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Map and table showing radiometric ages
of rocks in Southwestern Alaska

by
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This report is preliminary and has
not been reviewed for conformity
with U.S. Geological Survey
editorial standards and
stratigraphic nomenclature.



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This report is a compilation of radiometric age determinations from southwestern Alaska. The data were collected from published and unpublished sources available before February, 1981. The data base for this report is a file of radiometric age determinations housed in the U.S. Geological Survey Multics computer system. This computer file includes dates from the state of Alaska and the western parts of the Yukon Territory and British Columbia. Shew and Wilson, 1981, provides a description of this more comprehensive age file.

The sample locations have been plotted on a National Atlas base at a scale of 1:1,000,000 (plate 1). Indicating each locality is either a rectangular or oval bubble, representing igneous or metamorphic rock, which contains the sample identification, dating method, mineral or phase dated and apparent age.

Table 1 gives additional information for each sample. Data for each age determination are given in three lines and listed alphabetically by quadrangle. The first line shows the quadrangle, latitude, rock type, dating method, mineral or phase dated and the age. The second line gives comments pertinent to the sample or age determination. Line three is a list of all known references which cite the age determination. Abbreviations used on the map and in Table 1 are explained in Table 2.

Similar maps for southeastern Alaska, south-central Alaska, and the Aleutian Islands and Alaska Peninsula have been published (Wilson et al, 1979; Dadisman, 1980; and Wilson, 1981).

References Cited

- Berry, A. L., Dalrymple, G.B., Lanphere, M.A., and Von Essen, J.C., 1976, Summary of miscellaneous potassium-argon age measurements, U.S. Geological Survey, Menlo Park, California, for the years 1972-74: U.S. Geological Survey Circular 727, 13 p.
- Brockway, R., Alexander, B., Day, P., Lyle, W., Hiles, R., Decker, W., Polski, W., and Reed, B.L., 1975, Bristol Bay Region, Stratigraphic correlation section, southwest Alaska; The Alaska Geological Society, 1 sheet.
- Bundtzen, T.K., and Laird, G.M., 1980, Preliminary geology of the McGrath - Upper Innoko River area, western interior Alaska: Alaska Division of Geological and Geophysical Surveys, Alaska Open-file Report 134, 35p., 2 plates, scale 1:63,360.
- Bunker, C. M., Hedge, C. E., and Sainsbury, C. L., 1980,

- Radioelement concentrations and preliminary radiometric ages of rocks of the Kigluaik Mountains, Seward Peninsula, Alaska: U.S. Geological Survey Professional Paper 1129-C, 12p.
- Bunker, C. M., Hedge, C. E., and Sainsbury, C. L., 1977, Radioelement concentrations and preliminary radiometric ages of rocks of the Kigluaik Mountains, Seward Peninsula, Alaska: U.S. Geological Survey Open-File Report 77-735, 36 p.
- Carden, J.R., Connelly, W., Forbes, R.B., and Turner, D.L., 1977, Blueschists of the Kodiak Islands, Alaska - an extension of the Seldovia schist terrane: *Geology*, v. 5, p. 529-533.
- Connelly, William, and Moore, J.C., 1979, Geologic map of the northwest side of the Kodiak and adjacent islands, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-1057, 2 sheets, scale 1:250,000.
- Cox, Allan, and Dalrymple, G. B., 1967, Geomagnetic polarity epochs--Nunivak Island, Alaska: *Earth and Planetary Science letters*, v. 3, no. 2, p. 173-177.
- Csejtey, Béla, Jr., Patton, W. W., Jr., and Miller, T. P., 1971, Cretaceous plutonic rocks of St. Lawrence Island, Alaska--a preliminary report, in *Geological Survey research 1971*: U.S. Geological Survey Professional Paper 750-D, p. D68-D76.
- Dadisman, S.V., 1980, Radiometric ages of rocks in south-central Alaska and western Yukon Territory: U.S. Geological Survey Open-File Report 80-183, 79p., 1 map, scale 1:1,000,000.
- Dalrymple, G. B., and Lanphere, M.A., 1974, $^{40}\text{Ar}/^{39}\text{Ar}$ age spectra of some undisturbed terrestrial samples: *Geochimica et Cosmochimica Acta*, v. 38, p. 715-738.
- Dalrymple, G. B., Cox, Allan, Doell, R. R., and Gromme, C. S., 1967, Pliocene geomagnetic polarity epochs: *Earth and Planetary Science Letters*, v. 2, p. 163-173.
- Dalrymple, G. B., and Lanphere, M. A., 1971, $^{40}\text{Ar}/^{39}\text{Ar}$ technique of K/Ar dating; a comparison with the conventional technique: *Earth and Planetary Science Letters*, v. 12, no. 3, p. 300-308.
- Detterman, R. L., Reed, B. L., and Lanphere, M. A., 1965, Jurassic plutonism in the Cook Inlet region, Alaska, in *Geological Survey research 1965*: U.S. Geological Survey Professional Paper 525-D, p. D16-D21.
- Detterman, R.L., and Reed, B.L., 1980, Stratigraphy, structure and economic geology of the Iliamna quadrangle, Alaska: U.S. Geological Survey Bulletin 1368B, 86p.
- Eakins, G.R., Gilbert, W.G., and Bundtzen, T.K., 1978, Preliminary bedrock geology and mineral resource potential of west-central Lake Clark quadrangle, Alaska: Alaska Division of Geological and Geophysical Surveys, Alaska Open-File Report AOF-118, 15p.
- Gottfried, David, Jaffe, H. W., and Senftle, F. E., 1959,

