

Major-element Chemical Data accompanying Hildreth et al. (2003) Eruptive history and geochronology of the Mount Baker volcanic field, Washington [B25107]

Samples are listed numerically, grouped by 3-letter map-unit labels, which are in alphabetical order and explained in detail in Table 1 of Hildreth et al. (2003).

Major-oxide contents in weight percent, normalized to volatile-free totals of 99.6% (allowing 0.4% for trace oxides and halogens), determined by wavelength-dispersive x-ray-fluorescence analysis in the U.S. Geological Survey laboratory at Lakewood, Colorado; principal analyst D.F. Siems. Precision and accuracy were discussed by Baedecker (1987) and Bacon and Druitt (1988). FeO* is total Fe calculated as FeO. LOI is weight loss on ignition at 900°C. Original total is volatile-free sum of the 10 major-oxide analyses before normalization (with total Fe calculated as Fe₂O₃).

All samples collected by Wes Hildreth and Judy Fierstein, 1992-99; assisted by Dave Tucker, Patty Weston, Mike Dean, Ellen Lougee, and Kari Cooper.

Map Label	Sample	Grid E/N	SiO ₂	TiO ₂	Al ₂ O ₃	FeO*	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	LOI	original total
aac	15	947/162	65.93	0.65	16.51	3.88	0.09	1.36	3.76	4.90	2.30	0.23	0.67	98.35
aac	15r	947/162	59.22	0.95	18.02	6.02	0.11	3.02	6.21	4.22	1.54	0.30	0.81	98.39
aac	657b	948/161	58.55	0.98	17.95	6.25	0.11	3.30	6.65	4.05	1.46	0.30	0.40	99.34
aba	168	893/087	58.84	1.02	16.72	6.12	0.11	3.59	6.15	4.38	2.33	0.35	0.2	98.86
abb	16	822/036	62.08	1.02	17.03	5.43	0.14	1.79	4.40	5.68	1.61	0.41	0.07	98.84
abb	18	822/035	52.77	1.27	18.03	8.58	0.15	5.68	8.11	3.90	0.82	0.31	0.06	98.91
abb	19	822/037	58.23	0.73	17.65	5.61	0.10	4.39	7.57	3.54	1.50	0.27	0.33	98.18
abb	29	826/977	56.43	0.98	18.17	6.30	0.11	4.37	7.89	3.87	1.17	0.30	0.07	99.20
abb	49	878/972	58.47	0.93	17.68	5.76	0.10	3.82	6.92	4.12	1.49	0.31	0.01	99.15
abb	57	832/985	54.85	0.94	18.72	6.89	0.13	4.29	8.36	4.01	1.12	0.29	0.84	98.42
abb	108	829/009	58.99	0.73	17.63	5.39	0.10	4.12	7.35	3.48	1.54	0.28	1.29	97.76
abb	110	828/010	59.49	0.80	18.05	5.21	0.09	3.62	6.93	3.78	1.38	0.26	0.26	98.78
abb	111	833/008	56.79	0.92	19.44	6.22	0.10	3.47	7.77	3.26	1.44	0.20	2.81	96.81
abb	112	824/007	63.57	0.69	16.50	4.62	0.09	2.67	4.77	4.24	2.25	0.19	0.49	99.02
abb	113	825/007	59.73	0.71	16.89	5.05	0.10	4.59	7.09	3.57	1.59	0.28	0.25	99.05
abb	114	816/007	59.42	0.91	17.62	5.69	0.10	3.36	6.50	4.18	1.55	0.27	0.16	98.90
abb	116	821/001	63.67	0.70	16.50	4.65	0.09	2.55	4.75	4.15	2.32	0.20	0.38	99.02
abb	117	815/000	60.49	0.73	17.39	5.25	0.10	3.59	6.33	3.75	1.77	0.19	1.31	97.96
abb	118	815/998	60.01	0.84	18.36	5.38	0.10	2.51	6.73	4.03	1.35	0.27	0.25	99.25
abb	119	792/990	58.08	0.81	18.99	5.76	0.11	2.70	7.69	3.81	1.46	0.19	1.06	98.09
abb	176	814/033	62.06	1.02	17.30	5.40	0.14	1.86	4.27	5.51	1.63	0.41	0.15	99.03

Data Repository item 2003091

Map Label	Sample	Grid E/N	SiO ₂	TiO ₂	Al ₂ O ₃	FeO*	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	LOI	original total
abb	177	819/031	61.69	1.04	17.30	5.54	0.15	1.89	4.41	5.48	1.62	0.48	0.03	98.67
abb	178	813/026	59.57	1.05	17.69	6.27	0.15	2.47	5.25	5.39	1.32	0.42	0.1	99.10
abb	179	812/029	57.93	0.75	17.86	5.67	0.10	4.66	7.42	3.40	1.53	0.27	0.32	98.69
abb	233	831/031	59.49	0.82	18.05	5.35	0.09	3.51	6.87	3.80	1.38	0.25	0.36	98.78
abb	234	830/032	58.68	0.77	18.12	5.46	0.10	3.98	7.22	3.73	1.30	0.25	0.21	98.96
abb	235	830/032	58.77	0.77	18.12	5.41	0.09	4.00	7.16	3.72	1.30	0.26	0.2	98.97
abb	236	830/033	58.95	0.77	18.20	5.40	0.09	3.81	7.08	3.75	1.30	0.25	0.55	98.51
abb	237	830/033	58.85	0.79	18.44	5.43	0.09	3.63	6.91	3.90	1.30	0.27	0.22	98.85
abb	238	829/032	58.71	0.79	18.40	5.51	0.09	3.68	6.96	3.89	1.30	0.27	0.14	99.07
abb	239	825/032	57.72	0.80	17.26	5.91	0.11	5.28	7.38	3.59	1.26	0.29	0.45	98.70
abb	240	825/032	58.99	0.78	18.58	5.25	0.08	3.51	6.90	3.94	1.29	0.27	0.45	98.61
abb	241	829/029	59.57	0.87	17.81	5.45	0.10	3.38	6.59	4.04	1.53	0.26	0.09	98.97
abb	242	822/019	61.59	0.77	17.00	5.00	0.10	3.23	5.56	4.14	2.00	0.21	1.14	97.84
abb	243	826/020	61.77	0.78	17.03	4.93	0.10	3.14	5.50	4.08	2.06	0.21	0.87	98.84
abb	244	828/020	59.12	0.79	18.12	5.39	0.08	3.73	6.95	3.82	1.36	0.25	0.86	98.39
abb	245	825/020	63.53	0.73	16.52	4.70	0.10	2.55	4.63	4.26	2.38	0.20	0.74	98.30
abb	246	823/021	59.79	0.86	17.92	5.39	0.09	3.18	6.45	4.08	1.57	0.28	0.16	98.96
abb	247	824/026	59.54	0.84	18.03	5.44	0.10	3.32	6.49	4.02	1.54	0.27	0.26	98.86
abb	248	824/029	59.44	0.84	17.90	5.48	0.10	3.45	6.63	3.99	1.50	0.26	0.15	99.03
abb	249	803/023	59.55	1.04	17.98	6.05	0.14	2.36	5.38	5.41	1.30	0.38	0.04	99.18
abb	250	795/020	59.68	1.05	17.81	6.19	0.15	2.38	5.20	5.44	1.33	0.37	0.17	98.97
abb	251	806/016	59.75	0.88	17.95	5.66	0.10	3.32	6.10	3.98	1.60	0.26	0.62	98.19
abb	252	812/023	59.45	0.89	17.94	5.62	0.10	3.29	6.38	4.07	1.60	0.26	0.3	98.84
abb	253	815/023	59.36	0.88	17.84	5.59	0.10	3.44	6.51	4.06	1.56	0.27	0.18	98.83
abb	254	808/020	58.16	0.75	18.01	5.58	0.09	4.44	7.31	3.43	1.56	0.27	0.7	98.47
abb	255	808/022	58.02	0.74	17.83	5.61	0.10	4.60	7.44	3.44	1.54	0.27	0.43	98.87
abb	263	878/986	58.61	0.94	17.89	5.73	0.10	3.60	6.76	4.14	1.54	0.29	0.19	99.08
abb	264	879/986	57.85	0.88	18.71	5.63	0.11	3.71	7.53	3.88	1.06	0.24	0.29	99.00
abb	265	880/987	59.05	0.96	16.90	5.98	0.11	3.80	7.07	3.97	1.52	0.23	0.11	99.00
abb	266	881/987	59.02	0.95	16.88	6.17	0.11	3.79	6.91	3.99	1.55	0.23	0.34	98.56
abb	267	880/990	62.04	0.88	16.75	5.16	0.10	2.53	5.16	4.40	2.32	0.26	1.04	98.09
abb	268	879/990	57.77	0.88	18.75	5.64	0.10	3.73	7.49	3.92	1.08	0.24	0.5	98.79
abb	418	834/039	57.18	0.95	19.30	6.41	0.11	2.50	7.70	3.94	1.30	0.21	1.22	98.03
abb	420	835/039	57.80	0.79	17.07	6.13	0.11	5.17	7.37	3.56	1.32	0.29	0.95	98.46

