$^{40}\text{Ar}/^{39}\text{Ar}$ Age-Spectrum and Laser Fusion Data for Volcanic Rocks in West Central Colorado

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**U.S. DEPARTMENT OF THE INTERIOR
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INTRODUCTION

This publication contains $^{40}\text{Ar}/^{39}\text{Ar}$ data of Cenozoic basalts and sanidine mineral separates from basalts and tuffs from west central Colorado and is intended only to be a preliminary publication of these results. Also included in this report is information on the location and elevation of the samples. The data contained herein are not interpreted in a geological context, and care should be taken by users unfamiliar with argon isotopic data in the use of these results. No geological meaning is implied for any of the apparent ages presented below and many of the individual apparent ages are not geologically meaningful. This report is primarily a detailed source document for subsequent publications that will integrate this data into a geological context.

SAMPLE LOCATIONS

All of the samples in this report were collected in west central Colorado. Table 1 is a listing of the location of all of the samples. This table includes the sample number, the U.S. Geological Survey 71/2' quadrangle that the sample is located on, the material dated, the latitude and longitude of the sample site, and the elevation of the sample site, in feet above sea level. In general, the samples are listed in order of decreasing age, and where known in stratigraphic order, with the stratigraphically youngest sample in a group listed first. Stratigraphic relations between many of the samples are not known. Those samples that are in a known stratigraphic sequence are marked with an asterisk.

METHODS

Sample Preparation

All of the samples were crushed, ground, and sized using 250, 180, and 150 μm sieves. The 250-180 μm size fraction of the basalts was leached in 10% hydrochloric acid to remove secondary calcite. Plagioclase, olivine and other phenocrysts, were removed from basalts using heavy liquids and magnetic separation techniques. Sanidine mineral separates, from both the tuffs and from a small number of basalts were produced using magnetic separation, heavy liquids and hand picking to a purity of >99%. All samples were washed in acetone, alcohol, and deionized water(X3) in a Branson B-220 ultrasonic cleaner to remove dust and then re-sieved by hand using a 100 μm sieve.

Amounts between 250 and 1000 mg of basalt and 50 mg of sanidine were packaged in copper or aluminum capsules and sealed under vacuum in quartz vials. The quartz vials were irradiated in several packages in the central thimble facility at the U.S. Geological Survey TRIGA reactor (Dalrymple and Lanphere, 1981) in Denver, Colorado. The neutron fluence monitor mineral used in all packages was Fish

Table 1. Material dated, elevation, and location of samples. See text for explanation.

Sample#	Material dated	7 1/2' Quadrangle	Elevation	Latitude	Longitude
Flank of Mt Sopris					
K97-8-11F	Sanidine	Basalt	8200	39.3485	107.0667
Dotsero					
K97-10-7K5	Basalt	Dotsero	8130	39.6644	107.0076
Castle Peak					
2ABS13-9-99*	Basalt	Castle Peak	11200	39.7725	106.8367
2BBS13-9-99*	Basalt	Castle Peak	11200	39.7725	106.8367
2CBS13-9-99*	Basalt	Castle Peak	11200	39.7725	106.8367
1ABS13-9-99*	Basalt	Castle Peak	11160	39.7725	106.8372
1CBS13-9-99*	Basalt	Castle Peak	11160	39.7725	106.8372
1DBS13-9-99*	Basalt	Castle Peak	11160	39.7725	106.8372
Devils Causeway					
3BBS13-9-99	Basalt	Devils Causeway	10760	40.0333	107.1275
3CBS13-9-99	Basalt	Devils Causeway	10760	40.0333	107.1275
Yarmony Mountain					
K97-8-13A1-3*	Basalt	McCoy	9360	39.9119	106.6494
K97-8-13A1-4*	Basalt	McCoy	9360	39.9119	106.6494
K97-8-13A1	Basalt	McCoy	9200	39.9133	106.6542
K97-8-13A2	Basalt	McCoy	9200	39.9133	106.6542
K97-8-13B2*	Basalt	McCoy	8920	39.9158	106.6528
K97-8-13B3*	Basalt	McCoy	8920	39.9158	106.6528
K97-8-13C2*	Basalt	State Bridge	6840	39.8965	106.6050
K97-8-13C3*	Basalt	State Bridge	6840	39.8965	106.6050
Gypsum					
K99-10-24A3	Basalt	Gypsum	6960	39.6838	106.9675
K99-10-24A5	Basalt	Gypsum	6960	39.6838	106.9675
Spring Valley					
K97-10-8C2	Basalt	Glenwood Springs	6870	39.5150	107.2700
K97-10-8C4	Basalt	Glenwood Springs	6870	39.5150	107.2700
Porphyry Mtn					
JS-98-13	Sanidine	Burns South	6520	39.8486	106.9531
JS-98-25	Sanidine	Sugarloaf Mtn	7280	39.8211	107.0039
JS-98-5	Sanidine	Sugarloaf Mtn	7200	39.8263	107.0030
JS-98-93	Sanidine	Sugarloaf Mtn	7080	39.8321	107.0004
JS-98-2	Sanidine	Sugarloaf Mtn	7160	39.8056	107.0202
K97-8-13D	Sanidine	Sugarloaf Mtn	6980	39.8215	107.0028
JS-98-17	Sanidine	Sugarloaf Mtn	7280	39.8122	107.0188
Flat Tops					
K99-8-24A*	Basalt	Sweetwater Lake	11640	39.8664	107.1257
K99-8-24B1*	Basalt	Sugarloaf Mtn	11320	39.8701	107.1220
K99-8-24B3*	Basalt	Sugarloaf Mtn	11320	39.8701	107.1220
K99-8-24C*	Basalt	Sugarloaf Mtn	11165	39.8701	107.1061
K99-8-24D1*	Basalt	Sugarloaf Mtn	10920	39.8731	107.1014
K99-8-24D2*	Basalt	Sugarloaf Mtn	10920	39.8731	107.1014
K99-8-24E*	Basalt	Sugarloaf Mtn	10770	39.8733	107.0989