- Evaluation of the lead-alpha age determinations of accessory minerals of igneous rocks: U.S. Geological Survey Bulletin 1097-A, p. 1-63.
- Hoare, J. M., Condon, W. H., and Cox, Allan, and Dalrymple, G. B., 1968, Geology, paleomagnetism, and potassium-argon ages of basalts from Nunivak Island, Alaska, in Studies on volcanology--a memoir in honor of Howel Williams: Geological Society of America Memoir 116, p. 377-413.
- Hoare, J. M., and Condon, W. H., 1966, Geologic map of the Kwiguk and Black quadrangles, western Alaska: U.S. Geological Survey Miscellaneous Geology Investigations Map I-469, 7 p., 1 sheet, scale 1:250,000.
- Hoare, J. M., and Condon, W. H., 1968, Geologic map of the Hooper Bay quadrangle, Alaska: U.S. Geological Survey Miscellaneous Geology Investigations Map I-523, 4 p., 1 sheet, scale 1:250,000.
- Hoare, J.M., and Coonrad, W.L., 1978, Geologic map of the Goodnews and Hagemeister Islands quadrangles region, southwestern Alaska: U.S. Geological Survey Open-File Report 78-9-B, 2 sheets, scale 1:250,000.
- Jaffe, H. W., Gottfried, David, Waring, C. L., and Worthing, H. W., 1959, Lead-alpha age determinations of accessory minerals of igneous rocks (1953-1957): U.S. Geological Survey Bulletin 1097-B, p. 65-148.
- Karlstrom, T. N. V., and Ball, G. E., eds., 1969, The Kodiak Island Refugium, its geology, flora, fauna and history: The Ryerson Press, 362 p.
- Magoon, L. B., Adkison, W. L., and Egbert, R. M., 1976, Map showing geology, wildcat wells, Tertiary plant fossil localities, K-Ar age dates, and petroleum operations, Cook Inlet area, Alaska: U.S. Geological Survey Miscellaneous Investigations Series Map I-1019.
- Mankinen, E.A., and Dalrymple, G.B., 1979, Revised geomagnetic polarity time scale for the interval 0-5 m.y. B.P.: Journal of Geophysical Research, v. 84, n. B2, p. 615-626.
- Marvin, R.F., and Dobson, S.W., 1979, Radiometric ages: Compilation B, U.S. Geological Survey: Isochron/West, n. 26, p. 3-6.
- Marvin, R.F., and Cole, J.C., 1978, Radiometric ages: Compilation A, U.S. Geological Survey: Isochron/West, no. 22, p. 3-14.
- Matzko, J. J., Jaffe, H. W., and Waring, C. L., 1958, Lead-alpha age determination of granitic rocks from Alaska: American Journal of Science, v. 256, no. 8, p. 529-539.
- Miller, R. P., Moll, E. J., and Patton, W. W., Jr., 1980, Uranium- and thorium-rich volcanic rocks of the Sischu Creek area, Medfra quadrangle, Alaska: U.S. Geological Survey, Open-file Report 81-103, 18p.
- Miller, T. P., Grybeck, D. G., Elliott, R. L., and Hudson, Travis, 1972, Preliminary geologic map of the eastern

- Solomon and southeastern Bendeleben quadrangles, eastern Seward Peninsula, Alaska: U.S. Geological Survey Open-File Report 537, 11 p. scale 1:250,000.
- Patton, W. W., Jr., Lanphere, M. A., Miller, T. P., and Scott, R. A., 1976, Age and tectonic significance of volcanic rocks on St. Matthew Island, Bering Sea, Alaska: U.S. Geological Survey Journal of Research, v. 4, no. 1, p. 67-73.
- Patton, W. W., Jr., Miller, T. P., Berg, H. C., Gryc, George, Hoare, J. M., and Ovenshine, A. T., 1975, Reconnaissance geologic map of St. Matthew Island, Bering Sea, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-642.
- Patton, W. W., Jr., and Csejtey, Béla, Jr., 1971, Preliminary geologic investigations of western St. Lawrence Island, Alaska: U.S. Geological Survey Professional Paper 684-C, p. C1-C15.
- Patton, W.W., Jr., and Csejtey, Béla, Jr., 1979, Geologic map of St. Lawrence Island, Alaska: U.S. Geological Survey Open-file Report 79-945, scale 1:250,000.
- Reed, B. L., and Lanphere, M. A., 1969, Age and chemistry of Mesozoic and Tertiary plutonic rocks in south-central Alaska: Geological Society of America Bulletin, v. 80, no. 1, p. 23-43.
- Reed, B. L., and Lanphere, M. A., 1972, Generalized geologic map of the Alaska-Aleutian Range batholith showing potassium-argon ages of the plutonic rocks: U. S. Geological Survey Miscellaneous Field Studies Map MF-372, 2 sheets, scale 1:1,000,000.
- Reed, B.L., and Lanphere, M.A., 1973, Alaska-Aleutian Range batholith: Geochronology, chemistry, and relation to circumpacific plutonism: Geological Society of America Bulletin, v. 84, p. 2583-2610.
- Shew, Nora, and Wilson, F.H., 1981, Radiometric age file for Alaska in Coonrad, W.L., ed., The United States Geological Survey in Alaska, Accomplishments 1980: U.S. Geological Survey Circular, in prep.
- Silberman, M.L., Moll, E.J., Chapman, R.M., Patton, W.W., Jr., and Connor, C.L., 1979, Potassium-argon age of granitic and volcanic rocks from the Ruby, Medfra, and adjacent quadrangles, west:central Alaska: U.S. Geological Survey Circular 804-B, p. B63-B66.
- Wilson, F.H., 1977, Some plutonic rocks of southwestern Alaska, a data compilation: U.S. Geological Survey Open-file Report 77-501, 9p.
- Wilson, F.H., 1980, Late Mesozoic and Cenozoic tectonics and the age of porphyry copper prospects, Chignik and Sutwik Island quadrangles, Alaska Peninsula: U.S. Geological Survey Open-file Report 80-543, 99p., 5 plates.
- Wilson, F.H., 1981, Radiometric ages of rocks in the Aleutian Islands and Alaska Peninsula: U.S. Geological Survey Open-File Report 81-471, 23p., 1 map, scale

1:1,000,000.

Wilson, F.R., Dadisman, S.V., and Herzon, P.L., 1979, Map showing radiometric ages of rocks in southeastern Alaska: U.S. Geological Survey Open-File Report 79-594, 33p., 1 map, scale 1:1,000,000.

Wilson, F.H., and Smith, J.C., 1976, Map showing potassium-argon ages from the Goodnews quadrangle, Alaska: U.S. Geological Survey Open-file Report 76-437, scale 1:250,000.

Table 1. Radiometric ages of
Southwestern Alaska

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min.	Age(my)
Afognak Dioritic migmatite Carden et al, 1977; Connelly and Moore, 1979	58 03.6N	153 24.8W	Afog5	MIG	K HO		183.7
Afognak Dioritic migmatite Carden et al, 1977	58 03.6N	153 24.8W	Afog5	MIG	K HO		184.9
Afognak Quartz-mica schist Carden et al, 1977; Connelly and Moore, 1979	58 08.7N	153 11.2W	Afog3	SCH	K MU		192.1
Afognak hornblende diorite, approximate location Carden et al, 1977; Connelly and Moore, 1979	58 08.8N	153 22.9W	Afog4	DI	K HO		188.4
Afognak White mica-crossite schist, crossite date Carden et al, 1977; Connelly and Moore, 1979	58 14.5N	153 02.8W	Afog2	SCH	K AM		170.6
Afognak White mica-crossite schist Carden et al, 1977; Connelly and Moore, 1979	58 14.5N	153 02.8W	Afog2	SCH	K MI		187.6
Afognak Hornblende diorite Carden et al, 1977; Connelly and Moore, 1979	58 22.5N	152 46.9W	Afog1	DI	K HO		192.7
Afognak Magoon et al, 1976	58 57.0N	153 27.8W	G-24-2 n.1	AND	K WR		.7
Afognak Magoon et al, 1976	58 57.0N	153 27.8W	G-24-2 n.1	AND	K WR		1.0
Cape Mendenhall Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979	59 52.0N	165 51.0W	A78	BAS	K WR		.36
Cape Mendenhall Cox and Dalrymple, 1967; Hoare et al, 1968	59 56.0N	165 33.7W	A74	BAS	K WR		.33
Cape Mendenhall Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979	59 57.0N	166 10.0W	A114	BAS	K AW		.14
Cape Mendenhall Cox and Dalrymple, 1967; Hoare et al, 1968, Mankinen and Dalrymple, 1979	59 58.7N	165 39.4W	A71	BAS	K WR		.28
Cape Mendenhall Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979	59 59.0N	166 22.0W	A125	BAS	K AW		.03
Goodnews Crater Hill Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 01.3N	161 31.4W	GA7-1450	DI	K AM		162.4
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 10.3N	160 38.9W	GA5-1310	TON	K BI		67.4

