Ms 193SR-209, Table T1. Geochemistry of variably altered dacite from the PACMANUS hydrothermal field.

Sample ID:	PM01	PM02	PM05		PM06			PM07	PM08	PM10		PM11		PM14		PM15		PM18	PM20	PM21	PM23		PM26	PM27	PM29		PM33
Hole:	1188A																						1188F				
Core section, interval (cm):	2R-1, 18	5R-1, 37	7R-1, 114		8R-1, 13			8R-1, 66	9R-1, 130	11R-1, 20		12R-2, 47		14R-1, 86		14R-1, 107		17R-1, 24	19R-1, 41	19R-1, 86	20R-1, 95		6Z-1, 45	8Z-1, 26	13Z-1, 0		19Z-1, 27
Depth (mbsf):	9.78	33.97	49.34		58.03			58.56	68.9	87.1		98.55		116.86		117.07		145.34	164.71	165.16	174.85		233.55	236.46	241.4		268.67
Volcanic facies:	Coherent, vesicular	Coherent, perlite	Coherent relict perlite		Coherent kernels	Coherent app. matrix	Coherent relict perlite	Brecciated	Coherent, relict perlite	Coherent, margin	Coherent, kernel	Coherent, light bands	Coherent, dark bands	Coherent, veined	Coherent, app. clasts	Volcanic breccia clast	Volcanic breccia matrix	Coherent, vesicular	Coherent amygdal.	Coherent vesicular	Coherent spherulitic		Coherent spherulitic	Coherent amygdal.	Coherent, kernel	Coherent, margin	Coherent
Alteration facies:	Unaltered	Weak	Py-anhy	Chl-py	Py-anhy			Chl-py	Anhy-py-pyro	Py-anhy	Chl-py	Weak		Anhy-py-pyro		Anhy-py-pyro		Anhy-py-pyro	Chl-py	Weak	Chl-py		Weak	Py-anhy	Py-anhy	Anhy-py-pyro	Py-anhy
Powder:	P001	P002	P004	P003	P005	P006	P071	P007	P008	P009	P010	P011	P069	P012	P070	P013	P014	P015	P016	P017	P018	P019	P020	P021	P023	P022	P024
Major element oxides (wt%):																											
SiO_2	68.28	62.35	54.77	58.80	72.18		64.46	64.36	64.15	65.94	66.32	68.31	67.54	70.05	48.38		71.11	68.42	62.15	65.57	56.02	55.42	65.32	58.81	57.65	60.58	59.82
TiO_2	0.51	0.58	0.59	0.58	0.63	0.52	0.63	0.58	0.62	0.60	0.61	0.62	0.61	0.60	0.83	0.47	0.61	0.57	0.84	0.74	0.77	0.74	0.67	0.71	0.74	0.73	0.74
Al_2O_3	13.50	13.25	13.46	13.39	14.04		13.93	13.32	14.04	13.52	13.87	14.13	13.96	14.20	20.48		13.90	13.15	13.08	14.07	13.84	13.22	14.08	14.02	12.99	12.73	13.03
Fe_2O_3	4.43	4.97	6.90	5.37	4.71		8.19	6.09	1.50	4.13	5.17	5.12	5.65	3.14	3.51		0.55	1.90	5.07	5.60	10.06	9.64	5.08	6.79	7.01	4.12	6.70
MgO	0.99	1.13	2.18	4.03	0.65		0.65	4.54	0.23	3.28	1.93	1.43	1.59	0.23	0.35		0.25	1.96	6.17	2.28	4.07	3.72	3.63	1.77	0.43	0.25	0.14
CaO	2.70	2.52	5.60	3.14	0.32		0.22	1.04	5.36	2.41	2.71	1.99	1.93	1.82	5.65		3.24	2.84	3.24	3.56	3.08	3.79	1.12	2.70	3.36	4.52	3.48
MnO	0.11	0.12	0.03	0.09	0.01		0.01	0.15	0.01	0.02	0.02	0.08	0.09	0.00	0.00		0.00	0.03	0.07	0.09	0.16	0.12	0.17	0.01	0.01	0.00	0.00
Na_2O	4.67	2.63	1.04	0.69	0.47		0.72	0.53	0.67	2.55	3.85	5.25	4.98	0.77	1.55		0.85	0.58	3.30	4.00	4.29	4.15	4.67	0.49	0.47	0.52	0.80
K_2O	1.96	2.52	1.25	1.65	0.43		0.60	1.04	0.14	0.29	0.31	0.43	0.43	0.79	0.92		1.35	1.80	0.09	0.35	0.27	0.25	0.58	1.60	2.11	1.80	1.32
P_2O_5	0.10	0.14	0.11	0.11	0.16		0.07	0.12	0.12	0.15	0.11	0.13	0.14	0.06	0.07		0.14	0.06	0.25	0.19	0.37	0.36	0.14	0.19	0.25	0.17	0.24
Volatiles (wt%):																											
H_2O	2.06	8.19	3.94	5.16	4.16	3.94	4.27	5.14	3.18	3.29	1.95	1.67	1.79	2.94	4.71	3.7	2.74	3.54	4.04	1.97	3.57	3.79	3.57	3.83	3.22	3.78	2.72
CO_2	0.03	0.10	0.05	0.06	0.06	0.05	0.05	0.05	0.03	0.06	0.09	0.05	0.07	0.04	0.07	0.03	0.06	0.03	0.05	0.08	0.10	0.11	0.25	0.04	0.06	0.07	0.04
NO_3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
S_{total}	0.03	0.24	6.89	3.54	3.31	10.90	6.03	2.15	3.54	3.65	3.48	0.53	0.60	3.12	6.07	3.35	1.73	1.74	0.72	0.51	2.88	3.42	0.93	6.64	7.62	5.85	7.47
$S_{in\ sulfide}$	ND	ND	5.98	2.30	3.31	ND	6.03	1.60	0.84	3.29	3.25	ND	ND	2.12	ND	ND	0.42	0.65	ND	ND	2.88	2.82	ND	5.45	5.97	3.69	5.88
$SO_{4\ in\ anhydrite}$	ND	ND	2.73	3.72	BDL	ND	BDL	1.65	8.10	1.08	0.69	ND	ND	2.99	ND	ND	3.93	3.28	ND	ND	BDL	1.79	ND	3.58	4.94	6.48	4.76
LOI																											
Totals:	99.37	98.74	98.63	99.09	101.13		99.83	100.20	98.99	100.61	100.88	99.74	99.38	99.75	92.59		99.15	98.80	99.07	99.01	99.48	99.92	100.21	99.99	99.21	99.43	99.67
Halogens (ppm):																											
F	540	950					1100	1480				480	520					1190		620	1990			1800	1800		1470
Cl*	2950	2170					<200	470				810	1000					950		680	<200			260	420		920
Cl†	3100																							120	320		
Trace elements by XRF (ppm):																											
Ba	381	357	260	366	797		405	222	228	272	255	417	316	499	264		424	845	100	292	154	181	275	462	667	1631	604
Rb	33	38	18	27	8		14	20	7	8	7	9	11	9	13		14	19	5	4	4	3	11	16	16	13	11
Sr	223	243	373	219	69		103	83	288	220	303	242	229	139	303		189	237	430	342	359	365	276	186	260	388	276
Y	35	31	33	35	35		30	28	28	30	27	31	34	25	52		25	30	34	29	29	27	31	31	25	37	30
Zr	106	100	99	97	91		107	83	96	96	109	109	110	111	166		99	104	92	100	79	74	99	99	83	82	86
Trace elements by ICP-MS (ppm):																											
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cu	25	33	48	24	61	182	107	12	22	7	10	56	133	6	7	16	16	11	12	11	73	67	127	10	10	10	26
Pb	10	8	31	18	15	26	18	20	2	10	8	15	13	4	5	2	3	1	3	4	3	3	18	3	2	1	3
Zn	103	88	44	79	224	44	126	166	6	42	39	48	61	9	25	10	41	22	54	90	117	130	109	13	18	16	10
Ba	424	408	320	399	754	516	402	246	290	320	292	568	375	504	1290	707	481	956	94	375	157	293	268	704	785	1880	690
Ag	2.1	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
As	5.3	6.7	12.9	5.5	<5	30.2	15.8	20.6	5.9	<5	<5	16.1	<5	8.4	62.7	7.6	<5	8.9	<5	<5	5.5	11.2	<5	10.0	<5	<5	<5
Bi	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Cd	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cr	14.3	14.9	15.5	16.6	14.8	11.2	13.4	13.7	16.2	15.1	100.0	14.9	27.4	1.4	<0.5	5.0	12.1	1.0	3.9	31.2	108.6	103.0	51.3	7.4	2.5	3.6	2.4
Co	5.1	5.9	5.6	5.5	4.7	7.4	5.8	5.0	2.6	5.7	6.9	4.0	5.5	10.5	11.6	1.6	0.6	4.6	22.7	7.5	24.1	17.9	8.7	22.4	16.8	9.6	9.1
Ga	17.4	17.5	33.2	27.0	19.3	17.6	17.0	16.7	8.8	24.9	22.8	16.0	17.2	11.3	14.0	10.6	7.1	8.2	13.3	17.4	22.8	20.8	17.3	16.2	14.4	8.8	5.2
Mo	4.96	2.65	5.05	2.16	0.66	9.40	4.42	2.29	3.42	2.65	2.06	1.78	1.68	7.33	8.78	9.08	3.52	3.17	3.67	2.40	5.40	4.48	0.90	7.66	14.30	39.66	1.04
Ni	15	8	7	6	6	6	13	6	5	7	310	6	10	2	7	2	1	2	8	12	55	51	24	16	7	5	4
Rb	34.7	38.7	16.3	28.8	7.7	6.8	8.3	15.5	2.4	3.3	2.2	5.6	7.2	6.7	12.4	18.1	10.4	15.1	<0.5	1.5	1.8	2.3	7.8	14.5	16.4	13.1	9.4
Sb	<0.5	<0.5	<0.5	<0.5	<0.5	3.9	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sc	10.7	10.8	11.6	11.1	10.0	7.4	7.9	9.8	6.9	6.2	6.7	11.2	12.5	<5	6.5	6.4	5.2	6.9	12.3	17.4	15.7	14.7	15.0	12.0	14.2	10.0	10.9
Sr	257	271	433	254	67.7	172	99.3	92.3	349	253	340	249	258	147	362	357	209	259	464	373	403	413	301	211	288	465	299
Tl	0.25	0.43	0.49	0.66	0.76	1.19	0.67	0.25	0.07	0.05	0.07	0.09	0.09	0.21	0.12	0.55	0.47	0.26	<0.5	<0.5	<0.5	<0.5	0.20	0.15	<0.5	0.21	0.21
U	0.81	1.02	1.09	0.80	0.70	0.64	0.65	1.01	0.26	0.62	0.82	0.84	0.68	0.32	0.30	0.50	0.20	0.19	3.01	0.80	0.43	0.36	0.77	0.45	<0.5	0.39	0.29
V	18	27	29	27	25	20	23	24	25	23	29	25	27	8	12	25	18	7	114	39	194	184	38	31	56	49	51
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Uni Kiel	Uni Kiel	Uni Kiel	Freiberg	Freiberg	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Freiberg	Uni Kiel	Uni Kiel	Freiberg	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel
Cs	ND	ND	ND	ND	ND	ND	ND	ND	0.27	0.23	0.70	ND	ND	0.37	0.17	0.12	0.09	0.31	0.04	ND	0.18	0.15	ND	0.24	0.22	0.13	0.10
Ta	ND	ND	ND	ND	ND	ND	ND	ND	0.14	0.12	0.14	ND	ND	0.49	0.20	0.23	0.13	0.13	0.12	ND	0.09	0.09	ND	0.14	0.11	0.10	0.11
Th	2.16	2.19	1.66	1.75	1.72	1.84	1.68	1.87	1.26	1.36	1.40	1.92	2.00	1.70	1.95	2.91	1.39	1.24	1.25	1.00	0.97	1.03	1.90	1.35	1.09	0.98	1.08
Nb	1.56	1.74	1.40	1.47	1.34	1.24	1.30	1.29	1.54	1.40	1.52	1.42	1.35	1.89	2.45	2.32	1.55	1.59	1.38	<5	0.95	0.92	1.36	1.46	1.27	1.23	1.21
Hf	3.9	3.2	3.1	3.4	3.2	2.9	3.6	3.1	4.14	3.82	3.50	3.2	3.7	4.55	5.91	6.44	3.82	3.92	3.47	3.9	2.42	2.62	3.1	3.87	3.18	2.88	3.08
Y	35	32	31	33	25	19	25	30	35	32	27	33	30	23	57	37	21	31	35	29	24	25	31	32	30	33	31
Zr	121	107	102	107	96	86	92	96	123	114	119	103	106	134	196	193	123	124	102	101	76	78	107	112	98	96	96
La	11.70	11.78	9.36	11.70	12.58	10.52	12.30	10.53	12.75	11.83	10.62	11.04	11.40	9.06	16.96	9.19	7.77	10.46	12.98	11.30	8.55	10.70	10.06	10.95	7.61	12.87	9.54
Ce	24.93	24.52	22.15	24.46	28.34	25.20	24.30	25.26	29.20	27.58	24.09	26.45	23.40	20.88	40.52	21.53	18.13	24.66	29.75	25.10	20.74	25.39	23.43	26.77	19.98	31.33	23.48
Pr	3.63	3.46	3.35	3.45	3.98	3.65	3.52	3.72	4.16	4.16	3.49	3.76	3.46	3.00	6.19	3.21	2.62	3.73	4.23	3.67	3.10	3.93	3.43	4.04	3.22	4.74	3.62
Nd	17.66	17.80	15.83	16.42	16.12	14.87	14.80	16.86	18.37	18.88	15.20	16.69	15.10	12.75	28.50	14.56	11.53	17.15	18.60	16.31	14.27	18.68	15.35	18.50	15.54	21.12	17.05
Sm	4.27	4.03	4.08	3.98	4.19	3.88	3.80	4.75	4.54	4.87	3.71	4.57	3.95	3.26	8.08	4.34	3.15	4.61	4.90	4.00	3.81	4.70	4.49	4.89	4.38	5.28	4.64
Eu	1.21	1.20	1.10	1.02	1.13	1.02	0.92	1.42	1.47	1.32	1.30	1.32	1.05	0.71	2.33	1.45	0.72	1.20	1.59	1.55	1.14	1.38	1.38	1.26	1.18	1.18	1.33
Gd	4.53	4.36	4.32	4.27	4.18	3.48	3.76	4.78	5.24	5.34	3.94	4.80	4.35	3.63	9.31	5.85	3.44	5.08	5.59	5.26	4.23	4.99	4.64	5.46	4.96	5.51	5.29
Tb	0.83	0.76	0.78	0.75	0.71	0.57	0.59	0.90	0.92	0.94	0.72	0.90	0.70	0.66	1.66	1.07	0.60	0.88	0.99	0.87	0.73	0.83	0.86	0.97	0.87	0.95	0.92
Dy	5.62	5.24	5.20	4.90	4.63	3.76	3.90	6.15	6.13	6.19	4.76	6.05	4.57	4.43	10.36	7.17	3.91	5.75	6.58	5.42	4.71	5.16	5.63	6.38	5.71	6.22	6.11
Ho	1.18	1.07	1.09	1.04	0.95	0.78	0.82	1.30	1.37	1.33	1.03	1.27	0.98	0.97	2.16	1.54	0.82	1.22	1.41	1.21	0.99	1.07	1.21	1.38	1.23	1.32	1.30
Er	3.69	3.31	3.35	3.21	3.01	2.49	2.53	4.05	4.16	3.96	3.16	3.92	3.07	2.93	6.21	4.68	2.42	3.61	4.09	3.67	2.89	3.06	3.82	4.11	3.66	3.89	3.84
Tm	0.57	0.50	0.51	0.48	0.45	0.38	0.37	0.62	0.65	0.62	0.51	0.60	0.45	0.48	0.95	0.77	0.38	0.57	0.62	0.59	0.44	0.47	0.58	0.65	0.57	0.60	0.59
Yb	3.76	3.35	3.41	3.17	2.96	2.50	2.69	4.18	4.47	4.38	3.60	3.90	3.31	3.46	6.61	5.53	2.59	3.98	4.24	3.56	3.06	3.18	3.86	4.59	4.03	4.15	4.09
Lu	0.58	0.51	0.51	0.49	0.45	0.39	0.41	0.63	0.71	0.70	0.57	0.61	0.50	0.55	1.04	0.90	0.40	0.64	0.65	0.55	0.48	0.50	0.61	0.73	0.64	0.64	0.64
ZrXRF/ZrICP-MS:	0.88	0.93	0.97	0.91	0.95	NV	1.16	0.86	0.78	0.84	0.91	1.06	1.04	0.83	0.85	NV	0.81	0.84	0.90	0.99	1.04	0.94	0.93	0.88	0.85	0.86	0.90
Normative mineralogy:																											
Quartz	0.27	0.18	0.34	0.37	0.39		0.35	0.43	0.39	0.45	0.29	0.26	0.26	0.47			0.52	0.49	0.27	0.29	0.17	0.17	0.21	0.36	0.25	0.28	0.43
Albite	0.38	0.17	ND	ND	ND		ND	ND	ND	ND	0.33	0.45	0.42	ND			ND	ND	0.28	0.34	0.36	0.35	0.40	ND	0.03	0.02	ND
Anorthite	0.10	0.01	ND	0.00	0.00		0.00	0.00	ND	0.05	0.10	0.08	0.08	0.00			0.01	ND	0.12	0.16	0.12	0.09	0.03	0.00	0.00	0.00	0.00
K-feldspar	0.11	0.11	ND	ND	0.02		0.01	ND	ND	0.01	0.01	0.03	0.03	0.00			0.01	ND	0.00	0.02	0.01	0.00	0.04	0.01	0.10	0.08	0.00
Chlorite	0.00	0.00	0.00	0.06	0.00		0.00	0.13	0.00	0.01	0.03	0.02	0.04	0.00			0.00	0.01	0.15	0.05	0.11	0.06	0.08	0.00	0.00	0.00	0.00
Smectite	0.09	0.24	0.12	0.15	0.07		0.07	0.10	0.03	0.12	0.06	0.06	0.06	0.03			0.03	0.09	0.14	0.07	0.12	0.15	0.11	0.09	0.05	0.05	0.02
Illite	0.00	0.03	0.15	0.20	0.00		0.03	0.14	0.05	0.00	0.02	0.00	0.00	0.10			0.15	0.23	0.00	0.00	0.00	0.03	0.00	0.20	0.05	0.03	0.17
Pyrophyllite	0.00	0.20	0.00	0.00	0.38		0.27	0.03	0.22	0.00	0.08	0.04	0.05	0.16			0.02	0.00	0.00	0.00	0.00	0.01	0.10	0.06	0.31	0.33	0.02
Paragonite	ND	ND	0.17	0.09	0.06		0.11	0.11	0.14	0.27	ND	ND	ND	0.14			0.16	0.08	ND	ND	ND	ND	ND	0.10	ND	ND	0.14
Anhydrite	0.00	0.01	0.07	0.06	0.00		0.00	0.02	0.13	0.02	0.01	0.00	0.00	0.05			0.07	0.06	0.00	0.00	0.00	0.03	0.00	0.06	0.08	0.11	0.08
Pyrite	0.00	0.00	0.11	0.04	0.07		0.13	0.03	0.01	0.06	0.06	0.01	0.01	0.04			0.01	0.01	0.00	0.01	0.06	0.06	0.02	0.11	0.12	0.07	0.12
Magnetite	0.04	0.02	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.01			0.00	0.00	0.00	0.03	0.03	0.03	0.01	0.00	0.00	0.00	0.00
Totals:	0.99	0.97	0.96	0.97	1.00		0.98	0.99	0.98	0.98	0.99	0.99	0.99	0.99			0.98	0.98	0.97	0.98	0.98	0.98	0.99	0.98	0.97	0.98	0.98
$\delta^{18}O$ (‰ VSMOV):																											
Silicate	5.06	11.57	5.90	6.29	5.45	5.91			5.75			5.38					5.75	5.51			0.56		5.43				
Anhydrite			11.9	8.4				6.0	7.8	6.3				7.4			9.4	10.2				7.0		7.1	7.0	7.0	7.5
Bulk rock	5.06	11.57	6.33	6.42	5.45	5.91			6.02			5.38					6.00	5.77			0.56		5.43				
$^{86}Sr/^{87}Sr$:																											
Silicates	0.70380	0.70443	0.70758	0.70715	0.70655	0.70631		0.70535	0.70588	0.70557		0.70389		0.70499			0.70659	0.70557			0.70417	0.70546	0.70415	0.70482	0.70486	0.70489	0.70434
Anhydrite			0.70777	0.70749				0.70534	0.70606	0.70530				0.70550			0.70652	0.70632				0.70546		0.70456	0.70455	0.70471	0.70403
Bulk rock	0.70380	0.70443	0.70761	0.70721	0.70655	0.70631			0.70589	0.70554		0.70389		0.70500			0.70659	0.70564			0.70417	0.70417	0.70415	0.70415	0.70415	0.70415	0.70415
Recalculated major element oxides (wt%):																											
SiO_2	68.28	62.35	54.77	58.80	72.18		64.46	64.36	64.15	65.94	66.32	68.31	67.54	70.05	48.38		71.11	68.42	62.15	65.57	56.02	55.42	65.32	58.81	57.65	60.58	59.82
TiO_2	0.51	0.58	0.59	0.58	0.63		0.63	0.58	0.62	0.60	0.61	0.62	0.61	0.60	0.83		0.61	0.57	0.84	0.74	0.77	0.74	0.67	0.71	0.74	0.73	0.74
Al_2O_3	13.50	13.25	13.46	13.39	14.04		13.93	13.32	14.04	13.52	13.87	14.13	13.96	14.20	20.48		13.90	13.15	13.08	14.07	13.84	13.22	14.08	14.02	12.99	12.73	13.03
Fe_2O_3	4.41	4.82	3.17	3.93	2.64		4.43	5.09	0.98	2.08	3.14	4.79	5.28	1.82	1.70		0.29	1.50	4.62	5.28	8.26	7.88	4.50	3.39	3.28	1.82	3.03
FeS_2	0.03	0.23	5.61	2.16	3.10		5.65	1.50	0.79	3.08	3.05	0.50	0.56	1.99	2.72		0.39	0.61	0.68	0.48	2.70	2.65	0.87	5.11	5.60	3.46	5.52
$CaO_{in\ silicate}$	2.70	2.52	4.00	0.97	0.32		0.22	0.08	0.63	1.78	2.30	1.99	1.93	0.07	0.05		0.95	0.93	3.24	3.56	3.08	2.74	1.12	0.61	0.47	0.74	0.70
$CaSO_4$	0.00	0.00	3.87	5.27	0.00		0.00	2.33	11.48	1.54	0.98	0.00	0.00	4.24	13.60		5.57	4.64	0.00	0.00	0.00	2.54	0.00	5.07	7.01	9.18	6.74
MgO	0.99	1.13	2.18	4.03	0.65		0.65	4.54	0.23	3.28	1.93	1.43	1.59	0.23	0.35		0.25	1.96	6.17	2.28	4.07	3.72	3.63	1.77	0.43	0.25	0.14
MnO	0.11	0.12	0.03	0.09	0.01		0.01	0.15	0.01	0.02	0.02	0.08	0.09	0.00	0.00		0.00	0.03	0.07	0.09	0.16	0.12	0.17	0.01	0.01	0.00	0.00
Na_2O	4.67	2.63	1.04	0.69	0.47		0.72	0.53	0.67	2.55	3.85	5.25	4.98	0.77	1.55		0.85	0.58	3.30	4.00	4.29	4.15	4.67	0.49	0.47	0.52	0.80
K_2O	1.96	2.52	1.25	1.65	0.43		0.60	1.04	0.14	0.29	0.31	0.43	0.43	0.79	0.92		1.35	1.80	0.09	0.35	0.27	0.25	0.58	1.60	2.11	1.80	1.32
P_2O_5	0.10	0.14	0.11	0.11	0.16		0.07	0.12	0.12	0.15	0.11	0.13	0.14	0.06	0.07		0.14	0.06	0.25	0.19	0.37	0.36	0.14	0.19	0.25	0.17	0.24
Total:	97.26	90.29	90.08	91.67	94.64		91.36	93.64	93.85	94.82	96.50	97.66	97.10	94.82	90.65		95.41	94.24	94.49	96.61	93.83	93.79	95.75	91.78	91.01	91.97	92.07
Anhydrous major element oxides (wt%):																											
SiO_2	70.21	69.06	60.80	64.14	76.27		70.55	68.73	68.35	69.54	68.73	69.95	69.55	73.88	53.37		74.53	72.60	65.78	67.87	59.70	59.09	68.22	64.08	63.35	65.87	64.97
TiO_2	0.52	0.64	0.65	0.63	0.67		0.69	0.62	0.66	0.63	0.63	0.63	0.63	0.63	0.92		0.64	0.60	0.89	0.77	0.82	0.79	0.70	0.77	0.81	0.79	0.80
Al_2O_3	13.88	14.68	14.94	14.61	14.84		15.25	14.22	14.96	14.26	14.37	14.47	14.38	14.98	22.59		14.57	13.95	13.84	14.56	14.75	14.10	14.70	15.28	14.27	13.84	14.15
Fe_2O_3	4.54	5.34	3.52	4.29	2.79		4.84	5.44	1.04	2.19	3.26	4.91	5.43	1.91	1.87		0.30	1.59	4.89	5.47	8.81	8.40	4.70	3.69	3.61	1.97	3.29
FeS_2	0.03	0.25	6.22	2.35	3.28		6.19	1.60	0.84	3.25	3.16	0.51	0.58	2.10	3.00		0.41	0.64	0.71	0.49	2.88	2.82	0.91	5.56	6.15	3.76	5.99
$CaO_{in\ silicate}$	2.78	2.79	4.45	1.06	0.34		0.24	0.08	0.68	1.87	2.39	2.04	1.99	0.08	0.05		0.99	0.98	3.43	3.68	3.28	2.92	1.17	0.67	0.52	0.81	0.77
$CaSO_4$	0.00	0.00	4.30	5.75	0.00		0.00	2.49	12.23	1.62	1.02	0.00	0.00	4.47	15.01		5.84	4.93	0.00	0.00	0.00	2.71	0.00	5.53	7.70	9.98	7.32
MgO	1.02	1.25	2.42	4.40	0.69		0.71	4.85	0.25	3.46	2.00	1.46	1.64	0.24	0.39		0.26	2.08	6.53	2.36	4.34	3.97	3.79	1.93	0.47	0.27	0.15
MnO	0.11	0.13	0.03	0.10	0.01		0.01	0.16	0.01	0.02	0.02	0.08	0.09	0.00	0.00		0.00	0.03	0.07	0.09	0.17	0.13	0.18	0.01	0.01	0.00	0.00
Na_2O	4.80	2.91	1.15	0.75	0.50		0.79	0.57	0.71	2.69	3.99	5.38	5.13	0.81	1.71		0.89	0.62	3.49	4.14	4.57	4.42	4.88	0.53	0.52	0.57	0.87
K_2O	2.02	2.79	1.39	1.80	0.45		0.66	1.11	0.15	0.31	0.32	0.44	0.44	0.83	1.01		1.41	1.91	0.10	0.36	0.29	0.27	0.61	1.74	2.32	1.96	1.43
P_2O_5	0.10	0.16	0.12	0.12	0.17		0.07	0.12	0.12	0.15	0.11	0.13	0.14	0.06	0.08		0.15	0.06	0.27	0.19	0.39	0.38	0.15	0.21	0.27	0.18	0.26
Total:	100.00	100.00	100.00	100.00	100.00		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Sample ID:	PM35		PM36	PM37	PM40	PM42		PM44	PM45	PM47	PM48	PM49	PM50		PM51	PM52	PM53	PM54		PM56	PM57		PM58	PM60		PM63	PM64	PM68	PM71
Hole:								1189A																1189B					
Core section, interval (cm):	23Z-2, 56		30Z-1, 13	34Z-1, 123	39Z-1, 82	43Z-1, 21		1R-1, 12	2R-1, 0	2R-1, 130	3R-1, 0	3R-1, 84	5R-1, 44		7R-1, 11	8R-1, 3	9R-1, 21	10R-1, 39		12R-1, 83	12R-1, 120		13R-1, 51	6R-1, 0		11R-1, 22	11R-3, 3	13R-1, 48	14R-1, 87
Depth (mbsf):	288.66		318.23	337.63	354.32	371.71		0.12	9.7	11	19.4	20.24	39.24		58.41	68.03	77.91	87.69		107.33	107.7		116.61	79		127.82	129.72	147.48	157.37
