

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 86
RADIOMETRIC AGE MAP OF ALASKA -
NORTHERN 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 DGGGS 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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 2. Geophysical Institute and Geology Dept., Univ. of Alaska, Fairbanks, 99701.
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Table 1. Map numbers and corresponding identification numbers used in Special Report 10; listed by 1:250,000 scale quadrangle - Northern Alaska.

TELLER		CANDLE (cont.)		HUGHES	
<u>Map</u>	<u>Compilation</u>	<u>Map</u>	<u>Compilation</u>	<u>Map</u>	<u>Compilation</u>
1	BB44	4	61APA59		
2	BB45	5	61APA59A		
3	BB46	6	61APA59B	3	63APA177
		7	61APA60	4	63APA216
	BENDELEBEN	8	61ARU24	5	63APA229
		9	61ATG40		
<u>Map</u>	<u>Compilation</u>	SHUNGNAK		<u>Map</u>	<u>Compilation</u>
1	AA214 - AHP66				
2	BB3	<u>Map</u>	<u>Compilation</u>	1	58ABR 8 AW29
3	BB4	1	AA98		
	BB46 Not Plotted	2	AA99		BETTLES
	BAIRD MTS.	3	4S		
		4	64APA92	<u>Map</u>	<u>Compilation</u>
<u>Map</u>	<u>Compilation</u>	5	64APA95	1	66AMM255A
1	66 APA129		TESHEKPUK	2	67APA223
	SELAWIK	<u>Map</u>	<u>Compilation</u>		TANANA
<u>Map</u>	<u>Compilation</u>	1	BB47	<u>Map</u>	<u>Compilation</u>
1	AA84			1	AA36
2	BB30		SURVEY PASS		
3	BB31	<u>Map</u>	<u>Compilation</u>		CHANDALAR
4	61APA118	1	62ABE264	<u>Map</u>	<u>Compilation</u>
5	66AMM110	2	62ARR192		
6	66AMM126	3	72F10ARGH	1	241 B; 241Z
		4	72B2II	2	239 B; 239M
	CANDLE			3	240 B; 240Z
<u>Map</u>	<u>Compilation</u>				
1	BB6				
2	58ATB129				
3	61APA58				