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abb	423	834/035	58.00	0.79	17.17	5.67	0.11	5.30	7.40	3.53	1.33	0.29	0.76	98.81
abb	425	835/034	57.58	0.79	17.17	6.01	0.11	5.33	7.50	3.56	1.25	0.30	0.69	98.67
abb	426	837/033	62.38	1.00	17.23	5.25	0.14	1.72	4.27	5.50	1.72	0.39	0.92	98.16
abb	428	838/033	57.44	0.82	17.82	5.96	0.11	4.82	7.41	3.76	1.17	0.29	0.75	98.50
abb	429	839/032	56.72	0.95	19.16	6.31	0.11	3.34	7.66	3.93	1.22	0.21	1.31	97.96
abb	438	855/025	53.87	1.03	18.77	7.48	0.14	4.27	8.98	3.70	1.04	0.32	1.25	97.85
abb	439	855/024	54.08	1.18	18.40	7.51	0.16	5.15	8.01	3.68	1.09	0.34	2.4	96.99
abb	576	825/977	52.71	0.97	19.90	6.49	0.11	4.83	9.84	3.44	0.92	0.37	0.56	98.27
abb	601	814/002	64.47	0.73	16.67	4.57	0.09	1.99	4.07	4.25	2.54	0.22	0.73	98.18
abb	602	822/013	60.63	0.73	17.45	5.14	0.10	3.44	6.13	4.22	1.57	0.18	0.76	99.41
abb	603	823/013	64.68	0.72	16.49	4.25	0.09	1.88	4.24	4.44	2.62	0.19	0.73	98.72
abb	604	819/008	59.33	0.93	17.79	5.78	0.10	3.23	6.49	4.09	1.58	0.28	0.21	98.26
abb	635	833/988	55.92	0.89	16.23	6.52	0.11	7.10	8.00	3.41	1.18	0.23	1.29	98.12
abb	646	782/997	62.63	0.90	17.37	5.22	0.11	1.82	4.86	4.74	1.64	0.32	0.32	98.60
abb	647	813/997	58.41	0.81	19.03	5.45	0.09	2.80	7.71	3.88	1.16	0.26	0.15	98.90
abb	648	809/994	62.73	0.92	17.21	5.13	0.09	1.91	4.92	4.60	1.78	0.32	0.8	97.81
abc	203	944/978	60.74	0.93	17.05	5.49	0.10	3.04	5.63	4.25	2.11	0.27	0.51	98.72
abc	204	944/978	60.13	0.90	16.94	5.70	0.11	3.34	6.02	4.20	1.98	0.28	0.21	99.39
abc	205	944/978	59.64	0.89	17.13	5.74	0.11	3.49	6.30	4.15	1.88	0.27	0.25	98.86
abc	207	944/978	60.19	0.96	17.37	5.76	0.10	3.13	5.62	4.16	2.02	0.29	1.34	97.47
abc	663	925/990	60.50	0.91	17.00	5.55	0.10	3.13	5.73	4.30	2.06	0.31	-0.07	99.59
abc	664	922/993	61.21	0.90	16.83	5.42	0.10	2.86	5.48	4.31	2.20	0.29	-0.08	99.42
abc	667	918/987	60.86	0.92	16.92	5.51	0.10	3.01	5.55	4.29	2.13	0.31	-0.01	99.51
abc	668	911/985	60.81	0.91	16.93	5.52	0.10	3.06	5.55	4.31	2.11	0.31	0.06	99.43
abg	37	913/015	59.08	1.00	17.30	6.08	0.12	3.37	6.46	4.00	1.90	0.29	0.8	98.46
abg	38	911/015	56.60	1.04	17.74	6.91	0.13	3.97	7.68	3.88	1.34	0.32	1.07	97.67
abg	39	909/015	62.23	0.88	16.47	5.33	0.11	2.44	4.86	4.33	2.65	0.28	1.04	97.96
abg	120	909/017	57.03	1.02	17.65	6.86	0.12	3.92	7.44	3.87	1.41	0.29	1.74	97.62
abg	396	908/021	63.99	0.68	16.71	4.47	0.09	2.17	4.59	4.27	2.44	0.20	1.2	97.84
abg	397	907/023	64.43	0.70	16.80	4.41	0.08	1.88	4.25	4.31	2.51	0.21	0.69	98.70
abg	398	906/024	63.19	0.71	16.77	4.74	0.10	2.35	4.93	4.15	2.46	0.22	1.12	98.25
abg	400	907/025	63.16	0.81	16.48	4.81	0.10	2.36	4.74	4.25	2.65	0.24	0.85	98.38
abg	402	911/022	63.89	0.79	16.59	4.57	0.08	2.08	4.34	4.28	2.75	0.24	0.39	99.07
abg	403	912/022	63.62	0.78	16.58	4.74	0.09	2.17	4.52	4.20	2.68	0.24	0.68	98.40

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abg	404	900/019	63.93	0.68	16.74	4.53	0.09	2.20	4.51	4.31	2.40	0.21	0.26	99.15
abg	405	892/027	63.81	0.69	16.74	4.55	0.09	2.21	4.64	4.25	2.39	0.21	1.49	98.11
abg	406	887/028	61.32	0.75	17.69	5.25	0.10	2.64	5.20	4.44	1.95	0.26	0.36	98.99
abg	407	890/028	61.16	0.75	17.66	5.22	0.10	2.78	5.29	4.38	1.95	0.31	0.26	98.33
abg	408	891/028	63.00	0.73	16.80	4.87	0.10	2.39	4.96	4.15	2.32	0.27	1.26	97.75
abg	409	901/022	61.32	0.76	17.60	5.26	0.10	2.65	5.27	4.43	1.96	0.26	0.18	99.12
abg	410	902/022	61.32	0.74	17.71	5.20	0.10	2.68	5.21	4.41	1.96	0.26	0.3	99.11
abg	412	921/012	56.98	1.04	17.75	6.93	0.14	3.70	7.56	3.84	1.39	0.27	1.24	97.63
abg	491	926/008	58.06	0.94	17.81	6.35	0.10	3.64	7.06	3.90	1.48	0.26	1.15	98.01
abg	665	919/004	62.41	0.88	16.61	5.23	0.10	2.40	4.71	4.37	2.60	0.30	0.61	98.94
abg	666	919/005	62.30	0.89	16.71	5.33	0.10	2.41	4.66	4.37	2.55	0.30	0.24	98.96
abm	656b	926/134	57.70	0.82	18.28	6.02	0.11	3.94	7.53	3.29	1.72	0.20	1.69	97.54
abp	59	849/977	56.18	0.90	16.68	6.43	0.12	6.41	7.89	3.53	1.20	0.25	0.15	99.10
abp	529	851/978	56.10	0.90	16.46	6.56	0.11	6.79	7.78	3.43	1.20	0.27	0.23	99.08
abr	147	838/074	60.50	0.84	17.15	5.50	0.10	3.09	5.86	4.24	2.07	0.24	0.83	98.12
abr	148	853/066	63.45	0.87	16.83	4.23	0.09	2.16	4.70	4.48	2.54	0.26	1.24	97.64
abr	149	852/066	63.67	0.85	16.64	4.68	0.09	1.98	4.32	4.46	2.65	0.25	2.08	96.98
abr	150	851/065	61.53	0.86	17.23	5.12	0.10	2.65	5.47	4.33	2.08	0.23	0.94	98.26
abr	151	847/068	59.18	0.96	17.70	5.88	0.10	3.40	6.43	4.11	1.57	0.27	0.59	98.46
abr	152	849/066	58.96	0.95	17.64	5.81	0.11	3.51	6.62	4.13	1.60	0.27	0.19	98.83
abr	153	849/065	62.80	0.83	17.14	4.86	0.09	2.23	4.70	4.46	2.27	0.23	0.31	98.80
abr	154	851/070	59.44	1.01	17.69	5.59	0.10	3.08	6.20	4.37	1.81	0.31	0.31	98.53
abr	588	839/065	61.71	0.85	17.17	5.19	0.10	2.63	5.26	4.30	2.12	0.25	0.61	98.31
abr	589	853/063	61.44	0.86	17.29	5.32	0.10	2.77	5.28	4.28	2.03	0.22	0.31	99.01
acd	104	891/136	60.48	0.91	17.14	5.58	0.10	3.04	5.78	4.34	1.97	0.27	0.55	98.81
acd	105	894/130	60.41	0.82	17.39	5.70	0.11	3.17	6.40	3.82	1.50	0.28	0.26	99.09
acd	223	890/136	60.52	0.92	16.96	5.66	0.10	3.16	5.82	4.22	1.97	0.27	0.06	99.24
acd	574	894/136	59.90	0.94	17.09	5.81	0.11	3.27	6.04	4.19	1.92	0.33	0.19	98.40
acd	575a	894/129	60.09	0.82	17.39	5.78	0.11	3.30	6.54	3.75	1.49	0.33	0.9	97.74
acd	575b	894/129	59.94	0.93	17.33	5.72	0.11	3.26	5.95	4.15	1.91	0.30	0.64	98.71
ack	88	927/081	60.98	0.81	17.44	5.23	0.09	2.98	5.75	4.14	1.88	0.31	1.41	97.67
ack	136	922/081	62.60	0.84	16.91	4.81	0.09	2.42	5.04	4.25	2.39	0.26	1.56	97.21
ack	329	927/085	62.42	0.88	16.92	4.97	0.10	2.30	4.87	4.53	2.31	0.28	0.9	98.28
ack	478	922/077	62.71	0.89	16.81	4.99	0.09	2.18	4.84	4.46	2.39	0.26	1.76	97.21