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock Meth.	Min.	Age(my)
Goodnews Togiak River Valley basalt; Hoare and Coonrad, 1978	59 17.8N	159 58.2W	74Ahr77	BAS K WR		.76 0.758
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 20.8N	161 19.5W	GB7-1479a	Q DI K BI		71.3
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 27.9N	159 10.6W	GB1-3156	Q DI K BI		69.5
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 27.9N	159 10.6W	GB1-3156	Q DI K HO		63.4
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 37.1N	160 08.5W	GC4-1300	GR K HO		60.7
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 37.6N	159 00.0W	74B57	GDI K BI		69.6
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 37.6N	159 00.0W	74B57	GDI K HO		63.4
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 39.6N	159 40.3W	74Ahr118	QMON K BI		63.7
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 39.6N	159 40.3W	74Ahr118	QMON K HO		69.5
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 39.9N	159 21.6W	GC1-1381	TON K BI		72.5
Goodnews Mt. Waskey Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 50.6N	159 10.9W	GDI-3154	GDI K AM		65.2
Goodnews Mt. Waskey Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 50.6N	159 10.9W	GDI-3154	GDI K BI		62.5
Goodnews Sam Creek Hoare and Coonrad, 1978	59 51.2N	160 48.8W	GD5-1771	DAC K HO		68.7
Goodnews Wilson and Smith, 1976; Wilson, 1977; Hoare and Coonrad, 1978	59 55.1N	159 54.9W	73Ahr1	QMD K BI		71.1
Hagemeister Is. Red Mountain contact zone Hoare and Coonrad, 1978	58 54.7N	161 46.3W	HD6-2272a	AMPH K AM		176.4
Hagemeister Is. Red Mountain contact zone Hoare and Coonrad, 1978	58 55.1N	161 46.5W	HD6-1453e	AMPH K AM		186.9

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock Meth.	Min. Age(my)
Hagemeister Is. Nunavachak Hills Wilson, 1977; Hoare and Coonrad, 1978	58 57.0N	160 00.6W	74Ahr26	FELS K BI	13.0
Hagemeister Is. Downdraft Mountain Wilson, 1977; Hoare and Coonrad, 1978	58 57.8N	161 03.0W	74Ahr111	GAB K HO	186.9
Hagemeister Is. Matogak pluton, minimum age Wilson, 1977; Hoare and Coonrad, 1978	58 59.2N	160 58.2W	74Ahr112	GAB K HO	159.3
Holy Cross Marvin and Cole, 1978	62 45.0N	159 05.0W	62Ahr77	RHY K SA	64.7
Holy Cross Relationship between 62Ahr77 and 62Ahr79 unknown Marvin and Cole, 1978	62 45.0N	159 05.0W	62Ahr79	DI K HO	128.0
Hooper Bay Roare and Condon, 1966; 1968	61 45.0N	165 09.0W	61Ahr91	GDI K BI	78.7
Iditarod Chicken Creek Jaffe et al, 1959; Matzko et al, 1958	62 21.3N	157 57.3W	1810	QMON A ZI	60.
Iditarod Flat Creek Matzko et al, 1958; Jaffe et al, 1959	62 23.7N	157 59.2W	1895	QMON A ZI	49.
Iditarod biotite quartz (?) monzonite Bundtzen and Laird, 1980	62 45.9N	156 02.3W	78BT-261	MON K BI	61.3
Iditarod Bundtzen and Laird, 1980	62 52.0N	156 13.0W	78BT-435	MON K BI	70.6
Iditarod biotite rich syenite Bundtzen and Laird, 1980	62 57.6N	156 59.1W	79BT-436	SY K BI	70.3
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon, et al, 1976; Detterman and Reed, 1980	59 03.2N	154 39.1W	66AR1289	Q DI K BI	34.7
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon, et al, 1976; Detterman and Reed, 1980	59 03.2N	154 39.1W	66AR1289	Q DI K HO	36.1
Iliamna Magoon et al, 1976; Detterman and Reed, 1980	59 04.4N	154 02.5W	6-27-1	BAS K WR	4.4
Iliamna Magoon et al, 1976; Detterman and Reed, 1980	59 04.4N	154 02.5W	6-27-1	BAS K WR	5.1
Iliamna Alaska-Aleutian Range batholith, hornblende gabbro Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 16.1N	154 29.4W	64AE98	GAB K HO	179.

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock Meth.	Min. Age(my)
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 18.0N	154 18.3W	64AR612	Q DI K BI	163.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 18.0N	154 18.3W	64AR612	Q DI K HO	155.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 20.5N	154 27.0W	64ADt863	Q DI K BI	158.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 20.5N	154 27.0W	64ADt863	Q DI K HO	155.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 22.5N	154 28.0W	64ADt420A	Q DI K BI	154.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1972, 1973; Magoon et al, 1976	59 22.6N	154 19.3W	66ALe45	Q DI K BI	155.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1972; 1973; Magoon et al, 1976	59 22.6N	154 19.3W	66ALe45	Q DI K MU	157.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 23.8N	154 18.5W	64ADt715	Q DI K BI	152.
Iliamna Alaska-Aleutian Range batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 23.8N	154 18.5W	64ADt715	Q DI K MU	160.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1972; Magoon et al, 1976	59 24.1N	154 38.0W	66ALe22	Q DI K BI	132.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1972, 1973; Magoon et al, 1976	59 24.1N	154 38.0W	66ALe22	Q DI K HO	147.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969, 1972, 1973; Magoon et al, 1976	59 25.3N	154 26.9W	66ALe13	Q DI K BI	152.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1972, 1973; Magoon et al, 1976	59 25.3N	154 26.9W	66ALe13	Q DI K HO	154.
Iliamna Detterman and Reed, 1980	59 36.6N	153 33.7W	6-26-1	Q DI K FD	155.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Detterman and Reed, 1980	59 42.1N	153 42.0W	62ALe1	Q DI K BI	160.
Iliamna Alaska-Aleutian Range Batholith; additional reference Detterman and Reed, 1980 Detterman et al, 1965; Reed and Lanphere, 1969; 1972; Magoon et al, 1976;	59 42.1N	153 42.0W	62ALe1	Q DI K HO	168.