Volcanic facies:	Coherent, kernel	Coherent, halo	Volcanic breccia	Volcanic breccia?	Coherent amygdal.	Coherent margin	Coherent kernel	Coherent vesicular	Coherent vesicular	App. clast perlitic	Coherent	Coherent	App. clasts	App. matrix	Coherent vesicular	Coherent	Breccia	Coherent veined	Coherent unveined	Coherent	Volcanic breccia, sulfur matrix	Volcanic breccia, pu clasts	Volcanic breccia	Stockwork matrix	App. clast in stockwork	Volcanic breccia	Coherent vesicular	Coherent perlitic	Flow-banded volcanic breccia
Alteration facies:	Chl-py	Anhy-py-pyro	Kfsp-illite	Kfsp-illite	Chl-py	Py-anhy	Kfsp-illite	Unaltered	Weak	Chl-py	Kfsp-illite	Py-anhy	Kfsp-illite	Chl-py	Kfsp-illite	Kfsp-illite	Chl-py	Py-anhy	Kfsp-illite	Chl-py	Sulfides	Kfsp-illite	Chl-py	Sulfide, Fe oxide	Chl-py	Kfsp-illite	Unaltered	Kfsp-illite	Anhy-py-pyro
Powder:	P025	P026	P027	P028	P029	P031	P030	P032	P033	P034	P035	P036	P038	P037	P039	P040	P041	P043	P042	P044	P074	P072	P045	P075	P073	P046	P047	P048	P049
Major element oxides (wt%):																													
SiO_2	61.19	62.86	68.77	60.28	63.76	64.70	66.93	62.84	63.39	59.79	63.95	61.24	60.45	63.68	57.18	68.63	63.32	60.00	64.26	64.84			56.33		45.63	66.62	68.04	72.21	51.03
TiO_2	0.81	0.81	0.71	0.88	0.80	0.59	0.59	0.84	0.78	0.83	0.75	0.66	0.80	0.59	0.87	0.54	0.43	0.44	0.55	0.62	0.18	0.58	0.84	0.20	0.89	0.45	0.62	0.49	0.51
Al_2O_3	13.63	13.65	14.46	21.72	14.02	13.37	13.35	14.72	14.94	15.58	14.30	12.53	15.23	11.11	16.63	13.86	11.07	11.58	14.58	13.24			15.03		22.46	9.55	13.91	11.28	10.76
Fe_2O_3	5.61	5.13	4.78	2.18	6.83	5.54	5.93	6.48	4.65	5.56	4.66	8.05	5.99	5.95	6.04	4.79	4.74	7.30	5.06	6.56			8.45		12.36	6.87	4.86	4.00	5.45
MgO	4.89	1.56	2.41	3.53	2.14	1.39	1.30	1.77	2.25	4.77	3.52	2.37	3.51	3.45	3.92	1.54	2.50	2.57	2.03	5.10			5.43		7.62	2.07	1.30	1.72	2.46
CaO	2.18	2.45	0.63	0.72	3.31	1.73	2.07	4.56	3.09	1.16	2.62	0.28	1.98	2.89	2.63	2.16	4.68	3.30	1.38	0.29			1.87		0.39	1.37	2.50	0.55	8.83
MnO	0.04	0.01	0.03	0.03	0.08	0.03	0.04	0.15	0.07	0.16	0.03	0.02	0.05	0.08	0.04	0.04	0.04	0.03	0.04	0.04			0.03		0.20	0.04	0.12	0.08	0.09
Na_2O	0.56	0.58	1.30	1.28	3.36	0.49	2.02	4.43	4.40	0.79	2.65	0.58	3.47	1.34	3.05	4.04	2.36	0.62	1.78	0.29			1.72		0.95	0.11	4.42	1.63	0.93
K_2O	1.37	2.21	2.14	4.18	0.62	2.70	1.78	1.40	1.52	5.06	1.77	6.48	2.83	2.79	3.14	2.31	1.81	3.46	6.25	2.59			1.68		5.50	4.00	1.92	3.72	3.79
P_2O_5	0.31	0.30	0.14	0.23	0.23	0.13	0.13	0.27	0.19	0.20	0.21	0.12	0.19	0.13	0.21	0.12	0.08	0.08	0.11	0.17			0.42		0.17	0.10	0.13	0.08	0.09
Volatiles (wt%):																													
H_2O	4.74	4.05	3.40	4.61	2.24	4.59	2.83	2.06	3.08	4.59	2.94	2.04	2.47	3.22	2.33	1.53	1.65	3.29	2.39	4.00			3.72		ND	3.25	1.24	2.33	2.46
CO_2	0.06	0.06	0.07	0.05	0.07	0.08	0.07	0.05	0.08	0.10	0.07	0.05	0.05	0.11	0.04	0.06	0.01	0.08	0.08	0.04			0.05		ND	0.09	0.07	0.06	0.05
NO_3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03			<0.03		<0.03	<0.03	<0.03	<0.03	<0.03
S_{total}	2.43	4.21	0.94	0.81	1.64	4.05	3.47	0.07	0.38	0.87	1.62	5.07	2.27	2.21	3.15	1.10	3.56	5.56	1.97	2.00			4.05		1.28	2.70	0.05	0.79	5.20
$S_{in\ sulfide}$	1.50	2.83	ND	ND	1.25	3.11	2.98	ND	ND	ND	ND	5.07	1.98	0.94	3.15	1.10	1.89	4.00	1.97	2.00			4.05		ND	1.95	ND	ND	1.20
$SO_{4\ in\ anhydrite}$	2.80	4.13	ND	ND	1.17	2.82	1.47	ND	ND	ND	ND	BDL	0.86	3.81	BDL	BDL	5.00	4.69	BDL	BDL			BDL		ND	2.25	ND	ND	11.98
LOI																													
Totals:	99.69	100.63	99.78	100.50	99.88	101.27	101.49	99.64	98.82	99.46	99.09	99.49	99.86	100.09	99.23	100.72	99.58	101.44	100.48	99.78			99.62		97.45	98.72	99.18	98.94	99.63
Halogens (ppm):																													
F	2690	1170		490	1080		1090	520	500			580			750	<200	320	1580					740			750		440	
Cl*	590	440		490	270		<200	2580	520			<200			<200	<200	<200	1980					<200			<200		<200	
Cl†																	160											80	
Trace elements by XRF (ppm):																													
Ba	453	881	906	1096	253	552	340	271	986	6791	1500	4391	1317	1266	2165	780	1153	2468	5116	509			323		2007	5173	510	4529	1043
Rb	18	24	23	38	8	25	18	24	13	71	14	59	29	35	30	30	22	40	46	38			22		78	45	24	43	45
Sr	130	184	111	97	310	125	186	338	305	109	264	46	206	159	294	240	368	206	193	11			158		35	89	264	153	446
Y	27	31	30	26	33	36	39	32	30	33	35	27	33	25	42	40	30	33	41	30			27		53	23	34	28	32
Zr	80	82	122	143	99	93	99	93	100	100	100	81	110	79	121	110	131	82	109	89			77		167	73	117	89	102
Trace elements by ICP-MS (ppm):																													
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cu	33	10	21	7	32	11	9	53	85	156	176	16	59	13	127	10	454	75	88	104	4870	2019	76	117	18	3930	30	353	15
Pb	3	2	2	2	3	2	2	8	23	227	5	4	4	4	6	6	7	29	25	5	77	4	37	27	9	20	5	78	55
Zn	36	19	21	26	68	189	219	92	1390	4310	32	24	39	47	35	40	28	626	60	30	349	112	90	407	222	75	167	411	141
Ba	523	988	1100	1200	346	573	423	318	1060	7190	1490	4760	1470	1380	2500	1180	963	2670	5290	548	551	3199	616	2924	2313	5770	483	3980	1140
Ag	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	1.2	1.1	0.8	1.4	1.8	1.8	1.2	1.76	0.3	0.8	<0.5	0.03	0.6	<0.5	0.8	0.6
As	<5	<5	<5	<5	<5	<5	<5	6.1	9.6	24.5	12.6	16.2	15.3	23.5	5.0	132.6	24.3	276.7	<5	12.0	350.2	21.4	15.9	32.1	12.4	20.4	<5	19.5	19.5
Bi	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	38.2	<5	<5	<5	<5	<5	<5	<5	<5
Cd	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.6	4.0	9.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	0.56	0.37	<0.5	0.01	0.13	<0.5	<0.5	0.6	<0.5
Cr	3.2	4.2	22.7	30.8	5.6	6.7	6.8	21.6	2.3	24.3	2.3	18.1	21.7	14.9	24.1	4.9	4.9	6.6	4.4	9.6	8.0	17.7	82.3	83.6	14.4	16.0	18.2	8.3	17.7
Co	4.5	9.9	8.6	4.0	2.6	8.9	5.8	10.2	6.4	4.8	6.4	12.1	5.2	5.9	34.5	6.4	3.2	10.3	13.9	19.3	487.2	72.5	41.5	182.4	6.7	11.7	4.8	3.0	5.2
Ga	14.2	10.4	15.3	6.8	25.8	18.3	19.5	18.0	18.0	19.7	16.7	10.4	19.0	16.0	18.8	13.2	17.8	17.1	17.9	20.3	16.8	103.9	21.1	7.5	36.0	12.6	18.1	12.6	14.0
Mo	0.90	2.59	5.14	24.03	2.04	0.72	1.83	1.52	1.21	0.84	0.98	0.79	1.56	4.86	3.35	2.59	1.83	7.47	1.16	1.74	26.86	20.90	3.01	1.30	0.75	7.98	1.81	1.65	2.22
Ni	5	4	7	4	17	5	3	28	4	8	4	7	8	8	22	4	4	7	4	7	23	12	43	6624	5	7	37	4	7
Rb	12.9	21.0	20.5	40.0	7.3	27.4	19.2	24.7	10.6	81.2	16.1	62.8	24.7	33.2	29.0	17.6	34.0	44.3	51.7	35.0	14.2	112	21.9	36.9	91.3	48.8	26.1	35.7	52.5
Sb	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	0.5	7.1	<0.5	4.7	0.5	<0.5	2.7	<0.5	0.7	2.5	<0.5	<0.5	<0.5	0.8	<0.5
Sc	16.5	11.2	7.5	12.6	12.6	9.5	9.1	16.4	14.2	15.6	13.9	12.2	14.1	11.8	16.1	8.9	10.9	9.5	11.3	13.1	4.8	27.2	19.9	5.0	24.0	8.2	12.6	7.1	9.0
Sr	142	198	109	111	401	149	207	425	343	111	296	42.5	209	171	391	407	276	247	214	3.8	67.0	45.2	194	43.8	43.8	109	298	149	528
Tl	<0.5	0.28	0.19	0.50	0.06	0.26	0.16	0.41	0.14	1.51	0.21	0.35	0.43	0.84	0.19	5.85	0.53	14.19	0.37	0.18	4.30	0.77	0.97	0.75	0.46	1.66	0.11	0.73	0.71
U	0.90	0.25	0.86	1.34	0.89	0.24	0.22	1.26	1.31	1.85	0.93	0.80	0.65	0.76	1.74	2.62	1.16	10.15	2.95	1.65	1.04	2.49	4.39	1.44	4.80	2.04	0.70	1.21	4.39
V	77	75	43	88	57	19	21	82	50	38	48	17	34	28	30	16	19	24	16	35	38	298	104	12	52	18	20	14	18
Laboratory:	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Uni Kiel	Uni Kiel	Freiberg	Freiberg	Freiberg	Freiberg	GFZ	GFZ	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cs	0.19	0.19	0.20	0.30	0.14	0.21	0.18	ND	ND	ND	ND	ND	ND	ND	0.23	0.40	ND	ND	ND	ND	0.32	0.29	ND	ND	ND	ND	ND	ND	ND
Ta	0.11	0.11	0.15	0.19	0.10	0.12	0.13	ND	ND	ND	ND	ND	ND	ND	0.14	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Th	1.09	1.09	1.54	1.78	1.04	1.66	1.42	2.19	1.95	1.73	1.49	1.17	1.75	1.34	1.35	1.57	1.86	1.57	1.97	2.43	0.17	1.31	1.45	1.39	2.44	1.09	1.58	1.16	1.51
Nb	1.23	1.22	1.73	2.44	1.29	1.48	1.49	1.23	1.48	1.50	1.35	1.25	1.52	1.17	1.73	1.50	1.48	1.26	1.59	1.31	0.69	1.79	1.22	1.27	2.58	1.18	1.54	1.39	1.66
Hf	3.20	3.16	4.39	6.23	3.08	3.65	3.60	2.6	2.9	3.3	3.0	2.7	3.1	2.4	3.95	4.33	3.4	2.9	3.6	3.0	0.61	3.85	2.5	1.4	5.9	2.0	3.2	3.2	2.9
Y	29	29	29	19	31	32	31	31	33	36	31	23	21	19	42	33	34	27	33	24	8	35	26	11	32	20	36	22	26
Zr	97	97	137	209	100	118	118	87	106	108	104	83	102	74	130	127	110	94	121	98	22	139	77	45	185	60	120	100	108
La	8.85	9.53	13.12	30.25	10.86	7.96	7.13	9.75	10.59	13.48	10.70	10.74	10.37	8.50	16.66	12.75	11.63	7.23	12.38	10.45	5.59	16.89	10.44	3.14	12.20	9.09	11.02	8.37	9.69
Ce	22.49	23.26	30.17	65.23	26.76	20.46	18.47	23.75	26.99	29.61	25.88	24.48	25.90	20.53	37.97	29.22	29.27	18.50	29.05	24.11	12.57	39.13	23.61	6.43	25.80	20.22	24.74	18.06	21.27
Pr	3.51	3.59	4.34	8.20	4.01	3.23	2.90	3.38	3.81	3.85	3.65	3.33	3.41	2.85	5.33	4.29	3.91	2.67	3.91	3.66	1.71	5.52	3.81	0.92	3.60	3.12	3.71	2.58	3.04
Nd	16.58	16.78	19.12	28.38	18.21	15.32	13.86	15.12	16.93	17.31	16.06	15.31	14.26	12.00	23.35	19.08	17.95	12.86	17.70	16.00	7.48	24.71	18.08	4.29	16.10	14.15	16.37	11.61	13.58
Sm	4.40	4.43	4.45	3.28	4.71	4.19	3.91	4.39	4.65	4.98	4.29	3.28	3.74	3.03	6.21	4.94	4.58	3.42	4.61	3.83	1.61	5.60	4.87	1.22	3.91	3.63	4.21	2.81	3.25
Eu	1.35	1.23	1.25	1.01	1.59	1.06	1.13	1.39	1.50	1.66	1.35	0.01	0.93	0.65	0.80	1.14	1.15	0.49	0.77	0.68	0.40	1.44	0.99	0.02	0.39	0.07	1.14	0.21	0.63
Gd	5.00	4.94	4.43	2.21	5.13	4.72	4.48	5.27	5.66	5.91	5.05	3.41	4.06	3.38	6.86	5.45	5.48	4.11	5.24	3.88	1.67	5.95	4.94	1.34	4.02	3.45	5.01	3.12	3.46
Tb	0.88	0.85	0.79	0.40	0.87	0.85	0.81	0.82	0.88	0.89	0.79	0.54	0.59	0.50	1.20	0.97	0.86	0.62	0.80	0.65	0.26	0.98	0.77	0.22	0.59	0.57	0.80	0.52	0.56
Dy	5.74	5.63	5.28	2.91	5.77	5.63	5.47	5.23	5.71	5.87	5.15	3.41	3.80	3.25	7.72	6.49	5.64	4.17	5.22	4.34	1.66	6.24	4.68	1.46	3.89	3.65	5.63	3.49	3.85
Ho	1.22	1.20	1.17	0.76	1.21	1.23	1.20	1.14	1.23	1.25	1.10	0.77	0.80	0.70	1.62	1.41	1.20	0.91	1.13	0.90	0.34	1.31	0.99	0.32	0.89	0.76	1.18	0.74	0.81
Er	3.61	3.53	3.67	2.78	3.62	3.70	3.61	3.54	3.88	3.93	3.44	2.50	2.59	2.30	4.70	4.20	3.81	2.91	3.60	2.89	0.95	4.19	3.02	1.04	3.06	2.33	3.73	2.36	2.62
Tm	0.56	0.55	0.59	0.52	0.55	0.59	0.58	0.50	0.56	0.57	0.50	0.37	0.37	0.33	0.72	0.67	0.55	0.43	0.53	0.44	0.13	0.63	0.42	0.17	0.49	0.33	0.53	0.35	0.39
Yb	3.92	3.82	4.23	4.17	3.86	4.15	4.09	3.38	3.79	3.85	3.41	2.46	2.56	2.28	4.97	4.71	3.83	2.95	3.68	2.98	0.96	4.31	2.72	1.08	3.60	2.12	3.54	2.29	2.64
Lu	0.62	0.60	0.69	0.72	0.60	0.66	0.65	0.51	0.59	0.59	0.52	0.39	0.39	0.36	0.77	0.75	0.59	0.46	0.55	0.47	0.14	0.67	0.43	0.18	0.59	0.34	0.56	0.35	0.41
ZrXRF/ZrICP-MS:	0.83	0.85	0.89	0.68	0.99	0.79	0.84	1.07	0.95	0.93	0.96	0.98	1.08	1.07	0.93	0.87	1.19	0.87	0.90	0.91	NV	NV	1.01	NV	0.90	1.21	0.98	0.89	0.94
Normative mineralogy:																													
Quartz	0.39	0.43	0.35	0.20	0.28	0.41	0.33	0.23	0.19	0.25	0.29	0.25	0.20	0.33	0.14	0.28	0.33	0.26	0.22	0.37			0.27		0.00	0.36	0.27	0.39	0.22
Albite	ND	ND	0.11	ND	0.28	ND	0.17	0.35	0.37	ND	0.23	0.05	0.30	0.11	0.27	0.34	0.20	0.05	0.15	0.03			0.15		0.10	0.00	0.37	0.14	0.07
Anorthite	0.00	0.00	0.02	0.10	0.11	0.00	0.03	0.17	0.12	0.03	0.11	0.00	0.06	0.00	0.12	0.09	0.06	0.00	0.04	0.00			0.07		0.04	0.00	0.11	0.01	0.00
K-feldspar	0.03	ND	0.07	0.23	0.02	0.07	0.06	0.07	0.08	0.25	0.08	0.36	0.15	0.15	0.17	0.13	0.11	0.20	0.34	0.10			ND		0.25	0.23	0.11	0.20	0.19
Chlorite	0.14	0.00	0.06	0.07	0.06	0.00	0.00	0.00	0.00	0.13	0.09	0.07	0.14	0.12	0.11	0.03	0.10	0.06	0.02	0.18			0.16		0.33	0.03	0.02	0.02	0.05
Smectite	0.10	0.10	0.07	0.09	0.06	0.12	0.08	0.11	0.14	0.11	0.09	0.04	0.04	0.06	0.06	0.05	0.02	0.08	0.09	0.06			0.08		0.00	0.10	0.05	0.07	0.07
Illite	0.13	0.27	0.12	0.04	0.03	0.19	0.10	0.00	0.01	0.10	0.06	0.06	0.05	0.05	0.04	0.01	0.00	0.01	0.08	0.13			0.17		0.19	ND	0.00	0.06	0.08
Pyrophyllite	0.00	0.00	0.15	0.03	0.06	0.00	0.13	0.00	0.03	0.00	0.00	0.04	0.00	0.08	0.00	0.02	0.05	0.18	0.00	0.08			0.00		0.04	0.15	0.00	0.06	0.05
Paragonite	0.13	0.06	ND	0.24	ND	0.10	ND	ND	ND	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			ND		ND	ND	ND	ND	ND
Anhydrite	0.05	0.06	0.00	0.00	0.02	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.00	0.00	0.08	0.08	0.00	0.00			0.00		0.00	0.03	0.00	0.00	0.20
Pyrite	0.02	0.06	0.02	0.00	0.03	0.06	0.06	0.00	0.01	0.01	0.03	0.10	0.04	0.02	0.05	0.02	0.04	0.08	0.04	0.03			0.07		0.03	0.04	0.00	0.02	0.02
Magnetite	0.00	0.01	0.02	0.00	0.04	0.01	0.02	0.06	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.01	0.00			0.00		0.04	0.03	0.04	0.02	0.02
Totals:	0.98	0.99	0.99	1.00	0.99	1.00	1.00	0.99	0.98	0.97	0.97	0.98	0.98	0.99	0.97	1.00	0.98	1.00	1.00	0.98			0.97		1.01	0.98	0.98	0.98	0.99
$\delta^{18}O$ (‰ VSMOV):																													
Silicate	5.05	4.96						5.91	6.57		5.68	4.32	3.54	4.05			3.93	4.13	3.95				3.41			5.90	5.89	5.40	4.40
Anhydrite	6.4	5.0			4.5	7.4	7.2						9.7	10.7			9.6	10.8								9.8			10.5
Bulk rock	5.11	4.96						5.91	6.57		5.68	4.32	3.63	4.48			4.40	4.64	3.95				3.41			6.03	5.89	5.40	5.65
$^{86}Sr/^{87}Sr$:																													
Silicates	0.70472	0.70475			0.70450	0.70425	0.70572	0.70367	0.70400		0.70402	0.70451	0.70417	0.70476			0.70457	0.70548	0.70422				0.70430			0.70542	0.70380	0.70484	0.70580
Anhydrite	0.70456	0.70458			0.70445	0.70422	0.70469						0.70651	0.70674			0.70376	0.70828								0.70645			0.70626
Bulk rock	0.70470	0.70474			0.70450	0.70425	0.70564	0.70367	0.70400		0.64180	0.70451	0.70426	0.70488			0.70455	0.70570	0.70422				0.70430			0.70552	0.70380	0.70484	0.70583
Recalculated major element oxides (wt%):																													
SiO_2	61.19	62.86	68.77	60.28	63.76	64.70	66.93	62.84	63.39	59.79	63.95	61.24	60.45	63.68	57.18	68.63	63.32	60.00	64.26	64.84			56.33		45.63	66.62	68.04	72.21	51.03
TiO_2	0.81	0.81	0.71	0.88	0.80	0.59	0.59	0.84	0.78	0.83	0.75	0.66	0.80	0.59	0.87	0.54	0.43	0.44	0.55	0.62			0.84		0.89	0.45	0.62	0.49	0.51
Al_2O_3	13.63	13.65	14.46	21.72	14.02	13.37	13.35	14.72	14.94	15.58	14.30	12.53	15.23	11.11	16.63	13.86	11.07	11.58	14.58	13.24			15.03		22.46	9.55	13.91	11.28	10.76
Fe_2O_3	4.68	3.36	4.19	1.67	6.05	3.60	4.07	6.44	4.41	5.02	3.65	4.88	4.75	5.36	4.07	4.10	3.56	4.81	3.83	5.31			5.92		11.56	5.65	4.83	3.51	4.70
FeS_2	1.40	2.66	0.88	0.76	1.17	2.92	2.79	0.07	0.36	0.82	1.52	4.75	1.86	0.88	2.95	1.03	1.77	3.75	1.85	1.88			3.80		1.20	1.83	0.05	0.74	1.13
$CaO_{in\ silicate}$	0.54	0.04	0.63	0.72	2.63	0.08	1.21	4.56	3.09	1.16	2.62	0.28	1.48	0.67	2.63	2.16	1.76	0.56	1.38	0.29			1.87		0.39	0.06	2.50	0.55	1.84
$CaSO_4$	3.97	5.85	0.00	0.00	1.66	4.00	2.09	0.00	0.00	0.00	0.00	0.00	1.22	5.40	0.00	0.00	7.09	6.65	0.00	0.00			0.00		0.00	3.19	0.00	0.00	16.98
MgO	4.89	1.56	2.41	3.53	2.14	1.39	1.30	1.77	2.25	4.77	3.52	2.37	3.51	3.45	3.92	1.54	2.50	2.57	2.03	5.10			5.43		7.62	2.07	1.30	1.72	2.46
MnO	0.04	0.01	0.03	0.03	0.08	0.03	0.04	0.15	0.07	0.16	0.03	0.02	0.05	0.08	0.04	0.04	0.04	0.03	0.04	0.04			0.03		0.20	0.04	0.12	0.08	0.09
Na_2O	0.56	0.58	1.30	1.28	3.36	0.49	2.02	4.43	4.40	0.79	2.65	0.58	3.47	1.34	3.05	4.04	2.36	0.62	1.78	0.29			1.72		0.95	0.11	4.42	1.63	0.93
K_2O	1.37	2.21	2.14	4.18	0.62	2.70	1.78	1.40	1.52	5.06	1.77	6.48	2.83	2.79	3.14	2.31	1.81	3.46	6.25	2.59			1.68		5.50	4.00	1.92	3.72	3.79
P_2O_5	0.31	0.30	0.14	0.23	0.23	0.13	0.13	0.27	0.19	0.20	0.21	0.12	0.19	0.13	0.21	0.12	0.08	0.08	0.11	0.17			0.42		0.17	0.10	0.13	0.08	0.09
Total:	93.40	93.89	95.67	95.28	96.52	93.99	96.30	97.49	95.39	94.17	94.96	93.92	95.84	95.48	94.70	98.37	95.79	94.54	96.66	94.37			93.07		96.57	93.67	97.83	96.01	94.30
Anhydrous major element oxides (wt%):																													
SiO_2	65.52	66.95	71.89	63.26	66.06	68.83	69.50	64.46	66.45	63.49	67.34	65.20	63.07	66.69	60.38	69.76	66.10	63.46	66.48	68.71			60.53		47.25	71.13	69.55	75.21	54.11
TiO_2	0.87	0.86	0.74	0.92	0.83	0.63	0.61	0.86	0.82	0.88	0.79	0.70	0.83	0.62	0.92	0.55	0.45	0.47	0.57	0.66			0.90		0.92	0.48	0.63	0.51	0.54
Al_2O_3	14.59	14.54	15.12	22.80	14.53	14.22	13.86	15.10	15.66	16.54	15.06	13.34	15.89	11.64	17.56	14.09	11.56	12.25	15.08	14.03			16.15		23.26	10.20	14.22	11.75	11.41
Fe_2O_3	5.01	3.58	4.38	1.76	6.27	3.83	4.23	6.60	4.63	5.33	3.84	5.20	4.96	5.62	4.30	4.17	3.72	5.08	3.96	5.63			6.36		11.97	6.04	4.94	3.65	4.99
FeS_2	1.50	2.83	0.92	0.80	1.21	3.10	2.90	0.07	0.37	0.87	1.60	5.06	1.94	0.92	3.12	1.05	1.85	3.96	1.91	1.99			4.08		1.24	1.95	0.05	0.77	1.19
$CaO_{in\ silicate}$	0.58	0.04	0.66	0.76	2.72	0.09	1.26	4.68	3.24	1.23	2.76	0.30	1.54	0.70	2.78	2.19	1.84	0.59	1.43	0.31			2.01		0.40	0.06	2.55	0.57	1.95
$CaSO_4$	4.25	6.23	0.00	0.00	1.72	4.25	2.17	0.00	0.00	0.00	0.00	0.00	1.27	5.65	0.00	0.00	7.40	7.04	0.00	0.00			0.00		0.00	3.40	0.00	0.00	18.00
MgO	5.24	1.66	2.52	3.70	2.22	1.48	1.35	1.82	2.36	5.07	3.71	2.52	3.66	3.61	4.14	1.57	2.61	2.72	2.10	5.40			5.83		7.89	2.21	1.33	1.79	2.61
MnO	0.04	0.01	0.03	0.03	0.08	0.03	0.04	0.15	0.07	0.17	0.03	0.02	0.05	0.08	0.04	0.04	0.04	0.03	0.04	0.04			0.03		0.21	0.04	0.12	0.08	0.10
Na_2O	0.60	0.62	1.36	1.34	3.48	0.52	2.10	4.54	4.61	0.84	2.79	0.62	3.62	1.40	3.22	4.11	2.46	0.66	1.84	0.31			1.85		0.98	0.12	4.52	1.70	0.99
K_2O	1.47	2.35	2.24	4.39	0.64	2.87	1.85	1.44	1.59	5.37	1.86	6.90	2.95	2.92	3.32	2.35	1.89	3.66	6.47	2.74			1.81		5.70	4.27	1.96	3.87	4.02
P_2O_5	0.33	0.32	0.15	0.24	0.24	0.14	0.13	0.28	0.19	0.21	0.22	0.13	0.20	0.14	0.22	0.12	0.08	0.08	0.11	0.18			0.45		0.18	0.11	0.13	0.09	0.10
Total:	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00			100.00		100.00	100.00	100.00	100.00	100.00

