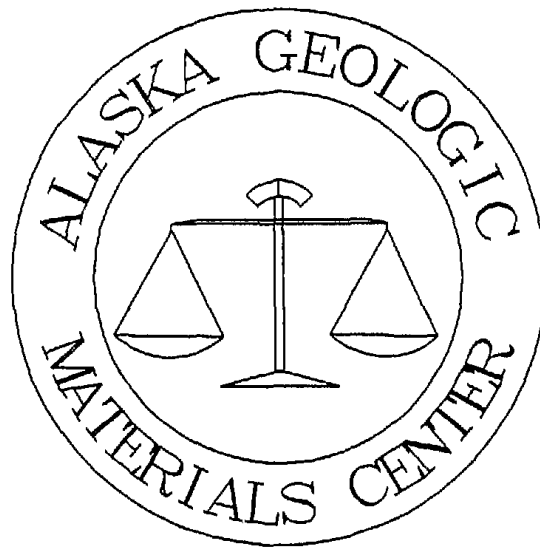


Potassium-argon whole rock age determinations of core samples from the following Copper River Basin oil and gas exploratory wells:

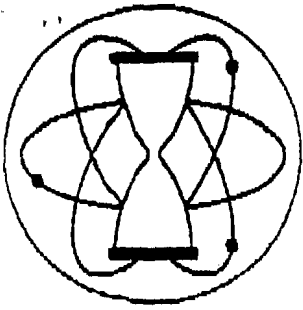
Aledo Oil Co. Eureka No. 2 (8,544.5' - 8,545.5'),
Amoco Production Co. Ahtna Inc. No. 1 (6,878' - 6,880'; 6,891' - 6,893'; and
7,885' - 7,887'),
Amoco Production Co. Ahtna Inc. No. A-1 (4,894.5' - 4,900.9'), and
Mobil Oil Corp. Salmonberry Lake Unit No. 1 (7,744' - 7,751').



Received 13 July 1995

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Alaska Geologic Materials Center Data Report No. 247



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TELEPHONE: (617) 676-3691 TELEFAX: (617) 661-0148

POTASSIUM-ARGON AGE DETERMINATION

REPORT OF ANALYTICAL WORK

Our Sample No. ██████████

Date Received: 5/12/95

Your Reference: Letter of 5/10/95

Date Reported: 6/23/95

Submitted By:

Sample Description & Locality: Sample # 1 AMOCO ANTNA *1 CORE *1
6878-79 &
6879-80 COMPOSITE

Material Analyzed: Whole rock, -80/+200 mesh.
Treated with dilute HF and HNO₃.

⁴⁰Ar/⁴⁰K = .009972

AGE = 164 +/- 5 M.Y.

Argon Analyses:

⁴⁰ Ar, ppm	⁴⁰ Ar/Total ⁴⁰ Ar	Ave. ⁴⁰ Ar, ppm
.006664	.524	.006698
.006731	.528	

Potassium Analyses:

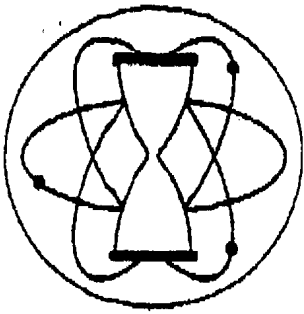
% K	Ave. % K	⁴⁰ K, ppm
0.556	0.563	0.672
0.570		

Constants Used:

$\lambda_2 = 4.962 \times 10^{-10}/\text{year}$
 $(\lambda_2 + \lambda'_2) = 0.581 \times 10^{-10}/\text{year}$
 $^{40}\text{K}/\text{K} = 1.193 \times 10^{-4} \text{ g/g}$

$$\text{AGE} = \frac{1}{\lambda_2 + (\lambda_2 + \lambda'_2)} \ln \left[\frac{\lambda_2 + (\lambda_2 + \lambda'_2)}{(\lambda_2 + \lambda'_2)} \times \frac{^{40}\text{Ar}}{^{40}\text{K}} + 1 \right]$$

Note: ⁴⁰Ar refers to radiogenic ⁴⁰Ar.



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POTASSIUM-ARGON AGE DETERMINATION

REPORT OF ANALYTICAL WORK

Our Sample No. XXXXXXXXXX

Date Received: 5/12/95

Your Reference: Letter of 5/10/95

Date Reported: 6/23/95

Submitted By:

Sample Description & Locality: Sample # 2

AMOCO - AHINA *1 CORE *1

6891-92 & 6892-93
COMPOSITE

Material Analyzed: Whole rock, -80/+200 mesh.
Treated with dilute HF and HNO₃.