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock Meth.	Min. Age(my)
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 43.8N	153 50.9W	65ADt1084	HBDT K HO	156.
Iliamna Alaska-Aleutian Range Batholith; additional ref. Detterman and Reed, 1980 Detterman et al, 1965; Reed and Lanphere, 1969; 1972; Magoon et al, 1976	59 45.9N	153 38.3W	65AR827	DI K BI	157.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 45.9N	153 38.3W	65AR827	DI K HO	157.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 46.1N	153 54.9W	62ALe2	GDI K BI	85.
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Detterman and Reed, 1980	59 46.1N	153 54.9W	62ALe2	GDI K HO	90.1
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 48.3N	154 14.8W	65AR1034	QMON K HO	74.1
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 49.6N	154 12.4W	65AR910	Q DI K BI	80.7
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 49.6N	154 12.4W	65AR910	Q DI K HO	83.4
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 50.8N	153 51.5W	65AR818	Q DI K BI	77.9
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 52.1N	153 44.7W	65AR906	Q DI K BI	76.1
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 52.1N	153 44.7W	65AR906	Q DI K HO	87.9
Iliamna Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976; Detterman and Reed, 1980	59 54.9N	153 36.5W	65AR905	TROND K MU	145.
Iliamna Detterman and Reed, 1980	59 55.3N	153 16.7W	6-14-6	QMON K WR	170.
Iliamna Detterman and Reed, 1980	59 55.3N	153 16.7W	6-14-6	QMON K WR	174.
Karluk Blueschist, crossite date Carden et al, 1977; Connelly and Moore, 1979	57 39.0N	154 03.6W	Karluk1	SCH K AM	161.4
Kodiak Age recalculated with 1976 constants Karlstrom and Ball, 1969; Wilson, 1980	57 26.0N	152 58.0W	62AKa10	GR K BI	59.5

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min.	Age(my)	
Kodiak Garnet bearing two mica granite F.H. Wilson, written communication, 1980	57 52.0N	152 40.0W	78AWs1	GR	K	BI	58.1	
Kodiak Garnet bearing two mica granite F.H. Wilson, written communication, 1980	57 52.0N	152 40.0W	78AWs1	GR	K	MU	57.1	
Kodiak North part Kodiak Island Marvin and Dobson, 1979	57 54.0N	153 43.0W	63AMe66	Q	DI	K	BI	58.2
Lake Clark Reed and Lanphere, 1969; 1972	60 02.5N	154 10.2W	66ALe23	QMON	K	BI	43.5	
Lake Clark Reed and Lanphere, 1969; 1972	60 08.3N	154 04.2W	66AR1393	GDI	K	BI	61.3	
Lake Clark Reed and Lanphere, 1969; 1972	60 08.3N	154 04.2W	66AR1393	GDI	K	HO	59.6	
Lake Clark Augite andesite porphyry Eakins et al, 1978	60 17.1N	154 50.2W	K-Ar5	AND	K	BI	62.7	
Lake Clark Hornblende biotite granodiorite Eakins et al, 1978	60 18.7N	154 38.3W	K-Ar2	GDI	K	BI	56.2	
Lake Clark Biotite dacite Eakins et al, 1978	60 22.2N	155 12.2W	77E216	DAC	K	BI	59.5	
Lake Clark Hornblende biotite granodiorite Eakins et al, 1978	60 22.7N	154 31.8W	K-Ar6	GDI	K	BI	60.5	
Lake Clark Biotite granodiorite Eakins et al, 1978	60 23.8N	154 54.2W	77E211	GDI	K	BI	61.6	
Lake Clark Reed and Lanphere, 1969; 1972; Magoon, et al, 1976	60 24.9N	153 36.6W	66ALe25	QMON	K	BI	38.6	
Lake Clark Biotite pyroxene granodiorite Eakins et al, 1978	60 29.0N	155 13.1W	77E217	GDI	K	BI	71.3	
Lake Clark Reed and Lanphere, 1962; 1973; Magoon et al, 1976	60 35.9N	153 24.3W	70AR169	GDI	K	BI	61.6	
Lake Clark Reed and Lanphere, 1962; 1973; Magoon et al, 1976	60 35.9N	153 24.3W	70AR169	GDI	K	HO	67.4	
Lake Clark Hornblende diorite Eakins et al, 1978	60 37.9N	154 34.7W	77BT224	DI	K	HO	69.4	

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock Meth.	Min.	Age(my)
Lake Clark	60 38.5N	153 09.5W	70AR168	Q DI	K BI	64.
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 38.5N	153 09.5W	70AR168	Q DI	K HO	67.1
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 42.3N	153 16.8W	70AR159	GDI	K BI	37.6
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 42.3N	153 16.8W	70AR159	GDI	K HO	38.3
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 43.4N	153 32.3W	68AR251	GDI	K BI	38.4
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 43.4N	153 32.3W	68AR251	GDI	K HO	40.8
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 44.2N	153 06.2W	70AR184	Q DI	K BI	70.7
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 44.2N	153 06.2W	70AR184	Q DI	K HO	93.6
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 46.1N	153 20.2W	70AR181	GDI	K BI	33.9
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 49.8N	153 31.4W	77BT217	MON	K BI	64.0
	Biotite quartz monzonite Eakins et al, 1978					
Lake Clark	60 50.3N	153 34.9W	68AR248	QMON	K BI	37.6
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 52.1N	153 24.9W	70AR165	GDI	K BI	36.5
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 53.2N	153 01.9W	68AR261	GDI	K BI	57.4
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 53.2N	153 01.9W	68AR261	GDI	K HO	95.1
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 55.8N	153 20.7W	68AR245	QMON	K BI	33.7
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					
Lake Clark	60 56.8N	153 32.7W	68AR244	GDI	K BI	31.1
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976					