Sample ID:	PM73		PM75		PM79	PM82	PM85		PM86		PM88	PM89	PM90			PM92	PM93	PM94	PM95	1188B-a	1188B-b	1188B-c	1191A-a	1191A-b	1191A-c
Hole:																1190C	1191A			1188B			1191A		
Core section, interval (cm):	15R-1, 25		15R-1, 124		16R-1, 75	17R-1, 57	18R-1, 5		18R-1, 45		18R-1, 125	18R-2, 0	18R-2, 49			3R-1, 3	1R-1, 64	1R-1, 75	3R-1, 80						
Depth (mbsf):	166.35		167.34		176.45	185.87	195.05		195.45		196.25	196.42	196.91			13.23	0.64	0.75	15.5						
Volcanic facies:	Volcanic breccia clast	Volcanic breccia matrix	Volcanic breccia gray clasts	Volcanic breccia green clasts	Coherent	Coherent	Volcanic breccia clast	Volcanic breccia matrix	Volcanic breccia clast	Volcanic breccia matrix	Brecciated	Volcanic breccia	Volcanic breccia clast	Volcanic breccia clast	Volcanic breccia matrix	Coherent vesicular	Coherent vesicular	Coherent vesicular	Coherent						
Alteration facies:	Weak	Kfsp-illite	Weak		Weak	Kfsp-illite	Kfsp-illite		Kfsp-illite		Weak	Fsp-qtz	Fsp-qtz			Unaltered	Unaltered	Unaltered	Weak						
Powder:	P050	P051	P052	P053	P054	P055	P056	P057	P058	P059	P060	P061	P062	P063	P064	P065	P066	P067	P068	Internal std.	Internal std.	Internal std.	Internal std.	Internal std.	Internal std.
Major element oxides (wt%):																									
SiO_2	68.89	67.84	67.43	68.64	70.89	70.73	67.68	68.33	63.04	68.34	67.23	67.22	64.41	60.48	69.09	67.83	68.96	67.54	67.98	66.37	66.92	68.03	67.76	67.98	68.91
TiO_2	0.64	0.61	0.64	0.61	0.58	0.59	0.62	0.56	0.79	0.62	0.69	0.67	0.70	0.82	0.55	0.51	0.64	0.62	0.63	0.60	0.60	0.61	0.63	0.63	0.64
Al_2O_3	13.65	13.06	13.58	12.89	12.38	12.69	13.55	12.35	15.66	12.30	13.49	12.98	15.01	17.87	11.82	13.42	14.18	13.91	14.04	13.57	13.67	13.74	14.03	14.10	14.17
Fe_2O_3	4.08	5.35	3.72	4.81	4.29	3.10	4.67	4.92	4.07	4.42	4.81	5.44	4.44	4.91	5.03	4.03	4.46	4.50	4.63	4.96	5.08	4.92	4.65	4.63	4.88
MgO	1.56	1.64	1.80	1.87	1.45	0.67	1.44	1.59	2.60	1.85	2.26	1.95	1.51	2.24	1.68	0.65	0.81	0.82	0.84	3.99	3.85	4.13	0.83	0.84	0.82
CaO	1.15	1.05	0.99	1.14	1.55	1.31	1.01	1.07	1.57	1.18	1.29	1.13	0.87	1.15	0.95	2.51	2.96	2.91	2.95	1.30	1.28	1.36	2.95	2.96	2.97
MnO	0.07	0.08	0.06	0.09	0.05	0.04	0.06	0.08	0.06	0.06	0.10	0.10	0.05	0.08	0.08	0.11	0.11	0.12	0.11	0.06	0.06	0.06	0.13	0.13	0.13
Na_2O	4.54	4.29	4.56	3.87	2.36	2.86	4.66	3.74	3.02	2.81	3.86	3.74	4.75	5.79	3.44	4.71	4.88	4.81	4.79	2.19	2.14	2.18	4.85	4.84	4.81
K_2O	2.69	2.44	2.71	2.04	3.76	4.45	3.05	2.63	5.49	3.56	2.70	2.80	4.45	4.58	2.42	1.99	1.76	1.74	1.75	0.39	0.44	0.38	1.72	1.73	1.76
P_2O_5	0.10	0.09	0.09	0.08	0.10	0.08	0.10	0.10	0.15	0.10	0.13	0.12	0.11	0.13	0.08	0.09	0.13	0.14	0.13	0.13	0.14	0.15	0.13	0.13	0.13
Volatiles (wt%):																									
H_2O	1.83	1.88	2.70	2.72	1.61	0.77	1.34	2.73	2.45	3.27	2.26	2.44	1.38	1.98	2.91	2.82	0.24	1.52	0.92	ND	ND	ND	ND	ND	ND
CO_2	0.08	0.10	0.11	0.09	0.25	0.03	0.06	0.07	0.18	0.21	0.15	0.08	0.07	0.16	0.11	0.05	0.02	0.02	0.04	ND	ND	ND	ND	ND	ND
NO_3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
S_{total}	0.41	1.06	0.54	0.44	1.10	1.63	1.20	1.01	0.58	1.09	0.55	0.90	1.57	0.62	1.01	0.03	0.03	0.02	0.03	2.54	2.54	2.54	0.04	0.04	0.04
$S_{in\ sulfide}$	ND	1.06	ND	ND	ND	1.63	1.20	ND	ND	1.09	ND	ND	1.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
$SO_{4\ in\ anhydrite}$	ND	BDL	ND	ND	ND	BDL	BDL	ND	ND	BDL	ND	ND	BDL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LOI																				3.70	3.70	3.70	1.44	1.44	1.44
Totals:	99.69	99.49	98.93	99.29	100.37	98.95	99.44	99.18	99.66	99.81	99.52	99.57	99.32	100.81	99.17	98.75	99.18	98.67	98.84	97.26	97.88	99.26	99.16	99.45	100.66
Halogens (ppm):																									
F											400	520					520	570							
Cl*											<200	1090					990	3160							
Cl†											100						940								
Trace elements by XRF (ppm):																									
Ba	1188	1128	1100	811	1716	2786	1021	1088	2443	1774	898	909	1738	2046	1099	371	354	331	344	143	138	120	365	380	382
Rb	32	31	29	29	33	39	33	33	48	37	31	33	40	36	27	31	28	28	26	7	10	6	26	29	29
Sr	208	193	186	189	183	165	163	163	190	169	197	178	169	173	146	230	264	249	260	153	152	154	261	265	240
Y	33	32	36	31	33	33	36	33	37	30	33	36	41	44	31	37	35	31	31	30	32	37	34	36	34
Zr	125	119	118	116	98	109	118	107	130	99	126	116	136	146	106	123	115	109	114	103	105	97	116	115	98
Trace elements by ICP-MS (ppm):																									
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg			Freiberg		
Cu	303	156	99	36	1150	36	369	54	1070	347	108	83	174	645	119	27	29	22	39	108			33		
Pb	14	34	24	13	21	7	34	25	5	31	43	94	19	5	15	5	4	6	7	26			6		
Zn	78	116	67	80	139	37	77	124	89	87	111	95	63	94	89	77	70	98	88	393			300		
Ba	1350	1130	2570	795	1910	2810	1190	1270	2610	1940	992	826	1730	2310	1120	632	384	1780	421	231			411		
Ag	<0.5	1.7	5.8	2.3	<0.5	1.5	1.4	1.3	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5		
As	15.2	61.7	69.6	19.8	25.4	21.9	159.3	143.3	34.0	43.8	60.8	100.6	31.5	48.1	80.8	13.8	<5	53.9	<5	17.7			4.5		
Bi	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5		
Cd	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5		
Cr	19.7	20.5	14.9	19.4	13.7	22.7	35.8	25.2	34.3	24.9	108.3	32.8	19.7	15.7	26.2	4.0	4.0	112.5	5.7	29.3			13.5		
Co	2.5	10.4	4.0	6.1	1.8	4.5	7.8	5.5	2.2	7.5	6.3	10.8	3.9	1.8	4.2	4.3	5.3	5.3	4.7	4.4			5.1		
Ga	16.5	15.9	15.8	15.6	15.0	14.1	16.6	15.7	19.3	15.0	15.5	16.5	17.2	21.1	16.5	16.8	18.5	16.8	17.4	16.4			18.8		
Mo	nn	5.01	0.57	0.80	1.30	1.00	6.33	2.59	1.50	nn	3.54	4.24	0.67	nn	nn	2.20	1.88	2.66	2.53	0.89			1.27		
Ni	9	15	6	9	4	8	11	5	12	5	256	11	5	5	7	3	4	371	16	9			6		
Rb	32.5	31.2	31.9	26.6	39.5	39.5	33.4	31.2	50.5	35.6	26.7	31.9	41.7	43.7	28.7	33.1	28.0	32.7	29.2	3.8			31.3		
Sb	0.5	1.5	1.9	1.5	<5	0.6	2.8	2.6	<0.5	2.1	0.8	1.3	0.6	<0.5	1.5	<0.5	<0.5	<0.5	4.1	0.6			<0.5		
Sc	11.0	11.0	16.3	14.1	10.1	12.0	13.9	11.4	17.8	11.3	14.6	13.5	12.9	14.7	10.6	11.9	14.0	15.2	12.7	9.4			16.1		
Sr	229	210	247	195	204	171	161	162	220	195	192	173	187	204	166	258	298	316	364	160			308		
Tl	3.01	12.70	3.72	4.24	0.80	0.99	1.25	1.10	0.79	0.84	3.00	4.54	0.82	0.57	0.63	0.23	0.15	0.23	0.28	0.09			0.21		
U	3.06	5.09	4.06	4.73	1.30	7.40	1.75	2.06	1.00	2.23	4.28	5.37	1.22	0.95	1.14	0.80	0.71	0.77	1.42	0.55			0.62		
V	31	38	26	37	20	17	40	50	75	53	64	72	32	42	51	17	22	19	20	26			21		
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Uni Kiel	Freiberg	Freiberg	Freiberg	Uni Kiel	GFZ	Freiberg		
Cs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.92	ND	ND	ND	0.31	0.29	ND		
Ta	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.14	ND	ND	ND	0.11	ND	ND		
Th	1.89	4.85	4.35	2.84	1.10	2.54	2.55	4.36	3.15	3.38	3.49	1.74	1.86	2.09	1.51	2.51	1.25	2.18	1.85	1.22	1.25	1.18	1.74		
Nb	1.77	1.74	1.82	1.66	<5	1.70	1.61	1.58	2.11	1.61	1.58	1.64	1.69	2.12	1.38	1.47	1.57	1.43	1.48	1.40	1.98	ND	1.62		
Hf	3.8	3.5	5.4	3.7	4.2	3.3	3.7	3.2	4.0	2.9	2.9	3.2	4.4	5.0	3.4	3.7	3.64	4.0	3.9	2.3	3.37	3.27	3.7		
Y	35	32	35	34	29	31	36	31	41	31	34	35	39	46	31	34	34	35	36	21	32	29	38		
Zr	127	122	141	128	ND	118	124	112	150	101	117	116	140	161	112	117	124	112	114	67	116	122	124		
La	11.90	12.87	16.51	13.14	10.90	9.54	12.87	12.87	7.46	11.90	11.73	12.39	14.33	12.99	9.88	11.79	11.12	12.57	12.82	10.40	10.09	9.99	11.10		
Ce	27.22	28.46	37.68	29.50	25.80	22.48	30.10	28.47	27.18	26.78	28.46	26.73	31.45	35.45	22.98	25.68	26.28	27.33	28.37	20.50	25.07	23.07	22.90		
Pr	4.06	4.21	5.60	4.46	3.84	3.26	4.37	3.98	4.67	3.90	4.00	3.91	4.43	5.67	3.42	3.91	3.93	3.97	4.10	3.00	3.77	3.33	3.40		
Nd	17.95	18.55	24.70	20.45	17.08	15.32	19.69	18.18	21.93	17.76	18.45	17.65	20.18	24.12	15.44	17.03	17.96	17.83	17.86	12.80	17.11	15.60	14.80		
Sm	4.44	4.76	6.10	5.24	4.41	4.18	5.01	4.53	5.64	4.48	4.50	4.59	5.17	5.93	3.87	4.29	4.68	4.67	4.56	3.28	4.46	3.94	4.08		
Eu	1.07	1.09	1.53	1.29	1.54	0.42	1.20	1.11	1.26	1.15	1.08	1.02	1.35	1.53	0.91	1.12	1.39	1.08	1.26	0.89	1.28	1.16	1.13		
Gd	4.95	5.08	6.44	5.83	5.23	4.76	5.52	5.02	5.79	4.69	5.02	4.83	5.50	6.04	4.30	4.62	5.20	4.88	5.14	3.40	4.86	4.35	4.55		
Tb	0.82	0.85	1.11	0.99	0.89	0.82	0.93	0.89	1.01	0.80	0.83	0.82	0.92	1.02	0.73	0.80	0.92	0.88	0.87	0.49	0.85	0.75	0.73		
Dy	5.48	5.90	7.55	6.79	5.63	5.67	6.26	5.98	6.69	5.42	5.44	5.47	6.26	6.96	4.95	5.41	6.03	5.98	5.92	3.00	5.63	4.90	4.96		
Ho	1.15	1.21	1.61	1.41	1.28	1.20	1.32	1.26	1.39	1.12	1.16	1.17	1.33	1.43	1.03	1.17	1.31	1.27	1.25	0.63	1.21	1.08	1.08		
Er	3.70	3.85	5.11	4.53	3.81	3.88	4.20	3.85	4.33	3.54	3.71	3.73	4.17	4.56	3.33	3.72	3.91	4.02	4.03	1.89	3.63	3.37	3.32		
Tm	0.53	0.57	0.74	0.67	0.58	0.56	0.60	0.58	0.63	0.51	0.53	0.55	0.60	0.66	0.49	0.54	0.61	0.59	0.58	0.27	0.56	0.51	0.50		
Yb	3.48	3.77	5.13	4.56	3.97	3.87	4.12	3.88	4.19	3.34	3.64	3.68	4.18	4.51	3.31	3.73	4.30	3.93	3.96	1.88	3.95	3.45	3.50		
Lu	0.56	0.59	0.80	0.71	0.65	0.59	0.64	0.62	0.65	0.54	0.57	0.56	0.64	0.70	0.52	0.58	0.68	0.62	0.61	0.23	0.62	0.53	0.54		
ZrXRF/ZrICP-MS:	0.99	0.97	0.84	0.91	NV	0.92	0.95	0.96	0.87	0.98	1.08	1.00	0.97	0.91	0.95	1.05	0.93	0.97	1.00	1.54	0.90	0.80	0.94		
Normative mineralogy:																									
Quartz	0.25	0.26	0.22	0.28	0.34	0.32	0.24	0.27	0.16	0.26	0.27	0.24	0.15	0.03	0.29	0.26	0.29	0.26	0.27						
Albite	0.39	0.36	0.38	0.33	0.20	0.24	0.40	0.31	0.25	0.23	0.33	0.32	0.40	0.49	0.29	0.38	0.39	0.39	0.39						
Anorthite	0.04	0.03	0.02	0.03	0.06	0.05	0.03	0.02	0.06	0.02	0.05	0.03	0.03	0.04	0.01	0.08	0.12	0.12	0.12						
K-feldspar	0.15	0.14	0.14	0.10	0.22	0.26	0.17	0.15	0.30	0.21	0.14	0.16	0.26	0.26	0.14	0.10	0.10	0.10	0.10						
Chlorite	0.00	0.02	0.00	0.00	0.02	0.00	0.03	0.00	0.05	0.00	0.05	0.01	0.03	0.05	0.00	0.00	0.02	0.00	0.00						
Smectite	0.08	0.07	0.11	0.11	0.06	0.03	0.05	0.11	0.09	0.13	0.08	0.10	0.05	0.07	0.11	0.10	0.01	0.07	0.05						
Illite	0.02	0.02	0.04	0.04	0.01	0.02	0.02	0.02	0.05	0.00	0.04	0.00	0.02	0.02	0.00	0.01	0.00	0.00	0.00						
Pyrophyllite	0.03	0.03	0.03	0.06	0.04	0.02	0.00	0.06	0.00	0.10	0.00	0.07	0.00	0.00	0.09	0.01	0.00	0.00	0.00						
Paragonite	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
Anhydrite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Pyrite	0.01	0.02	0.01	0.01	0.02	0.03	0.02	0.02	0.01	0.02	0.01	0.02	0.03	0.01	0.02	0.00	0.00	0.00	0.00						
Magnetite	0.03	0.03	0.02	0.03	0.02	0.01	0.02	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.03	0.03	0.04	0.04	0.04						
Totals:	0.99	0.99	0.98	0.99	0.99	0.98	0.99	0.98	0.98	0.99	0.98	0.99	0.98	1.00	0.98	0.98	0.98	0.98	0.98						
$\delta^{18}O$ (‰ VSMOV):																									
Silicate	4.87	4.90	5.37	4.91									4.82	3.83	5.53	6.02		6.67	6.32						
Anhydrite																									
Bulk rock	4.87	4.90	5.37	4.91									4.82	3.83	5.53	6.02		6.67	6.32						
$^{86}Sr/^{87}Sr$:																									
Silicates	0.70456	0.70437	0.70419	0.70431									0.70424	0.70429	0.70418	0.70379	0.70376	0.70379							
Anhydrite																									
Bulk rock	0.70456	0.70437	0.70419	0.70431									0.70424	0.70429	0.70418	0.70379	0.70376	0.70379							
Recalculated major element oxides (wt%):																									
SiO_2	68.89	67.84	67.43	68.64	70.89	70.73	67.68	68.33	63.04	68.34	67.23	67.22	64.41	60.48	69.09	67.83	68.96	67.54	67.98						
TiO_2	0.64	0.61	0.64	0.61	0.58	0.59	0.62	0.56	0.79	0.62	0.69	0.67	0.70	0.82	0.55	0.51	0.64	0.62	0.63						
Al_2O_3	13.65	13.06	13.58	12.89	12.38	12.69	13.55	12.35	15.66	12.30	13.49	12.98	15.01	17.87	11.82	13.42	14.18	13.91	14.04						
Fe_2O_3	3.83	4.69	3.38	4.54	3.60	2.08	3.92	4.29	3.71	3.74	4.47	4.88	3.46	4.52	4.40	4.01	4.44	4.49	4.61						
FeS_2	0.38	0.99	0.51	0.41	1.03	1.53	1.13	0.95	0.54	1.02	0.52	0.84	1.47	0.58	0.95	0.03	0.03	0.02	0.03						
$CaO_{in\ silicate}$	1.15	1.05	0.99	1.14	1.55	1.31	1.01	1.07	1.57	1.18	1.29	1.13	0.87	1.15	0.95	2.51	2.96	2.91	2.95						
$CaSO_4$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
MgO	1.56	1.64	1.80	1.87	1.45	0.67	1.44	1.59	2.60	1.85	2.26	1.95	1.51	2.24	1.68	0.65	0.81	0.82	0.84						
MnO	0.07	0.08	0.06	0.09	0.05	0.04	0.06	0.08	0.06	0.06	0.10	0.10	0.05	0.08	0.08	0.11	0.11	0.12	0.11						
Na_2O	4.54	4.29	4.56	3.87	2.36	2.86	4.66	3.74	3.02	2.81	3.86	3.74	4.75	5.79	3.44	4.71	4.88	4.81	4.79						
K_2O	2.69	2.44	2.71	2.04	3.76	4.45	3.05	2.63	5.49	3.56	2.70	2.80	4.45	4.58	2.42	1.99	1.76	1.74	1.75						
P_2O_5	0.10	0.09	0.09	0.08	0.10	0.08	0.10	0.10	0.15	0.10	0.13	0.12	0.11	0.13	0.08	0.09	0.13	0.14	0.13						
Total:	97.50	96.78	95.75	96.18	97.75	97.03	97.22	95.68	96.63	95.59	96.73	96.43	96.79	98.24	95.46	95.86	98.90	97.11	97.86						
Anhydrous major element oxides (wt%):																									
SiO_2	70.66	70.09	70.43	71.37	72.52	72.89	69.62	71.41	65.24	71.50	69.50	69.71	66.55	61.56	72.38	70.76	69.73	69.55	69.47						
TiO_2	0.66	0.63	0.67	0.63	0.59	0.61	0.64	0.59	0.82	0.65	0.71	0.69	0.72	0.83	0.58	0.53	0.65	0.64	0.64						
Al_2O_3	14.00	13.49	14.18	13.40	12.66	13.08	13.94	12.91	16.21	12.87	13.95	13.46	15.51	18.19	12.38	14.00	14.34	14.32	14.35						
Fe_2O_3	3.92	4.85	3.53	4.72	3.69	2.15	4.03	4.48	3.84	3.91	4.62	5.06	3.58	4.60	4.61	4.19	4.49	4.62	4.71						
FeS_2	0.39	1.03	0.53	0.43	1.05	1.57	1.16	0.99	0.56	1.07	0.53	0.87	1.52	0.59	0.99	0.03	0.03	0.02	0.03						
$CaO_{in\ silicate}$	1.18	1.08	1.03	1.18	1.58	1.35	1.04	1.12	1.62	1.23	1.33	1.17	0.90	1.17	0.99	2.62	2.99	3.00	3.01						
$CaSO_4$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
MgO	1.60	1.69	1.88	1.94	1.48	0.69	1.48	1.66	2.69	1.94	2.34	2.02	1.56	2.28	1.76	0.68	0.82	0.84	0.86						
MnO	0.07	0.08	0.06	0.09	0.05	0.04	0.06	0.08	0.06	0.06	0.10	0.10	0.05	0.08	0.08	0.11	0.11	0.12	0.11						
Na_2O	4.66	4.43	4.76	4.02	2.41	2.95	4.79	3.91	3.13	2.94	3.99	3.88	4.91	5.89	3.60	4.91	4.93	4.95	4.89						
K_2O	2.76	2.52	2.83	2.12	3.85	4.59	3.14	2.75	5.68	3.72	2.79	2.90	4.60	4.66	2.54	2.08	1.78	1.79	1.79						
P_2O_5	0.10	0.09	0.09	0.09	0.10	0.08	0.10	0.10	0.15	0.11	0.13	0.12	0.11	0.13	0.09	0.10	0.13	0.14	0.13						
Total:	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00						