Table 1. Continued.

Sample#	Material dated	7 1/2' Quadrangle	Elevation	Latitude	Longitude
Poison Creek Debris Flow					
JS-99-8A	Basalt	Sugarloaf Mtn	7400	39.8052	107.1152
JS-99-8B	Basalt	Sugarloaf Mtn	7380	39.8056	107.0125
JS-99-8C	Basalt	Sugarloaf Mtn	7320	39.8070	107.1318
JS-99-9	Basalt	Sugarloaf Mtn	7240	39.8052	107.0151
JS-99-10	Basalt	Sugarloaf Mtn	7040	39.8061	107.0034
Sopris Bowl					
L-223	Basalt	Carbondale	7340	39.3900	107.1500
BR6(3)	Basalt	Basalt	6850	39.3600	107.0590
Ba36(1)	Basalt	Basalt	7260	39.3590	107.0550
Basalt Mtn.,top					
K97-8-15C2	Basalt	Leon	10720	39.4106	107.0139
K97-8-15C4	Basalt	Leon	10720	39.4106	107.0139
K97-8-15B	Basalt	Leon	10460	39.4097	107.0158
L-37	Basalt	Leon	10740	39.4110	107.0150
Basalt Mtn.,west flank					
L-176	Basalt	Leon	8160	39.4130	107.0660
Basalt Mtn., north rim					
L-91A1	Basalt	Leon	9480	39.4420	107.0330
L-39	Basalt	Leon	9540	39.4410	107.0390
L-181	Basalt	Leon	9540	39.4450	107.0180
L-187D1*	Basalt	Leon	9720	39.4320	107.0450
L-187B3*	Basalt	Leon	9600	39.4310	107.0450
L-187A2*	Basalt	Leon	9560	39.4310	107.0460
Basalt Mtn., south					
L-38A	Basalt	Leon	9840	39.3990	107.0020
K97-8-11E1*	Basalt	Leon	9680	39.3998	107.0022
K97-8-11E2*	Basalt	Leon	9600	39.3998	107.0022
K97-8-11D3*	Basalt	Leon	9600	39.3998	107.0039
K97-8-11C1*	Basalt	Leon	9540	39.3998	107.0039
K97-8-11C3*	Basalt	Leon	9540	39.3998	107.0039
K97-8-11B*	Basalt	Leon	9480	39.3998	107.0039
K97-8-11A1*	Basalt	Leon	9400	39.3998	107.0039
K97-8-11A2*	Basalt	Leon	9400	39.3998	107.0039
Grand Mesa, Mesa Lakes					
K98-8-18F2*	Basalt	Mesa Lakes	10640	39.0419	108.0667
K98-8-18F3*	Basalt	Mesa Lakes	10640	39.0419	108.0667
K98-8-18E4*	Basalt	Mesa Lakes	10560	39.0467	108.0661
K98-8-18E5*	Basalt	Mesa Lakes	10560	39.0467	108.0661
K98-8-18D1*	Basalt	Mesa Lakes	10520	39.0489	108.0656
K98-8-18C1*	Basalt	Mesa Lakes	10500	39.0503	108.0653
K98-8-18C2*	Basalt	Mesa Lakes	10500	39.0503	108.0653
K98-8-18B1*	Basalt	Mesa Lakes	10490	39.0508	108.0647
K98-8-18B2*	Basalt	Mesa Lakes	10490	39.0508	108.0647
K98-8-18A3*	Basalt	Mesa Lakes	10480	39.0514	108.0639
K98-8-18A4*	Basalt	Mesa Lakes	10480	39.0514	108.0639
K98-8-17B6*	Basalt	Mesa Lakes	10440	39.0525	108.0611
K98-8-17A4*	Basalt	Mesa Lakes	10400	39.0528	108.0597

