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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

A TABULATION OF K-Ar, Rb-Sr, AND Pb- α AGES
OBTAINED FOR MATERIALS WITHIN THE
UNITED STATES (INCLUDING ALASKA AND HAWAII)
DURING THE YEARS 1969 THROUGH 1971

By Richard F. Marvin

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A TABULATION OF K-Ar, Rb-Sr, AND Pb- α AGES OBTAINED FOR MATERIALS
WITHIN THE UNITED STATES (INCLUDING ALASKA AND HAWAII)
DURING THE YEARS 1969 THROUGH 1971

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This tabulation of ages has been made as a convenience to anyone desiring a quick reference to ages published in the United States from 1969 through 1971. This tabulation does not include all published K-Ar, Rb-Sr, or Pb- α ages but is probably 98% complete. Many of the radiometric ages published in abstracts, footnotes, or personal communications are not included as sample localities are lacking or are not sufficiently detailed to be of value. Such ages are often published in a subsequent article with detailed sample locations and geologic interpretation. There may be some duplication of ages in this tabulation. The references listed are either the original source for an age or the best source in regard to sample location, decay constants, interpretation, etc. A few fission-track ages also are listed.

The tabulated ages are systematized according to year and state. All ages published during a specific year (i.e. 1956) are grouped together, with the ages listed under the name of the state in which the sample was collected. The states are alphabetized. The dated sample is described as to rock type, location, material analyzed, age(s) determined, radiometric method used, and published reference (by first author only). The complete reference is listed at the end of the tabulation for each specific year. To answer questions about geologic interpretation, decay constants, or location, one must review the source reference.

Ages Published for 1969

Rock type and location Material Analyzed	Age (m.y.)			Reference
	K-Ar	Rb-Sr	Pb- α	
	<u>Alaska</u>			
Granodiorite, 57°52'25"N, 156°32'08"W				Reed, 1969
biotite	176			
hornblende	172			
Granodiorite, 58°02'06"N, 156°26'38"W				Reed, 1969
biotite	163			
Gabbro, 58°02'06"N, 156°26'38"W				Reed, 1969
hornblende	166			
Granodiorite, 58°32'23"N, 155°28'30"W				Reed, 1969
hornblende	156			
Granodiorite 58°41'06"N, 155°23'51"W				Reed, 1969
biotite	162			
Quartz diorite, 58°51'36"N, 154°53'28"W				Reed, 1969
hornblende	169			
Granodiorite, 58°54'13"N, 154°50'42"W				Reed, 1969
biotite	27.5			
hornblende	25.3			
Granodiorite, 58°52'16"N, 154°34'58"W				Reed, 1969
biotite	26.7			
Quartz diorite, 59°03'10"N, 154°39'31"W				Reed, 1969
biotite	34.7			
hornblende	36.1			
Gabbro, 59°16'05"N, 154°29'26"W				Reed, 1969
hornblende	179			
Quartz diorite, 59°18'00"N, 154°18'15"W				Reed, 1969
biotite	163			
hornblende	155			

Ages Published for 1969

Rock type and location Material Analyzed	Age (m.y.)			References
	K-Ar Alaska	Rb-Sr (Cont'd)	Pb-α	
Quartz diorite, 59°20'30"N, 154°27'02"W				Reed, 1969
biotite	158			
hornblende	155			
Quartz diorite, 59°22'29"N, 154°27'59"W				Reed, 1969
biotite	154			
Quartz diorite, 59°23'50"N, 154°18'32"W				Reed, 1969
biotite	152			
muscovite	160			
Hornblendite, 59°43'50"N, 153°50'51"W				Reed, 1969
hornblende	156			
Quartz diorite, 59°42'05"N, 153°42'W				Reed, 1969
biotite	160			
hornblende	168			
Diorite, 59°46'24"N, 153°38'42"W				Reed, 1969
biotite	157			
hornblende	157			
Granodiorite, 59°46'04"N, 153°54'56"W				Reed, 1969
biotite	85.0			
hornblende	90.1			
Quartz diorite, 59°50'46"N, 153°51'29"W				Reed, 1969
biotite	77.9			
Quartz diorite, 59°53'02"N, 153°44'42"W				Reed, 1969
biotite	76.1			
hornblende	87.9			
Altered granodiorite, 59°55'13"N, 153°36'28"W				Reed, 1969
muscovite	145			
Granodiorite, 60°15'10"N, 152°53'10"W				Reed, 1969
biotite	170			
hornblende	168			

