

**Basic data for Apatite Fission Track analysis of cuttings (413'-12,375') from the Atlantic Richfield Lower Cook Inlet Cost Well No.1.**

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**Alaska Geologic Materials Center Data Report No. 180**

## GMC Data Report No. 180

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**Table 1: Sample details and apatite yields - samples from well COST #1, Lower Cook Inlet (Geotrack Report #278)**

Sample number	Depth (m)	Sample type	Stratigraphic subdivision	Stratigraphic age (Ma)	Present temperature <sup>*1</sup> (°C)	Raw weight (g)	Washed weight (g)	Apatite yield <sup>*2</sup>
<b>COST #1</b>								
GC278-1	413-526 (1356-1726')	cuttings	West Foreland	38-65		990	260	Very Good
GC278-2	671-762 (2200-2500')	cuttings	West Foreland	54.9-65		1290	526	Excellent
GC278-3	945-1073 (3100-3520')	cuttings	Kaguyak	65-83		1290	Not	Processed
GC278-4	1283-1384 (4210-4540')	cuttings	Kaguyak	65-83		1340	334	Excellent
GC278-5	1466-1530 (4810-5020')	cuttings	Kaguyak	65-83		780	Not	Processed
GC278-6	1585-1704 (5200-5590')	cuttings	Herendeen Limestone	119-131		1440	Not	Processed
GC278-7	1832-1951 (6010-6400')	cuttings	Herendeen Limestone	119-131		1560	327	Excellent
GC278-8	2133-2225 (7000-7300')	cuttings	Naknek	144-150		1170	474	Excellent
GC278-9	2783-2911 (9130-9550')	cuttings	Naknek	150-156		1550	804	Excellent
GC278-10	3066-3158 (10060-10360')	cuttings	Naknek	156-163		900	469	Excellent
GC278-11	3359-3450 (11020-11320')	cuttings	Naknek	156-163		1140	648	Excellent
GC278-12	3621-3688 (11880-12100')	cuttings	Naknek	156-163		850	413	Excellent
GC278-13	3715-3772 (12190-12375')	cuttings	Naknek	156-163		820	Not	Processed

<sup>\*1</sup> See Appendix A for discussion of present temperature data.

<sup>\*2</sup> Yield based on quantity of apatite suitable for age determination. Excellent: >20 grains; Very Good: ~20 grains; Good: 15-20 grains; Fair: 10-15 grains; Poor: 5-10 grains; Very Poor: <5 grains.

## GC278-1 APATITE

IRRADIATION G147

SLIDE NUMBER 1

COUNTED BY: GML

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	12	34	24	0.353	20.7	7.945E+05	2.251E+06	89.6 ± 30.2
2	2	10	24	0.200	6.1	1.324E+05	6.621E+05	50.9 ± 39.5
3	9	30	35	0.300	12.5	4.086E+05	1.362E+06	76.2 ± 29.0
4	7	19	15	0.368	18.5	7.416E+05	2.013E+06	93.5 ± 41.4
5	36	120	60	0.300	29.3	9.534E+05	3.178E+06	76.2 ± 14.6
6	18	33	48	0.545	10.1	5.959E+05	1.092E+06	138.0 ± 40.6
7	13	73	80	0.178	13.4	2.582E+05	1.450E+06	45.4 ± 13.7
8	14	51	50	0.274	14.9	4.449E+05	1.621E+06	69.8 ± 21.1
9	4	26	36	0.154	10.6	1.766E+05	1.148E+06	39.2 ± 21.1
10	3	20	20	0.150	14.6	2.384E+05	1.589E+06	38.2 ± 23.7
11	4	22	70	0.182	4.6	9.080E+04	4.994E+05	46.3 ± 25.2
12	8	23	30	0.348	11.2	4.238E+05	1.218E+06	88.3 ± 36.3
13	2	7	10	0.286	10.2	3.178E+05	1.112E+06	72.6 ± 58.3
14	11	35	40	0.314	12.8	4.370E+05	1.390E+06	79.9 ± 27.7
15	10	12	70	0.833	2.5	2.270E+05	2.724E+05	209.6 ± 89.9
16	6	46	49	0.130	13.7	1.946E+05	1.492E+06	33.3 ± 14.5
17	13	67	90	0.194	10.9	2.295E+05	1.183E+06	49.4 ± 15.0
18	7	10	28	0.700	5.2	3.973E+05	5.675E+05	176.5 ± 87.1
19	1	7	25	0.143	4.1	6.356E+04	4.449E+05	36.4 ± 38.9
20	8	16	70	0.500	3.3	1.816E+05	3.632E+05	126.6 ± 54.9
188		661			11.1	3.418E+05	1.202E+06	