⁴⁰Ar/⁴⁰K = .009739

AGE = 160 +/- 5 M.Y.

Argon Analyses:

⁴⁰ Ar, ppm	⁴⁰ Ar/Total ⁴⁰ Ar	Ave. ⁴⁰ Ar, ppm
.006750	.473	.006687
.006623	.525	

Potassium Analyses:

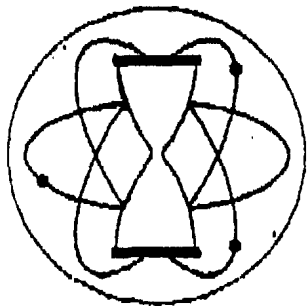
% K	Ave. % K	⁴⁰ K, ppm
0.583	0.576	0.687
0.568		

Constants Used:

$\lambda_p = 4.962 \times 10^{-10}/\text{year}$
 $(\lambda_p + \lambda') = 0.581 \times 10^{-10}/\text{year}$
 $^{40}\text{K}/\text{K} = 1.193 \times 10^{-4} \text{ g/g}$

$$\text{AGE} = \frac{1}{\lambda_p + (\lambda_p + \lambda')} \ln \left[\frac{\lambda_p + (\lambda_p + \lambda')}{(\lambda_p + \lambda')} \times \frac{^{40}\text{Ar}}{^{40}\text{K}} + 1 \right]$$

Note: ⁴⁰Ar refers to radiogenic ⁴⁰Ar.



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POTASSIUM-ARGON AGE DETERMINATION

REPORT OF ANALYTICAL WORK

Our Sample No. [REDACTED]

Date Received: 5/12/95

Your Reference: Letter of 5/10/95

Date Reported: 6/27/95

Submitted By:

Sample Description & Locality: Sample # 3 AMOCO AHTNA #1 CORE #2
 COMPOSITE FROM CHIPS
 7885-86 & 7886-87

Material Analyzed: Whole rock, -80/+200 mesh.
 Treated with dilute HF and HNO₃.

⁴⁰Ar/⁴⁰K = .01006

AGE = 165 +/- 4 M.Y.

Argon Analyses:

⁴⁰ Ar, ppm	⁴⁰ Ar/Total ⁴⁰ Ar	Ave. ⁴⁰ Ar, ppm
.04867	.875	.04829
.04790	.885	

Potassium Analyses:

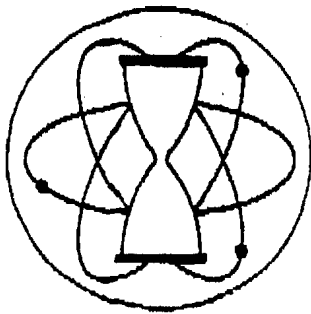
% K	Ave. % K	⁴⁰ K, ppm
4.216	4.025	4.802
4.027		
3.832		

Constants Used:

$\lambda_0 = 4.962 \times 10^{-10}/\text{year}$
 $(\lambda_0 + \lambda_1) = 0.581 \times 10^{-10}/\text{year}$
 $^{40}\text{K}/\text{K} = 1.193 \times 10^{-4} \text{ g/g}$

$$\text{AGE} = \frac{1}{\lambda_0 + (\lambda_0 + \lambda_1)} \ln \left[\frac{\lambda_0 + (\lambda_0 + \lambda_1)}{(\lambda_0 + \lambda_1)} \times \frac{^{40}\text{Ar}}{^{40}\text{K}} + 1 \right]$$

Note: ⁴⁰Ar refers to radiogenic ⁴⁰Ar.
 Units are in millions of years.



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POTASSIUM-ARGON AGE DETERMINATION

REPORT OF ANALYTICAL WORK

Our Sample No. XXXXXXXXXX

Date Received: 5/12/95

Your Reference: Letter of 5/10/95

Date Reported: 6/23/95

Submitted By:

Sample Description & Locality: Sample # 4 AMOCO-AHTNA A*(
 COMPOSITE FROM CHIPS
 4894.5/4895.5/4897.7/
 4898.1/4900.9

Material Analyzed: Whole rock, -80/+200 mesh.
 Treated with dilute HF and HNO₃.

⁴⁰Ar/⁴⁰K = .01002

AGE = 165 +/- 4 M.Y.