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min.	Age(my)
Lake Clark	60 56.8N	153 32.7W	68AR244	GDI	K	HO	35.4
	Reed and Lanphere, 1962; 1973; Magoon et al, 1976						
Lime Hills	61 04.1N	153 04.4W	69AR196	GDI	K	BI	62.6
	Reed and Lanphere, 1962; 1973						
Lime Hills	61 04.1N	153 04.4W	69AR196	GDI	K	HO	60.5
	Reed and Lanphere, 1962; 1973						
Lime Hills	61 04.3N	153 12.4W	70AR151	QMON	K	BI	36.1
	Reed and Lanphere, 1962; 1973						
Lime Hills	61 08.2N	153 48.0W	64AR596	GDI	K	BI	67.8
	Reed and Lanphere, 1969; 1972						
Lime Hills	61 12.2N	153 18.0W	68AR254	QMON	K	BI	34.7
	Reed and Lanphere, 1972; 1973						
Lime Hills	61 15.4N	153 40.2W	69AR377	QMON	K	BI	62.4
	Reed and Lanphere, 1972; 1973						
Lime Hills	61 17.0N	153 50.8W	68AR212	QMON	K	BI	57.1
	Reed and Lanphere, 1972; 1973						
Lime Hills	61 17.2N	153 17.9W	69AR318	QMON	K	BI	35.6
	Reed and Lanphere, 1972; 1973						
Lime Hills	61 22.9N	153 36.9W	69AR347	GDI	K	BI	40.4
	Reed and Lanphere, 1972; 1973						
Lime Hills	61 23.7N	153 14.8W	69AR316	QMON	K	BI	36.0
	Reed and Lanphere, 1972; 1973						
Lime Hills	61 24.3N	153 03.0W	68AR210	QMON	K	BI	55.6
	Reed and Lanphere, 1972; 1973						
Lime Hills	61 24.6N	153 41.3W	69AR371	QMON	K	BI	34.
	Reed and Lanphere, 1972; 1973						
Lime Hills	61 25.9N	153 04.4W	69AR401	QMON	K	BI	59.1
	Reed and Lanphere, 1972; 1973						
Lime Hills	61 25.9N	153 04.4W	69AR401	QMON	K	HO	59.8
	Reed and Lanphere, 1972; 1973						
Lime Hills	61 27.6N	153 14.0W	69AR177	GDI	K	BI	36.7
	Reed and Lanphere, 1972; 1973						

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock Meth.	Min. Age(my)
Lime Hills Reed and Lanphere, 1972; 1973	61 29.1N	153 54.7W	68AR213	GDI K BI	39.9
Lime Hills Reed and Lanphere, 1972; 1973	61 33.5N	153 00.8W	69AR275	QMON K BI	58.5
Lime Hills Reed and Lanphere, 1972; 1973	61 33.5N	153 00.8W	69AR275	QMON K HO	58.4
Lime Hills Reed and Lanphere, 1972; 1973	61 34.5N	153 21.0W	69AR282	SY K BI	69.7
Lime Hills Reed and Lanphere, 1972; 1973	61 36.9N	153 49.2W	68AR221	QMON K BI	57.7
Lime Hills Reed and Lanphere, 1972; 1973	61 37.7N	153 39.7W	68AR222	GDI K HO	74.1
Lime Hills Reed and Lanphere, 1972; 1973	61 40.9N	153 49.7W	69AR332	QMON K BI	39.1
Lime Hills Reed and Lanphere, 1972; 1973	61 42.6N	154 07.2W	68AR235	QMON K BI	55.3
Lime Hills Reed and Lanphere, 1972; 1973	61 44.9N	153 51.8W	69AR333	QMON K BI	25.8
Lime Hills Reed and Lanphere, 1972; 1973	61 44.9N	153 51.8W	69AR333	QMON K HO	26.
Lime Hills Reed and Lanphere, 1972; 1973	61 48.8N	153 50.3W	69AR334	GR K BI	25.1
Lime Hills Reed and Lanphere, 1972; 1973	61 49.5N	153 24.3W	69AEr233	GDI K BI	35.9
Lime Hills Reed and Lanphere, 1972; 1973	61 53.3N	153 29.1W	68AR229	GDI K BI	62.0
Lime Hills Reed and Lanphere, 1972; 1973	61 54.6N	153 44.2W	68AR226	GR K BI	24.8
Lime Hills Reed and Lanphere, 1972; 1973	61 56.8N	153 59.6W	67AR195	GR K BI	28.6
McGrath Reed and Lanphere, 1972; 1973	62 01.6N	154 08.4W	67AR186	GR K BI	30.1

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock Meth.	Min. Age(my)
McGrath	62 03.3N	154 05.5W	67AR318	GR K HO	29.
Reed and Lanphere, 1972; 1973					
McGrath	62 13.6N	154 25.4W	67AER116	QMON K BI	56.
Reed and Lanphere, 1972; 1973					
McGrath	62 22.0N	153 47.5W	67AMa226	QMON K BI	56.6
Berry et al, 1976					
McGrath	62 22.0N	153 47.5W	67AMa226	QMON K HO	57.6
Berry et al, 1976					
McGrath	62 22.0N	153 47.5W	70AMa226	QMON K BI	56.4
Berry et al, 1976					
McGrath	62 22.0N	153 47.5W	70AMa226	QMON K HO	56.5
Berry et al, 1976					
McGrath	62 25.4N	153 40.1W	68AR233	GDI K HO	38.3
Reed and Lanphere, 1972; 1973					
McGrath	62 30.9N	154 43.1W	67AR450	GR K BI	58.3
Reed and Lanphere, 1972; 1973					
McGrath	62 51.3N	155 49.2W	78BT-379	MON K BI	69.7
impure biotite, minimum age Bundtzen and Laird, 1980					
McGrath	62 56.8N	155 59.5W	78BT-461	MONDI K BI	71.2
impure biotite Bundtzen and Laird, 1980					
Medfra	63 04.0N	153 03.9W	79APa40	META K MU	108.0
Metaquartzeye grit; Slow Fork Hills Silberman, writ. comm., 1981					
Medfra	63 06.1N	155 13.1W	68APa62	AND K WR	68.9
Alone Mountain Silberman, writ. comm., 1981					
Medfra	63 10.7N	155 57.9W	78AMs152	MON K KF	69.3
Cloudy Mountain Silberman, writ. comm., 1981					
Medfra	63 11.0N	155 58.8W	78AMs149	AND K HO	66.4
Cloudy Mountain Silberman, writ. comm., 1981					
Medfra	63 11.0N	155 58.8W	78AMs149	AND K PL	65.2
Cloudy Mountain Silberman, writ. comm., 1981					
Medfra	63 13.3N	154 46.7W	78ANf17	PORPH K WR	67.8
Sericitic altered quartz porphyry; dike; Nixon Fork Mine Silberman, writ. comm., 1981					