Area of basic unit = 6.293E-07 cm-2

Chi Squared = 29.814 with 19 degrees of freedom

P(chi squared) = 5.4 %

Correlation Coefficient = 0.856

Variance of SQR(Ns) = 1.32

Variance of SQR(Ni) = 4.62

Age Dispersion = 25.127 % (did not converge)

Ns/Ni = 0.284 ± 0.024

Mean Ratio = 0.323 ± 0.043

Ages calculated using a zeta of 359.6 ± 5 for SRM612 glass

Rho D = 1.422E+06cm-2; ND = 2237

POOLED AGE = 72.3 ± 6.2 Ma

MEAN AGE = 82.0 ± 11.0 Ma

CENTRAL AGE = 73.9 ± 8.0 Ma

## GC278-2 APATITE

IRRADIATION G147  
SLIDE NUMBER 2  
COUNTED BY: GML

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	54	156	36	0.346	63.4	2.384E+06	6.886E+06	87.9 ± 14.1
2	4	14	60	0.286	3.4	1.059E+05	3.708E+05	72.6 ± 41.2
3	23	77	70	0.299	16.1	5.221E+05	1.748E+06	75.9 ± 18.1
4	41	49	25	0.837	28.7	2.606E+06	3.115E+06	210.4 ± 44.9
5	5	22	60	0.227	5.4	1.324E+05	5.827E+05	57.8 ± 28.7
6	2	6	28	0.333	3.1	1.135E+05	3.405E+05	84.7 ± 69.2
7	6	26	90	0.231	4.2	1.059E+05	4.591E+05	58.7 ± 26.6
8	4	17	35	0.235	7.1	1.816E+05	7.718E+05	59.9 ± 33.3
9	25	81	36	0.309	32.9	1.104E+06	3.575E+06	78.4 ± 18.1
10	21	76	30	0.276	37.1	1.112E+06	4.026E+06	70.3 ± 17.4
11	18	56	50	0.321	16.4	5.721E+05	1.780E+06	81.7 ± 22.2
12	8	19	36	0.421	7.7	3.531E+05	8.387E+05	106.8 ± 45.1
13	1	32	36	0.031	13.0	4.414E+04	1.412E+06	8.0 ± 8.1
14	11	39	36	0.282	15.9	4.855E+05	1.721E+06	71.7 ± 24.5
15	6	28	25	0.214	16.4	3.814E+05	1.780E+06	54.6 ± 24.6
16	37	136	60	0.272	33.2	9.799E+05	3.602E+06	69.2 ± 12.9
17	25	113	21	0.221	78.8	1.892E+06	8.551E+06	56.3 ± 12.5
18	18	71	24	0.254	43.3	1.192E+06	4.701E+06	64.5 ± 17.1
19	7	34	40	0.206	12.4	2.781E+05	1.351E+06	52.4 ± 21.8
20	11	23	50	0.478	6.7	3.496E+05	7.310E+05	121.1 ± 44.5
327	1075				18.6	6.128E+05	2.014E+06	

