

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

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This report is preliminary and has not been edited or reviewed for conformity with Alaska Division of Geological and Geophysical Surveys standards.

Alaska Open File Report 84
RADIOMETRIC AGE MAP OF ALASKA -
SOUTHWESTERN ALASKA
by
Frederic H. Wilson and
Donald L. Turner

RADIOMETRIC AGE MAP OF ALASKA

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Frederic H. Wilson¹ and Donald L. Turner²

This map includes published, thesis, and open-file radiometric data available to us as of June, 1975. Some dates are not plotted because of inadequate location data in the original references.

The map is divided into five sections, based on 1:1,000,000 scale enlargements of the National Atlas maps of Alaska. Within each section (e.g., southeastern Alaska), radiometric dates are plotted and keyed to 1:250,000 scale quadrangles. Accompanying each map section is table 1, listing map numbers and the sample identification numbers used in DGGG Special Report 10: Radiometric Dates from Alaska—A 1975 Compilation³. The reader is referred to Special Report 10 for more complete information on location, rock type, dating method, and literature references for each age entry. A listing of dates in Special Report 10 which require correction or deletion is included as table 2. Corrected and additional entries are listed in table 3. The listings in tables 2 and 3 follow the format of Special Report 10. Table 4 is a glossary of abbreviations used for quadrangle name, rock type, mineral dated, and type of dating method used.

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Table 1. Map numbers and corresponding identification numbers used in Special Report 10; listed by 1:250,000 scale quadrangle - Southwestern Alaska.

ST. LAWRENCE ISLAND		NUNIVAK (cont.)	
<u>Map</u>	<u>Compilation</u>	<u>Map</u>	<u>Compilation</u>
1	AA 68	13	A11
2	66 AMM 211	14	A12
3	66 AMM 245	15	A126
4	66 APA 242	16	A15
5	69 APA 187B	17	A17
6	69 APA 219E	18	A19
7	69 APA 229A	19	A2
8	70 ACY 162	20	A23
		21	A3
		22	A35
		23	A41
		24	A45
		25	A46
		26	A48
		27	A50
		28	A51
		29	A57
		30	A57A
		31	A59A
		32	A6
		33	A61
		34	A69
HOOPER BAY			
<u>Map</u>	<u>Compilation</u>		
1	61 AHR 91		
NUNIVAK ISLAND			
<u>Map</u>	<u>Compilation</u>		
1	A7		
2	A70		
3	A8		
4	A86		
5	A88		
6	A91		
7	A96		
8	A97		
9	A1		
10	A101		
11	A102		
12	A108		

CAPE MENDENHALL

<u>Map</u>	<u>Compilation</u>
1	A114
2	A125
3	A71
4	A74
5	A78

SOLOMON

<u>Map</u>	<u>Compilation</u>
1	BB35
2	BB36
3	BB37

UNALAKLEET

<u>Map</u>	<u>Compilation</u>
1	62 AHR 218

IDITAROD

<u>Map</u>	<u>Compilation</u>
1	1810
2	1895

NAKNEK

<u>Map</u>	<u>Compilation</u>
1	66 ALE 3
2	66 LE 4

UGASHIK

<u>Map</u>	<u>Compilation</u>
1	66 AR 1331

RUBY

<u>Map</u>	<u>Compilation</u>
1	3469

MEDFRA

<u>Map</u>	<u>Compilation</u>
1	5044

MCGRATH

<u>Map</u>	<u>Compilation</u>
1	67 AR 318
2	67 AR 450
3	68 AR 233
4	67 AER 116
5	67 AR 186

LIME HILLS

<u>Map</u>	<u>Compilation</u>
1	69 AR 401
2	70 AR 151
3	64 AR 596
4	67 AR 195
5	68 AR 210
6	68 AR 212

LIME HILLS (cont.)

<u>Map</u>	<u>Compilation</u>
7	68 AR 213
8	68 AR 221
9	68 AR 222
10	68 AR 226
11	68 AR 229
12	68 AR 235
13	68 AR 254
14	69 AER 233
15	69 AR 177
16	69 AR 196
17	69 AR 275
18	69 AR 282
19	69 AR 316
20	69 AR 318
21	69 AR 332
22	69 AR 333
23	69 AR 334
24	69 AR 347
25	69 AR 371
26	69 AR 377

LAKE CLARK

<u>Map</u>	<u>Compilation</u>
1	70 AR 184
2	66 ALE 23
3	66 ALE 25
4	66 AR 1393
5	68 AR 244
6	68 AR 245
7	68 AR 248
8	68 AR 251
9	68 AR 261
10	70 AR 159
11	70 AR 165
12	70 AR 168
13	70 AR 169
14	70 AR 171