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ack	479	924/074	62.89	0.90	17.02	4.92	0.09	2.06	4.59	4.41	2.46	0.25	2.05	96.93
ack	606	923/079	62.96	0.81	16.91	4.67	0.09	2.24	4.86	4.45	2.35	0.26	0.22	98.36
ack	608	926/080	61.84	0.87	17.28	4.71	0.09	2.48	5.20	4.46	2.35	0.32	0.45	98.02
acp	2	934/086	59.57	0.98	16.69	5.59	0.10	2.80	5.85	4.70	2.90	0.42	0.55	98.48
acp	74	938/099	60.28	0.95	16.80	5.44	0.10	2.59	5.58	4.64	2.83	0.40	1.09	97.82
acp	86	935/094	63.60	0.78	16.99	4.40	0.09	1.75	4.29	4.64	2.78	0.27	0.85	97.88
acp	89	925/080	59.39	1.01	16.74	5.60	0.10	2.75	5.87	4.77	2.93	0.43	0.12	98.77
acp	218	939/105	60.43	0.96	16.84	5.42	0.10	2.60	5.43	4.68	2.76	0.38	1.3	97.57
acp	330	927/085	58.95	1.00	16.80	5.53	0.09	2.85	6.09	4.74	3.07	0.47	0.93	97.82
acp	331	931/090	59.06	1.01	16.60	5.58	0.09	2.91	6.06	4.66	3.16	0.48	1.14	97.82
acp	359	930/078	59.70	0.99	16.98	4.95	0.11	1.76	7.19	4.52	2.95	0.44	4.44	94.43
acp	605	924/079	57.96	1.04	17.06	5.77	0.10	3.07	6.49	4.36	3.22	0.53	1.35	96.78
acp	607	925/081	58.63	1.03	17.22	5.71	0.10	2.86	5.97	4.72	2.90	0.47	0.69	97.55
acp	609	929/083	59.72	0.98	16.88	5.47	0.10	2.68	5.67	4.69	2.96	0.45	0.39	97.98
acp	610	929/085	59.59	0.98	16.87	5.53	0.09	2.84	5.86	4.54	2.86	0.44	0.79	97.70
acr	386	847/087	57.09	1.69	23.49	6.64	0.03	0.99	5.89	3.11	0.52	0.16	8.28	91.01
acr	387	847/087	55.34	1.40	17.62	8.33	0.14	3.24	7.93	4.10	1.22	0.29	3.02	96.19
acr	573a	847/087	58.48	1.76	24.47	3.86	0.03	0.97	5.72	3.25	0.58	0.47	10.88	88.45
acr	573b	847/087	58.55	1.85	25.36	3.16	0.02	1.01	5.70	3.36	0.36	0.25	9.88	89.69
acr	573c	847/087	58.11	1.32	19.24	6.36	0.10	2.55	6.46	3.81	1.33	0.33	3.08	95.96
acr	573d	847/087	53.78	1.29	17.77	8.30	0.16	4.25	9.09	3.50	1.14	0.32	4.3	94.50
acv	45	872/993	58.18	0.89	17.38	6.00	0.11	4.32	7.01	3.87	1.56	0.27	0.1	99.12
acv	46	871/992	58.76	0.92	17.38	5.93	0.11	3.83	6.68	4.01	1.70	0.29	< 0.01	99.16
acv	47	872/992	58.79	0.91	17.49	5.89	0.11	3.82	6.70	3.89	1.72	0.28	< 0.01	99.11
acv	48	875/987	58.09	0.90	17.49	5.99	0.11	4.31	7.04	3.81	1.58	0.28	0.01	99.10
acv	364	873/978	58.87	0.91	17.35	5.80	0.11	3.82	6.70	4.03	1.70	0.30	0.02	99.30
acv	365	871/979	58.78	0.93	17.28	5.91	0.11	3.92	6.70	4.00	1.68	0.29	< 0.01	99.13
acv	366	863/980	58.62	0.94	17.32	5.92	0.11	3.96	6.71	4.04	1.68	0.30	0.35	98.89
acv	367	861/983	58.69	0.93	17.26	6.00	0.11	3.99	6.69	3.95	1.67	0.30	< 0.01	99.27
acv	369	862/972	58.94	0.91	17.37	5.77	0.10	3.76	6.63	4.11	1.73	0.29	< 0.01	99.20
acv	518	872/960	58.87	0.93	17.41	5.91	0.11	3.80	6.60	3.92	1.74	0.30	0.18	98.93
acv	520	872/962	58.27	0.90	17.43	5.95	0.11	4.24	6.98	3.80	1.60	0.31	-0.01	99.53
acv	596	862/962	58.86	0.92	17.50	5.84	0.11	3.79	6.72	3.88	1.70	0.29	0.03	98.91
acv	597	863/964	58.69	0.90	17.55	5.88	0.11	3.85	6.79	3.84	1.69	0.29	0	98.94

Map Label	Sample	Grid E/N	SiO ₂	TiO ₂	Al ₂ O ₃	FeO*	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	LOI	original total
acv	598	865/967	58.59	0.93	17.46	5.95	0.11	3.96	6.77	3.86	1.68	0.30	0.06	99.07
acv	599	866/966	58.78	0.92	17.47	5.90	0.11	3.83	6.72	3.87	1.71	0.30	0.05	98.75
acv	600	866/961	58.71	0.91	17.57	5.88	0.11	3.89	6.69	3.84	1.69	0.30	0.3	98.79
acv	612	875/973	58.75	0.91	17.49	5.90	0.11	3.91	6.69	3.83	1.71	0.31	0.11	99.01
acv	655	867/983	58.77	0.91	17.42	5.86	0.11	3.87	6.72	3.92	1.70	0.31	-0.01	99.48
acv	658	858/971	58.75	0.91	17.44	5.93	0.10	3.89	6.68	3.89	1.70	0.30	0.04	99.34
acv	659	862/986	58.98	0.91	17.39	5.84	0.10	3.78	6.63	3.94	1.73	0.31	0.00	99.64
acv	660	874/982	58.18	0.90	17.46	5.94	0.11	4.31	6.96	3.84	1.59	0.30	0.07	99.28
adb	13	889/136	59.42	1.09	16.81	6.33	0.12	3.33	5.84	4.35	1.94	0.36	0.05	98.58
adb	14	886/134	59.08	1.07	16.68	6.37	0.12	3.61	6.18	4.36	1.82	0.31	0.07	99.12
adb	146	870/089	59.01	1.05	16.82	6.39	0.12	3.78	6.19	4.14	1.79	0.31	0.04	98.91
adb	261	870/092	59.39	1.08	16.65	6.35	0.12	3.49	5.88	4.37	1.88	0.37	0.16	98.59
adb	335	874/108	59.64	1.09	16.64	6.24	0.12	3.34	5.74	4.52	1.93	0.33	< 0.01	99.36
adb	337	889/145	58.80	1.08	16.71	6.43	0.12	3.81	6.20	4.33	1.78	0.33	0.1	98.92
adb	585	880/122	57.48	1.06	17.01	6.72	0.13	4.51	6.90	3.87	1.60	0.33	0.87	97.91
adb	586	883/128	58.26	1.08	17.05	6.56	0.12	3.95	6.36	4.13	1.73	0.36	0.46	98.55
adc	125	857/087	62.97	1.02	17.07	5.16	0.09	1.91	4.37	4.77	1.85	0.38	1.71	97.43
adc	155	865/070	57.76	1.06	18.16	6.65	0.11	3.05	9.22	3.11	0.24	0.24	7.43	91.57
adc	156b	865/071	53.30	1.19	16.62	8.06	0.14	6.94	9.08	3.11	0.85	0.30	3.12	95.52
adc	156c	866/072	58.87	0.91	17.22	5.97	0.10	4.13	7.40	3.52	1.20	0.27	1.14	98.31
adc	498	853/090	61.05	1.05	17.10	5.91	0.17	1.62	6.03	4.72	1.66	0.29	4.36	94.70
adc	499	854/091	53.84	1.01	17.40	6.48	0.13	5.18	10.87	3.05	1.27	0.37	4.63	94.38
adc	500	853/085	60.98	0.84	17.42	5.89	0.13	2.54	5.62	4.05	1.86	0.28	2.21	96.73
adc	587	863/073	60.54	0.84	17.39	5.60	0.09	3.14	6.01	4.02	1.68	0.29	1.8	96.79
adc	590	879/074	64.20	0.78	16.89	4.75	0.10	1.93	6.45	3.93	0.31	0.25	4.97	93.42
adc	592	881/074	67.41	0.71	16.36	3.75	0.08	2.05	2.46	4.24	2.25	0.28	3.05	95.32
adc	593	880/074	58.02	0.78	16.91	6.39	0.11	5.10	7.50	3.27	1.30	0.23	2.93	95.70
adc	594	875/076	71.35	0.51	15.43	2.34	0.06	0.42	2.06	4.30	2.98	0.15	2.44	95.55
adc	595	873/075	66.43	0.67	16.57	4.04	0.08	1.92	5.18	3.05	1.44	0.22	5.12	93.42
adc	649	871/078	52.28	0.84	17.67	7.97	0.15	8.48	7.90	2.88	1.21	0.23	3.22	95.83
adf	281	878/045	59.59	0.94	16.97	5.87	0.13	3.59	6.02	3.96	2.22	0.32	1.42	97.44
adf	282	877/045	60.94	0.92	16.92	5.44	0.15	3.16	5.84	3.98	2.00	0.25	0.96	97.74
adh	262	869/115	60.74	1.34	16.62	6.53	0.15	1.95	4.44	5.22	2.04	0.56	0.04	98.88
adk	87	935/085	62.90	0.74	16.83	4.75	0.09	2.62	4.81	4.22	2.39	0.24	2.44	96.44

