

TABLE 1: POTASSIUM-ARGON AGES AND ANALYTICAL DATA

Map no.	Field no.	Rock type	Quadrangle	Latitude (North)	Longitude (West)	Mineral	K ₂ O (percent)	A ⁴⁰ rad (10 ⁻¹⁰ moles/gm)	A ⁴⁰ rad A ³⁹ total	Calculated age (millions of years)
1	66AR-1331	GD	Upashik D-2	57°52'25"	156°32'08"	Biotite	7.85 7.91	21.53	0.99	176
						Hornblende	0.741 0.744	1.981	0.89	172
2a	66ALe-3	GD	Naknek A-2	58°02'06"	156°26'38"		7.95 7.96	19.99	0.97	163
						Hornblende	0.261 0.263 0.262	0.6712	0.42	166
3	66AR-1280	GD	Mount Katmai D-5	58°32'23"	155°28'30"	Hornblende	0.580 0.592	1.417	0.80	156
4	66AR-77	GD	Mount Katmai D-3	58°41'06"	155°23'51"	Biotite	8.84 8.89	22.17	0.94	162
5	A-126	GD	Mount Katmai D-3	58°51'36"	154°53'28"	Hornblende	0.225 0.226	0.5903	0.69	169
6	66ALe-5	GD	Mount Katmai D-3	58°54'13"	154°50'42"	Biotite	8.14 8.17	3.341	0.86	27.5
						Hornblende	0.398 0.398	0.1498	0.50	25.3
7	A-113	GD	Mount Katmai D-2	58°52'16"	154°34'58"	Biotite	8.04 8.11	3.203	0.77	26.7
8	66AR-1289	GD	Ililamna A-5	59°03'10"	154°39'31"	Biotite	8.08 8.11	4.191	0.89	34.7
						Hornblende	0.461 0.462	0.2467	0.48	36.1
9	66AR-98	G	Ililamna B-4	59°16'05"	154°29'26"	Hornblende	0.222 0.226	0.6223	0.73	179
10	66AR-612	GD	Ililamna B-4	59°18'09"	154°18'13"	Biotite	9.16 9.19	23.08	0.93	163
						Hornblende	0.411 0.416	0.9860	0.83	155
11	66ADe-863	GD	Ililamna B-4	59°20'30"	154°27'02"	Biotite	5.60 5.63	13.66	0.90	158
						Hornblende	0.440 0.440	1.052	0.83	155
12	66ADe-420A	GD	Ililamna B-4	59°22'29"	154°27'59"	Biotite	7.74 7.87	18.49	0.94	154
13	66ADe-715	GD	Ililamna B-4	59°23'50"	154°18'32"	Biotite	7.10 7.11	16.66	0.49	152
						Muscovite	9.29 9.32	23.01	0.71	160
14	66ADe-1084	H	Ililamna C-3	59°43'50"	153°50'51"	Hornblende	0.266 0.274	0.6491	0.79	156
15	62ALe-1	GD	Ililamna C-2	59°42'05"	153°42'	Biotite	8.75 8.77 8.83	21.56	0.82 0.96	160
						Hornblende	0.931 0.932	2.469	0.77	168
16	65AR-827	D	Ililamna D-2	59°46'24"	153°38'42"	Biotite	8.08 8.10	19.57	0.97	157
						Hornblende	0.288 0.293	0.7064	0.83	157
17	62ALe-2	GD	Ililamna D-3	59°46'04"	153°54'56"	Biotite	7.76 7.84	10.02	0.91	85.0
						Hornblende	0.849 0.863	1.167	0.85	90.1
18	65AR-818	GD	Ililamna D-3	59°50'46"	153°51'29"	Biotite	8.28 8.32	9.754	0.95	77.9
19	65AR-906	GD	Ililamna D-2	59°53'02"	153°44'42"	Biotite	7.58 7.63	8.725	0.93	76.1
						Hornblende	0.854 0.855	1.137	0.81	87.9
20	65AR-905	altered GD?	Ililamna D-2	59°55'13"	153°36'28"	Muscovite	9.80 9.88	21.85	0.85	145
21	62ALe-5	GD	Kenai A-8	60°15'10"	152°55'10"	Biotite	5.59 5.63	14.75	0.68	170