ILIAMNA

<u>Map</u>	<u>Compilation</u>
1	62 ALE 1
2	62 ALE 2
3	64 ADT 1084
4	64 ADT 420A
5	64 ADT 715
6	64 ADT 863
7	64 AE 98
8	64 AR 612
9	65 AR 1034
10	65 AR 818
11	65 AR 827
12	65 AR 905
13	65 AR 906
14	65 AR 910
15	66 ALE 13
16	66 ALE 22
17	66 ALE 45
18	66 AR 1289

MT. KATMAI

<u>Map</u>	<u>Compilation</u>
1	66 ALE 5
2	56 AR 1280
3	67 AR 563
4	67 AR 570
5	67 AR 571
6	69 AR 1
9	A 113
10	A 123
11	A 126
12	64 AE 77

NOME

(Neither date plotted.)

Table 2. Errata for Special Report 10. The following entries in Special Report 10 require correction or deletion. See table 3 for corrected entries (entries not found in table 3 have been deleted).

ADAK	ADAK	ADAK	ADAK	ADAK	ADAK	ALEXR	ANCH	ATTU	REANDE	CANDL	CRATG	EAGLE	GULK	HUGH5	HUGH5	IDITTA	IDITTA	JUNFU	KATMI	KATMI	KATMI	KART	MOLFR	MOLFR	MOLFR	NABRF	NOMF	NOMF	RUBY	RATIS	RATIS	RATIS	RATIS	RATIS	SHISE	SHISE	SHISE	SHISE	SHISE	SHISE	SHISE	SHISE					
51/58	51/57	51/55	51/55	51/55	51/56	56/42	52/43	52/43	00/00	65/41	/	/	63/18	66/01	66/07	62/19	58/41	63/04	63/00	63/00	/	/	55/00	55/00	55/00	00/00	00/00	00/00	00/00	51/21	51/23	51/36	51/28	51/31	51/23	66/00	66/00	66/00	66/00	66/00	66/00	66/00	66/00				
0N176/34	5N176/34	0N176/34	0N176/34	0N176/34	0N176/37	0N134/53	6N174/07	6N174/07	0N000/00	0N161/31	/	/	6N145/37	0N154/06	5N155/55	8N157/57	0N134/00	8N151/27	3N151/24	3N151/24	/	/	0N160/00	0N160/00	0N160/00	0N000/00	0N000/00	0N000/00	0N179/20	0N179/14	5N179/12	0N178/48	5N179/02	0N179/02	0N166/30	0N166/30	0N166/30	0N166/30	0N166/30	0N166/30	0N166/30	0N166/30	0N166/30	0N166/30	0N166/30	0N166/30	
0W	0W	0W	0W	0W	5W	0W	3W	0W	0W	0W	W	W	7W	0W	0W	3W	0W	2W	9W	9W	W	W	0W	0W	0W	0W	0W	0W	7E	0E	8E	0E	5E	0E	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	
156E126N	155F124N	156E118N	156E118N	156E118N	156E119N	108E122N	225E084N	225E082N	000E000N	034E120N	E	E	132E064N	135E003N	006E022N	086E058N	186E120N	124E013N	126E001N	125E001N	G	F	201E000N	201E000N	201E000N	000E000N	000E000N	000E000N	147E020N	135E003N	132E025N	087E062N	114E040N	155E023N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	
RAS	RAS	AND	AND	AND	AND	GDI	SS	RAS	DAC	RAS	GMON	DI	SCH	GNS	MON	MON	QMON	GMON	GMON	GR	GDI	GDI	GDI	DI	DI	DI	GDI	GNS	GNS	GR	AND	AND	BAS	AND	AND	GDI	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS	BAS		
K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	
WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR	WR
0.00	0.00	5.	5.	5.	5.	5.	42.	146.	112.	15.	90.	103.	177.	149.	81.	60.	49.	49.	56.	32.	35.	8.	8.	56.	64.	57.	117.	750.	750.	56.	28.	10.	12.	13.	14.	15.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
1	2	4	5	6	7	10	6KR215C	BR2	3	6	AA214	242	BB8	AA222	AA96	AA97	1810	1895	AA57	70ARR125	70ARR126	70ARR126	RB17	BB17	AA75	AA77	9B25	BB27	3445	AA45	AA48	AA49	AA50	AA51	AA52	AA119	AA120	AA121	AA122	AA123	AA124	AA125	AA126	AA127	AA129		
N	N	N	N	N	N	N	NEAR SEWARD HY	SHEMYA ISLAND	SHEMYA ISLAND	LAVA CAMP MINE	TOLSTOI POINT	NEAR JACK WADE	RAINBOW MT PLUT	INDIAN HILLS PLUT	ZANE HILLS PLUT	CHICKEN CREEK	FLAT CREEK							GLACIR CK	GLACIR CK	SHUMAGIN BATH	SHUMAGIN BATH	SHUMAGIN BATH					BIRCH CREEK	DIKE	DIKE												
CAM	CAM	CAM	CAM	CAM	CAM	CAM	LOLA	CLA	CAM	HOK	PTT	MAT	WAS	RAG	MIL	MIL	MAT	FOR	REL	REL	MAC	MAC	BUR	BUR	BUR	PCI	SAI	SAN	MAT	CAR	CAR	CAR	CAR	CAR	COX	COX	COX	COX	COX	COX	COX	COX	COX	COX			