Map Label	Sample	Grid E/N	SiO ₂	TiO ₂	Al ₂ O ₃	FeO*	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	LOI	original total
adk	165	907/082	64.34	0.89	16.39	5.06	0.07	2.75	3.83	4.23	1.75	0.28	4.31	94.76
adk	272	931/070	56.58	1.03	18.13	6.94	0.15	4.33	6.87	4.03	1.25	0.29	4.04	95.06
adk	289	935/081	58.02	0.94	18.56	6.76	0.12	3.17	6.91	3.87	0.97	0.28	5.38	93.38
adk	314	968/091	64.04	0.72	16.09	4.40	0.08	2.64	4.89	3.90	2.56	0.28	1.95	97.20
adk	318	954/072	58.23	0.78	18.66	5.83	0.10	3.28	7.23	3.78	1.51	0.19	1.64	97.67
adk	327	925/092	56.24	0.93	18.64	6.64	0.12	4.45	7.44	3.35	1.55	0.24	4.45	92.98
adk	328	924/094	55.38	1.19	16.45	7.25	0.13	4.96	7.89	3.67	2.12	0.56	6.28	92.62
adk	348	913/103	55.55	0.91	17.50	7.11	0.13	4.49	8.41	3.42	1.73	0.36	7.59	91.09
adk	358	932/081	62.95	0.90	16.90	4.90	0.08	2.04	4.67	4.47	2.42	0.28	2.31	96.68
adk	360	928/079	62.38	0.90	16.77	5.10	0.10	2.38	4.96	4.48	2.24	0.29	1.75	97.40
adk	361	927/077	61.17	0.77	17.68	4.94	0.09	2.78	5.94	4.30	1.65	0.28	1.1	98.03
adk	363	926/078	62.54	0.79	17.13	4.61	0.08	2.43	5.11	4.47	2.17	0.26	0.89	98.26
adk	379	926/072	55.37	1.05	18.79	7.31	0.12	4.40	8.74	2.85	0.70	0.28	6.94	91.19
adk	456	933/076	61.24	1.01	16.88	5.54	0.13	2.81	5.77	3.49	2.31	0.43	4.56	94.19
adk	466	918/080	60.14	0.75	17.88	4.74	0.08	4.03	7.56	2.36	1.82	0.22	4.3	94.15
adk	468	913/080	60.78	1.00	16.34	6.02	0.11	3.57	5.75	3.78	1.94	0.31	4.58	94.09
adk	469	908/083	65.68	0.68	16.13	3.89	0.07	1.78	3.64	4.31	3.21	0.21	2.05	96.58
adk	470	907/085	61.38	0.74	17.01	5.32	0.16	2.73	5.11	4.43	2.47	0.26	2.19	96.69
adk	471	905/086	55.73	0.86	18.45	6.91	0.14	4.86	8.33	3.20	0.91	0.19	1.8	96.84
adk	619	931/073	55.44	1.00	17.80	7.95	0.15	5.30	8.08	2.81	0.80	0.27	7.54	91.32
adk	623	935/066	55.63	1.03	18.45	7.50	0.12	4.42	7.45	3.57	1.14	0.28	3.9	94.79
adk	633	929/094	60.97	0.83	17.22	5.57	0.11	3.13	6.44	3.43	1.60	0.29	2.83	95.72
ado	224	885/121	56.23	1.02	16.82	7.00	0.12	5.45	7.77	3.63	1.28	0.28	< 0.01	100.09
ado	260	868/097	56.13	1.01	16.96	7.04	0.13	5.52	7.70	3.51	1.33	0.26	0.37	98.66
ado	300	880/117	56.09	1.00	16.89	6.92	0.12	5.50	7.84	3.68	1.28	0.28	0.08	99.08
ado	301	881/117	56.11	1.01	16.82	7.00	0.12	5.52	7.80	3.65	1.27	0.30	0.19	98.87
ado	336	882/117	56.17	1.00	16.88	6.94	0.12	5.46	7.73	3.72	1.30	0.28	0.02	99.12
adp	637	909/029	59.44	0.86	16.45	6.27	0.12	4.68	6.39	3.31	1.86	0.22	4.25	94.81
aem	92	873/167	59.19	1.06	16.84	6.34	0.12	3.52	6.04	4.33	1.84	0.33	0.19	98.78
afd	22	941/944	61.09	0.92	16.73	5.71	0.11	2.82	5.60	4.23	2.12	0.26	0.16	98.80
afd	23	932/961	59.00	0.95	16.61	6.12	0.11	4.14	6.83	4.05	1.55	0.24	0.14	98.92
afd	24	939/945	57.96	1.22	17.45	7.14	0.14	3.04	6.61	4.24	1.51	0.29	< 0.01	99.33
afd	220	899/991	59.55	0.86	16.45	5.93	0.11	4.13	6.59	3.90	1.85	0.23	0.15	98.68
afd	221	897/990	59.29	0.87	16.51	6.01	0.12	4.27	6.65	3.84	1.81	0.23	0.27	98.94

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afd	222	903/985	57.95	0.90	16.40	6.38	0.12	4.97	7.45	3.58	1.61	0.24	0.34	99.00
afd	670	939/974	60.57	0.84	16.89	5.47	0.11	3.42	5.91	4.11	2.03	0.26	1.01	98.49
agc	3	836/050	58.27	0.85	17.25	5.83	0.11	4.63	7.00	3.83	1.55	0.27	< 0.01	99.31
agc	4	837/050	58.35	0.86	17.24	5.87	0.11	4.56	6.98	3.78	1.57	0.27	< 0.01	99.35
agc	94	811/094	58.26	0.81	17.28	5.74	0.11	4.81	7.11	3.75	1.48	0.25	< 0.01	99.16
agc	182	809/087	58.25	0.83	17.27	5.74	0.10	4.87	7.09	3.71	1.49	0.25	0.22	99.18
agc	199	807/085	58.30	0.84	17.32	5.73	0.10	4.81	7.08	3.68	1.50	0.25	0.48	98.92
agc	219	814/074	58.25	0.82	17.30	5.77	0.10	4.84	7.02	3.74	1.50	0.25	0.11	99.01
agc	295	846/054	58.18	0.82	17.35	5.70	0.10	4.85	7.06	3.78	1.47	0.27	< 0.01	99.29
agc	302	834/053	58.09	0.84	17.19	5.79	0.10	4.93	7.11	3.79	1.50	0.27	0.01	99.11
agc	303	835/053	58.08	0.85	17.22	5.78	0.10	4.82	7.12	3.85	1.50	0.28	< 0.01	99.47
agc	304	836/052	58.13	0.84	17.20	5.78	0.10	4.89	7.09	3.80	1.50	0.27	< 0.01	99.04
agc	305	837/051	58.15	0.84	17.20	5.78	0.10	4.85	7.10	3.78	1.51	0.28	< 0.01	99.00
agc	306	831/051	58.15	0.85	17.30	5.77	0.10	4.83	6.98	3.83	1.52	0.27	0.15	99.01
agc	311	825/060	58.04	0.83	17.27	5.75	0.10	4.89	7.11	3.83	1.51	0.27	< 0.01	99.19
agc	312	822/062	58.24	0.83	17.33	5.68	0.10	4.78	7.08	3.81	1.48	0.27	< 0.01	98.85
agc	340	816/070	58.53	0.82	17.37	5.59	0.10	4.54	6.99	3.87	1.53	0.27	0.04	99.21
agc	395	808/087	58.26	0.83	17.32	5.74	0.10	4.86	7.09	3.66	1.48	0.25	0.45	98.68
agc	632	817/065	58.30	0.83	17.38	5.78	0.10	4.76	7.04	3.70	1.48	0.24	0.15	99.19
agp	430	872/031	59.74	0.90	17.36	5.86	0.12	4.32	5.93	3.56	1.55	0.26	1.79	97.39
agp	431	872/031	59.37	0.89	17.17	5.88	0.11	3.66	6.38	4.04	1.84	0.27	0.49	98.69
agp	432	872/031	58.60	0.89	17.78	6.19	0.11	3.61	6.59	3.99	1.54	0.29	1.04	97.78
ail	81	938/119	62.05	0.66	16.68	5.09	0.11	3.34	6.01	3.55	1.87	0.25	0.79	98.55
ald	25	932/037	62.44	0.89	16.60	5.21	0.10	2.40	4.83	4.39	2.49	0.25	0.68	98.41
ald	26	926/037	61.79	0.92	17.12	5.39	0.09	2.34	5.15	4.36	2.21	0.24	0.54	98.33
ald	27	935/021	62.38	0.90	17.17	5.23	0.09	2.05	4.86	4.32	2.36	0.24	1.06	98.03
ald	60	922/034	60.32	1.01	17.24	5.92	0.11	2.82	5.69	4.22	2.01	0.26	0.64	98.24
ald	61	923/034	60.62	0.78	17.77	5.40	0.09	3.01	5.91	3.98	1.82	0.22	0.96	98.09
ald	62	925/034	62.85	0.88	16.78	5.12	0.13	1.78	4.83	4.40	2.57	0.24	1.07	97.93
ald	192	945/014	57.98	1.01	17.57	6.38	0.12	3.74	7.00	3.82	1.76	0.23	0.9	98.09
ald	273	917/057	61.55	0.81	16.20	5.36	0.11	3.37	5.59	4.07	2.30	0.25	0.79	98.39
ald	284	891/049	59.14	0.89	17.59	5.79	0.12	4.01	6.27	3.47	2.05	0.27	2.07	96.84
ald	285	890/049	53.70	1.15	17.38	7.34	0.40	5.18	8.82	3.73	1.42	0.48	3.16	95.15
ald	613	932/038	62.66	0.86	16.73	4.99	0.09	2.52	4.73	4.30	2.48	0.25	0.66	98.65