Notes: Major elements and Ba, Rb, Sr, Y, and Zr were measured by X-ray fluorescence (XRF) on fused disks (Philips PW1480; Mineralogisch-Petrologisches Institut, Universität Bonn, Germany). TiO_2 of samples P006, P013, P072, P074, and P075 was measured by inductively coupled plasma–mass spectrometry (ICP-MS). Py = pyrite, anhy = anhydrite, chl = chlorite, pyro = pyrophyllite, Kfsp = K-feldspar, Fsp = feldspar, qtz = quartz. app. = apparent, amygdal. = amygdaloidal, pu. = pumice, std. = standard. LOI = loss on ignition, ND = not determined, NV = no value, BDL = below detection limit. * = determined using an ion-selective electrode (Bergakademie Freiberg). † = determined by combustion, applying microcoulometry (EA 2000 gas analyzer; Analytik Jena AG). ICP-MS laboratories: Freiberg = Mineralogisches Institut, Bergakademie Freiberg (Prof. Klemm); GFZ = GeoForschungsZentrum Potsdam (Dr. Dulski); Uni Kiel = University of Kiel (Dr. Garbe-Schönberg). Mineralogy was determined by X-ray diffraction (XRD) and modal mineralogy calculated using SOLVER in Excel. Calculated abundances <0.01 are shown as 0. All SiO_2 polymorphs are calculated as quartz. Unaltered samples are generally glassy; calculated modal mineralogy does not represent actual composition. XRD results are given in Table T2, p. 18. Minerals not identified by XRD were excluded from the calculations and are shown as ND. Silicate $\delta^{18}O$ measurements were made on sulfate-free bulk rock powders. Where present, anhydrite was removed prior to analysis. Reported values are the average of two individual measurements with deviation <0.2‰ (Mineralogisch-Petrologisches Institut, Universität Bonn; Prof. Hoernes). For anhydrites, the $\delta^{18}O$ of sulfate was determined separately using the $BaSO_4$ powders obtained from gravimetric determination of SO_4. Pyrolysis measurements were performed at the isotope laboratory at the Bergakademie Freiberg (Dr. Tichomirowa). Data reproducibility is on the order of ±0.5‰. Bulk rock isotopic composition was calculated based on the proportions of anhydrite and silicate phases. For samples with minor anhydrite and anhydrite-free samples, the bulk rock isotopic composition equals the isotopic composition determined for the silicate phases. Sr isotopes were measured at the Bergakademie Freiberg (Dr. Tichomirowa). $^{87}Sr/^{86}S_{rsilicate}$ duplicates for P001 = 0.70380 and 0.70379, better than measurement error, which ranges 0.00001–0.00006. $^{87}Sr/^{86}S_{ranhydrite}$ in P025 = 0.70456 and 0.70524. Recalculated major element oxides: FeS_2 and $CaSO_4$ are calculated based on S_{total} and SO_4 in anhydrite. Where SO_4 in anhydrite was BDL, all S was assigned to pyrite. Where SO_4 in anhydrite is not available, XRD data were used in the recalculation. All S was assigned to pyrite for samples where pyrite was identified in XRD but anhydrite was absent (powders 16, 34, 73, 61, 63, 64, 27, 48, 51, 11, 52, 53, and 54). In powder P017, XRD shows anhydrite but pyrite was not detected; consequently, all S was assigned to anhydrite. For P070, the recalculation assumed all Ca resided in anhydrite (plagioclase is absent in XRD). For P020, it was assumed that pyrite and anhydrite are present in proportions 80:20 based on XRD data. Unaltered and many weakly altered samples (2, 69, 33, 50, 68, and 60) show no indication of pyrite or anhydrite in XRD but contain minor S_{total}. Here, all the S_{total} was assigned to pyrite because anhydrite is an unlikely igneous phase at PACMANUS.

Table T1. Geochemistry of variably altered dacite from the PACMANUS hydrothermal field. (**See table notes.** Continued on next 31 pages.)

Sample ID:	PM01	PM02	PM05		PM06			PM07	PM08	PM10	
Hole:					1188A						
Core section, interval (cm):	2R-1, 18	5R-1, 37	7R-1, 114		8R-1, 13			8R-1, 66	9R-1, 130	11R-1, 20	
Depth (mbsf):	9.78	33.97	49.34		58.03			58.56	68.9	87.1	
Volcanic facies:	Coherent, vesicular	Coherent, perlite	Coherent relict perlite		Coherent kernels	Coherent app. matrix	Coherent relict perlite	Brecciated	Coherent, relict perlite	Coherent, margin	Coherent, kernel
Alteration facies:	Unaltered	Weak	Py-anhy	Chl-py		Py-anhy		Chl-py	Anhy-py-pyro	Py-anhy	Chl-py
Powder:	P001	P002	P004	P003	P005	P006	P071	P007	P008	P009	P010
Major element oxides (wt%):											
SiO_2	68.28	62.35	54.77	58.80	72.18		64.46	64.36	64.15	65.94	66.32
TiO_2	0.51	0.58	0.59	0.58	0.63	0.52	0.63	0.58	0.62	0.60	0.61
Al_2O_3	13.50	13.25	13.46	13.39	14.04		13.93	13.32	14.04	13.52	13.87
Fe_2O_3	4.43	4.97	6.90	5.37	4.71		8.19	6.09	1.50	4.13	5.17
MgO	0.99	1.13	2.18	4.03	0.65		0.65	4.54	0.23	3.28	1.93
CaO	2.70	2.52	5.60	3.14	0.32		0.22	1.04	5.36	2.41	2.71
MnO	0.11	0.12	0.03	0.09	0.01		0.01	0.15	0.01	0.02	0.02
Na_2O	4.67	2.63	1.04	0.69	0.47		0.72	0.53	0.67	2.55	3.85
K_2O	1.96	2.52	1.25	1.65	0.43		0.60	1.04	0.14	0.29	0.31
P_2O_5	0.10	0.14	0.11	0.11	0.16		0.07	0.12	0.12	0.15	0.11
Volatiles (wt%):											
H_2O	2.06	8.19	3.94	5.16	4.16	3.94	4.27	5.14	3.18	3.29	1.95
CO_2	0.03	0.10	0.05	0.06	0.06	0.05	0.05	0.05	0.03	0.06	0.09
NO_3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
S_{total}	0.03	0.24	6.89	3.54	3.31	10.90	6.03	2.15	3.54	3.65	3.48
$S_{in\ sulfide}$	ND	ND	5.98	2.30	3.31	ND	6.03	1.60	0.84	3.29	3.25
$SO_{4\ in\ anhydrite}$	ND	ND	2.73	3.72	BDL	ND	BDL	1.65	8.10	1.08	0.69
LOI											
Totals:	99.37	98.74	98.63	99.09	101.13		99.83	100.20	98.99	100.61	100.88
Halogens (ppm):											
F	540	950					1100	1480			
Cl*	2950	2170					<200	470			
Cl†	3100										
Trace elements by XRF (ppm):											
Ba	381	357	260	366	797		405	222	228	272	255
Rb	33	38	18	27	8		14	20	7	8	7
Sr	223	243	373	219	69		103	83	288	220	303
Y	35	31	33	35	35		30	28	28	30	27
Zr	106	100	99	97	91		107	83	96	96	109
Trace elements by ICP-MS (ppm):											
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cu	25	33	48	24	61	182	107	12	22	7	10
Pb	10	8	31	18	15	26	18	20	2	10	8
Zn	103	88	44	79	224	44	126	166	6	42	39
Ba	424	408	320	399	754	516	402	246	290	320	292
Ag	2.1	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	0.6	<0.5	<0.5
As	5.3	6.7	12.9	5.5	<5	30.2	15.8	20.6	5.9	<5	<5
Bi	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Table T1 (continued).

Sample ID:	PM11		PM14		PM15		PM18	PM20	PM21	PM23	
Hole:						1188A					
Core section, interval (cm):	12R-2, 47		14R-1, 86		14R-1, 107		17R-1, 24	19R-1, 41	19R-1, 86	20R-1, 95	
Depth (mbsf):	98.55		116.86		117.07		145.34	164.71	165.16	174.85	
Volcanic facies:	Coherent, light bands	Coherent, dark bands	Coherent, veined	Coherent, app. clasts	Volcanic breccia clast	Volcanic breccia matrix	Coherent, vesicular	Coherent amygdal.	Coherent vesicular	Coherent spherulitic	
Alteration facies:	Weak		Anhy-py-pyro		Anhy-py-pyro		Anhy-py-pyro	Chl-py	Weak	Chl-py	
Powder:	P011	P069	P012	P070	P013	P014	P015	P016	P017	P018	P019
Major element oxides (wt%):											
SiO_2	68.31	67.54	70.05	48.38		71.11	68.42	62.15	65.57	56.02	55.42
TiO_2	0.62	0.61	0.60	0.83	0.47	0.61	0.57	0.84	0.74	0.77	0.74
Al_2O_3	14.13	13.96	14.20	20.48		13.90	13.15	13.08	14.07	13.84	13.22
Fe_2O_3	5.12	5.65	3.14	3.51		0.55	1.90	5.07	5.60	10.06	9.64
MgO	1.43	1.59	0.23	0.35		0.25	1.96	6.17	2.28	4.07	3.72
CaO	1.99	1.93	1.82	5.65		3.24	2.84	3.24	3.56	3.08	3.79
MnO	0.08	0.09	0.00	0.00		0.00	0.03	0.07	0.09	0.16	0.12
Na_2O	5.25	4.98	0.77	1.55		0.85	0.58	3.30	4.00	4.29	4.15
K_2O	0.43	0.43	0.79	0.92		1.35	1.80	0.09	0.35	0.27	0.25
P_2O_5	0.13	0.14	0.06	0.07		0.14	0.06	0.25	0.19	0.37	0.36
Volatiles (wt%):											
H_2O	1.67	1.79	2.94	4.71	3.7	2.74	3.54	4.04	1.97	3.57	3.79
CO_2	0.05	0.07	0.04	0.07	0.03	0.06	0.03	0.05	0.08	0.10	0.11
NO_3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
S_{total}	0.53	0.60	3.12	6.07	3.35	1.73	1.74	0.72	0.51	2.88	3.42
$S_{in\ sulfide}$	ND	ND	2.12	ND	ND	0.42	0.65	ND	ND	2.88	2.82
$SO_{4\ in\ anhydrite}$	ND	ND	2.99	ND	ND	3.93	3.28	ND	ND	BDL	1.79
LOI											
Totals:	99.74	99.38	99.75	92.59		99.15	98.80	99.07	99.01	99.48	99.92
Halogens (ppm):											
F	480	520					1190		620	1990	
Cl*	810	1000					950		680	<200	
Cl†											
Trace elements by XRF (ppm):											
Ba	417	316	499	264		424	845	100	292	154	181
Rb	9	11	9	13		14	19	5	4	4	3
Sr	242	229	139	303		189	237	430	342	359	365
Y	31	34	25	52		25	30	34	29	29	27
Zr	109	110	111	166		99	104	92	100	79	74
Trace elements by ICP-MS (ppm):											
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cu	56	133	6	7	16	16	11	12	11	73	67
Pb	15	13	4	5	2	3	1	3	4	3	3
Zn	48	61	9	25	10	41	22	54	90	117	130
Ba	568	375	504	1290	707	481	956	94	375	157	293
Ag	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
As	16.1	<5	8.4	62.7	7.6	<5	8.9	<5	<5	5.5	11.2
Bi	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Table T1 (continued).

Sample ID:	PM26	PM27	PM29		PM33	PM35		PM36	PM37	PM40	PM42	
Hole:					1188F						1189A	
Core section, interval (cm):	6Z-1, 45	8Z-1, 26	13Z-1, 0		19Z-1, 27	23Z-2, 56		30Z-1, 13	34Z-1, 123	39Z-1, 82	43Z-1, 21	
Depth (mbsf):	233.55	236.46	241.4		268.67	288.66		318.23	337.63	354.32	371.71	
Volcanic facies:	Coherent spherulitic	Coherent amygdal.	Coherent, kernel	Coherent, margin	Coherent	Coherent, kernel	Coherent, halo	Volcanic breccia	Volcanic breccia?	Coherent amygdal.	Coherent margin	Coherent kernel
Alteration facies:	Weak	Py-anhy	Py-anhy	Anhy-py-pyro	Py-anhy	Chl-py	Anhy-py-pyro	Kfsp-illite	Kfsp-illite	Chl-py	Py-anhy	Kfsp-illite
Powder:	P020	P021	P023	P022	P024	P025	P026	P027	P028	P029	P031	P030
Major element oxides (wt%):												
SiO_2	65.32	58.81	57.65	60.58	59.82	61.19	62.86	68.77	60.28	63.76	64.70	66.93
TiO_2	0.67	0.71	0.74	0.73	0.74	0.81	0.81	0.71	0.88	0.80	0.59	0.59
Al_2O_3	14.08	14.02	12.99	12.73	13.03	13.63	13.65	14.46	21.72	14.02	13.37	13.35
Fe_2O_3	5.08	6.79	7.01	4.12	6.70	5.61	5.13	4.78	2.18	6.83	5.54	5.93
MgO	3.63	1.77	0.43	0.25	0.14	4.89	1.56	2.41	3.53	2.14	1.39	1.30
CaO	1.12	2.70	3.36	4.52	3.48	2.18	2.45	0.63	0.72	3.31	1.73	2.07
MnO	0.17	0.01	0.01	0.00	0.00	0.04	0.01	0.03	0.03	0.08	0.03	0.04
Na_2O	4.67	0.49	0.47	0.52	0.80	0.56	0.58	1.30	1.28	3.36	0.49	2.02
K_2O	0.58	1.60	2.11	1.80	1.32	1.37	2.21	2.14	4.18	0.62	2.70	1.78
P_2O_5	0.14	0.19	0.25	0.17	0.24	0.31	0.30	0.14	0.23	0.23	0.13	0.13
Volatiles (wt%):												
H_2O	3.57	3.83	3.22	3.78	2.72	4.74	4.05	3.40	4.61	2.24	4.59	2.83
CO_2	0.25	0.04	0.06	0.07	0.04	0.06	0.06	0.07	0.05	0.07	0.08	0.07
NO_3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
S_{total}	0.93	6.64	7.62	5.85	7.47	2.43	4.21	0.94	0.81	1.64	4.05	3.47
$S_{in\ sulfide}$	ND	5.45	5.97	3.69	5.88	1.50	2.83	ND	ND	1.25	3.11	2.98
$SO_{4\ in\ anhydrite}$	ND	3.58	4.94	6.48	4.76	2.80	4.13	ND	ND	1.17	2.82	1.47
LOI												
Totals:	100.21	99.99	99.21	99.43	99.67	99.69	100.63	99.78	100.50	99.88	101.27	101.49
Halogens (ppm):												
F		1800	1800		1470	2690	1170		490	1080		1090
Cl*		260	420		920	590	440		490	270		<200
Cl†		120	320									
Trace elements by XRF (ppm):												
Ba	275	462	667	1631	604	453	881	906	1096	253	552	340
Rb	11	16	16	13	11	18	24	23	38	8	25	18
Sr	276	186	260	388	276	130	184	111	97	310	125	186
Y	31	31	25	37	30	27	31	30	26	33	36	39
Zr	99	99	83	82	86	80	82	122	143	99	93	99
Trace elements by ICP-MS (ppm):												
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cu	127	10	10	10	26	33	10	21	7	32	11	9
Pb	18	3	2	1	3	3	2	2	2	3	2	2
Zn	109	13	18	16	10	36	19	21	26	68	189	219
Ba	268	704	785	1880	690	523	988	1100	1200	346	573	423
Ag	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
As	<5	10.0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bi	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Table T1 (continued).

Sample ID:	PM44	PM45	PM47	PM48	PM49	PM50		PM51	PM52	PM53	PM54	
Hole:						1189A						
Core section, interval (cm):	1R-1, 12	2R-1, 0	2R-1, 130	3R-1, 0	3R-1, 84	5R-1, 44		7R-1, 11	8R-1, 3	9R-1, 21	10R-1, 39	
Depth (mbsf):	0.12	9.7	11	19.4	20.24	39.24		58.41	68.03	77.91	87.69	
Volcanic facies:	Coherent vesicular	Coherent vesicular	App. clast perlitic	Coherent	Coherent	App. clasts	App. matrix	Coherent vesicular	Coherent	Breccia	Coherent veined	Coherent unveined
Alteration facies:	Unaltered	Weak	Chl-py	Kfsp-illite	Py-anhy	Kfsp-illite	Chl-py	Kfsp-illite	Kfsp-illite	Chl-py	Py-anhy	Kfsp-illite
Powder:	P032	P033	P034	P035	P036	P038	P037	P039	P040	P041	P043	P042
Major element oxides (wt%):												
SiO_2	62.84	63.39	59.79	63.95	61.24	60.45	63.68	57.18	68.63	63.32	60.00	64.26
TiO_2	0.84	0.78	0.83	0.75	0.66	0.80	0.59	0.87	0.54	0.43	0.44	0.55
Al_2O_3	14.72	14.94	15.58	14.30	12.53	15.23	11.11	16.63	13.86	11.07	11.58	14.58
Fe_2O_3	6.48	4.65	5.56	4.66	8.05	5.99	5.95	6.04	4.79	4.74	7.30	5.06
MgO	1.77	2.25	4.77	3.52	2.37	3.51	3.45	3.92	1.54	2.50	2.57	2.03
CaO	4.56	3.09	1.16	2.62	0.28	1.98	2.89	2.63	2.16	4.68	3.30	1.38
MnO	0.15	0.07	0.16	0.03	0.02	0.05	0.08	0.04	0.04	0.04	0.03	0.04
Na_2O	4.43	4.40	0.79	2.65	0.58	3.47	1.34	3.05	4.04	2.36	0.62	1.78
K_2O	1.40	1.52	5.06	1.77	6.48	2.83	2.79	3.14	2.31	1.81	3.46	6.25
P_2O_5	0.27	0.19	0.20	0.21	0.12	0.19	0.13	0.21	0.12	0.08	0.08	0.11
Volatiles (wt%):												
H_2O	2.06	3.08	4.59	2.94	2.04	2.47	3.22	2.33	1.53	1.65	3.29	2.39
CO_2	0.05	0.08	0.10	0.07	0.05	0.05	0.11	0.04	0.06	0.01	0.08	0.08
NO_3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
S_{total}	0.07	0.38	0.87	1.62	5.07	2.27	2.21	3.15	1.10	3.56	5.56	1.97
$S_{in\ sulfide}$	ND	ND	ND	ND	5.07	1.98	0.94	3.15	1.10	1.89	4.00	1.97
$SO_{4\ in\ anhydrite}$	ND	ND	ND	ND	BDL	0.86	3.81	BDL	BDL	5.00	4.69	BDL
LOI												
Totals:	99.64	98.82	99.46	99.09	99.49	99.86	100.09	99.23	100.72	99.58	101.44	100.48
Halogens (ppm):												
F	520	500			580			750	<200	320	1580	
Cl*	2580	520			<200			<200	<200	<200	1980	
Cl†										160		
Trace elements by XRF (ppm):												
Ba	271	986	6791	1500	4391	1317	1266	2165	780	1153	2468	5116
Rb	24	13	71	14	59	29	35	30	30	22	40	46
Sr	338	305	109	264	46	206	159	294	240	368	206	193
Y	32	30	33	35	27	33	25	42	40	30	33	41
Zr	93	100	100	100	81	110	79	121	110	131	82	109
Trace elements by ICP-MS (ppm):												
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cu	53	85	156	176	16	59	13	127	10	454	75	88
Pb	8	23	227	5	4	4	4	6	6	7	29	25
Zn	92	1390	4310	32	24	39	47	35	40	28	626	60
Ba	318	1060	7190	1490	4760	1470	1380	2500	1180	963	2670	5290
Ag	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	1.2	1.1	0.8	1.4	1.8	1.8
As	6.1	9.6	24.5	12.6	16.2	15.3	23.5	5.0	132.6	24.3	276.7	<5
Bi	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Table T1 (continued).

