

**GEOHERMAL BRANCH**

**INTER-OFFICE MEMORANDUM**

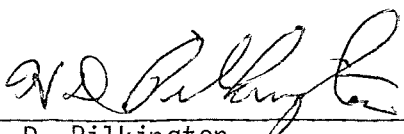
SUBJECT: K/Ar Data Dike Rock at Twin Buttes  
Deeth Area, Nevada

DATE: August 17, 1981

TO: J. E. Deymonaz, H. J. Olson

FROM: H. D. Pilkington

The K/Ar data on biotite from the dike rock in the saddle between the Twin Buttes is  $40.1 \pm 2.0$  m.y. (analysis attached). I do not see any reason for collecting a sample from the dikes at the southern end since they are probably of the same general age.

  
\_\_\_\_\_  
H. D. Pilkington

HDP/c

attachments

10 August 1981

Mr. H.D. Pilkington  
AMAX Exploration, Inc.  
Geothermal Branch  
7100 West 44th Ave.  
Wheatridge, Colorado 80033

re: W.O. #3-5403-122

Dear Mr. Pilkington:

We have completed the analysis of your sample submitted for K/Ar age determination. The results for the analysis are as follows:

Isotopes Sample #	Your Sample #	Isotopic Age (m.y.)	scc Ar <sup>40</sup> Rad/gmx10 <sup>-5</sup>	% Ar <sup>40</sup> Rad	% K
KA81-182	Twin Bottles	40.1 ± 2.0	1.05	71.4	6.70
	B4#25		1.05	71.3	6.70
					6.61

The analysis was performed on a biotite separate.

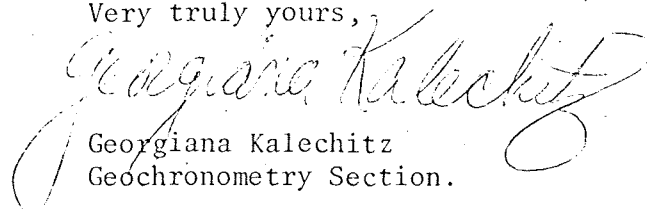
The constants for the age calculation are:  $\lambda_{\beta} = 4.962 \times 10^{-10} \text{yr}^{-1}$ ,  
 $\lambda_{\alpha} = 0.581 \times 10^{-10} \text{yr}^{-1}$ ,  $K^{40} = 1.167 \times 10^{-4}$  atom per atom of natural potassium.  
(Convention on decay constants, Subcommittee on Geochronology, 25th International Geological Congress, 1976).

The error indicated for the reported ages consists of a summation of all analytical errors. The argon extraction spike calibration against standard biotite limits the accuracy to 5%. Therefore, we have selected 5% as our minimum analytical error for samples with sufficient radiogenic argon. All samples are done in duplicate. The precision of the duplicate analysis is calculated. If the sum of the errors of the potassium and argon measurements exceeds 5%, the summation is reported as the analytical error.

If you have any questions concerning these results, please do not hesitate to contact me.

We look forward to being of further service to you.

Very truly yours,

  
Georgiana Kalechitz  
Geochronometry Section.

GK:bm