Table 1. Continued.

Sample#	Material dated	7 1/2' Quadrangle	Elevation	Latitude	Longitude
Grand Mesa, Lands End					
K98-8-18I1*	Basalt	Lands End	9880	39.0247	108.2297
K98-8-18I4*	Basalt	Lands End	9880	39.0247	108.2297
K98-8-18H4*	Basalt	Lands End	9840	39.0244	108.2286
K98-8-18G2*	Basalt	Lands End	9800	39.0239	108.2261
K98-8-18G5*	Basalt	Lands End	9800	39.0239	108.2261
Missouri Heights					
K97-8-15A3	Basalt	Leon	7290	39.4214	107.0917
K97-8-15A4	Basalt	Leon	7290	39.4214	107.0917
K97-8-12F1	Basalt	Leon	6760	39.4086	107.0972
K97-8-12F2	Basalt	Leon	6760	39.4086	107.0972
K97-8-12E1	Basalt	Leon	6755	39.4086	107.0972
K97-8-12E2	Basalt	Leon	6755	39.4086	107.0972
K97-10-8A2	Basalt	Carbondale	6740	39.4219	107.1500
K97-10-8A4	Basalt	Carbondale	6740	39.4219	107.1500
Heuschkel Park					
K97-10-8E1	Basalt	Carbondale	7440	39.4353	107.2000
K97-10-8E3	Basalt	Carbondale	7440	39.4353	107.2000
K97-10-8F3	Basalt	Carbondale	7420	39.4344	107.2008
K97-10-8F4	Basalt	Carbondale	7420	39.4344	107.2008
Red Canyon Graben					
K97-10-8B1	Basalt	Glenwood Springs	6800	39.5194	107.2756
K97-10-8B3	Basalt	Glenwood Springs	6800	39.5194	107.2756
Upper Cattle Creek					
L60	Basalt	Leon	8040	39.4750	107.0610
Spring Valley II					
K97-10-8D1	Basalt	Glenwood Springs	7000	39.5194	107.2717
K97-10-8D2	Basalt	Glenwood Springs	7000	39.5194	107.2717
McNulty Pit					
K97-8-12G	Basalt	Leon	7405	39.4675	107.1114
K97-8-12H	Basalt	Leon	7380	39.4631	107.1089
Griffith Pit					
L244-1	Basalt	Leon	7440	39.4330	107.0830
L244-2	Basalt	Leon	7440	39.4330	107.0830
L-244	Sanidine	Leon	7440	39.4330	107.0830
L-245	Sanidine	Leon	7520	39.4339	107.0800
Triangle Peak					
K97-8-12B1*	Basalt	Woody Creek	8840	39.3056	106.9153
K97-8-12B2*	Basalt	Woody Creek	8840	39.3056	106.9153
K99-8-22B2*	Basalt	Woody Creek	8560	39.3047	106.9167
K99-8-22B3*	Basalt	Woody Creek	8560	39.3047	106.9167
K97-8-12A2*	Basalt	Woody Creek	8400	39.3028	106.9167
K97-8-22A1*	Basalt	Woody Creek	8400	39.3047	106.9174
K99-8-22A4*	Basalt	Woody Creek	8400	39.3047	106.9174
Willow Peak					
K97-10-7F	Basalt	Dotsero	8320	39.6594	107.1247
K97-10-7G	Basalt	Dotsero	8275	39.6494	107.1242

Canyon Tuff (FCT-3) sanidine with an age of 27.79 Ma (Kunk et al., 1985; Cebula et al 1986) relative to MMhb-1 with an age of 519.4 ± 2.5 Ma (Alexander et al., 1978; Dalrymple et al., 1981). The type of container, and the geometry of samples and standards is similar to that described by Snee et al. (1988).