Sample ID:	PM56	PM57		PM58	PM60		PM63	PM64	PM68	PM71
Hole:		1189A					1189B			
Core section, interval (cm):	12R-1, 83	12R-1, 120		13R-1, 51	6R-1, 0		11R-1, 22	11R-3, 3	13R-1, 48	14R-1, 87
Depth (mbsf):	107.33	107.7		116.61	79		127.82	129.72	147.48	157.37
Volcanic facies:	Coherent	Volcanic breccia, sulfur matrix	Volcanic breccia, pu clasts	Volcanic breccia	Stockwork matrix	App. clast in stockwork	Volcanic breccia	Coherent vesicular	Coherent perlitic	Flow-banded volcanic breccia
Alteration facies:	Chl-py	Sulfides	Kfsp-illite	Chl-py	Sulfide, Fe oxide	Chl-py	Kfsp-illite	Unaltered	Kfsp-illite	Anhy-py-pyro
Powder:	P044	P074	P072	P045	P075	P073	P046	P047	P048	P049
Major element oxides (wt%):										
SiO_2	64.84			56.33		45.63	66.62	68.04	72.21	51.03
TiO_2	0.62	0.18	0.58	0.84	0.20	0.89	0.45	0.62	0.49	0.51
Al_2O_3	13.24			15.03		22.46	9.55	13.91	11.28	10.76
Fe_2O_3	6.56			8.45		12.36	6.87	4.86	4.00	5.45
MgO	5.10			5.43		7.62	2.07	1.30	1.72	2.46
CaO	0.29			1.87		0.39	1.37	2.50	0.55	8.83
MnO	0.04			0.03		0.20	0.04	0.12	0.08	0.09
Na_2O	0.29			1.72		0.95	0.11	4.42	1.63	0.93
K_2O	2.59			1.68		5.50	4.00	1.92	3.72	3.79
P_2O_5	0.17			0.42		0.17	0.10	0.13	0.08	0.09
Volatiles (wt%):										
H_2O	4.00			3.72		ND	3.25	1.24	2.33	2.46
CO_2	0.04			0.05		ND	0.09	0.07	0.06	0.05
NO_3	<0.03			<0.03		<0.03	<0.03	<0.03	<0.03	<0.03
S_{total}	2.00			4.05		1.28	2.70	0.05	0.79	5.20
$S_{in\ sulfide}$	2.00			4.05		ND	1.95	ND	ND	1.20
$SO_{4\ in\ anhydrite}$	BDL			BDL		ND	2.25	ND	ND	11.98
LOI										
Totals:	99.78			99.62		97.45	98.72	99.18	98.94	99.63
Halogens (ppm):										
F				740			750		440	
Cl*				<200			<200		<200	
Cl†									80	
Trace elements by XRF (ppm):										
Ba	509			323		2007	5173	510	4529	1043
Rb	38			22		78	45	24	43	45
Sr	11			158		35	89	264	153	446
Y	30			27		53	23	34	28	32
Zr	89			77		167	73	117	89	102
Trace elements by ICP-MS (ppm):										
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cu	104	4870	2019	76	117	18	3930	30	353	15
Pb	5	77	4	37	27	9	20	5	78	55
Zn	30	349	112	90	407	222	75	167	411	141
Ba	548	551	3199	616	2924	2313	5770	483	3980	1140
Ag	1.2	1.76	0.3	0.8	<0.5	0.03	0.6	<0.5	0.8	0.6
As	12.0	350.2	21.4	15.9	32.1	12.4	20.4	<5	19.5	19.5
Bi	<5	38.2	<5	<5	<5	<5	<5	<5	<5	<5

Table T1 (continued).

Sample ID:	PM73		PM75		PM79	PM82	PM85		PM86		PM88
Hole:						1189B					
Core section, interval (cm):	15R-1, 25		15R-1, 124		16R-1, 75	17R-1, 57	18R-1, 5		18R-1, 45		18R-1, 125
Depth (mbsf):	166.35		167.34		176.45	185.87	195.05		195.45		196.25
Volcanic facies:	Volcanic breccia clast	Volcanic breccia matrix	Volcanic breccia gray clasts	Volcanic breccia green clasts	Coherent	Coherent	Volcanic breccia clast	Volcanic breccia matrix	Volcanic breccia clast	Volcanic breccia matrix	Brecciated
Alteration facies:	Weak	Kfsp-illite	Weak		Weak	Kfsp-illite	Kfsp-illite		Kfsp-illite		Weak
Powder:	P050	P051	P052	P053	P054	P055	P056	P057	P058	P059	P060
Major element oxides (wt%):											
SiO_2	68.89	67.84	67.43	68.64	70.89	70.73	67.68	68.33	63.04	68.34	67.23
TiO_2	0.64	0.61	0.64	0.61	0.58	0.59	0.62	0.56	0.79	0.62	0.69
Al_2O_3	13.65	13.06	13.58	12.89	12.38	12.69	13.55	12.35	15.66	12.30	13.49
Fe_2O_3	4.08	5.35	3.72	4.81	4.29	3.10	4.67	4.92	4.07	4.42	4.81
MgO	1.56	1.64	1.80	1.87	1.45	0.67	1.44	1.59	2.60	1.85	2.26
CaO	1.15	1.05	0.99	1.14	1.55	1.31	1.01	1.07	1.57	1.18	1.29
MnO	0.07	0.08	0.06	0.09	0.05	0.04	0.06	0.08	0.06	0.06	0.10
Na_2O	4.54	4.29	4.56	3.87	2.36	2.86	4.66	3.74	3.02	2.81	3.86
K_2O	2.69	2.44	2.71	2.04	3.76	4.45	3.05	2.63	5.49	3.56	2.70
P_2O_5	0.10	0.09	0.09	0.08	0.10	0.08	0.10	0.10	0.15	0.10	0.13
Volatiles (wt%):											
H_2O	1.83	1.88	2.70	2.72	1.61	0.77	1.34	2.73	2.45	3.27	2.26
CO_2	0.08	0.10	0.11	0.09	0.25	0.03	0.06	0.07	0.18	0.21	0.15
NO_3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
S_{total}	0.41	1.06	0.54	0.44	1.10	1.63	1.20	1.01	0.58	1.09	0.55
$S_{in\ sulfide}$	ND	1.06	ND	ND	ND	1.63	1.20	ND	ND	1.09	ND
$SO_{4\ in\ anhydrite}$	ND	BDL	ND	ND	ND	BDL	BDL	ND	ND	BDL	ND
LOI											
Totals:	99.69	99.49	98.93	99.29	100.37	98.95	99.44	99.18	99.66	99.81	99.52
Halogens (ppm):											
F											400
Cl*											<200
Cl†											100
Trace elements by XRF (ppm):											
Ba	1188	1128	1100	811	1716	2786	1021	1088	2443	1774	898
Rb	32	31	29	29	33	39	33	33	48	37	31
Sr	208	193	186	189	183	165	163	163	190	169	197
Y	33	32	36	31	33	33	36	33	37	30	33
Zr	125	119	118	116	98	109	118	107	130	99	126
Trace elements by ICP-MS (ppm):											
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cu	303	156	99	36	1150	36	369	54	1070	347	108
Pb	14	34	24	13	21	7	34	25	5	31	43
Zn	78	116	67	80	139	37	77	124	89	87	111
Ba	1350	1130	2570	795	1910	2810	1190	1270	2610	1940	992
Ag	<0.5	1.7	5.8	2.3	<0.5	1.5	1.4	1.3	1.2	0.6	<0.5
As	15.2	61.7	69.6	19.8	25.4	21.9	159.3	143.3	34.0	43.8	60.8
Bi	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Table T1 (continued).

Sample ID:	PM89	PM90			PM92	PM93	PM94	PM95	1188B-a	1188B-b	1188B-c
Hole:		1189B			1190C		1191A			1188B	
Core section, interval (cm):	18R-2, 0	18R-2, 49			3R-1, 3	1R-1, 64	1R-1, 75	3R-1, 80			
Depth (mbsf):	196.42	196.91			13.23	0.64	0.75	15.5			
Volcanic facies:	Volcanic breccia	Volcanic breccia clast	Volcanic breccia clast	Volcanic breccia matrix	Coherent vesicular	Coherent vesicular	Coherent vesicular	Coherent			
Alteration facies:	Fsp-qtz	Fsp-qtz			Unaltered	Unaltered	Unaltered	Weak			
Powder:	P061	P062	P063	P064	P065	P066	P067	P068	Internal std.	Internal std.	Internal std.
Major element oxides (wt%):											
SiO_2	67.22	64.41	60.48	69.09	67.83	68.96	67.54	67.98	66.37	66.92	68.03
TiO_2	0.67	0.70	0.82	0.55	0.51	0.64	0.62	0.63	0.60	0.60	0.61
Al_2O_3	12.98	15.01	17.87	11.82	13.42	14.18	13.91	14.04	13.57	13.67	13.74
Fe_2O_3	5.44	4.44	4.91	5.03	4.03	4.46	4.50	4.63	4.96	5.08	4.92
MgO	1.95	1.51	2.24	1.68	0.65	0.81	0.82	0.84	3.99	3.85	4.13
CaO	1.13	0.87	1.15	0.95	2.51	2.96	2.91	2.95	1.30	1.28	1.36
MnO	0.10	0.05	0.08	0.08	0.11	0.11	0.12	0.11	0.06	0.06	0.06
Na_2O	3.74	4.75	5.79	3.44	4.71	4.88	4.81	4.79	2.19	2.14	2.18
K_2O	2.80	4.45	4.58	2.42	1.99	1.76	1.74	1.75	0.39	0.44	0.38
P_2O_5	0.12	0.11	0.13	0.08	0.09	0.13	0.14	0.13	0.13	0.14	0.15
Volatiles (wt%):											
H_2O	2.44	1.38	1.98	2.91	2.82	0.24	1.52	0.92	ND	ND	ND
CO_2	0.08	0.07	0.16	0.11	0.05	0.02	0.02	0.04	ND	ND	ND
NO_3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
S_{total}	0.90	1.57	0.62	1.01	0.03	0.03	0.02	0.03	2.54	2.54	2.54
$S_{in\ sulfide}$	ND	1.57	ND	ND	ND	ND	ND	ND	ND	ND	ND
$SO_{4\ in\ anhydrite}$	ND	BDL	ND	ND	ND	ND	ND	ND	ND	ND	ND
LOI									3.70	3.70	3.70
Totals:	99.57	99.32	100.81	99.17	98.75	99.18	98.67	98.84	97.26	97.88	99.26
Halogens (ppm):											
F	520					520	570				
Cl*	1090					990	3160				
Cl†						940					
Trace elements by XRF (ppm):											
Ba	909	1738	2046	1099	371	354	331	344	143	138	120
Rb	33	40	36	27	31	28	28	26	7	10	6
Sr	178	169	173	146	230	264	249	260	153	152	154
Y	36	41	44	31	37	35	31	31	30	32	37
Zr	116	136	146	106	123	115	109	114	103	105	97
Trace elements by ICP-MS (ppm):											
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg		
Cu	83	174	645	119	27	29	22	39	108		
Pb	94	19	5	15	5	4	6	7	26		
Zn	95	63	94	89	77	70	98	88	393		
Ba	826	1730	2310	1120	632	384	1780	421	231		
Ag	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
As	100.6	31.5	48.1	80.8	13.8	<5	53.9	<5	17.7		
Bi	<5	<5	<5	<5	<5	<5	<5	<5	<5		

Table T1 (continued).

Sample ID:	1191A-a	1191A-b	1191A-c
Hole:		1191A	
Core section, interval (cm):			
Depth (mbsf):			
Volcanic facies:			
Alteration facies:			
Powder:	Internal std.	Internal std.	Internal std.
Major element oxides (wt%):			
SiO_2	67.76	67.98	68.91
TiO_2	0.63	0.63	0.64
Al_2O_3	14.03	14.10	14.17
Fe_2O_3	4.65	4.63	4.88
MgO	0.83	0.84	0.82
CaO	2.95	2.96	2.97
MnO	0.13	0.13	0.13
Na_2O	4.85	4.84	4.81
K_2O	1.72	1.73	1.76
P_2O_5	0.13	0.13	0.13
Volatiles (wt%):			
H_2O	ND	ND	ND
CO_2	ND	ND	ND
NO_3	<0.03	<0.03	<0.03
S_{total}	0.04	0.04	0.04
$S_{in\ sulfide}$	ND	ND	ND
$SO_{4\ in\ anhydrite}$	ND	ND	ND
LOI	1.44	1.44	1.44
Totals:	99.16	99.45	100.66
Halogens (ppm):			
F			
Cl*			
Cl†			
Trace elements by XRF (ppm):			
Ba	365	380	382
Rb	26	29	29
Sr	261	265	240
Y	34	36	34
Zr	116	115	98
Trace elements by ICP-MS (ppm):			
Laboratory:	Freiberg		
Cu	33		
Pb	6		
Zn	300		
Ba	411		
Ag	<0.5		
As	4.5		
Bi	<5		

Table T1 (continued).

Sample ID:	PM01	PM02	PM05		PM06			PM07	PM08	PM10	
Hole:					1188A						
Core section, interval (cm):	2R-1, 18	5R-1, 37	7R-1, 114		8R-1, 13			8R-1, 66	9R-1, 130	11R-1, 20	
Depth (mbsf):	9.78	33.97	49.34		58.03			58.56	68.9	87.1	
Volcanic facies:	Coherent, vesicular	Coherent, perlite	Coherent relict perlite		Coherent kernels	Coherent app. matrix	Coherent relict perlite	Brecciated	Coherent, relict perlite	Coherent, margin	Coherent, kernel
Alteration facies:	Unaltered	Weak	Py-anhy	Chl-py		Py-anhy		Chl-py	Anhy-py-pyro	Py-anhy	Chl-py
Powder:	P001	P002	P004	P003	P005	P006	P071	P007	P008	P009	P010
Cd	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cr	14.3	14.9	15.5	16.6	14.8	11.2	13.4	13.7	16.2	15.1	100.0
Co	5.1	5.9	5.6	5.5	4.7	7.4	5.8	5.0	2.6	5.7	6.9
Ga	17.4	17.5	33.2	27.0	19.3	17.6	17.0	16.7	8.8	24.9	22.8
Mo	4.96	2.65	5.05	2.16	0.66	9.40	4.42	2.29	3.42	2.65	2.06
Ni	15	8	7	6	6	6	13	6	5	7	310
Rb	34.7	38.7	16.3	28.8	7.7	6.8	8.3	15.5	2.4	3.3	2.2
Sb	<0.5	<0.5	<0.5	<0.5	<0.5	3.9	1.6	<0.5	<0.5	<0.5	<0.5
Sc	10.7	10.8	11.6	11.1	10.0	7.4	7.9	9.8	6.9	6.2	6.7
Sr	257	271	433	254	67.7	172	99.3	92.3	349	253	340
Tl	0.25	0.43	0.49	0.66	0.76	1.19	0.67	0.25	0.07	0.05	0.07
U	0.81	1.02	1.09	0.80	0.70	0.64	0.65	1.01	0.26	0.62	0.82
V	18	27	29	27	25	20	23	24	25	23	29
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Uni Kiel	Uni Kiel	Uni Kiel
Cs	ND	ND	ND	ND	ND	ND	ND	ND	0.27	0.23	0.70
Ta	ND	ND	ND	ND	ND	ND	ND	ND	0.14	0.12	0.14
Th	2.16	2.19	1.66	1.75	1.72	1.84	1.68	1.87	1.26	1.36	1.40
Nb	1.56	1.74	1.40	1.47	1.34	1.24	1.30	1.29	1.54	1.40	1.52
Hf	3.9	3.2	3.1	3.4	3.2	2.9	3.6	3.1	4.14	3.82	3.50
Y	35	32	31	33	25	19	25	30	35	32	27
Zr	121	107	102	107	96	86	92	96	123	114	119
La	11.70	11.78	9.36	11.70	12.58	10.52	12.30	10.53	12.75	11.83	10.62
Ce	24.93	24.52	22.15	24.46	28.34	25.20	24.30	25.26	29.20	27.58	24.09
Pr	3.63	3.46	3.35	3.45	3.98	3.65	3.52	3.72	4.16	4.16	3.49
Nd	17.66	17.80	15.83	16.42	16.12	14.87	14.80	16.86	18.37	18.88	15.20
Sm	4.27	4.03	4.08	3.98	4.19	3.88	3.80	4.75	4.54	4.87	3.71
Eu	1.21	1.20	1.10	1.02	1.13	1.02	0.92	1.42	1.47	1.32	1.30
Gd	4.53	4.36	4.32	4.27	4.18	3.48	3.76	4.78	5.24	5.34	3.94
Tb	0.83	0.76	0.78	0.75	0.71	0.57	0.59	0.90	0.92	0.94	0.72
Dy	5.62	5.24	5.20	4.90	4.63	3.76	3.90	6.15	6.13	6.19	4.76
Ho	1.18	1.07	1.09	1.04	0.95	0.78	0.82	1.30	1.37	1.33	1.03
Er	3.69	3.31	3.35	3.21	3.01	2.49	2.53	4.05	4.16	3.96	3.16
Tm	0.57	0.50	0.51	0.48	0.45	0.38	0.37	0.62	0.65	0.62	0.51
Yb	3.76	3.35	3.41	3.17	2.96	2.50	2.69	4.18	4.47	4.38	3.60
Lu	0.58	0.51	0.51	0.49	0.45	0.39	0.41	0.63	0.71	0.70	0.57
ZrXRF/ZrICP-MS:	0.88	0.93	0.97	0.91	0.95	NV	1.16	0.86	0.78	0.84	0.91
Normative mineralogy:											
Quartz	0.27	0.18	0.34	0.37	0.39		0.35	0.43	0.39	0.45	0.29
Albite	0.38	0.17	ND	ND	ND		ND	ND	ND	ND	0.33
Anorthite	0.10	0.01	ND	0.00	0.00		0.00	0.00	ND	0.05	0.10

Table T1 (continued).

Sample ID:	PM11		PM14		PM15		PM18	PM20	PM21	PM23	
Hole:					1188A						
Core section, interval (cm):	12R-2, 47		14R-1, 86		14R-1, 107		17R-1, 24	19R-1, 41	19R-1, 86	20R-1, 95	
Depth (mbsf):	98.55		116.86		117.07		145.34	164.71	165.16	174.85	
Volcanic facies:	Coherent, light bands	Coherent, dark bands	Coherent, veined	Coherent, app. clasts	Volcanic breccia clast	Volcanic breccia matrix	Coherent, vesicular	Coherent amygdal.	Coherent vesicular	Coherent spherulitic	
Alteration facies:	Weak		Anhy-py-pyro		Anhy-py-pyro		Anhy-py-pyro	Chl-py	Weak	Chl-py	
Powder:	P011	P069	P012	P070	P013	P014	P015	P016	P017	P018	P019
Cd	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cr	14.9	27.4	1.4	<0.5	5.0	12.1	1.0	3.9	31.2	108.6	103.0
Co	4.0	5.5	10.5	11.6	1.6	0.6	4.6	22.7	7.5	24.1	17.9
Ga	16.0	17.2	11.3	14.0	10.6	7.1	8.2	13.3	17.4	22.8	20.8
Mo	1.78	1.68	7.33	8.78	9.08	3.52	3.17	3.67	2.40	5.40	4.48
Ni	6	10	2	7	2	1	2	8	12	55	51
Rb	5.6	7.2	6.7	12.4	18.1	10.4	15.1	<0.5	1.5	1.8	2.3
Sb	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sc	11.2	12.5	<5	6.5	6.4	5.2	6.9	12.3	17.4	15.7	14.7
Sr	249	258	147	362	357	209	259	464	373	403	413
Tl	0.09	0.09	0.21	0.12	0.55	0.47	0.26	<0.5	<0.5	<0.5	<0.5
U	0.84	0.68	0.32	0.30	0.50	0.20	0.19	3.01	0.80	0.43	0.36
V	25	27	8	12	25	18	7	114	39	194	184
Laboratory:	Freiberg	Freiberg	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Freiberg	Uni Kiel	Uni Kiel
Cs	ND	ND	0.37	0.17	0.12	0.09	0.31	0.04	ND	0.18	0.15
Ta	ND	ND	0.49	0.20	0.23	0.13	0.13	0.12	ND	0.09	0.09
Th	1.92	2.00	1.70	1.95	2.91	1.39	1.24	1.25	1.00	0.97	1.03
Nb	1.42	1.35	1.89	2.45	2.32	1.55	1.59	1.38	<5	0.95	0.92
Hf	3.2	3.7	4.55	5.91	6.44	3.82	3.92	3.47	3.9	2.42	2.62
Y	33	30	23	57	37	21	31	35	29	24	25
Zr	103	106	134	196	193	123	124	102	101	76	78
La	11.04	11.40	9.06	16.96	9.19	7.77	10.46	12.98	11.30	8.55	10.70
Ce	26.45	23.40	20.88	40.52	21.53	18.13	24.66	29.75	25.10	20.74	25.39
Pr	3.76	3.46	3.00	6.19	3.21	2.62	3.73	4.23	3.67	3.10	3.93
Nd	16.69	15.10	12.75	28.50	14.56	11.53	17.15	18.60	16.31	14.27	18.68
Sm	4.57	3.95	3.26	8.08	4.34	3.15	4.61	4.90	4.00	3.81	4.70
Eu	1.32	1.05	0.71	2.33	1.45	0.72	1.20	1.59	1.55	1.14	1.38
Gd	4.80	4.35	3.63	9.31	5.85	3.44	5.08	5.59	5.26	4.23	4.99
Tb	0.90	0.70	0.66	1.66	1.07	0.60	0.88	0.99	0.87	0.73	0.83
Dy	6.05	4.57	4.43	10.36	7.17	3.91	5.75	6.58	5.42	4.71	5.16
Ho	1.27	0.98	0.97	2.16	1.54	0.82	1.22	1.41	1.21	0.99	1.07
Er	3.92	3.07	2.93	6.21	4.68	2.42	3.61	4.09	3.67	2.89	3.06
Tm	0.60	0.45	0.48	0.95	0.77	0.38	0.57	0.62	0.59	0.44	0.47
Yb	3.90	3.31	3.46	6.61	5.53	2.59	3.98	4.24	3.56	3.06	3.18
Lu	0.61	0.50	0.55	1.04	0.90	0.40	0.64	0.65	0.55	0.48	0.50
ZrXRF/ZrICP-MS:	1.06	1.04	0.83	0.85	NV	0.81	0.84	0.90	0.99	1.04	0.94
Normative mineralogy:											
Quartz	0.26	0.26	0.47			0.52	0.49	0.27	0.29	0.17	0.17
Albite	0.45	0.42	ND			ND	ND	0.28	0.34	0.36	0.35
Anorthite	0.08	0.08	0.00			0.01	ND	0.12	0.16	0.12	0.09

Table T1 (continued).

