	10.75	-85.15	59.2	2.9	48	480	24	19.79	0.100
samp. P07	10.20	-84.22	55.7	3.7	62	558	28	19.81	0.111
samp. 11	10.00	-84.50	58.1	3.5	64	535	27	19.81	0.120
samp. 122	13.56	-88.78	59.0	3.2	29	382	19	20.11	0.076
samp. RV62	10.83	-85.33	59.5	4.0	28	418	21	20.29	0.066
samp. 010627-4A	10.72	-85.40	60.8	2.8	59	460	23	20.41	0.128
samp. 1	13.56	-88.78	61.3	3.5	27	368	18	20.44	0.073
samp. 131	13.56	-88.78	62.5	2.9	25	369	18	20.50	0.068
samp. OR03_4F	10.98	-85.47	56.6	3.7	26	429	21	20.67	0.061
samp. 43	13.56	-88.78	58.6	3.5	27	415	20	20.75	0.065
samp. P65	10.20	-84.23	59.1	2.9	37	478	23	20.78	0.077
samp. 133	13.56	-88.78	62.7	2.9	25	396	19	20.84	0.063

Arc: Guatemala

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. AG-2	14.47	-90.73	58.9	2.7	62	532	24	22.17	0.117
samp. SM-09-05	14.78	-91.55	62.8	2.0	53	377	17	22.55	0.142
samp. G6GA2	14.39	-90.50	55.3	2.8	37	551	24	22.96	0.067
samp. AC-2	14.48	-90.98	57.0	3.1	34	513	21	24.43	0.066
samp. TA-4-C	15.13	-92.11	58.3	2.1	43	569	23	24.61	0.076
samp. TAC9864	15.13	-92.11	64.4	2.3	47	477	19	25.11	0.099
samp. SG-09-41	14.76	-91.55	64.0	2.0	33	440	17	25.26	0.075
samp. TAC9867	15.13	-92.11	61.9	2.8	57	481	19	25.32	0.119
samp. TACA-11 C1	15.13	-92.11	60.9	2.2	34	470	18	26.10	0.073
samp. 9734	15.13	-92.11	60.2	2.4	58	502	19	26.42	0.116
samp. 9704LJO	15.13	-92.11	60.7	2.4	59	480	18	26.67	0.123
samp. 9704LIC	15.13	-92.11	59.8	2.4	66	484	18	26.89	0.136
samp. 9714LJO	15.13	-92.11	61.4	2.3	61	486	18	27.00	0.126
samp. 9707PO	15.13	-92.11	59.7	2.4	50	494	18	27.44	0.101
samp. 9714LIC	15.13	-92.11	60.4	2.3	52	478	17	28.12	0.109
samp. 9701B	15.13	-92.11	60.5	2.3	58	479	17	28.18	0.121
samp. 9707LIC	15.13	-92.11	61.2	2.3	49	480	17	28.24	0.102
samp. T-16	14.00	-90.50	61.5	2.2	55	631	22	28.68	0.087
samp. 9727C	15.13	-92.11	60.5	2.3	64	491	17	28.88	0.130
samp. 9726	15.13	-92.11	61.0	2.4	54	492	17	28.94	0.110
samp. 9727D	15.13	-92.11	61.5	2.2	66	468	16	29.25	0.141
samp. 9870A	15.10	-92.15	61.0	2.4	58	501	17	29.47	0.116
samp. 9707LJO	15.13	-92.11	60.5	2.2	60	505	17	29.71	0.119
samp. 9735A	15.10	-92.15	59.5	3.0	53	511	17	30.06	0.104
samp. 9721LIX	15.10	-92.15	62.0	2.3	61	481	16	30.06	0.127
samp. 9876B	15.13	-92.11	60.7	2.3	53	519	17	30.53	0.102
samp. 9891LJ	15.13	-92.11	61.5	2.3	60	520	17	30.59	0.115
samp. 9871	15.13	-92.11	59.7	2.7	45	551	18	30.61	0.082
samp. 9884	15.15	-92.08	62.9	2.3	67	501	16	31.31	0.134
samp. 9721LJ-2	15.10	-92.15	60.4	2.2	64	471	15	31.40	0.136

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Guatemala (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. TAC9721P	15.13	-92.11	60.4	2.2	64	471	15	31.40	0.136
samp. S1005	14.76	-91.55	64.8	2.0	30	506	16	31.63	0.059
samp. 9821IN	15.10	-92.15	62.2	2.3	64	508	16	31.75	0.126
samp. TAC9320	15.13	-92.11	62.0	2.3	61	481	15	32.07	0.127
samp. 9721LJ-1	15.10	-92.15	61.8	2.4	68	483	15	32.20	0.141
samp. TAC9721DL	15.13	-92.11	61.8	2.4	68	483	15	32.20	0.141
samp. 9733	15.13	-92.11	57.9	3.2	40	580	18	32.22	0.069
samp. 9721LIV	15.10	-92.15	61.2	2.5	58	490	15	32.67	0.118
samp. TAC9721GL	15.13	-92.11	61.2	2.5	58	490	15	32.67	0.118
samp. 9865AB	15.10	-92.15	61.3	2.6	60	492	15	32.80	0.122
samp. 1429C	14.60	-91.24	58.5	3.5	53	631	19	33.21	0.084
samp. 9878B	15.13	-92.11	62.8	2.2	67	500	15	33.33	0.134
samp. 9863	15.10	-92.15	61.8	2.5	59	509	15	33.93	0.116
samp. 9887	15.15	-92.08	58.8	3.0	55	481	14	34.36	0.114
samp. 9890	15.15	-92.08	62.7	2.2	58	481	14	34.36	0.121
samp. 9735B	15.10	-92.15	59.8	2.5	42	560	16	35.00	0.075
samp. T-7	14.00	-90.50	59.6	2.6	36	639	18	35.50	0.056
samp. 9891P	15.13	-92.11	60.4	2.1	43	471	13	36.23	0.091
samp. 9885	15.15	-92.08	62.2	2.1	57	487	13	37.46	0.117
samp. 9892A	15.13	-92.11	62.2	2.3	54	489	13	37.62	0.110
samp. 9878C	15.13	-92.11	62.9	2.2	61	502	13	38.62	0.122
samp. 9741	15.13	-92.11	61.7	2.5	59	505	13	38.85	0.117
samp. 9753I	15.13	-92.11	59.2	3.2	44	583	15	38.87	0.075
samp. 9889	15.15	-92.08	60.0	2.9	47	512	13	39.38	0.092
samp. 9752LJ	15.13	-92.11	62.7	2.2	65	486	12	40.50	0.134
samp. 9755A	15.13	-92.11	62.9	2.2	65	486	12	40.50	0.134
samp. 9755B	15.13	-92.11	62.5	2.2	65	527	13	40.54	0.123
samp. 9741B	15.13	-92.11	62.4	2.3	62	488	12	40.67	0.127
samp. 9867	15.13	-92.11	61.9	2.8	62	490	12	40.83	0.127
samp. 9878A	15.13	-92.11	63.3	2.2	64	491	12	40.92	0.130

Arc: Andes, Southern Volcanic Zone (SVZ)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. HUD174	-45.90	-72.97	55.9	2.0	54	318	55	5.78	0.170
samp. PU-03-22	-40.54	-72.19	61.6	2.1	52	295	44	6.72	0.176
samp. IV-A4	-40.59	-72.12	62.8	2.2	54	290	43	6.78	0.186
samp. I-A8	-40.59	-72.12	60.5	2.1	41	354	50	7.07	0.116
samp. HV98A	-45.96	-72.89	60.9	2.2	67	378	53	7.13	0.177
samp. HUD143	-46.12	-72.56	61.4	2.1	59	349	49	7.13	0.169
samp. HV98B	-45.96	-72.89	61.2	2.3	66	369	51	7.24	0.179
samp. PU-02-22	-40.58	-72.17	59.5	2.4	52	317	44	7.25	0.164
samp. PU-02-24	-40.52	-72.15	59.0	3.5	51	287	40	7.27	0.178
samp. HV97A	-45.96	-72.89	60.4	2.3	59	369	50	7.38	0.160
samp. HV111	-45.85	-73.10	60.7	2.2	68	384	52	7.38	0.177
samp. XM-7	-41.17	-71.82	55.2	2.8	58	365	48	7.60	0.158
samp. HV114	-46.00	-72.75	61.3	2.1	67	385	50	7.70	0.174
samp. HUD110-3	-45.90	-72.97	57.1	3.4	62	358	46	7.75	0.173
samp. HV104	-46.02	-72.77	61.6	2.1	65	374	48	7.79	0.174
samp. PU 02 11	-40.56	-72.10	60.2	2.3	44	351	45	7.80	0.125
samp. PU-02-11	-40.56	-72.10	60.2	2.3	44	351	45	7.83	0.125
samp. PU-05-31	-40.63	-72.14	57.0	2.8	35	381	48	7.87	0.092
samp. PU-02-30	-40.52	-72.25	60.7	2.2	44	365	46	7.88	0.121
samp. PU 05 31	-40.50	-71.00	57.0	2.8	35	381	48	7.94	0.092
samp. I-A7	-40.59	-72.12	59.8	2.3	43	339	42	8.00	0.126
samp. HUD110-3	-45.90	-72.97	60.7	2.1	65	406	50	8.10	0.160
samp. PU-05-30	-40.61	-72.09	56.6	3.3	36	351	43	8.14	0.103
samp. IV-A2	-40.59	-72.12	58.1	2.6	35	381	47	8.16	0.092
samp. M-8	-33.25	-70.40	60.5	2.3	37	345	42	8.21	0.107
samp. CH1031	-45.56	-71.84	55.3	4.6	158	1440	163	8.83	0.110
samp. TC142	-38.00	-71.00	59.3	2.2	48	350	39	8.97	0.137
samp. 300191-02	-37.80	-72.10	62.7	3.9	44	242	26	9.31	0.183
samp. HV21	-45.87	-72.90	59.4	2.3	59	401	42	9.55	0.147
samp. M-25	-33.25	-70.40	58.8	2.2	48	364	38	9.68	0.132
samp. PU-02-33	-40.52	-72.24	55.7	3.8	30	350	36	9.86	0.086
samp. HV38	-45.21	-73.07	63.5	2.5	54	367	37	9.92	0.147
samp. HV41	-45.21	-73.07	63.3	2.5	66	367	37	9.92	0.180
samp. I-A1	-40.59	-72.12	56.5	3.3	34	348	35	9.93	0.098
samp. HV137	-45.97	-73.03	59.2	2.5	59	420	42	10.00	0.140
samp. CB23	-36.86	-71.38	55.2	4.4	69	360	36	10.06	0.191
samp. PU-02-32	-40.52	-72.25	56.1	3.6	33	360	36	10.11	0.092
samp. CB35	-36.86	-71.38	59.0	2.3	55	396	39	10.28	0.138
samp. PU-03-16	-40.55	-72.09	57.1	3.0	32	356	34	10.56	0.090
samp. CE68	-34.25	-70.55	58.1	2.5	21	397	37	10.67	0.053
samp. CS92-1	-39.00	-72.30	60.5	2.1	39	302	28	10.79	0.129
samp. T40E	-46.65	-75.45	61.0	3.3	35	205	19	10.79	0.171
samp. I-A5	-40.59	-72.12	56.8	3.1	28	406	38	10.80	0.068
samp. I-A3	-40.59	-72.12	56.6	3.1	28	394	37	10.80	0.071
samp. AT7-3 (0-15CM)	-45.90	-72.97	59.3	2.5	51	399	36	11.08	0.128
samp. T28B	-46.65	-75.45	58.8	4.0	29	270	24	11.25	0.107
samp. IV-A3	-40.59	-72.12	58.7	4.3	39	375	33	11.29	0.104
samp. PU-02-31	-40.58	-72.17	56.1	3.3	29	379	33	11.38	0.077
samp. 94T-44 44A	-45.90	-72.97	60.1	2.0	44	412	36	11.44	0.107
samp. CZ-24	-38.00	-71.00	57.5	2.0	66	449	39	11.51	0.147
samp. 94T-59 59K	-45.90	-72.97	60.1	2.4	41	428	35	12.23	0.096
samp. CB74	-36.86	-71.38	58.9	2.6	68	385	32	12.23	0.177
samp. C158K	-36.86	-71.38	61.5	2.1	55	346	28	12.36	0.159
samp. AH-7	-37.92	-70.67	58.0	2.6	54	421	34	12.38	0.129
samp. CL 412	-36.99	-70.01	58.3	2.3	59	505	41	12.45	0.117

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, Southern Volcanic Zone (SVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. P34	-45.00	-72.00	61.7	3.0	67	386	31	12.45	0.174
samp. HV36	-45.21	-73.08	55.1	3.4	34	412	33	12.48	0.083
samp. 219C	-35.60	-70.67	56.5	3.8	71	414	33	12.55	0.171
samp. P51	-45.00	-72.00	56.9	2.6	36	477	38	12.55	0.075
samp. XB14-1	-41.24	-71.96	55.0	2.7	68	382	30	12.73	0.178
samp. AT7-2 (0-15CM)	-45.90	-72.97	57.7	3.0	45	459	36	12.75	0.098
samp. C156A	-36.86	-71.38	60.6	2.3	59	358	28	12.79	0.165
samp. CB53	-36.86	-71.38	61.0	2.1	65	395	31	12.96	0.163
samp. HV84	-45.22	-73.09	59.1	2.4	40	416	32	13.00	0.096
samp. F-24	-33.25	-70.20	56.1	2.6	45	360	27	13.43	0.125
samp. P53	-45.00	-72.00	56.2	3.9	53	512	37	13.84	0.104
samp. P33	-45.00	-72.00	58.7	3.6	53	417	30	13.90	0.127
samp. CN11	-32.47	-70.43	57.0	3.9	26	369	27	13.92	0.070
samp. 385	-38.40	-71.60	55.7	3.9	27	403	29	14.09	0.066
samp. CB55	-36.86	-71.38	58.4	3.3	50	434	31	14.19	0.116
samp. I-BA5	-40.59	-72.12	55.0	4.3	28	386	27	14.23	0.072
samp. I-A4	-40.59	-72.12	56.8	3.7	25	387	27	14.48	0.063
samp. V1-1	-39.42	-71.95	56.7	3.6	25	402	28	14.57	0.061
samp. PT1	-35.24	-70.57	56.2	2.9	40	443	30	14.57	0.090
samp. HV142	-45.90	-72.97	61.3	2.1	32	511	35	14.60	0.063
samp. 6385-1	-41.33	-72.61	57.1	3.1	19	339	23	14.74	0.055
samp. 94T-49 49H	-45.90	-72.97	58.4	2.6	36	489	33	14.82	0.074
samp. CV12	-33.57	-70.34	60.6	2.0	44	440	30	14.86	0.100
samp. Q1-3	-39.30	-71.45	56.7	3.1	35	467	31	14.97	0.074
samp. 210495-3	-45.40	-71.50	61.3	2.6	51	436	29	15.03	0.117
samp. CS92-6	-37.50	-72.30	62.3	4.1	43	346	23	15.04	0.124
samp. Q1-1	-39.30	-71.45	56.4	3.1	38	449	30	15.17	0.084
samp. CL 563	-37.86	-71.16	56.3	3.8	68	464	31	15.22	0.146
samp. P32	-45.00	-72.00	58.9	3.8	55	411	27	15.22	0.134
samp. Q1-2	-39.30	-71.45	56.4	3.2	35	459	30	15.51	0.076
samp. PA-69	-45.05	-72.99	57.5	2.6	25	498	32	15.56	0.051
samp. HV87	-45.22	-73.09	57.7	3.3	30	467	30	15.57	0.064
samp. CB27	-36.86	-71.38	62.9	2.3	45	476	30	15.64	0.096
samp. V2-5	-39.42	-71.95	55.4	3.7	21	428	27	15.79	0.050
samp. PA-20C	-45.05	-72.99	55.6	3.2	27	459	29	15.83	0.059
samp. TA90	-46.60	-75.33	66.7	2.4	25	222	14	15.86	0.113
samp. HV29	-45.21	-73.08	59.5	3.8	31	403	25	16.12	0.077
samp. ARQ00-19	-29.83	-70.00	56.6	3.3	84	463	29	16.25	0.181
samp. ESPE1.14	-36.00	-70.80	60.5	2.1	45	529	32	16.64	0.084
samp. 94AT	-36.30	-69.20	56.0	2.3	78	533	32	16.71	0.147
samp. TC30	-37.83	-71.20	58.4	3.5	47	470	28	16.79	0.100
samp. PT5	-35.24	-70.57	56.9	3.2	34	470	28	17.03	0.072
samp. CB02	-36.86	-71.38	57.5	3.2	42	471	28	17.05	0.090
samp. ESPE1.17	-36.00	-70.80	59.9	2.2	43	527	31	17.06	0.082
samp. CH1028	-45.52	-71.83	61.1	3.2	672	3747	218	17.19	0.179
samp. XX506	-43.40	-74.00	58.7	5.0	51	311	18	17.28	0.164
samp. XX511	-43.40	-74.00	59.1	5.4	36	312	18	17.33	0.115
samp. 3282-4	-41.33	-72.61	57.8	3.4	18	340	20	17.44	0.052
samp. TC84	-38.73	-71.10	61.3	2.3	63	460	26	17.69	0.137
samp. TAT137	-36.00	-70.50	58.3	2.6	35	536	30	17.87	0.065
samp. PMC 20	-36.48	-69.20	55.6	3.2	79	537	30	17.90	0.147
samp. VQ-10	-35.58	-75.85	60.8	2.5	71	399	22	18.14	0.178
samp. QTW12.41	-36.00	-70.80	58.3	2.5	31	560	31	18.18	0.056
samp. AD96-15	-45.25	-71.80	60.2	3.2	450	3487	191	18.26	0.129
samp. P61	-45.00	-72.00	63.2	2.4	63	476	26	18.31	0.132
samp. MV60	-33.83	-70.08	55.6	2.4	46	458	25	18.32	0.100
samp. 7385-7	-41.33	-72.61	56.5	3.8	18	350	19	18.32	0.052
samp. C88	-36.86	-71.38	58.6	3.3	40	440	24	18.33	0.091
samp. VQ-15	-35.58	-75.85	61.3	2.4	71	385	21	18.33	0.184
samp. H-72	-36.00	-70.83	62.2	2.2	38	240	13	18.46	0.158
samp. PA-89	-45.09	-73.18	56.5	4.1	24	456	25	18.54	0.052
samp. PT2	-35.24	-70.57	56.8	3.2	39	460	24	18.93	0.085
samp. CA36	-33.32	-70.36	55.6	3.6	20	353	19	19.08	0.057
samp. 0106T	-33.17	-69.50	64.1	2.1	54	458	24	19.08	0.118
samp. CL 557	-37.41	-71.29	55.9	3.9	56	530	28	19.11	0.106
samp. ESPW3.23	-36.00	-70.80	57.6	2.6	37	549	29	19.20	0.067
samp. CB26	-36.86	-71.38	58.2	3.4	41	510	26	19.35	0.081
samp. PEL334	-36.00	-70.50	61.2	2.0	85	429	22	19.50	0.198
samp. 18523	-36.77	-70.45	60.0	2.7	75	401	21	19.58	0.187
samp. T18B	-46.65	-75.45	63.1	2.3	35	326	17	19.76	0.107
samp. CH1029	-45.52	-71.83	59.3	3.2	656	3913	198	19.76	0.168
samp. GUA3D2.MI	-36.00	-70.50	56.0	4.9	37	300	15	19.87	0.123
samp. TAT163	-36.00	-70.50	55.6	3.6	37	517	26	19.88	0.072
samp. CB48	-36.86	-71.38	59.1	3.1	54	451	23	19.89	0.121
samp. CZ38	-38.00	-71.00	56.5	2.7	59	640	32	20.00	0.092
samp. 11M	-36.86	-71.38	60.8	3.4	62	444	22	20.18	0.140
samp. HV83	-45.20	-73.05	55.6	5.7	42	405	20	20.25	0.104
samp. ESPE1.10	-36.00	-70.80	59.7	2.2	41	531	26	20.42	0.076
samp. 822-3A	-42.40	-72.60	58.9	3.0	20	370	18	20.56	0.054
samp. PT8	-35.24	-70.57	56.8	3.9	61	452	22	20.64	0.136
samp. LV.5A	-36.00	-70.80	56.2	5.2	63	479	23	20.74	0.131
samp. QTW10.5	-36.00	-70.80	58.5	3.1	70	459	22	20.77	0.153
samp. PVF2	-34.10	-70.40	55.4	4.5	60	561	27	20.78	0.107
samp. ARRQT.5	-36.00	-70.80	59.9	2.1	40	539	26	20.81	0.074
samp. VQ-09	-35.58	-75.85	61.6	2.4	69	461	22	20.95	0.150
samp. AZ15	-35.25	-68.80	57.0	2.3	41	484	23	21.04	0.084
samp. LV.15	-36.00	-70.80	60.5	2.2	60	461	22	21.05	0.129
samp. RB17	-33.83	-70.08	55.3	3.0	47	423	20	21.15	0.111

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, Southern Volcanic Zone (SVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. VQ-37B	-35.58	-75.85	59.5	3.0	62	445	21	21.19	0.139
samp. 18540	-36.77	-70.45	57.5	2.8	38	505	24	21.23	0.075
samp. 2638	-35.30	-69.90	55.2	4.2	61	538	25	21.26	0.113
samp. 021-ACUF-E-1-8	-35.25	-68.80	59.8	2.3	62	451	21	21.48	0.137
samp. QTW12.30	-36.00	-70.80	61.0	2.2	63	453	21	21.57	0.140
samp. 18952	-36.77	-70.45	58.9	2.8	34	349	16	21.70	0.096
samp. 822-1A	-42.40	-72.60	62.2	2.1	26	391	18	21.72	0.066
samp. PG132	-47.16	-71.56	55.0	2.1	47	718	33	21.76	0.065
samp. 15800	-36.77	-70.45	56.9	3.3	49	343	16	21.83	0.142
samp. 15772	-36.77	-70.45	55.6	3.4	67	373	17	22.06	0.179
samp. VQ-16	-35.58	-75.85	60.8	2.3	70	442	20	22.10	0.158
samp. ESPN.5	-36.00	-70.80	56.2	5.0	55	486	22	22.19	0.114
samp. AZ14	-35.25	-68.80	55.5	2.4	36	506	23	22.19	0.072
samp. GUA1	-36.00	-70.50	61.1	3.5	70	448	20	22.40	0.156
samp. EMU1.6	-36.00	-70.80	56.7	2.6	31	603	27	22.50	0.051
samp. 15906	-36.77	-70.45	59.4	2.5	49	518	23	22.54	0.095
samp. PT3	-35.24	-70.57	56.1	3.4	41	489	22	22.64	0.083
samp. PT4	-35.24	-70.57	56.1	3.4	40	487	22	22.65	0.082
samp. EMU4.8	-36.00	-70.80	57.1	2.2	31	606	27	22.70	0.050
samp. EML.5	-36.00	-70.80	55.3	4.4	49	507	22	22.74	0.097
samp. F13	-36.72	-70.30	55.4	5.4	69	467	21	22.76	0.147
samp. EMU1.2	-36.00	-70.80	55.8	3.7	41	588	26	22.79	0.070
samp. C7	-36.86	-71.38	57.9	3.9	34	456	20	22.80	0.075
samp. L3	-36.86	-71.38	56.7	4.3	38	482	21	22.95	0.079
samp. F-107	-33.25	-70.20	55.7	3.2	29	545	24	23.00	0.053
samp. GUA10	-36.00	-70.50	62.1	3.4	83	417	18	23.04	0.199
samp. AZ6	-35.25	-68.80	55.5	3.7	31	550	24	23.31	0.057
samp. GUA16	-36.00	-70.50	61.7	3.3	80	415	18	23.31	0.193
samp. VQ-02	-35.58	-75.85	61.4	2.5	70	468	20	23.40	0.150
samp. M25	-34.17	-69.87	57.1	4.2	57	446	19	23.47	0.128
samp. PT9	-35.24	-70.57	55.1	4.4	44	475	20	23.51	0.092
samp. GUA1	-36.00	-70.50	60.7	2.5	62	454	19	23.52	0.136
samp. PVF1	-34.10	-70.40	56.5	4.8	60	566	24	23.58	0.106
samp. M8	-34.17	-69.87	60.2	2.3	91	525	22	23.86	0.173
samp. 026-ACUF-PARA-1-4	-35.25	-68.80	60.5	2.2	69	502	21	23.90	0.137
samp. QTW11.5	-36.00	-70.80	55.7	4.2	51	508	21	23.96	0.100
samp. PM 44	-36.37	-69.20	57.8	2.3	83	599	25	24.25	0.139
samp. M22	-34.17	-69.87	56.1	4.5	55	486	20	24.30	0.113
samp. CA28	-33.36	-70.26	63.6	2.3	43	438	18	24.47	0.098
samp. QTW11.1	-36.00	-70.80	55.6	4.4	51	508	21	24.54	0.100
samp. M12	-34.17	-69.87	57.9	4.0	73	516	21	24.57	0.141
samp. 16D	-36.86	-71.38	55.5	4.3	31	495	20	24.63	0.063
samp. QTW10.17	-36.00	-70.80	55.6	4.7	56	516	21	24.81	0.108
samp. QCNE.2	-36.00	-70.80	56.0	5.1	58	531	21	24.81	0.109
samp. PEL105	-36.00	-70.50	56.5	3.8	41	522	21	24.86	0.079
samp. ESPN.1	-36.00	-70.80	55.4	4.2	46	538	22	25.02	0.085
samp. QTW10.7	-36.00	-70.80	55.6	4.1	49	511	20	25.05	0.095
samp. 127313	-34.18	-69.70	58.3	4.1	71	513	20	25.07	0.138
samp. RD20A	-37.77	-68.89	55.4	2.9	48	605	24	25.21	0.079
samp. 127317	-34.18	-69.72	58.7	3.7	78	513	20	25.23	0.152
samp. 127316	-34.18	-69.74	57.4	4.5	65	501	20	25.36	0.130
samp. 027A-ACUF-SAT-2-5	-35.25	-68.80	59.8	3.3	73	535	21	25.48	0.136
samp. AZ13	-35.25	-68.80	55.1	4.3	28	549	22	25.53	0.052
samp. VP21G	-35.30	-69.90	58.9	2.9	63	556	22	25.73	0.113
samp. EMU1.5	-36.00	-70.80	55.3	3.9	41	611	24	25.78	0.067
samp. CL 411	-37.07	-70.06	58.8	2.9	104	564	22	25.85	0.185
samp. TTC9	-34.10	-70.40	61.0	2.8	82	543	21	25.86	0.151
samp. GUA23	-36.00	-70.50	60.8	3.6	75	449	17	26.10	0.167
samp. CE69	-34.26	-70.57	55.7	4.8	61	525	20	26.12	0.116
samp. C70	-36.86	-71.38	56.4	2.7	31	497	19	26.16	0.062
samp. QTW11.12	-36.00	-70.80	55.3	4.6	48	523	20	26.28	0.092
samp. CV7	-33.83	-70.06	57.3	2.0	80	589	22	26.29	0.136
samp. 025-ACUF-PARA-1-3	-35.25	-68.80	58.6	3.5	58	500	19	26.32	0.116
samp. 48	-35.60	-70.67	57.5	3.5	61	553	21	26.33	0.110
samp. ESPW3.20	-36.00	-70.80	55.4	4.0	38	611	23	26.45	0.062
samp. 024-ACUF-F-1-2	-35.25	-68.80	58.6	3.3	62	503	19	26.47	0.123
samp. QTW11.23	-36.00	-70.80	56.1	4.2	58	527	20	26.48	0.109
samp. GUA22	-36.00	-70.50	61.1	3.4	76	458	17	26.63	0.167
samp. CS92-2	-39.00	-72.30	60.7	3.2	37	480	18	26.67	0.077
samp. M15	-34.17	-69.87	60.2	2.3	70	562	21	26.76	0.125
samp. GUA9	-36.00	-70.50	60.7	3.5	77	468	17	27.05	0.164
samp. C17	-36.86	-71.38	56.5	4.3	25	489	18	27.17	0.051
samp. QTW11.20	-36.00	-70.80	55.1	4.5	48	530	20	27.18	0.090
samp. C154A	-36.86	-71.38	56.0	4.5	29	463	17	27.24	0.063
samp. EML.9	-36.00	-70.80	56.1	4.6	54	507	19	27.26	0.106
samp. F14	-36.72	-70.30	60.1	2.7	49	425	16	27.42	0.116
samp. 020-ACUF-D-1-7	-35.25	-68.80	58.1	2.8	53	521	19	27.42	0.102
samp. GUA9	-36.00	-70.50	60.7	3.5	77	470	17	27.65	0.164
samp. FM37	-36.00	-70.25	56.5	2.9	53	584	21	27.81	0.090
samp. AZUFRE-1	-35.25	-68.80	57.1	2.9	50	502	18	27.89	0.100
samp. 15902	-36.77	-70.45	59.0	2.4	76	463	17	28.04	0.165
samp. CB59	-36.86	-71.38	60.2	2.4	37	535	19	28.32	0.069
samp. UEP7.4	-36.00	-70.80	56.5	4.3	52	507	18	28.48	0.103
samp. H-73	-36.00	-70.83	55.4	3.4	34	571	20	28.55	0.060
samp. EML.11	-36.00	-70.80	55.6	5.0	48	528	18	28.70	0.091
samp. 2629	-35.30	-69.90	56.3	2.8	47	603	21	28.71	0.078
samp. ESPE1.5	-36.00	-70.80	56.7	4.0	49	522	18	28.84	0.094
samp. AG-7	-50.00	-70.00	62.0	2.9	63	463	16	28.94	0.136