Sample Analysis

All basalt samples were analyzed at the U.S. Geological Survey, Denver, Colorado on a VG Isotopes, Ltd., Model 1200 B Mass Spectrometer fitted with an electron multiplier using the $^{40}\text{Ar}/^{39}\text{Ar}$ step heating method of dating. Heating for 10 minutes per step followed a schedule of 4-12 steps per sample. Heating schedules were designed such that the percentage of ^{39}Ar released per step was limited to less than 20% of the total released for most samples.

Basalt samples were heated in a small volume, molybdenum-lined, low-blank tantalum resistance furnace similar to that described by Staudacher (1978). Temperature was monitored by a W_5Re - W_{26}Re thermocouple and controlled by a proportional, programmable controller. The furnace and the rear manifold were pumped between steps with a turbo molecular pump. Two isolated ion pumps evacuated the front manifold and the mass spectrometer flight-tube between each incremental step. Prior to analyzing in the mass spectrometer, the gas was purified in the rear manifold by a SAES ST707 Zr-V-Fe getter operated at room temperature and a hot Re filament. A cold finger in the rear manifold, immersed in liquid N_2 , was used to freeze out H_2O . Gas was equilibrated with the front manifold, then isolated and cleaned in the front manifold with a SAES ST101 Al-Zr getter operated at 400°C and a Ti getter operated at 350°C .

An activated charcoal finger submerged in a thermally equilibrated mixture of dry ice and acetone in the front manifold was used to remove gasses with a molecular weight greater than 60 or 80 (primarily other noble gasses) prior to the expansion of the argon dominated gas into the mass spectrometer. The gas was further purified in the mass spectrometer by a second SAES ST101 active gas getter operated at room temperature. Its successful operation could be monitored by the drop in counts of mass 44 (dominated by CO_2) after the first gas analysis cycle. Argon isotopes with masses 40 through 36 and CO_2 (mass 44) were analyzed as a function of time in five analytical cycles. ^{40}Ar , ^{39}Ar , ^{38}Ar , and ^{37}Ar peaks and their baselines, were measured for five 1.28 second integrations in each of the five cycles. ^{36}Ar and its baselines were measured for twenty 1.28 second integrations each of the five cycles. After the analysis the mass spectrometer was evacuated. All phases of the sample heating, cleanup, equilibration, and analysis were performed under computer control.

All sanidine samples were analyzed at the U.S. Geological Survey in Denver, Colorado in a MAP 216 mass spectrometer fitted with an electron multiplier using the $^{40}\text{Ar}/^{39}\text{Ar}$ -laser fusion method of dating. For each sample, 8 to 10 individual grains of sanidine were fused using a Synrad model 48-5-28(w) 50 watt CO_2 laser. The laser chamber and manifold were pumped between analyses with a turbomolecular pump. An isolated ion pump was used to pump the mass spectrometer. Prior to mass spectrometer analysis the gas was purified in the manifold by two SAES ST101 Al-Zr

getters, one operated at room temperature and the other at 400°C, and a hot Re filament. The argon rich gas was further purified by a third SAES ST 101 getter operated at room temperature in the flight tube of the mass spectrometer. Argon isotopes with masses 40 through 36 were analyzed as a function of time in six analytical cycles. Baselines were measured for ^{39}Ar and ^{36}Ar . The ^{36}Ar baselines were subtracted from the ^{40}Ar , ^{38}Ar , ^{37}Ar and ^{36}Ar peaks. The ^{39}Ar baseline was subtracted from the ^{39}Ar peak to reduce the influence of the tail of the ^{40}Ar peak. All phases of the sample heating, cleanup, equilibration, and analysis were performed under computer control.