Sample ID:	PM26	PM27	PM29		PM33	PM35		PM36	PM37	PM40	PM42	
Hole:					1188F						1189A	
Core section, interval (cm):	6Z-1, 45	8Z-1, 26	13Z-1, 0		19Z-1, 27	23Z-2, 56		30Z-1, 13	34Z-1, 123	39Z-1, 82	43Z-1, 21	
Depth (mbsf):	233.55	236.46	241.4		268.67	288.66		318.23	337.63	354.32	371.71	
Volcanic facies:	Coherent spherulitic	Coherent amygdal.	Coherent, kernel	Coherent, margin	Coherent	Coherent, kernel	Coherent, halo	Volcanic breccia	Volcanic breccia?	Coherent amygdal.	Coherent margin	Coherent kernel
Alteration facies:	Weak	Py-anhy	Py-anhy	Anhy-py-pyro	Py-anhy	Chl-py	Anhy-py-pyro	Kfsp-illite	Kfsp-illite	Chl-py	Py-anhy	Kfsp-illite
Powder:	P020	P021	P023	P022	P024	P025	P026	P027	P028	P029	P031	P030
Cd	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Cr	51.3	7.4	2.5	3.6	2.4	3.2	4.2	22.7	30.8	5.6	6.7	6.8
Co	8.7	22.4	16.8	9.6	9.1	4.5	9.9	8.6	4.0	2.6	8.9	5.8
Ga	17.3	16.2	14.4	8.8	5.2	14.2	10.4	15.3	6.8	25.8	18.3	19.5
Mo	0.90	7.66	14.30	39.66	1.04	0.90	2.59	5.14	24.03	2.04	0.72	1.83
Ni	24	16	7	5	4	5	4	7	4	17	5	3
Rb	7.8	14.5	16.4	13.1	9.4	12.9	21.0	20.5	40.0	7.3	27.4	19.2
Sb	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sc	15.0	12.0	14.2	10.0	10.9	16.5	11.2	7.5	12.6	12.6	9.5	9.1
Sr	301	211	288	465	299	142	198	109	111	401	149	207
Tl	0.20	0.15	<0.5	0.21	0.21	<0.5	0.28	0.19	0.50	0.06	0.26	0.16
U	0.77	0.45	<0.5	0.39	0.29	0.90	0.25	0.86	1.34	0.89	0.24	0.22
V	38	31	56	49	51	77	75	43	88	57	19	21
Laboratory:	Freiberg	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel	Uni Kiel
Cs	ND	0.24	0.22	0.13	0.10	0.19	0.19	0.20	0.30	0.14	0.21	0.18
Ta	ND	0.14	0.11	0.10	0.11	0.11	0.11	0.15	0.19	0.10	0.12	0.13
Th	1.90	1.35	1.09	0.98	1.08	1.09	1.09	1.54	1.78	1.04	1.66	1.42
Nb	1.36	1.46	1.27	1.23	1.21	1.23	1.22	1.73	2.44	1.29	1.48	1.49
Hf	3.1	3.87	3.18	2.88	3.08	3.20	3.16	4.39	6.23	3.08	3.65	3.60
Y	31	32	30	33	31	29	29	29	19	31	32	31
Zr	107	112	98	96	96	97	97	137	209	100	118	118
La	10.06	10.95	7.61	12.87	9.54	8.85	9.53	13.12	30.25	10.86	7.96	7.13
Ce	23.43	26.77	19.98	31.33	23.48	22.49	23.26	30.17	65.23	26.76	20.46	18.47
Pr	3.43	4.04	3.22	4.74	3.62	3.51	3.59	4.34	8.20	4.01	3.23	2.90
Nd	15.35	18.50	15.54	21.12	17.05	16.58	16.78	19.12	28.38	18.21	15.32	13.86
Sm	4.49	4.89	4.38	5.28	4.64	4.40	4.43	4.45	3.28	4.71	4.19	3.91
Eu	1.38	1.26	1.18	1.18	1.33	1.35	1.23	1.25	1.01	1.59	1.06	1.13
Gd	4.64	5.46	4.96	5.51	5.29	5.00	4.94	4.43	2.21	5.13	4.72	4.48
Tb	0.86	0.97	0.87	0.95	0.92	0.88	0.85	0.79	0.40	0.87	0.85	0.81
Dy	5.63	6.38	5.71	6.22	6.11	5.74	5.63	5.28	2.91	5.77	5.63	5.47
Ho	1.21	1.38	1.23	1.32	1.30	1.22	1.20	1.17	0.76	1.21	1.23	1.20
Er	3.82	4.11	3.66	3.89	3.84	3.61	3.53	3.67	2.78	3.62	3.70	3.61
Tm	0.58	0.65	0.57	0.60	0.59	0.56	0.55	0.59	0.52	0.55	0.59	0.58
Yb	3.86	4.59	4.03	4.15	4.09	3.92	3.82	4.23	4.17	3.86	4.15	4.09
Lu	0.61	0.73	0.64	0.64	0.64	0.62	0.60	0.69	0.72	0.60	0.66	0.65
ZrXRF/ZrICP-MS:	0.93	0.88	0.85	0.86	0.90	0.83	0.85	0.89	0.68	0.99	0.79	0.84
Normative mineralogy:												
Quartz	0.21	0.36	0.25	0.28	0.43	0.39	0.43	0.35	0.20	0.28	0.41	0.33
Albite	0.40	ND	0.03	0.02	ND	ND	ND	0.11	ND	0.28	ND	0.17
Anorthite	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.11	0.00	0.03

Table T1 (continued).

Sample ID:	PM44	PM45	PM47	PM48	PM49	PM50		PM51	PM52	PM53	PM54	
Hole:						1189A						
Core section, interval (cm):	1R-1, 12	2R-1, 0	2R-1, 130	3R-1, 0	3R-1, 84	5R-1, 44		7R-1, 11	8R-1, 3	9R-1, 21	10R-1, 39	
Depth (mbsf):	0.12	9.7	11	19.4	20.24	39.24		58.41	68.03	77.91	87.69	
Volcanic facies:	Coherent vesicular	Coherent vesicular	App. clast perlitic	Coherent	Coherent	App. clasts	App. matrix	Coherent vesicular	Coherent	Breccia	Coherent veined	Coherent unveined
Alteration facies:	Unaltered	Weak	Chl-py	Kfsp-illite	Py-anhy	Kfsp-illite	Chl-py	Kfsp-illite	Kfsp-illite	Chl-py	Py-anhy	Kfsp-illite
Powder:	P032	P033	P034	P035	P036	P038	P037	P039	P040	P041	P043	P042
Cd	0.6	4.0	9.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5
Cr	21.6	2.3	24.3	2.3	18.1	21.7	14.9	24.1	4.9	4.9	6.6	4.4
Co	10.2	6.4	4.8	6.4	12.1	5.2	5.9	34.5	6.4	3.2	10.3	13.9
Ga	18.0	18.0	19.7	16.7	10.4	19.0	16.0	18.8	13.2	17.8	17.1	17.9
Mo	1.52	1.21	0.84	0.98	0.79	1.56	4.86	3.35	2.59	1.83	7.47	1.16
Ni	28	4	8	4	7	8	8	22	4	4	7	4
Rb	24.7	10.6	81.2	16.1	62.8	24.7	33.2	29.0	17.6	34.0	44.3	51.7
Sb	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	0.5	7.1	<0.5	4.7	0.5
Sc	16.4	14.2	15.6	13.9	12.2	14.1	11.8	16.1	8.9	10.9	9.5	11.3
Sr	425	343	111	296	42.5	209	171	391	407	276	247	214
Tl	0.41	0.14	1.51	0.21	0.35	0.43	0.84	0.19	5.85	0.53	14.19	0.37
U	1.26	1.31	1.85	0.93	0.80	0.65	0.76	1.74	2.62	1.16	10.15	2.95
V	82	50	38	48	17	34	28	30	16	19	24	16
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Uni Kiel	Uni Kiel	Freiberg	Freiberg	Freiberg
Cs	ND	ND	ND	ND	ND	ND	ND	0.23	0.40	ND	ND	ND
Ta	ND	ND	ND	ND	ND	ND	ND	0.14	0.14	ND	ND	ND
Th	2.19	1.95	1.73	1.49	1.17	1.75	1.34	1.35	1.57	1.86	1.57	1.97
Nb	1.23	1.48	1.50	1.35	1.25	1.52	1.17	1.73	1.50	1.48	1.26	1.59
Hf	2.6	2.9	3.3	3.0	2.7	3.1	2.4	3.95	4.33	3.4	2.9	3.6
Y	31	33	36	31	23	21	19	42	33	34	27	33
Zr	87	106	108	104	83	102	74	130	127	110	94	121
La	9.75	10.59	13.48	10.70	10.74	10.37	8.50	16.66	12.75	11.63	7.23	12.38
Ce	23.75	26.99	29.61	25.88	24.48	25.90	20.53	37.97	29.22	29.27	18.50	29.05
Pr	3.38	3.81	3.85	3.65	3.33	3.41	2.85	5.33	4.29	3.91	2.67	3.91
Nd	15.12	16.93	17.31	16.06	15.31	14.26	12.00	23.35	19.08	17.95	12.86	17.70
Sm	4.39	4.65	4.98	4.29	3.28	3.74	3.03	6.21	4.94	4.58	3.42	4.61
Eu	1.39	1.50	1.66	1.35	0.01	0.93	0.65	0.80	1.14	1.15	0.49	0.77
Gd	5.27	5.66	5.91	5.05	3.41	4.06	3.38	6.86	5.45	5.48	4.11	5.24
Tb	0.82	0.88	0.89	0.79	0.54	0.59	0.50	1.20	0.97	0.86	0.62	0.80
Dy	5.23	5.71	5.87	5.15	3.41	3.80	3.25	7.72	6.49	5.64	4.17	5.22
Ho	1.14	1.23	1.25	1.10	0.77	0.80	0.70	1.62	1.41	1.20	0.91	1.13
Er	3.54	3.88	3.93	3.44	2.50	2.59	2.30	4.70	4.20	3.81	2.91	3.60
Tm	0.50	0.56	0.57	0.50	0.37	0.37	0.33	0.72	0.67	0.55	0.43	0.53
Yb	3.38	3.79	3.85	3.41	2.46	2.56	2.28	4.97	4.71	3.83	2.95	3.68
Lu	0.51	0.59	0.59	0.52	0.39	0.39	0.36	0.77	0.75	0.59	0.46	0.55
ZrXRF/ZrICP-MS:	1.07	0.95	0.93	0.96	0.98	1.08	1.07	0.93	0.87	1.19	0.87	0.90
Normative mineralogy:												
Quartz	0.23	0.19	0.25	0.29	0.25	0.20	0.33	0.14	0.28	0.33	0.26	0.22
Albite	0.35	0.37	ND	0.23	0.05	0.30	0.11	0.27	0.34	0.20	0.05	0.15
Anorthite	0.17	0.12	0.03	0.11	0.00	0.06	0.00	0.12	0.09	0.06	0.00	0.04

Table T1 (continued).

Sample ID:	PM56	PM57		PM58	PM60		PM63	PM64	PM68	PM71
Hole:		1189A					1189B			
Core section, interval (cm):	12R-1, 83	12R-1, 120		13R-1, 51	6R-1, 0		11R-1, 22	11R-3, 3	13R-1, 48	14R-1, 87
Depth (mbsf):	107.33	107.7		116.61	79		127.82	129.72	147.48	157.37
Volcanic facies:	Coherent	Volcanic breccia, sulfur matrix	Volcanic breccia, pu clasts	Volcanic breccia	Stockwork matrix	App. clast in stockwork	Volcanic breccia	Coherent vesicular	Coherent perlitic	Flow-banded volcanic breccia
Alteration facies:	Chl-py	Sulfides	Kfsp-illite	Chl-py	Sulfide, Fe oxide	Chl-py	Kfsp-illite	Unaltered	Kfsp-illite	Anhy-py-pyro
Powder:	P044	P074	P072	P045	P075	P073	P046	P047	P048	P049
Cd	<0.5	0.56	0.37	<0.5	0.01	0.13	<0.5	<0.5	0.6	<0.5
Cr	9.6	8.0	17.7	82.3	83.6	14.4	16.0	18.2	8.3	17.7
Co	19.3	487.2	72.5	41.5	182.4	6.7	11.7	4.8	3.0	5.2
Ga	20.3	16.8	103.9	21.1	7.5	36.0	12.6	18.1	12.6	14.0
Mo	1.74	26.86	20.90	3.01	1.30	0.75	7.98	1.81	1.65	2.22
Ni	7	23	12	43	6624	5	7	37	4	7
Rb	35.0	14.2	112	21.9	36.9	91.3	48.8	26.1	35.7	52.5
Sb	<0.5	2.7	<0.5	0.7	2.5	<0.5	<0.5	<0.5	0.8	<0.5
Sc	13.1	4.8	27.2	19.9	5.0	24.0	8.2	12.6	7.1	9.0
Sr	3.8	67.0	45.2	194	43.8	43.8	109	298	149	528
Tl	0.18	4.30	0.77	0.97	0.75	0.46	1.66	0.11	0.73	0.71
U	1.65	1.04	2.49	4.39	1.44	4.80	2.04	0.70	1.21	4.39
V	35	38	298	104	12	52	18	20	14	18
Laboratory:	Freiberg	GFZ	GFZ	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cs	ND	0.32	0.29	ND	ND	ND	ND	ND	ND	ND
Ta	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Th	2.43	0.17	1.31	1.45	1.39	2.44	1.09	1.58	1.16	1.51
Nb	1.31	0.69	1.79	1.22	1.27	2.58	1.18	1.54	1.39	1.66
Hf	3.0	0.61	3.85	2.5	1.4	5.9	2.0	3.2	3.2	2.9
Y	24	8	35	26	11	32	20	36	22	26
Zr	98	22	139	77	45	185	60	120	100	108
La	10.45	5.59	16.89	10.44	3.14	12.20	9.09	11.02	8.37	9.69
Ce	24.11	12.57	39.13	23.61	6.43	25.80	20.22	24.74	18.06	21.27
Pr	3.66	1.71	5.52	3.81	0.92	3.60	3.12	3.71	2.58	3.04
Nd	16.00	7.48	24.71	18.08	4.29	16.10	14.15	16.37	11.61	13.58
Sm	3.83	1.61	5.60	4.87	1.22	3.91	3.63	4.21	2.81	3.25
Eu	0.68	0.40	1.44	0.99	0.02	0.39	0.07	1.14	0.21	0.63
Gd	3.88	1.67	5.95	4.94	1.34	4.02	3.45	5.01	3.12	3.46
Tb	0.65	0.26	0.98	0.77	0.22	0.59	0.57	0.80	0.52	0.56
Dy	4.34	1.66	6.24	4.68	1.46	3.89	3.65	5.63	3.49	3.85
Ho	0.90	0.34	1.31	0.99	0.32	0.89	0.76	1.18	0.74	0.81
Er	2.89	0.95	4.19	3.02	1.04	3.06	2.33	3.73	2.36	2.62
Tm	0.44	0.13	0.63	0.42	0.17	0.49	0.33	0.53	0.35	0.39
Yb	2.98	0.96	4.31	2.72	1.08	3.60	2.12	3.54	2.29	2.64
Lu	0.47	0.14	0.67	0.43	0.18	0.59	0.34	0.56	0.35	0.41
ZrXRF/ZrICP-MS:	0.91	NV	NV	1.01	NV	0.90	1.21	0.98	0.89	0.94
Normative mineralogy:										
Quartz	0.37			0.27		0.00	0.36	0.27	0.39	0.22
Albite	0.03			0.15		0.10	0.00	0.37	0.14	0.07
Anorthite	0.00			0.07		0.04	0.00	0.11	0.01	0.00

Table T1 (continued).

Sample ID:	PM73		PM75		PM79	PM82	PM85		PM86		PM88
Hole:						1189B					
Core section, interval (cm):	15R-1, 25		15R-1, 124		16R-1, 75	17R-1, 57	18R-1, 5		18R-1, 45		18R-1, 125
Depth (mbsf):	166.35		167.34		176.45	185.87	195.05		195.45		196.25
Volcanic facies:	Volcanic breccia clast	Volcanic breccia matrix	Volcanic breccia gray clasts	Volcanic breccia green clasts	Coherent	Coherent	Volcanic breccia clast	Volcanic breccia matrix	Volcanic breccia clast	Volcanic breccia matrix	Brecciated
Alteration facies:	Weak	Kfsp-illite	Weak		Weak	Kfsp-illite	Kfsp-illite		Kfsp-illite		Weak
Powder:	P050	P051	P052	P053	P054	P055	P056	P057	P058	P059	P060
Cd	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cr	19.7	20.5	14.9	19.4	13.7	22.7	35.8	25.2	34.3	24.9	108.3
Co	2.5	10.4	4.0	6.1	1.8	4.5	7.8	5.5	2.2	7.5	6.3
Ga	16.5	15.9	15.8	15.6	15.0	14.1	16.6	15.7	19.3	15.0	15.5
Mo	nn	5.01	0.57	0.80	1.30	1.00	6.33	2.59	1.50	nn	3.54
Ni	9	15	6	9	4	8	11	5	12	5	256
Rb	32.5	31.2	31.9	26.6	39.5	39.5	33.4	31.2	50.5	35.6	26.7
Sb	0.5	1.5	1.9	1.5	<5	0.6	2.8	2.6	<0.5	2.1	0.8
Sc	11.0	11.0	16.3	14.1	10.1	12.0	13.9	11.4	17.8	11.3	14.6
Sr	229	210	247	195	204	171	161	162	220	195	192
Tl	3.01	12.70	3.72	4.24	0.80	0.99	1.25	1.10	0.79	0.84	3.00
U	3.06	5.09	4.06	4.73	1.30	7.40	1.75	2.06	1.00	2.23	4.28
V	31	38	26	37	20	17	40	50	75	53	64
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg
Cs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ta	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Th	1.89	4.85	4.35	2.84	1.10	2.54	2.55	4.36	3.15	3.38	3.49
Nb	1.77	1.74	1.82	1.66	<5	1.70	1.61	1.58	2.11	1.61	1.58
Hf	3.8	3.5	5.4	3.7	4.2	3.3	3.7	3.2	4.0	2.9	2.9
Y	35	32	35	34	29	31	36	31	41	31	34
Zr	127	122	141	128	ND	118	124	112	150	101	117
La	11.90	12.87	16.51	13.14	10.90	9.54	12.87	12.87	7.46	11.90	11.73
Ce	27.22	28.46	37.68	29.50	25.80	22.48	30.10	28.47	27.18	26.78	28.46
Pr	4.06	4.21	5.60	4.46	3.84	3.26	4.37	3.98	4.67	3.90	4.00
Nd	17.95	18.55	24.70	20.45	17.08	15.32	19.69	18.18	21.93	17.76	18.45
Sm	4.44	4.76	6.10	5.24	4.41	4.18	5.01	4.53	5.64	4.48	4.50
Eu	1.07	1.09	1.53	1.29	1.54	0.42	1.20	1.11	1.26	1.15	1.08
Gd	4.95	5.08	6.44	5.83	5.23	4.76	5.52	5.02	5.79	4.69	5.02
Tb	0.82	0.85	1.11	0.99	0.89	0.82	0.93	0.89	1.01	0.80	0.83
Dy	5.48	5.90	7.55	6.79	5.63	5.67	6.26	5.98	6.69	5.42	5.44
Ho	1.15	1.21	1.61	1.41	1.28	1.20	1.32	1.26	1.39	1.12	1.16
Er	3.70	3.85	5.11	4.53	3.81	3.88	4.20	3.85	4.33	3.54	3.71
Tm	0.53	0.57	0.74	0.67	0.58	0.56	0.60	0.58	0.63	0.51	0.53
Yb	3.48	3.77	5.13	4.56	3.97	3.87	4.12	3.88	4.19	3.34	3.64
Lu	0.56	0.59	0.80	0.71	0.65	0.59	0.64	0.62	0.65	0.54	0.57
ZrXRF/ZrICP-MS:	0.99	0.97	0.84	0.91	NV	0.92	0.95	0.96	0.87	0.98	1.08
Normative mineralogy:											
Quartz	0.25	0.26	0.22	0.28	0.34	0.32	0.24	0.27	0.16	0.26	0.27
Albite	0.39	0.36	0.38	0.33	0.20	0.24	0.40	0.31	0.25	0.23	0.33
Anorthite	0.04	0.03	0.02	0.03	0.06	0.05	0.03	0.02	0.06	0.02	0.05

Table T1 (continued).

Sample ID:	PM89	PM90			PM92	PM93	PM94	PM95	1188B-a	1188B-b	1188B-c
Hole:		1189B			1190C		1191A			1188B	
Core section, interval (cm):	18R-2, 0	18R-2, 49			3R-1, 3	1R-1, 64	1R-1, 75	3R-1, 80			
Depth (mbsf):	196.42	196.91			13.23	0.64	0.75	15.5			
Volcanic facies:	Volcanic breccia	Volcanic breccia clast	Volcanic breccia clast	Volcanic breccia matrix	Coherent vesicular	Coherent vesicular	Coherent vesicular	Coherent			
Alteration facies:	Fsp-qtz	Fsp-qtz			Unaltered	Unaltered	Unaltered	Weak			
Powder:	P061	P062	P063	P064	P065	P066	P067	P068	Internal std.	Internal std.	Internal std.
Cd	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Cr	32.8	19.7	15.7	26.2	4.0	4.0	112.5	5.7	29.3		
Co	10.8	3.9	1.8	4.2	4.3	5.3	5.3	4.7	4.4		
Ga	16.5	17.2	21.1	16.5	16.8	18.5	16.8	17.4	16.4		
Mo	4.24	0.67	nn	nn	2.20	1.88	2.66	2.53	0.89		
Ni	11	5	5	7	3	4	371	16	9		
Rb	31.9	41.7	43.7	28.7	33.1	28.0	32.7	29.2	3.8		
Sb	1.3	0.6	<0.5	1.5	<0.5	<0.5	<0.5	4.1	0.6		
Sc	13.5	12.9	14.7	10.6	11.9	14.0	15.2	12.7	9.4		
Sr	173	187	204	166	258	298	316	364	160		
Tl	4.54	0.82	0.57	0.63	0.23	0.15	0.23	0.28	0.09		
U	5.37	1.22	0.95	1.14	0.80	0.71	0.77	1.42	0.55		
V	72	32	42	51	17	22	19	20	26		
Laboratory:	Freiberg	Freiberg	Freiberg	Freiberg	Freiberg	Uni Kiel	Freiberg	Freiberg	Freiberg	Uni Kiel	GFZ
Cs	ND	ND	ND	ND	ND	0.92	ND	ND	ND	0.31	0.29
Ta	ND	ND	ND	ND	ND	0.14	ND	ND	ND	0.11	ND
Th	1.74	1.86	2.09	1.51	2.51	1.25	2.18	1.85	1.22	1.25	1.18
Nb	1.64	1.69	2.12	1.38	1.47	1.57	1.43	1.48	1.40	1.98	ND
Hf	3.2	4.4	5.0	3.4	3.7	3.64	4.0	3.9	2.3	3.37	3.27
Y	35	39	46	31	34	34	35	36	21	32	29
Zr	116	140	161	112	117	124	112	114	67	116	122
La	12.39	14.33	12.99	9.88	11.79	11.12	12.57	12.82	10.40	10.09	9.99
Ce	26.73	31.45	35.45	22.98	25.68	26.28	27.33	28.37	20.50	25.07	23.07
Pr	3.91	4.43	5.67	3.42	3.91	3.93	3.97	4.10	3.00	3.77	3.33
Nd	17.65	20.18	24.12	15.44	17.03	17.96	17.83	17.86	12.80	17.11	15.60
Sm	4.59	5.17	5.93	3.87	4.29	4.68	4.67	4.56	3.28	4.46	3.94
Eu	1.02	1.35	1.53	0.91	1.12	1.39	1.08	1.26	0.89	1.28	1.16
Gd	4.83	5.50	6.04	4.30	4.62	5.20	4.88	5.14	3.40	4.86	4.35
Tb	0.82	0.92	1.02	0.73	0.80	0.92	0.88	0.87	0.49	0.85	0.75
Dy	5.47	6.26	6.96	4.95	5.41	6.03	5.98	5.92	3.00	5.63	4.90
Ho	1.17	1.33	1.43	1.03	1.17	1.31	1.27	1.25	0.63	1.21	1.08
Er	3.73	4.17	4.56	3.33	3.72	3.91	4.02	4.03	1.89	3.63	3.37
Tm	0.55	0.60	0.66	0.49	0.54	0.61	0.59	0.58	0.27	0.56	0.51
Yb	3.68	4.18	4.51	3.31	3.73	4.30	3.93	3.96	1.88	3.95	3.45
Lu	0.56	0.64	0.70	0.52	0.58	0.68	0.62	0.61	0.23	0.62	0.53
ZrXRF/ZrICP-MS:	1.00	0.97	0.91	0.95	1.05	0.93	0.97	1.00	1.54	0.90	0.80
Normative mineralogy:											
Quartz	0.24	0.15	0.03	0.29	0.26	0.29	0.26	0.27			
Albite	0.32	0.40	0.49	0.29	0.38	0.39	0.39	0.39			
Anorthite	0.03	0.03	0.04	0.01	0.08	0.12	0.12	0.12			

Table T1 (continued).

Sample ID:	1191A-a	1191A-b	1191A-c
Hole:		1191A	
Core section, interval (cm):			
Depth (mbsf):			
Volcanic facies:			
Alteration facies:			
Powder:	Internal std.	Internal std.	Internal std.
Cd	<0.5		
Cr	13.5		
Co	5.1		
Ga	18.8		
Mo	1.27		
Ni	6		
Rb	31.3		
Sb	<0.5		
Sc	16.1		
Sr	308		
Tl	0.21		
U	0.62		
V	21		
Laboratory:	Freiberg		
Cs	ND		
Ta	ND		
Th	1.74		
Nb	1.62		
Hf	3.7		
Y	38		
Zr	124		
La	11.10		
Ce	22.90		
Pr	3.40		
Nd	14.80		
Sm	4.08		
Eu	1.13		
Gd	4.55		
Tb	0.73		
Dy	4.96		
Ho	1.08		
Er	3.32		
Tm	0.50		
Yb	3.50		
Lu	0.54		
ZrXRF/ZrICP-MS:	0.94		
Normative mineralogy:			
Quartz			
Albite			
Anorthite			

Table T1 (continued).