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, Southern Volcanic Zone (SVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. GUA15	-36.00	-70.50	59.4	3.9	66	493	17	29.00	0.134
samp. F-90	-33.25	-70.20	61.1	2.7	66	494	17	29.06	0.134
samp. QTW10.2	-36.00	-70.80	56.2	4.0	52	572	20	29.33	0.090
samp. 2686	-35.30	-69.90	56.8	3.8	58	622	21	29.46	0.093
samp. PA-06-06	-47.01	-71.80	55.9	3.2	64	734	25	29.48	0.087
samp. 15751	-36.77	-70.45	55.4	3.8	26	464	16	29.74	0.057
samp. CL 555	-36.18	-71.16	55.6	4.6	29	528	18	29.98	0.055
samp. TAT39	-36.00	-70.50	55.1	4.7	36	541	18	30.06	0.067
samp. 2696	-35.30	-69.90	56.7	2.7	46	614	20	30.23	0.074
samp. PED12	-36.00	-70.50	55.5	4.6	35	556	18	30.89	0.063
samp. PED-12	-36.00	-70.50	55.5	4.6	35	556	18	30.89	0.063
samp. 3	-50.00	-70.00	63.6	2.4	64	464	15	30.93	0.138
samp. EML.1	-36.00	-70.80	58.7	4.2	52	463	15	31.07	0.112
samp. QTW12.13	-36.00	-70.80	56.7	4.8	46	524	17	31.19	0.088
samp. UEP7.2	-36.00	-70.80	55.7	4.5	43	538	17	31.28	0.080
samp. QTW12.8	-36.00	-70.80	60.0	3.4	66	475	15	31.46	0.140
samp. H-8	-36.00	-70.83	63.6	2.4	84	473	15	31.53	0.178
samp. PED151	-36.00	-70.50	57.7	3.6	46	570	18	31.67	0.081
samp. VQ-24A	-35.58	-75.85	56.8	3.6	45	603	19	31.74	0.075
samp. QTW12.4	-36.00	-70.80	59.2	2.8	63	518	16	31.78	0.121
samp. VQ-44A	-35.58	-75.85	56.9	3.8	41	606	19	31.89	0.068
samp. GUA19	-36.00	-70.50	61.3	3.1	87	536	17	32.10	0.162
samp. PED11	-36.00	-70.50	62.4	2.5	77	485	15	32.33	0.159
samp. QTW12.2	-36.00	-70.80	58.6	3.2	58	529	16	32.65	0.110
samp. VQ-26A	-35.58	-75.85	57.3	3.6	44	591	18	32.83	0.074
samp. AZUFRE-2	-35.25	-68.80	58.2	3.4	53	493	15	32.87	0.108
samp. PA-06-07	-47.01	-71.80	57.0	2.5	60	1011	30	33.26	0.060
samp. 2652	-35.30	-69.90	55.9	3.1	69	601	18	33.39	0.115
samp. H-20I	-36.00	-70.83	57.3	3.1	43	570	17	33.53	0.075
samp. 027-ACUF-SAT-1-1	-35.25	-68.80	59.3	3.5	71	537	16	33.56	0.132
samp. H-20	-36.00	-70.83	61.4	2.9	71	504	15	33.60	0.141
samp. GUA08	-36.00	-70.50	58.3	4.3	59	532	16	33.67	0.110
samp. AG-5	-50.00	-70.00	62.4	2.9	57	511	15	34.07	0.112
samp. H-70	-36.00	-70.83	56.7	3.8	46	580	17	34.12	0.079
samp. H-23	-36.00	-70.83	63.7	2.3	88	482	14	34.43	0.183
samp. 020A-ACUF-D-2-5	-35.25	-68.80	58.4	2.8	51	518	15	34.53	0.098
samp. EMU4.3	-36.00	-70.80	57.5	4.5	52	585	17	34.62	0.089
samp. 019-ACUF-D-1-6	-35.25	-68.80	58.2	2.8	54	523	15	34.87	0.103
samp. H-13	-36.00	-70.83	64.6	2.2	89	458	13	35.23	0.194

Arc: Cascades

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. YB20	44.00	-124.00	57.1	3.6	38	518	64	8.09	0.073
samp. 209	46.21	-121.49	61.8	2.9	65	326	36	9.06	0.199
samp. 788	42.96	-122.02	61.1	3.2	65	326	36	9.06	0.199
samp. AES	46.20	-121.49	59.8	2.1	60	393	40	9.83	0.153
samp. TS-684	44.10	-121.75	57.7	2.8	21	384	38	10.11	0.055
samp. ASC-W	46.20	-121.50	58.8	3.2	61	395	39	10.13	0.154
samp. AHV	46.20	-121.49	58.1	3.3	58	417	41	10.17	0.139
samp. 266	46.21	-121.49	59.6	3.0	60	348	34	10.24	0.172
samp. 554MA	41.58	-121.58	60.7	2.2	49	320	31	10.32	0.153
samp. AKC	46.20	-121.49	59.6	3.1	66	369	35	10.54	0.179
samp. AMC	46.20	-121.50	58.3	3.4	48	401	38	10.55	0.120
samp. 554MG	41.58	-121.58	61.8	2.5	36	300	28	10.71	0.120
samp. 642	46.21	-121.49	63.0	2.3	64	344	32	10.75	0.186
samp. TS-256	44.10	-121.75	62.2	2.0	34	400	37	10.81	0.085
samp. TS-263	44.10	-121.75	62.2	2.0	34	401	37	10.84	0.085
samp. 93827YB	44.00	-124.00	58.1	3.6	55	447	41	10.90	0.123
samp. 94H	46.21	-121.49	59.9	2.8	72	365	33	11.06	0.197
samp. 275	46.21	-121.49	59.3	3.1	58	388	35	11.09	0.149
samp. TS-262	44.10	-121.75	62.1	2.0	33	400	36	11.11	0.083
samp. TS-451	44.10	-121.75	57.8	2.9	22	394	35	11.26	0.056
samp. 92	46.21	-121.49	59.6	3.0	69	373	33	11.30	0.185
samp. AMF	46.20	-121.49	59.3	3.1	69	373	33	11.30	0.185
samp. AWS	46.20	-121.49	57.5	3.4	59	386	34	11.35	0.153
samp. TS-529	44.10	-121.75	57.3	3.0	21	399	35	11.40	0.053
samp. TS-258	44.10	-121.75	62.3	2.0	32	400	35	11.43	0.080
samp. ABS	46.20	-121.50	58.5	3.3	67	369	32	11.53	0.182
samp. 8-9-B-1	41.58	-121.58	60.8	2.1	39	474	41	11.56	0.082
samp. 79	46.21	-121.49	58.0	3.6	48	383	33	11.61	0.125
samp. TS-313	44.10	-121.75	62.1	2.0	33	399	34	11.74	0.083
samp. 217	46.21	-121.49	59.9	2.9	67	368	31	11.87	0.182
samp. 51	46.21	-121.49	60.6	2.7	68	369	31	11.90	0.184
samp. TS-318	44.10	-121.75	61.9	2.1	33	398	33	12.06	0.083
samp. 5	46.21	-121.49	59.2	3.0	65	374	31	12.06	0.174
samp. AAA	46.20	-121.49	59.2	3.0	65	374	31	12.06	0.174
samp. ML-57	41.58	-121.58	59.9	2.6	34	465	38	12.24	0.073
samp. 237	46.21	-121.49	61.9	2.3	60	380	31	12.26	0.158
samp. 14	46.21	-121.49	59.5	2.6	72	396	32	12.38	0.182
samp. TS-316	44.10	-121.75	62.0	2.1	31	397	32	12.41	0.078
samp. TS-265	44.10	-121.75	62.1	2.1	32	398	32	12.44	0.080
samp. TS-260	44.10	-121.75	61.7	2.2	32	411	33	12.45	0.078
samp. TS-314	44.10	-121.75	62.1	2.0	33	399	32	12.47	0.083
samp. TS-261	44.10	-121.75	61.5	2.3	31	417	33	12.64	0.074
samp. 10	46.21	-121.49	59.6	2.6	72	397	31	12.81	0.181
samp. ATM	46.20	-121.50	59.6	2.6	72	397	31	12.81	0.181
samp. 82-028	48.50	-121.00	57.0	4.0	55	301	24	12.81	0.183
samp. 46	46.21	-121.49	58.9	3.1	65	391	30	13.03	0.166

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Cascades (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. TS-714	44.10	-121.75	62.0	2.2	33	393	30	13.10	0.084
samp. TS-319	44.10	-121.75	62.2	2.0	33	394	30	13.13	0.084
samp. 88-061	48.50	-121.00	62.8	2.5	64	403	31	13.17	0.159
samp. 507M	41.58	-121.58	58.6	3.4	57	360	27	13.33	0.158
samp. 82-24	46.21	-121.49	59.4	3.2	58	383	28	13.68	0.151
samp. TS-712	44.10	-121.75	61.6	2.3	32	397	29	13.69	0.081
samp. 462	46.21	-121.49	57.4	3.8	49	425	31	13.71	0.115
samp. 9	46.21	-121.49	59.3	3.1	67	374	27	13.85	0.179
samp. TS-696D	44.10	-121.75	63.4	2.0	36	395	28	14.11	0.091
samp. 22-7C	41.58	-121.58	60.9	2.0	32	497	35	14.20	0.064
samp. TS-708	44.10	-121.75	61.4	2.2	32	412	29	14.21	0.078
samp. 30	46.21	-121.49	58.2	3.3	53	387	27	14.33	0.137
samp. TS-582-2	44.10	-121.75	62.6	2.1	41	393	27	14.56	0.104
samp. TS-49	44.10	-121.75	60.4	2.7	31	423	29	14.59	0.073
samp. TS-691	44.10	-121.75	62.6	2.1	42	396	27	14.67	0.106
samp. TS-696D-R	44.10	-121.75	63.4	2.1	35	398	27	14.74	0.088
samp. TS-44	44.10	-121.75	60.5	2.4	29	428	29	14.76	0.068
samp. ML-19	41.58	-121.58	59.6	2.0	27	473	32	14.78	0.057
samp. TS-713D	44.10	-121.75	61.7	2.2	34	417	28	14.89	0.082
samp. TS-690	44.10	-121.75	62.6	2.0	33	403	27	14.93	0.082
samp. TS-632A	44.10	-121.75	64.0	2.1	40	359	24	14.96	0.111
samp. TS-688	44.10	-121.75	62.6	2.0	34	407	27	15.07	0.084
samp. ML-15	41.58	-121.58	60.2	2.3	26	484	32	15.13	0.054
samp. SM-75-31	41.58	-121.58	59.9	2.1	32	493	32	15.41	0.065
samp. TS-574	44.10	-121.75	60.7	2.3	28	432	28	15.43	0.065
samp. TS-274	44.10	-121.75	59.8	2.8	26	448	29	15.45	0.058
samp. TS-632C	44.10	-121.75	63.1	2.2	40	371	24	15.46	0.108
samp. TS-629A	44.10	-121.75	63.1	2.2	40	373	24	15.54	0.107
samp. TS-713A	44.10	-121.75	61.9	2.1	33	420	27	15.56	0.079
samp. TS-629B	44.10	-121.75	62.7	2.3	38	378	24	15.75	0.101
samp. TS-632B	44.10	-121.75	63.5	2.1	41	378	24	15.75	0.108
samp. TS-698	44.10	-121.75	63.1	2.2	41	378	24	15.75	0.108
samp. 82-135	48.50	-121.00	62.3	3.1	45	383	24	15.89	0.118
samp. TS-713E	44.10	-121.75	61.7	2.3	33	422	26	16.23	0.078
samp. MB-592	48.80	-121.83	67.4	2.1	35	504	31	16.26	0.069
samp. 531MA	41.58	-121.58	58.4	4.7	56	358	22	16.27	0.156
samp. TS-272	44.10	-121.75	62.1	2.1	34	409	25	16.36	0.083
samp. TS-582	44.10	-121.75	62.8	2.0	36	396	24	16.50	0.091
samp. TS-622	44.10	-121.75	61.6	2.4	34	399	24	16.63	0.085
samp. LC80-178	40.49	-121.51	60.3	3.6	48	416	25	16.64	0.115
samp. TS-484	44.10	-121.75	63.9	2.2	38	368	22	16.73	0.103
samp. TS-621	44.10	-121.75	61.0	2.5	32	404	24	16.83	0.079
samp. TS-481A	44.10	-121.75	62.8	2.4	44	379	22	17.23	0.116
samp. TS-718	44.10	-121.75	59.2	2.8	26	448	26	17.23	0.058
samp. TS-709	44.10	-121.75	59.3	2.8	28	451	26	17.35	0.062
samp. TS-481B	44.10	-121.75	62.8	2.3	42	383	22	17.41	0.110
samp. LB91-107	40.50	-121.00	63.5	2.7	71	420	24	17.50	0.169
samp. 508MA	41.58	-121.58	57.0	5.0	50	381	21	18.14	0.131
samp. 89-002	48.50	-121.00	56.7	4.1	33	407	22	18.25	0.082
samp. 1399	42.88	-121.96	57.4	2.9	35	512	28	18.29	0.068
samp. 203080	46.80	-121.81	58.5	3.6	59	385	21	18.33	0.153
samp. TS-480	44.10	-121.75	62.9	2.4	43	388	21	18.48	0.111
samp. TS-246	44.10	-121.75	62.5	2.1	35	425	23	18.48	0.082
samp. APP	46.20	-121.50	55.0	4.7	32	484	26	18.62	0.066
samp. 01SR878	46.91	-121.64	57.8	5.5	30	489	26	18.81	0.061
samp. TS-565	44.10	-121.75	55.9	5.8	26	417	22	18.95	0.062
samp. TS-479	44.10	-121.75	62.4	2.5	31	404	21	19.24	0.077
samp. TS-63	44.10	-121.75	63.1	2.0	36	404	21	19.24	0.089
samp. MB-636A	48.80	-121.83	62.9	2.5	37	509	26	19.58	0.073
samp. TS-348	44.10	-121.75	62.5	2.1	34	432	22	19.64	0.079
samp. TS-563	44.10	-121.75	62.5	2.1	34	413	21	19.67	0.082
samp. LC82-194	40.49	-121.51	63.0	2.8	62	416	21	19.81	0.149
samp. TS-506	44.10	-121.75	59.6	3.1	25	461	23	20.04	0.054
samp. TS-498	44.10	-121.75	61.4	2.5	29	406	20	20.30	0.071
samp. TS-576	44.10	-121.75	60.3	2.8	27	427	21	20.33	0.063
samp. BG-3TB	48.75	-121.75	64.2	2.1	50	468	23	20.38	0.107
samp. LC81-849	40.49	-121.51	57.5	5.1	32	376	18	20.89	0.085
samp. 1545M	41.33	-121.33	57.7	4.7	46	424	19	21.86	0.109
samp. LM80-824	40.49	-121.51	60.2	3.6	51	459	21	21.86	0.111
samp. 95RE462	46.79	-121.75	58.4	5.1	41	464	21	22.10	0.088
samp. 93RE4	46.80	-121.73	59.7	4.5	46	443	20	22.15	0.104
samp. DS-2	46.20	-122.18	57.6	3.8	32	469	21	22.23	0.068
samp. BG-7TB	48.75	-121.75	63.6	2.1	43	509	23	22.24	0.085
samp. 88-028	48.50	-121.00	65.9	2.1	47	365	16	22.39	0.128
samp. 1424M	41.33	-121.33	57.2	5.1	44	422	19	22.81	0.105
samp. EL3^	39.77	-120.62	61.7	2.0	18	320	14	22.86	0.056
samp. F	46.87	-121.76	61.0	2.8	48	438	19	23.05	0.110
samp. 99RE777	46.81	-121.74	58.4	5.1	41	464	20	23.20	0.088
samp. 787	42.96	-122.02	61.6	2.6	37	565	24	23.54	0.065
samp. 82-104	48.50	-121.00	59.7	2.5	44	531	23	23.60	0.083
samp. BG-10TB	48.75	-121.75	61.7	2.8	33	602	25	24.07	0.055
samp. LC87-1232	40.49	-121.51	57.1	4.8	31	388	16	24.25	0.080
samp. 278M	41.58	-121.58	56.3	4.7	45	444	18	24.67	0.101
samp. 203004	46.78	-121.73	65.4	2.5	60	371	15	24.73	0.162
samp. 1400	42.88	-121.96	56.0	3.2	35	545	22	24.77	0.064
samp. 08RR998	46.65	-121.15	67.0	2.2	22	398	16	24.88	0.055
samp. LC81-844	40.49	-121.51	56.2	4.3	58	423	17	24.88	0.137
samp. 1161	42.85	-122.12	60.0	3.1	28	551	22	25.05	0.051

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Cascades (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 87-060	48.50	-121.00	57.7	4.3	32	427	17	25.27	0.076
samp. A	46.87	-121.76	63.8	2.5	61	406	16	25.38	0.150
samp. LC80-449	40.49	-121.51	61.6	3.5	49	559	22	25.41	0.088
samp. 93RE41	46.84	-121.73	59.0	4.2	41	483	19	25.42	0.085
samp. 94ML444	46.90	-121.82	57.3	4.7	32	511	20	25.55	0.063
samp. ALA	46.20	-121.49	55.7	4.9	44	724	28	25.86	0.061
samp. LM80-884	40.49	-121.51	56.6	4.3	37	603	23	26.22	0.061
samp. SL1-A	46.87	-121.76	57.9	4.4	38	473	18	26.28	0.080
samp. LC84-541	40.49	-121.51	64.2	2.3	50	453	17	26.65	0.110
samp. MB-500	48.80	-121.83	61.0	2.5	38	537	20	26.85	0.071
samp. 96RW570	46.83	-121.79	62.9	2.9	50	458	17	26.94	0.109
samp. LC87-1207	40.49	-121.51	60.1	3.8	41	486	18	27.00	0.084
samp. 82-95	41.48	-122.18	64.0	3.2	70	487	18	27.06	0.144
samp. 82-95	41.48	-122.18	64.0	3.2	70	487	18	27.06	0.144
samp. BG-2TB	48.75	-121.75	61.8	2.7	34	546	20	27.12	0.063
samp. 00RE801	46.83	-121.72	64.1	2.5	59	434	16	27.13	0.136
samp. MB-637	48.80	-121.83	59.4	4.7	33	516	19	27.16	0.064
samp. 509MA	41.58	-121.58	60.4	3.3	75	464	17	27.29	0.162
samp. 97-21C	46.87	-121.76	61.2	3.2	40	520	19	27.37	0.077
samp. MB-492	48.80	-121.83	65.1	2.2	61	467	17	27.47	0.131
samp. C	46.87	-121.76	58.6	4.1	37	495	18	27.50	0.075
samp. 69-31F 203	50.50	-127.20	61.5	3.0	23	413	15	27.53	0.056
samp. 08RE1034B	46.84	-121.74	61.5	2.9	47	496	18	27.56	0.095
samp. 93RE39	46.84	-121.73	63.2	2.8	56	470	17	27.65	0.119
samp. 93RE120	46.81	-121.75	64.1	2.5	58	450	16	28.13	0.129
samp. 05KI921-1	47.15	-122.64	65.9	2.1	73	399	14	28.50	0.183
samp. 01RW894	46.82	-121.76	65.3	2.5	62	429	15	28.60	0.145
samp. 403ME	41.58	-121.58	56.5	4.8	40	431	15	28.73	0.093
samp. 97-17	46.87	-121.76	60.7	3.3	32	489	17	28.76	0.065
samp. 98-37	46.87	-121.76	59.6	3.3	38	489	17	28.76	0.078
samp. 93RE193	46.79	-121.73	64.0	2.7	46	432	15	28.80	0.106
samp. 93RW177	46.85	-121.75	61.7	2.9	40	548	19	28.84	0.073
samp. LC84-589	40.49	-121.51	65.9	2.4	57	406	14	29.00	0.140
samp. 97-16	46.87	-121.76	61.9	3.1	42	494	17	29.06	0.085
samp. 97RE614	46.82	-121.73	59.0	3.8	30	524	18	29.11	0.057
samp. 93MW72	46.81	-121.89	60.6	3.1	39	555	19	29.21	0.070
samp. 98RE692P1	46.86	-121.66	60.3	3.8	40	497	17	29.24	0.080
samp. 93RW3	46.77	-121.78	61.6	2.4	47	499	17	29.35	0.094
samp. 08RE1034A	46.84	-121.74	61.7	2.9	47	499	17	29.35	0.094
samp. 00RW821	46.80	-121.79	62.9	2.4	61	499	17	29.35	0.122
samp. 87-082	48.50	-121.00	57.5	4.1	55	632	22	29.40	0.087
samp. SH20	46.20	-122.18	62.7	2.2	38	477	16	29.81	0.080
samp. 98-36	46.87	-121.76	64.3	2.9	41	481	16	30.06	0.085
samp. 93RE26	46.84	-121.73	60.7	3.6	45	513	17	30.18	0.088
samp. 93MW68	46.81	-121.89	60.8	3.1	40	545	18	30.28	0.073
samp. 98-32C	46.87	-121.76	63.2	3.0	37	517	17	30.41	0.072
samp. 98-24	46.87	-121.76	61.6	3.6	31	579	19	30.47	0.054
samp. SL1-B	46.87	-121.76	59.6	4.0	39	489	16	30.56	0.080
samp. H	46.87	-121.76	58.6	3.7	40	489	16	30.56	0.082
samp. 00RE849	46.86	-121.70	63.9	2.6	57	556	18	30.89	0.103
samp. 97-LT-18	39.31	-120.05	58.8	3.6	66	746	24	31.08	0.088
samp. 99GL769	46.88	-121.88	62.1	3.2	46	498	16	31.13	0.092
samp. SR-24A	46.20	-122.18	60.7	2.9	27	518	17	31.20	0.052
samp. 82-99	41.40	-122.20	61.6	3.4	40	625	20	31.25	0.064
samp. 97-LT-29	39.36	-120.17	60.9	2.6	56	756	24	31.50	0.074
samp. 93RE197	46.80	-121.73	60.9	3.1	38	504	16	31.50	0.075
samp. 01-LT-52	39.44	-119.89	59.5	3.4	63	761	24	31.71	0.083
samp. SR861	46.87	-121.76	59.1	3.5	40	574	18	31.89	0.070
samp. L82-58	46.20	-122.18	64.5	2.1	37	450	14	32.14	0.082
samp. LC81-846	40.49	-121.51	60.5	3.6	47	484	15	32.27	0.097
samp. 97-34	46.87	-121.76	59.7	3.6	34	581	18	32.28	0.059
samp. L	46.87	-121.76	60.3	3.5	43	485	15	32.33	0.089
samp. SR859	46.87	-121.76	59.5	3.6	34	616	19	32.42	0.055
samp. MB-189	48.80	-121.83	60.2	2.7	33	650	20	32.50	0.051
samp. 94ML329	46.88	-121.79	61.8	2.8	39	488	15	32.53	0.080
samp. 96RW581	46.83	-121.79	60.9	3.4	49	587	18	32.61	0.083
samp. DS-70	46.20	-122.18	61.7	2.5	30	484	15	32.70	0.062
samp. 98-27	46.87	-121.76	61.3	3.8	39	556	17	32.71	0.070
samp. SR860	46.87	-121.76	60.9	3.5	35	592	18	32.89	0.059
samp. SR858	46.87	-121.76	62.9	2.5	40	528	16	33.00	0.076
samp. LC84-540	40.49	-121.51	60.3	4.5	32	565	17	33.24	0.057
samp. LC89-1494	40.49	-121.51	58.4	4.3	34	433	13	33.31	0.079
samp. LC86-1027	40.49	-121.51	63.0	3.1	55	567	17	33.35	0.097
samp. 97-LT-52	39.22	-120.11	59.0	2.9	70	804	24	33.50	0.087
samp. 98-11	46.87	-121.76	63.8	2.7	36	606	18	33.67	0.059
samp. 01-LT-51	39.42	-119.90	60.0	3.1	67	742	22	33.73	0.090
samp. 430MB	41.58	-121.58	56.5	4.9	45	542	16	33.88	0.083
samp. 99ML770	46.88	-121.86	58.7	5.0	37	543	16	33.94	0.068
samp. 01-LT-50	39.42	-119.93	59.5	3.2	64	748	22	34.00	0.086
samp. L82-59	46.20	-122.18	61.6	2.6	31	478	14	34.14	0.065
samp. 82-84A	41.35	-122.19	61.4	3.5	64	515	15	34.33	0.124
samp. SH2	46.20	-122.18	63.3	2.1	31	481	14	34.36	0.064
samp. 98-30	46.87	-121.76	59.9	3.9	34	586	17	34.47	0.058
samp. 98-29	46.87	-121.76	61.7	3.6	36	587	17	34.53	0.061
samp. 98-17	46.87	-121.76	60.7	3.3	34	622	18	34.56	0.055
samp. SR862	46.87	-121.76	61.0	3.5	34	588	17	34.59	0.058
samp. 96RE530	46.83	-121.68	62.6	2.8	56	661	19	34.79	0.085
samp. 98-35	46.87	-121.76	63.4	2.7	32	523	15	34.87	0.061