Area of basic unit = 6.293E-07 cm<sup>2</sup>

Chi Squared = 40.950 with 19 degrees of freedom

P(chi squared) = 0.2 %

Correlation Coefficient = 0.869

Variance of SQR(Ns) = 3.05

Variance of SQR(Ni) = 7.57

Age Dispersion = 32.026 %

Ns/Ni = 0.304 ± 0.019

Mean Ratio = 0.304 ± 0.034

Ages calculated using a zeta of 359.6 ± 5 for SRM612 glass

Rho D = 1.422E+06cm<sup>-2</sup>; ND = 2237

POOLED AGE = 77.3 ± 5.3 Ma

MEAN AGE = 77.3 ± 9.0 Ma

CENTRAL AGE = 75.5 ± 8.0 Ma

## GC278-4 APATITE

IRRADIATION G147

SLIDE NUMBER 3

COUNTED BY: GML

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	6	26	49	0.231	7.8	1.946E+05	8.432E+05	58.7 ± 26.6
2	4	13	36	0.308	5.3	1.766E+05	5.738E+05	78.2 ± 44.7
3	65	170	56	0.382	44.4	1.844E+06	4.824E+06	97.0 ± 14.4
4	13	53	25	0.245	31.0	8.263E+05	3.369E+06	62.4 ± 19.4
5	12	74	80	0.162	13.5	2.384E+05	1.470E+06	41.3 ± 12.9
6	14	79	70	0.177	16.5	3.178E+05	1.793E+06	45.1 ± 13.1
7	16	54	90	0.296	8.8	2.825E+05	9.534E+05	75.3 ± 21.5
8	11	7	45	1.571	2.3	3.884E+05	2.472E+05	389.7 ± 188.7
9	40	175	100	0.229	25.6	6.356E+05	2.781E+06	58.2 ± 10.3
10	15	36	35	0.417	15.1	6.810E+05	1.634E+06	105.7 ± 32.6
11	21	80	50	0.262	23.4	6.674E+05	2.542E+06	66.8 ± 16.5
12	5	16	50	0.312	4.7	1.589E+05	5.085E+05	79.4 ± 40.7
13	14	29	70	0.483	6.1	3.178E+05	6.583E+05	122.3 ± 39.9
14	17	45	60	0.378	11.0	4.502E+05	1.192E+06	95.9 ± 27.4
15	31	152	28	0.204	79.5	1.759E+06	8.626E+06	51.9 ± 10.3
16	7	16	56	0.438	4.2	1.986E+05	4.540E+05	110.9 ± 50.3
17	2	5	50	0.400	1.5	6.356E+04	1.589E+05	101.5 ± 84.9
18	73	169	72	0.432	34.4	1.611E+06	3.730E+06	109.5 ± 15.6
19	19	77	80	0.247	14.1	3.774E+05	1.529E+06	62.8 ± 16.2
20	15	41	45	0.366	13.3	5.297E+05	1.448E+06	92.9 ± 28.1
400		1317			16.8	5.542E+05	1.825E+06	