						Hornblende	0.473 0.474	1.229	0.58	168
22	65AR-1034	QM	Ililamna D-4	59°48'16"	154°14'43"	Hornblende	1.09 1.10	1.223	0.82	74.1
23	65AR-910	GD	Ililamna D-4	59°49'38"	154°12'26"	Biotite	6.75 6.77	8.238	0.94	80.7
						Hornblende	0.965 0.965	1.216	0.81	83.4
24	66ALe-23	QM	Lake Clark A-4	60°02'28"	154°10'12"	Biotite	5.01 5.05	3.217	0.83	43.5
25	66AR-1393	GD	Lake Clark A-3	60°08'20"	154°04'10"	Biotite	8.08 8.11	7.457	0.80	61.3
						Hornblende	0.471 0.472	0.4217	0.48	59.6
26	66ALe-25	QM	Lake Clark B-2	60°24'56"	153°36'34"	Biotite	8.22 8.22	4.741	0.84	38.6
27	66AR-596	GD	Line Hills A-3	61°08'10"	153°48'00"	Biotite	8.49 8.48	8.648	0.87	67.8
28	66ALe-28	GD	Tyonek A-7	61°13'00"	152°37'08"	Biotite	8.62 8.68	6.372 6.451	0.88 0.86	49.2 49.8
						Hornblende	0.977 0.978	0.9029	0.66	61.5
29	66ALe-29	QM	Tyonek A-7	61°12'38"	152°22'56"	Biotite	8.03 8.04	7.022	0.91	58.2
30	66ALe-30	GD	Tyonek A-6	61°01'58"	152°08'34"	Biotite	8.88 8.90	9.483	0.96	70.9
						Hornblende	0.674 0.678	0.7340	0.75	72.1
31	66AR-1464	QM	Kenai D-7	60°48'13"	152°21'20"	Biotite	7.78 7.86	18.67	0.88	155
32	66AR-1	GD	Tyonek A-1	E/2 SE/4 SW/4 sec. 30, T29N., R.12E., T.455E., Pan American Stadium Creek No. 1		Biotite	7.42 7.48	18.76	0.95	163
						Hornblende	0.656 0.660	1.655	0.86	163
33	66ALe-45	GD	Tyonek B-2	61°27'48"	150°44'37"	Hornblende	1.11 1.12	1.209	0.84	72.0

TABLE 1: (CONTINUED)

Map no.	Field no.	Rock type	Quadrangle	Latitude (North)	Longitude (West)	Mineral	K ₂ O (percent)	A ⁴⁰ rad (10 ⁻¹⁰ moles/gm)	A ⁴⁰ rad A ³⁹ total	Calculated age (millions of years)
34	67AR-571	GD	Mt. Katmai D-3	58° 51'17"	154° 45' 55"	Biotite	8.69 8.71	5.70	3.512	27.1 ± 0.6
						Hornblende	0.360 0.372	0.370	0.1402	25.4 ± 1.0
35	67AR-570	GD	Mt. Katmai D-3	58° 49'46"	154° 43'45"	Hornblende	0.355 0.355	0.358	0.1384	26.0 ± 0.9
36	A-123	GD	Mt. Katmai D-2	58° 48'27"	154° 37'45"	Biotite	8.15 8.26	3.465	0.81	28.4 ± 0.9
37	67AR-563	GD	Mt. Katmai D-2	58° 55'06"	154° 34'58"	Biotite	8.16 8.17	5.16	3.176	26.2 ± 0.8
						Hornblende	0.339 0.34	0.338	0.1256	25.0 ± 1.0
38	69AR-1	GD	Mt. Katmai D-2	58° 58'27"	154° 32'55"	Hornblende	0.138 0.162	0.162	0.4266	0.64
39	66ALe-22	GD	Ililamna B-3	59° 24'05"	154° 38'02"	Biotite	6.33 6.47	6.40	12.95	0.94
						Hornblende	0.999 0.992	2.247	0.84	147 ± 4.5
40	66ALe-13	GD	Ililamna B-4	59° 25'15"	154° 26'54"	Biotite	6.80 6.81	15.95	0.90	152 ± 4.6
						Hornblende	0.704 0.706	1.470	0.85	154 ± 4.6