LIVENGOOD

<u>Map</u>	<u>Compilation</u>
1	62ACH65
2	69ACH151
3	69ACH96
4	71AWR513

MT. MICHELSON

<u>Map</u>	<u>Compilation</u>
1	AA152
2	AA153

CIRCLE

<u>Map</u>	<u>Compilation</u>
1	AA182, BB7
2	CHS72X
3	MP246
4	MP406
5	AA184

AMBLER RIVER

<u>Map</u>	<u>Compilation</u>
1	A-2
2	A-3
	A-1 Not Plotted
	A-2 Not 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	BEHDE	CANDL	CRAIG	EAGLE	GULK	HUGH5	HUGH5	IDITA	IDITA	JUMFU	KATWI	KATWI	KART	MART	MOLFR	MOLFR	NARFS	NONE	NONE	RATIS	RATIS	RATIS	RATIS	RATIS	SHISE	SHISE	SHISE	SHISE	SHISE	SHISE	SHISE								
51/58.0N	51/57.5N	51/55.0N	51/55.0N	51/55.0N	51/55.0N	56/42.0N	52/43.8N	52/43.0N	00/00.0N	65/41.0N	63/18.6N	66/01.0N	66/07.5N	62/19.8N	58/41.0N	63/04.3N	63/00.3N	63/00.3N	55/00.0N	55/00.0N	55/00.0N	00/00.0N	00/00.0N	00/00.0N	00/00.0N	00/00.0N	51/21.9N	51/26.0N	51/23.5N	51/36.0N	51/31.0N	51/23.0N	66/00.0N	66/00.0N	66/00.0N	66/00.0N	66/00.0N	66/00.0N	66/00.0N	66/00.0N							
0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W	0W				
156E126N	155E124N	156E118N	156E118N	156E118N	156E118N	108E122N	225E084N	225E082N	000E000N	036E120N	E	136E064N	136E003N	006E022N	086E058N	186E120N	124E013N	126E001N	126E001N	201E000N	201E000N	201E000N	000E000N	000E000N	000E000N	000E000N	000E000N	147E020N	135E033N	132E025N	087E062N	114E047N	155E023N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N	107E000N		
RAS	RAS	AND	AND	AND	AND	GDI	SS	RAS	PAS	GMDN	DI	SCH	GNS	MGN	NON	QMON	GMDN	QMON	DI	DI	DI	GDI	GMS	GMS	GMS	GMS	AND	AND	BAS	AND	AND	GDI	BAS	BAS	BAS	BAS	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			
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	5.0	5.0	5.0	5.0	5.1	42.0	146.3	112.0	15.7	90.0	103.0	147.0	141.5	60.9	49.5	49.5	56.1	32.2	35.2	0.4	0.4	56.0	64.0	57.0	112.0	750.0	756.0	2.9	8.0	10.2	12.4	13.0	14.1	15.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
1	2	4	5	6	7	10	6KB215C	BR2	3	6	242	BR222	AA95	AA97	1810	1895	1A57	70AR125	70AR126	70AR126	BB17	BB17	AA76	AA77	AA77	BB25	BB27	BB27	3469	AA46	AA47	AA48	AA49	AA50	AA51	AA52	AA119	AA120	AA121	AA123	AA124	AA125	AA126	AA127	AA128	AA129	
ISLAND	ISLAND	ISLAND	ISLAND	ISLAND	ISLAND	ISLAND	NEAR SEWARD HY	SHEMYA ISLAND	SHEMYA ISLAND	LAVA CAMP MINE	TOLSTOI POINT	NEAR JACK WADE	RAINBOW MT	INDIAN HILLS	ZANE HILLS	CHICKEN CREEK	FLAT CREEK	GLACIR CK	GLACIR CK	GLACIR CK	SHUMAGIN BATH	SHUMAGIN BATH	BIRCH CREEK	BIKE	DIKE																						
CAM	CAM	CAM	CAM	CAM	CAM	LOY	LCLA	CAM	CAM	HOK	PTT	MAT	WAS	RAG	WIL	MIL	MAT	FOR	REL	REL	MAC	MAC	RUR	RUR	RUR	PCI	SAT	SAT	CAR	CAR	CAR	CAR	CAR	COX	COX	COX	COX	COX	COX	COX	COX	COX	COX	COX	COX		