Area of basic unit = 6.293E-07 cm<sup>2</sup>

Chi Squared = 44.563 with 19 degrees of freedom

P(chi squared) = 0.1 %

Correlation Coefficient = 0.888

Variance of SQR(Ns) = 3.39

Variance of SQR(Ni) = 12.05

Age Dispersion = 26.327 %

Ns/Ni = 0.304 ± 0.017

Mean Ratio = 0.377 ± 0.066

Ages calculated using a zeta of 359.6 ± 5 for SRM612 glass

Rho D = 1.422E+06cm<sup>-2</sup>; ND = 2237

POOLED AGE = 77.2 ± 4.8 Ma

MEAN AGE = 95.7 ± 17.0 Ma

CENTRAL AGE = 78.6 ± 7.3 Ma

## GC278-7 APATITE

IRRADIATION G147

SLIDE NUMBER 4

COUNTED BY: GML

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	4	11	50	0.364	3.2	1.271E+05	3.496E+05	92.3 ± 53.9
2	1	5	24	0.200	3.0	6.621E+04	3.311E+05	50.9 ± 55.8
3	37	107	24	0.346	65.3	2.450E+06	7.085E+06	87.8 ± 16.9
4	4	11	32	0.364	5.0	1.986E+05	5.462E+05	92.3 ± 53.9
5	5	4	10	1.250	5.9	7.945E+05	6.356E+05	311.9 ± 209.4
6	2	15	80	0.133	2.7	3.973E+04	2.980E+05	34.0 ± 25.6
7	14	27	80	0.519	4.9	2.781E+05	5.363E+05	131.2 ± 43.3
8	18	37	20	0.486	27.1	1.430E+06	2.940E+06	123.2 ± 35.5
9	10	18	60	0.556	4.4	2.648E+05	4.767E+05	140.5 ± 55.5
10	10	13	70	0.769	2.7	2.270E+05	2.951E+05	193.7 ± 81.6
11	5	13	60	0.385	3.2	1.324E+05	3.443E+05	97.6 ± 51.4
12	0	7	25	0.000	4.1	0.000E+00	4.449E+05	0.0 ± 0.0
13	3	15	50	0.200	4.4	9.534E+04	4.767E+05	50.9 ± 32.2
14	22	63	45	0.349	20.5	7.769E+05	2.225E+06	88.7 ± 22.1
15	29	64	40	0.453	23.4	1.152E+06	2.542E+06	114.8 ± 25.9
16	5	4	20	1.250	2.9	3.973E+05	3.178E+05	311.9 ± 209.4
17	2	6	24	0.333	3.7	1.324E+05	3.973E+05	84.7 ± 69.2
18	1	6	32	0.167	2.7	4.966E+04	2.980E+05	42.5 ± 45.9
19	14	20	40	0.700	7.3	5.562E+05	7.945E+05	176.5 ± 61.7
20	4	15	48	0.267	4.6	1.324E+05	4.966E+05	67.8 ± 38.2
190		461			8.1	3.620E+05	8.784E+05	

Area of basic unit = 6.293E-07 cm-2

Chi Squared = 22.310 with 19 degrees of freedom

P(chi squared) = 26.9 %

Correlation Coefficient = 0.950

Variance of SQR(Ns) = 2.47

Variance of SQR(Ni) = 5.02

Age Dispersion = 2.653 % (did not converge)

Ns/Ni = 0.412 ± 0.036

Mean Ratio = 0.454 ± 0.074

Ages calculated using a zeta of 359.6 ± 5 for SRM612 glass

Rho D = 1.422E+06cm-2; ND = 2237

POOLED AGE = 104.5 ± 9.4 Ma

MEAN AGE = 115.2 ± 18.9 Ma

CENTRAL AGE = 104.6 ± 9.4 Ma

GC278-8 APATTTE

IRRADIATION G147

SLIDE NUMBER 5

COUNTED BY: GML

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	6	6	50	1.000	1.8	1.907E+05	1.907E+05	250.7 ± 144.9
2	66	166	40	0.398	60.8	2.622E+06	6.595E+06	100.9 ± 14.9
3	35	68	100	0.515	10.0	5.562E+05	1.081E+06	130.3 ± 27.3
4	6	11	40	0.545	4.0	2.384E+05	4.370E+05	138.0 ± 70.1
5	5	4	32	1.250	1.8	2.483E+05	1.986E+05	311.9 ± 209.4
6	46	74	40	0.622	27.1	1.827E+06	2.940E+06	157.0 ± 29.7
7	2	2	40	1.000	0.7	7.945E+04	7.945E+04	250.7 ± 250.8
8	22	46	40	0.478	16.8	8.740E+05	1.827E+06	121.1 ± 31.5
9	1	8	60	0.125	2.0	2.648E+04	2.119E+05	31.9 ± 33.8
10	7	12	80	0.583	2.2	1.390E+05	2.384E+05	147.4 ± 70.2
11	99	203	40	0.488	74.3	3.933E+06	8.065E+06	123.5 ± 15.5
12	45	71	50	0.634	20.8	1.430E+06	2.256E+06	160.0 ± 30.8
13	16	37	36	0.432	15.0	7.063E+05	1.633E+06	109.6 ± 32.9
14	6	6	60	1.000	1.5	1.589E+05	1.589E+05	250.7 ± 144.9
15	3	7	50	0.429	2.0	9.534E+04	2.225E+05	108.6 ± 75.0
16	0	2	20	0.000	1.5	0.000E+00	1.589E+05	0.0 ± 0.0
17	4	5	63	0.800	1.2	1.009E+05	1.261E+05	201.3 ± 135.2
18	5	5	80	1.000	0.9	9.932E+04	9.932E+04	250.7 ± 158.7
19	5	4	40	1.250	1.5	1.986E+05	1.589E+05	311.9 ± 209.4
20	19	22	28	0.864	11.5	1.078E+06	1.249E+06	217.1 ± 68.2
398	759				11.2	6.395E+05	1.220E+06	