41	66ALe-45	GD	Ililamna B-4	59° 22'37"	154° 19'20"	Biotite	6.44 6.46	15.37	0.91	155 ± 4.6
						Muscovite	9.23 9.35	22.45	0.93	157 ± 4.7
42	70AR-175	GD	Kenai C-8	60° 55'26"	152° 46'48"	Biotite	8.91 8.94	12.90	0.87	95.4 ± 2.8
43	70AR-177	GD	Kenai C-8	60° 36'51"	152° 37'40"	Biotite	8.83 8.86	21.69	0.92	159 ± 4.7
						Hornblende	0.937 0.940	2.279	0.83	158 ± 4.7
44	70AR-178	GD	Kenai C-7	60° 40'33"	152° 27'03"	Biotite	7.39 7.37	18.33	0.90	161 ± 4.8
						Hornblende	0.631 0.632	1.345	0.85	159 ± 4.8
45	70AR-169	GD	Lake Clark C-2	60° 35'56"	153° 24'19"	Biotite	8.45 8.45	7.805	0.89	62.6 ± 1.8
						Hornblende	0.984 0.985	0.9970	0.73	67.4 ± 2.0
46	70AR-168	GD	Lake Clark C-1	60° 38'32"	153° 09'31"	Biotite	9.21 9.21	8.857	0.93	64.0 ± 1.8
						Hornblende	0.827 0.828	0.8333	0.84	67.1 ± 2.0
47	68AR-251	GD	Lake Clark C-2	60° 43'23"	153° 32'20"	Biotite	8.87 8.90	8.88	5.088	0.73
						Hornblende	0.667 0.667	0.4066	0.52	40.8 ± 1.3
48	70AR-181	GD	Lake Clark D-1	60° 46'03"	153° 20'10"	Biotite	8.28 8.28	4.187	0.82	33.9 ± 1.0
49	70AR-159	GD	Lake Clark C-1	60° 42'20"	153° 16'47"	Biotite	8.81 8.83	4.954	0.88	37.6 ± 1.1
						Hornblende	0.228 0.229	0.1688	0.29	38.3 ± 1.9
50	70AR-184	GD	Lake Clark C-1	60° 44'14"	153° 06'09"	Biotite	8.69 8.70	9.253	0.89	70.7 ± 2.0
						Hornblende	0.852 0.852	1.207	0.84	93.6 ± 2.8
51	70AR-146	GD	Kenai C-8	60° 44'34"	152° 57'30"	Biotite	8.93 8.94	8.94	0.90	64.9 ± 1.9
52	70AR-173	D	Kenai C-8	60° 44'55"	152° 48'40"	Biotite	8.73 8.74	8.616	0.89	65.6 ± 1.9
						Hornblende	0.733 0.733	0.7684	0.72	69.7 ± 2.1
53	70AR-158	GD	Kenai D-7	60° 49'56"	152° 34'55"	Biotite	9.40 9.45	9.42	0.87	68.4 ± 2.0
						Hornblende	1.033 1.033	1.129	0.78	72.5 ± 2.2
54	70AR-156	D	Kenai D-7	60° 48'18"	152° 29'32"	Hornblende	0.537 0.537	0.537	1.173	0.85
55	70AR-147	GD	Kenai D-8	60° 51'54"	152° 40'47"	Biotite	8.16 8.39	8.88	8.508	0.88
						Hornblende	0.817 0.840	0.838	0.8308	0.65
56	70AR-140	GD	Kenai D-8	60° 56'35"	152° 51'41"	Biotite	9.12 9.13	9.14	8.726	0.96
						Hornblende	0.793 0.795	0.784	0.8117	0.80
57	68 AR-261	GD	Lake Clark D-1	60° 53'13"	153° 01'53"	Biotite	9.17 9.18	9.18	7.898	0.83
						Hornblende	0.724 0.738	0.731	1.054	0.67
58	70AR-165	GD	Lake Clark D-2	60° 52'04"	153° 24'54"	Biotite	8.72 8.73	4.754	0.85	36.5 ± 1.0
59	68AR-248	QM	Lake Clark D-2	60° 50'18"	153° 34'56"	Biotite	8.76 8.83	4.961	0.63	37.6 ± 1.1
60	68AR-244	GD	Lake Clark D-2	60° 56'49"	153° 32'44"	Biotite	9.00 9.03	4.178	0.80	31.1 ± 0.9
						Hornblende	0.475 0.478	0.475	0.2508	0.35