Isotopic Data Reduction

All the isotopic data produced on the VG 1200b were reduced using an updated version of the computer program ArAr* (Haugerud and Kunk, 1988). Isotopic data from the MAP 216 was reduced using the computer program Mass Spec (Deino, 2001). We used the decay constants recommended by Steiger and Jäger (1977). The isotopic measurements made in the five- or six-cycle analysis had baseline values subtracted and then were regressed, to time zero, using standard linear regression techniques. These regressed peak values and associated analytical uncertainties were used in data reduction. For the VG 1200b, full system blanks were measured prior to the suite of analyses made on each sample and then subtracted from the analytical results. For the MAP 216, blanks were measured every fourth laser fusion analysis, and several of these were averaged before subtraction from the regressed peak values. Error estimates of the blanks were quadratically combined with the analytical errors and propagated through the error equations.

Corrections for interfering reactor-produced argon isotopes from Ca, K, and Cl in the sample were made using the production ratios given in Dalrymple et al. (1981) and Roddick (1983). Errors in calculated ages or ratios include; measurement uncertainty in the analysis, decay factor uncertainties, uncertainties in measured atmospheric or calculated initial $^{40}\text{Ar}/^{36}\text{Ar}$ ratios, the irradiation parameter J, the production ratios of the various reactor induced argon producing reactions, the initial $^{38}\text{Ar}/^{36}\text{Ar}$ ratio, and the age of the monitor (Haugerud and Kunk, 1988).

The tables and figures in this report include the identification of (for the VG1200b) individual step ages, plateau ages, total gas ages, (for both the VG 1200b and the Map 216) inverse isochron ages, (for the MAP 216) laser fusion ages, and weighted mean ages. Total gas ages represent the age calculated from the addition of all of the measured argon peaks for all steps, in a single sample. The total gas ages are roughly equivalent to conventional K/Ar ages. No analytical precision is calculated for total gas ages. Plateau ages were determined using the definition of Fleck, Sutter, and Elliot(1977) as modified by Haugerud and Kunk(1988). Laser fusion ages are the results of a single laser fusion analysis. Weighted mean ages are the weighted average of several laser fusion ages that agree within the limits of error. Inverse isotope correlation analysis of the analytical data to assess if non-atmospheric argon components were trapped in any samples and to calculate an inverse isochron age was done using the method of York (1969).

RESULTS

⁴⁰Ar/³⁹Ar Data

The ⁴⁰Ar/³⁹Ar geochronologic results in this report are presented in two different formats. Data within both formats are arranged in the same order as the section on sample locations. The first of these formats is a condensed tabular data summary (Table 2). These tables summarize the data contained in the subsequent, more detailed individual data sets. Included in this table are: the sample number, the material analyzed, the apparent age and its error, the percent ³⁹Ar of the total that this apparent age represents (or LF for laser fusion analyses), the number of steps / total number of steps that this apparent age represents, and a comment listing the type of apparent age.

The second format, individual data sets (Table 3), include tabular data, as well as two or three graphical representations of some of the age spectrum data on facing pages. Each sample starts with a line that gives the sample number, the sample weight in grams, the material analyzed, the packet and package number from the irradiation and the J-value used with its analytical uncertainty. The table includes; a letter designation for the individual argon analysis, the temperature of the step (or LF for laser fusion analyses), the percent of potassium derived ³⁹Ar_K for each step (or asterisks for laser fusion analyses), the radiogenic yield (percentage of ⁴⁰Ar that is derived from the decay of potassium), moles of ³⁹Ar_K ($\times 10^{-12}$), a corrected ⁴⁰Ar/³⁹Ar_K ratio from which the age can be directly calculated, calculated apparent K/Ca, and K/Cl ratios for each step (or asterisk if the measured ³⁸Ar or ³⁷Ar signal measured was less than the detection limit of the mass spectrometer), a calculated age for the step, in millions of years and an estimate of the precision of each age at the 1 sigma level. The sample precision includes estimates of the errors that are unique to a single sample and can be used only for comparisons with other steps of the same sample. This error estimate does not include the error in "J". The second to last line in the age spectra data sets represents the total gas results for the sample, no analytical error is calculated for the age in this line because the age spectra are frequently disturbed and the error that could be calculated here would be meaningless. The final line in the age spectrum data sets indicates if there was a plateau age. If the sample has an age plateau, the percentage of ³⁹Ar on the plateau, the steps on the plateau, and the plateau age and its precision are reported. The final line of the laser fusion data sets identifies the weighted mean age and its error of analyses that agree in age within analytical error. The number of analyses included in this weighted mean is also indicated. Analyses not included in the weighted mean age are italicized. Both plateau ages and weighted mean ages include the error in the irradiation parameter J.