Area of basic unit = 6.293E-07 cm-2

Chi Squared = 20.373 with 19 degrees of freedom

P(chi squared) = 37.2 %

Correlation Coefficient = 0.982

Variance of SQR(Ns) = 6.78

Variance of SQR(Ni) = 14.46

Age Dispersion = 8.475 % (did not converge)

Ns/Ni = 0.524 ± 0.032

Mean Ratio = 0.671 ± 0.076

Ages calculated using a zeta of 359.6 ± 5 for SRM612 glass

Rho D = 1.422E+06cm-2; ND = 2237

POOLED AGE = 132.7 ± 8.9 Ma

MEAN AGE = 169.2 ± 19.7 Ma

CENTRAL AGE = 135.1 ± 9.9 Ma

## GC278-9 APATITE

IRRADIATION G147  
SLIDE NUMBER 6  
COUNTED BY: GML

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	10	19	35	0.526	7.9	4.540E+05	8.626E+05	133.2 ± 52.1
2	6	20	24	0.300	12.2	3.973E+05	1.324E+06	76.2 ± 35.5
3	5	19	42	0.263	6.6	1.892E+05	7.189E+05	66.9 ± 33.7
4	28	46	36	0.609	18.7	1.236E+06	2.030E+06	153.8 ± 37.1
5	7	20	8	0.350	36.6	1.390E+06	3.973E+06	88.9 ± 39.1
6	12	19	36	0.632	7.7	5.297E+05	8.387E+05	159.5 ± 58.9
7	6	5	49	1.200	1.5	1.946E+05	1.621E+05	299.7 ± 181.6
8	25	60	18	0.417	48.8	2.207E+06	5.297E+06	105.7 ± 25.3
9	13	49	28	0.265	25.6	7.378E+05	2.781E+06	67.5 ± 21.1
10	80	147	70	0.544	30.7	1.816E+06	3.337E+06	137.7 ± 19.4
11	12	31	12	0.387	37.8	1.589E+06	4.105E+06	98.2 ± 33.5
12	49	86	40	0.570	31.5	1.947E+06	3.416E+06	144.0 ± 26.0
13	19	67	30	0.284	32.7	1.006E+06	3.549E+06	72.1 ± 18.8
14	6	16	32	0.375	7.3	2.980E+05	7.945E+05	95.2 ± 45.6
15	53	109	20	0.486	79.8	4.211E+06	8.660E+06	123.1 ± 20.9
16	7	13	35	0.538	5.4	3.178E+05	5.902E+05	136.2 ± 64.0
17	37	87	60	0.425	21.2	9.799E+05	2.304E+06	107.8 ± 21.3
18	3	9	49	0.333	2.7	9.729E+04	2.919E+05	84.7 ± 56.5
19	64	76	24	0.842	46.4	4.238E+06	5.032E+06	211.8 ± 36.3
20	74	87	16	0.851	79.6	7.349E+06	8.641E+06	213.9 ± 34.3
516		985			21.7	1.235E+06	2.357E+06	