61	68AR-245	QM	Lake Clark D-1	60° 55'47"	153° 20'44"	Biotite	8.57 8.59	4.58	4.309	0.37
62	70AR-151	QM	Line Hills A-1	61° 04'20"	153° 12'24"	Biotite	8.75 8.75	4.705	0.81	36.1 ± 1.0
63	68AR-260	GD	Tyonek A-8	61° 05'00"	152° 49'55"	Biotite	9.23 9.23	8.113	0.74	58.6 ± 1.7
						Hornblende	0.895 0.895	1.064	0.76	78.8 ± 2.3
64	70AR-188	GD	Tyonek A-7	61° 00'32"	152° 23'47"	Biotite	6.87 6.90	6.88	6.477	0.83
						Hornblende	0.873 0.879	0.874	0.8517	0.75
65	70AR-179	GD	Kenai D-7	60° 59'08"	152° 16'47"	Biotite	9.18 9.18	9.18	9.613	0.86
						Hornblende	0.923 0.930	0.926	0.9402	0.76
66	68AR-258	GD	Tyonek A-7	61° 06'08"	152° 28'55"	Biotite	9.54 9.55	9.54	8.712	0.79
						Hornblende	0.693 0.696	0.694	0.6454	0.68

TABLE 1: (CONTINUED)

Map no.	Field no.	Rock type	Quadrangle	(North)	(West)	Mineral	K ₂ O (percent)	A ⁴⁰ rad (10 ⁻¹⁰ moles/gm)	A ⁴⁰ rad A ³⁹ total	Calculated age (billions of years)
67	70AR-134	GD	Tyonek A-6	61° 09'44"	152° 05'40"	Biotite	8.63 8.64	8.64	8.159	0.86
						Hornblende	0.687 0.690	0.688	0.7108	0.64
68	70AR-195	QM	Tyonek B-6	61° 17'28"	152° 01'03"	Biotite	5.41 5.43	5.42	4.631	0.91
69	69AR-393	QM	Tyonek A-3	61° 14'38"	152° 30'48"	Biotite	8.96 9.06	9.01	7.169	0.78
						Hornblende	0.569 0.569	0.569	0.5438	0.73
70	70AR-191	QM	Tyonek B-7	61° 19'53"	152° 34'36"	Biotite	8.67 8.68	8.68	7.261	0.95
71	69AR-388	GD	Tyonek B-8	61° 20'23"	152° 44'33"	Hornblende	0.793 0.800	0.799	1.157	0.81
72	70AR-255	GD	Tyonek B-8	61° 18'22"	152° 42'14"	Biotite	8.90 8.91	8.90	7.761	0.91
						Hornblende	0.945 0.947	0.946	0.8179	0.72
73	69AR-330	GD	Tyonek B-8	61° 15'39"	152° 45'50"	Biotite	8.92 8.95	8.94	7.268	0.96
						Hornblende	0.887 0.890	0.884	0.7588	0.71
74	69AR-328	QM	Tyonek A-3	61° 12'40"	152° 55'05"	Biotite	8.77 8.77	8.77	6.905	0.88
75	68AR-254	QM	Line Hills A-1	61° 12'14"	153° 18'00"	Biotite	8.47 8.52	8.50	4.395	0.57
76	69AR-318	QM	Line Hills B-1	61° 17'12"	153° 17'54"	Biotite	8.60 8.61	8.60	4.568	0.73
77	69AR-377	QM	Line Hills B-2	61° 15'25"	153° 40'09"	Biotite	8.88 8.89	8.88	8.329	0.85
78	68AR-212	QM	Line Hills B-3	61° 16'53"	153° 50'45"	Biotite	8.79 8.80	8.75	7.491	0.78
79	68AR-210	QM	Line Hills B-3	61° 24'18"	154° 03'00"	Biotite	8.43 8.43	8.44	7.046 6.078	0.85 0.69
80	68AR-215	GD	Line Hills B-3	61° 29'05"	153° 54'39"	Biotite	9.30 9.31	9.30	5.537	0.74
81	69AR-371	QM	Line Hills B-2	61° 24'33"	153° 41'15"	Biotite	8.62 8.62	8.62	4.269	0.52
82	69AR-347	GD	Line Hills B-2	61° 22'52"	153° 36'56"	Biotite	8.97 9.00	8.98	5.420	0.80
