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REPORT OF ANALYTICAL WORK

POTASSIUM-ARGON AGE DETERMINATION

Our Sample No. R -1346

Your Reference:　S-2 (CLAM-1 Core 6) .5316-5323'

Submitted by:

Date Received: 9 September 1969
Date Reported: 15 September 1969

K. A. Richards
Esso Standard Oil (Australia) Ltd.
G.P.O. Box 4047
Sydney 2001, Australia

Sample Description & Locality:
Highly pyritic, basalt (or basic volcanic rock).

Material Analyzed:　Whole rock, crushed to -20/+200.

$Ar^{40}*/K^{40}$ =　0.0438

AGE = 630 ($\pm$21) x 10^6 years.

Argon Analyses:

$Ar^{40}*$, ppm.	$Ar^{40}*/$ Total Ar^{40}	Ave. $Ar^{40}*$, ppm.
0.1229	0.906	0.1243
0.1257	0.967	

Potassium Analyses:

% K	Ave. %K	K^{40}, ppm
2.302	2.326	2.838
2.349		

Constants Used:

λ_β = 4.72 x 10^{-10}/ year
λ_e = 0.585 x 10^{-10}/ year
K^{40}/K = 1.22 x 10^{-4} g./g.

$$AGE = \frac{1}{\lambda_e + \lambda_\beta} \ln\left[\frac{\lambda_\beta + \lambda_e}{\lambda_e} \times \frac{Ar^{40}*}{K^{40}} + 1\right]$$

Note: $Ar^{40}*$ refers to radiogenic Ar^{40}.