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ald	615	931/039	62.78	0.84	16.53	5.01	0.10	2.44	4.73	4.35	2.57	0.24	0.94	98.39
ald	616	931/029	61.99	0.86	16.64	5.38	0.09	2.79	5.11	4.09	2.37	0.28	1.23	97.88
ald	638	921/033	61.40	0.92	17.14	5.49	0.11	2.61	5.36	3.86	2.48	0.22	1.79	97.47
ald	639	922/033	61.20	0.91	17.07	5.53	0.12	2.69	5.44	4.02	2.40	0.23	1.04	98.07
ald	640	918/036	61.86	0.84	16.91	5.18	0.09	2.70	5.16	4.20	2.44	0.22	1.1	97.86
ald	641	916/038	62.06	0.85	16.75	5.17	0.10	2.66	5.14	4.15	2.49	0.23	1.35	98.23
alm	91	776/075	59.81	0.93	17.45	6.01	0.11	3.22	6.17	4.07	1.54	0.28	0.32	98.75
alr	97	916/093	57.47	0.95	17.87	6.37	0.12	3.98	6.94	3.68	1.95	0.26	1.02	98.09
alr	98	917/093	61.44	0.91	17.04	5.41	0.11	2.58	5.45	3.62	2.77	0.27	2.03	97.59
alr	99	918/098	61.02	0.88	16.85	5.49	0.10	2.88	5.56	4.18	2.35	0.27	1.37	98.09
alr	100	918/100	61.22	0.89	17.11	5.63	0.14	2.48	5.26	4.23	2.39	0.26	1.7	97.78
alr	106	907/119	62.11	0.89	16.81	5.01	0.10	2.60	5.38	3.99	2.46	0.26	2.05	97.19
alr	135	914/086	58.25	0.93	17.38	6.20	0.12	3.89	7.06	3.56	1.96	0.24	1.21	97.97
alr	195	922/106	60.11	0.90	17.23	5.89	0.12	2.78	5.96	4.18	2.16	0.26	0.78	98.25
alr	346	910/093	62.67	0.82	16.51	4.91	0.10	2.51	4.86	4.18	2.79	0.25	1.34	97.74
alr	347	911/096	61.14	0.94	16.85	5.59	0.11	3.00	5.35	4.05	2.28	0.29	2.46	96.93
alr	350	917/103	61.53	0.86	17.10	5.23	0.09	2.52	5.21	4.41	2.38	0.26	0.7	98.42
alr	351	919/103	60.70	0.87	17.15	5.42	0.11	2.81	5.64	4.34	2.26	0.27	0.74	98.12
alr	481	916/083	60.97	0.89	16.99	5.44	0.12	2.81	5.89	3.96	2.27	0.25	4.7	94.43
amp	28	837/975	59.63	0.92	16.97	5.83	0.11	3.56	6.26	4.17	1.87	0.28	< 0.01	99.21
amp	40	853/987	60.56	0.82	17.05	5.39	0.10	3.49	6.01	4.04	1.88	0.26	< 0.01	99.34
amp	41	853/991	60.27	0.70	17.65	5.15	0.10	3.57	6.55	3.85	1.52	0.23	< 0.01	99.32
amp	43	847/993	57.90	0.89	17.46	6.06	0.11	4.51	7.16	3.73	1.51	0.27	0.02	99.25
amp	44	849/987	60.61	0.80	17.19	5.31	0.10	3.52	6.01	3.94	1.87	0.25	0.08	99.09
amp	54	853/967	60.17	0.74	17.78	5.23	0.10	3.66	6.38	3.71	1.60	0.24	0.19	99.16
amp	55	847/986	58.52	0.91	17.49	5.98	0.11	4.06	6.75	3.83	1.66	0.28	0.06	99.06
amp	56	843/990	59.49	0.95	17.05	6.01	0.11	3.61	6.15	4.05	1.89	0.29	< 0.01	99.29
amp	352	833/969	59.67	0.94	17.10	5.76	0.10	3.48	6.11	4.26	1.89	0.29	< 0.01	98.99
amp	353	832/968	59.62	0.94	17.06	5.76	0.10	3.55	6.18	4.23	1.86	0.30	< 0.01	99.24
amp	506	842/972	59.67	0.94	17.15	5.83	0.11	3.49	6.07	4.08	1.95	0.31	0.09	99.23
amp	507	835/967	59.51	0.95	17.07	5.88	0.11	3.63	6.21	4.07	1.87	0.30	-0.01	99.71
amp	524	853/964	60.06	0.74	17.59	5.32	0.10	3.80	6.40	3.75	1.57	0.26	0.32	98.96
amp	525	853/000	60.17	0.71	17.79	5.16	0.10	3.62	6.57	3.72	1.51	0.26	-0.08	99.43
amp	526	853/999	58.32	0.89	17.42	5.93	0.11	4.25	6.98	3.79	1.60	0.30	-0.06	99.50