Ages Published for 1969

Rock type and location Material Analyzed	Age (m.y.)			References
	K-Ar Alaska	Rb-Sr (Cont'd)	Pb-α	
Quartz monzonite, 59°48'16"N, 154°14'45"W hornblende	74.1			Reed, 1969
Quartz diorite, 59°49'38"N, 154°12'26"W biotite hornblende	80.7 83.4			Reed, 1969
Quartz monzonite, 60°02'28"N, 154°10'12"W biotite	43.5			Reed, 1969
Granodiorite, 60°08'20"N, 154°04'10"W biotite hornblende	61.3 59.6			Reed, 1969
Quartz monzonite, 60°24'56"N, 153°36'34"W biotite	38.6			Reed, 1969
Granodiorite, 61°08'10"N, 153°48'00"W biotite	67.8			Reed, 1969
Quartz diorite, 61°13'00"W, 152°37'08"W biotite biotite hornblende	49.2 49.8 61.5			Reed, 1969
Quartz monzonite, 61°12'38"W, 152°22'56"W biotite	58.2			Reed, 1969
Quartz diorite, 61°01'58"W, 152°08'34"W biotite hornblende	70.9 72.1			Reed, 1969
Quartz monzonite, 60°48'13"W 152°21'20"W biotite	155			Reed, 1969
Quartz diorite, drill core, 7452'-7459', Pan American Stedatna Creek #1, E1/2, SE1/4, SW1/4, sec. 30, T12N, R12E(?) biotite hornblende	163 163			Reed, 1969

Ages Published for 1969

Rock type and location Material analyzed	Age (m.y.)			References
	K-Ar	Rb-Sr	Pb-α	
	Alaska	(Cont'd)		
Granodiorite, 61°27'48"N, 150°44'37"W hornblende				Reed, 1969
	72.0			
<hr/>				
Gabbro, near Point No Point, Yukon River, Approx. 65°38'N, 150°10'W hornblende				Brosge', 1969
	205 ± 6			
<hr/>				
Andesite, White River Valley, approx. 61°42'15"N, 141°50'W whole rock				Denton, 1969
	10.2±0.3			
Andesite, White River Valley, approx. 61°44'N, 141°50'21"W whole rock				Denton, 1969
	9.9±0.5			
Andesite, White River Valley, approx. 61°44'N, 141°50'18"W whole rock				Denton, 1969
	8.7±0.9			
Andesite, White River Valley, approx. 61°44'45"N, 141°50'W whole rock				Denton, 1969
	9.8±0.3			
Andesite, White River Valley, approx. 61°41'45"N, 141°48'W whole rock				Denton, 1969
	8.4±0.7			
Andesite, White River Valley, approx. 61°42'30"N, 141°47'36"W whole rock				Denton, 1969
	2.7±0.6			
Andesite, White River Valley, approx. 61°45'15"N, 141°49'52"W whole rock				Denton, 1969
	3.6±0.2			
Andesite, White River Valley, approx. 61°40'30"N, 141°49'W whole rock				Denton, 1969
	1.6±0.2			