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

MCART	61/23	3N142/06	.0W	162F	E068N	GDI	K	BI	8.4	BD17	GLACIR CK	MAC
MCART	61/23	3N142/06	.0W	162E	E068N	GDI	K	HO	8.4	RRAR	GLACIR CK	MAC
MCKIN	63/00	3N151/27	.2W	127E	E007N	GRI	K	BI	56.8	70ARR	GLACIR CK	RELE
MCKIN	63/00	3N151/24	.9W	127E	E001N	GDI	K	HO	32.2	70ARR		RELE
MCKIN	63/00	3N151/24	.9W	127E	E001N	GDI	K	BI	32.8	70ARR		RUR
MOLFR	55/03	2N160/02	.5W	196E	E004N	DI	K	MU	56.6	405M	SHUMAGIN BATH	BUR
MOLFR	55/06	8N160/01	.7W	198E	E020N	DI	K	MU	57.4	406B	SHUMAGIN BATH	BUR
NABES	00/00	0N000/00	.0W	000E	E000N	GDI	K	WR	112.0	406N	SHUMAGIN B-4	BUR
NUNVK	60/13	0N167/28	.0W	048E	E038N	RAS	K	WR	4.0	406N	NABESNA B-4	COX
NUNVK	60/13	0N167/28	.0W	048E	E038N	RAS	K	WR	4.0	406N		COX
NUNVK	60/13	0N167/26	.0W	050E	E038N	RAS	K	WR	4.0	8825		COX
NUNVK	60/13	0N167/26	.0W	050E	E038N	RAS	K	WR	4.0	A1		COX
NUNVK	60/13	0N166/57	.0W	092E	E038N	RAS	K	WR	4.0	A2		COX
NUNVK	60/13	0N166/57	.0W	092E	E038N	RAS	K	WR	4.0	A3		COX
NUNVK	60/13	0N166/57	.0W	092E	E038N	RAS	K	WR	4.0	AR		COX
NUNVK	60/13	0N166/57	.0W	092E	E038N	RAS	K	WR	4.0	A11		COX
NUNVK	60/13	0N166/57	.0W	092E	E038N	RAS	K	WR	4.0	A12		COX
NUNVK	60/13	0N166/57	.0W	092E	E038N	RAS	K	WR	4.0	A15		COX
NUNVK	60/13	0N166/57	.0W	092E	E038N	RAS	K	WR	4.0	A17		COX
NUNVK	60/13	0N166/55	.0W	095E	E036N	RAS	K	WR	5.0	A19		COX
NUNVK	60/20	0N166/42	.0W	113E	E050N	RAS	K	WR	4.0	A23		COX
NUNVK	60/22	0N166/20	.0W	146E	E061N	RAS	K	WR	3.0	A35		COX
NUNVK	60/23	0N166/24	.0W	139E	E063N	RAS	K	WR	1.0	A41		COX
NUNVK	60/23	0N165/06	.0W	168E	E063N	RAS	K	WR	0.0	A45		COX
NUNVK	60/22	0N166/04	.0W	170E	E061N	RAS	K	WR	0.0	A46		COX
NUNVK	60/21	0N166/04	.0W	171E	E055N	RAS	K	WR	0.0	A48		COX
NUNVK	60/19	0N166/01	.0W	174E	E057N	RAS	K	WR	0.0	A48		COX
NUNVK	60/20	0N165/57	.0W	181E	E053N	RAS	K	WR	0.0	A50		COX
NUNVK	60/16	0N165/40	.0W	191E	E042N	RAS	K	WR	1.0	A51		COX
NUNVK	60/16	0N165/40	.0W	191E	E042N	RAS	K	WR	1.0	A57		COX
NUNVK	60/13	0N165/41	.0W	202E	E038N	RAS	K	WR	1.0	A57A		COX
NUNVK	60/12	0N165/40	.0W	204E	E036N	RAS	K	WR	0.0	A59A		COX
NUNVK	60/04	0N165/40	.0W	204E	E036N	RAS	K	WR	0.0	A51		COX
NUNVK	60/01	0N165/33	.0W	207E	E003N	RAS	K	WR	0.0	A69		COX
NUNVK	60/01	0N166/04	.0W	171E	E003N	RAS	K	WR	0.0	A70		COX
NUNVK	60/02	0N166/05	.0W	169E	E006N	RAS	K	WR	0.0	A86		COX
NUNVK	60/02	0N166/05	.0W	169E	E006N	RAS	K	WR	0.0	A98		COX
NUNVK	60/01	0N166/44	.0W	111E	E003N	RAS	K	WR	0.0	A91		COX
NUNVK	60/01	0N166/16	.0W	153E	E003N	RAS	K	WR	0.0	A96		COX
NUNVK	60/01	0N166/19	.0W	149E	E003N	RAS	K	WR	0.0	A97		COX
NUNVK	60/00	0N166/20	.0W	177E	E000N	RAS	K	WR	0.0	A101		COX
NUNVK	60/01	0N166/14	.0W	154E	E002N	RAS	K	WR	0.0	A102		COX
NUNVK	60/01	0N166/43	.0W	112E	E002N	RAS	K	WR	0.0	A108		COX
NUNVK	51/31	0N179/02	.0E	114E	E067N	AMD	K	WR	14.0	A126		COX
RATIS	51/23	0N179/25	.0E	155E	E067N	AMD	K	WR	15.0	69AMC11		COX
RATIS	51/26	0N179/14	.0E	135E	E033N	AMD	K	WR	15.0	69AMC12		COX
RATIS	51/36	0N178/48	.0E	087E	E062N	AMD	K	WR	12.0	69AMC15		COX
RATIS	51/28	0N179/02	.5E	114E	E040N	AMD	K	WR	13.0	69AMC17		COX
RATIS	51/23	0N179/12	.8E	142E	E025N	AMD	K	WR	13.0	WJC-1-67		COX
RURY	64/29	5N155/19	.0W	147E	E020N	GR	K	HO	48.0	WJC-87A-66		CAR
RURY	64/29	5N155/19	.0W	159E	E087N	GP	K	ZI	48.0	3469		CAR
RURY	64/29	5N155/19	.0W	159E	E087N	GP	K	ZI	56.0	3469		CAR
RURY	64/29	5N155/19	.0W	159E	E087N	GP	K	ZI	53.0	3469		MAT
RURY	64/29	5N155/19	.0W	159E	E087N	GP	K	ZI	56.0	3469		MAT