Argon Analyses:

⁴⁰ Ar, ppm	⁴⁰ Ar/Total ⁴⁰ Ar	Ave. ⁴⁰ Ar, ppm
.02051	.755	.02057
.02062	.690	

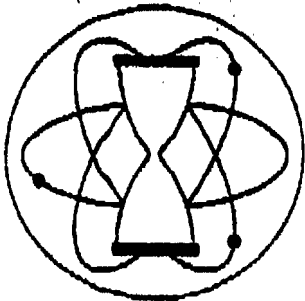
Potassium Analyses:

% K	Ave. % K	⁴⁰ K, ppm
1.737	1.720	2.052
1.703		

Constants Used:

$\lambda_2 = 4.962 \times 10^{-10}/\text{year}$
 $(\lambda_2 + \lambda'_2) = 0.581 \times 10^{-10}/\text{year}$
 $^{40}\text{K}/\text{K} = 1.193 \times 10^{-4} \text{ g/g}$

$$\text{AGE} = \frac{1}{\lambda_2 + (\lambda_2 + \lambda'_2)} \ln \left[\frac{\lambda_2 + (\lambda_2 + \lambda'_2)}{(\lambda_2 + \lambda'_2)} \times \frac{^{40}\text{Ar}}{^{40}\text{K}} + 1 \right]$$



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POTASSIUM-ARGON AGE DETERMINATION

REPORT OF ANALYTICAL WORK

Our Sample No. XXXXXXXXXX

Date Received: 5/12/95

Your Reference: Letter of 5/10/95

Date Reported: 6/28/95

Submitted By:

Sample Description & Locality: Sample # 5 ALEDO - EUREKA #2 CORE #1
COMPOSITE 8544.5 / 8545.0 a.
8545.5

Material Analyzed: Whole rock, -80/+200 mesh.
Treated with dilute HF and HNO₃.

⁴⁰Ar/⁴⁰K = .009495

AGE = 156 +/- 9 M.Y.

Argon Analyses:

⁴⁰ Ar, ppm	⁴⁰ Ar/Total ⁴⁰ Ar	Ave. ⁴⁰ Ar, ppm
.001013	.271	.001019
.001026	.215	

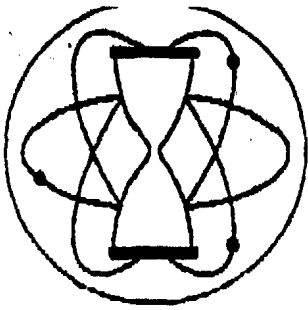
Potassium Analyses:

% K	Ave. % K	⁴⁰ K, ppm
0.088	0.090	0.107
0.092		

Constants Used:

$\lambda_2 = 4.962 \times 10^{-10}/\text{year}$
 $(\lambda_2 + \lambda'_2) = 0.581 \times 10^{-10}/\text{year}$
 $^{40}\text{K}/\text{K} = 1.193 \times 10^{-4} \text{ g/g}$

$$\text{AGE} = \frac{1}{\lambda_2 + (\lambda_2 + \lambda'_2)} \ln \left[\frac{\lambda_2 + (\lambda_2 + \lambda'_2)}{(\lambda_2 + \lambda'_2)} \times \frac{^{40}\text{Ar}}{^{40}\text{K}} + 1 \right]$$



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POTASSIUM-ARGON AGE DETERMINATION

REPORT OF ANALYTICAL WORK

Our Sample No. [REDACTED]

Date Received: 5/12/95

Your Reference: Letter of 5/10/95

Date Reported: 6/23/95

Submitted By:

Sample Description & Locality: Sample # 6 MOBIL SALMON BERRY LAKE #1
 CORE #2
 COMPOSITE - 7744 TO 51'

Material Analyzed: Whole rock, -80/+200 mesh.
 Treated with dilute HF and HNO₃.

⁴⁰Ar/⁴⁰K = .01008

AGE = 166 +/- 4 M.Y.

Argon Analyses:

⁴⁰ Ar, ppm	⁴⁰ Ar/Total ⁴⁰ Ar	Ave. ⁴⁰ Ar, ppm
.03997	.872	.04021
.04044	.889	

Potassium Analyses:

% K	Ave. % K	⁴⁰ K, ppm
3.373	3.343	3.988
3.313		

Constants Used:

$\lambda_2 = 4.962 \times 10^{-10}/\text{year}$
 $(\lambda_2 + \lambda'_2) = 0.581 \times 10^{-10}/\text{year}$
 $^{40}\text{K}/\text{K} = 1.193 \times 10^{-4} \text{ g/g}$

$$\text{AGE} = \frac{1}{\lambda_2 + (\lambda_2 + \lambda'_2)} \ln \left[\frac{\lambda_2 + (\lambda_2 + \lambda'_2)}{(\lambda_2 + \lambda'_2)} \times \frac{^{40}\text{Ar}}{^{40}\text{K}} + 1 \right]$$

: ⁴⁰Ar refers to radiogenic ⁴⁰Ar.