Table 2. Errata for Special Report 10 (cont.)

SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.68	AA130	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.65	AA131	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.67	AA132	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.72	AA133	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.73	AA134	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.79	AA135	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.86	AA136	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.85	AA137	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.91	AA138	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.93	AA139	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	0.91	AA140	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	1.51	AA141	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	1.54	AA142	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	1.65	AA143	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	1.67	AA144	COX
SHISFF	66/00	ONI	66/30	OW	107E000N	BRAS	X	WR	3.33	AA145	COX
SHISFA	57/11	ONI	35/49	OW	107E000N	BRAS	X	WR	100	BR333	COX
SHITKA	57/47	ONI	34/57	OW	080E037N	TCMN	P	ZI	150	BR334	COX
SHITKA	57/47	ONI	35/13	OW	144E137N	TCMN	P	ZI	51.9	BR335	COX
SHITKA	58/44	ONI	33/55	OW	133E129N	OMCN	P	ZI	49.6	BR336	COX
SHITKA	58/44	ONI	33/59	OW	007E129N	OMCN	P	ZI	49.7	BR337	COX
SHITKA	58/44	ONI	34/00	OW	009E117N	OMCN	P	ZI	52.8	BR338	COX
SHITKA	58/44	ONI	33/57	OW	011E129N	OMCN	P	ZI	57.6	BR339	COX
SHITKA	58/44	ONI	33/53	OW	010E129N	OMCN	P	ZI	59	BR340	COX
SHITKA	61/18	ONI	52/42	OW	026E052N	GDI	P	ZI		BR341	COX
SHITKA	61/40	ONI	52/05	OW	078E114N	OMCN	P	ZI		BR342	COX

10 TENAKE
10 TENAKE
10 TENAKE
10 TENAKE

70 ARB11
PMS2255

Table 3. Corrected and additional entries to Special Report 10 (cont.)

SURVY	67/17	7N155/56	5W	005E052N	SCH	K	BI	96.4	72R21	ARGH	TUR
SURVY	67/05	0N155/55	0W	006E015N	SCH	K	AC	289.1	72F10	ARGH	TUR
SURVY	67/05	0N155/55	0W	006E015N	SCH	K	AC	287.1	72F10	ARGH	TUR
SURVY	67/05	0N155/55	0W	006E015N	SCH	K	IC	213.1	EM2	ARGH	TUR
TAKU	58/44	0N133/55	0W	007E129N	CMON	K	WR	51.9	EM3	ARGH	FOR
TAKU	58/41	0N134/00	0W	007E129N	CMON	K	WR	45.6	EM4	ARGH	FOR
TAKU	58/44	0N133/57	0W	011E129N	CMON	K	BI	49.7	PMS1	ARGH	FOR
TAKU	58/44	0N133/53	0W	010E129N	CMON	K	BI	48.7	PMS2	ARGH	FOR
TYNEK	61/18	4N152/42	2W	026E052N	GDI	K	BI	58.1	70AER	255	REL
TYNEK	61/18	4N152/42	2W	026E052N	GDI	K	HO	57.6	70AER	255	REL
TYNEK	61/40	0N152/05	0W	078E114N	CMON	K	BI	59.0	70AER	8-11	REL

Table 4. Compilation glossary.