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

SURVY	67/17	7N155/56	5W	005E052N	SCH	K	BI	96.4	72R211	TUR
SURVY	67/05	0N155/55	0W	006E015N	SCH	K	AC	289.1	72F10ARGH	TUR
SURVY	67/05	0N155/55	0W	006E015N	SCH	K	IC	287.1	72F10ARGH	TUR
TAKUJ	58/44	0N133/55	0W	007E129N	GMON	K	WP	213.1	EM2	FOR
TAKUJ	58/44	0N133/59	0W	001E120N	GMON	K	WR	45.9	EM3	FOR
TAKUJ	58/41	0N134/00	0W	000E120N	GMON	K	HI	49.6	EM4	FOR
TAKUJ	58/44	0N133/57	0W	011E129N	GMON	K	BI	48.8	PMS1	FOR
TYNEK	61/18	4N152/42	2W	026E052N	GDI	K	BI	58.1	70AER255	REL
TYNEK	61/18	4N152/42	2W	026E052N	GDI	K	HO	57.6	70AER255	REL
TYNEK	61/40	0N152/05	0W	078E114N	GMON	K	BI	59.0	70AER8-11	REL

PARAGONITE-ACT.

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	MCCART		
MT. MCKINLEY	MCKIN		
MDFRA	MDFRA		
MT. MICHELSON(S)	MICHL		
PORT MOLLER	MOLER		
NABESNA	NABES		
NAKNEK	NKNEK		
NOME	NOME		
NUNIVAK	NUNVK		
(OFFSHORE)	OFFSH		
PRIPILOF ISLANDS	PRIPI		
PETERSBURG	PTSRG		
RAT ISLANDS	RATIS		
RUBY	RUBY		
SELDOVIA	SELD		
SELAHUK	SELWK		
SEWARD	SEWRD		
SHISHAREF	SHISF		
SHUNGNAK	SHUNG		
SITKA	SITKA		
SKAGWAY	SKAG		
SOLOMON	SOLMN		
SURVEY PASS	SURVY		
TAKU RIVER	TAKU		
TALKEETNA	TALK		
TALKEETNA MOUNTAINS	TALKM		
TANACROSS	TANAC		
TANANA	TANAN		
TFULLER	TELER		
TESHEKPUK	TESHE		
TYONEK	TYNEK		
UGASHIK	UGSHK		
UMNAK	UMNAK		

DATE TYPE	
PR-ALPHA	A
FTSSION-TRACK	F
K-AR	K
PP-U, PR-TH, ETC.	P
RR-SR	R

MINERAL DATED	
ACTINOLITE	AC
AMPHIBOLE	AM
APATITE	AP
ANORTHOCLASE	AN
BTOTITE	BT
CHLORITE	CH
COOSSITE	CR
FELDSPAR	FD
GLASS	GL
GLAUCOPHANE	GP
HORNBLEND	HO
ISOCHRON	IC
MTCA	MT
MUSCOVITE	MU
PARAGONITE	PA
PHEMGITE	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	DUNIT
ECLG	ECLOGITE
FELS	FELSITE
GAB	GABBRO
GDI	GRANODIORITE
GLASS	GLASS
GNET	GRANULITE
GNS	GNEISS
GNST	GREENSTONE
GR	GRANITE
GRYD	GRAINTOID
GSCH	GREENSCHIST

Table 4. Compilation glossary (cont.)

HBDT	HORNBLENDITE	Q DI	QUARTZ DIORITE
HFLS	HORNFELS	Q GAB	QUARTZ CARBON
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	TRONDHEMITE
PERD	PERIDOTITE	TUFF	TUFF
PHYL	PHYLLITE	UMAF	ULTRAMAFIC
PYRX	PYROXENITE	VOL	VOLCANIC
Q BAS	QUARTZ BASALT		

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 B1S BINGHAM, D. K., & STONE, P. B., 1972, R. ASTRON. SOC. GEOPHYS. JOUR. V. 28, P. 317-329
 BRG BROSSE, W. P., & REISER, H. N., (1971), U.S.G.S. OPEN FILE MAP 479
 BRD BROSSE, W. P., LANPHERE, M. A., REISER, H. N., & CHAPMAN, R. M., (1969), U.S.G.S.
 BRD CONT. PULL 1294-P BR1-B18.
 BRQ BROSSE, W. P., REISER, H. N., (1964), U.S.G.S. MISC. GEOL. INV. MAP I-375
 BRP BROSSE, W. P., & TAILLEUR, I. L., (1970), GEOL. SEM. ON NORTH SLOPE, ALASKA
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