Map Label	Sample	Grid E/N	SiO ₂	TiO ₂	Al ₂ O ₃	FeO*	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	LOI	original total
amp	527	853/998	58.35	0.90	17.41	5.90	0.11	4.25	6.96	3.82	1.60	0.30	-0.08	99.46
amp	528	852/997	57.91	0.90	17.35	6.01	0.11	4.51	7.24	3.74	1.53	0.31	-0.1	99.00
amp	577	834/979	59.41	0.93	17.20	5.83	0.11	3.62	6.27	4.05	1.85	0.32	-0.06	99.55
amp	582	837/979	59.58	0.94	17.24	5.79	0.10	3.52	6.12	4.09	1.89	0.33	0.18	98.85
amp	661	858/966	57.65	0.82	18.01	5.90	0.11	4.19	7.35	3.96	1.32	0.28	0.12	99.00
amp	662b	862/960	58.08	0.83	17.85	5.89	0.11	4.09	7.08	3.95	1.43	0.28	0.34	99.30
amp	662c	862/960	58.52	0.80	18.07	5.67	0.10	3.70	6.88	4.10	1.51	0.26	0.18	99.23
amp	671	827/967	58.40	0.82	18.16	5.69	0.10	3.80	6.81	4.04	1.49	0.28	0.49	98.75
aoc	341	942/105	57.03	0.93	16.42	6.04	0.11	5.48	8.05	3.68	1.57	0.29	0.29	98.86
aoc	342b	942/104	64.35	0.75	17.12	3.87	0.08	1.47	3.93	4.88	2.85	0.29	0.4	98.90
aoc	343	943/104	62.13	0.83	17.13	4.83	0.09	2.34	5.05	4.60	2.30	0.30	0.95	98.27
aoc	371	943/105	63.75	0.79	17.02	4.29	0.09	1.70	4.07	4.83	2.77	0.29	0.32	98.90
aoc	372	942/105	62.47	0.78	16.70	4.49	0.09	2.70	5.17	4.45	2.50	0.25	0.31	99.01
aoc	389	943/108	62.74	0.84	16.83	4.86	0.09	2.27	4.82	4.52	2.39	0.26	0.57	98.43
aoc	390	943/108	63.65	0.77	17.21	4.28	0.09	1.70	4.16	4.74	2.74	0.26	0.51	98.43
aoc	487	941/108	62.54	0.83	17.03	4.74	0.09	2.28	4.96	4.44	2.40	0.29	1.3	97.65
aoc	488	942/107	60.00	0.89	17.02	5.29	0.10	3.46	6.39	4.08	2.10	0.26	0.34	98.87
aoc	489	943/106	62.34	0.86	16.88	5.04	0.10	2.33	4.89	4.47	2.37	0.32	0.3	98.82
aoc	490	941/106	60.96	0.86	16.74	5.03	0.09	3.21	5.89	4.22	2.30	0.30	0.19	98.63
apc	643	913/024	60.94	0.92	16.88	5.47	0.13	2.83	5.46	3.95	2.75	0.26	1.24	98.14
apc	644	912/024	59.61	0.90	17.66	5.59	0.17	2.91	6.53	3.83	2.14	0.25	1.11	98.33
apc	645	911/025	58.59	0.89	17.76	5.84	0.12	3.62	6.92	3.87	1.76	0.23	0.88	98.51
apl	12	885/171	62.17	0.82	16.91	4.70	0.09	2.59	5.16	4.39	2.47	0.28	0.56	98.36
apl	550	887/169	59.37	0.90	16.75	5.49	0.10	4.02	6.75	3.93	2.00	0.29	0.32	98.81
apl	551	888/171	60.29	0.86	16.82	5.14	0.10	3.60	6.28	4.02	2.19	0.29	0.8	98.21
apr	436	859/026	58.39	0.85	17.28	5.80	0.10	4.64	6.95	3.59	1.74	0.26	0.51	99.03
apr	437	857/026	59.94	0.92	16.62	5.71	0.10	3.36	6.17	4.11	2.35	0.31	0.35	98.99
apt	1	912/073	62.00	0.73	16.97	5.10	0.10	2.66	5.26	4.40	2.12	0.24	0.76	98.00
apt	103	900/116	60.70	0.79	17.27	5.50	0.11	2.94	5.59	4.50	1.94	0.26	0.52	98.62
apt	138	906/069	62.46	0.73	17.08	4.93	0.10	2.55	5.00	4.29	2.23	0.23	0.64	98.55
apt	163	906/080	60.15	0.78	17.76	5.52	0.11	3.04	5.82	4.30	1.87	0.25	0.65	98.69
apt	164	901/079	61.66	0.76	17.26	5.13	0.10	2.70	5.30	4.35	2.11	0.23	0.46	98.69
apt	166	895/074	62.23	0.74	17.06	5.01	0.10	2.60	5.15	4.31	2.17	0.23	< 0.01	99.24
apt	167	892/079	60.95	0.77	17.41	5.34	0.11	2.85	5.54	4.37	1.99	0.26	0.86	98.37

Map Label	Sample	Grid E/N	SiO ₂	TiO ₂	Al ₂ O ₃	FeO*	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	LOI	original total
apt	169	901/085	61.39	0.75	17.37	5.19	0.10	2.76	5.39	4.35	2.05	0.25	0.62	98.64
apt	202	898/116	60.77	0.77	17.39	5.39	0.11	2.99	5.62	4.35	1.94	0.26	0.62	98.50
apt	230	919/069	60.79	0.76	17.60	5.37	0.11	2.87	5.63	4.27	1.93	0.25	0.92	98.46
apt	231	918/062	60.66	0.78	17.52	5.48	0.11	2.94	5.60	4.30	1.95	0.25	0.69	98.35
apt	232	915/066	60.85	0.77	17.47	5.40	0.11	2.93	5.51	4.34	1.95	0.27	0.05	99.20
apt	278	893/060	57.21	0.85	18.63	6.33	0.11	3.66	6.84	4.31	1.38	0.28	0.39	98.89
apt	279	893/059	57.12	0.82	18.74	6.31	0.11	3.62	6.87	4.36	1.38	0.28	0.61	98.35
arc	63	814/989	55.66	0.91	18.79	6.61	0.11	4.18	8.30	3.78	1.06	0.20	0.66	98.60
arc	64	814/988	54.63	0.89	17.81	6.96	0.12	5.92	8.57	3.56	0.92	0.22	1	98.45
arc	65	815/993	52.29	1.05	16.42	8.59	0.15	8.12	8.03	3.70	0.95	0.30	0.22	98.86
arc	66	812/988	56.86	1.17	17.50	7.00	0.13	3.80	7.23	4.12	1.47	0.30	0.8	98.44
arc	67	813/986	56.31	0.97	18.03	6.30	0.12	4.52	8.05	3.83	1.17	0.30	0.2	98.88
arc	521	817/988	51.34	1.33	17.23	8.97	0.16	6.61	9.57	3.44	0.67	0.28	1.26	98.00
arg	292	843/058	60.19	0.92	17.11	5.48	0.10	3.19	6.02	4.26	2.03	0.31	0.16	98.96
arg	293	843/057	60.36	0.82	17.53	5.32	0.09	3.06	6.07	4.09	2.01	0.25	0.3	98.83
arg	294	843/055	60.10	0.86	17.09	5.53	0.10	3.57	6.07	4.17	1.84	0.26	< 0.01	99.10
arg	296	843/053	60.19	0.89	17.04	5.54	0.10	3.42	5.97	4.30	1.89	0.27	0.42	98.79
arg	458	831/059	60.63	0.89	17.07	5.45	0.10	3.24	5.80	4.17	2.00	0.25	-0.04	99.26
arg	460	835/059	60.18	0.82	17.68	5.31	0.10	3.18	6.13	3.97	2.01	0.23	0.78	98.44
arg	461	835/058	60.36	0.82	17.64	5.33	0.09	3.07	6.06	4.03	1.97	0.23	0.23	98.91
arw	433	865/029	58.20	0.83	17.66	5.95	0.10	4.70	6.93	3.48	1.50	0.25	2.11	97.64
arw	434	864/029	57.97	0.84	17.59	5.83	0.11	4.72	7.10	3.70	1.47	0.27	0.73	98.68
arw	434a	864/029	58.36	0.82	17.28	5.71	0.10	4.88	7.10	3.61	1.50	0.24	1.15	98.13
asm	78	954/124	57.57	0.83	17.69	6.15	0.10	4.17	7.85	3.71	1.30	0.21	1.91	97.40
asr	276a	948/059	60.46	1.02	17.07	5.94	0.11	2.50	5.55	4.58	1.92	0.44	0.04	99.17
asw	256	963/073	55.72	1.04	16.73	7.06	0.13	6.02	7.68	3.70	1.27	0.26	0.24	98.85
asw	317	961/073	55.06	1.03	16.71	7.22	0.13	6.47	7.82	3.72	1.17	0.27	0.28	98.95
asw	319	959/076	55.04	1.03	16.60	7.29	0.13	6.48	7.83	3.76	1.17	0.27	0.32	98.99
asw	320	959/083	54.09	1.04	17.02	7.47	0.13	6.48	8.46	3.67	1.00	0.25	0.12	98.89
asw	572	972/047	55.60	1.03	16.86	7.08	0.13	6.00	7.67	3.68	1.27	0.28	0.38	98.56
atc	93	829/125	55.51	1.01	17.40	6.90	0.12	5.18	7.92	3.69	1.51	0.36	0.21	99.04
atm	8	974/129	62.30	0.88	16.67	5.09	0.10	2.49	4.94	4.56	2.31	0.26	1.1	98.01
atm	9	963/120	62.64	0.91	16.67	5.13	0.11	2.16	4.68	4.64	2.38	0.27	0.47	98.58
atm	10	956/113	60.74	0.74	17.60	5.12	0.10	3.15	6.06	4.21	1.60	0.28	0.14	99.05