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Cascades (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 96RW576	46.83	-121.79	58.8	3.8	28	558	16	34.88	0.050
samp. LC86-1028	40.49	-121.51	64.9	2.5	48	598	17	35.18	0.080
samp. 98-26	46.87	-121.76	61.5	3.6	38	563	16	35.19	0.067
samp. SR863	46.87	-121.76	60.9	3.5	36	599	17	35.24	0.060
samp. SR864	46.87	-121.76	61.0	3.4	38	599	17	35.24	0.063
samp. SH16	46.20	-122.18	62.5	2.2	31	531	15	35.40	0.058
samp. 98-28	46.87	-121.76	60.3	4.0	33	602	17	35.41	0.055
samp. 97-LT-35A	39.35	-120.19	57.2	3.4	64	850	24	35.42	0.075
samp. 97-LT-28	39.36	-120.17	61.4	2.6	59	745	21	35.48	0.079
samp. 96RW555	46.86	-121.85	62.3	3.0	51	640	18	35.56	0.080
samp. SL-9C	46.20	-122.18	59.9	2.9	27	490	14	35.77	0.054
samp. 97-LT-50B	39.23	-120.11	59.7	3.2	68	787	22	35.77	0.086
samp. LC81-843	40.49	-121.51	59.2	4.2	40	539	15	35.93	0.074
samp. 97-LT-50A	39.23	-120.11	59.4	3.2	64	794	22	36.09	0.081
samp. 98-25	46.87	-121.76	60.8	3.5	32	616	17	36.24	0.052
samp. 93ML98	46.97	-121.79	61.3	4.1	50	616	17	36.24	0.081
samp. 97-LT-35B	39.35	-120.19	57.5	3.6	63	872	24	36.33	0.072
samp. 97-LT-33	39.35	-120.21	57.4	3.7	60	845	23	36.74	0.071
samp. 01-LT-46	39.42	-119.95	55.9	4.2	57	811	22	36.86	0.070
samp. 95SR514	46.90	-121.63	59.7	3.6	34	563	15	37.53	0.060
samp. LC86-1022	40.49	-121.51	64.5	2.6	58	606	16	37.88	0.096
samp. 97-LT-46	39.34	-120.07	61.3	2.0	45	834	22	37.91	0.054
samp. 97RE629	46.81	-121.69	64.4	2.6	43	455	12	37.92	0.095
samp. SL-5B	46.20	-122.18	61.6	2.2	33	488	13	38.13	0.068
samp. SL5	46.87	-121.76	59.7	3.5	38	612	16	38.25	0.062
samp. 97-6G	46.87	-121.76	61.4	3.2	27	537	14	38.36	0.050
samp. 94ML318	46.88	-121.78	59.5	4.1	36	654	17	38.47	0.055
samp. 98-13	46.87	-121.76	63.3	2.4	46	621	16	38.81	0.074
samp. LC84-530	40.49	-121.51	63.7	2.6	41	704	18	39.11	0.058
samp. 97-LT-14BOCA	39.41	-120.05	55.2	4.3	62	942	24	39.25	0.066
samp. LC86-954	40.49	-121.51	64.0	2.7	51	598	15	39.87	0.085
samp. 99-9	41.38	-122.32	63.7	2.9	53	482	12	40.17	0.110
samp. 94RW275	46.86	-121.81	62.8	2.4	37	565	14	40.36	0.065
samp. LC85-727	40.49	-121.51	66.2	2.4	62	647	16	40.44	0.096
samp. 01-LT-48	39.42	-119.96	56.1	4.4	57	809	20	40.45	0.070
samp. 96RE539	46.83	-121.69	59.6	3.6	50	817	20	40.85	0.061
samp. 93RE53	46.80	-121.70	62.3	2.8	60	696	17	40.94	0.086
samp. 82-98	41.41	-122.19	63.3	3.2	35	589	14	42.07	0.059

Arc: Aegean

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. GZNIS07	36.56	27.18	58.7	2.7	49	377	31	12.12	0.129
samp. 48	36.40	25.45	55.7	3.3	18	342	28	12.20	0.052
samp. GZNIS03	36.56	27.18	58.9	2.7	49	378	31	12.23	0.129
samp. NIS11	36.58	27.22	60.4	2.6	40	276	22	12.32	0.145
samp. UNIT3	36.58	27.17	57.9	2.9	48	359	29	12.38	0.134
samp. GZNIS22X	36.61	27.14	58.7	2.8	53	380	30	12.54	0.138
samp. SI130	36.37	25.46	55.0	2.7	27	265	21	12.62	0.102
samp. GZNIS31X	36.57	27.18	58.7	2.8	52	377	30	12.78	0.139
samp. GZNIS02	36.60	27.18	59.9	2.5	59	389	30	12.80	0.152
samp. ME.01	37.58	23.38	55.9	5.6	35	257	20	12.85	0.136
samp. ME-1	37.58	23.38	55.9	5.6	35	257	20	12.85	0.136
samp. AV8	36.56	27.18	59.7	2.3	56	387	30	12.90	0.145
samp. AV5	36.58	27.15	59.3	2.6	59	403	31	13.00	0.146
samp. AV25-1	36.56	27.18	58.8	2.7	48	379	29	13.07	0.127
samp. GZNIS16	36.59	27.13	59.6	2.5	58	395	30	13.08	0.147
samp. LV12	36.56	27.18	59.0	2.4	57	380	29	13.10	0.150
samp. AV25-2	36.56	27.18	58.6	2.8	49	381	29	13.14	0.129
samp. GZNIS17	36.59	27.13	59.6	2.6	58	388	29	13.20	0.149
samp. GZNIS13	36.56	27.18	58.5	2.9	48	382	29	13.31	0.124
samp. ME-4	37.58	23.38	59.4	3.0	54	282	21	13.43	0.191
samp. AV17	36.56	27.18	59.2	2.5	56	393	29	13.55	0.142
samp. GZNIS04	36.56	27.18	58.0	3.4	43	397	29	13.60	0.109
samp. AV67B	36.56	27.18	58.1	2.8	47	382	28	13.64	0.123
samp. AV67A	36.56	27.18	58.5	2.9	49	382	28	13.64	0.128
samp. AV19	36.56	27.18	59.1	2.5	55	397	29	13.69	0.139
samp. AV22	36.56	27.18	59.1	2.5	55	401	29	13.83	0.137
samp. GZNIS05X	36.56	27.18	57.8	3.0	49	389	28	13.89	0.125
samp. AV44	36.56	27.18	58.6	2.6	54	405	29	13.97	0.133
samp. LV8	36.56	27.18	58.2	3.0	44	395	28	14.11	0.111
samp. NI-1	36.59	27.17	59.0	2.5	59	396	28	14.14	0.149
samp. KIM51	36.79	24.57	55.3	3.3	61	382	27	14.15	0.160
samp. MI.01	36.73	24.42	65.5	2.5	56	326	23	14.17	0.172
samp. MI-1	36.73	24.42	65.5	2.5	56	326	23	14.17	0.172
samp. AV55B	36.56	27.18	56.0	4.2	42	454	32	14.19	0.093
samp. LV7	36.56	27.18	58.2	3.0	42	398	28	14.21	0.106
samp. AV6	36.58	27.15	56.7	2.7	37	427	30	14.23	0.087
samp. AV49	36.56	27.18	58.3	2.6	53	402	28	14.36	0.132
samp. AV35	36.56	27.18	58.5	2.7	47	388	27	14.37	0.121
samp. AV51	36.59	27.13	58.6	3.0	43	403	28	14.39	0.107
samp. AV46	36.56	27.18	58.7	3.0	43	405	28	14.46	0.106
samp. AV3	36.58	27.15	60.0	2.1	52	394	27	14.59	0.132
samp. NS-07	36.62	27.19	58.1	2.8	49	380	26	14.62	0.129
samp. NS-41	36.60	27.13	59.3	2.2	59	410	28	14.64	0.144
samp. SAN8	36.40	25.45	55.7	3.0	30	225	15	15.00	0.133
samp. LV40	36.56	27.18	58.6	3.0	46	391	26	15.04	0.118
samp. SH70	36.60	25.40	56.6	4.2	59	361	24	15.04	0.163
samp. NIS80	36.59	27.17	61.1	2.3	55	394	26	15.15	0.140

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Aegean (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. NS-08	36.62	27.19	57.4	2.7	50	380	25	15.20	0.132
samp. NIS143	36.58	27.22	60.5	2.6	55	397	26	15.27	0.139
samp. AV64	36.56	27.18	57.6	3.4	43	401	26	15.42	0.107
samp. NIS126	36.59	27.17	59.2	2.8	49	390	25	15.60	0.126
samp. LV45	36.56	27.18	57.5	3.1	44	391	25	15.64	0.113
samp. ME-5	37.58	23.38	61.3	3.6	51	331	21	15.76	0.154
samp. NIS33	36.58	27.22	59.4	2.7	42	412	26	15.85	0.102
samp. NIS112	36.58	27.22	60.6	2.5	78	414	26	15.92	0.188
samp. LD	36.58	27.22	55.1	4.1	50	442	28	16.01	0.114

Arc: Aeolian

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. CV85-3	38.48	15.97	58.8	2.6	61	370	25	14.80	0.165
samp. STR127	38.79	15.21	60.8	2.6	110	556	35	15.89	0.198
samp. STR121	38.79	15.21	57.3	3.0	102	521	32	16.28	0.196
samp. STR69	38.79	15.21	58.3	2.8	109	587	36	16.31	0.186
samp. E85/5	38.63	15.07	65.4	2.1	80	429	26	16.50	0.186
samp. STR109	38.79	15.21	55.4	3.3	97	633	38	16.66	0.153
samp. PS22	38.63	15.07	56.7	4.4	56	318	19	16.74	0.176
samp. STR125	38.79	15.21	57.1	3.1	119	596	35	17.03	0.200
samp. STD7	38.79	15.21	57.4	3.2	99	530	31	17.10	0.187
samp. ST1005	38.79	15.21	56.4	3.7	111	616	36	17.11	0.180
samp. STR77	38.79	15.21	58.5	3.5	81	500	29	17.24	0.162
samp. ST153	38.79	15.21	55.6	2.9	84	554	32	17.31	0.152
samp. ST113	38.79	15.21	57.4	3.1	60	520	30	17.33	0.115
samp. STR23	38.79	15.21	56.2	3.0	117	609	35	17.40	0.192
samp. STR43	38.79	15.21	56.7	3.6	72	506	29	17.45	0.142
samp. STR124B	38.79	15.21	59.7	2.6	83	474	27	17.56	0.175
samp. STR208	38.79	15.21	59.9	2.8	92	492	28	17.57	0.187
samp. FIL67	38.58	14.58	55.6	2.7	75	705	40	17.63	0.106
samp. STR120	38.79	15.21	58.9	2.8	99	537	30	17.90	0.184
samp. ST155	38.79	15.21	56.1	2.8	82	561	31	18.10	0.146
samp. PN329	38.63	15.07	61.2	3.4	84	475	26	18.27	0.177
samp. STR37	38.79	15.21	58.0	2.8	119	624	34	18.35	0.191
samp. ST33	38.79	15.21	56.4	3.1	113	570	31	18.39	0.198
samp. STR41	38.79	15.21	60.0	2.1	83	500	27	18.52	0.166
samp. STR29	38.79	15.21	58.7	2.8	114	593	32	18.53	0.192
samp. STR70	38.79	15.21	58.1	2.8	118	612	33	18.55	0.193
samp. ST110	38.79	15.21	56.7	3.0	115	595	32	18.59	0.193
samp. CV85-9	38.48	15.97	60.5	2.6	66	355	19	18.68	0.186
samp. ST30	38.79	15.21	56.5	3.8	79	508	27	18.81	0.156
samp. STB14	38.79	15.21	57.9	3.0	90	508	27	18.81	0.177
samp. STR162	38.79	15.21	56.4	3.6	88	586	31	18.90	0.150
samp. STR155	38.79	15.21	55.4	3.6	95	586	31	18.90	0.162
samp. FIL89	38.58	14.58	55.0	3.2	95	800	42	19.05	0.119
samp. STR98	38.79	15.21	58.6	3.1	96	555	29	19.14	0.173
samp. ST4	38.79	15.21	56.3	3.6	82	500	26	19.23	0.164
samp. STR79	38.79	15.21	58.9	3.3	87	506	26	19.46	0.172
samp. STR124N	38.79	15.21	55.9	4.1	69	545	28	19.46	0.127
samp. ST38	38.79	15.21	56.2	3.4	73	488	25	19.52	0.150
samp. ST18	38.79	15.21	57.0	3.4	84	488	25	19.52	0.172
samp. ST321	38.79	15.21	55.7	4.1	100	606	31	19.55	0.165
samp. ST41	38.79	15.21	57.8	2.9	99	528	27	19.56	0.188
samp. STR137	38.79	15.21	58.9	3.0	97	490	25	19.60	0.198
samp. PN289	38.63	15.07	61.5	3.5	83	510	26	19.62	0.163
samp. STB45	38.79	15.21	56.1	3.3	96	590	30	19.67	0.163
samp. ST160	38.79	15.21	57.0	3.0	83	513	26	19.73	0.162
samp. INCL12D	38.58	14.58	56.0	4.6	38	672	34	19.76	0.057
samp. DCB	38.63	15.07	62.1	3.1	77	411	21	19.77	0.188
samp. 171	38.28	14.58	58.7	3.1	94	496	25	19.84	0.190
samp. ST31	38.79	15.21	55.0	5.4	58	518	26	19.92	0.112
samp. PN19	38.63	15.07	60.9	3.3	80	479	24	19.96	0.167
samp. ST304	38.79	15.21	58.3	2.9	113	601	30	20.03	0.188
samp. ST92	38.79	15.21	57.3	3.6	77	464	23	20.17	0.166
samp. STR28	38.79	15.21	56.4	3.6	83	606	30	20.20	0.137
samp. ST44	38.79	15.21	57.7	2.6	99	527	26	20.27	0.188
samp. BB2	38.63	15.07	59.3	3.6	58	461	23	20.38	0.126
samp. STR42	38.79	15.21	58.5	3.1	84	510	25	20.40	0.165
samp. ST45	38.79	15.21	55.1	3.6	64	537	26	20.65	0.119
samp. STR67	38.79	15.21	57.6	3.3	82	580	28	20.71	0.141
samp. PN295	38.63	15.07	60.0	2.7	70	503	24	20.96	0.139
samp. STR64	38.79	15.21	58.5	3.3	82	590	28	21.07	0.139
samp. STPG	38.79	15.21	58.0	2.8	100	527	25	21.08	0.190
samp. ST19	38.79	15.21	57.3	3.6	82	506	24	21.08	0.162
samp. ST15	38.79	15.21	58.6	2.9	96	508	24	21.17	0.189
samp. ST422	38.79	15.21	59.3	2.9	97	487	23	21.17	0.199
samp. ST324	38.79	15.21	57.1	3.2	120	618	29	21.31	0.194
samp. ST302	38.79	15.21	57.2	3.2	113	621	29	21.41	0.182
samp. STR161	38.79	15.21	56.6	3.6	78	643	30	21.43	0.121
samp. STR93	38.79	15.21	55.4	4.6	60	561	26	21.58	0.107
samp. ST154	38.79	15.21	55.7	2.3	104	669	31	21.58	0.155
samp. E85-2	38.63	15.07	55.0	3.9	50	583	27	21.59	0.086
samp. ST93	38.79	15.21	56.4	3.5	77	545	25	21.80	0.141
samp. ST138	38.79	15.21	58.3	2.9	117	594	27	22.00	0.197
samp. ST91	38.79	15.21	57.4	3.6	77	465	21	22.14	0.166
samp. STR95	38.79	15.21	55.2	4.6	53	554	25	22.16	0.096
samp. ST910	38.79	15.21	56.2	3.5	76	557	25	22.28	0.136
samp. STR38	38.79	15.21	55.8	5.3	47	538	24	22.42	0.087

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Aeolian (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. ST1006	38.79	15.21	55.7	3.7	104	607	27	22.48	0.171
samp. ST42	38.79	15.21	56.1	3.9	71	567	25	22.68	0.125
samp. ST1015	38.79	15.21	56.8	3.2	96	587	25	23.48	0.164
samp. FIL28	38.58	14.58	62.6	2.9	77	634	27	23.48	0.121
samp. LAV1	38.63	15.07	55.9	4.6	43	521	22	23.48	0.082
samp. LIP193	38.28	14.58	59.3	2.6	103	662	28	23.64	0.156
samp. ST7	38.79	15.21	56.0	3.6	82	592	25	23.68	0.139
samp. ST10	38.79	15.21	56.9	3.1	115	648	27	24.00	0.177
samp. LIP110	38.28	14.58	58.4	2.2	106	651	27	24.11	0.163
samp. 110	38.28	14.58	59.6	2.3	106	651	27	24.11	0.163
samp. FIL29	38.58	14.58	62.5	2.8	79	628	26	24.15	0.126
samp. ST22	38.79	15.21	55.3	6.0	44	513	21	24.43	0.086
samp. LIP76	38.28	14.58	60.5	2.1	109	643	26	24.73	0.170
samp. DPP	38.63	15.07	58.7	3.8	49	488	20	24.87	0.101
samp. B22	38.79	15.21	55.3	4.0	82	593	24	25.13	0.138
samp. INCL1	38.58	14.58	55.3	4.4	50	704	28	25.14	0.071
samp. STR200	38.58	14.58	57.6	2.0	85	765	30	25.50	0.111
samp. FIL23	38.58	14.58	61.1	2.2	66	689	27	25.52	0.096
samp. FIL45	38.58	14.58	58.0	3.2	68	593	23	25.78	0.115
samp. STR40	38.79	15.21	55.4	3.6	72	675	26	25.96	0.107
samp. B21	38.79	15.21	55.0	3.9	90	635	24	26.02	0.141
samp. ST207	38.79	15.21	55.6	4.4	92	678	26	26.08	0.136
samp. ST228	38.79	15.21	55.6	4.2	90	633	24	26.38	0.142
samp. STR200	38.58	14.58	56.0	3.6	52	607	23	26.39	0.086
samp. STR200	38.58	14.58	56.0	3.6	52	607	23	26.39	0.086
samp. INCL2	38.58	14.58	55.5	3.8	52	795	30	26.50	0.065
samp. LIP101	38.28	14.58	55.3	4.2	73	611	23	26.57	0.119
samp. DAB21	38.79	15.21	55.9	5.5	39	534	20	26.70	0.073
samp. STR159	38.79	15.21	56.7	4.8	47	591	22	26.86	0.080
samp. ESAL05	38.53	14.87	61.4	2.2	58	648	24	27.00	0.090
samp. FIL46	38.58	14.58	58.7	3.0	68	621	23	27.00	0.110
samp. SF-65	38.50	15.00	60.1	3.0	46	565	21	27.03	0.081
samp. FIL24	38.58	14.58	57.9	3.0	61	649	24	27.04	0.094
samp. INCL12C	38.58	14.58	58.6	3.4	56	595	22	27.05	0.094
samp. STR200	38.58	14.58	55.7	3.6	66	626	23	27.22	0.105
samp. FIL111	38.58	14.58	59.0	3.5	60	602	22	27.36	0.100
samp. STR171	38.58	14.58	62.6	2.1	75	658	24	27.42	0.114
samp. FIL27	38.58	14.58	62.6	2.1	75	658	24	27.42	0.114
samp. ESAL24	38.53	14.87	60.6	2.5	62	660	24	27.50	0.094
samp. VL25	38.40	14.96	56.5	4.0	142	773	28	27.61	0.184
samp. 178	38.28	14.58	57.2	2.8	83	749	27	27.74	0.111
samp. LIP130	38.28	14.58	56.0	3.1	54	669	24	27.88	0.081
samp. 130	38.28	14.58	56.0	3.1	54	669	24	27.88	0.081
samp. 77	38.28	14.58	60.4	2.4	109	669	24	27.88	0.163
samp. INCL12A	38.58	14.58	56.4	3.7	45	614	22	27.91	0.073
samp. STR169	38.79	15.21	60.5	2.0	77	615	22	27.95	0.125
samp. STR169	38.79	15.21	60.5	2.8	77	615	22	27.95	0.125
samp. FIL13	38.58	14.58	56.8	3.5	55	643	23	27.96	0.086
samp. STR191	38.79	15.21	58.2	3.8	62	645	23	28.04	0.096
samp. FIL110	38.58	14.58	61.5	2.9	74	533	19	28.05	0.139
samp. FIL79	38.58	14.58	56.5	3.5	61	651	23	28.30	0.094
samp. SF-14	38.50	15.00	62.3	2.1	56	622	22	28.40	0.090
samp. FIL82	38.58	14.58	56.8	4.4	52	631	22	28.68	0.082
samp. FIL25	38.58	14.58	57.8	3.1	61	661	23	28.74	0.092
samp. SA76	38.50	15.00	61.4	2.0	65	667	23	29.00	0.097
samp. STR189	38.79	15.21	58.2	4.0	63	678	23	29.48	0.093
samp. STR190	38.79	15.21	56.4	4.1	58	681	23	29.61	0.085
samp. SL2	38.50	14.85	64.4	2.1	56	652	22	29.64	0.086
samp. FIL110	38.58	14.58	60.8	2.9	83	571	19	30.05	0.145
samp. FIL49	38.58	14.58	57.6	4.2	65	632	21	30.10	0.103
samp. FIL47	38.58	14.58	59.0	3.0	69	606	20	30.30	0.114
samp. FIL121	38.58	14.58	57.8	3.1	60	638	21	30.38	0.094
samp. SF-35	38.50	15.00	57.9	3.4	36	584	19	30.58	0.062
samp. LIP13	38.28	14.58	58.5	3.3	134	850	27	31.02	0.158
samp. FIL13	38.58	14.58	56.5	3.5	69	652	21	31.05	0.106
samp. FIL26	38.58	14.58	59.4	2.6	88	621	20	31.05	0.142
samp. FIL21	38.58	14.58	59.0	2.8	63	654	21	31.14	0.096
samp. SL1	38.50	14.85	62.2	2.2	56	670	21	31.90	0.084
samp. 50	38.28	14.58	56.7	3.6	76	678	21	32.29	0.112
samp. FIL2	38.58	14.58	61.3	2.6	67	615	19	32.37	0.109
samp. STR177	38.79	15.21	58.4	4.0	56	651	20	32.55	0.086
samp. FIL5	38.58	14.58	57.7	3.2	73	686	21	32.67	0.106
samp. 9	38.50	14.85	57.5	3.0	40	722	22	32.82	0.055
samp. 19A	38.50	14.85	63.8	2.6	60	560	17	32.94	0.107
samp. 18	38.50	14.85	56.5	3.9	34	594	18	33.00	0.057
samp. ST178	38.79	15.21	57.8	3.8	55	595	18	33.06	0.092
samp. FIL47	38.58	14.58	58.4	3.0	76	664	20	33.20	0.114
samp. FIL1	38.58	14.58	61.7	2.6	70	601	18	33.39	0.116
samp. FIL6	38.58	14.58	58.6	3.0	76	672	20	33.60	0.113
samp. FIL85	38.58	14.58	56.0	3.8	55	709	21	33.76	0.078
samp. FIL46	38.58	14.58	58.3	3.0	75	676	20	33.80	0.111
samp. FIL19	38.58	14.58	61.3	2.1	84	610	18	33.89	0.138
samp. FIL83	38.58	14.58	59.3	3.3	64	645	19	33.95	0.099
samp. FIL27	38.58	14.58	63.0	2.3	85	579	17	34.06	0.147
samp. STR171	38.58	14.58	63.0	2.3	85	579	17	34.06	0.147
samp. ESAL19	38.53	14.87	59.4	3.1	54	616	18	34.22	0.088
samp. LIP60	38.28	14.58	57.6	2.2	84	788	23	34.26	0.107
samp. STR192	38.79	15.21	57.9	4.5	49	722	21	34.38	0.068

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Aeolian (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. FIL24	38.58	14.58	57.3	3.0	73	690	20	34.50	0.106
samp. L01-13	38.40	14.96	55.7	4.7	132	871	25	34.56	0.152
samp. 94	38.28	14.58	55.1	3.7	30	520	15	34.67	0.058
samp. LIP47	38.40	14.96	57.9	2.8	177	978	28	34.93	0.181
samp. FIL79	38.58	14.58	56.4	3.5	69	665	19	35.00	0.104
samp. STR195	38.79	15.21	58.6	4.0	61	666	19	35.05	0.092
samp. LIP44	38.40	14.96	56.3	5.6	137	878	25	35.12	0.156
samp. VL99/1	38.40	14.96	57.9	2.5	187	1025	29	35.34	0.182
samp. VL175B/1	38.40	14.96	55.8	4.8	145	850	24	35.42	0.171
samp. VL175A/2	38.40	14.96	56.9	4.3	137	851	24	35.46	0.161
samp. 43B	38.50	14.85	55.0	3.8	32	606	17	35.65	0.053
samp. 17B	38.50	14.85	55.5	4.2	33	575	16	35.94	0.057
samp. FIL116	38.58	14.58	61.3	2.2	78	684	19	36.00	0.114
samp. FIL82	38.58	14.58	57.0	4.4	60	651	18	36.17	0.092
samp. 19	38.50	14.85	60.1	2.6	40	690	19	36.32	0.058
samp. STR169	38.79	15.21	60.6	2.8	80	620	17	36.47	0.129
samp. 3325	38.38	14.97	57.9	3.1	161	1022	28	36.50	0.158
samp. FIL115	38.58	14.58	60.9	2.2	89	699	19	36.79	0.127
samp. FIL28	38.58	14.58	62.4	2.9	86	669	18	37.17	0.129
samp. 3326	38.38	14.97	57.6	3.0	151	1052	28	37.57	0.144
samp. 13A	38.50	14.85	64.1	2.0	51	565	15	37.67	0.090
samp. 28B	38.50	14.85	60.5	2.9	40	569	15	37.93	0.070
samp. VL79/2	38.40	14.96	55.3	4.4	100	956	25	38.24	0.105
samp. FIL85	38.58	14.58	55.4	3.8	60	727	19	38.26	0.083
samp. FIL27	38.58	14.58	62.2	2.1	87	695	18	38.61	0.125
samp. 16B	38.50	14.85	62.2	3.1	57	580	15	38.67	0.098
samp. FIL116	38.58	14.58	60.8	2.2	80	737	19	38.79	0.109
samp. FIL80	38.58	14.58	55.2	4.2	52	661	17	38.88	0.079
samp. PVL10A3	38.40	14.96	57.9	2.2	176	1011	26	38.88	0.174