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min.	Age(my)
Medfra Sericitic altered quartz porphyry; dike; Nixon Fork Mine Silberman, writ. comm., 1981	63 13.4N	154 45.5W	78ANf3	PORPH	K	MU	69.1
Medfra Nixon Fork Mine Silberman, writ. comm., 1981	63 13.5N	154 46.2W	78ANf20	QMON	K	BI	70.4
Medfra Nixon Fork Mine Jaffe et al, 1959, Matzko et al, 1958	63 14.1N	154 45.8W	5044	MON	A	ZI	58.
Medfra Altered basalt or andesite; Page Mountain Silberman et al, 1979	63 21.2N	155 28.8W	78AMs132	BAS	K	WR	59.5
Medfra Page Mountain Silberman, writ. comm., 1981	63 21.4N	155 35.0W	77APa204B	AND	K	PL	65.8
Medfra Page Mountain Silberman et al, 1979	63 21.4N	155 35.0W	77APa204b	AND	K	BI	69.8
Medfra Page Mountain Silberman, writ. comm., 1981	63 21.5N	155 32.5W	78AMs134	GDI	K	BI	70.5
Medfra Sunshine Mountain Silberman et al, 1979	63 30.7N	154 58.8W	77APa87	QMON	K	BI	63.4
Medfra Chloritized biotite; sill; Mystery Mountains Silberman, writ. comm., 1981	63 31.9N	154 36.5W	78AMs008A	DAC	K	BI	62.5
Medfra Telida Mountain Silberman et al, 1979	63 32.0N	153 08.1W	77APa42	QMON	K	BI	70.5
Medfra Monzogabbro; Von Frank Mountain Silberman, writ. comm., 1981	63 32.3N	154 18.0W	70APa105f	OTHER	K	BI	67.3
Medfra Cripple Creek Mountains Silberman, writ. comm., 1981	63 32.6N	155 55.8W	78APa007	MON	K	BI	66.4
Medfra Shepard Creek intrusive Silberman, writ. comm., 1981	63 36.2N	154 23.0W	78AMs91	GDI	K	BI	66.2
Medfra Hypabyssal; Shepard Creek intrusive Silberman, writ. comm., 1981	63 36.8N	154 22.1W	78AMs113	QMON	K	BI	65.3
Medfra Hypabyssal; Shepard Creek intrusive Silberman, writ. comm., 1981	63 36.8N	154 22.1W	78AMs113	QMON	K	HO	65.8
Medfra Shepard Creek intrusive Silberman, writ. comm., 1981	63 38.5N	154 17.6W	78AMs68	DAC	K	BI	62.2

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock Meth.	Min.	Age(my)
Medfra Shepard Creek intrusive Silberman, writ. comm., 1981	63 38.9N	154 16.5W	78AMS65	QMON	K BI	66.6
Medfra Shepard Creek intrusive Silberman, writ. comm., 1981	63 38.9N	154 16.5W	78AMS65	QMON	K HO	69.9
Medfra Silberman, writ. comm., 1981	63 39.0N	155 57.2W	79APa23C	GAB	K AM	267.0
Medfra Upper Sulunka River stock Silberman, writ. comm., 1981	63 39.7N	154 04.1W	76APa50	GR	K BI	69.2
Medfra Altered Silberman, writ. comm., 1981	63 42.5N	155 47.7W	79APa24B	GAB	K WR	176.0
Medfra Stone Mountain Silberman, writ. comm., 1981	63 43.4N	153 50.9W	78APa151	GAB	K BI	68.3
Medfra Monzogabbro; Stone Mountain Silberman, writ. comm., 1981	63 43.4N	153 50.9W	78APa53	OTHER	K BI	66.4
Medfra Sischu Mountain Silberman et al, 1979	63 50.2N	153 11.9W	77APa201	RHY	K WR	71.0
Medfra Sischu Mountain Silberman et al, 1979	63 50.5N	153 13.1W	77APa202	RHY	K WR	69.9
Medfra Pyroxene andesite; Nowitna volcanics Silberman et al, 1979	63 51.7N	155 13.1W	77APa77	AND	K WR	63.8
Medfra Pyroxene andesite; Nowitna volcanics Silberman et al, 1979	63 52.2N	155 14.6W	77APa203	AND	K WR	64.2
Medfra Biotite actinolite greenstone; metaplutonic rock Silberman, writ. comm., 1981	63 53.2N	154 20.2W	75APa104c	GNST	K BI	274.0
Medfra Precambrian rock; Telsitna River Silberman et al, 1979	63 56.7N	153 42.4W	77APa196	SCH	K MU	514.
Medfra Sischu Creek area Miller et al, 1981; Silberman, writ. comm., 1981	63 57.4N	153 03.9W	78APa36A	RHY	K SA	66.3
Medfra Precambrian rock; Telsitna River; quartz muscovite schist Silberman et al, 1979	63 57.7N	153 41.5W	75APa77	SCH	K MU	411.
Medfra Quartz muscovite schist; Telsitna river; 2nd determination Silberman, writ. comm., 1981	63 59.2N	153 44.2W	77APa198	SCH	K MU	295.0

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min.	Age(my)
Medfra Precambrian rock Silberman et al, 1979	63 59.2N	153 44.2W	77APa198	SCH	K	MU	297.
Medfra Silberman, writ. comm., 1981	63 59.2N	155 08.1W	78APa17B	DIA	K	HO	84.9
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972	58 32.4N	155 28.5W	66AR1280	GDI	K	HO	156.
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972	58 41.1N	155 23.9W	64AE77	GDI	K	BI	162.
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1972; 1973; Magoon et al, 1976	58 48.5N	154 37.8W	A123	GDI	K	BI	28.4
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1972; 1973; Magoon et al, 1976	58 49.7N	154 43.8W	67AR570	GDI	K	HO	26.
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1972; 1973; Magoon et al, 1976	58 51.3N	154 45.9W	67AR571	Q DI	K	BI	27.1
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1972; 1973; Magoon et al, 1976	58 51.3N	154 45.9W	67AR571	Q DI	K	HO	25.4
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976	58 51.6N	154 53.5W	A126	Q DI	K	HO	169.
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976	58 52.3N	154 34.9W	A113	GDI	K	BI	26.7
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976	58 54.2N	154 50.7W	66ALe5	GDI	K	BI	27.5
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972; Magoon et al, 1976	58 54.2N	154 50.7W	66ALe5	GDI	K	HO	25.3
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1972; 1973; Magoon et al, 1976	58 55.1N	154 34.9W	67AR563	Q DI	K	BI	26.2
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1972; 1973; Magoon et al, 1976	58 55.1N	154 34.9W	67AR563	Q DI	K	HO	25.
Mt. Katmai Alaska-Aleutian Range Batholith Reed and Lanphere, 1972; 1973; Magoon et al, 1976	58 58.5N	154 32.9W	69AR1	Q DI	K	HO	171.
Naknek Alaska-Aleutian Range Batholith Reed and Lanphere, 1969, 1972	58 02.1N	156 26.6W	66ALe3	GDI	K	BI	163.