Area of basic unit = 6.293E-07 cm<sup>2</sup>

Chi Squared = 39.479 with 19 degrees of freedom

P(chi squared) = 0.4 %

Correlation Coefficient = 0.912

Variance of SQR(Ns) = 5.43

Variance of SQR(Ni) = 7.81

Age Dispersion = 25.925 %

Ns/Ni = 0.524 ± 0.028

Mean Ratio = 0.510 ± 0.053

Ages calculated using a zeta of 359.6 ± 5 for SRM612 glass

Rho D = 1.422E+06cm<sup>-2</sup>; ND = 2237

POOLED AGE = 132.6 ± 7.9 Ma

MEAN AGE = 129.1 ± 13.7 Ma

CENTRAL AGE = 125.4 ± 11.3 Ma



## GC278-10 APATITE

IRRADIATION G147

SLIDE NUMBER 7

COUNTED BY: GML

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	6	19	20	0.316	13.9	4.767E+05	1.510E+06	80.2 ± 37.6
2	3	7	24	0.429	4.3	1.986E+05	4.635E+05	108.6 ± 75.0
3	1	5	16	0.200	4.6	9.932E+04	4.966E+05	50.9 ± 55.8
4	1	3	15	0.333	2.9	1.059E+05	3.178E+05	84.7 ± 97.8
5	1	3	24	0.333	1.8	6.621E+04	1.986E+05	84.7 ± 97.8
6	3	5	12	0.600	6.1	3.973E+05	6.621E+05	151.6 ± 110.8
7	2	5	12	0.400	6.1	2.648E+05	6.621E+05	101.5 ± 84.9
8	9	19	30	0.474	9.3	4.767E+05	1.006E+06	120.0 ± 48.6
9	13	20	30	0.650	9.8	6.886E+05	1.059E+06	164.1 ± 58.6
10	2	4	30	0.500	2.0	1.059E+05	2.119E+05	126.6 ± 109.7
11	2	2	9	1.000	3.3	3.531E+05	3.531E+05	250.7 ± 250.8
12	10	22	12	0.455	26.8	1.324E+06	2.913E+06	115.2 ± 44.0
13	1	1	12	1.000	1.2	1.324E+05	1.324E+05	250.7 ± 354.6
14	13	52	42	0.250	18.1	4.919E+05	1.967E+06	63.6 ± 19.8
15	1	2	9	0.500	3.3	1.766E+05	3.531E+05	126.6 ± 155.1
16	9	15	8	0.600	27.4	1.788E+06	2.980E+06	151.6 ± 64.0
17	0	3	14	0.000	3.1	0.000E+00	3.405E+05	0.0 ± 0.0
18	21	62	20	0.339	45.4	1.669E+06	4.926E+06	86.0 ± 21.8
19	30	95	70	0.316	19.9	6.810E+05	2.157E+06	80.2 ± 16.9
20	2	15	64	0.133	3.4	4.966E+04	3.724E+05	34.0 ± 25.6
130		359			11.1	4.367E+05	1.206E+06	

Area of basic unit = 6.293E-07 cm<sup>2</sup>

Chi Squared = 12.837 with 19 degrees of freedom

P(chi squared) = 84.7 %

Correlation Coefficient = 0.959

Variance of SQR(Ns) = 1.98

Variance of SQR(Ni) = 5.69

Age Dispersion = 0.927 % (did not converge)

Ns/Ni = 0.362 ± 0.037

Mean Ratio = 0.441 ± 0.056

Ages calculated using a zeta of 359.6 ± 5 for SRM612 glass

Rho D = 1.422E+06cm<sup>-2</sup>; ND = 2237

POOLED AGE = 91.9 ± 9.7 Ma

MEAN AGE = 111.9 ± 14.4 Ma

CENTRAL AGE = 91.9 ± 9.7 Ma

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## GC278-11 APATITE

IRRADIATION G147

SLIDE NUMBER 8

COUNTED BY: GML

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	27	73	18	0.370	59.4	2.384E+06	6.445E+06	93.9 ± 21.3
2	43	89	28	0.483	46.5	2.440E+06	5.051E+06	122.4 ± 22.9
3	0	5	56	0.000	1.3	0.000E+00	1.419E+05	0.0 ± 0.0
4	2	10	40	0.200	3.7	7.945E+04	3.973E+05	50.9 ± 39.5
5	3	4	35	0.750	1.7	1.362E+05	1.816E+05	188.9 ± 144.4
6	4	17	64	0.235	3.9	9.932E+04	4.221E+05	59.9 ± 33.3
7	13	31	40	0.419	11.3	5.164E+05	1.232E+06	106.3 ± 35.2
8	8	44	40	0.182	16.1	3.178E+05	1.748E+06	46.3 ± 17.8
9	0	7	40	0.000	2.6	0.000E+00	2.781E+05	0.0 ± 0.0
10	19	56	30	0.339	27.3	1.006E+06	2.966E+06	86.2 ± 23.0
11	4	14	50	0.286	4.1	1.271E+05	4.449E+05	72.6 ± 41.2
12	7	58	30	0.121	28.3	3.708E+05	3.072E+06	30.8 ± 12.3
13	4	8	49	0.500	2.4	1.297E+05	2.594E+05	126.6 ± 77.6
14	6	18	32	0.333	8.2	2.980E+05	8.938E+05	84.7 ± 40.0
15	17	34	16	0.500	31.1	1.688E+06	3.377E+06	126.6 ± 37.7
16	2	11	35	0.182	4.6	9.080E+04	4.994E+05	46.3 ± 35.6
17	0	2	24	0.000	1.2	0.000E+00	1.324E+05	0.0 ± 0.0
18	0	4	16	0.000	3.7	0.000E+00	3.973E+05	0.0 ± 0.0
19	4	3	35	1.333	1.3	1.816E+05	1.362E+05	332.2 ± 253.8
20	74	125	32	0.592	57.2	3.675E+06	6.207E+06	149.6 ± 22.3
237		613			12.6	5.304E+05	1.372E+06	