Arc: NE Aleutian (Mt. Spurr and Mt. Redoubt)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 90AMC002	60.50	-152.77	60.1	2.4	28	513	18	28.82	0.055
samp. 90CNR13	60.50	-152.77	60.2	2.3	29	520	18	28.84	0.056
samp. USGS3/23-3	60.50	-152.77	60.1	2.3	29	516	18	28.96	0.056
samp. 90CNR04	60.50	-152.77	59.8	2.5	28	521	18	29.29	0.054
samp. 90CNR05	60.50	-152.77	60.4	2.3	29	517	18	29.48	0.056
samp. USGS3/23-4	60.50	-152.77	60.2	2.3	28	517	18	29.53	0.054
samp. USGS1/8-01	60.50	-152.77	60.0	2.3	29	514	17	29.54	0.056
samp. 90AMM-03	60.50	-152.77	58.9	2.5	28	531	18	29.57	0.053
samp. 90CNR16	60.50	-152.77	60.0	2.4	29	514	17	29.64	0.056
samp. 90CNR03	60.50	-152.77	60.6	2.2	28	515	17	29.75	0.055
samp. JK90RED2AA	60.50	-152.77	59.7	2.5	28	524	18	29.81	0.053
samp. USGS3/23-1	60.50	-152.77	60.2	2.3	29	515	17	29.86	0.056
samp. 900313-3	60.50	-152.77	60.2	2.3	31	521	17	29.94	0.059
samp. 90AMM-05	60.50	-152.77	61.5	2.1	30	515	17	29.96	0.059
samp. 90AMM-15	60.50	-152.77	60.4	2.3	31	517	17	30.01	0.060
samp. 90AMM-10	60.50	-152.77	59.5	2.5	27	523	17	30.02	0.052
samp. 90CNR08	60.50	-152.77	58.8	2.5	26	528	18	30.10	0.050
samp. JK90RED3	60.50	-152.77	59.7	2.4	28	530	17	30.37	0.053
samp. 90DTR53	60.50	-152.77	59.7	2.5	28	519	17	30.44	0.054
samp. USGS3/14-1	60.50	-152.77	59.6	2.5	27	513	17	30.55	0.053
samp. 90AMM-11	60.50	-152.77	60.3	2.3	30	520	17	30.59	0.058
samp. 89DTR50	60.50	-152.77	61.6	2.1	31	510	16	31.56	0.060
samp. 90CNR24	60.50	-152.77	60.7	2.2	28	517	16	31.91	0.055
samp. 90AMM-01	60.50	-152.77	59.6	2.4	29	562	18	31.93	0.051
samp. 90CNR10	60.50	-152.77	60.9	2.1	30	522	16	32.28	0.057
samp. 90AMM300I	60.50	-152.77	59.8	2.5	30	527	16	33.40	0.057
samp. 90AMM300X	60.50	-152.77	59.8	2.5	30	527	16	33.40	0.057
samp. AMS-B05	61.30	-152.25	59.8	3.5	40	486	22	21.99	0.083
samp. AMS-B03	61.30	-152.25	59.9	4.2	39	460	20	22.55	0.084
samp. PF-45	61.30	-152.25	57.9	3.2	27	485	21	23.66	0.055
samp. PF-47	61.30	-152.25	58.5	3.5	33	475	20	24.23	0.069
samp. AMS-B04	61.30	-152.25	58.5	4.2	34	504	20	24.71	0.067
samp. AMS-A03	61.30	-152.25	60.3	3.1	37	510	21	24.76	0.073
samp. PF-39	61.30	-152.25	59.0	3.0	30	495	20	25.00	0.061
samp. AMS-A01	61.30	-152.25	60.0	3.5	36	511	20	25.05	0.070
samp. AMS-A02	61.30	-152.25	60.0	3.5	36	517	20	25.34	0.069
samp. AMS-B10	61.30	-152.25	58.9	3.4	33	507	20	25.74	0.064
samp. AMS-B02	61.30	-152.25	58.4	3.5	33	518	20	25.77	0.064
samp. AMS-A07	61.30	-152.25	59.8	3.3	35	513	20	25.91	0.067
samp. AMS-B01	61.30	-152.25	59.5	4.8	36	498	19	26.63	0.071
samp. AMS-A06	61.30	-152.25	58.7	3.9	32	546	20	27.44	0.059
samp. AF-09	61.30	-152.25	62.8	2.3	40	523	19	27.97	0.076
samp. AF-08	61.30	-152.25	61.8	2.8	37	559	20	28.09	0.066
samp. AMS-B06	61.30	-152.25	60.0	3.0	40	563	20	28.29	0.071
samp. AMS-A05	61.30	-152.25	58.6	3.9	32	547	19	28.64	0.058
samp. PF-07	61.30	-152.25	60.6	3.0	34	562	20	28.67	0.061
samp. AMS-A08	61.30	-152.25	57.9	3.7	29	533	18	28.97	0.054
samp. AMS-B09	61.30	-152.25	59.9	3.0	40	567	20	29.08	0.070
samp. SP-01	61.30	-152.25	61.3	2.9	41	507	17	29.14	0.080
samp. SP-02	61.30	-152.25	62.3	2.7	39	535	17	31.47	0.073
samp. AF-06	61.30	-152.25	62.9	2.4	39	556	17	31.95	0.070
samp. SP-04	61.30	-152.25	63.2	2.7	37	522	16	33.68	0.070
samp. SP-03	61.30	-152.25	62.1	2.9	36	610	18	34.27	0.059
samp. PF-34	61.30	-152.25	59.9	3.8	31	593	13	46.33	0.052

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Aleutian

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 98JLOK-4G	53.42	168.13	55.1	3.5	32	342	38	9.00	0.094
samp. 05S096M1	55.40	-162.03	60.5	2.5	39	294	33	9.03	0.133
samp. 98JLOK-3A	53.42	168.13	55.3	3.5	32	345	38	9.08	0.093
samp. K1266F	58.30	-155.16	63.4	2.7	31	248	27	9.22	0.125
samp. 05ELAC002	55.33	-162.06	59.5	3.2	32	294	32	9.25	0.109
samp. 05S103M1	55.33	-162.08	58.5	3.5	32	290	31	9.27	0.110
samp. 05S119T3	55.39	-162.06	59.5	3.5	38	300	32	9.32	0.126
samp. 99JLOK-4G_7	53.42	168.13	55.0	3.5	31	354	38	9.32	0.088
samp. K90AND	58.25	-154.98	61.8	2.6	34	283	30	9.37	0.118
samp. K0100C	58.30	-155.16	64.0	2.5	27	254	27	9.37	0.106
samp. 43	51.75	-177.33	59.3	2.8	56	367	39	9.41	0.153
samp. 99JLOK-4G_10	53.42	168.13	55.1	3.5	31	358	38	9.42	0.087
samp. 03S64C2	55.34	161.98	58.1	3.5	36	301	32	9.44	0.121
samp. K0200	58.30	-155.16	62.5	2.8	28	261	27	9.56	0.107
samp. 97NT12A	58.20	-155.10	62.8	2.7	28	288	30	9.60	0.097
samp. 96NT7	58.20	-155.10	63.2	2.8	31	269	28	9.61	0.115
samp. 05ELAC011	55.39	-162.07	59.0	3.8	36	304	31	9.68	0.118
samp. 05S119M1	55.39	-162.06	59.8	3.3	49	324	33	9.77	0.150
samp. K-45	58.30	-155.16	64.6	2.1	38	237	24	9.88	0.160
samp. K1268F	58.30	-155.16	62.0	3.0	29	260	26	9.89	0.110
samp. 97ANB-26	56.88	-158.17	62.6	2.1	48	423	42	10.02	0.114
samp. 00S22F1	55.32	-162.00	57.6	4.3	36	316	31	10.19	0.113
samp. 03S63M1	55.30	-161.97	57.8	3.7	34	310	30	10.27	0.110
samp. 03S63C2	55.30	-161.97	57.8	3.6	35	320	31	10.30	0.110
samp. 23	51.75	-177.33	58.1	3.3	46	371	36	10.31	0.124
samp. 03S85M1	55.40	-162.03	57.6	3.7	32	364	35	10.37	0.087
samp. K90CB	58.23	-155.07	64.4	2.4	29	283	27	10.44	0.104
samp. K2488D	58.30	-155.16	61.4	3.0	28	272	26	10.46	0.104
samp. 05132M1	55.37	-161.99	57.9	3.5	33	328	31	10.54	0.102
samp. 05S132M2	55.37	-161.99	57.8	3.7	36	343	32	10.57	0.106
samp. 21	51.75	-177.33	55.5	5.1	36	370	35	10.57	0.097
samp. 96PS13	54.17	-165.92	55.6	3.8	20	365	34	10.61	0.054
samp. AB23	53.23	-168.80	57.4	4.0	51	308	29	10.62	0.166
samp. BF00-G2	53.42	168.13	56.4	3.0	30	330	31	10.65	0.091
samp. 97ANB-33	56.88	-158.17	61.7	2.3	46	448	42	10.67	0.103
samp. K1271B	58.30	-155.16	61.9	2.9	28	279	26	10.73	0.100
samp. 02S54M1	55.40	-161.81	56.2	3.8	15	292	27	10.78	0.052
samp. K-177	58.30	-155.16	64.2	2.2	29	303	28	10.82	0.096
samp. 38	51.75	-177.33	57.5	3.0	68	427	39	10.95	0.159
samp. SEG 03 64	52.28	-172.47	58.8	3.2	30	252	23	10.96	0.119
samp. K0184	58.30	-155.16	59.5	3.6	26	266	24	11.04	0.098
samp. 41	51.75	-177.33	57.7	2.9	63	431	39	11.05	0.146
samp. SB87-49	52.20	-172.30	56.8	3.4	21	277	25	11.08	0.076
samp. B87-3	52.27	-172.58	59.7	2.8	33	311	28	11.11	0.106
samp. 96PS17	54.17	-165.92	55.7	3.7	19	379	34	11.11	0.051
samp. 42	51.75	-177.33	59.2	2.9	56	379	34	11.15	0.148
samp. 25	51.75	-177.33	55.6	4.5	33	335	30	11.17	0.099
samp. K1595C	58.30	-155.16	61.4	3.0	25	273	24	11.23	0.092
samp. 99JLOK-18A	53.42	168.13	57.6	3.0	28	371	33	11.24	0.075
samp. 96PS23	54.17	-165.92	55.4	3.7	19	370	33	11.25	0.052
samp. 96PS23	54.17	-165.92	55.4	3.7	19	370	33	11.25	0.052
samp. 03S79M2B	55.35	-162.01	56.8	4.2	30	332	29	11.31	0.092
samp. 05NYEL01	55.34	-162.04	57.5	4.1	33	332	29	11.38	0.100
samp. K90TR	58.23	-155.07	61.3	3.1	26	320	28	11.39	0.083
samp. BF00-E2	53.42	168.13	55.4	3.8	26	331	29	11.41	0.079
samp. 96NT12	58.20	-155.10	61.2	3.2	28	297	26	11.42	0.094
samp. 03S65M1	55.34	-161.98	57.2	3.4	24	318	28	11.42	0.076
samp. 03S66M2	55.35	-161.97	58.9	2.4	27	340	30	11.44	0.079
samp. BF00-E1	53.42	168.13	55.5	3.8	27	344	30	11.47	0.078
samp. 2727M01	59.35	-154.14	64.2	2.5	18	241	21	11.53	0.076
samp. 39	51.75	-177.33	58.2	2.8	66	427	37	11.54	0.155
samp. 03S84M2	55.41	-162.01	57.7	3.6	25	321	28	11.57	0.077
samp. 00JLOK-29K(FALL)	53.42	168.13	55.1	3.7	21	364	31	11.74	0.058
samp. M03-101A	55.35	-161.97	58.3	2.7	27	339	29	11.74	0.079
samp. ACAF1A4	56.88	-158.17	59.0	6.0	36	441	37	11.79	0.082
samp. K2466B	58.30	-155.16	59.6	3.6	26	298	25	11.83	0.086
samp. AK81-35	54.17	-165.92	57.0	2.6	21	407	34	11.87	0.051
samp. AK81-35	54.17	-165.92	57.0	2.6	21	407	34	11.87	0.051
samp. 2599	58.48	-154.30	57.3	4.2	17	274	23	11.91	0.062
samp. 24	51.75	-177.33	56.2	3.6	37	394	33	11.94	0.094
samp. 13	51.75	-177.33	58.7	2.9	61	420	35	12.00	0.145
samp. 51L22	52.09	-177.55	57.9	3.6	40	600	50	12.00	0.067
samp. K0581	58.30	-155.16	59.7	3.5	25	291	24	12.02	0.084
samp. K90FM	58.23	-155.07	64.8	2.1	29	304	25	12.06	0.095
samp. 05S102M1	55.32	-162.04	57.0	4.1	29	340	28	12.08	0.087
samp. K1267C	58.30	-155.16	63.0	2.7	24	299	25	12.11	0.080
samp. K1268B	58.30	-155.16	59.9	3.5	24	299	25	12.11	0.080
samp. 32	51.75	-177.33	57.5	3.4	44	424	35	12.11	0.104
samp. B87-49	52.27	-172.58	58.3	3.3	24	282	23	12.26	0.083
samp. 03S62M1	55.31	-161.92	57.4	3.8	29	319	26	12.28	0.090
samp. K-164	58.30	-155.16	64.0	2.3	29	320	26	12.31	0.091
samp. UN36	53.67	166.67	62.5	3.0	55	345	28	12.32	0.159
samp. UN36	53.67	166.67	62.5	3.0	55	345	28	12.32	0.159
samp. 05S097M3	55.39	-161.95	56.3	4.1	17	302	24	12.52	0.055
samp. 40	51.75	-177.33	56.6	3.2	61	451	36	12.53	0.135
samp. 03S86T2	55.34	-162.13	56.2	4.4	30	355	28	12.56	0.083
samp. K0135D	58.30	-155.16	59.9	3.5	24	289	23	12.57	0.082
samp. KNM-15	58.36	-155.09	62.5	2.3	38	330	26	12.69	0.115

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Aleutian (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. 18	51.75	-177.33	58.5	3.1	46	459	36	12.75	0.100
samp. 98AC2D	56.88	-158.17	58.4	2.9	34	483	38	12.81	0.070
samp. MAD-6	59.37	-153.50	59.6	4.1	35	257	20	12.85	0.136
samp. 05NYEL10	55.40	-162.04	56.2	3.9	22	329	26	12.86	0.067
samp. 05CW223-1	55.39	-162.06	55.9	3.9	21	324	25	12.86	0.065
samp. 2601	58.48	-154.30	56.8	4.5	18	298	23	12.96	0.060
samp. 97ANB-27	56.88	-158.17	58.2	3.1	33	457	35	13.06	0.071
samp. 36	51.75	-177.33	57.4	3.2	57	463	35	13.23	0.123
samp. 52-496	51.97	-178.50	58.6	3.2	25	285	22	13.26	0.088
samp. 97ANB-44	56.88	-158.17	57.8	3.2	30	429	32	13.28	0.070
samp. 17	51.75	-177.33	58.2	2.8	56	469	35	13.40	0.119
samp. 15	51.75	-177.33	57.9	3.0	53	471	35	13.46	0.113
samp. 33	51.75	-177.33	59.5	2.8	51	445	33	13.48	0.115
samp. MAD-5	59.37	-153.50	60.7	3.6	34	297	22	13.50	0.114
samp. 52	58.36	-155.09	59.6	3.4	33	339	25	13.56	0.097
samp. 34	51.75	-177.33	59.0	2.7	58	463	34	13.62	0.125

Arc: Andes, North Volcanic Zone (NVZ)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. AT-02	-0.35	-78.62	58.7	5.0	22	438	18	24.07	0.050
samp. ATAC 043	-0.35	-78.62	61.0	4.5	20	350	15	24.14	0.057
samp. CAY 109B	0.04	-78.15	59.8	2.5	74	534	22	24.27	0.139
samp. MOJ 3	0.12	-78.26	62.3	3.0	46	450	18	25.00	0.102
samp. CH30	0.80	-77.30	63.9	3.1	67	376	15	25.07	0.178
samp. CL258	1.22	-77.30	61.5	3.7	38	402	16	25.13	0.095
samp. ATAC 010	-0.35	-78.62	60.7	4.0	21	382	15	25.47	0.054
samp. ATAC 10	-0.35	-78.62	60.2	4.0	21	382	15	25.47	0.054
samp. ATAC 082	-0.35	-78.62	61.7	3.2	21	386	15	25.73	0.055
samp. ATAC 085	-0.35	-78.62	60.7	3.9	24	404	16	25.90	0.059
samp. AT13	-0.35	-78.62	57.7	5.1	25	442	17	26.00	0.057
samp. MOJ 80B	0.12	-78.26	61.9	2.9	45	380	15	26.21	0.118
samp. CAY 100A	0.04	-78.15	57.4	3.3	40	568	22	26.42	0.070
samp. Y-53	1.22	-77.30	60.6	2.3	40	556	21	26.48	0.072
samp. CB36	1.00	-77.90	60.0	3.9	29	398	15	26.53	0.073
samp. ATAC 062	-0.35	-78.62	60.8	4.3	23	356	13	26.57	0.065
samp. 8557AT	-0.35	-78.62	59.4	4.9	20	351	13	27.00	0.057
samp. MOJ 115F	0.13	-78.28	60.1	4.2	28	383	14	27.36	0.073
samp. CB38	1.00	-77.90	62.2	2.8	36	413	15	27.53	0.087
samp. ATAC 087	-0.35	-78.62	60.6	4.4	23	353	13	27.58	0.066
samp. MOJ 85	0.12	-78.26	62.4	3.2	44	447	16	27.59	0.098
samp. CB41	1.00	-77.90	59.3	4.4	26	387	14	27.64	0.067
samp. ATVIU	-0.35	-78.62	61.3	5.0	24	418	15	27.87	0.057
samp. TUNG-PS-03B	-1.47	-78.44	64.5	2.3	79	455	16	27.91	0.173
samp. CUI 4	0.31	-78.36	58.7	5.0	23	410	15	28.08	0.055
samp. CUI 7	0.31	-78.36	60.0	3.8	24	450	16	28.13	0.053
samp. MOJ 73A	0.12	-78.26	60.7	3.3	39	450	16	28.13	0.086
samp. Y-38	1.22	-77.30	61.3	2.8	44	535	19	28.16	0.082
samp. ATAC 077	-0.35	-78.62	60.8	3.6	22	372	13	28.18	0.058
samp. ATAC 004	-0.35	-78.62	61.7	4.0	20	380	13	28.57	0.053
samp. ATAC 12C	-0.35	-78.62	60.0	3.3	25	349	12	28.61	0.072
samp. CB42	1.00	-77.90	61.4	3.8	30	402	14	28.71	0.075
samp. ATAC 058	-0.35	-78.62	61.0	3.9	20	398	14	28.84	0.051
samp. PICH 121C	-0.17	-78.60	59.1	4.9	24	384	13	28.87	0.061
samp. ILI 16B	-0.66	-78.71	61.4	3.6	29	410	14	28.87	0.071
samp. TUNG-PS-07C	-1.47	-78.44	56.2	4.9	37	523	18	29.06	0.071
samp. TUNG-PS-01B	-1.47	-78.44	56.3	4.9	37	530	18	29.12	0.069
samp. ATAC 067A	-0.35	-78.62	62.1	3.4	28	345	12	29.24	0.080
samp. W83A	1.22	-77.30	61.1	2.3	48	528	18	29.33	0.091
samp. TUNG 9	-1.47	-78.44	64.0	2.8	85	470	16	29.38	0.181
samp. PICH 121B	-0.17	-78.60	59.3	5.0	24	385	13	29.39	0.062
samp. G 10	1.20	-77.35	60.3	2.8	44	531	18	29.50	0.083
samp. ATAC 066B	-0.35	-78.62	60.5	4.2	21	399	14	29.56	0.053
samp. PICH 106	-0.17	-78.60	60.0	3.8	25	414	14	29.57	0.060
samp. PICH 102	-0.17	-78.60	60.2	3.4	22	397	13	29.63	0.054
samp. TUNG-PS-51A	-1.47	-78.44	61.4	2.9	68	522	18	29.66	0.130
samp. CAY 151	0.04	-78.15	59.8	3.5	57	564	19	29.68	0.100
samp. CAY 66	0.04	-78.15	59.4	2.8	52	505	17	29.71	0.103
samp. TUNG 19FO	-1.47	-78.44	64.0	2.5	76	462	16	29.81	0.165
samp. ATAC 12D	-0.35	-78.62	61.5	3.4	22	360	12	30.00	0.060
samp. PICH 143	-0.17	-78.60	59.3	3.7	27	420	14	30.00	0.064
samp. TUNG-PS-48C	-1.47	-78.44	62.4	2.7	72	540	18	30.00	0.132
samp. TUNG-PS-03G	-1.47	-78.44	62.6	3.0	68	493	16	30.06	0.137
samp. PUL-5	0.04	-78.46	62.7	3.6	20	399	13	30.23	0.051
samp. L1	1.60	-76.50	55.8	3.1	30	576	19	30.32	0.052
samp. TG 1-11	-1.47	-78.44	64.0	2.5	75	470	16	30.32	0.160
samp. ATAC 12E	-0.35	-78.62	62.0	3.5	23	352	12	30.34	0.064
samp. MOJ 77B	0.13	-78.28	61.1	2.0	30	440	15	30.34	0.068
samp. TUNG 19CL	-1.47	-78.44	61.3	3.7	62	486	16	30.38	0.128
samp. PICH 122	-0.17	-78.60	59.3	4.9	23	372	12	30.49	0.062
samp. 4	-2.00	-77.00	64.5	2.2	63	582	19	30.63	0.108
samp. ILI 10	-0.66	-78.71	62.5	2.8	31	408	13	30.68	0.076
samp. ATAC 097	-0.35	-78.62	63.2	2.9	26	356	12	30.69	0.072
samp. TUNG 37B	-1.47	-78.44	64.2	2.5	70	472	15	30.85	0.148
samp. AT06	-0.35	-78.62	61.7	3.7	28	340	11	30.91	0.082
samp. TUNG 18C	-1.47	-78.44	64.3	2.7	69	470	15	30.92	0.146
samp. AT07	-0.35	-78.62	60.5	4.0	24	404	13	31.08	0.059
samp. ATAC 6	-0.35	-78.62	61.8	3.6	28	343	11	31.18	0.083
samp. Y-54	1.22	-77.30	61.6	2.1	40	562	18	31.22	0.072

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, North Volcanic Zone (NVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. CTX-75	-1.25	-78.42	57.2	3.5	35	520	17	31.23	0.068
samp. CAY 48	0.04	-78.15	58.8	3.3	51	656	21	31.24	0.078
samp. CAY 55B	0.04	-78.15	58.3	4.1	36	550	18	31.25	0.065
samp. PUL-6	0.04	-78.46	63.7	3.1	22	397	13	31.26	0.055
samp. Y-28	1.22	-77.30	59.1	2.9	32	594	19	31.26	0.054
samp. MOJ 80A	0.12	-78.26	59.2	4.6	27	470	15	31.33	0.057
samp. CAY 152	0.04	-78.15	59.5	3.5	59	565	18	31.39	0.104
samp. PICH 120	-0.17	-78.60	59.2	5.1	24	387	12	31.46	0.062
samp. TUNG 18B	-1.47	-78.44	64.0	2.5	69	472	15	31.47	0.146
samp. PICH 107B	-0.17	-78.60	60.4	3.8	24	410	13	31.54	0.059
samp. PICH 121A	-0.17	-78.60	59.4	5.1	22	388	12	31.54	0.057
samp. CAY 55A	0.04	-78.15	58.4	3.4	37	554	18	31.66	0.067
samp. ILI 79A	-0.66	-78.71	62.4	3.0	27	397	13	31.76	0.068
samp. MOJ 68B	0.12	-78.26	60.9	3.2	34	525	17	31.82	0.065
samp. MOJ 38	0.13	-78.28	60.6	2.9	28	420	13	31.82	0.067
samp. PICH 108	-0.17	-78.60	60.2	3.0	23	452	14	31.83	0.051
samp. AT08	-0.35	-78.62	60.6	4.2	25	382	12	31.83	0.065
samp. CAY 56	0.04	-78.15	56.5	4.2	31	574	18	31.89	0.053
samp. CAY 68	0.04	-78.15	60.0	3.0	54	610	19	32.11	0.089
samp. TUNG 37C	-1.47	-78.44	63.0	3.0	65	486	15	32.19	0.133
samp. ATAC 008	-0.35	-78.62	60.7	3.9	23	412	13	32.19	0.056
samp. ATAC 8	-0.35	-78.62	60.6	3.9	23	412	13	32.19	0.056
samp. 3.2AN	-0.05	-78.15	58.3	5.5	84	580	18	32.22	0.145
samp. TUNG 1D	-1.47	-78.44	61.8	3.2	60	530	16	32.32	0.112
samp. CAY 120A	0.02	-77.97	58.6	3.9	32	615	19	32.37	0.052
samp. CAY 153	0.04	-78.15	58.8	3.8	53	567	18	32.40	0.093
samp. PICH 107A	-0.17	-78.60	60.0	3.8	25	396	12	32.46	0.063
samp. CAY 108A	0.04	-78.15	64.3	2.2	65	578	18	32.47	0.112
samp. CUI 3	0.31	-78.36	60.1	3.8	25	475	15	32.53	0.053
samp. TUNG 10D	-1.47	-78.44	63.4	2.7	68	485	15	32.55	0.140
samp. CUI 15	0.31	-78.36	61.5	2.5	23	440	14	32.59	0.051
samp. ILI 79B	-0.66	-78.71	62.1	2.9	30	400	12	32.79	0.075
samp. AN18	-0.05	-78.15	57.3	5.8	77	591	18	32.83	0.130
samp. TUNG 18A	-1.47	-78.44	63.8	2.7	68	486	15	32.84	0.139
samp. CAY 108C	0.04	-78.15	60.0	3.4	64	552	17	32.86	0.116
samp. TUNG 14	-1.47	-78.44	62.0	2.9	63	520	16	32.91	0.121
samp. HHV	-0.05	-78.15	57.6	5.9	74	594	18	33.00	0.124
samp. E99116	-1.42	-78.47	57.4	5.1	45	596	18	33.11	0.076
samp. TUNG-PS-51B	-1.47	-78.44	58.0	4.5	44	570	17	33.14	0.078
samp. CAY 94A	0.04	-78.15	64.3	2.4	72	558	17	33.21	0.128
samp. TUNG 3	-1.47	-78.44	61.3	3.7	58	505	15	33.22	0.115
samp. TUNG-3	-1.47	-78.44	61.3	3.7	58	505	15	33.22	0.115
samp. PICH 110	-0.17	-78.60	60.7	3.5	22	420	13	33.33	0.051
samp. TUNG-PS-40	-1.47	-78.44	58.0	4.3	45	580	17	33.33	0.077
samp. CAY 94B	0.04	-78.15	58.0	4.2	56	574	17	33.37	0.098
samp. TUNG 30	-1.47	-78.44	56.3	5.6	39	565	17	33.43	0.068
samp. ATAC 050	-0.35	-78.62	62.2	3.5	22	408	12	33.44	0.054
samp. PICH 71	-0.17	-78.60	58.0	4.5	31	435	13	33.46	0.070
samp. AT11	-0.35	-78.62	61.3	3.7	27	335	10	33.50	0.081
samp. CAY 50	0.04	-78.15	58.5	3.8	45	604	18	33.56	0.074
samp. ATAC 014A	-0.35	-78.62	61.8	3.8	24	383	11	33.60	0.062
samp. ILI 11	-0.66	-78.71	62.6	2.8	31	420	13	33.60	0.074
samp. TUNG-PS-29	-1.47	-78.44	58.0	4.2	42	585	17	33.62	0.071
samp. ATAC 061	-0.35	-78.62	60.9	4.1	22	379	11	33.84	0.057
samp. ATAC 060	-0.35	-78.62	62.0	3.7	23	379	11	33.84	0.061
samp. ATAC 051	-0.35	-78.62	62.3	3.2	23	407	12	33.92	0.057
samp. TUNG-PS-36A	-1.47	-78.44	57.7	4.3	45	586	17	34.07	0.076
samp. ILI 29B	-0.66	-78.71	61.0	4.4	22	410	12	34.17	0.052
samp. MOJ 72	0.12	-78.26	58.0	3.2	27	530	16	34.19	0.050
samp. PICH 42B	-0.17	-78.60	59.9	4.3	26	390	11	34.21	0.065
samp. HHJ-AN	-0.05	-78.15	62.7	2.7	111	583	17	34.29	0.190
samp. TUNG-PS-25B	-1.47	-78.44	57.9	4.3	42	584	17	34.35	0.072
samp. ILI 5	-0.66	-78.71	62.8	2.7	31	426	12	34.35	0.073
samp. Y-52	1.22	-77.30	59.8	3.1	36	655	19	34.47	0.056
samp. ATAC 059	-0.35	-78.62	61.7	3.8	23	390	11	34.51	0.060
samp. TUNG-PS-48A	-1.47	-78.44	58.2	4.2	45	580	17	34.52	0.078
samp. TUNG 5	-1.47	-78.44	57.5	4.9	46	587	17	34.53	0.078
samp. ATAC 076	-0.35	-78.62	61.7	3.4	25	415	12	34.58	0.060
samp. CAY 57	0.04	-78.15	57.0	3.5	37	606	18	34.63	0.061
samp. TUNG 11	-1.47	-78.44	58.0	3.6	41	624	18	34.67	0.066
samp. MOJ 37	0.13	-78.28	62.3	3.2	30	399	12	34.70	0.074
samp. CH DB 11	-1.47	-78.82	63.9	2.3	45	528	15	34.74	0.085
samp. P 4	2.30	-76.40	60.3	2.7	81	766	22	34.82	0.106
samp. ATAC 083	-0.35	-78.62	60.7	3.2	22	425	12	34.84	0.052
samp. ATAC 102	-0.35	-78.62	61.5	3.9	21	391	11	34.91	0.052
samp. ILI 33	-0.66	-78.71	63.5	2.6	29	412	12	34.92	0.070
samp. CAY 114	0.02	-77.97	57.2	4.2	26	518	15	35.00	0.050
samp. CTX-41	-1.25	-78.42	58.1	3.5	66	386	11	35.09	0.171
samp. TUNG 29	-1.47	-78.44	58.0	4.6	45	580	17	35.15	0.078
samp. ATAC 069	-0.35	-78.62	61.7	3.6	20	387	11	35.18	0.052
samp. DJ49	1.50	-76.90	64.1	2.0	49	458	13	35.23	0.107
samp. PICH 56	-0.17	-78.60	61.0	3.4	24	444	13	35.24	0.053
samp. TUNG 19C	-1.47	-78.44	58.0	4.6	42	582	17	35.27	0.071
samp. CTX-30	-1.25	-78.42	57.8	4.2	37	518	15	35.33	0.071
samp. ATAC 105	-0.35	-78.62	61.9	3.7	23	389	11	35.36	0.059
samp. TUNG 15	-1.47	-78.44	56.0	5.5	39	566	16	35.38	0.069
samp. TUNG-PS-75	-1.47	-78.44	57.9	4.0	46	595	17	35.42	0.076
samp. TUNG 10G	-1.47	-78.44	57.2	4.4	41	605	17	35.59	0.067