Table I. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min.	Age(my)
Naknek Alaska-Aleutian Range Batholith Reed and Lanphere, 1969; 1972	58 02.1N	156 26.6W	66ALe4	GAB	K	HO	166.
Naknek Wilson, written communication, 1980	58 08.2N	156 10.3W	78ACe4	TON	K	BI	171.2
Naknek Wilson, written communication, 1980	58 08.2N	156 10.3W	78ACe4	TON	K	HO	155.2
Naknek Wilson, written communication, 1980	58 10.5N	156 04.9W	78ADt2	GR	K	BI	173.6
Nome Orthogneiss, approximate location Bunker et al, 1977	64 31.0N	165 29.0W	70AcH30	GNS	R	WR	717.0
Nome Orthogneiss, approximate location Bunker et al, 1977	64 54.1N	165 05.0W	70AcH1	GNS	R	WR	1306.0
Nome Orthogneiss, approximate location Bunker et al, 1977	64 54.1N	165 05.0W	70AcH2	GNS	R	WR	1380.0
Nome Orthogneiss, approximate location Bunker et al, 1977	64 54.5N	165 30.0W	70AcH20	GNS	R	WR	376.0
Nome Orthogneiss, approximate location Bunker et al, 1977	64 55.5N	165 13.7W	70AcH14	GNS	R	WR	489.0
Nunivak Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979	60 00.0N	166 14.0W	A108	BAS	K	WR	.67
Nunivak Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979	60 00.0N	166 20.0W	A102	BAS	K	WR	.07
Nunivak Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979	60 01.0N	165 38.0W	A70	BAS	K	WR	.50
Nunivak Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979	60 01.0N	166 04.0W	A86	BAS	K	WR	.29
Nunivak Cox and Dalrymple, 1967; Hoare et al, 1968	60 01.0N	166 11.0W	A126	BAS	K	AW	.09
Nunivak Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979	60 01.0N	166 12.0W	A96	BAS	K	WR	.11
Nunivak Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979	60 01.0N	166 16.0W	A97	BAS	K	WR	.69

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min.	Age(my)
Nunivak	60 01.0N	166 19.0W	A101	BAS	K	WR	.74
	Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 02.0N	166 05.0W	A88	BAS	K	WR	.34
	Nanwaksjiak crater Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 02.0N	166 05.0W	A91	BAS	K	WR	.22
	Nanwaksjiak crater Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 03.2N	165 40.9W	A69	BAS	K	WR	.30
	Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 12.0N	166 55.0W	A19	BAS	K	WR	3.24
	Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 12.5N	167 26.1W	A3	BAS	K	WR	4.14
	Dalrymple et al, 1967 Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 12.6N	165 40.3W	A61	BAS	K	WR	.75
	Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 12.7N	166 56.7W	A17	BAS	K	WR	5.01
	Dalrymple et al, 1967 Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 12.8N	167 27.5W	A1	BAS	K	WR	6.12
	Dalrymple et al, 1967; Cox and Dalrymple, 1967; Hoare et al, 1968						
Nunivak	60 12.8N	167 27.5W	A2	BAS	K	WR	4.24
	Dalrymple et al, 1967 Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 13.2N	166 56.4W	A15	BAS	K	WR	5.06
	Dalrymple et al, 1967; Cox and Dalrymple, 1967; Hoare et al, 1968						
Nunivak	60 13.2N	167 03.8W	A8	BAS	K	WR	4.97
	Dalrymple et al, 1967 Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 13.4N	165 41.6W	A59A	BAS	K	WR	.63
	Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 13.5N	166 57.0W	A11	BAS	K	WR	5.01
	Dalrymple et al, 1967 Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 13.5N	166 57.0W	A12	BAS	K	WR	4.95
	Dalrymple et al, 1967 Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 14.0N	167 12.9W	A7	BAS	K	WR	3.40
	Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min. Age(my)
Nunivak	60 14.0N	167 17.7W	A6	BAS	K WR	3.36
Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 16.0N	165 41.1W	A57	BAS	K WR	1.58
Age recalculated with 1976 constants Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 19.0N	166 01.0W	A50	BAS	K WR	.88
Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 20.9N	166 05.1W	A48	BAS	K WR	.86
Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 21.9N	166 19.9W	A35	BAS	K WR	.93
Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 22.0N	166 06.0W	A46	BAS	K WR	.81
Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 23.2N	166 14.5W	A41	BAS	K WR	.95
Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 25.3N	166 07.9W	A45	BAS	K WR	.87
Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 26.9N	166 00.0W	A51	BAS	K WR	1.70
Cox and Dalrymple, 1967; Hoare et al, 1968; Mankinen and Dalrymple, 1979						
Nunivak	60 34.6N	166 42.2W	A23	BAS	K WR	1.51
Hoare et al, 1968						
Nushagak Bay	58 51.1N	159 58.7W	74ACd14d	DIA	K BI	64.6
Biotite diabase Hoare and Coonrad, 1978						
Nushagak Bay	59 53.8N	159 28.8W	74Ahr51	MON	K BI	71.9
Pyroxene monzonite, Kulukak pluton Wilson, 1977; Hoare and Coonrad, 1978						
Ophir	63 02.8N	156 35.1W	79BT-301	DAC	K BI	70.1
biotite dacite dike Bundtzen and Laird, 1980						
Ruby	64 00.0N	155 21.7W	79APa151	DIA	K WR	98.0
Olivine diabase Silberman, writ. comm., 1981						
Ruby	64 04.8N	154 44.6W	75ACh67	BAS	K WR	62.9
Silberman et al, 1979						
Ruby	64 09.3N	153 14.3W	75ACh79	DI	K BI	921.
Sheared diorite, VABM Baker Silberman et al, 1979						

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min.	Age(my)
Ruby Mylonite schist, Silberman et al, 1979	64 09.3N	153 14.3W	75ACh79c	SCH	K	MU	663.
Ruby Monzonite Hills Silberman et al, 1979	64 28.5N	154 46.5W	75ACh128	QMON	K	BI	69.6
Ruby Jaffe et al, 1959; Matzko et al, 1958	64 29.5N	155 19.0W	3469	GR	A	ZI	48.
Ruby Jaffe et al, 1959; Matzko et al, 1958	64 29.5N	155 19.0W	3469	GR	A	ZI	53.
Ruby Jaffe et al, 1959; Matzko et al, 1958	64 29.5N	155 19.0W	3469	GR	A	ZI	54.
Ruby Gottfried et al, 1959	64 29.5N	155 19.0W	3469	GR	A	ZI	55.
Ruby Gottfried et al, 1959; Jaffe et al, 1959; Matzko et al, 1958	64 29.5N	155 19.0W	3469	GR	A	ZI	56.
Ruby Kokrines Hills Silberman et al, 1979	64 55.6N	155 01.3W	77ACh53	QMON	K	BI	110.
Ruby Kokrines Hills Silberman et al, 1979	64 55.6N	155 01.3W	77ACh53	QMON	K	MU	110.
Russian Mission Nyac pluton Wilson, 1977	61 02.0N	160 00.0W	63ACo414	GDI	K	BI	120.
Russian Mission Marvin and Cole, 1978	61 53.0N	161 29.0W	63ACo254	QMON	K	BI	70.9
Sleetmute mineral dated, buddingtonite Sorg, D., 1980, written communication	61 23.8N	157 57.7W	71ASg15-25	UNID	K	FD	41.8
Sleetmute Sorg, D., 1980, written communication	61 23.8N	157 57.7W	71ASg27	BAS	K	WR	70.1
Solomon Miller et al, 1972	64 34.0N	162 45.0W	70AMm150	MON	K	HO	97.5
Solomon Nepheline syenite dike Berry et al, 1976	64 43.5N	162 53.1W	71AGk259	SY	K	BI	93.9
Solomon Darby pluton Berry et al, 1976	64 45.2N	162 25.2W	70AMm158B	QMON	K	BI	88.3