The figures associated with each age spectrum data set include three graphs. For basalt data the lower and larger graph on the right plots cumulative percent ³⁹Ar_K of the individual heating steps against apparent age in millions of years. Errors in age are graphically displayed at the two sigma level of confidence. Also displayed are the apparent K/Ca ratios of each step against the cumulative ³⁹Ar_K released. The graph on the left is the inverse isotope correlation diagram, which plots ³⁹Ar/⁴⁰Ar against

$^{36}\text{Ar}/^{40}\text{Ar}$. Included in this figure are; the apparent age of the sample (calculated from the inverse of the X-axis intercept), the calculated initial $^{40}\text{Ar}/^{36}\text{Ar}$ ratio of the sample (the inverse of the y-axis intercept), the MSWD of the data (a goodness of fit indicator), and the points that were excluded from the calculation of the above mentioned results.

The laser fusion data sets replace the age spectrum diagram and K/Ca diagram with an age probability distribution diagram, frequently referred to as an ideogram and two smaller graphs. In the ideogram a solid line represents the weighted mean age of the sample, while dashed lines represent the data with outliers included. Immediately above the ideogram are two smaller graphs, the lower of which plots the age of sample ages with error bars, and the upper graph is radiogenic yield. In both of these upper graphs filled circles represent data that are included in the weighted mean age, while open circles are used for those that were excluded from the weighed mean age.

For additional information on the sample data sets see Haugerud and Kunk (1988) and Deino (2001)

Table 2. Summary of argon isotopic results.

Sample	Apparent Age and Error (Ma)	% ³⁹ Ar	# Steps Total Steps	MSWD	⁴⁰ Ar/ ³⁶ Ar (Initial)	Comment
Flank of Mt Sopris						
K97-8-11F	35.21 ± 0.03	LF	9/10	0.4	295.5	Weighted Mean
	35.27 ± 0.17	LF	9/10		225.5 ± 22.4	Isochron
Dotsero						
K97-10-7K5	23.41 ± 0.13	51.9	3/10	2.543	295.5	Plateau
	23.12 ± 0.38	78.6	5/7		486.4 ± 70.9	Isochron
	23.8	100	7/7		295.5	Total gas
Castle Peak						
2ABS13-9-99	22.25 ± 0.26	64.6	3/7	1.999	364.4 ± 19.7	Isochron
	22.53	100	7/7		295.5	Total Gas
2BBS13-9-99	22.59 ± 0.14	82.4	4/8	0.722	342.6 ± 5.4	Isochron
	23.12	100	8/8		295.5	Total Gas
2CBS13-9-99	22.62 ± 0.27	97.6	6/8	0.54	342.1 ± 16.8	Isochron
	23.03	100	8/8		295.5	Total Gas
1ABS13-9-99	23.49 ± 0.16	100	8/8	9.967	299.9 ± 1.7	Isochron
	23.34	100	8/8		295.5	Total Gas
1CBS13-9-99	22.68 ± 0.15	82.1	4/8	1.018	356.2 ± 7.8	Isochron
	23.34	100	8/8		295.5	Total Gas
1DBS13-9-99	22.91 ± 0.12	81.1	4/7	1.233	328.8 ± 4.4	Isochron
	23.27	100	7/7		295.5	Total Gas
Devils Causeway						
3BBS13-9-99	23.05 ± 0.08	52.2	2/6	0.232	295.5	Plateau
	22.61 ± 0.41	98.2	4/6		320.9 ± 21.5	Isochron
	22.89	100	6/6		295.5	Total Gas
3CBS13-9-99	22.56 ± 0.18	96.3	5/8	1.993	352.1 ± 12.5	Isochron
	22.98	100	8/8		295.5	Total Gas
Yarmony Mountain						
K97-8-13A1-3	22.71 ± 0.20	75.3	4/7	2.196	427.2 ± 34.4	Isochron
	22.72	100	7/7		295.5	Total Gas
K97-8-13A1-4	22.74 ± 0.13	63.3	3/7	1.476	295.5	Average
	22.59 ± 0.26	63.3	3/7		293.0 ± 11.9	Isochron
	22.74	100	7/7		295.5	Total Gas
K97-8-13A1	22.95 ± 0.15	100	6/6	6.452	328.1 ± 5.9	Isochron
	22.96	100	6/6		295.5	Total Gas
K97-8-13A2	22.92 ± 0.13	62.7	3/6	9.528	295.5	Plateau
	23.21 ± 0.19	100	6/6		324.3 ± 13.0	Isochron
	23.3	100	6/6		295.5	Total Gas
K97-8-13B2	22.90 ± 0.13	51.7	3/7	0.758	295.5	Plateau
	22.65 ± 0.45	83.9	5/7		388.3 ± 58.5	Isochron
	23.09	100	7/7		295.5	Total Gas