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, North Volcanic Zone (NVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. ILI 12A	-0.66	-78.71	62.5	2.8	31	410	12	35.65	0.076
samp. PICH 111B	-0.17	-78.60	61.5	2.8	20	371	10	35.67	0.053
samp. TUNG-PS-07B	-1.47	-78.44	58.2	4.6	45	582	16	35.71	0.077
samp. CTX-18	-1.25	-78.42	58.5	4.0	28	524	15	35.72	0.053
samp. TUNG 12D	-1.47	-78.44	56.6	4.5	41	612	17	36.00	0.066
samp. ILI 22A	-0.66	-78.71	62.7	2.8	31	425	12	36.02	0.073
samp. TUNG 2	-1.47	-78.44	57.5	4.9	43	585	16	36.11	0.074
samp. TUNG 10E	-1.47	-78.44	57.5	4.8	40	582	16	36.15	0.068
samp. CAY 49	0.04	-78.15	58.8	3.8	45	590	16	36.20	0.076
samp. IMB-29	0.20	-78.20	60.3	5.3	24	438	12	36.20	0.055
samp. CTX-101	-1.25	-78.42	59.0	3.4	31	522	14	36.22	0.059
samp. E05028	-0.30	-78.20	63.1	2.5	83	541	15	36.31	0.153
samp. TUNG-PS-79	-1.47	-78.44	58.0	3.9	48	612	17	36.43	0.078
samp. ILI 6A	-0.66	-78.71	62.9	2.7	25	408	11	36.43	0.060
samp. CAY 80C	0.06	-78.02	62.8	2.4	63	605	17	36.45	0.104
samp. TUNG 12B	-1.47	-78.44	56.3	5.3	38	602	17	36.48	0.063
samp. TUNG 23	-1.47	-78.44	58.0	4.4	43	584	16	36.50	0.074
samp. CTX-34Z	-1.25	-78.42	57.5	3.4	36	556	15	36.53	0.064
samp. ILI 82	-0.66	-78.71	62.0	3.7	26	424	12	36.55	0.061
samp. TUNG 16	-1.47	-78.44	56.3	5.5	38	567	16	36.58	0.066
samp. ILI 8A	-0.66	-78.71	60.1	2.6	24	410	11	36.61	0.057
samp. PICH 145A	-0.17	-78.60	59.7	3.6	28	432	12	36.61	0.064
samp. MOJ 18	0.12	-78.26	61.6	3.2	32	418	11	36.67	0.077
samp. ATAC 100	-0.35	-78.62	63.0	2.6	21	386	11	36.76	0.053
samp. CUI 9	0.31	-78.36	61.8	3.0	25	480	13	36.92	0.051
samp. MOJ 87	0.13	-78.28	64.4	2.3	45	410	11	36.94	0.109
samp. ILI 6B	-0.66	-78.71	64.0	2.4	26	404	11	37.06	0.063
samp. ILI 35A	-0.66	-78.71	64.3	2.5	27	408	11	37.09	0.066
samp. ATAC 049	-0.35	-78.62	62.1	3.3	21	412	11	37.12	0.052
samp. MOJ 26	0.12	-78.26	63.5	2.8	30	412	11	37.12	0.073
samp. TG 47A	-1.47	-78.44	57.7	4.8	44	594	16	37.13	0.073
samp. ILI 13	-0.66	-78.71	62.7	2.8	30	457	12	37.15	0.065
samp. PICH 136A	-0.17	-78.60	60.5	4.0	28	465	13	37.20	0.060
samp. TUNG 26	-1.47	-78.44	58.0	4.7	42	588	16	37.22	0.071
samp. ILI 7A	-0.66	-78.71	63.3	2.8	26	417	11	37.23	0.062
samp. ILI 14A	-0.66	-78.71	62.5	2.8	30	410	11	37.27	0.073
samp. MOJ 118	0.13	-78.28	61.4	2.6	28	500	13	37.31	0.055
samp. CTX-91	-1.25	-78.42	61.3	2.4	30	505	13	37.44	0.059
samp. TUNG 19	-1.47	-78.44	58.7	4.4	48	578	15	37.53	0.082
samp. MER1C	-1.47	-77.98	55.8	4.4	54	770	21	37.56	0.070
samp. ILI 51	-0.66	-78.71	62.0	3.4	23	429	11	37.63	0.054
samp. MOJ 58A	0.13	-78.28	64.8	3.1	34	415	11	37.73	0.081
samp. W85A	1.22	-77.30	58.0	3.1	35	642	17	37.76	0.054
samp. CTX-92	-1.25	-78.42	60.0	2.8	34	547	14	37.85	0.062
samp. CAY 103	0.06	-78.02	63.5	2.3	65	530	14	37.86	0.123
samp. MOJ 17	0.13	-78.28	61.0	3.4	28	455	12	37.92	0.062
samp. CTX-102	-1.25	-78.42	59.5	2.8	33	551	14	38.03	0.059
samp. CTX-29	-1.25	-78.42	57.8	4.2	33	619	16	38.05	0.053
samp. ANT60	-0.05	-78.15	57.9	2.5	66	735	19	38.08	0.090
samp. MOJ 36	0.13	-78.28	63.2	3.6	30	435	11	38.16	0.069
samp. LI 32B2	-0.66	-78.71	64.4	2.2	29	420	11	38.18	0.069
samp. CTX-20B	-1.25	-78.42	58.7	3.2	28	550	14	38.25	0.051
samp. MOJ 115C	0.13	-78.28	63.2	3.0	41	444	12	38.28	0.091
samp. CTX-119	-1.25	-78.42	59.6	2.9	35	564	15	38.29	0.062
samp. CTX-62	-1.25	-78.42	59.6	3.6	34	567	15	38.31	0.059
samp. CTX-21	-1.25	-78.42	57.4	3.3	36	610	16	38.36	0.059
samp. ILI 36C	-0.66	-78.71	63.5	2.6	28	415	11	38.43	0.067
samp. ILI 26B	-0.66	-78.71	64.3	2.1	31	415	11	38.43	0.073
samp. SIL 2B	-0.66	-78.71	63.4	2.7	25	419	11	38.44	0.058
samp. ILI 2B	-0.66	-78.71	63.4	2.7	25	419	11	38.44	0.060
samp. ILI 20	-0.66	-78.71	62.7	2.8	31	423	11	38.45	0.073
samp. CTX-47	-1.25	-78.42	59.9	2.9	36	590	15	38.46	0.060
samp. PICH 91B1	-0.35	-78.62	62.3	2.0	21	385	10	38.50	0.055
samp. ILI 36B	-0.66	-78.71	63.5	2.5	27	420	11	38.53	0.064
samp. Y-14	1.22	-77.30	59.9	3.2	43	540	14	38.57	0.079
samp. TG 1-12	-1.47	-78.44	59.4	3.8	49	610	16	38.61	0.080
samp. ILI 8B	-0.66	-78.71	63.0	2.5	28	410	11	38.68	0.068
samp. CTX-98	-1.25	-78.42	58.8	3.1	31	605	16	38.68	0.052
samp. MOJ 115B	0.13	-78.28	64.0	3.0	43	465	12	38.75	0.091
samp. ATARE	-0.35	-78.62	62.6	2.7	22	389	10	38.90	0.057
samp. IMB-42	0.20	-78.20	62.5	3.2	26	440	11	38.94	0.058
samp. ILI 54	-0.66	-78.71	62.9	2.2	24	390	10	39.00	0.062
samp. DJ43	1.50	-76.90	65.5	2.1	56	470	12	39.17	0.119
samp. TUNG 13	-1.47	-78.44	57.3	4.0	43	647	17	39.21	0.066
samp. TUNG 10F	-1.47	-78.44	56.5	4.6	34	612	16	39.23	0.055
samp. E05010	-0.17	-78.60	62.8	2.7	45	518	13	39.24	0.087
samp. ILI 75	-0.66	-78.71	63.5	2.4	26	420	11	39.25	0.061
samp. ILI 38D	-0.66	-78.71	63.4	2.7	30	424	11	39.26	0.071
samp. E05030	-0.30	-78.20	56.7	5.3	52	727	19	39.30	0.072
samp. CAY 139E	0.02	-77.97	58.2	3.6	32	570	15	39.31	0.056
samp. PICH 59	-0.17	-78.60	60.8	3.7	28	472	12	39.33	0.058
samp. TUN PM #2	-1.47	-78.44	58.3	4.0	41	630	16	39.38	0.065
samp. CTX-50	-1.25	-78.42	61.6	2.4	30	561	14	39.40	0.053
samp. CTX-25	-1.25	-78.42	59.2	3.1	38	615	16	39.40	0.061
samp. ILI 30	-0.66	-78.71	64.3	2.2	29	394	10	39.40	0.072
samp. AN-5N	-0.05	-78.15	64.2	2.6	122	631	16	39.44	0.193
samp. CTX-120	-1.25	-78.42	58.2	3.2	31	618	16	39.44	0.051
samp. CTX-125	-1.25	-78.42	58.5	3.3	29	578	15	39.45	0.050

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, North Volcanic Zone (NVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. RASU PF	-0.66	-78.71	64.0	2.2	27	415	11	39.52	0.065
samp. ILI 4A	-0.66	-78.71	64.0	2.2	27	423	11	39.53	0.064
samp. SIL 4A	-0.66	-78.71	64.0	2.2	30	423	11	39.53	0.071
samp. CTX-116	-1.25	-78.42	59.8	2.9	35	586	15	39.57	0.060
samp. TG 48B	-1.47	-78.44	56.8	5.1	36	635	16	39.69	0.057
samp. TUNG 1E	-1.47	-78.44	57.8	4.6	42	635	16	39.69	0.066
samp. ILI 2A	-0.66	-78.71	64.3	2.2	28	421	11	39.72	0.067
samp. SIL 2A	-0.66	-78.71	64.3	2.2	28	421	11	39.72	0.067
samp. CTX-28A	-1.25	-78.42	57.6	3.7	32	614	15	39.82	0.051
samp. CTX-28B	-1.25	-78.42	57.3	4.2	32	614	15	39.82	0.051
samp. ILI 32A	-0.66	-78.71	64.6	2.2	30	415	10	39.90	0.072
samp. CTX-124	-1.25	-78.42	57.2	3.5	36	617	15	39.99	0.058
samp. TUNG 10B	-1.47	-78.44	56.7	4.5	36	640	16	40.00	0.056
samp. TUN PM #3	-1.47	-78.44	58.8	3.7	42	640	16	40.00	0.066
samp. ILI 26D	-0.66	-78.71	64.4	2.3	28	420	11	40.00	0.067
samp. SAN 18	-2.00	-78.34	61.2	2.4	64	715	18	40.17	0.090
samp. TUNG-PS-68B	-1.47	-78.44	58.6	3.9	42	635	16	40.19	0.065
samp. TUN PM #1	-1.47	-78.44	58.2	3.9	42	635	16	40.19	0.065
samp. ILI 36A	-0.66	-78.71	64.0	2.4	28	422	11	40.19	0.065
samp. MOJ 56B (?)	0.13	-78.28	62.7	3.6	31	410	10	40.20	0.074
samp. CTX-25	-1.25	-78.42	59.2	3.1	37	603	15	40.20	0.061
samp. ILI 27B	-0.66	-78.71	61.9	2.6	26	402	10	40.20	0.065
samp. E05141	-0.30	-78.20	60.5	3.0	46	559	14	40.22	0.081
samp. ILI 50	-0.66	-78.71	61.0	3.7	22	427	11	40.28	0.052
samp. TUNG 1A	-1.47	-78.44	57.0	4.9	38	645	16	40.31	0.058
samp. RIO 5	-1.47	-78.82	61.5	3.2	41	585	15	40.34	0.070
samp. TUN MH #1	-1.47	-78.44	58.9	3.8	43	646	16	40.38	0.067
samp. ILI 77A2	-0.66	-78.71	63.6	2.5	25	412	10	40.39	0.061
samp. CYX-96	-1.25	-78.42	57.6	3.5	36	610	15	40.40	0.059
samp. TG 54	-1.47	-78.44	56.0	5.6	37	606	15	40.40	0.060
samp. MOJ 14B	0.12	-78.26	59.6	4.7	31	485	12	40.42	0.064
samp. TIS 1	-0.66	-78.71	64.6	2.2	28	405	10	40.50	0.068
samp. TIS 1	-0.66	-78.71	64.6	2.2	28	405	10	40.50	0.069
samp. CTX-28	-1.25	-78.42	57.6	3.7	32	608	15	40.53	0.053
samp. MOJ 107	0.13	-78.28	61.0	4.4	25	430	11	40.57	0.058
samp. TUNG 1F	-1.47	-78.44	58.5	4.2	45	645	16	40.57	0.070
samp. ILI 4B	-0.66	-78.71	65.0	2.1	28	414	10	40.59	0.068
samp. SIL 4B	-0.66	-78.71	65.0	2.1	28	414	10	40.59	0.068
samp. ATAC 4A2	-0.35	-78.62	62.0	2.5	20	386	10	40.63	0.051
samp. CTX-21	-1.25	-78.42	57.4	3.3	36	610	15	40.67	0.059
samp. MOJ 115D	0.13	-78.28	65.0	2.7	48	419	10	40.68	0.115
samp. TUN MH #5	-1.47	-78.44	58.9	3.8	43	645	16	40.82	0.067
samp. ILI 43	-0.66	-78.71	64.8	2.4	26	425	10	40.87	0.061
samp. CAY 54	0.13	-78.28	60.0	3.5	31	470	12	40.87	0.066
samp. TUNG 6	-1.47	-78.44	60.3	3.5	51	655	16	40.94	0.078
samp. CTX-103	-1.25	-78.42	61.3	2.3	31	554	14	40.95	0.055
samp. CTX-99	-1.25	-78.42	61.1	2.0	41	620	15	41.01	0.065
samp. TUN MH #3	-1.47	-78.44	59.0	3.8	43	650	16	41.14	0.065
samp. TUNG-PS-66C	-1.47	-78.44	58.5	3.8	42	640	16	41.29	0.066
samp. CTX-109	-1.25	-78.42	59.8	2.4	30	567	14	41.30	0.053
samp. PICH 136F	-0.17	-78.60	60.0	3.6	31	475	12	41.30	0.064
samp. CTX-24	-1.25	-78.42	57.2	3.9	32	639	15	41.31	0.051
samp. TUNG 10C	-1.47	-78.44	57.0	4.4	36	645	16	41.35	0.056
samp. CAY 102	0.04	-78.15	57.7	3.7	41	645	16	41.35	0.063
samp. CYX-108	-1.25	-78.42	59.5	2.8	35	603	15	41.41	0.058
samp. ILI 38B	-0.66	-78.71	64.0	2.5	27	435	11	41.43	0.061
samp. ILI 62A	-0.66	-78.71	64.4	2.0	31	464	11	41.43	0.067
samp. MOJ 44	0.13	-78.28	63.4	2.6	33	435	11	41.43	0.075
samp. TUN MH #6	-1.47	-78.44	58.7	3.8	42	643	16	41.48	0.065
samp. TUNG-PS-57	-1.47	-78.44	58.7	3.8	42	643	16	41.48	0.065
samp. CTX-107	-1.25	-78.42	59.8	2.8	35	593	14	41.50	0.059
samp. CAY 169	0.02	-77.98	60.9	3.7	51	515	12	41.53	0.099
samp. PICH 42A	-0.17	-78.60	60.4	4.7	23	449	11	41.57	0.051
samp. PICH 116	-0.17	-78.60	60.3	4.8	25	470	11	41.59	0.053
samp. AN12	-0.05	-78.15	55.9	4.7	36	708	17	41.65	0.051
samp. MOJ 51A	0.13	-78.28	62.2	4.3	34	500	12	41.67	0.067
samp. ILI 41	-0.66	-78.71	64.3	2.5	26	425	10	41.67	0.061
samp. MOJ 52A	0.13	-78.28	64.2	2.6	33	425	10	41.67	0.078
samp. ATAC 4A1	-0.35	-78.62	62.3	2.2	21	396	10	41.68	0.053
samp. TUNG 1B	-1.47	-78.44	56.3	5.5	35	655	16	41.72	0.053
samp. CTX-23	-1.25	-78.42	59.4	2.7	41	620	15	41.72	0.066
samp. PICH 43A	-0.17	-78.60	61.2	3.5	32	470	11	41.78	0.068
samp. CAY 140B	0.02	-77.97	59.6	3.2	37	560	13	41.79	0.066
samp. TUNG 12C	-1.47	-78.44	58.0	4.5	46	648	16	41.81	0.071
samp. CTX-51	-1.25	-78.42	60.8	2.3	41	569	14	41.90	0.072
samp. ANT10	-0.05	-78.15	64.6	2.5	128	655	16	41.99	0.195
samp. ILI 7B	-0.66	-78.71	63.4	2.1	28	420	10	42.00	0.067
samp. PICH 134C	-0.17	-78.60	62.4	3.3	36	450	11	42.06	0.079
samp. PICH 134C	-0.17	-78.60	62.4	3.3	36	450	11	42.06	0.079
samp. PU74	2.30	-76.40	60.4	2.9	76	631	15	42.07	0.120
samp. IMB-26	0.20	-78.20	60.2	5.1	23	456	11	42.22	0.051
samp. CTX-126B	-1.25	-78.42	58.9	2.7	43	604	14	42.30	0.071
samp. MOJ 102	0.13	-78.28	64.9	2.1	28	437	10	42.43	0.064
samp. PICH 37D1	-0.17	-78.60	58.3	4.6	33	459	11	42.50	0.071
samp. ILI 53	-0.66	-78.71	63.5	2.1	27	426	10	42.60	0.062
samp. PICH 90-3	-0.17	-78.60	59.0	3.6	32	520	12	42.62	0.062
samp. MOJ 57A	0.13	-78.28	64.2	2.6	32	435	10	42.65	0.072
samp. PICH 135	-0.17	-78.60	61.6	4.0	37	444	10	42.69	0.083

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, North Volcanic Zone (NVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. PICH 60	-0.17	-78.60	61.0	3.8	29	440	10	42.72	0.065
samp. PU2	2.30	-76.40	60.2	2.9	75	641	15	42.73	0.117
samp. SAN 70	-2.00	-78.34	61.3	2.3	65	712	17	42.89	0.091
samp. PICH 43B	-0.17	-78.60	61.3	3.4	32	472	11	42.91	0.067
samp. PU75	2.30	-76.40	58.9	3.5	55	687	16	42.94	0.080
samp. AN19	-0.05	-78.15	59.0	3.9	54	605	14	43.21	0.089
samp. ILI 38A	-0.66	-78.71	63.5	2.6	27	463	11	43.27	0.057
samp. PICH 136B	-0.17	-78.60	61.4	4.1	33	455	11	43.33	0.073
samp. PICH 43C	-0.17	-78.60	60.9	3.4	32	477	11	43.36	0.067
samp. CTX-93	-1.25	-78.42	61.0	2.1	39	635	15	43.38	0.061
samp. CTX-46	-1.25	-78.42	61.3	2.9	34	594	14	43.52	0.058
samp. PICH 43E	-0.17	-78.60	61.3	3.3	34	470	11	43.52	0.072
samp. PICH 136C	-0.17	-78.60	60.6	3.6	32	492	11	43.54	0.065
samp. PICH 49	-0.17	-78.60	61.2	2.9	44	483	11	43.91	0.091
samp. TG 52	-1.47	-78.44	58.0	4.4	45	664	15	43.97	0.067
samp. CTX-40A	-1.25	-78.42	61.0	2.3	47	619	14	43.99	0.076
samp. CAY 137A	0.02	-77.97	62.4	2.6	45	550	13	44.00	0.082
samp. MOJ 1A	0.13	-78.28	65.0	2.3	32	432	10	44.08	0.074
samp. CAY 168D	0.02	-77.98	58.0	4.5	36	534	12	44.13	0.066
samp. PICH 16	-0.17	-78.60	60.2	3.1	36	495	11	44.20	0.072
samp. MOJ 41C	0.13	-78.28	65.2	2.1	33	420	10	44.21	0.079
samp. CHIM 057 DB	-1.47	-78.82	63.8	2.4	47	575	13	44.23	0.081
samp. ILI 18	-0.66	-78.71	64.0	2.3	31	465	11	44.29	0.067
samp. CTX-40B	-1.25	-78.42	60.4	2.4	45	643	14	44.56	0.070
samp. CH DB 142	-1.47	-78.82	59.5	4.1	33	615	14	44.57	0.053
samp. PICH 136E	-0.17	-78.60	62.4	3.2	38	460	10	44.66	0.083
samp. ILI 19A	-0.66	-78.71	64.2	2.2	31	447	10	44.70	0.069
samp. PICH 17	-0.17	-78.60	59.2	3.5	31	492	11	44.73	0.062
samp. IMB-21.2	0.20	-78.20	63.5	2.9	28	462	10	44.85	0.061
samp. PICH 20A	-0.17	-78.60	60.9	4.4	27	451	10	44.88	0.059
samp. PICH 48	-0.17	-78.60	60.8	3.2	40	485	11	44.91	0.081
samp. CAY 143E	0.02	-77.97	59.2	2.8	34	630	14	45.00	0.054
samp. CAY 157	0.02	-77.98	61.0	3.5	51	523	12	45.09	0.098
samp. E05147	-0.30	-78.20	57.5	3.9	55	623	14	45.14	0.088
samp. MOJ 22	0.12	-78.26	62.7	2.9	32	465	10	45.15	0.069
samp. MOJ 114B	0.12	-78.26	63.2	2.8	29	447	10	45.15	0.065
samp. CAY 168B	0.02	-77.98	58.7	3.4	38	542	12	45.17	0.070
samp. PICH 45	-0.17	-78.60	61.1	3.2	35	479	11	45.19	0.073
samp. PICH 62A	-0.17	-78.60	62.2	3.2	30	475	11	45.24	0.062
samp. CTX-78	-1.25	-78.42	60.9	2.5	33	609	13	45.48	0.054
samp. MOJ 55	0.13	-78.28	64.8	2.4	34	455	10	45.50	0.075
samp. CH 1115	-1.47	-78.82	59.2	3.7	38	610	13	45.52	0.061
samp. MOJ 90	0.13	-78.28	64.2	2.4	24	428	9	45.53	0.055
samp. CAY 3B2	0.02	-77.97	60.3	2.8	43	565	12	45.56	0.076
samp. MOJ 114A	0.12	-78.26	62.0	2.6	32	465	10	45.59	0.069
samp. CTX-77	-1.25	-78.42	62.5	2.2	38	576	13	45.64	0.066
samp. PICH 43F	-0.17	-78.60	61.5	2.9	41	490	11	45.79	0.084
samp. ILI 1A	-0.66	-78.71	61.9	3.7	32	550	12	45.83	0.058
samp. PICH 141A2	-0.17	-78.60	58.3	3.5	30	560	12	45.90	0.053
samp. PICH 136D	-0.17	-78.60	60.8	3.5	32	505	11	45.91	0.062
samp. PICH 44A	-0.17	-78.60	62.0	3.1	40	492	11	45.98	0.081
samp. RAS 1	-0.66	-78.71	62.5	3.4	33	525	11	46.05	0.062
samp. REV 12	-0.08	-77.66	56.4	4.2	42	775	17	46.13	0.054
samp. PICH 113B	-0.17	-78.60	61.0	3.7	29	472	10	46.27	0.061
samp. MOJ 106	0.13	-78.28	64.5	2.7	32	435	9	46.28	0.072
samp. CAY 46DE	0.02	-77.97	59.6	2.5	34	635	14	46.35	0.054
samp. CAY 93A	0.02	-77.98	62.5	3.2	58	502	11	46.48	0.116
samp. PICH 44B	-0.17	-78.60	62.1	3.1	40	498	11	46.54	0.080
samp. PU72	2.30	-76.40	61.6	2.9	71	746	16	46.63	0.095
samp. TUNG 4	-1.47	-78.44	56.8	4.9	35	700	15	46.67	0.050
samp. PICH4C	-0.17	-78.60	57.7	5.1	29	505	11	46.76	0.057
samp. PICH 4C	-0.17	-78.60	57.7	5.1	29	505	11	46.76	0.057
samp. MOJ 41B	0.13	-78.28	65.0	2.2	32	440	9	46.81	0.072
samp. MOJ 51C	0.13	-78.28	63.3	2.8	30	445	10	46.84	0.067
samp. PICH 117	-0.17	-78.60	61.2	4.0	26	484	10	46.99	0.054
samp. CAY 113B	0.02	-77.97	58.8	3.3	38	612	13	47.08	0.062
samp. PICH 24B	-0.17	-78.60	61.3	3.0	35	482	10	47.25	0.073
samp. ANT36	-0.05	-78.15	59.0	4.0	71	714	15	47.28	0.099
samp. RIO 106C	-1.47	-78.44	57.9	3.4	51	740	16	47.44	0.068
samp. RIO 106B	-1.47	-78.44	58.2	3.3	51	760	16	47.50	0.066
samp. IMB-38	0.20	-78.20	59.1	4.7	28	518	11	47.52	0.054
samp. REV 13	-0.08	-77.66	57.2	3.9	45	785	17	47.58	0.057
samp. PICH 132A	-0.17	-78.60	61.8	3.1	38	500	11	47.62	0.076
samp. PICH 23B	-0.17	-78.60	61.6	2.9	42	500	11	47.62	0.083
samp. P 12	2.30	-76.40	56.3	3.7	51	1001	21	47.67	0.051
samp. PICH 25	-0.17	-78.60	60.8	3.3	35	501	11	47.71	0.070
samp. TIS 5	-0.66	-78.71	62.0	3.5	32	535	11	47.77	0.060
samp. TIS 4A	-0.66	-78.71	61.9	3.7	32	550	12	47.83	0.057
samp. PICH 115	-0.17	-78.60	61.4	3.3	29	488	10	47.84	0.058
samp. PICH 15-2	-0.17	-78.60	61.1	2.9	35	489	10	47.94	0.072
samp. RIO 106A	-1.47	-78.44	58.0	3.5	51	748	16	47.95	0.068
samp. RIO 106E	-1.47	-78.44	58.0	3.2	51	758	16	47.97	0.067
samp. PICH 43D	-0.17	-78.60	62.4	2.9	38	480	10	48.00	0.079
samp. PICH 19	-0.17	-78.60	60.7	3.8	35	497	10	48.02	0.070
samp. RIO 106F	-1.47	-78.44	59.1	2.5	56	745	16	48.06	0.075
samp. PICH 13	-0.17	-78.60	61.6	3.2	32	482	10	48.20	0.065
samp. CAY 133	0.02	-77.97	63.8	2.3	49	545	11	48.23	0.090
samp. CAY 141A	0.02	-77.97	63.8	2.3	49	550	11	48.25	0.089