Area of basic unit = 6.293E-07 cm<sup>2</sup>

Chi Squared = 38.473 with 19 degrees of freedom

P(chi squared) = 0.5 %

Correlation Coefficient = 0.931

Variance of SQR(Ns) = 5.10

Variance of SQR(Ni) = 8.15

Age Dispersion = 35.067 %

Ns/Ni = 0.387 ± 0.030

Mean Ratio = 0.341 ± 0.071

Ages calculated using a zeta of 359.6 ± 5 for SRM612 glass

Rho D = 1.422E+06cm<sup>-2</sup>; ND = 2237

POOLED AGE = 98.1 ± 7.9 Ma

MEAN AGE = 86.7 ± 18.0 Ma

CENTRAL AGE = 86.4 ± 11.3 Ma

## GC278-12 APATITE

IRRADIATION GC278:G147

SLIDE NUMBER 9

COUNTED BY: GML

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	2	2	16	1.000	1.8	1.986E+05	1.986E+05	250.7 ± 250.8
2	0	3	15	0.000	2.9	0.000E+00	3.178E+05	0.0 ± 0.0
3	0	7	36	0.000	2.8	0.000E+00	3.090E+05	0.0 ± 0.0
4	2	2	30	1.000	1.0	1.059E+05	1.059E+05	250.7 ± 250.8
5	3	4	25	0.750	2.3	1.907E+05	2.542E+05	188.9 ± 144.4
6	0	4	32	0.000	1.8	0.000E+00	1.986E+05	0.0 ± 0.0
7	7	9	70	0.778	1.9	1.589E+05	2.043E+05	195.8 ± 98.8
8	3	6	20	0.500	4.4	2.384E+05	4.767E+05	126.6 ± 89.6
9	5	6	48	0.833	1.8	1.655E+05	1.986E+05	209.6 ± 127.0
10	1	1	40	1.000	0.4	3.973E+04	3.973E+04	250.7 ± 354.6
11	3	3	30	1.000	1.5	1.589E+05	1.589E+05	250.7 ± 204.8
12	4	9	60	0.444	2.2	1.059E+05	2.384E+05	112.6 ± 67.7
13	8	22	70	0.364	4.6	1.816E+05	4.994E+05	92.3 ± 38.2
14	2	2	18	1.000	1.6	1.766E+05	1.766E+05	250.7 ± 250.8
15	2	5	45	0.400	1.6	7.063E+04	1.766E+05	101.5 ± 84.9
16	6	8	80	0.750	1.5	1.192E+05	1.589E+05	188.9 ± 102.2
17	2	13	36	0.154	5.3	8.828E+04	5.738E+05	39.2 ± 29.8
18	2	6	60	0.333	1.5	5.297E+04	1.589E+05	84.7 ± 69.2
19	12	31	100	0.387	4.5	1.907E+05	4.926E+05	98.2 ± 33.5
20	4	5	48	0.800	1.5	1.324E+05	1.655E+05	201.3 ± 135.2
					68	148	2.5	1.229E+05 2.676E+05

Area of basic unit = 6.293E-07 cm<sup>2</sup>

Chi Squared = 16.753 with 19 degrees of freedom

P(chi squared) = 60.7 %

Correlation Coefficient = 0.821

Variance of SQR(Ns) = 0.83

Variance of SQR(Ni) = 1.25

Age Dispersion = 1.439 % (did not converge)