Table 2. Continued.

Table 2. Continued.

Sample	Apparent Age and Error (Ma)	% ³⁹ Ar	# Steps Total Steps	MSWD	⁴⁰ Ar/ ³⁶ Ar	Comment
K97-8-13B3	22.88 ± 0.13	56.4	3/7	0.368	295.5	Plateau
	22.49 ± 0.50	75.5	4/7		808 ± 260	Isochron
	23.03	100	7/7		295.5	Total Gas
K97-8-13C2	24.19 ± 0.13	52.4	2/6	1.414	295.5	Plateau
	23.88 ± 0.36	93.7	5/6		450.0 ± 40.7	Isochron
	24.87	100	6/6		295.5	Total Gas
K97-8-13C3	24.06 ± 0.29	82.5	5/6	0.449	439.6 ± 45.2	Isochron
	24.36	100	6/6		295.5	Total Gas
Gypsum						
K99-10-24A3	22.52 ± 0.08	79.4	4/7	0.092	295.5	Plateau
	22.51 ± 0.22	98.2	5/7		287.9 ± 23.2	Isochron
	22.46	100	7/7		295.5	Total Gas
K99-10-24A5	22.51 ± 0.35	81.8	7/9	0.307	339.0 ± 11.9	Isochron
	22.33	100	9/9		295.5	Total Gas
Spring Valley						
K97-10-8C2	23.05 ± 0.33	100	7/7	1.762	384.6 ± 24.6	Isochron
	22.86	100	7/7		295.5	Total gas
K97-10-8C4	22.56 ± 0.13	69.8	3/7	1.137	295.5	Plateau
	22.58 ± 0.51	100	7/7		414.7 ± 41.8	Isochron
	22.8	100	7/7		295.5	Total gas
Porphyry Mtn						
JS-98-13	20.15 ± 0.05	LF	6/8	1.64	295.5	Weighted Mean
	20.20 ± 0.06	LF	6/8		243.9 ± 34.9	Isochron
JS-98-25	19.39 ± 0.05	LF	9/10	3.68	295.5	Weighted Mean
	19.46 ± 0.05	LF	9/10		291.5 ± 5.6	Isochron
JS-98-5	19.44 ± 0.05	LF	9/10	2.14	295.5	Weighted Mean
	19.31 ± 0.07	LF	9/10		387.0 ± 0.07	Isochron
JS-98-93	19.40 ± 0.05	LF	9/9	1.84	295.5	Weighted Mean
	19.40 ± 0.06	LF	9/9		313.0 ± 23.9	Isochron
JS-98-2	19.58 ± 0.05	LF	4/7	1.46	295.5	Weighted Mean
	19.57 ± 0.07	LF	4/7		318.1 ± 33.6	Isochron
K97-8-13D	19.40 ± 0.05	LF	7/9	1.66	295.5	Weighted Mean
	19.38 ± 0.05	LF	7/9		321.1 ± 16.9	Isochron
JS-98-17	19.36 ± 0.05	LF	7/9	2.72	295.5	Weighted Mean
	19.37 ± 0.06	LF	7/9		286.0 ± 13.8	Isochron
Flat Tops						
K99-8-24A	13.45 ± 0.16	85.4	5/8	0.856	329.0 ± 22.5	Isochron
	13.36	100	8/8		295.5	Total Gas
K99-8-24B1	14.06 ± 0.05	59	3/9	0.227	295.5	Plateau
	14.12 ± 0.17	85.1	6/9		311.0 ± 10.2	Isochron
	13.94	100	9/9		295.5	Total Gas
K99-8-24B3	14.27 ± 0.07	100	10/10	15.967	298.6 ± 1.1	Isochron
	13.97	100	10/10		295.5	Total Gas

Table 2. Continued.