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, North Volcanic Zone (NVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. CAY 130	0.02	-77.97	63.3	2.2	48	560	12	48.28	0.086
samp. CAY 121	0.02	-77.98	63.7	2.5	65	507	11	48.29	0.128
samp. RIO 22	-1.40	-78.70	58.5	5.7	30	570	12	48.31	0.053
samp. CAY 139C	0.02	-77.97	62.8	2.1	49	580	12	48.33	0.084
samp. RIO 106D	-1.47	-78.44	58.0	3.5	51	750	16	48.39	0.067
samp. MOJ 21A	0.13	-78.28	62.6	2.7	27	470	10	48.45	0.057
samp. PICH 124B3	-0.17	-78.60	61.2	2.8	38	490	10	48.51	0.077
samp. CAY 184	0.02	-77.98	61.9	3.4	51	539	11	48.56	0.095
samp. PICH 26	-0.17	-78.60	59.4	4.0	25	476	10	48.57	0.053
samp. PICH 132C2	-0.17	-78.60	60.5	3.2	36	525	11	48.61	0.068
samp. PICH 12B	-0.17	-78.60	60.5	4.6	25	462	10	48.63	0.054
samp. ILI 1B	-0.66	-78.71	62.3	3.4	32	546	11	48.75	0.059
samp. CAY 46DL	0.02	-77.97	62.5	2.2	46	585	12	48.75	0.079
samp. CAY 113A	0.02	-77.97	61.7	2.6	49	587	12	48.92	0.083
samp. TIS 4B	-0.66	-78.71	62.0	3.5	32	548	11	48.93	0.058
samp. CAY 110A	0.02	-77.98	61.2	3.6	48	524	11	48.97	0.091
samp. PICH 62C	-0.17	-78.60	61.8	3.0	29	490	10	49.00	0.059
samp. PICH 124A	-0.17	-78.60	61.3	2.9	36	490	10	49.00	0.073
samp. PICH 124B1	-0.17	-78.60	61.4	2.7	39	490	10	49.00	0.079
samp. PICH 7	-0.17	-78.60	62.3	2.9	42	490	10	49.00	0.086
samp. MOJ 103	0.13	-78.28	61.0	3.5	26	510	10	49.04	0.051
samp. CTX-37	-1.25	-78.42	60.9	3.8	50	653	13	49.17	0.077
samp. PICH 15-1	-0.17	-78.60	60.8	2.8	35	492	10	49.20	0.071
samp. PICH 18	-0.17	-78.60	60.7	2.9	36	492	10	49.20	0.072
samp. TUNG 12A	-1.47	-78.44	58.2	4.7	41	690	14	49.29	0.059
samp. CAY 9C	0.02	-77.98	61.1	3.5	47	518	11	49.33	0.091
samp. CAY 168A	0.02	-77.98	63.7	2.3	58	528	11	49.35	0.109
samp. CAY 115	0.02	-77.98	62.6	3.2	67	520	11	49.52	0.129
samp. PICH 134A	-0.17	-78.60	63.0	2.7	42	457	9	49.67	0.092
samp. PICH 23A	-0.17	-78.60	62.4	2.8	42	512	10	49.71	0.081
samp. PICH 21B	-0.17	-78.60	63.0	2.6	23	418	8	49.76	0.054
samp. PICH 124B2	-0.17	-78.60	60.8	2.9	36	488	10	49.80	0.073
samp. PICH 29A	-0.17	-78.60	62.5	2.8	46	488	10	49.80	0.093
samp. PICH 20B	-0.17	-78.60	60.3	3.9	27	510	10	50.00	0.052
samp. CH DB 24	-1.47	-78.82	59.9	2.7	35	650	13	50.00	0.053
samp. CAY 136	0.02	-77.97	60.2	2.8	39	640	13	50.00	0.061
samp. PICH 33-1	-0.17	-78.60	62.0	3.0	39	500	10	50.00	0.077
samp. PICH 134B	-0.17	-78.60	63.3	2.6	42	460	9	50.00	0.091
samp. CH DB 56A	-1.47	-78.82	65.3	2.5	53	497	10	50.20	0.107
samp. PICH 114	-0.17	-78.60	62.0	3.2	30	482	10	50.21	0.061
samp. PICH 113A	-0.17	-78.60	61.2	3.5	28	479	10	50.42	0.058
samp. CAY 183	0.02	-77.98	62.5	3.6	54	535	11	50.47	0.101
samp. PICH 62B	-0.17	-78.60	61.5	3.0	28	530	11	50.48	0.052
samp. PICH 78B2	-0.17	-78.60	62.4	2.7	40	500	10	50.51	0.080
samp. PICH 40B	-0.17	-78.60	63.2	2.4	46	495	10	50.51	0.093
samp. PICH 130A	-0.17	-78.60	62.2	2.4	38	480	10	50.53	0.079
samp. SOC 5E	0.55	-77.57	58.1	3.6	46	785	16	50.65	0.059
samp. CAY 123	0.02	-77.98	63.5	2.8	55	532	11	50.67	0.102
samp. PICH 76	-0.17	-78.60	61.8	3.5	26	488	10	50.83	0.053
samp. PICH 5	-0.17	-78.60	61.8	3.7	28	473	9	50.86	0.059
samp. CAY 2A	0.02	-77.97	62.4	2.3	51	570	11	50.89	0.089
samp. PICH 9A	-0.17	-78.60	61.0	3.3	38	510	10	51.00	0.074
samp. PICH 44C	-0.17	-78.60	62.7	2.8	42	505	10	51.01	0.082
samp. PICH 39A	-0.17	-78.60	62.8	3.5	34	500	10	51.02	0.068
samp. E05017	0.24	-78.60	63.0	3.2	45	506	10	51.11	0.089
samp. PICH 112	-0.17	-78.60	62.5	2.8	41	502	10	51.22	0.082
samp. CAY 44A	0.02	-77.97	58.9	3.7	35	600	12	51.28	0.058
samp. CAY 9E	0.02	-77.97	61.6	2.3	50	580	11	51.33	0.086
samp. PICH 141C	-0.17	-78.60	61.6	3.3	42	515	10	51.50	0.082
samp. PICH 6	-0.17	-78.60	62.5	3.6	28	485	9	51.60	0.058
samp. CAY 127	0.02	-77.97	63.0	2.3	48	558	11	51.67	0.085
samp. ALS 72C	-0.65	-78.65	63.5	2.2	27	540	10	51.92	0.051
samp. RIO 13B	0.00	-78.00	58.3	4.7	34	655	13	51.98	0.051
samp. CAY 188	0.02	-77.98	63.0	3.3	69	520	10	52.00	0.133
samp. PICH 66F	-0.17	-78.60	61.3	3.4	37	500	10	52.08	0.074
samp. ILI 37A	-0.66	-78.71	59.8	4.5	33	620	12	52.10	0.053
samp. E05137	-0.30	-78.20	62.0	3.3	64	579	11	52.16	0.111
samp. PICH 54	-0.17	-78.60	62.6	3.4	29	470	9	52.22	0.061
samp. RIO 13A	0.00	-78.00	58.5	4.7	33	653	13	52.24	0.051
samp. PICH 22	-0.17	-78.60	61.8	2.8	41	512	10	52.24	0.079
samp. CAY 125	0.02	-77.97	62.8	2.3	47	565	11	52.31	0.083
samp. PICH 33-2	-0.17	-78.60	62.2	2.7	40	508	10	52.37	0.079
samp. CAY 79A	0.06	-78.02	63.4	2.1	72	592	11	52.39	0.122
samp. CH-6	-0.30	-78.20	62.4	2.7	61	609	12	52.50	0.101
samp. PICH 142A	-0.17	-78.60	62.0	3.0	44	515	10	52.55	0.085
samp. PICH 9B	-0.17	-78.60	61.5	3.3	38	505	10	52.60	0.075
samp. AN15	-0.05	-78.15	60.7	3.0	64	632	12	52.67	0.101
samp. CAY 42C	0.02	-77.98	61.7	3.5	56	570	11	52.78	0.098
samp. CAY 13B	0.02	-77.98	62.5	2.7	56	565	11	52.80	0.099
samp. CAY 3F	0.02	-77.97	63.5	2.0	57	555	11	52.86	0.103
samp. E05021	-0.30	-78.20	61.7	3.7	57	610	12	53.04	0.093
samp. CH DB 44	-1.47	-78.82	59.0	4.0	37	632	12	53.11	0.058
samp. E05012	-0.17	-78.60	61.3	2.7	44	526	10	53.13	0.084
samp. RIO 95	0.00	-78.00	61.0	4.2	35	590	11	53.64	0.059
samp. 3DAAN	-0.05	-78.15	56.3	5.3	86	1245	23	53.66	0.069
samp. RIO 2A	-1.40	-78.70	57.7	5.4	32	612	11	53.68	0.052
samp. PICH 1	-0.17	-78.60	63.4	2.5	41	505	9	53.72	0.081
samp. CAY 13E	0.02	-77.98	62.0	2.7	55	570	11	53.77	0.096

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, North Volcanic Zone (NVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. PICH 154B	-0.17	-78.60	57.6	3.1	31	506	9	53.83	0.060
samp. RIO 1B	-1.40	-78.70	58.8	5.3	41	582	11	53.89	0.070
samp. CAY 126B	0.02	-77.97	64.5	2.1	55	562	10	54.04	0.098
samp. PICH 141A1	-0.17	-78.60	62.8	2.5	42	515	10	54.21	0.082
samp. CAY 13A	0.02	-77.98	62.5	2.6	56	570	11	54.29	0.098
samp. PICH 41A	-0.17	-78.60	62.0	2.4	47	522	10	54.38	0.090
samp. PICH 98A1	-0.17	-78.60	63.0	2.4	43	506	9	54.41	0.084
samp. PICH4A	-0.17	-78.60	63.8	2.5	43	518	10	54.53	0.082
samp. PICH 4A	-0.17	-78.60	63.8	2.5	43	518	10	54.53	0.082
samp. CAY 41B	0.02	-77.97	62.7	2.8	46	540	10	54.55	0.085
samp. CAY 41A	0.02	-77.97	63.2	2.8	52	540	10	54.55	0.096
samp. RIO 12C	0.00	-78.00	60.0	4.6	33	590	11	54.63	0.055
samp. RIO 1A	-1.40	-78.70	59.0	5.2	41	585	11	54.67	0.069
samp. CAY 3E2	0.02	-77.97	61.8	2.6	51	585	11	54.67	0.087
samp. PICH 30A	-0.17	-78.60	63.0	2.4	45	509	9	54.73	0.088
samp. RIO 12D	0.00	-78.00	60.0	4.5	32	592	11	54.81	0.054
samp. E05015	-0.19	-78.59	62.3	3.8	28	495	9	55.00	0.057
samp. PICH 66G	-0.17	-78.60	59.7	2.6	41	495	9	55.00	0.083
samp. PICH 90-1	-0.17	-78.60	63.2	2.4	42	506	9	55.00	0.083
samp. PICH 98D2	-0.17	-78.60	62.4	2.4	42	512	9	55.05	0.082
samp. E05016	0.24	-78.60	62.6	2.9	45	524	10	55.16	0.085
samp. CAY 61	0.02	-77.98	62.5	3.2	52	563	10	55.20	0.091
samp. PICH 30E	-0.17	-78.60	62.9	2.5	43	514	9	55.27	0.083
samp. ANT28	-0.05	-78.15	62.6	2.8	96	597	11	55.28	0.161
samp. SOC 01B	0.55	-77.57	63.9	2.4	60	565	10	55.39	0.105
samp. PICH 100B	-0.17	-78.60	61.7	3.0	42	510	9	55.43	0.081
samp. E05036	-0.30	-78.20	62.4	3.5	61	638	12	55.48	0.096
samp. PICH 30B	-0.17	-78.60	63.2	2.4	43	509	9	55.63	0.083
samp. CAY 44C	0.02	-77.97	61.1	2.6	44	585	11	55.71	0.075
samp. PICH 66E	-0.17	-78.60	62.2	2.7	43	524	9	55.74	0.082
samp. CAY 77B	0.06	-78.02	65.0	2.0	78	520	9	55.91	0.150
samp. PICH 32A1	-0.17	-78.60	63.5	2.5	43	504	9	56.00	0.084
samp. PICH 30F	-0.17	-78.60	63.0	2.5	42	510	9	56.04	0.082
samp. PICH 32D2	-0.17	-78.60	63.5	2.5	41	505	9	56.11	0.081
samp. PICH 32D1	-0.17	-78.60	63.5	2.5	42	505	9	56.11	0.082
samp. PICH 98A2	-0.17	-78.60	62.8	2.4	43	505	9	56.11	0.085
samp. PICH 36B1	-0.17	-78.60	63.2	2.2	44	505	9	56.11	0.087
samp. PICH 90-2	-0.17	-78.60	63.5	2.3	43	500	9	56.18	0.086
samp. PICH 39B2	-0.17	-78.60	63.4	2.3	41	506	9	56.22	0.081
samp. PICH 98D1	-0.17	-78.60	63.0	2.5	42	501	9	56.29	0.083
samp. PICH 51	-0.17	-78.60	62.6	3.2	29	473	8	56.31	0.061
samp. CAY 28C	0.06	-78.02	62.6	2.5	74	620	11	56.36	0.119
samp. PICH 4B	-0.17	-78.60	63.4	2.5	43	525	9	56.45	0.081
samp. REV 2	-0.08	-77.66	57.8	3.3	49	875	16	56.45	0.055
samp. CAY 170	0.02	-77.98	63.5	2.6	51	565	10	56.50	0.090
samp. CAY 1A	0.02	-77.98	63.1	2.4	60	565	10	56.50	0.106
samp. PICH 46	-0.17	-78.60	61.8	2.7	41	520	9	56.52	0.078
samp. PICH 126A2	-0.17	-78.60	61.8	2.8	41	520	9	56.52	0.079
samp. CAY 42B	0.02	-77.98	61.7	2.9	62	605	11	56.54	0.102
samp. RIO 12N	0.00	-78.00	60.2	4.5	33	600	11	56.60	0.054
samp. PICH 34B	-0.17	-78.60	63.8	2.7	40	510	9	56.67	0.078
samp. PICH 32H	-0.17	-78.60	63.0	2.7	41	510	9	56.67	0.080
samp. PICH 2	-0.17	-78.60	63.3	2.3	43	510	9	56.67	0.084
samp. PICH 66D	-0.17	-78.60	62.0	2.6	43	522	9	56.74	0.082
samp. CAY 85	0.02	-77.98	64.0	2.3	65	568	10	56.80	0.114
samp. PICH 35A2	-0.17	-78.60	63.1	2.2	42	512	9	56.89	0.082
samp. PICH 37D2	-0.17	-78.60	61.3	2.6	43	518	9	56.92	0.083
samp. PICH 28A	-0.17	-78.60	63.0	2.8	41	507	9	56.97	0.081
samp. PICH 30C	-0.17	-78.60	63.2	2.4	42	514	9	57.11	0.082
samp. 3D1AN	-0.05	-78.15	56.3	5.3	87	1257	22	57.14	0.069
samp. PICH 58E1	-0.17	-78.60	62.6	2.6	42	480	8	57.14	0.086
samp. CAY 44B	0.02	-77.97	61.5	3.0	40	595	10	57.21	0.067
samp. PICH 32E	-0.17	-78.60	63.0	2.5	41	515	9	57.22	0.080
samp. PICH 14	-0.17	-78.60	63.4	2.3	45	504	9	57.27	0.089
samp. PICH 97A1	-0.17	-78.60	63.1	2.2	45	510	9	57.30	0.087
samp. SG-13	-2.00	-78.34	63.8	2.6	97	894	16	57.31	0.108
samp. CAY 135B	0.02	-77.98	64.6	2.3	65	545	10	57.37	0.118
samp. CH DB 59	-1.47	-78.82	62.0	3.4	44	580	10	57.43	0.076
samp. SAN 19A	-2.00	-78.34	58.9	3.7	53	816	14	57.46	0.065
samp. E05035	-0.39	-78.15	61.7	2.7	68	645	11	57.59	0.105
samp. CAY 79B	0.06	-78.02	63.5	2.0	64	576	10	57.60	0.111
samp. PICH 78B1	-0.17	-78.60	63.0	2.3	43	513	9	57.64	0.083
samp. PICH9C	-0.17	-78.60	61.5	2.9	36	490	9	57.65	0.072
samp. PICH 9C	-0.17	-78.60	61.5	2.9	36	490	9	57.65	0.072
samp. PICH 55A	-0.17	-78.60	60.0	2.7	39	525	9	57.69	0.074
samp. PICH 47	-0.17	-78.60	63.1	2.6	44	525	9	57.69	0.084
samp. PICH 69B	-0.17	-78.60	62.5	2.2	42	508	9	57.73	0.082
samp. PICH 32G	-0.17	-78.60	63.0	2.6	40	520	9	57.78	0.077
samp. PICH 72F	-0.17	-78.60	63.4	2.3	45	498	9	57.91	0.090
samp. PICH 58A3	-0.17	-78.60	62.8	2.6	42	475	8	57.93	0.088
samp. PICH 36B2	-0.17	-78.60	63.0	2.2	42	510	9	57.95	0.082
samp. E05014	-0.17	-78.60	62.0	3.7	28	487	8	57.98	0.058
samp. GP-1	-0.17	-78.60	64.3	2.6	40	534	9	58.04	0.075
samp. PICH 142B	-0.17	-78.60	63.4	2.5	50	525	9	58.33	0.095
samp. CAY 64	0.02	-77.98	62.5	2.8	62	595	10	58.33	0.104
samp. CAY 42A	0.02	-77.98	61.8	2.7	62	620	11	58.49	0.100
samp. PICH 55C	-0.17	-78.60	60.8	2.5	41	515	9	58.52	0.080
samp. PICH 32A2	-0.17	-78.60	63.4	2.5	41	515	9	58.52	0.080

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, North Volcanic Zone (NVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. CAY 181	0.02	-77.98	63.4	2.6	52	574	10	58.57	0.091
samp. E05013	-0.17	-78.60	62.0	2.8	46	492	8	58.57	0.094
samp. PICH 97A3	-0.17	-78.60	63.7	2.2	44	510	9	58.62	0.085
samp. PICH 58A2	-0.17	-78.60	62.9	2.5	42	481	8	58.66	0.087
samp. RIO 12M	0.00	-78.00	58.4	4.8	32	640	11	58.72	0.050
samp. PICH 125	-0.17	-78.60	64.8	2.3	38	535	9	58.79	0.071
samp. PICH 69A	-0.17	-78.60	63.6	2.2	45	500	9	58.82	0.090
samp. PICH 58E2	-0.17	-78.60	62.6	2.6	42	483	8	58.90	0.086
samp. CAY 95	0.02	-77.98	60.8	3.5	57	560	10	58.95	0.102
samp. PICH 37C1B	-0.17	-78.60	62.2	2.4	49	513	9	58.97	0.096
samp. SAN 63	-2.00	-78.34	58.3	4.1	53	856	15	59.03	0.062
samp. PICH 126B2	-0.17	-78.60	62.0	2.4	47	520	9	59.09	0.090
samp. CAY 23	0.02	-77.98	63.1	2.5	66	585	10	59.09	0.113
samp. CAY 105A	0.06	-78.02	63.3	2.1	71	562	10	59.16	0.125
samp. PICH 92A	-0.17	-78.60	62.6	2.2	42	515	9	59.20	0.081
samp. PICH 61	-0.17	-78.60	62.2	3.0	28	468	8	59.24	0.060
samp. CAY 11A	0.02	-77.98	61.4	2.5	50	575	10	59.28	0.087
samp. CAY 14	0.02	-77.98	63.4	2.4	60	575	10	59.28	0.104
samp. REV 3	-0.08	-77.66	57.3	3.4	48	860	15	59.31	0.056
samp. CAY 43B	0.02	-77.98	63.8	2.2	79	558	9	59.36	0.142
samp. PICH 37C1A	-0.17	-78.60	62.8	2.3	51	505	9	59.41	0.101
samp. CAY 29	0.02	-77.98	62.5	2.7	61	595	10	59.50	0.103
samp. PICH 30D	-0.17	-78.60	63.2	2.3	46	512	9	59.53	0.090
samp. PICH 41C	-0.17	-78.60	62.5	2.4	49	518	9	59.54	0.094
samp. PICH 91D	-0.17	-78.60	60.5	2.5	47	530	9	59.55	0.089
samp. CAY 44E	0.02	-77.97	64.0	2.4	65	560	9	59.57	0.116
samp. REV 1976	-0.08	-77.66	57.6	3.4	48	865	15	59.66	0.055
samp. PICH 89	-0.17	-78.60	63.9	2.5	40	525	9	59.66	0.076
samp. PICH 73	-0.17	-78.60	62.1	3.5	26	490	8	59.76	0.053
samp. PICH 100A	-0.17	-78.60	62.8	2.5	47	520	9	59.77	0.090
samp. PICH 78A	-0.17	-78.60	63.2	2.4	42	515	9	59.88	0.082
samp. CAY 180	0.02	-77.98	62.2	2.8	55	618	10	60.00	0.089
samp. RIO 94I	0.00	-78.00	60.6	4.0	33	630	11	60.00	0.052
samp. PICH 41B	-0.17	-78.60	62.9	2.3	49	510	9	60.00	0.095
samp. CAY 119	0.02	-77.97	65.0	2.1	66	540	9	60.00	0.122
samp. QL-12	-0.95	-78.90	66.0	2.0	31	533	9	60.09	0.058
samp. RIO 94E	0.00	-78.00	60.5	3.9	33	625	10	60.10	0.053
samp. PICH 35A1	-0.17	-78.60	63.3	2.2	42	517	9	60.12	0.081
samp. PICH 126B1	-0.17	-78.60	62.2	2.4	46	512	9	60.24	0.089
samp. CAY 182	0.02	-77.98	63.4	2.6	66	603	10	60.30	0.109
samp. CAY 11B	0.02	-77.98	62.6	2.4	52	555	9	60.33	0.094
samp. PICH 126A1	-0.17	-78.60	62.0	2.5	44	525	9	60.34	0.083
samp. PICH 32B2	-0.17	-78.60	63.5	2.5	40	520	9	60.47	0.077
samp. PICH 37-1	-0.17	-78.60	62.8	2.4	50	508	8	60.48	0.098
samp. CAY 120B	0.02	-77.97	65.4	2.0	66	539	9	60.56	0.122
samp. AN1	-0.05	-78.15	61.7	2.7	60	788	13	60.62	0.076
samp. CAY 3A	0.02	-77.98	62.4	2.4	51	570	9	60.64	0.089
samp. CAY 8	0.02	-77.98	61.9	2.5	51	565	9	60.75	0.090
samp. CAY 185	0.02	-77.98	61.9	2.8	52	638	11	60.76	0.082
samp. CAY 98	0.02	-77.98	61.3	3.7	50	675	11	60.81	0.074
samp. CAY 97A	0.02	-77.98	63.0	2.5	65	566	9	60.86	0.115
samp. PICH 97A2	-0.17	-78.60	63.7	2.1	44	520	9	61.18	0.085
samp. PICH 132C1	-0.17	-78.60	63.7	2.2	45	508	8	61.20	0.088
samp. CAY 27	0.02	-77.98	64.0	2.1	64	545	9	61.24	0.117
samp. E05142	-0.30	-78.20	61.4	3.3	50	625	10	61.27	0.080
samp. PICH 35B	-0.17	-78.60	63.8	2.4	41	515	8	61.31	0.079
samp. PICH 91A1	-0.17	-78.60	62.6	2.2	53	515	8	61.31	0.103
samp. RIO 96	0.00	-78.00	59.7	4.0	33	650	11	61.32	0.051
samp. ANT26	-0.05	-78.15	63.0	2.8	98	638	10	61.35	0.154
samp. ANT26	-0.05	-78.15	63.0	2.8	98	638	10	61.35	0.154
samp. PICH 32B1	-0.17	-78.60	64.0	2.3	43	510	8	61.45	0.084
samp. CAY 83A	0.02	-77.98	64.0	2.3	67	590	10	61.46	0.113
samp. RIO 94D	0.00	-78.00	60.5	4.0	32	635	10	61.65	0.050
samp. PICH 38A	-0.17	-78.60	64.4	2.1	43	518	8	61.67	0.082
samp. PICH-10-5	-0.17	-78.60	63.4	2.4	40	543	9	61.70	0.074
samp. PICH 93	-0.17	-78.60	64.9	2.3	42	525	9	61.76	0.080
samp. PICH 58A1	-0.17	-78.60	63.0	2.4	42	488	8	61.77	0.085
samp. CAY 163	0.02	-77.98	63.6	2.1	59	550	9	61.80	0.107
samp. RIO 94F	0.00	-78.00	60.6	3.9	34	632	10	61.96	0.053
samp. CAY 24	0.02	-77.98	64.6	2.1	68	540	9	62.07	0.126
samp. CAY 167	0.02	-77.98	65.0	2.1	72	547	9	62.16	0.132
samp. ANT37	-0.05	-78.15	59.0	3.3	67	790	13	62.20	0.085
samp. CAY 162A	0.02	-77.98	63.6	2.0	61	560	9	62.22	0.109
samp. PICH 78E2	-0.17	-78.60	64.0	2.2	45	505	8	62.35	0.088
samp. PICH 78B3	-0.17	-78.60	64.1	2.5	43	512	8	62.44	0.083
samp. CAY 84	0.02	-77.98	65.3	2.3	65	562	9	62.44	0.115
samp. PICH 66C1	-0.17	-78.60	60.2	2.5	45	525	8	62.50	0.085
samp. PICH 99	-0.17	-78.60	63.6	2.2	53	525	8	62.50	0.100
samp. PICH 101B	-0.17	-78.60	60.7	2.6	40	526	8	62.62	0.077
samp. PICH 28B	-0.17	-78.60	64.3	2.2	43	520	8	62.65	0.083
samp. CAY 160	0.02	-77.98	64.9	2.3	70	535	9	62.94	0.131
samp. CAY 75	0.02	-77.98	62.4	2.7	62	630	10	63.00	0.098
samp. CAY 58A	0.02	-77.98	63.0	2.6	57	605	10	63.02	0.094
samp. PICH 79B	-0.17	-78.60	64.8	2.3	42	530	8	63.10	0.079
samp. CAY 177A	0.02	-77.97	63.4	2.3	52	644	10	63.14	0.081
samp. CH-7	-0.30	-78.20	62.2	3.1	62	777	12	63.17	0.079
samp. PICH 36A1	-0.17	-78.60	64.0	2.2	43	518	8	63.17	0.082
samp. CAY 96A	0.02	-77.98	60.6	3.0	51	664	11	63.24	0.077