Ages Published in 1969

Rock type & Location Material Dated	Age (m.y.) K-Ar Rb-Sr	Pb-Cr	Reference
ALASKA (Cont'd)			
Glass (Grubstake Fm.), Tatlanika Creek, approx. 64°04'45"N, 148°12'30"W			Wahrhaftig, 1969
biotite	57.3±2.3 (too old)		
muscovite	54.4±2.2 (too old)		
glass	8.1±0.4		
Granite, Brooks Mountain, York Mountains, Seward Peninsula			Sainsbury, 196
biotite	75.1±3.0		
Arizona			
Pegmatite, White Picacho District			Laughlin, 1969
muscovite	1270±40		
albite	816±24		
albite	754±23		
spodumene	1600±50		
spodumene	1580±50		
Diorite porphyry, Teec Nos Pas Canyon, Carrizo Mtns., 36°51'30"N, 109°07'13"W			Armstrong, 196
hornblende	67.9		
whole rock less heavy fraction	67.9		
Andesite, near Blue Range Primitive Area, Greenlee County, 33°23'45"N, 109°19'56"W			Ratte, 1969
hornblende	37.4±3.9		
Ash-flow tuff (rhyolite), Blue Range Primitive Area, Greenlee County, 33°35'55"N, 109°07'38"W			Ratte, 1969
sanidine	24.9±0.7		
Perlitic vitrophyre (latite- rhyolite), Blue Range Primitive Area, Greenlee County, 33°23'39"N, 109°12'55"W			Ratte, 1969
biotite	23.4±0.7		
Basaltic andesite, Blue Range Primitive Area, Greenlee County, 33°26'52"N, 109°22'15"W			Ratte, 1969
whole rock	22.3±0.7		

Ages Published in 1970

Rock type and location Material analyzed	Age (m.y.) K-Ar Rb-Sr Pb-α	References
ALASKA		
Andesite dike, 51°21'55"N, 179°20'40"E, Amchitka Island hornblende	2.7±3.0	Carr, 1970
Andesite dike, W. side of Kirilof Bay, Amchitka Island, 51°26'N, 179°14'E whole rock	8.9±0.6	Carr, 1970
Basalt, Amchitka Island, 51°23'30"N, 179°12'50"E whole rock	10.2±1.1	Carr, 1970
Andesite, Amchitka Island, 51°36'N, 178°48'E whole rock	12.4±1.1	Carr, 1970
Andesite, Mex Island, 51°28'30"N, 179°02'30"E whole rock	13.2±1.2	Carr, 1970
Andesite, Amchitka Island, 51°31'N, 179°02'E whole rock	14.1±1.1	Carr, 1970
Granodiorite, Amchitka Island, 51°23'N, 179°25'E biotite	15.8±0.7	Carr, 1970

Monzonite, NE of Juneau, approx. 58°44'N, 133°52'W biotite	48.7±1.8	Forbes, 1970
Quartz monzonite, NE of Juneau, approx. 58°43'N, 133°53'W biotite	52.8±2.6	Forbes, 1970
Quartz monzonite, NE of Juneau, approx. 58°43'N, 133°55'W whole rock	51.1±1.5	Forbes, 1970
Quartz monzonite, NE of Juneau, approx. 58°43'N, 133°59'W whole rock	46.9±1.4	Forbes, 1970
Quartz monzonite, NE of Juneau, approx. 58°41'N, 134°00'W biotite	49.6±1.4	Forbes, 1970
Quartz monzonite, NE of Juneau, approx. 58°40'N, 134°03'W whole rock	51.0±1.0	Forbes, 1970
Quartz monzonite gneiss, NE of Juneau, approx. 58°39'N, 134°12'W biotite	47.0±1.6	Forbes, 1970