83	69AR-316	QM	Line Hills B-1	61° 23'43"	153° 14'50"	Biotite	8.30 8.31	8.30	4.458	0.75
84	69AR-177	GD	Line Hills B-1	61° 27'36"	153° 14'00"	Biotite	7.97 7.98	7.98	4.372	0.70
85	69AR-401	QM	Line Hills B-1	61° 25'54"	153° 04'22"	Biotite	7.34 7.38	7.36	6.533	0.59
						Hornblende	0.633 0.643	0.639	0.5740	0.60
86	69AR-383	QM	Tyonek B-8	61° 21'54"	152° 56'42"	Biotite	7.99 7.99	7.99	7.253	0.88
87	69AR-239	QM	Tyonek B-8	61° 26'21"	152° 56'25"	Biotite	7.15 7.18	7.16	6.472	0.73
						Hornblende	0.933 0.933	0.943	0.7851	0.81
88	70AR-194	G	Tyonek B-8	61° 27'28"	152° 38'00"	Biotite	8.26 8.26	8.25	6.931	0.93
89	70AR-208	S	Tyonek B-8	61° 24'22"	152° 24'40"	Hornblende	0.707 0.707	0.700	1.137	0.74
90	70AR-200	QM	Tyonek B-6	61° 25'30"	151° 57'18"	Biotite	6.06 6.06	6.06	5.139	0.86
						Hornblende	0.807 0.807	0.807	0.7107	0.63
91	70AR-199	QM	Tyonek B-6	61° 29'52"	152° 00'45"	Biotite	6.49 6.53	6.51	5.694	0.89
92	70AR-8-11	QM	Tyonek C-8	61° 40'00"	152° 05'00"	Biotite	3.47 3.48	3.47	3.54	0.81
93	69AR-207	GD	Tyonek C-8	61° 42'19"	152° 55'21"	Biotite	6.78 6.81	6.80	6.189	0.81
						Hornblende	0.346 0.346	0.344	0.3237	0.43
94	69AR-196	GD	Line Hills C-1	61° 04'08"	153° 04'23"	Biotite	7.99 8.03	8.01	7.528	0.86
						Hornblende	0.400 0.400	0.402	0.3658	0.65
95	69AR-275	QM	Line Hills C-1	61° 33'29"	153° 00'45"	Biotite	7.67 7.67	7.67	6.732	0.89
						Hornblende	1.08 1.12	1.10	0.9664	0.79
96	69AR-282	S	Line Hills C-1	61° 34'27"	153° 21'00"	Biotite	9.02 9.02	9.03	9.474	0.93
97	68AR-222	GD	Line Hills C-2	61° 37'40"	153° 39'60"	Hornblende	1.05 1.06	1.061	1.185	0.77
98	68AR-221	QM	Line Hills C-3	61° 36'53"	153° 49'10"	Biotite	8.51 8.54	8.52	7.374	0.76
99	69AR-332	QM	Line Hills C-3	61° 40'55"	153° 49'43"	Biotite	8.80 8.83	8.80	5.135	0.79
100	68AR-235	QM	Line Hills C-3	61° 42'34"	154° 07'10"	Biotite	8.42 8.46	8.44	6.998	0.74
101	69AR-333	QM	Line Hills C-3	61° 44'52"	153° 51'50"	Biotite	8.86 8.89	8.88	3.33	0.77
						Hornblende	0.905 0.909	0.906	0.3499	0.59
102	69AR-334	G	Line Hills D-3	61° 48'45"	153° 50'18"	Biotite	8.68 8.76	8.69	3.247	0.83
103	68AR-226	G	Line Hills D-2	61° 54'38"	153° 44'10"	Biotite	8.24 8.24	8.24	3.042	0.63
104	68AR-229	GD	Line Hills D-2	61° 53'20"	153° 29'06"	Biotite	8.68 8.71	8.71	8.114	0.78
105	69AR-233	GD	Line Hills D-2	61° 49'27"	153° 24'20"	Biotite	9.18 9.22	9.20	4.922 4.897	0.77 0.80
106	69AR-310	QM	Tyonek D-8	61° 54'07"	152° 53'48"	Biotite	8.71 8.76	8.72	8.561	0.89
107	70AR-3-1	D	Talkeetna A-1	62° 04'36"	152° 27'00"	Biotite	8.95 8.96	8.94	9.074	0.60