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, North Volcanic Zone (NVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. PICH 38C	-0.17	-78.60	64.7	2.1	43	525	8	63.25	0.082
samp. CAY 172	0.02	-77.98	63.6	2.4	56	583	9	63.37	0.096
samp. CAY 15C	0.02	-77.98	62.7	2.2	69	564	9	63.37	0.122
samp. PICH 36A2	-0.17	-78.60	64.4	2.1	44	520	8	63.41	0.084
samp. PICH 37-2	-0.17	-78.60	62.7	2.3	48	520	8	63.41	0.092
samp. CAY 173	0.02	-77.98	65.6	2.2	73	560	9	63.64	0.130
samp. PICH-10-7	-0.17	-78.60	64.0	2.2	41	548	9	63.72	0.075
samp. CAY 25	0.02	-77.98	60.6	2.8	46	625	10	63.78	0.074
samp. CAY 40A	0.02	-77.98	62.5	2.4	65	625	10	63.78	0.104
samp. CAY 26	0.02	-77.98	62.5	2.7	60	600	9	63.83	0.100
samp. CAY 175B	0.02	-77.98	64.3	2.3	55	590	9	64.13	0.092
samp. E05019	-0.30	-78.20	62.1	3.4	52	644	10	64.40	0.081
samp. PICH 79A	-0.17	-78.60	64.8	2.2	42	535	8	64.46	0.078
samp. SAN 68	-2.00	-78.34	59.3	2.9	57	930	14	64.58	0.061
samp. PICH 101C	-0.17	-78.60	63.8	2.0	44	517	8	64.63	0.085
samp. CAY 92	0.02	-77.98	61.8	2.9	54	610	9	64.89	0.089
samp. CAY 154	0.02	-77.98	63.5	2.4	60	623	10	64.90	0.096
samp. PICH 39B1	-0.17	-78.60	63.4	2.1	41	520	8	65.00	0.079
samp. PICH 35C	-0.17	-78.60	64.7	2.1	43	520	8	65.00	0.083
samp. PICH 34A1	-0.17	-78.60	64.0	2.1	44	520	8	65.00	0.084
samp. PICH 11	-0.17	-78.60	62.8	2.2	52	520	8	65.00	0.100
samp. ANT61	-0.05	-78.15	62.3	2.9	78	722	11	65.05	0.107
samp. CH-8	-0.30	-78.20	63.1	2.7	60	749	12	65.13	0.080
samp. PICH 78C2	-0.17	-78.60	64.7	2.0	46	515	8	65.19	0.089
samp. PICH 38D	-0.17	-78.60	64.8	2.1	43	522	8	65.25	0.082
samp. SAN 573	-2.00	-78.34	57.9	4.3	47	914	14	65.29	0.051
samp. CAY 10	0.02	-77.98	62.0	2.4	53	575	9	65.34	0.092
samp. PICH 64	-0.17	-78.60	64.2	2.3	41	525	8	65.63	0.078
samp. PICH 38B	-0.17	-78.60	64.2	2.1	43	512	8	65.64	0.084
samp. AN17	-0.05	-78.15	61.9	2.7	60	788	12	65.67	0.076
samp. E94008	-0.30	-78.23	62.0	3.8	65	657	10	65.70	0.099
samp. PICH8E	-0.17	-78.60	61.4	3.1	42	513	8	65.77	0.081
samp. PICH 91A2	-0.17	-78.60	63.0	2.2	52	520	8	65.82	0.100
samp. CAY 158	0.02	-77.98	63.5	2.4	56	606	9	65.87	0.092
samp. E05143	-0.30	-78.20	59.6	4.1	44	719	11	65.96	0.061
samp. PICH 78E1	-0.17	-78.60	64.4	2.0	45	515	8	66.03	0.087
samp. PICH 78C1	-0.17	-78.60	64.5	2.0	45	517	8	66.28	0.087
samp. ANT8	-0.05	-78.15	61.7	3.0	63	776	12	66.32	0.081
samp. PICH-9-26	-0.17	-78.60	64.5	2.3	42	544	8	66.34	0.076
samp. PICH 96A	-0.17	-78.60	64.2	2.2	41	531	8	66.38	0.077
samp. CAY 179A	0.02	-77.98	65.2	2.2	72	555	8	66.87	0.130
samp. CAY 28B	0.06	-78.02	62.7	2.4	86	625	9	67.20	0.138
samp. CAY 178	0.02	-77.98	64.6	2.4	63	580	9	67.44	0.109
samp. E05138	-0.30	-78.20	61.7	2.9	65	779	12	67.74	0.083
samp. PICH 34A2	-0.17	-78.60	64.0	2.1	45	522	8	67.79	0.086

Arc: Andes, Northern Central Volcanic Zone (NCVZ)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. AJO 174	-18.25	-69.22	61.7	2.3	70	456	20	22.80	0.154
samp. PAR 201	-18.20	-69.19	59.3	3.3	52	298	13	22.92	0.174
samp. ACM-12	-18.83	-69.30	56.9	2.6	86	463	20	23.14	0.185
samp. DBF112_PAR112	-18.20	-69.27	57.6	3.1	51	302	13	23.23	0.169
samp. PIG-00-14	-16.25	-71.60	59.7	2.2	65	506	21	24.10	0.128
samp. LAU-005	-18.33	-69.38	58.7	2.8	53	534	22	24.27	0.099
samp. LAU005	-18.33	-69.38	58.0	2.8	50	526	21	25.05	0.095
samp. LAU005	-18.33	-69.38	58.0	2.8	50	526	21	25.05	0.095
samp. BAR-00-28	-15.70	-72.63	56.5	4.4	63	486	19	25.58	0.130
samp. BAR-01-59	-15.63	-71.82	58.6	3.5	93	517	20	25.85	0.180
samp. YUC-00-05	-17.20	-70.17	55.8	4.0	95	678	26	26.08	0.140
samp. PIP-01-42	-16.48	-71.20	62.1	2.4	53	631	24	26.29	0.084
samp. LAU-102	-18.26	-69.39	61.5	2.1	74	503	19	26.47	0.147
samp. TAP 97-02	-18.13	-69.54	61.6	2.4	49	614	23	26.70	0.080
samp. CHA_04_06	-16.27	-71.51	63.4	2.5	146	748	27	27.44	0.194
samp. LAU102	-18.26	-69.39	60.8	2.1	72	496	18	27.56	0.145
samp. CHA_04_07	-16.12	-71.64	59.1	3.1	70	554	20	27.70	0.126
samp. PIG-00-13	-16.25	-71.60	56.4	3.3	59	499	18	27.72	0.118
samp. BAR-00-24	-16.17	-71.18	56.5	3.1	112	612	22	27.82	0.183
samp. DBF 113	-18.21	-69.22	58.4	3.7	59	753	27	27.89	0.078
samp. PAR 120	-18.22	-69.14	59.9	2.9	61	561	20	28.05	0.109
samp. SAR-00-05	-15.34	-73.36	55.2	3.6	84	563	20	28.15	0.149
samp. PAR 075	-18.23	-69.15	60.1	2.9	58	567	20	28.35	0.102
samp. PIP-01-029	-16.38	-71.30	56.2	3.6	82	573	20	28.65	0.143
samp. COTA-05-06	-15.37	-73.02	59.5	2.5	54	651	22	29.59	0.083
samp. CHA_02_24	-16.13	-71.46	60.2	3.2	77	537	18	29.83	0.143
samp. OCO-03-01	-16.08	-73.17	57.1	4.1	71	573	19	30.16	0.124
samp. AJO177	-18.25	-69.22	60.1	2.4	68	556	18	30.89	0.122
samp. AJO177	-18.25	-69.22	60.1	2.4	68	556	18	30.89	0.122
samp. BAR-00-43	-17.58	-69.77	59.2	2.7	90	526	17	30.94	0.171
samp. PAR 229	-18.23	-69.15	56.5	4.2	44	565	18	31.39	0.078
samp. PAR 074	-18.23	-69.15	59.3	3.0	115	629	20	31.45	0.183
samp. CAQ002	-18.08	-69.25	55.9	3.6	77	575	18	31.94	0.134
samp. CAQ002	-18.08	-69.25	55.9	3.6	77	575	18	31.94	0.134
samp. BAR-02-13	-15.88	-71.39	58.8	3.1	104	639	20	31.95	0.163
samp. CHA_02_07	-16.27	-71.62	58.1	2.8	106	672	21	32.00	0.158
samp. BAR-01-43	-16.49	-71.20	60.1	2.4	70	677	21	32.24	0.103
samp. PAR 235	-18.20	-69.17	59.1	3.2	32	558	17	32.82	0.057
samp. BAR-00-35	-15.25	-72.88	55.4	3.2	56	605	18	33.61	0.093
samp. 5	-15.62	-72.73	59.0	2.7	52	640	19	33.68	0.081

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, Northern Central Volcanic Zone (NCVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. YUC-00-04 B	-17.15	-70.17	61.1	2.2	37	689	20	34.45	0.054
samp. PAR 227	-18.22	-69.15	56.6	4.1	54	672	19	35.37	0.080
samp. PAR 012	-18.21	-69.15	56.5	4.0	65	579	16	35.50	0.113
samp. PAR 119	-18.23	-69.15	59.7	3.0	101	646	18	35.89	0.156
samp. PAR 029	-18.18	-69.17	58.7	2.9	75	556	15	37.07	0.135
samp. TAC-005	-17.72	-69.77	60.2	2.7	56	633	17	37.24	0.088
samp. PAR 221	-18.22	-69.16	56.7	4.0	39	634	17	37.29	0.062
samp. TAC-001	-17.72	-69.77	60.3	2.8	54	634	17	37.29	0.085
samp. PAR 233	-18.19	-69.17	58.9	3.2	66	527	14	37.64	0.125
samp. VOL77	-15.17	-72.00	59.1	3.1	83	650	17	38.24	0.128
samp. TAC-003	-17.72	-69.77	59.1	2.6	48	698	18	38.78	0.069
samp. TAC-006	-17.72	-69.77	55.7	4.4	46	739	19	38.89	0.062
samp. CHA_02_09	-16.27	-71.62	58.0	2.1	51	680	17	39.95	0.075
samp. EL MISTI FLOW2	-16.43	-71.47	59.0	3.0	118	999	25	39.96	0.118
samp. PAR 219	-18.20	-69.19	56.7	4.2	60	802	20	40.10	0.075
samp. MIS-99-04	-16.43	-71.47	60.5	2.7	116	963	24	40.13	0.120
samp. DBF 088	-18.22	-69.19	58.4	3.8	64	523	13	40.23	0.122
samp. PIG-00-12	-16.25	-71.60	57.2	3.8	57	685	17	40.29	0.083
samp. 211	-18.50	-70.10	61.2	2.0	30	488	12	40.67	0.061
samp. VOL70	-15.17	-72.00	58.7	3.0	81	693	17	40.76	0.117
samp. EL MISTI FLOW1	-16.43	-71.47	60.7	2.4	121	981	24	40.88	0.123
samp. UBI06-05-1	-16.36	-70.90	57.1	3.3	56	901	22	40.95	0.062
samp. 1	-15.67	-72.73	55.5	2.5	43	826	20	41.30	0.052
samp. PIP-01-026	-16.39	-71.34	60.2	2.7	78	748	18	41.56	0.104
samp. 11	-15.57	-72.72	63.7	2.0	110	727	17	42.76	0.151
samp. PIP-01-48	-16.55	-71.34	58.0	3.6	75	771	18	42.83	0.097
samp. OCO-05-11	-15.82	-73.06	57.1	4.1	107	864	20	43.20	0.124
samp. UBI06-05-2	-16.36	-70.90	57.3	3.8	51	871	20	43.55	0.059
samp. PAR 165	-18.15	-69.18	56.4	4.2	79	619	14	44.21	0.128
samp. GUL-004	-18.42	-69.25	61.6	2.2	76	759	17	44.65	0.100
samp. TAP-007	-18.08	-69.50	62.1	2.4	101	536	12	44.67	0.188
samp. 13	-15.57	-72.72	63.8	2.2	109	720	16	45.00	0.151
samp. SUA-006	-18.78	-69.07	61.7	2.3	78	815	18	45.28	0.096
samp. SAB2	-15.78	-71.85	63.1	2.3	87	678	15	45.52	0.128
samp. UBI06-04	-16.36	-70.90	56.8	3.2	62	912	20	45.60	0.068
samp. FIR-00-01	-15.34	-72.67	58.3	2.8	62	596	13	45.85	0.104
samp. 3	-15.60	-72.73	62.1	2.0	75	597	13	45.92	0.126
samp. BAR-01-41	-16.43	-71.17	60.2	2.1	71	923	20	46.15	0.077
samp. UBI06-05-3	-16.36	-70.90	56.7	3.3	57	889	19	46.79	0.064
samp. ANT-00-02	-15.39	-72.69	57.7	3.0	42	711	15	47.40	0.059
samp. UBI-10-20	-16.36	-70.90	56.2	3.3	54	899	19	47.57	0.060
samp. TAC-004	-18.72	-69.73	61.3	2.4	66	686	14	49.00	0.096
samp. UBI-10-18B	-16.36	-70.90	56.5	3.2	62	922	19	49.04	0.067
samp. BAR-00-27	-16.20	-71.27	56.4	3.0	51	933	19	49.11	0.055
samp. YUC-00-07	-17.20	-70.18	55.2	4.3	65	797	16	49.81	0.082
samp. CHA_02_21	-16.12	-71.63	60.0	3.2	92	601	12	50.08	0.153
samp. UBI-10-18A	-16.36	-70.90	56.8	3.3	65	885	18	50.28	0.073
samp. 9	-15.57	-72.72	61.8	2.2	84	859	17	50.53	0.098
samp. UBI-10-18C	-16.36	-70.90	55.4	3.5	58	941	19	50.59	0.062
samp. COTA-05-15	-15.34	-73.00	58.9	2.9	37	661	13	50.85	0.056
samp. SAB9719	-15.78	-71.85	62.0	2.5	81	714	14	50.97	0.114
samp. SAB9718	-15.78	-71.85	61.6	2.6	79	741	15	51.10	0.106
samp. UBI-0618	-16.36	-70.90	56.8	3.3	59	923	18	51.28	0.063
samp. GUL-002	-18.42	-69.25	62.7	2.2	87	718	14	51.29	0.121
samp. UBI-0614	-16.36	-70.90	55.9	3.3	60	910	18	51.41	0.066
samp. SAB969	-15.80	-71.85	61.9	2.5	79	722	14	51.54	0.110
samp. GUL-015	-18.42	-69.25	62.4	2.4	93	777	15	51.80	0.120
samp. TAC-002	-17.72	-69.77	60.8	2.4	61	726	14	51.86	0.084
samp. GUL-016	-18.42	-69.25	62.5	2.5	95	781	15	52.07	0.122
samp. VOL137	-15.17	-72.00	59.2	2.3	75	941	18	52.28	0.080
samp. MI02-117	-16.28	-71.46	59.1	3.1	42	787	15	52.47	0.053
samp. PAR162	-18.18	-69.18	60.4	2.2	86	853	16	53.31	0.101
samp. PAR162	-18.18	-69.18	60.4	2.2	86	853	16	53.31	0.101
samp. C10	-15.67	-72.52	61.4	2.2	93	806	15	53.73	0.115
samp. TAP-97-22	-18.15	-69.48	62.4	2.5	69	679	13	53.89	0.102
samp. UBI-0613	-16.36	-70.90	56.5	3.3	55	907	17	54.64	0.061
samp. SAB953	-15.78	-71.85	62.3	2.5	71	777	14	54.75	0.092
samp. PAR 04-12	-18.20	-69.14	59.8	2.9	51	942	17	55.41	0.054
samp. BAR-00-40	-17.40	-70.14	60.0	2.2	59	722	13	55.54	0.082
samp. PAR 169	-18.16	-69.18	56.5	4.2	86	642	12	55.83	0.134
samp. GUL-017	-18.42	-69.25	57.4	3.6	60	1007	18	55.94	0.060
samp. SAB942	-15.78	-71.85	61.8	2.5	78	746	13	56.06	0.104
samp. 15	-15.52	-72.72	63.1	2.3	93	730	13	56.15	0.127
samp. PAR-04-13	-18.20	-69.14	58.6	2.8	61	955	17	56.18	0.064
samp. SAB943	-15.78	-71.85	62.3	2.6	77	760	14	56.33	0.101
samp. YUC-00-15	-17.18	-70.20	58.4	3.1	82	789	14	56.36	0.104
samp. 121-133	-15.53	-72.32	58.3	2.7	69	893	16	56.88	0.077
samp. MIS-02-102	-16.27	-71.42	60.2	2.8	43	797	14	56.93	0.054
samp. AND-99-07	-15.43	-72.35	59.3	2.6	69	627	11	57.00	0.110
samp. 14	-15.52	-72.72	62.4	2.5	97	800	14	57.14	0.121
samp. SAB941A	-15.78	-71.85	62.4	2.7	75	763	13	57.39	0.099
samp. VOL15	-15.17	-72.00	59.0	2.6	48	861	15	57.40	0.056
samp. TIT-00-03	-17.26	-69.82	56.8	2.7	74	749	13	57.62	0.099
samp. SAB944	-15.80	-71.85	61.9	2.6	71	779	14	57.67	0.091
samp. CAS-00-02	-17.50	-69.78	59.6	4.0	86	808	14	57.71	0.106
samp. BAR-00-39	-17.15	-70.28	61.1	2.1	49	751	13	57.77	0.065
samp. SAB3	-15.80	-71.85	61.0	2.8	66	799	14	57.88	0.082
samp. 7	-15.60	-72.73	62.2	2.2	103	815	14	58.21	0.126

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, Northern Central Volcanic Zone (NCVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. C7	-15.50	-72.55	63.3	2.0	91	878	15	58.53	0.104
samp. SAB9215	-15.80	-71.85	60.8	2.8	70	787	13	58.71	0.089
samp. 10	-15.57	-72.72	63.7	2.1	106	770	13	59.23	0.138
samp. 8	-15.58	-72.72	58.6	3.4	61	711	12	59.25	0.086
samp. GUL-014	-18.42	-69.25	60.6	2.8	81	830	14	59.29	0.098
samp. 121-034	-15.53	-72.32	59.0	3.2	53	932	16	59.36	0.057
samp. MIS-02-113	-16.29	-71.41	58.3	3.3	53	894	15	59.60	0.059
samp. DBF 03-01	-18.22	-69.26	62.3	2.0	90	839	14	59.93	0.107
samp. PAR165	-18.15	-69.18	56.1	4.1	54	960	16	60.00	0.056
samp. YUC-00-01	-17.21	-70.17	55.5	4.2	73	901	15	60.07	0.081
samp. YUC-00-19	-17.33	-70.20	58.3	2.5	86	843	14	60.21	0.102
samp. A99-10	-15.17	-72.00	61.4	2.1	106	845	14	60.36	0.125
samp. MI02-116	-16.28	-71.46	58.3	3.3	40	785	13	60.38	0.051
samp. VOL54A	-15.17	-72.00	58.9	2.9	66	849	14	60.64	0.078
samp. PAR 03-20	-18.19	-69.16	58.5	3.2	73	974	16	60.88	0.075
samp. PAR 129	-18.14	-69.14	60.1	2.4	85	1098	18	61.00	0.077
samp. H99-03	-15.87	-72.12	59.0	2.8	64	917	15	61.13	0.070
samp. 121-051	-15.53	-72.32	58.1	3.2	53	968	16	61.27	0.055
samp. PAR 03-25	-18.20	-69.19	58.7	3.2	74	981	16	61.31	0.075
samp. VOL54B	-15.17	-72.00	58.5	3.1	60	859	14	61.36	0.070
samp. VOL54C	-15.17	-72.00	59.1	3.0	63	861	14	61.50	0.073
samp. SUP-015	-18.67	-69.00	57.7	3.8	67	1054	17	62.00	0.064
samp. TC-12A	-16.75	-70.60	59.7	2.5	97	744	12	62.00	0.130
samp. PAR 074	-18.20	-69.15	59.3	3.0	82	1117	18	62.06	0.073
samp. TAP-02-02-B	-18.13	-69.52	56.8	3.5	95	745	12	62.08	0.128
samp. YUC-00-04 A	-17.15	-70.17	61.5	2.2	88	808	13	62.15	0.109
samp. VOL5	-15.17	-72.00	60.3	2.4	64	873	14	62.36	0.073
samp. CAS-00-01	-17.50	-69.78	60.3	3.6	95	749	12	62.42	0.127
samp. MIS-02-101	-16.27	-71.42	61.5	2.7	48	752	12	62.67	0.064
samp. PAR 03-38	-18.18	-69.15	58.0	2.9	70	1067	17	62.76	0.066
samp. BAR-01-36	-16.26	-71.08	57.4	3.6	84	950	15	63.33	0.088
samp. MIS-02-105	-16.26	-71.41	58.3	3.1	47	826	13	63.54	0.057
samp. P7	-15.25	-73.48	55.4	4.9	62	1069	17	63.61	0.058
samp. PAR 082	-18.20	-69.18	60.5	3.1	78	1147	18	63.72	0.068
samp. DBF 03-03	-18.22	-69.23	57.9	3.6	69	1084	17	63.76	0.064
samp. YUC-00-18	-17.33	-70.20	58.6	3.8	60	1022	16	63.88	0.059
samp. PAR160	-18.14	-69.17	62.7	2.4	95	963	15	64.20	0.099
samp. PAR086	-18.18	-69.17	58.2	3.3	70	969	15	64.60	0.072
samp. DBF 03-04	-18.21	-69.23	58.1	3.5	73	1103	17	64.88	0.066
samp. PAR163	-18.18	-69.18	59.1	3.2	74	974	15	64.93	0.076
samp. PAR 04-10	-18.19	-69.14	58.0	3.2	65	1108	17	65.18	0.059
samp. DBF 03-05	-18.20	-69.25	61.8	2.6	87	1053	16	65.81	0.083
samp. MIS-02-111	-16.29	-71.41	59.2	2.9	44	860	13	66.15	0.051
samp. PAR 03-19	-18.19	-69.16	58.5	3.3	69	995	15	66.33	0.069
samp. SUP-019	-18.67	-69.00	60.6	2.2	65	1130	17	66.47	0.058
samp. PAR 03-36	-18.20	-69.14	61.7	2.3	79	999	15	66.60	0.079
samp. POM145	-18.15	-69.15	60.8	2.6	105	1018	15	67.87	0.103
samp. VOL22A	-15.17	-72.00	58.2	2.1	80	952	14	68.00	0.084
samp. PAR 03-10	-18.14	-69.16	62.2	2.3	97	953	14	68.07	0.102
samp. SUP-021	-18.67	-69.00	60.5	2.4	65	1164	17	68.47	0.056
samp. TAP-97-06	-18.14	-69.50	61.5	2.6	64	963	14	68.79	0.066
samp. PAR 03-09	-18.14	-69.17	58.7	3.2	58	1105	16	69.06	0.052
samp. PAR 03-28	-18.21	-69.19	59.9	3.1	83	1111	16	69.44	0.075
samp. PAR 04-09	-18.19	-69.13	57.9	3.1	60	1113	16	69.56	0.054
samp. 121-095	-15.53	-72.32	60.3	2.5	68	895	13	69.92	0.076
samp. PAR 03-31	-18.23	-69.18	57.3	3.4	78	1119	16	69.94	0.070
samp. EM 0401	-16.30	-71.41	60.0	3.3	44	840	12	70.41	0.053
samp. SUP-020	-18.67	-69.00	60.5	2.5	64	1145	16	71.56	0.056
samp. PAR 03-15	-18.19	-69.14	57.5	3.2	67	1145	16	71.56	0.059
samp. PAR 03-11	-18.13	-69.16	59.7	3.0	86	1087	15	72.47	0.079
samp. 121-090	-15.53	-72.32	60.3	2.3	70	886	12	72.62	0.079
samp. 121-099	-15.53	-72.32	60.3	2.4	69	904	12	72.90	0.076
samp. PAR 03-14	-18.18	-69.14	59.1	3.2	72	1024	14	73.14	0.070
samp. 12	-15.57	-72.72	60.4	2.7	70	954	13	73.38	0.073
samp. 121-087	-15.53	-72.31	60.5	2.4	55	911	12	73.47	0.060
samp. PAR 03 43	-18.19	-69.16	58.6	3.1	63	1108	15	73.87	0.057
samp. OCO-05-08	-15.81	-72.98	56.3	4.2	66	816	11	74.18	0.081
samp. SUA-007	-18.66	-69.00	60.8	2.6	79	1113	15	74.20	0.071
samp. POM116	-18.15	-69.15	60.9	2.7	96	966	13	74.31	0.099
samp. POM116	-18.15	-69.15	60.9	2.7	96	966	13	74.31	0.099
samp. PAR121	-18.20	-69.15	58.3	3.0	84	1046	14	74.71	0.080
samp. EM 085	-16.30	-71.41	61.2	2.5	42	829	11	75.99	0.051
samp. 121-098	-15.53	-72.32	59.4	2.6	62	982	13	76.12	0.063
samp. PAR 03 39	-18.17	-69.15	59.2	3.1	75	990	13	76.15	0.076
samp. VOL65	-15.17	-72.00	60.7	2.3	72	915	12	76.25	0.079
samp. PAR 03-12	-18.18	-69.14	58.4	3.1	71	993	13	76.38	0.072
samp. PAR118	-18.22	-69.14	59.1	2.9	84	1075	14	76.79	0.078
samp. PAR118	-18.22	-69.14	59.1	2.9	84	1075	14	76.79	0.078
samp. 121-146	-15.53	-72.31	59.8	2.6	53	985	13	76.95	0.054
samp. VOL25	-15.17	-72.00	62.4	2.0	83	847	11	77.00	0.098
samp. VOL64	-15.17	-72.00	58.8	2.8	63	925	12	77.08	0.068
samp. MIS-02-04	-16.34	-71.49	58.4	2.9	42	772	10	77.20	0.054
samp. 121-114	-15.53	-72.32	59.6	2.4	63	1016	13	77.56	0.062
samp. 121-019	-15.53	-72.32	58.4	2.7	78	1178	15	79.59	0.066
samp. A99-17	-15.48	-72.42	59.0	2.5	58	1116	14	79.71	0.052
samp. PAR082	-18.20	-69.18	60.2	3.1	75	1117	14	79.79	0.067
samp. PAR082	-18.20	-69.18	60.2	3.1	75	1117	14	79.79	0.067
samp. PAR 03-22	-18.23	-69.15	59.5	2.9	85	1045	13	80.38	0.081

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, Northern Central Volcanic Zone (NCVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. MIS-02-103	-16.26	-71.41	60.0	2.8	46	806	10	80.60	0.057
samp. PAR 03-30	-18.23	-69.18	59.0	3.0	79	1090	13	83.85	0.072