Map Label	Sample	Grid E/N	SiO ₂	TiO ₂	Al ₂ O ₃	FeO*	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	LOI	original total
atm	20	971/119	60.53	0.82	17.52	5.36	0.10	3.14	5.89	4.23	1.70	0.30	0.26	98.89
atm	68	972/105	62.60	0.89	16.73	5.03	0.10	2.24	4.78	4.59	2.39	0.26	0.43	98.81
atm	70	945/101	62.10	0.88	17.07	5.05	0.10	2.34	4.92	4.58	2.28	0.27	0.24	98.64
atm	71	944/107	62.24	0.89	16.77	5.24	0.11	2.42	4.83	4.50	2.31	0.28	0.3	98.58
atm	72	951/107	62.24	0.89	16.87	5.09	0.10	2.32	4.96	4.40	2.43	0.28	1.06	98.58
atm	75	942/096	61.70	0.79	17.51	4.86	0.09	2.48	5.45	4.42	2.03	0.27	< 0.01	98.95
atm	76	954/118	60.99	0.86	16.99	5.39	0.10	3.20	5.51	4.27	2.01	0.27	0.89	98.47
atm	77	953/117	62.18	0.87	17.00	5.00	0.10	2.42	4.89	4.59	2.29	0.26	0.35	99.00
atm	79	948/121	61.03	0.86	17.09	5.38	0.10	2.98	5.53	4.36	1.97	0.29	0.21	99.06
atm	83	942/110	61.26	0.80	17.55	4.95	0.09	2.67	5.64	4.33	2.04	0.27	1	98.20
atm	84	941/109	62.64	0.82	16.88	4.83	0.10	2.27	4.99	4.37	2.43	0.26	1.33	97.95
atm	85	945/106	62.51	0.86	16.93	4.98	0.10	2.27	4.84	4.45	2.39	0.28	1.31	97.68
atm	90	978/144	62.33	0.91	16.96	5.10	0.10	2.23	4.81	4.53	2.36	0.27	< 0.01	99.23
atm	130	949/113	60.71	0.80	17.55	5.13	0.10	3.11	5.94	4.30	1.68	0.28	0.49	98.76
atm	131	951/115	60.68	0.85	17.03	5.29	0.10	3.34	5.69	4.39	1.96	0.27	0.22	98.82
atm	157	973/101	61.77	0.90	16.91	5.22	0.10	2.62	5.06	4.51	2.23	0.27	1.03	98.35
atm	186	965/104	59.16	0.83	17.36	5.58	0.10	4.21	6.23	4.23	1.62	0.28	0.35	98.65
atm	187	962/106	61.48	0.80	17.48	4.91	0.09	2.61	5.50	4.38	2.08	0.27	0.98	98.02
atm	191	956/107	62.29	0.87	16.84	4.98	0.10	2.36	4.96	4.51	2.41	0.26	1	98.18
atm	373	943/108	62.03	0.86	17.08	5.01	0.10	2.39	5.05	4.52	2.26	0.29	1.51	97.95
atm	388	944/108	62.30	0.87	16.88	5.01	0.10	2.39	4.97	4.41	2.33	0.32	1.33	97.64
atm	443	942/113	60.80	0.84	17.30	5.31	0.10	3.12	5.66	4.34	1.86	0.28	0.28	99.01
atm	444	944/116	61.45	0.81	17.56	4.91	0.09	2.57	5.52	4.39	2.02	0.27	1.01	98.16
atm	445	945/117	61.50	0.81	17.56	4.89	0.09	2.58	5.45	4.38	2.06	0.27	1.01	98.16
atm	446	945/118	61.35	0.82	17.49	4.99	0.09	2.67	5.51	4.41	2.01	0.27	1.16	97.71
atm	447	944/117	61.28	0.82	17.47	4.97	0.09	2.66	5.60	4.41	2.01	0.28	1.01	98.19
atm	CR-73	983/130	62.44	0.90	16.72	5.10	0.10	2.26	4.91	4.58	2.34	0.26	0.54	98.90
atp	53	848/962	54.16	0.90	16.25	7.18	0.13	7.33	9.66	2.87	0.92	0.20	0.14	99.31
atp	522	851/966	53.92	0.86	15.16	7.22	0.13	8.54	9.99	2.66	0.90	0.22	0.01	99.47
atp	523	852/965	54.61	0.93	15.68	7.14	0.13	7.63	9.20	2.95	1.08	0.24	0.1	99.01
BA	411	891/027	62.13	1.04	16.06	5.49	0.10	2.45	4.30	4.56	3.10	0.37	0.22	99.23
bcc	50	849/970	52.87	1.13	20.28	6.69	0.11	3.99	9.41	3.77	0.99	0.35	0.13	98.71
bcc	51	849/971	52.89	1.08	20.31	6.64	0.11	4.04	9.54	3.68	0.96	0.35	0.1	99.05
bcc	CR-71	849/969	52.77	1.14	20.10	6.71	0.11	3.98	9.62	3.83	0.99	0.36	0.14	99.09

Map Label	Sample	Grid E/N	SiO ₂	TiO ₂	Al ₂ O ₃	FeO*	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	LOI	original total
bls	181	932/878	51.42	1.43	17.68	8.80	0.15	6.50	8.77	3.94	0.63	0.29	< 0.01	99.17
bls	175b	937/876	52.09	1.20	17.63	7.92	0.14	7.69	8.30	3.70	0.70	0.23	0.38	98.85
bpb	52	846/963	50.21	1.06	17.30	9.83	0.17	8.04	9.23	3.11	0.47	0.18	< 0.01	99.59
bpb	CR-70	845/964	50.30	1.05	16.97	9.74	0.16	8.40	9.39	3.00	0.41	0.16		98.60
bsc	30	933/915	55.01	1.35	17.22	7.80	0.14	4.80	7.32	4.16	1.34	0.46	0.29	98.32
bsc	31	932/919	55.13	1.33	17.24	7.70	0.14	4.84	7.32	4.12	1.35	0.43	0.3	98.82
bsc	32	895/919	55.65	1.25	17.40	7.46	0.13	4.57	7.23	4.09	1.39	0.42	0.27	98.44
bsc	33	899/921	55.19	1.33	17.26	7.69	0.14	4.76	7.34	4.10	1.33	0.45	0.14	99.26
bsc	34	906/928	55.70	1.30	17.21	7.50	0.14	4.61	7.11	4.17	1.45	0.42	0	98.85
bsc	35	963/906	51.91	1.65	17.50	8.96	0.16	5.46	8.36	4.26	0.84	0.50	<0.01	99.58
bsc	36	949/919	55.18	1.35	17.19	7.73	0.14	4.71	7.25	4.20	1.38	0.47	<0.01	99.09
bsc	183	958/897	51.79	1.64	17.56	8.92	0.16	5.51	8.37	4.35	0.86	0.45	< 0.01	99.82
bsc	185	980/907	52.06	1.59	17.52	8.84	0.16	5.51	8.35	4.26	0.88	0.43	< 0.01	98.91
bsc	440	913/920	55.30	1.28	17.15	7.65	0.14	4.89	7.33	4.09	1.36	0.40	0.11	99.06
bsc	442	881/947	51.40	1.67	18.07	9.16	0.17	5.58	8.17	4.16	0.78	0.44	0.62	98.41
bsc	462	956/903	51.64	1.66	17.60	9.03	0.17	5.51	8.39	4.27	0.83	0.50	-0.04	98.98
bsc	501	876/944	55.60	1.28	17.15	7.56	0.14	4.72	7.21	4.12	1.40	0.41	-0.15	99.36
bsc	502	875/943	55.69	1.27	17.30	7.42	0.14	4.55	7.21	4.20	1.40	0.41	-0.19	99.31
bsc	503	866/937	55.76	1.28	17.21	7.42	0.14	4.65	7.19	4.14	1.42	0.40	-0.23	99.45
bsc	CR-64	963/906	51.36	1.65	17.69	9.09	0.16	5.45	8.62	4.34	0.79	0.46	< 0.01	99.67
bsc	CR-67	872/947	58.57	0.91	17.49	5.90	0.10	3.87	6.92	3.89	1.67	0.29	0.01	99.65
bws	325	918/088	52.11	1.17	17.47	8.31	0.14	7.49	8.43	3.50	0.71	0.27	1.99	96.91
bws	475	911/087	51.39	1.22	17.90	8.54	0.18	7.23	9.02	3.20	0.67	0.26	2.79	96.17
bws	482	918/082	54.45	1.17	18.05	8.45	0.16	4.82	6.84	4.28	1.07	0.33	6.5	92.10
dbm	492	929/123	65.12	0.60	16.46	4.22	0.09	2.23	4.82	3.94	1.87	0.25	3.51	95.81
dbm	493	928/124	66.27	0.63	16.36	4.03	0.08	1.66	4.18	3.85	2.27	0.27	2.3	96.82
dcd	123	874/124	62.62	0.78	16.87	4.94	0.09	2.63	5.05	4.17	2.25	0.20	0.3	98.61
dcd	225	873/137	61.96	0.75	17.00	5.03	0.09	2.92	5.61	3.98	2.04	0.21	0.24	99.03
dcd	259	872/143	63.68	0.77	16.79	4.43	0.09	2.27	4.64	4.31	2.40	0.21	1.32	97.91
dla	416	993/093	66.37	0.58	16.09	3.62	0.08	1.82	4.01	4.31	2.54	0.18	3.11	96.37
dml	449	938/115	65.79	0.73	16.38	4.31	0.07	1.10	3.98	4.35	2.68	0.21	1.38	97.68
dnf	142	887/177	63.71	0.79	17.00	4.32	0.09	1.76	4.19	4.60	2.82	0.32	0.7	97.87
dnf	143	886/177	64.80	0.74	16.76	3.95	0.08	1.52	3.77	4.78	2.97	0.23	0.58	98.67
dnf	332a	886/178	64.73	0.72	16.71	3.95	0.08	1.50	3.79	4.92	2.93	0.27	0.19	98.94