Ns/Ni = 0.459 ± 0.067

Mean Ratio = 0.575 ± 0.081

Ages calculated using a zeta of 359.6 ± 5 for SRM612 glass

Rho D = 1.422E+06cm<sup>-2</sup>; ND = 2237

POOLED AGE = 116.4 ± 17.3 Ma

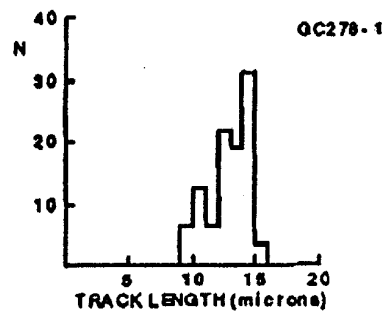
MEAN AGE = 145.3 ± 20.8 Ma

CENTRAL AGE = 116.4 ± 17.3 Ma

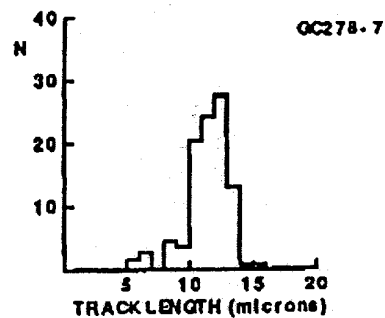
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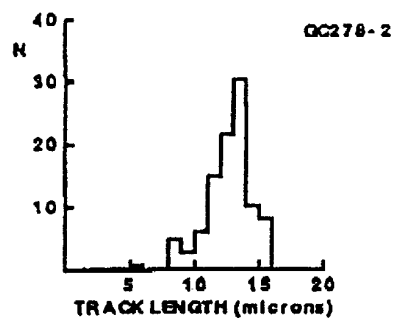
GC278-1



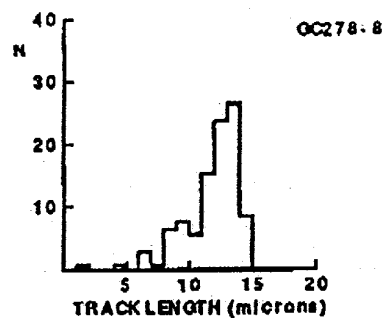
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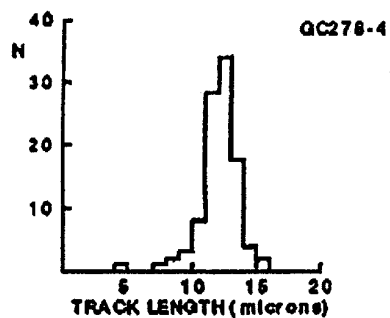
GC278-2



GC278-8



GC278-4



GC278-9

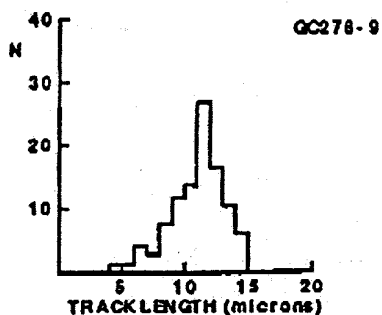
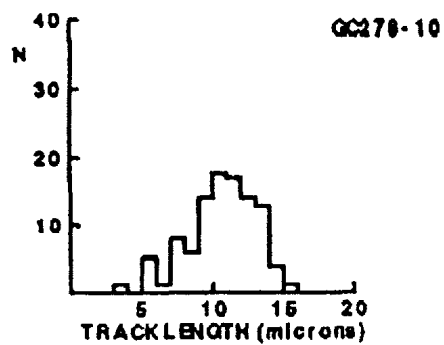


Figure 3: Distributions of confined track lengths in samples from well Cost #1, Lower Cook Inlet.

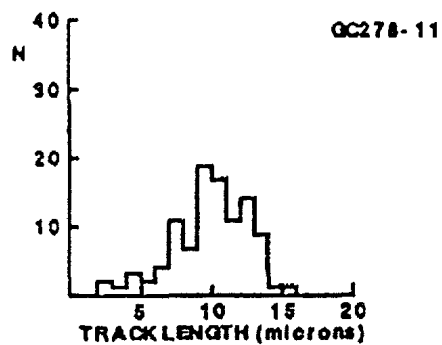
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## GC278-10



## GC278-11



## GC278-12