Ages Published in 1970

Rock type & Location Material Dated	K-Ar	Age (m.y.) Rb-Sr	Pb- α	Reference
<u>ALASKA</u> (Cont'd)				
Biotite-hornblende gneiss, NE of Juneau, approx. 58°36'N, 134°16'W biotite		54.2±2.0		Forbes, 1970
Biotite schist(?), NE of Juneau, approx. 58°30'N, 134°22'W biotite		50.4±1.2		Forbes, 1970
Hornblende-biotite gneiss, NE of Juneau, approx. 58°23'N, 134°22'W biotite hornblende		53.8±1.6 56.1±1.2		Forbes, 1970
Hornblende-biotite gneiss, NE of Juneau, approx. 58°22'N, 134°20'W biotite hornblende		51.4±1.4 55.9±1.8		Forbes, 1970
Amphibolite, NE of Juneau, approx. 58°22'N, 134°23'W hornblende		59.8±3.0		Forbes, 1970
Biotite schist, NE of Juneau, approx. 58°22'N, 134°25'W biotite		57.0±4.0		Forbes, 1970

Pegmatite, Mentasta Mountains, Alaska Range, 62°36'N, 143°21'W hornblende biotite		199 198		Richter, 1970
Granodiorite, stock north of Glacier Creek Glacier, McCarthy B-3 quad. hornblende biotite		8.4±0.25 8.4±0.25		MacKevett, Jr., 1970

Ages Published in 1971

Rock Type & Location Material Analyzed	K-Ar	Ages (m.y.) Rb-Sr	Pb-α	References
<u>Alaska</u>				
Andesitic crystal tuff, St. Lawrence Island, 63°23'N, 171°17'W biotite	88.7±3			Patton, 1971
Trachyte, St. Lawrence Island, 63°30'N, 170°55'W sanidine hornblende	62.8±1.9 60.5±1.8			Patton, 1971
Gabbro, St. Lawrence Island, 63°34'N, 171°34'W hornblende	238±7			Patton, 1971
Quartz monzonite, St. Lawrence Island, 63°45'N, 171°40'W biotite	106±3			Patton, 1971
Granodiorite, 63°14'N, 147°08'W, Clearwater Mtns. biotite hornblende	61.2±2 66.3±2			Smith, 1971a
Monzonite, 63°09'N, 147°14'W, Clearwater Mtns. hornblende	143±4			Smith, 1971a
Theralite, 63°09'N, 147°14'W, Clearwater Mtns. biotite	130±4			Smith, 1971a
Schist (Maclaren metamorphic belt), 63°14'N, 147°15'W, Clearwater Mtns. biotite	57.2±2			Smith, 1971a

Ages Published in 1971

Rock type and location Material Dated	Age (m.y.)			Reference
	K-Ar	Rb-Sr	Pb-α	
<u>Alaska</u> (Cont'd)				
Basalt, Lava Camp Mine, Immachuk River, Bendeleben D-3 quad., Seward Peninsula whole rock	5.7±0.2			Hopkins, 1971
Quartz monzonite, Sevuokuk pluton, St. Lawrence Island, 53°45'N, 171°40'W biotite	106±3			Csejtey, 1971
Quartz monzonite, Sevuokuk pluton, St. Lawrence Island, 63°27'N, 171°32'W biotite	91.3±3			Csejtey, 1971
Quartz monzonite, Kialegak pluton, St. Lawrence Island, 62°59'N, 169°35'W biotite	101±3			Csejtey, 1971
Monzonite-syenite, Kinipaghulghat pluton, St. Lawrence Island, 63°11'N, 168°25'W hornblende	101.7±3.1			Csejtey, 1971
<u>Arizona</u>				
Quartz latite cuff(Siphon Draw Member, Superstition Tuff), Superstition Mountains biotite	22.6±1.0			Stuckless, 1
Quartz latite dome, Goldfield Mountains biotite	21.3±0.8			Stuckless,
Basanite, Superstition Mountains whole rock	17.8±3.1			Stuckless, 1
Quartz latite tuff (Dogie Spring Member, Superstition Tuff), Superstition Mountains biotite	18.4±0.6			Stuckless,
Rhyolite ash-flow (Geronimo Head Fm.), Superstition Mountains sanidine	16.3±0.5			Stuckless, 1