Arc: Andes, Southern Central Volcanic Zone (SCVZ)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. JC005	-26.18	-67.40	56.7	4.8	58	469	22	21.32	0.124
samp. 1717	-26.80	-68.73	56.1	4.3	79	488	21	23.24	0.162
samp. JC010	-26.18	-67.40	59.5	3.5	68	477	20	23.85	0.143
samp. JC025	-26.18	-67.40	55.9	5.5	72	618	25	24.72	0.117
samp. OLA-99-3	-26.50	-69.00	58.9	2.2	45	573	21	27.29	0.079
samp. 1719	-26.82	-68.52	58.4	2.6	64	562	20	28.10	0.114
samp. 1672	-26.95	-68.52	58.0	2.4	58	593	20	29.65	0.098
samp. 1722	-26.80	-68.73	63.1	2.2	99	532	17	31.29	0.186
samp. 1670	-27.00	-68.50	57.5	2.1	49	645	20	32.25	0.076
samp. 1680	-27.10	-68.53	56.2	5.4	48	858	26	33.00	0.056
samp. 1664	-27.10	-68.53	62.7	2.1	111	627	19	33.00	0.177
samp. CC101	-27.36	-68.92	55.5	5.7	35	612	18	33.44	0.057
samp. 1702	-27.10	-68.53	60.2	3.8	92	810	22	36.82	0.114
samp. CO 146	-28.14	-68.70	57.5	4.5	50	828	22	37.64	0.060
samp. 1654	-27.17	-69.23	59.5	2.7	68	640	17	37.65	0.106
samp. CO 149	-28.08	-68.75	60.8	3.6	104	610	16	38.13	0.170
samp. CO159	-28.27	-68.87	62.2	2.4	80	665	17	39.12	0.120
samp. CO160	-28.31	-68.80	59.2	4.3	77	699	17	41.12	0.110
samp. CO173	-28.24	-69.19	58.9	4.1	54	626	15	41.73	0.086
samp. 1648	-27.22	-69.35	58.8	2.5	46	567	13	43.62	0.081
samp. CO 135	-27.92	-68.82	63.5	2.2	114	646	14	46.14	0.176
samp. CO 170	-28.39	-69.13	57.4	4.8	48	848	17	49.88	0.057
samp. CO 39	-27.69	-68.78	62.8	2.5	104	604	12	50.33	0.172
samp. CO161	-28.27	-68.75	63.8	2.0	74	732	14	52.29	0.101
samp. CO176	-28.10	-69.16	63.4	2.3	95	737	14	52.64	0.129
samp. CO 412	-28.07	-69.30	57.4	4.7	47	912	17	53.65	0.052
samp. CO 332	-28.42	-69.04	59.3	3.7	71	991	18	55.06	0.072
samp. CO 329	-28.40	-69.16	59.0	4.2	61	882	16	55.13	0.069
samp. CO 180	-27.76	-69.03	62.7	2.3	103	688	12	57.33	0.150
samp. CO 507	-27.94	-69.05	63.0	2.4	81	901	15	60.07	0.090
samp. CO 331	-28.41	-69.10	61.5	2.6	78	789	13	60.69	0.099
samp. CO 163	-28.04	-69.16	62.8	2.1	62	835	14	60.95	0.074
samp. CO 504	-27.95	-69.12	60.2	3.5	51	932	15	62.13	0.055
samp. CO 333	-28.41	-68.93	62.0	2.5	87	831	13	63.44	0.105
samp. CO414	-28.01	-69.30	62.0	2.7	57	705	11	64.09	0.081
samp. CO 427	-27.77	-69.17	59.3	3.5	47	934	14	66.71	0.050
samp. CC17	-27.73	-69.20	58.4	3.5	55	740	11	67.27	0.074
samp. CO 416	-27.86	-69.27	58.9	2.8	55	850	12	70.83	0.065
samp. CO413	-28.06	-69.31	58.9	3.7	52	995	14	71.07	0.052
samp. CO 312	-27.99	-69.15	60.9	2.4	68	863	12	71.92	0.079
samp. CO 310	-28.11	-69.18	59.1	3.2	61	820	11	74.55	0.074
samp. CO 296A	-26.99	-68.77	62.9	2.2	93	821	11	74.64	0.113
samp. CO 140	-27.96	-68.82	63.0	2.2	85	759	10	75.90	0.112
samp. CO 151	-28.15	-68.85	64.0	2.1	98	765	10	76.50	0.128
samp. CO 313	-27.91	-69.09	62.2	2.2	76	921	12	76.75	0.083
samp. CO175	-28.11	-69.21	60.6	2.6	56	897	11	81.55	0.062
samp. CO 309	-28.10	-69.22	61.7	2.6	60	899	11	81.73	0.067

Arc: Andes, Central Central Volcanic Zone (CCVZ)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. IRU-15	-20.77	-68.62	64.6	2.1	33	532	26	20.46	0.062
samp. AR215	-25.51	-68.09	59.4	2.4	65	422	20	20.61	0.154
samp. OLC-22_1	-20.93	-68.50	58.9	2.7	49	497	24	20.71	0.099
samp. LAS 07-11	-23.40	-67.75	56.9	4.3	68	500	24	20.83	0.136
samp. LA-133	-23.37	-67.73	60.5	2.6	53	521	25	20.84	0.102
samp. NEG-98-16	-24.14	-68.32	63.7	2.2	92	480	23	20.87	0.192
samp. LA-130	-23.37	-67.73	60.3	3.6	85	480	23	20.87	0.177
samp. AN-109	-25.33	-67.98	61.0	3.6	89	481	23	20.91	0.185
samp. LA-102	-23.37	-67.73	58.3	4.8	61	462	22	21.00	0.132
samp. SS-G6	-24.37	-69.47	61.7	2.2	73	506	24	21.08	0.144
samp. LAS53	-23.37	-67.73	62.5	2.9	88	446	21	21.24	0.197
samp. AGUI-38	-23.18	-66.85	60.5	2.4	92	681	32	21.28	0.135
samp. LA-135	-23.37	-67.73	60.6	2.4	70	512	24	21.33	0.137
samp. 95/043	-23.37	-67.73	58.9	4.0	64	567	26	21.81	0.113
samp. AN-103	-25.37	-67.95	58.3	4.9	81	422	19	22.21	0.192
samp. AR88	-24.67	-68.17	60.3	2.9	83	467	21	22.24	0.178
samp. LASTARRIA-21	-25.17	-68.52	59.1	4.3	101	513	23	22.30	0.197
samp. FG-III-130D	-25.17	-68.52	59.4	4.3	101	513	23	22.30	0.197
samp. LAS 07-05	-23.35	-67.81	60.4	2.5	63	558	25	22.32	0.113
samp. LAS30	-23.37	-67.73	59.2	4.2	59	469	21	22.33	0.126
samp. OLA9026I	-21.17	-68.00	57.1	4.0	59	520	23	22.61	0.113
samp. LA-140	-23.37	-67.73	63.4	2.8	90	453	20	22.65	0.199
samp. LASTARRIA-19	-25.17	-68.52	59.3	4.0	101	524	23	22.78	0.193
samp. FG-II-214C	-25.17	-68.52	59.8	4.1	101	524	23	22.78	0.193
samp. RIN 41B	-24.01	-67.35	59.2	2.7	57	614	27	22.84	0.093
samp. AR29	-24.67	-68.17	60.9	2.8	40	320	14	22.86	0.125
samp. OLA9024	-21.28	-68.00	61.4	2.6	87	505	22	22.95	0.172
samp. LAS101	-23.37	-67.73	62.5	2.9	94	486	21	23.14	0.193
samp. RIN 41	-24.01	-67.35	62.4	2.4	81	544	23	23.23	0.150
samp. LASTARRIA-11	-25.17	-68.52	59.1	4.0	100	516	22	23.45	0.194
samp. FG-II-113C	-25.17	-68.52	59.7	4.0	100	516	22	23.45	0.194
samp. RIN 13	-24.07	-67.34	65.5	2.1	89	472	20	23.60	0.189
samp. OLA-029	-21.30	-68.18	61.7	2.8	82	496	21	23.62	0.165

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, Central Central Volcanic Zone (CCVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. OLA9030	-21.28	-68.00	61.2	2.6	83	520	22	23.64	0.160
samp. LAS61	-23.37	-67.73	60.9	3.1	77	546	23	23.74	0.141
samp. OLA9031	-21.28	-68.00	58.6	3.5	69	547	23	23.78	0.126
samp. L-A1	-22.51	-69.02	56.6	3.5	62	479	20	23.95	0.129
samp. OLA-023	-21.31	-68.19	60.4	3.6	83	479	20	23.95	0.173
samp. OLA9023	-21.28	-68.00	63.0	2.4	91	527	22	23.95	0.173
samp. LAS79-1	-23.37	-67.73	59.2	4.2	70	480	20	24.00	0.146
samp. LASTARRIA-9	-25.17	-68.52	60.9	3.2	96	529	22	24.05	0.181
samp. D-143	-25.17	-68.52	61.2	3.2	96	529	22	24.05	0.181
samp. LAS191	-23.37	-67.73	62.4	2.7	84	530	22	24.09	0.158
samp. LASTARRIA-27	-25.17	-68.52	58.8	3.9	99	531	22	24.14	0.186
samp. FG-IV-224C	-25.17	-68.52	59.4	3.9	99	531	22	24.14	0.186
samp. OLA9026	-21.20	-68.00	60.1	2.9	89	485	20	24.25	0.184
samp. FP-214B1	-25.17	-68.52	57.2	4.7	108	558	23	24.26	0.194
samp. LASTARRIA-34	-25.17	-68.52	57.8	4.7	108	558	23	24.26	0.194
samp. NN-P2	-22.11	-68.97	60.5	2.1	69	631	26	24.27	0.109
samp. 0100-COLO-1-38	-25.37	-68.93	59.7	2.3	57	534	22	24.27	0.107
samp. OLA9053	-21.25	-68.17	61.0	2.7	90	510	21	24.29	0.176
samp. FG-II-214A1	-25.17	-68.52	58.6	4.6	89	535	22	24.32	0.166
samp. LASTARRIA-17	-25.17	-68.52	58.8	4.6	89	535	22	24.32	0.166
samp. LASTARRIA-14	-25.17	-68.52	59.0	3.8	100	535	22	24.32	0.187
samp. FG-II-158F	-25.17	-68.52	59.6	3.9	100	535	22	24.32	0.187
samp. 059-CDA-1-4	-25.30	-68.52	58.1	3.6	91	539	22	24.50	0.169
samp. 090-COLO-1-29	-25.37	-68.93	58.1	2.9	55	515	21	24.52	0.107
samp. LAS145B	-23.37	-67.73	61.1	3.3	73	466	19	24.53	0.157
samp. 88068B	-22.12	-68.15	60.3	3.8	78	493	20	24.65	0.158
samp. LAS145D	-23.37	-67.73	61.0	3.4	73	470	19	24.74	0.155
samp. 074-COLO-1-14	-25.37	-68.93	60.7	2.2	71	571	23	24.83	0.124
samp. RIN 28	-24.07	-67.33	63.1	2.9	95	500	20	24.87	0.189
samp. LASTARRIA-15	-25.17	-68.52	57.9	4.6	83	548	22	24.91	0.151
samp. FG-II-210A1	-25.17	-68.52	58.3	4.6	83	548	22	24.91	0.151
samp. RIN 11	-24.07	-67.34	64.8	2.0	87	500	20	25.00	0.174
samp. LASTARRIA-13	-25.17	-68.52	59.1	4.3	98	526	21	25.05	0.186
samp. FG-II-113H	-25.17	-68.52	59.4	4.3	98	526	21	25.05	0.186
samp. AR262	-25.42	-67.90	57.1	5.8	78	430	17	25.07	0.181
samp. OLA9050	-21.25	-68.17	60.8	3.2	85	502	20	25.10	0.169
samp. 41559	-25.49	-68.11	58.5	2.5	58	434	17	25.23	0.134
samp. OLA9014	-21.28	-68.00	60.9	2.6	77	530	21	25.24	0.145
samp. FG-II-300A	-25.17	-68.52	59.9	4.2	101	531	21	25.29	0.190
samp. AR43	-24.67	-68.17	60.6	2.9	61	431	17	25.35	0.142
samp. RIN 25	-24.11	-67.33	63.8	2.6	89	482	19	25.37	0.185
samp. AP-07-26	-21.35	-68.38	62.5	2.7	94	473	19	25.44	0.199
samp. LAS62	-23.37	-67.73	61.4	3.0	78	537	21	25.57	0.145
samp. LAS95A	-23.37	-67.73	61.3	3.3	72	464	18	25.78	0.155
samp. RIN 27	-24.11	-67.33	64.2	2.7	84	490	19	25.79	0.171
samp. OLA9047	-21.25	-68.17	60.5	3.1	89	491	19	25.84	0.181
samp. LAS149	-23.37	-67.73	62.5	3.0	84	441	17	25.94	0.190
samp. AR273	-25.50	-68.14	58.7	2.7	92	489	19	25.94	0.188
samp. 094-COLO-1-32	-25.37	-68.93	55.2	4.1	41	493	19	25.95	0.083
samp. LAS109	-23.37	-67.73	59.0	4.3	61	494	19	26.00	0.123
samp. LAS7	-23.37	-67.73	62.5	3.1	77	443	17	26.06	0.174
samp. 95/042	-23.37	-67.73	56.7	5.2	38	549	21	26.14	0.069
samp. RAN11B	-25.87	-67.42	56.5	5.2	66	522	20	26.23	0.126
samp. LAS58E	-23.37	-67.73	58.1	4.5	56	525	20	26.25	0.107
samp. OLA90151	-21.17	-68.00	56.2	3.3	63	610	23	26.52	0.103
samp. AN-132	-25.27	-67.68	61.4	2.9	82	531	20	26.55	0.154
samp. AN-18	-25.87	-67.67	58.0	5.2	83	425	16	26.56	0.195
samp. SS-H1	-24.24	-69.35	61.2	3.2	76	559	21	26.62	0.136
samp. 072-COLO-1-12	-25.37	-68.93	55.5	3.4	43	533	20	26.65	0.081
samp. LAS58F	-23.37	-67.73	59.9	4.0	70	480	18	26.67	0.146
samp. LASTARRIA-23	-25.17	-68.52	58.8	4.4	96	535	20	26.75	0.179
samp. FG-IV-224A	-25.17	-68.52	59.3	4.4	96	535	20	26.75	0.179
samp. OLA-021	-21.30	-68.18	62.1	2.4	93	535	20	26.75	0.174
samp. BC9011	-21.20	-68.00	60.9	2.8	95	535	20	26.75	0.178
samp. BC9008	-21.20	-68.00	58.2	2.6	86	616	23	26.78	0.140
samp. L-A4/2	-22.51	-69.03	55.8	4.5	47	484	18	26.89	0.097
samp. LAS 07-26	-23.40	-67.72	58.5	4.7	112	592	22	26.91	0.189
samp. AR168	-25.53	-67.66	56.2	4.5	65	630	23	27.07	0.103
samp. LAS108	-23.37	-67.73	59.2	4.1	62	516	19	27.16	0.120
samp. AR266	-25.50	-67.85	57.1	3.2	81	734	27	27.31	0.110
samp. OLA9048	-21.25	-68.17	61.5	2.9	79	519	19	27.32	0.152
samp. LAS50	-23.37	-67.73	62.0	3.2	79	466	17	27.41	0.170
samp. LAS57	-23.37	-67.73	58.3	4.2	63	494	18	27.44	0.128
samp. LASTARRIA-24	-25.17	-68.52	58.2	4.4	83	552	20	27.60	0.150
samp. FG-IV-224B1	-25.17	-68.52	58.9	4.5	83	552	20	27.60	0.150
samp. FN2-10	-25.37	-68.93	57.4	2.9	51	497	18	27.61	0.103
samp. AN-136	-25.23	-67.67	60.5	3.3	77	533	19	27.62	0.144
samp. FG-IV-224B3	-25.17	-68.52	59.0	3.8	104	528	19	27.79	0.197
samp. LASTARRIA-26	-25.17	-68.52	59.3	3.8	104	528	19	27.79	0.197
samp. 070-COLO-1-10	-25.37	-68.93	58.4	2.5	61	584	21	27.81	0.104
samp. NN-Q2(1)	-22.34	-68.97	63.2	2.2	94	612	22	27.82	0.154
samp. AN-133	-25.25	-67.68	61.4	2.7	88	557	20	27.85	0.158
samp. LAS 07-14	-23.34	-67.76	57.4	4.7	57	559	20	27.95	0.102
samp. AR152	-25.62	-67.79	57.2	4.0	74	506	18	28.00	0.146
samp. VLM1	-21.28	-68.00	61.1	2.6	79	507	18	28.01	0.156
samp. AN-136	-25.23	-67.67	60.5	3.3	77	533	19	28.05	0.144
samp. LAS110	-23.37	-67.73	59.1	4.2	61	535	19	28.16	0.114
samp. OLA9037	-21.25	-68.17	62.6	2.3	93	507	18	28.17	0.183

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Andes, Central Central Volcanic Zone (CCVZ) (continued)

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. OLC-001	-20.94	-68.54	60.9	2.6	90	621	22	28.23	0.145
samp. 086-COLO-1-25	-25.37	-68.93	60.9	2.5	70	537	19	28.26	0.130
samp. BC9007	-21.20	-68.00	59.5	2.8	92	599	21	28.52	0.154
samp. 95/026	-23.37	-67.73	62.4	3.1	74	514	18	28.56	0.144
samp. OLA-013	-21.31	-68.18	62.2	2.4	93	515	18	28.61	0.181
samp. OLA-003	-21.30	-68.18	61.6	2.2	75	487	17	28.65	0.154
samp. COLORADO-8	-25.37	-68.93	55.3	3.3	40	602	21	28.67	0.066
samp. OLA9021	-21.20	-68.00	63.5	2.1	94	488	17	28.71	0.193
samp. OLA-014	-21.30	-68.18	56.4	3.9	55	603	21	28.71	0.091
samp. PN11	-24.22	-66.92	60.7	3.0	103	576	20	28.94	0.179
samp. LA-136	-23.37	-67.73	58.0	3.8	57	616	21	29.33	0.093
samp. NN-Q1A	-22.30	-69.10	56.2	4.1	92	646	22	29.36	0.142
samp. COR-98-87-2	-22.64	-67.90	56.4	3.9	59	647	22	29.41	0.091
samp. LTA-98-83	-25.14	-68.52	58.7	4.2	50	618	21	29.43	0.081
samp. SS-L1	-22.55	-69.00	62.5	2.5	100	620	21	29.52	0.161
samp. OLA90271	-21.17	-68.00	57.1	3.8	43	650	22	29.55	0.066
samp. LTA-98-81-2	-25.13	-68.52	59.5	3.6	65	563	19	29.63	0.115
samp. AN-50	-25.75	-67.92	60.4	3.0	88	534	18	29.67	0.165
samp. AP-00-52	-21.21	-68.57	62.0	2.4	82	554	19	29.80	0.148
samp. AN-112	-25.77	-68.02	60.8	3.7	88	477	16	29.81	0.184
samp. OLA-001	-21.30	-68.18	62.4	2.2	94	507	17	29.82	0.185
samp. OLA90251	-21.17	-68.00	59.2	3.5	54	600	20	30.00	0.090
samp. AZU-002	-21.78	-68.23	60.1	3.8	71	573	19	30.16	0.124
samp. AR258	-25.45	-67.97	57.8	3.7	48	573	19	30.17	0.084
samp. GLA-101	-23.37	-67.73	60.1	3.3	73	575	19	30.26	0.127
samp. AR122	-25.65	-67.88	61.4	2.3	93	541	18	30.31	0.172
samp. SP-001	-21.88	-68.50	56.4	5.7	37	576	19	30.32	0.064
samp. LAS 07-08	-23.32	-67.78	57.4	3.7	75	789	26	30.35	0.095
samp. AN-51	-25.77	-67.90	59.9	3.2	82	549	18	30.50	0.149
samp. LAS78B	-23.37	-67.73	60.6	3.4	69	489	16	30.56	0.141
samp. AR129	-25.67	-67.80	63.1	3.0	92	564	18	30.57	0.163
samp. AR205	-25.56	-68.10	57.0	3.4	59	545	18	30.62	0.108
samp. AN-16	-25.85	-67.65	60.0	3.2	83	591	19	30.65	0.140
samp. AR237	-25.51	-68.04	55.8	3.1	70	751	24	30.78	0.093
samp. GLA-201	-23.37	-67.73	61.6	2.9	78	585	19	30.79	0.133
samp. 081-COLO-1-20	-25.37	-68.93	57.9	2.2	53	556	18	30.89	0.095
samp. 069-COLO-1-9	-25.37	-68.93	58.8	2.4	62	588	19	30.95	0.105
samp. AR230	-25.62	-68.06	60.4	3.7	59	516	17	31.03	0.114
samp. COLORADO-3	-25.37	-68.93	56.3	2.4	32	559	18	31.06	0.057
samp. AR136	-25.55	-67.69	58.4	2.4	88	700	23	31.07	0.126
samp. AN-16	-25.85	-67.65	60.0	3.2	83	591	19	31.11	0.140
samp. OLC-006	-20.92	-68.48	59.1	3.7	71	654	21	31.14	0.109
samp. AR231	-25.61	-68.05	59.8	3.2	80	601	19	31.19	0.133
samp. LA-141	-23.37	-67.73	57.2	4.8	49	625	20	31.25	0.078
samp. OLA9022	-21.28	-68.00	61.2	2.1	74	563	18	31.28	0.131
samp. AP-00-37	-21.17	-68.58	63.4	2.6	94	490	16	31.42	0.193
samp. AR163	-25.38	-67.72	60.2	4.6	65	525	17	31.53	0.124
samp. COLORADO-7	-25.37	-68.93	56.5	2.6	50	603	19	31.74	0.083
samp. AR134	-25.66	-67.80	64.0	2.0	78	403	13	31.88	0.194
samp. LPO1	-21.32	-68.29	56.0	4.9	43	587	18	32.08	0.072
samp. LA-143	-23.37	-67.73	55.5	5.5	38	643	20	32.15	0.059
samp. COLO-2-5	-25.75	-68.55	57.1	2.7	50	611	19	32.16	0.082
samp. CEB-005	-21.62	-68.47	61.6	2.2	86	549	17	32.29	0.157
samp. LAS47	-23.37	-67.73	56.1	5.7	41	550	17	32.35	0.075
samp. AR121	-25.65	-67.89	60.4	2.5	87	514	16	32.66	0.169
samp. PN15	-24.22	-66.92	60.0	3.4	94	557	17	32.76	0.169
samp. 091-COLO-1-30	-25.37	-68.93	55.7	3.0	43	623	19	32.79	0.069
samp. M8	-24.18	-67.07	60.6	3.0	63	680	21	32.85	0.093
samp. AR146	-25.57	-67.73	60.0	2.0	89	707	21	32.90	0.126
samp. AN-85	-25.28	-67.97	56.8	4.9	52	626	19	32.95	0.083
samp. AZU1	-21.78	-68.23	61.6	3.1	37	629	19	33.11	0.059
samp. PUS-1	-20.48	-68.58	55.7	4.1	37	629	19	33.11	0.059
samp. AN-83	-25.25	-67.82	61.5	2.0	70	631	19	33.21	0.111
samp. SPP-98-56	-21.82	-68.46	62.9	2.3	62	667	20	33.35	0.093
samp. OLC-007	-20.92	-68.48	60.6	2.4	95	667	20	33.35	0.142
samp. AR103	-25.60	-67.69	59.7	2.1	108	699	21	33.38	0.155
samp. 88085	-21.80	-68.30	64.3	2.1	90	502	15	33.47	0.179
samp. SAT-1-1	-25.37	-68.85	59.3	3.5	71	537	16	33.56	0.132
samp. LA-124	-23.37	-67.73	56.2	5.8	34	571	17	33.59	0.060
samp. LA124	-23.37	-67.73	56.2	5.8	34	571	17	33.59	0.060
samp. CHE-007	-21.43	-68.43	60.0	2.3	56	605	18	33.61	0.093
samp. AUC-003	-21.20	-68.47	63.2	2.5	97	605	18	33.61	0.160
samp. AR165	-25.30	-67.77	57.8	4.2	70	574	17	33.74	0.122
samp. AP-07-08	-21.12	-68.36	62.5	3.0	94	519	15	33.89	0.181
samp. M35	-24.23	-67.02	59.1	3.7	48	717	21	33.97	0.067
samp. AR139	-25.58	-67.69	60.3	2.5	94	701	20	34.26	0.134
samp. OLC-005	-20.93	-68.50	62.3	2.4	100	585	17	34.41	0.171
samp. RIN 32	-24.07	-67.34	58.4	4.0	48	622	18	34.56	0.077
samp. AP-07-27	-21.35	-68.40	62.3	2.9	84	522	15	34.59	0.160
samp. OPC1	-21.30	-68.15	60.1	3.0	67	517	15	34.70	0.129
samp. AR147	-25.57	-67.72	59.9	2.3	94	735	21	34.74	0.128
samp. LIC-98-11	-22.86	-67.88	60.9	2.5	96	592	17	34.82	0.162
samp. LAS 07-16	-23.39	-67.79	56.9	4.0	135	957	27	34.93	0.141
samp. SAF212	-25.51	-67.22	60.5	4.5	106	645	18	35.05	0.164

Table DR4: Geochemical data for Quaternary rock analyses (continued)

Arc: Tonga

Sample	Latitude	Longitude	SiO ₂ (wt. %)	MgO (wt. %)	Rb (ppm)	Sr (ppm)	Y (ppm)	Sr/Y	Rb/Sr
samp. MG14	-20.33	-174.88	59.0	2.9	20	168	36	4.67	0.119
samp. L1	-18.82	-174.67	56.6	3.7	10	130	24	5.42	0.077
samp. F30	-17.70	-174.33	60.9	2.4	14	130	21	6.19	0.108
samp. L20	-18.82	-174.67	56.8	4.4	12	225	26	8.65	0.053
samp. MG98	-20.33	-174.88	59.5	3.2	27	284	30	9.47	0.095
samp. 1	-18.78	-175.00	63.7	5.1	14	215	21	10.24	0.065
samp. IV3-40	-14.97	-173.39	56.7	4.6	9	118	11	10.73	0.076
samp. 34.1	-16.95	-174.53	55.9	4.9	8	150	12	12.40	0.055
samp. T053	-15.95	-173.97	61.2	2.3	11	210	15	14.01	0.051
samp. VI3-32	-14.97	-173.39	60.0	3.4	20	385	13	29.62	0.052
samp. VI3-30	-14.97	-173.39	60.8	3.1	21	379	12	31.58	0.055
samp. VI3-29	-14.97	-173.39	60.2	3.3	21	389	12	32.42	0.054

Table DR5: Compiled data for individual arcs

Arc	median Sr/Y	Sr/Y uncertainty	Moho depth (km)	Moho uncertainty	Moho Source
Aegean	14.0	1.1	28.2	0.6	Zellmer, 2008
Aeolian	26.0	6.6	24.9	1.0	Zellmer, 2008
Aleutian	11.4	2.3	18.9	4.4	Zellmer, 2008
C. America	15.6	2.6	28.0	7.0	Zellmer, 2008
Cascades	24.8	9.4	38.0	1.9	Zellmer, 2008
G. Antilles	12.8	3.3	25	5	Brown and Gurrola, 2002
Guatamala	31.4	5.1	44	3	Lucke, 2014
Honshu	11.7	4.0	26.9	4.0	Zellmer, 2008
Izu-Bonin	8.7	1.3	20.5	2.7	Zellmer, 2008
Kamchatka	15.5	4.7	24.6	5.4	Zellmer, 2008
Kurile	9.9	1.6	18.3	0.9	Zellmer, 2008
L. Antilles	11.8	1.4	24.7	0.7	Zellmer, 2008
Liguria	16.2	6.3	30	3	Chamot-Rooke et al., 1999
Luzon	24.0	10.3	27.8	4.5	Zellmer, 2008
Marianas	9.4	0.3	14.5	1.0	Zellmer, 2008
Mexican	21.6	4.5	30.3	5.5	Zellmer, 2008
NE Aluetian	29.6	0.6	40	3	Eberhart-Phillips et al., 2006
New Britain	9.5	1.0	22.5	6.5	Zellmer, 2008
New Hebrides	20.1	5.6	25	3	Dimalanta et al., 2002
Ryukyu	18.2	3.5	24.5	3.4	Zellmer, 2008
S. Sandwich	4.5	0.3	11.8	0.1	Zellmer, 2008
S. Shetland	17.9	4.8	31	3	Janik et al., 2014
Sulawesi	11.9	2.8	27.4	2.2	Zellmer, 2008
Sunda	15.7	2.9	27.8	1.8	Zellmer, 2008
SVZ	20.7	7.7	40	5	Yuan et al., 2006
Tonga	10.5	10.4	20.0	3.0	Zellmer, 2008
NVZ	45.0	11.2	60	8	Guillier et al., 2001
N_CVZ	55.7	16.1	65.0	0.7	Zellmer, 2008
S_CVZ	52.3	18.0	65.0	0.7	Zellmer, 2008
C_CVZ	27.3	3.9	65.0	0.7	Zellmer, 2008