Sample ID:	PM01	PM02	PM05		PM06			PM07	PM08	PM10	
Hole:					1188A						
Core section, interval (cm):	2R-1, 18	5R-1, 37	7R-1, 114		8R-1, 13			8R-1, 66	9R-1, 130	11R-1, 20	
Depth (mbsf):	9.78	33.97	49.34		58.03			58.56	68.9	87.1	
Volcanic facies:	Coherent, vesicular	Coherent, perlite	Coherent relict perlite		Coherent kernels	Coherent app. matrix	Coherent relict perlite	Brecciated	Coherent, relict perlite	Coherent, margin	Coherent, kernel
Alteration facies:	Unaltered	Weak	Py-anhy	Chl-py		Py-anhy		Chl-py	Anhy-py-pyro	Py-anhy	Chl-py
Powder:	P001	P002	P004	P003	P005	P006	P071	P007	P008	P009	P010
K-feldspar	0.11	0.11	ND	ND	0.02		0.01	ND	ND	0.01	0.01
Chlorite	0.00	0.00	0.00	0.06	0.00		0.00	0.13	0.00	0.01	0.03
Smectite	0.09	0.24	0.12	0.15	0.07		0.07	0.10	0.03	0.12	0.06
Illite	0.00	0.03	0.15	0.20	0.00		0.03	0.14	0.05	0.00	0.02
Pyrophyllite	0.00	0.20	0.00	0.00	0.38		0.27	0.03	0.22	0.00	0.08
Paragonite	ND	ND	0.17	0.09	0.06		0.11	0.11	0.14	0.27	ND
Anhydrite	0.00	0.01	0.07	0.06	0.00		0.00	0.02	0.13	0.02	0.01
Pyrite	0.00	0.00	0.11	0.04	0.07		0.13	0.03	0.01	0.06	0.06
Magnetite	0.04	0.02	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Totals:	0.99	0.97	0.96	0.97	1.00		0.98	0.99	0.98	0.98	0.99
$\delta^{18}O$ (‰ VSMOV):											
Silicate	5.06	11.57	5.90	6.29	5.45	5.91			5.75		
Anhydrite			11.9	8.4				6.0	7.8	6.3	
Bulk rock	5.06	11.57	6.33	6.42	5.45	5.91			6.02		
$^{86}Sr/^{87}Sr$:											
Silicates	0.70380	0.70443	0.70758	0.70715	0.70655	0.70631		0.70535	0.70588	0.70557	
Anhydrite			0.70777	0.70749				0.70534	0.70606	0.70530	
Bulk rock	0.70380	0.70443	0.70761	0.70721	0.70655	0.70631			0.70589	0.70554	
Recalculated major element oxides (wt%):											
SiO_2	68.28	62.35	54.77	58.80	72.18		64.46	64.36	64.15	65.94	66.32
TiO_2	0.51	0.58	0.59	0.58	0.63		0.63	0.58	0.62	0.60	0.61
Al_2O_3	13.50	13.25	13.46	13.39	14.04		13.93	13.32	14.04	13.52	13.87
Fe_2O_3	4.41	4.82	3.17	3.93	2.64		4.43	5.09	0.98	2.08	3.14
FeS_2	0.03	0.23	5.61	2.16	3.10		5.65	1.50	0.79	3.08	3.05
$CaO_{in\ silicate}$	2.70	2.52	4.00	0.97	0.32		0.22	0.08	0.63	1.78	2.30
$CaSO_4$	0.00	0.00	3.87	5.27	0.00		0.00	2.33	11.48	1.54	0.98
MgO	0.99	1.13	2.18	4.03	0.65		0.65	4.54	0.23	3.28	1.93
MnO	0.11	0.12	0.03	0.09	0.01		0.01	0.15	0.01	0.02	0.02
Na_2O	4.67	2.63	1.04	0.69	0.47		0.72	0.53	0.67	2.55	3.85
K_2O	1.96	2.52	1.25	1.65	0.43		0.60	1.04	0.14	0.29	0.31
P_2O_5	0.10	0.14	0.11	0.11	0.16		0.07	0.12	0.12	0.15	0.11
Total:	97.26	90.29	90.08	91.67	94.64		91.36	93.64	93.85	94.82	96.50
Anhydrous major element oxides (wt%):											
SiO_2	70.21	69.06	60.80	64.14	76.27		70.55	68.73	68.35	69.54	68.73
TiO_2	0.52	0.64	0.65	0.63	0.67		0.69	0.62	0.66	0.63	0.63
Al_2O_3	13.88	14.68	14.94	14.61	14.84		15.25	14.22	14.96	14.26	14.37
Fe_2O_3	4.54	5.34	3.52	4.29	2.79		4.84	5.44	1.04	2.19	3.26
FeS_2	0.03	0.25	6.22	2.35	3.28		6.19	1.60	0.84	3.25	3.16
$CaO_{in\ silicate}$	2.78	2.79	4.45	1.06	0.34		0.24	0.08	0.68	1.87	2.39
$CaSO_4$	0.00	0.00	4.30	5.75	0.00		0.00	2.49	12.23	1.62	1.02

Table T1 (continued).

Sample ID:	PM11		PM14		PM15		PM18	PM20	PM21	PM23	
Hole:					1188A						
Core section, interval (cm):	12R-2, 47		14R-1, 86		14R-1, 107		17R-1, 24	19R-1, 41	19R-1, 86	20R-1, 95	
Depth (mbsf):	98.55		116.86		117.07		145.34	164.71	165.16	174.85	
Volcanic facies:	Coherent, light bands	Coherent, dark bands	Coherent, veined	Coherent, app. clasts	Volcanic breccia clast	Volcanic breccia matrix	Coherent, vesicular	Coherent amygdal.	Coherent vesicular	Coherent spherulitic	
Alteration facies:	Weak		Anhy-py-pyro		Anhy-py-pyro		Anhy-py-pyro	Chl-py	Weak	Chl-py	
Powder:	P011	P069	P012	P070	P013	P014	P015	P016	P017	P018	P019
K-feldspar	0.03	0.03	0.00			0.01	ND	0.00	0.02	0.01	0.00
Chlorite	0.02	0.04	0.00			0.00	0.01	0.15	0.05	0.11	0.06
Smectite	0.06	0.06	0.03			0.03	0.09	0.14	0.07	0.12	0.15
Illite	0.00	0.00	0.10			0.15	0.23	0.00	0.00	0.00	0.03
Pyrophyllite	0.04	0.05	0.16			0.02	0.00	0.00	0.00	0.00	0.01
Paragonite	ND	ND	0.14			0.16	0.08	ND	ND	ND	ND
Anhydrite	0.00	0.00	0.05			0.07	0.06	0.00	0.00	0.00	0.03
Pyrite	0.01	0.01	0.04			0.01	0.01	0.00	0.01	0.06	0.06
Magnetite	0.04	0.04	0.01			0.00	0.00	0.00	0.03	0.03	0.03
Totals:	0.99	0.99	0.99			0.98	0.98	0.97	0.98	0.98	0.98
$\delta^{18}O$ (‰ VSMOV):											
Silicate	5.38					5.75	5.51			0.56	
Anhydrite			7.4			9.4	10.2				7.0
Bulk rock	5.38					6.00	5.77			0.56	
$^{86}Sr/^{87}Sr$:											
Silicates	0.70389		0.70499			0.70659	0.70557			0.70417	0.70546
Anhydrite			0.70550			0.70652	0.70632				0.70546
Bulk rock	0.70389		0.70500			0.70659	0.70564			0.70417	0.70417
Recalculated major element oxides (wt%):											
SiO_2	68.31	67.54	70.05	48.38		71.11	68.42	62.15	65.57	56.02	55.42
TiO_2	0.62	0.61	0.60	0.83		0.61	0.57	0.84	0.74	0.77	0.74
Al_2O_3	14.13	13.96	14.20	20.48		13.90	13.15	13.08	14.07	13.84	13.22
Fe_2O_3	4.79	5.28	1.82	1.70		0.29	1.50	4.62	5.28	8.26	7.88
FeS_2	0.50	0.56	1.99	2.72		0.39	0.61	0.68	0.48	2.70	2.65
$CaO_{in\ silicate}$	1.99	1.93	0.07	0.05		0.95	0.93	3.24	3.56	3.08	2.74
$CaSO_4$	0.00	0.00	4.24	13.60		5.57	4.64	0.00	0.00	0.00	2.54
MgO	1.43	1.59	0.23	0.35		0.25	1.96	6.17	2.28	4.07	3.72
MnO	0.08	0.09	0.00	0.00		0.00	0.03	0.07	0.09	0.16	0.12
Na_2O	5.25	4.98	0.77	1.55		0.85	0.58	3.30	4.00	4.29	4.15
K_2O	0.43	0.43	0.79	0.92		1.35	1.80	0.09	0.35	0.27	0.25
P_2O_5	0.13	0.14	0.06	0.07		0.14	0.06	0.25	0.19	0.37	0.36
Total:	97.66	97.10	94.82	90.65		95.41	94.24	94.49	96.61	93.83	93.79
Anhydrous major element oxides (wt%):											
SiO_2	69.95	69.55	73.88	53.37		74.53	72.60	65.78	67.87	59.70	59.09
TiO_2	0.63	0.63	0.63	0.92		0.64	0.60	0.89	0.77	0.82	0.79
Al_2O_3	14.47	14.38	14.98	22.59		14.57	13.95	13.84	14.56	14.75	14.10
Fe_2O_3	4.91	5.43	1.91	1.87		0.30	1.59	4.89	5.47	8.81	8.40
FeS_2	0.51	0.58	2.10	3.00		0.41	0.64	0.71	0.49	2.88	2.82
$CaO_{in\ silicate}$	2.04	1.99	0.08	0.05		0.99	0.98	3.43	3.68	3.28	2.92
$CaSO_4$	0.00	0.00	4.47	15.01		5.84	4.93	0.00	0.00	0.00	2.71

Table T1 (continued).

Sample ID:	PM26	PM27	PM29		PM33	PM35		PM36	PM37	PM40	PM42	
Hole:					1188F						1189A	
Core section, interval (cm):	6Z-1, 45	8Z-1, 26	13Z-1, 0		19Z-1, 27	23Z-2, 56		30Z-1, 13	34Z-1, 123	39Z-1, 82	43Z-1, 21	
Depth (mbsf):	233.55	236.46	241.4		268.67	288.66		318.23	337.63	354.32	371.71	
Volcanic facies:	Coherent spherulitic	Coherent amygdal.	Coherent, kernel	Coherent, margin	Coherent	Coherent, kernel	Coherent, halo	Volcanic breccia	Volcanic breccia?	Coherent amygdal.	Coherent margin	Coherent kernel
Alteration facies:	Weak	Py-anhy	Py-anhy	Anhy-py-pyro	Py-anhy	Chl-py	Anhy-py-pyro	Kfsp-illite	Kfsp-illite	Chl-py	Py-anhy	Kfsp-illite
Powder:	P020	P021	P023	P022	P024	P025	P026	P027	P028	P029	P031	P030
K-feldspar	0.04	0.01	0.10	0.08	0.00	0.03	ND	0.07	0.23	0.02	0.07	0.06
Chlorite	0.08	0.00	0.00	0.00	0.00	0.14	0.00	0.06	0.07	0.06	0.00	0.00
Smectite	0.11	0.09	0.05	0.05	0.02	0.10	0.10	0.07	0.09	0.06	0.12	0.08
Illite	0.00	0.20	0.05	0.03	0.17	0.13	0.27	0.12	0.04	0.03	0.19	0.10
Pyrophyllite	0.10	0.06	0.31	0.33	0.02	0.00	0.00	0.15	0.03	0.06	0.00	0.13
Paragonite	ND	0.10	ND	ND	0.14	0.13	0.06	ND	0.24	ND	0.10	ND
Anhydrite	0.00	0.06	0.08	0.11	0.08	0.05	0.06	0.00	0.00	0.02	0.04	0.03
Pyrite	0.02	0.11	0.12	0.07	0.12	0.02	0.06	0.02	0.00	0.03	0.06	0.06
Magnetite	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.04	0.01	0.02
Totals:	0.99	0.98	0.97	0.98	0.98	0.98	0.99	0.99	1.00	0.99	1.00	1.00
$\delta^{18}O$ (‰ VSMOV):												
Silicate	5.43					5.05	4.96					
Anhydrite		7.1	7.0	7.0	7.5	6.4	5.0			4.5	7.4	7.2
Bulk rock	5.43					5.11	4.96					
$^{86}Sr/^{87}Sr$:												
Silicates	0.70415	0.70482	0.70486	0.70489	0.70434	0.70472	0.70475			0.70450	0.70425	0.70572
Anhydrite		0.70456	0.70455	0.70471	0.70403	0.70456	0.70458			0.70445	0.70422	0.70469
Bulk rock	0.70415	0.70415	0.70415	0.70415	0.70415	0.70470	0.70474			0.70450	0.70425	0.70564
Recalculated major element oxides (wt%):												
SiO_2	65.32	58.81	57.65	60.58	59.82	61.19	62.86	68.77	60.28	63.76	64.70	66.93
TiO_2	0.67	0.71	0.74	0.73	0.74	0.81	0.81	0.71	0.88	0.80	0.59	0.59
Al_2O_3	14.08	14.02	12.99	12.73	13.03	13.63	13.65	14.46	21.72	14.02	13.37	13.35
Fe_2O_3	4.50	3.39	3.28	1.82	3.03	4.68	3.36	4.19	1.67	6.05	3.60	4.07
FeS_2	0.87	5.11	5.60	3.46	5.52	1.40	2.66	0.88	0.76	1.17	2.92	2.79
$CaO_{in\ silicate}$	1.12	0.61	0.47	0.74	0.70	0.54	0.04	0.63	0.72	2.63	0.08	1.21
$CaSO_4$	0.00	5.07	7.01	9.18	6.74	3.97	5.85	0.00	0.00	1.66	4.00	2.09
MgO	3.63	1.77	0.43	0.25	0.14	4.89	1.56	2.41	3.53	2.14	1.39	1.30
MnO	0.17	0.01	0.01	0.00	0.00	0.04	0.01	0.03	0.03	0.08	0.03	0.04
Na_2O	4.67	0.49	0.47	0.52	0.80	0.56	0.58	1.30	1.28	3.36	0.49	2.02
K_2O	0.58	1.60	2.11	1.80	1.32	1.37	2.21	2.14	4.18	0.62	2.70	1.78
P_2O_5	0.14	0.19	0.25	0.17	0.24	0.31	0.30	0.14	0.23	0.23	0.13	0.13
Total:	95.75	91.78	91.01	91.97	92.07	93.40	93.89	95.67	95.28	96.52	93.99	96.30
Anhydrous major element oxides (wt%):												
SiO_2	68.22	64.08	63.35	65.87	64.97	65.52	66.95	71.89	63.26	66.06	68.83	69.50
TiO_2	0.70	0.77	0.81	0.79	0.80	0.87	0.86	0.74	0.92	0.83	0.63	0.61
Al_2O_3	14.70	15.28	14.27	13.84	14.15	14.59	14.54	15.12	22.80	14.53	14.22	13.86
Fe_2O_3	4.70	3.69	3.61	1.97	3.29	5.01	3.58	4.38	1.76	6.27	3.83	4.23
FeS_2	0.91	5.56	6.15	3.76	5.99	1.50	2.83	0.92	0.80	1.21	3.10	2.90
$CaO_{in\ silicate}$	1.17	0.67	0.52	0.81	0.77	0.58	0.04	0.66	0.76	2.72	0.09	1.26
$CaSO_4$	0.00	5.53	7.70	9.98	7.32	4.25	6.23	0.00	0.00	1.72	4.25	2.17

Table T1 (continued).

Sample ID:	PM44	PM45	PM47	PM48	PM49	PM50		PM51	PM52	PM53	PM54	
Hole:						1189A						
Core section, interval (cm):	1R-1, 12	2R-1, 0	2R-1, 130	3R-1, 0	3R-1, 84	5R-1, 44		7R-1, 11	8R-1, 3	9R-1, 21	10R-1, 39	
Depth (mbsf):	0.12	9.7	11	19.4	20.24	39.24		58.41	68.03	77.91	87.69	
Volcanic facies:	Coherent vesicular	Coherent vesicular	App. clast perlitic	Coherent	Coherent	App. clasts	App. matrix	Coherent vesicular	Coherent	Breccia	Coherent veined	Coherent unveined
Alteration facies:	Unaltered	Weak	Chl-py	Kfsp-illite	Py-anhy	Kfsp-illite	Chl-py	Kfsp-illite	Kfsp-illite	Chl-py	Py-anhy	Kfsp-illite
Powder:	P032	P033	P034	P035	P036	P038	P037	P039	P040	P041	P043	P042
K-feldspar	0.07	0.08	0.25	0.08	0.36	0.15	0.15	0.17	0.13	0.11	0.20	0.34
Chlorite	0.00	0.00	0.13	0.09	0.07	0.14	0.12	0.11	0.03	0.10	0.06	0.02
Smectite	0.11	0.14	0.11	0.09	0.04	0.04	0.06	0.06	0.05	0.02	0.08	0.09
Illite	0.00	0.01	0.10	0.06	0.06	0.05	0.05	0.04	0.01	0.00	0.01	0.08
Pyrophyllite	0.00	0.03	0.00	0.00	0.04	0.00	0.08	0.00	0.02	0.05	0.18	0.00
Paragonite	ND	ND	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anhydrite	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.00	0.00	0.08	0.08	0.00
Pyrite	0.00	0.01	0.01	0.03	0.10	0.04	0.02	0.05	0.02	0.04	0.08	0.04
Magnetite	0.06	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.01
Totals:	0.99	0.98	0.97	0.97	0.98	0.98	0.99	0.97	1.00	0.98	1.00	1.00
$\delta^{18}O$ (‰ VSMOV):												
Silicate	5.91	6.57		5.68	4.32	3.54	4.05			3.93	4.13	3.95
Anhydrite						9.7	10.7			9.6	10.8	
Bulk rock	5.91	6.57		5.68	4.32	3.63	4.48			4.40	4.64	3.95
$^{86}Sr/^{87}Sr$:												
Silicates	0.70367	0.70400		0.70402	0.70451	0.70417	0.70476			0.70457	0.70548	0.70422
Anhydrite						0.70651	0.70674			0.70376	0.70828	
Bulk rock	0.70367	0.70400		0.64180	0.70451	0.70426	0.70488			0.70455	0.70570	0.70422
Recalculated major element oxides (wt%):												
SiO_2	62.84	63.39	59.79	63.95	61.24	60.45	63.68	57.18	68.63	63.32	60.00	64.26
TiO_2	0.84	0.78	0.83	0.75	0.66	0.80	0.59	0.87	0.54	0.43	0.44	0.55
Al_2O_3	14.72	14.94	15.58	14.30	12.53	15.23	11.11	16.63	13.86	11.07	11.58	14.58
Fe_2O_3	6.44	4.41	5.02	3.65	4.88	4.75	5.36	4.07	4.10	3.56	4.81	3.83
FeS_2	0.07	0.36	0.82	1.52	4.75	1.86	0.88	2.95	1.03	1.77	3.75	1.85
$CaO_{in\ silicate}$	4.56	3.09	1.16	2.62	0.28	1.48	0.67	2.63	2.16	1.76	0.56	1.38
$CaSO_4$	0.00	0.00	0.00	0.00	0.00	1.22	5.40	0.00	0.00	7.09	6.65	0.00
MgO	1.77	2.25	4.77	3.52	2.37	3.51	3.45	3.92	1.54	2.50	2.57	2.03
MnO	0.15	0.07	0.16	0.03	0.02	0.05	0.08	0.04	0.04	0.04	0.03	0.04
Na_2O	4.43	4.40	0.79	2.65	0.58	3.47	1.34	3.05	4.04	2.36	0.62	1.78
K_2O	1.40	1.52	5.06	1.77	6.48	2.83	2.79	3.14	2.31	1.81	3.46	6.25
P_2O_5	0.27	0.19	0.20	0.21	0.12	0.19	0.13	0.21	0.12	0.08	0.08	0.11
Total:	97.49	95.39	94.17	94.96	93.92	95.84	95.48	94.70	98.37	95.79	94.54	96.66
Anhydrous major element oxides (wt%):												
SiO_2	64.46	66.45	63.49	67.34	65.20	63.07	66.69	60.38	69.76	66.10	63.46	66.48
TiO_2	0.86	0.82	0.88	0.79	0.70	0.83	0.62	0.92	0.55	0.45	0.47	0.57
Al_2O_3	15.10	15.66	16.54	15.06	13.34	15.89	11.64	17.56	14.09	11.56	12.25	15.08
Fe_2O_3	6.60	4.63	5.33	3.84	5.20	4.96	5.62	4.30	4.17	3.72	5.08	3.96
FeS_2	0.07	0.37	0.87	1.60	5.06	1.94	0.92	3.12	1.05	1.85	3.96	1.91
$CaO_{in\ silicate}$	4.68	3.24	1.23	2.76	0.30	1.54	0.70	2.78	2.19	1.84	0.59	1.43
$CaSO_4$	0.00	0.00	0.00	0.00	0.00	1.27	5.65	0.00	0.00	7.40	7.04	0.00

Table T1 (continued).

Sample ID:	PM56	PM57		PM58	PM60		PM63	PM64	PM68	PM71
Hole:		1189A					1189B			
Core section, interval (cm):	12R-1, 83	12R-1, 120		13R-1, 51	6R-1, 0		11R-1, 22	11R-3, 3	13R-1, 48	14R-1, 87
Depth (mbsf):	107.33	107.7		116.61	79		127.82	129.72	147.48	157.37
Volcanic facies:	Coherent	Volcanic breccia, sulfur matrix	Volcanic breccia, pu clasts	Volcanic breccia	Stockwork matrix	App. clast in stockwork	Volcanic breccia	Coherent vesicular	Coherent perlitic	Flow-banded volcanic breccia
Alteration facies:	Chl-py	Sulfides	Kfsp-illite	Chl-py	Sulfide, Fe oxide	Chl-py	Kfsp-illite	Unaltered	Kfsp-illite	Anhy-py-pyro
Powder:	P044	P074	P072	P045	P075	P073	P046	P047	P048	P049
K-feldspar	0.10			ND		0.25	0.23	0.11	0.20	0.19
Chlorite	0.18			0.16		0.33	0.03	0.02	0.02	0.05
Smectite	0.06			0.08		0.00	0.10	0.05	0.07	0.07
Illite	0.13			0.17		0.19	ND	0.00	0.06	0.08
Pyrophyllite	0.08			0.00		0.04	0.15	0.00	0.06	0.05
Paragonite	ND			ND		ND	ND	ND	ND	ND
Anhydrite	0.00			0.00		0.00	0.03	0.00	0.00	0.20
Pyrite	0.03			0.07		0.03	0.04	0.00	0.02	0.02
Magnetite	0.00			0.00		0.04	0.03	0.04	0.02	0.02
Totals:	0.98			0.97		1.01	0.98	0.98	0.98	0.99
$\delta^{18}O$ (‰ VSMOV):										
Silicate				3.41			5.90	5.89	5.40	4.40
Anhydrite							9.8			10.5
Bulk rock				3.41			6.03	5.89	5.40	5.65
$^{86}Sr/^{87}Sr$:										
Silicates				0.70430			0.70542	0.70380	0.70484	0.70580
Anhydrite							0.70645			0.70626
Bulk rock				0.70430			0.70552	0.70380	0.70484	0.70583
Recalculated major element oxides (wt%):										
SiO_2	64.84			56.33		45.63	66.62	68.04	72.21	51.03
TiO_2	0.62			0.84		0.89	0.45	0.62	0.49	0.51
Al_2O_3	13.24			15.03		22.46	9.55	13.91	11.28	10.76
Fe_2O_3	5.31			5.92		11.56	5.65	4.83	3.51	4.70
FeS_2	1.88			3.80		1.20	1.83	0.05	0.74	1.13
$CaO_{in\ silicate}$	0.29			1.87		0.39	0.06	2.50	0.55	1.84
$CaSO_4$	0.00			0.00		0.00	3.19	0.00	0.00	16.98
MgO	5.10			5.43		7.62	2.07	1.30	1.72	2.46
MnO	0.04			0.03		0.20	0.04	0.12	0.08	0.09
Na_2O	0.29			1.72		0.95	0.11	4.42	1.63	0.93
K_2O	2.59			1.68		5.50	4.00	1.92	3.72	3.79
P_2O_5	0.17			0.42		0.17	0.10	0.13	0.08	0.09
Total:	94.37			93.07		96.57	93.67	97.83	96.01	94.30
Anhydrous major element oxides (wt%):										
SiO_2	68.71			60.53		47.25	71.13	69.55	75.21	54.11
TiO_2	0.66			0.90		0.92	0.48	0.63	0.51	0.54
Al_2O_3	14.03			16.15		23.26	10.20	14.22	11.75	11.41
Fe_2O_3	5.63			6.36		11.97	6.04	4.94	3.65	4.99
FeS_2	1.99			4.08		1.24	1.95	0.05	0.77	1.19
$CaO_{in\ silicate}$	0.31			2.01		0.40	0.06	2.55	0.57	1.95
$CaSO_4$	0.00			0.00		0.00	3.40	0.00	0.00	18.00

Table T1 (continued).