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min.	Age(my)
Solomon Darby pluton Berry et al, 1976	64 45.2N	162 25.2W	70AMm158B	QMON	K	HO	92.8
Solomon Miller et al, 1972	64 48.0N	162 42.0W	70AMm45	QMON	K	HO	86.1
Solomon Miller et al, 1972	64 53.0N	162 42.0W	70AMm218	SY	K	HO	105.
Solomon Darby pluton Berry et al, 1976	64 57.0N	162 19.2W	70AMm415A	QMON	K	BI	94.0
St. Lawrence Csejtey et al, 1971; Patton and Csejtey, 1979	62 59.4N	169 35.7W	70ACyl162	QMON	K	BI	104.
St. Lawrence Kinipagh pluton Csejtey et al, 1971; Patton and Csejtey, 1979	63 11.0N	168 55.0W	66AMm245	SY	K	HO	104.
St. Lawrence Patton and Csejtey, 1971, 1979	63 22.6N	171 17.5W	69APa187B	TUFF	K	BI	90.9
St. Lawrence Patton and Csejtey, 1979	63 26.6N	170 04.4W	79APa47a	RHY	K	BI	39.3
St. Lawrence Sevuokuk pluton Csejtey et al, 1971; Patton and Csejtey, 1979	63 27.1N	171 31.3W	69APa219E	QMON	K	BI	93.5
St. Lawrence Patton and Csejtey, 1979	63 28. N	171 31. W	70APa13	GAB	K	HO	221.
St. Lawrence Kookooligit Mtns. Marvin and Dobson, 1979; Patton and Csejtey, 1979	63 28.0N	170 17.2W	71AHR134a	BAS	K	WR	.24
St. Lawrence Dalrymple and Lanphere, 1971; Patton and Csejtey, 1979	63 29.8N	170 52.2W	69ACyl163B	DAC	K	WR	64.0
St. Lawrence 40 39 date Dalrymple and Lanphere, 1971; 1974	63 29.8N	170 52.2W	69ACyl163B	DAC	K	WR	64.0
St. Lawrence 40 39 incremental heat date Dalrymple and Lanphere, 1974	63 29.8N	170 52.2W	69ACyl163B	DAC	K	WR	64.0
St. Lawrence Patton and Csejtey, 1971; 1979	63 30.1N	170 54.2W	66APa242	RHY	K	SA	64.4
St. Lawrence Patton and Csejtey, 1971; 1979	63 30.1N	170 54.2W	66APa242a	RHY	K	HO	62.1

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min.	Age(my)	
St. Lawrence North Mamagnak Mountains Patton and Csejtey, 1971, 1979	63 34.4N	171 34.6W	69APa229A	GAB	K	HO	244.	
St. Lawrence Massive, alkali olivene basalt flow; Kookoolight Mountains Marvin and Dobson, 1979; Patton and Csejtey, 1979	63 35.9N	170 33.2W	66Ahr136b	BAS	K	WR	.37	
St. Lawrence Kookooligit Mtns. Marvin and Dobson, 1979; Patton and Csejtey, 1979	63 39.1N	170 36.8W	66Ahr217b	BAS	K	WR	1.46	
St. Lawrence Reversed magnetization suggests flow is older Marvin and Dobson, 1979; Patton and Csejtey, 1979	63 39.7N	170 36.8W	66Ahr218a	BAS	K	WR	.66	
St. Lawrence Sevuokuk Pluton Csejtey et al, 1971; Patton and Csejtey, 1971; 1979	63 45.9N	171 40.6W	66AMm211	QMON	K	BI	108.	
St. Matthew Patton et al, 1975; Silberman and Hopkins, 1976	60 24.0N	172 41.9W	71AMm45	GDI	K	HO	60.7	
St. Matthew Patton et al, 1975;1976; Silberman and Hopkins, 1976	60 33.7N	172 56.5W	71APa10	BAS	K	WR	64.8	
St. Matthew Patton et al, 1975;1976; Silberman and Hopkins, 1976	60 35.0N	172 58.5W	71APa15	BAS	K	WR	76.8	
St. Matthew Patton et al, 1975;1976; Silberman and Hopkins, 1976	60 39.2N	173 03.6W	71AMm50	TUFF	K	BI	74.1	
St. Matthew Patton et al, 1975;1976; Silberman and Hopkins, 1976	60 39.2N	173 03.6W	71AMm50	TUFF	K	HO	74.4	
Taylor Mountains Berry et al, 1976	60 29.5N	158 04.0W	69ACK1008	GR	K	BI	65.6	
Ugashik Reed and Lanphere, 1969; 1972	57 52.4N	156 32.1W	66AR1331	GDI	K	BI	176.	
Ugashik Reed and Lanphere, 1969; 1972	57 52.4N	156 32.1W	66AR1331	GDI	K	HO	172.	
Ugashik 40-39 incremental heat date Dalrymple and Lanphere, 1974	57 52.4N	156 32.1W	66AR1331	Q	DI	K	BI	176.2
Ugashik 40-39 isochron date Dalrymple and Lanphere, 1974	57 52.4N	156 32.1W	66AR1331	Q	DI	K	HO	177.4
Ugashik General Petroleum 1 Great Basins well, core 21, 11,071-11080' Brockway et al, 1975	57 52.8N	157 05.1W	Ugashik3	GR	K	UN	177.	

Table 1. Continued

Quadrangle	Latitude	Longitude	Sample No.	Rock	Meth.	Min. Age(my)
Unalakleet	63 09.0N	161 20.0W	62Ahr218	GR	K BI	67.1

Roare and Condon, 1966

TABLE 2 - ABBREVIATIONS

Rock Type

AMPH	amphibolite	MON	monzonite
AND	andesite	MONDI	monzodiorite
BAS	basalt	OTHER	other
DAC	dacite	PORPH	porphyry
DI	diorite	Q DI	quartz diorite
DIA	diabase	Q MD	quartz monzodiorite
FELS	felsite	QMON	quartz monzonite
GAB	gabbro	RHY	rhyolite
GDI	granodiorite	SCH	schist
GNS	gneiss	SY	syenite
GNST	greenstone	TON	tonalite
GR	granite	TROND	trondhjemite
HBDT	hornblendite	TUFF	tuff
META	metamorphic	UNID	unidentified
MIG	migmatite		

Mineral or phase dated

AM	amphibole	MI	mica
AW	anorthoclase	MU	muscovite
BI	biotite	PL	plagioclase
FD	feldspar	SA	sanidine
HO	hornblende	UN	unknown
KF	potassium feldspar	WR	whole rock
		ZI	zircon

Dating method

K	potassium-argon
A	lead alpha
R	rubidium-strontium