QUADRANGLE		UNALAKLEET	UNLAK
ADAK	ADAK	VALDEZ	VALDZ
PORT ALEXANDER	ALEXR	WISEMAN	WISE
AMBLER RIVER	AMBRI		
ANCHORAGE	ANCH		
ATKA	ATKA		
ATTU	ATTU		
BAIRD MTS	BAIRD		
BENDELEBEN	BENDE		
BETTLES	BETLE		
BIG DELTA	BIG D		
CANDLE	CANDL		
CAPE MENDENHALL	CAPMN		
CHANDALAR	CHAND		
CIRCLE	CIRCL		
LAKE CLARK	CLARK		
CRAIG	CRAIG		
DIXON ENTRANCE	DIXON		
EAGLE	EAGLE		
FAIRBANKS	FAIR		
MCGRATH	GRATH		
GULKANA	GULK		
MT. HAYES	HAYES		
HEALY	HEALY		
HOOPER BAY	HOOPR		
HUGHES	HUGHS		
IDITAROD	IDITA		
ILIAMNA	ILIAM		
JUNEAU	JUNEU		
MT. KATMAI	KATMI		
KENAI	KENAI		
KETCHIKAN	KETCH		
ST. LAWRENCE	LAWRC		
LIME HILLS	LIME		
LIVENGOOD	LIVEN		
MCCARTHY	MCART		
MT. MCKINLEY	MCKIN		
MDFRA	MDFRA		
MT. MICHELSON(S)	MICHL		
PORT MOLLER	MOLER		
NABESNA	NABES		
NAKNEK	NKNEK		
NOME	NOME		
NUNIVAK	NUNVK		
(OFFSHORE)	OFFSH		
PRILOF ISLANDS	PRIB		
PETERSBURG	PTSRG		
RAT ISLANDS	RATIS		
RUBY	RUBY		
SELDOVIA	SELD		
SELAWIK	SELWK		
SEWARD	SEWRD		
SHISMAREF	SHISF		
SHUNGNAK	SHUNG		
SITKA	SITKA		
SKAGWAY	SKAG		
SOLOMON	SOLMN		
SURVEY PASS	SURVY		
TAKU RIVER	TAKU		
TALKEETNA	TALK		
TALKEETNA MOUNTAINS	TALKM		
TANACROSS	TANAC		
TANANA	TANAN		
TELLER	TELER		
TESHEKPUK	TESHE		
TYONEK	TYNEK		
UGASHIK	UGSHK		
UMNAK	UMNAK		

DATE TYPE	
PR-ALPHA	A
FTSSION-TRACK	FF
K-AR	K
PR-U, PB-TH, ETC.	P
RB-SR	R

MINERAL DATED	
ACTINOLITE	AC
AMPHIBOLE	AM
APATITE	AP
ANORTHOCLASE	AW
BTOTITE	BI
CHLORITE	CH
CROSSITE	CR
FELDSPAR	FD
GLASS	GE
GLAUCOPHANE	GP
HORNBLEND	HO
ISOCHRON	IC
MICA	MI
MUSCOVITE	MU
PARAGONITE	PA
PHENGITE	PH
PLAGIOCLASE	PL
PYROXENE	PY
RIEBECKITE	RI
SANIDINE	SA
SERICITE	SE
SPHENE	SP
WHOLE ROCK	WR
ZIRCON	ZI

ROCK TYPES	
ADAM	ADAMELLITE
AGNS	AUGEN GNEISS
ALSK	ALASKITE
AMPH	AMPHIBOLITE
AND	ANDESITE
ANOR	ANORTHOSITE
APL	APLITE
BAS	BASALT
BIOT	BIOTITITE
DAC	DACITE
DI	DIORITE
DIA	DIABASE
DUN	DUNITE
ECLG	ECLOGITE
FELS	FELSITE
GAB	GABBRO
GDI	GRANODIORITE
GLASS	GLASS
GNT	GRANULITE
GNS	GNEISS
GNST	GREENSTONE
GR	GRANITE
GRTO	GRAINTOID
GSCH	GREENSCHIST

Table 4. Compilation glossary (cont.)

HBDT	HORNBLENDITE	Q DI	QUARTZ DIORITE
HFLS	HORNFFLS	Q GAB	QUARTZ GABBRO
INTR	INTRUSIVE	Q LAT	QUARTZ LATITE
LAMP	LAMPROPHYRE	Q MON	QUARTZ MONZONITE
LAT	LATITE	RHY	RHYOLITE
LTON	LEUCOTONALITE	SCH	SCHIST
MALIG	MALIGNITE	SS	SANDSTONE
META	METAPELITE	SY	SYENITE
MIG	MIGMATITE	THER	THERALITE
MON	MONZONITE	TON	TONALITE
MYLT	MYLONITE	TRCH	TRACHYTE
PEG	PEGMATITE	TROND	TRONDHJEMITE
PERD	PERIDOTITE	TUFF	TUFF
PHYL	PHYLLITE	UMAF	ULTRAMAFIC
PYRX	PYROXENITE	VOL	VOLCANIC
Q. BAS	QUARTZ BASALT		

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