Sample ID:	PM73		PM75		PM79	PM82	PM85		PM86		PM88
Hole:						1189B					
Core section, interval (cm):	15R-1, 25		15R-1, 124		16R-1, 75	17R-1, 57	18R-1, 5		18R-1, 45		18R-1, 125
Depth (mbsf):	166.35		167.34		176.45	185.87	195.05		195.45		196.25
Volcanic facies:	Volcanic breccia clast	Volcanic breccia matrix	Volcanic breccia gray clasts	Volcanic breccia green clasts	Coherent	Coherent	Volcanic breccia clast	Volcanic breccia matrix	Volcanic breccia clast	Volcanic breccia matrix	Brecciated
Alteration facies:	Weak	Kfsp-illite	Weak		Weak	Kfsp-illite	Kfsp-illite		Kfsp-illite		Weak
Powder:	P050	P051	P052	P053	P054	P055	P056	P057	P058	P059	P060
K-feldspar	0.15	0.14	0.14	0.10	0.22	0.26	0.17	0.15	0.30	0.21	0.14
Chlorite	0.00	0.02	0.00	0.00	0.02	0.00	0.03	0.00	0.05	0.00	0.05
Smectite	0.08	0.07	0.11	0.11	0.06	0.03	0.05	0.11	0.09	0.13	0.08
Illite	0.02	0.02	0.04	0.04	0.01	0.02	0.02	0.02	0.05	0.00	0.04
Pyrophyllite	0.03	0.03	0.03	0.06	0.04	0.02	0.00	0.06	0.00	0.10	0.00
Paragonite	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anhydrite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pyrite	0.01	0.02	0.01	0.01	0.02	0.03	0.02	0.02	0.01	0.02	0.01
Magnetite	0.03	0.03	0.02	0.03	0.02	0.01	0.02	0.03	0.02	0.02	0.02
Totals:	0.99	0.99	0.98	0.99	0.99	0.98	0.99	0.98	0.98	0.99	0.98
$\delta^{18}O$ (‰ VSMOV):											
Silicate	4.87	4.90	5.37	4.91							
Anhydrite											
Bulk rock	4.87	4.90	5.37	4.91							
$^{86}Sr/^{87}Sr$:											
Silicates	0.70456	0.70437	0.70419	0.70431							
Anhydrite											
Bulk rock	0.70456	0.70437	0.70419	0.70431							
Recalculated major element oxides (wt%):											
SiO_2	68.89	67.84	67.43	68.64	70.89	70.73	67.68	68.33	63.04	68.34	67.23
TiO_2	0.64	0.61	0.64	0.61	0.58	0.59	0.62	0.56	0.79	0.62	0.69
Al_2O_3	13.65	13.06	13.58	12.89	12.38	12.69	13.55	12.35	15.66	12.30	13.49
Fe_2O_3	3.83	4.69	3.38	4.54	3.60	2.08	3.92	4.29	3.71	3.74	4.47
FeS_2	0.38	0.99	0.51	0.41	1.03	1.53	1.13	0.95	0.54	1.02	0.52
$CaO_{in\ silicate}$	1.15	1.05	0.99	1.14	1.55	1.31	1.01	1.07	1.57	1.18	1.29
$CaSO_4$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MgO	1.56	1.64	1.80	1.87	1.45	0.67	1.44	1.59	2.60	1.85	2.26
MnO	0.07	0.08	0.06	0.09	0.05	0.04	0.06	0.08	0.06	0.06	0.10
Na_2O	4.54	4.29	4.56	3.87	2.36	2.86	4.66	3.74	3.02	2.81	3.86
K_2O	2.69	2.44	2.71	2.04	3.76	4.45	3.05	2.63	5.49	3.56	2.70
P_2O_5	0.10	0.09	0.09	0.08	0.10	0.08	0.10	0.10	0.15	0.10	0.13
Total:	97.50	96.78	95.75	96.18	97.75	97.03	97.22	95.68	96.63	95.59	96.73
Anhydrous major element oxides (wt%):											
SiO_2	70.66	70.09	70.43	71.37	72.52	72.89	69.62	71.41	65.24	71.50	69.50
TiO_2	0.66	0.63	0.67	0.63	0.59	0.61	0.64	0.59	0.82	0.65	0.71
Al_2O_3	14.00	13.49	14.18	13.40	12.66	13.08	13.94	12.91	16.21	12.87	13.95
Fe_2O_3	3.92	4.85	3.53	4.72	3.69	2.15	4.03	4.48	3.84	3.91	4.62
FeS_2	0.39	1.03	0.53	0.43	1.05	1.57	1.16	0.99	0.56	1.07	0.53
$CaO_{in\ silicate}$	1.18	1.08	1.03	1.18	1.58	1.35	1.04	1.12	1.62	1.23	1.33
$CaSO_4$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table T1 (continued).

Sample ID:	PM89	PM90			PM92	PM93	PM94	PM95	1188B-a	1188B-b	1188B-c
Hole:		1189B			1190C		1191A			1188B	
Core section, interval (cm):	18R-2, 0	18R-2, 49			3R-1, 3	1R-1, 64	1R-1, 75	3R-1, 80			
Depth (mbsf):	196.42	196.91			13.23	0.64	0.75	15.5			
Volcanic facies:	Volcanic breccia	Volcanic breccia clast	Volcanic breccia clast	Volcanic breccia matrix	Coherent vesicular	Coherent vesicular	Coherent vesicular	Coherent			
Alteration facies:	Fsp-qtz	Fsp-qtz			Unaltered	Unaltered	Unaltered	Weak			
Powder:	P061	P062	P063	P064	P065	P066	P067	P068	Internal std.	Internal std.	Internal std.
K-feldspar	0.16	0.26	0.26	0.14	0.10	0.10	0.10	0.10			
Chlorite	0.01	0.03	0.05	0.00	0.00	0.02	0.00	0.00			
Smectite	0.10	0.05	0.07	0.11	0.10	0.01	0.07	0.05			
Illite	0.00	0.02	0.02	0.00	0.01	0.00	0.00	0.00			
Pyrophyllite	0.07	0.00	0.00	0.09	0.01	0.00	0.00	0.00			
Paragonite	ND	ND	ND	ND	ND	ND	ND	ND			
Anhydrite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Pyrite	0.02	0.03	0.01	0.02	0.00	0.00	0.00	0.00			
Magnetite	0.03	0.02	0.02	0.03	0.03	0.04	0.04	0.04			
Totals:	0.99	0.98	1.00	0.98	0.98	0.98	0.98	0.98			
$\delta^{18}O$ (‰ VSMOV):											
Silicate		4.82	3.83	5.53	6.02		6.67	6.32			
Anhydrite											
Bulk rock		4.82	3.83	5.53	6.02		6.67	6.32			
$^{86}Sr/^{87}Sr$:											
Silicates		0.70424	0.70429	0.70418	0.70379	0.70376	0.70379				
Anhydrite											
Bulk rock		0.70424	0.70429	0.70418	0.70379	0.70376	0.70379				
Recalculated major element oxides (wt%):											
SiO_2	67.22	64.41	60.48	69.09	67.83	68.96	67.54	67.98			
TiO_2	0.67	0.70	0.82	0.55	0.51	0.64	0.62	0.63			
Al_2O_3	12.98	15.01	17.87	11.82	13.42	14.18	13.91	14.04			
Fe_2O_3	4.88	3.46	4.52	4.40	4.01	4.44	4.49	4.61			
FeS_2	0.84	1.47	0.58	0.95	0.03	0.03	0.02	0.03			
$CaO_{in\ silicate}$	1.13	0.87	1.15	0.95	2.51	2.96	2.91	2.95			
$CaSO_4$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
MgO	1.95	1.51	2.24	1.68	0.65	0.81	0.82	0.84			
MnO	0.10	0.05	0.08	0.08	0.11	0.11	0.12	0.11			
Na_2O	3.74	4.75	5.79	3.44	4.71	4.88	4.81	4.79			
K_2O	2.80	4.45	4.58	2.42	1.99	1.76	1.74	1.75			
P_2O_5	0.12	0.11	0.13	0.08	0.09	0.13	0.14	0.13			
Total:	96.43	96.79	98.24	95.46	95.86	98.90	97.11	97.86			
Anhydrous major element oxides (wt%):											
SiO_2	69.71	66.55	61.56	72.38	70.76	69.73	69.55	69.47			
TiO_2	0.69	0.72	0.83	0.58	0.53	0.65	0.64	0.64			
Al_2O_3	13.46	15.51	18.19	12.38	14.00	14.34	14.32	14.35			
Fe_2O_3	5.06	3.58	4.60	4.61	4.19	4.49	4.62	4.71			
FeS_2	0.87	1.52	0.59	0.99	0.03	0.03	0.02	0.03			
$CaO_{in\ silicate}$	1.17	0.90	1.17	0.99	2.62	2.99	3.00	3.01			
$CaSO_4$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

Table T1 (continued).

Sample ID:	1191A-a	1191A-b	1191A-c
Hole:		1191A	
Core section, interval (cm):			
Depth (mbsf):			
Volcanic facies:			
Alteration facies:			
Powder:	Internal std.	Internal std.	Internal std.
K-feldspar			
Chlorite			
Smectite			
Illite			
Pyrophyllite			
Paragonite			
Anhydrite			
Pyrite			
Magnetite			
Totals:			
$\delta^{18}O$ (‰ VSMOV):			
Silicate			
Anhydrite			
Bulk rock			
$^{86}Sr/^{87}Sr$:			
Silicates			
Anhydrite			
Bulk rock			
Recalculated major element oxides (wt%):			
SiO_2			
TiO_2			
Al_2O_3			
Fe_2O_3			
FeS_2			
$CaO_{in\ silicate}$			
$CaSO_4$			
MgO			
MnO			
Na_2O			
K_2O			
P_2O_5			
Total:			
Anhydrous major element oxides (wt%):			
SiO_2			
TiO_2			
Al_2O_3			
Fe_2O_3			
FeS_2			
$CaO_{in\ silicate}$			
$CaSO_4$			

Table T1 (continued).

Sample ID:	PM01	PM02	PM05		PM06			PM07	PM08	PM10	
Hole:					1188A						
Core section, interval (cm):	2R-1, 18	5R-1, 37	7R-1, 114		8R-1, 13			8R-1, 66	9R-1, 130	11R-1, 20	
Depth (mbsf):	9.78	33.97	49.34		58.03			58.56	68.9	87.1	
Volcanic facies:	Coherent, vesicular	Coherent, perlite	Coherent relict perlite		Coherent kernels	Coherent app. matrix	Coherent relict perlite	Brecciated	Coherent, relict perlite	Coherent, margin	Coherent, kernel
Alteration facies:	Unaltered	Weak	Py-anhy	Chl-py		Py-anhy		Chl-py	Anhy-py-pyro	Py-anhy	Chl-py
Powder:	P001	P002	P004	P003	P005	P006	P071	P007	P008	P009	P010
MgO	1.02	1.25	2.42	4.40	0.69		0.71	4.85	0.25	3.46	2.00
MnO	0.11	0.13	0.03	0.10	0.01		0.01	0.16	0.01	0.02	0.02
Na_2O	4.80	2.91	1.15	0.75	0.50		0.79	0.57	0.71	2.69	3.99
K_2O	2.02	2.79	1.39	1.80	0.45		0.66	1.11	0.15	0.31	0.32
P_2O_5	0.10	0.16	0.12	0.12	0.17		0.07	0.12	0.12	0.15	0.11
Total:	100.00	100.00	100.00	100.00	100.00		100.00	100.00	100.00	100.00	100.00

Notes: Major elements and Ba, Rb, Sr, Y, and Zr were measured by X-ray fluorescence (XRF) on fused disks (Philips PW1480; Mineralogisch-Petrologisches Institut, Universität Bonn, Germany). TiO_2 of samples P006, P013, P072, P074, and P075 was measured by inductively coupled plasma–mass spectrometry (ICP-MS). Py = pyrite, anhy = anhydrite, chl = chlorite, pyro = pyrophillite, Kfsp = K-feldspar, Fsp = feldspar, qtz = quartz. app. = apparent, amygdal. = amygdaloidal, pu. = pumice, std. = standard. LOI = loss on ignition, ND = not determined, NV = no value, BDL = below detection limit. * = determined using an ion-selective electrode (Bergakademie Freiberg). † = determined by combustion, applying microcoulometry (EA 2000 gas analyzer; Analytik Jena AG). ICP-MS laboratories: Freiberg = Mineralogisches Institut, Bergakademie Freiberg (Prof. Klemm); GFZ = GeoForschungsZentrum Potsdam (Dr. Dulski); Uni Kiel = University of Kiel (Dr. Garbe-Schönberg). Mineralogy was determined by X-ray diffraction (XRD) and modal mineralogy calculated using SOLVER in Excel. Calculated abundances <0.01 are shown as 0. All SiO_2 polymorphs are calculated as quartz. Unaltered samples are generally glassy; calculated modal mineralogy does not represent actual composition. XRD results are given in Table **T2**, p. 18. Minerals not identified by XRD were excluded from the calculations and are shown as ND. Silicate $\delta^{18}O$ measurements were made on sulfate-free bulk rock powders. Where present, anhydrite was removed prior to analysis. Reported values are the average of two individual measurements with deviation <0.2‰ (Mineralogisch-Petrologisches Institut, Universität Bonn; Prof. Hoernes). For anhydrites, the $\delta^{18}O$ of sulfate was determined separately using the $BaSO_4$ powders obtained from gravimetric determination of SO_4. Pyrolysis measurements were performed at the isotope laboratory at the Bergakademie Freiberg (Dr. Tichomirowa). Data reproducibility is on the order of ±0.5‰. Bulk rock isotopic composition was calculated based on the proportions of anhydrite and silicate phases. For samples with minor anhydrite and anhydrite-free samples, the bulk rock isotopic composition equals the isotopic composition determined for the silicate phases. Sr isotopes were measured at the Bergakademie Freiberg (Dr. Tichomirowa). $^{87}Sr/^{86}S_{rsilicate}$ duplicates for P001 = 0.70380 and 0.70379, better than measurement error, which ranges 0.00001–0.00006. $^{87}Sr/^{86}S_{ranhydrite}$ in P025 = 0.70456 and 0.70524. Recalculated major element oxides: FeS_2 and $CaSO_4$ are calculated based on S_{total} and SO_4 in anhydrite. Where SO_4 in anhydrite was BDL, all S was assigned to pyrite. Where SO_4 in anhydrite is not available, XRD data were used in the recalculation. All S was assigned to pyrite for samples where pyrite was identified in XRD but anhydrite was absent (powders 16, 34, 73, 61, 63, 64, 27, 48, 51, 11, 52, 53, and 54). In powder P017, XRD shows anhydrite but pyrite was not detected; consequently, all S was assigned to anhydrite. For P070, the recalculation assumed all Ca resided in anhydrite (plagioclase is absent in XRD). For P020, it was assumed that pyrite and anhydrite are present in proportions 80:20 based on XRD data. Unaltered and many weakly altered samples (2, 69, 33, 50, 68, and 60) show no indication of pyrite or anhydrite in XRD but contain minor S_{total}. Here, all the S_{total} was assigned to pyrite because anhydrite is an unlikely igneous phase at PACMANUS.

Table T1 (continued).

Sample ID:	PM11		PM14		PM15		PM18	PM20	PM21	PM23	
Hole:						1188A					
Core section, interval (cm):	12R-2, 47		14R-1, 86		14R-1, 107		17R-1, 24	19R-1, 41	19R-1, 86	20R-1, 95	
Depth (mbsf):	98.55		116.86		117.07		145.34	164.71	165.16	174.85	
Volcanic facies:	Coherent, light bands	Coherent, dark bands	Coherent, veined	Coherent, app. clasts	Volcanic breccia clast	Volcanic breccia matrix	Coherent, vesicular	Coherent amygdal.	Coherent vesicular	Coherent spherulitic	
Alteration facies:	Weak		Anhy-py-pyro		Anhy-py-pyro		Anhy-py-pyro	Chl-py	Weak	Chl-py	
Powder:	P011	P069	P012	P070	P013	P014	P015	P016	P017	P018	P019
MgO	1.46	1.64	0.24	0.39		0.26	2.08	6.53	2.36	4.34	3.97
MnO	0.08	0.09	0.00	0.00		0.00	0.03	0.07	0.09	0.17	0.13
Na_2O	5.38	5.13	0.81	1.71		0.89	0.62	3.49	4.14	4.57	4.42
K_2O	0.44	0.44	0.83	1.01		1.41	1.91	0.10	0.36	0.29	0.27
P_2O_5	0.13	0.14	0.06	0.08		0.15	0.06	0.27	0.19	0.39	0.38
Total:	100.00	100.00	100.00	100.00		100.00	100.00	100.00	100.00	100.00	100.00

Table T1 (continued).

Sample ID:	PM26	PM27	PM29		PM33	PM35		PM36	PM37	PM40	PM42	
Hole:					1188F						1189A	
Core section, interval (cm):	6Z-1, 45	8Z-1, 26	13Z-1, 0		19Z-1, 27	23Z-2, 56		30Z-1, 13	34Z-1, 123	39Z-1, 82	43Z-1, 21	
Depth (mbsf):	233.55	236.46	241.4		268.67	288.66		318.23	337.63	354.32	371.71	
Volcanic facies:	Coherent spherulitic	Coherent amygdal.	Coherent, kernel	Coherent, margin	Coherent	Coherent, kernel	Coherent, halo	Volcanic breccia	Volcanic breccia?	Coherent amygdal.	Coherent margin	Coherent kernel
Alteration facies:	Weak	Py-anhy	Py-anhy	Anhy-py-pyro	Py-anhy	Chl-py	Anhy-py-pyro	Kfsp-illite	Kfsp-illite	Chl-py	Py-anhy	Kfsp-illite
Powder:	P020	P021	P023	P022	P024	P025	P026	P027	P028	P029	P031	P030
MgO	3.79	1.93	0.47	0.27	0.15	5.24	1.66	2.52	3.70	2.22	1.48	1.35
MnO	0.18	0.01	0.01	0.00	0.00	0.04	0.01	0.03	0.03	0.08	0.03	0.04
Na_2O	4.88	0.53	0.52	0.57	0.87	0.60	0.62	1.36	1.34	3.48	0.52	2.10
K_2O	0.61	1.74	2.32	1.96	1.43	1.47	2.35	2.24	4.39	0.64	2.87	1.85
P_2O_5	0.15	0.21	0.27	0.18	0.26	0.33	0.32	0.15	0.24	0.24	0.14	0.13
Total:	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table T1 (continued).

Sample ID:	PM44	PM45	PM47	PM48	PM49	PM50		PM51	PM52	PM53	PM54	
Hole:						1189A						
Core section, interval (cm):	1R-1, 12	2R-1, 0	2R-1, 130	3R-1, 0	3R-1, 84	5R-1, 44		7R-1, 11	8R-1, 3	9R-1, 21	10R-1, 39	
Depth (mbsf):	0.12	9.7	11	19.4	20.24	39.24		58.41	68.03	77.91	87.69	
Volcanic facies:	Coherent vesicular	Coherent vesicular	App. clast perlitic	Coherent	Coherent	App. clasts	App. matrix	Coherent vesicular	Coherent	Breccia	Coherent veined	Coherent unveined
Alteration facies:	Unaltered	Weak	Chl-py	Kfsp-illite	Py-anhy	Kfsp-illite	Chl-py	Kfsp-illite	Kfsp-illite	Chl-py	Py-anhy	Kfsp-illite
Powder:	P032	P033	P034	P035	P036	P038	P037	P039	P040	P041	P043	P042
MgO	1.82	2.36	5.07	3.71	2.52	3.66	3.61	4.14	1.57	2.61	2.72	2.10
MnO	0.15	0.07	0.17	0.03	0.02	0.05	0.08	0.04	0.04	0.04	0.03	0.04
Na_2O	4.54	4.61	0.84	2.79	0.62	3.62	1.40	3.22	4.11	2.46	0.66	1.84
K_2O	1.44	1.59	5.37	1.86	6.90	2.95	2.92	3.32	2.35	1.89	3.66	6.47
P_2O_5	0.28	0.19	0.21	0.22	0.13	0.20	0.14	0.22	0.12	0.08	0.08	0.11
Total:	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table T1 (continued).

Sample ID:	PM56	PM57		PM58	PM60		PM63	PM64	PM68	PM71
Hole:		1189A					1189B			
Core section, interval (cm):	12R-1, 83	12R-1, 120		13R-1, 51	6R-1, 0		11R-1, 22	11R-3, 3	13R-1, 48	14R-1, 87
Depth (mbsf):	107.33	107.7		116.61	79		127.82	129.72	147.48	157.37
Volcanic facies:	Coherent	Volcanic breccia, sulfur matrix	Volcanic breccia, pu clasts	Volcanic breccia	Stockwork matrix	App. clast in stockwork	Volcanic breccia	Coherent vesicular	Coherent perlitic	Flow-banded volcanic breccia
Alteration facies:	Chl-py	Sulfides	Kfsp-illite	Chl-py	Sulfide, Fe oxide	Chl-py	Kfsp-illite	Unaltered	Kfsp-illite	Anhy-py-pyro
Powder:	P044	P074	P072	P045	P075	P073	P046	P047	P048	P049
MgO	5.40			5.83		7.89	2.21	1.33	1.79	2.61
MnO	0.04			0.03		0.21	0.04	0.12	0.08	0.10
Na_2O	0.31			1.85		0.98	0.12	4.52	1.70	0.99
K_2O	2.74			1.81		5.70	4.27	1.96	3.87	4.02
P_2O_5	0.18			0.45		0.18	0.11	0.13	0.09	0.10
Total:	100.00			100.00		100.00	100.00	100.00	100.00	100.00

Table T1 (continued).

Sample ID:	PM73		PM75		PM79	PM82	PM85		PM86		PM88
Hole:						1189B					
Core section, interval (cm):	15R-1, 25		15R-1, 124		16R-1, 75	17R-1, 57	18R-1, 5		18R-1, 45		18R-1, 125
Depth (mbsf):	166.35		167.34		176.45	185.87	195.05		195.45		196.25
Volcanic facies:	Volcanic breccia clast	Volcanic breccia matrix	Volcanic breccia gray clasts	Volcanic breccia green clasts	Coherent	Coherent	Volcanic breccia clast	Volcanic breccia matrix	Volcanic breccia clast	Volcanic breccia matrix	Brecciated
Alteration facies:	Weak	Kfsp-illite	Weak		Weak	Kfsp-illite	Kfsp-illite		Kfsp-illite		Weak
Powder:	P050	P051	P052	P053	P054	P055	P056	P057	P058	P059	P060
MgO	1.60	1.69	1.88	1.94	1.48	0.69	1.48	1.66	2.69	1.94	2.34
MnO	0.07	0.08	0.06	0.09	0.05	0.04	0.06	0.08	0.06	0.06	0.10
Na_2O	4.66	4.43	4.76	4.02	2.41	2.95	4.79	3.91	3.13	2.94	3.99
K_2O	2.76	2.52	2.83	2.12	3.85	4.59	3.14	2.75	5.68	3.72	2.79
P_2O_5	0.10	0.09	0.09	0.09	0.10	0.08	0.10	0.10	0.15	0.11	0.13
Total:	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table T1 (continued).

Sample ID:	PM89	PM90			PM92	PM93	PM94	PM95	1188B-a	1188B-b	1188B-c
Hole:		1189B			1190C		1191A			1188B	
Core section, interval (cm):	18R-2, 0	18R-2, 49			3R-1, 3	1R-1, 64	1R-1, 75	3R-1, 80			
Depth (mbsf):	196.42	196.91			13.23	0.64	0.75	15.5			
Volcanic facies:	Volcanic breccia	Volcanic breccia clast	Volcanic breccia clast	Volcanic breccia matrix	Coherent vesicular	Coherent vesicular	Coherent vesicular	Coherent			
Alteration facies:	Fsp-qtz	Fsp-qtz			Unaltered	Unaltered	Unaltered	Weak			
Powder:	P061	P062	P063	P064	P065	P066	P067	P068	Internal std.	Internal std.	Internal std.
MgO	2.02	1.56	2.28	1.76	0.68	0.82	0.84	0.86			
MnO	0.10	0.05	0.08	0.08	0.11	0.11	0.12	0.11			
Na_2O	3.88	4.91	5.89	3.60	4.91	4.93	4.95	4.89			
K_2O	2.90	4.60	4.66	2.54	2.08	1.78	1.79	1.79			
P_2O_5	0.12	0.11	0.13	0.09	0.10	0.13	0.14	0.13			
Total:	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00			

Table T1 (continued).

Sample ID:	1191A-a	1191A-b	1191A-c
Hole:		1191A	
Core section, interval (cm):			
Depth (mbsf):			
Volcanic facies:			
Alteration facies:			
Powder:	Internal std.	Internal std.	Internal std.
MgO			
MnO			
Na_2O			
K_2O			
P_2O_5			
Total:			