

# CONFIDENTIAL

University of Arizona  
Isotope Geochemistry Lab  
Date:

K-Ar Data on Young Rock Samples  
Cooperative Research Project with Union Oil Co.,  
Geothermal Division

Constants used:  
 $\lambda_{\beta} = 4.963 \times 10^{-10} \text{ yr}^{-1}$   
 $\lambda_e = 0.581 \times 10^{-10} \text{ yr}^{-1}$   
 $\lambda = 5.544 \times 10^{-10} \text{ yr}^{-1}$   
 $^{40}\text{K}/\text{K} = 1.167 \times 10^{-4} \text{ atom/atom}$

Sample No.	Sample description and location	K-analyses		Radiogenic $^{40}\text{Ar}$ $\times 10^{-12}\text{m/g}$		Percent atmospheric argon-40		Age in million years
		Individual % K	Mean	Individual Analyses	Mean	Individual Analyses	Mean	
UAKA 84-251	Feldspar concentrate Hydrothermally altered, hypabyssal intrusive (felsite) (#GDC - 21)	3.857	3.873	6.22	6.33	54.7	54.4	0.943±0.028
		3.875		6.42		54.1		
		3.877		6.26		54.9		
		3.882		6.44		54.1		
UAKA 84-252	Plagioclase, Dome Complex (Rainbow Mountain - 1)		0.584	0.341	0.363	92.2	91.4	0.359±0.050
		0.584		0.337		92.0		
		0.586		0.412		90.1		
		0.588						
UAKA 84-253	Feldspar concentrate Latite (ML 6526 1200')		3.402	1.274	1.244	74.3	75.7	0.211±0.013
		3.446		1.247		76.3		
		3.434		1.199		76.6		
		3.349		1.256		75.7		
		3.379						

Note: The remaining samples are in various stages of completion.

DA-GMT-912-5



Table 1

Sample No.	Rock Type	Phase Dated	%K	$^{40}\text{Ar}$ Total $\times 10^{-12}$ m/g	$^{40}\text{Ar}$ rdgc $\times 10^{-12}$ m/gm	Gls/Bt K Fspar	$^{40}\text{Ar}$ Total $\times 10^{-12}$ m/gm	Gls/Bt K Fspar	Age
UAKA 84-259	Obsidian	Feldspar Glass	5.156 3.452	13.24 3.52	$\leq 0.55$ 0.088	0.67	0.27	$< 0.062$ $0.015 \pm 0.019$	
UAKA 84-254	Air-fall tuff	Feldspar Glass	0.319 1.748	4.56 32.86	0.082 0.690	5.48	7.21	$0.148 \pm 0.071$ $0.228 \pm 0.169$	
UAKA 84-255	Obsidian	Feldspar Glass	0.498 3.042	13.55 87.11	$\leq 0.22$ $\leq 2.01$	6.11	6.43	$\leq 0.25$ $\leq 0.38$	
UAKA 84-118	Dacite	Feldspar Biotite	1.069 7.189	6.09 67.8	0.33 2.24	6.7	11.1	$0.177 \pm 0.04$ $0.180 \pm 0.05$	
		<i>DS-84-ET-1</i>							
UAKA 84-120	Dacite	Feldspar Biotite	3.645 5.99	99.1 134.1	8.72 15.73	1.64	1.36	$1.380 \pm 0.14$ $1.510 \pm 0.10$	
		<i>DS-84-ET-3</i>							