Map Label	Sample	Grid E/N	SiO ₂	TiO ₂	Al ₂ O ₃	FeO*	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	LOI	original total
dnf	332b	886/178	64.46	0.75	16.82	4.10	0.08	1.56	3.92	4.68	2.93	0.29	0.19	98.27
gbc	356	886/079	64.65	0.73	16.21	4.53	0.08	2.08	4.42	4.55	2.12	0.23	1.17	97.68
gbc	591	885/077	64.78	0.81	16.27	3.78	0.05	1.80	4.13	5.55	2.16	0.28	2.31	96.09
gbc	356a	886/079	68.87	0.52	15.64	2.94	0.08	1.04	2.64	4.75	2.92	0.20	2.29	94.87
gbc	591a	885/076	64.89	0.82	16.21	4.39	0.08	1.82	3.66	5.03	2.47	0.23	2.45	96.00
gbc	636a	887/080	62.91	0.86	16.51	5.26	0.10	2.53	5.12	4.10	1.98	0.24	2	97.37
gbc	636b	887/080	65.44	0.78	16.14	4.29	0.08	1.74	4.28	4.17	2.47	0.20	2.57	95.47
gbc	636c	887/080	59.85	0.84	18.11	5.72	0.11	3.16	6.26	3.83	1.49	0.22	2.49	96.10
rbr	193	960/977	68.55	0.63	15.67	3.04	0.06	0.88	2.61	4.55	3.40	0.22	0.36	98.39
rcd	129	861/102	69.20	0.44	15.74	3.37	0.03	0.90	2.61	4.30	2.85	0.15	1.68	97.44
rcd	626	861/101	65.43	0.59	16.64	4.25	0.04	1.52	4.30	4.15	2.48	0.20	3.01	96.36
rcd	627	865/110	69.79	0.56	15.95	2.81	0.03	0.41	2.29	4.89	2.72	0.15	1.84	97.67
rck	137	921/081	72.35	0.45	15.70	2.09	0.06	0.73	0.45	4.02	3.59	0.15	2.1	97.06
rck	326	919/087	73.76	0.44	15.54	1.70	0.04	0.70	1.16	3.91	2.18	0.17	2.79	96.26
rck	465	919/086	74.13	0.42	14.93	1.48	0.05	0.86	1.42	2.15	4.01	0.16	3.11	96.03
rck	618	924/079	70.76	0.44	17.26	2.13	0.05	0.67	0.38	5.72	2.04	0.14	2.52	96.65
rck	465i	919/086	63.30	0.88	17.74	5.62	0.06	0.75	3.26	3.96	3.61	0.42	4.98	92.69
rcr	145	855/087	71.64	0.38	15.24	2.02	0.03	0.64	1.80	4.61	3.12	0.12	1.25	98.01
rcx	287	938/083	71.09	0.44	15.58	2.22	0.03	0.43	2.11	4.73	2.81	0.17	1.2	97.80
rcx	290	936/080	72.58	0.41	14.80	2.27	0.05	0.22	1.99	4.45	2.64	0.17	1.46	97.56
rcx	451	936/077	71.21	0.42	14.98	2.71	0.08	1.11	2.75	3.62	2.58	0.15	4.73	94.37
rcx	452	938/077	70.37	0.43	15.61	2.57	0.06	0.90	2.47	4.31	2.74	0.16	2.24	96.73
rcx(i)	453	938/077	55.21	0.91	18.76	6.91	0.21	3.86	7.69	3.76	1.87	0.42	8.38	90.47
rdc	297	871/129	71.86	0.35	15.41	1.61	0.02	0.26	2.23	4.65	3.05	0.15	0.73	98.27
rdc	298	870/123	68.07	0.71	15.68	3.42	0.07	0.84	2.41	5.12	3.10	0.19	0.48	98.47
rdc	583	871/131	71.34	0.36	15.33	2.45	0.06	0.42	2.04	4.37	3.06	0.17	1.68	97.34
rdd	299	871/119	70.22	0.49	15.59	2.56	0.04	0.65	2.04	4.89	2.96	0.16	1.59	97.73
rdd	628	871/118	72.10	0.50	16.31	0.91	0.02	0.20	1.85	4.63	2.98	0.09	2.19	96.80
ril	80	939/117	71.29	0.37	15.11	2.24	0.06	0.58	1.69	4.46	3.67	0.14	3.88	95.28
ril	82	940/115	72.27	0.34	14.66	1.90	0.06	0.48	1.50	4.96	3.33	0.09	3.93	95.10
ril	631	941/115	73.29	0.34	14.76	1.37	0.03	0.16	1.34	4.86	3.36	0.10	0.46	98.61
ril	448b	941/114	72.97	0.33	14.70	1.86	0.02	0.14	1.34	4.89	3.26	0.09	0.9	97.97
ris	96	923/094	73.32	0.36	13.26	2.25	0.06	1.04	3.21	3.76	2.20	0.14	2.78	95.36
ris	188	957/106	72.46	0.36	14.41	2.10	0.06	0.81	2.15	3.80	3.34	0.12	4.56	94.70

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ris	189	957/106	60.20	0.90	17.61	6.25	0.11	2.66	6.04	3.78	1.78	0.25	2.56	96.12
ris	321	960/095	71.02	0.42	15.08	2.60	0.07	1.25	4.15	2.30	2.57	0.16	10.8	88.50
rlr	345	906/099	72.90	0.39	16.71	1.72	0.08	0.77	0.35	4.10	2.40	0.16	2.99	96.59
rlr	472	905/088	73.12	0.36	15.45	1.86	0.03	0.78	1.88	3.70	2.28	0.14	2.72	96.60
rmf	309	930/118	70.30	0.42	15.45	2.42	0.09	0.71	2.19	4.41	3.46	0.16	6.34	92.80
rmf	310	929/117	72.82	0.37	14.91	1.25	0.02	0.11	1.33	4.65	4.03	0.12	0.93	98.20
rod	228	934/073	69.02	0.55	16.19	1.75	0.04	1.07	3.48	4.51	2.71	0.29	1.19	97.83
rod	378	928/072	70.83	0.55	15.05	4.15	0.08	1.34	1.25	3.82	2.30	0.23	3.6	95.44
rod	455	934/076	64.76	0.57	17.20	3.85	0.08	1.31	4.21	4.56	2.78	0.27	3.78	95.12
rod	455	934/076	63.78	0.59	17.55	3.97	0.08	1.37	4.49	4.58	2.87	0.32	4.22	94.52
rpd	73	951/103	71.24	0.40	15.10	2.29	0.04	0.60	1.81	4.82	3.16	0.13	0.96	98.28
rpd	190	958/104	71.08	0.37	15.15	2.17	0.05	0.59	1.84	4.97	3.28	0.10	0.63	98.64
rpd	212	951/095	70.82	0.40	15.40	2.31	0.05	0.65	1.86	4.89	3.10	0.12	1.01	98.31
rpd	291	939/091	71.25	0.40	15.22	2.23	0.04	0.52	1.78	4.92	3.10	0.15	1.04	98.14
rps	622	935/066	71.21	0.43	15.07	2.44	0.06	1.14	2.62	2.95	3.56	0.12	4.14	95.46
rsr	275c	945/062	72.20	0.35	15.65	1.18	0.02	0.28	1.86	4.89	3.04	0.12	0.86	98.63
rsr	621a	944/061	70.40	0.37	15.63	2.34	0.07	0.74	2.35	4.70	2.90	0.10	2.66	96.61
rsw	315	967/089	67.26	0.63	15.72	3.70	0.08	1.34	3.21	4.83	2.63	0.21	0.94	98.18
rsw	316	959/079	68.14	0.57	15.36	3.35	0.07	1.45	2.90	4.89	2.68	0.19	1.34	97.94
rwc	102	932/095	71.37	0.41	15.45	2.32	0.09	0.53	1.34	4.79	3.17	0.13	1.76	97.97
rwc	213	935/101	72.37	0.40	15.35	1.95	0.02	0.45	1.38	4.37	3.19	0.11	1.59	97.30
rwc	215	932/101	72.04	0.41	15.38	1.95	0.05	0.81	3.08	4.71	1.05	0.12	6.09	92.63
rwc	555	934/099	71.80	0.40	15.24	2.19	0.05	0.74	1.61	4.37	3.06	0.15	1.45	97.68
rwc	630	935/101	73.14	0.38	14.59	2.11	0.04	0.44	1.59	4.18	3.04	0.10	1.59	97.44
Tgla	160	977/098	60.75	1.02	16.60	6.00	0.11	2.85	5.47	4.24	2.26	0.30	0.37	98.37
Tgla	161	977/100	64.05	0.79	16.92	4.29	0.06	1.76	4.18	4.69	2.64	0.21	0.71	98.28
Tgla	170	980/090	61.36	1.01	16.33	5.96	0.09	2.49	4.56	4.87	2.63	0.29	0.84	98.20
Tgla	333	997/097	67.04	0.52	16.30	3.45	0.07	1.45	3.78	4.54	2.26	0.20	0.65	98.35
Tgla	538	976/108	60.83	0.94	17.10	5.77	0.11	2.74	5.34	4.28	2.17	0.31	1.2	97.65
Tht	380	074/161	75.21	0.17	13.55	1.17	0.07	0.26	0.67	4.53	3.89	0.09	6.08	92.88