Sample	Apparent Age and Error (Ma)	% ³⁹ Ar	# Steps Total Steps	MSWD	⁴⁰ Ar/ ³⁶ Ar	Comment
K99-8-24C	14.36 ± 0.05	52	3/10		295.5	Plateau
	13.72 ± 0.61	82.5	5/10	0.653	668 ± 261	Isochron
	14.39	100	10/10		295.5	Total Gas
K99-8-24D1	14.91 ± 0.18	65.5	4/9	1.07	289.5 ± 7.9	Isochron
	14.3	100	9/9		295.5	Total Gas
K99-8-24D2	15.11 ± 0.18	67.2	5/9	1.213	289.8 ± 13.9	Isochron
	14.71	100	9/9		295.5	Total Gas
K99-8-24E	15.57 ± 0.09	90.5	6/10	1.924	312.5 ± 6.6	Isochron
	15.53	100	10/10		295.5	Total Gas
Poison Creek Debris Flow						
JS-99-8A	15.05 ± 0.12	100	7/7	11.409	298.7 ± 1.06	Isochron
	14.83	100	7/7		295.5	Total Gas
JS-99-8B	14.74 ± 0.08	50.1	2/8		295.5	Plateau
	14.74 ± 0.44	95.1	6/8	0.661	304.0 ± 31.6	Isochron
	14.71	100	8/8		295.5	Total Gas
JS-99-8C	15.09 ± 0.21	73.5	4/7	1.651	314.3 ± 9.4	Isochron
	14.98	100	7/7		295.5	Total Gas
JS-99-9	14.48 ± 0.08	61.2	2/7		295.5	Plateau
	14.51 ± 0.14	86.9	4/7	2.798	377.5 ± 27.8	Isochron
	14.53	100	7/7		295.5	Total Gas
JS-99-10	14.87 ± 0.15	67.5	3/6	1.498	280.39 ± 12.6	Isochron
	14.85	100	6/6		295.5	Total Gas
Sopris Bowl						
L-223	13.38 ± 0.06	63.5	6/12	1.744	345.5 ± 6.8	Isochron
	14.03	100	12/12		295.5	Total gas
BR6(3)	13.57 ± 0.05	61.5	5/9		295.5	Plateau
	13.62 ± 0.08	75.5	6/9	0.359	285.7 ± 27.6	Isochron
	13.42	100	9/9		295.5	Total gas
Ba36(1)	13.81 ± 0.25	96.7	5/8	1.49	361.0 ± 85.5	Isochron
	13.5	100	8/8		295.5	Total gas
Basalt Mtn., top						
K97-8-15C2	10.42 ± 0.09	100	7/7	18.027	280.2 ± 1.5	Isochron
	9.86	100	7/7		295.5	Total gas
K97-8-15C4	9.97 ± 0.06	60.1	3/7		295.5	Plateau
	10.33 ± 0.09	100	7/7	7.033	206.2 ± 6.7	Isochron
	9.99	100	7/7		295.5	Total gas
K97-8-15B	9.83 ± 0.05	75.9	3/6		295.5	Plateau
	9.84 ± 0.15	75.9	3/6	0.001	292.4 ± 19.3	Isochron
	10.0	100	6/6		295.5	Total gas
L-37	9.65 ± 0.06	100	9/9	129.5	280.5 ± 1.0	Isochron
	9.84	100	9/9		295.5	Total gas

Table 2. Continued.

Sample	Apparent Age and Error (Ma)	% ³⁹ Ar	# Steps Total Steps	MSWD	⁴⁰ Ar/ ³⁶ Ar	Comment
Basalt Mtn., west flank						
L-176	9.68 ± 0.03	56.9	4/8	0.087	295.5	Plateau
	9.60 ± 0.12	80.3	5/8		332.7 ± 24.1	Isochron
	9.58	100	8/8		295.5	Total gas
Basalt Mtn., north rim						
L-91A1	9.71 ± 0.03	56.8	2/8	0.45	295.5	Plateau
	9.68 ± 0.06	56.8	4/8		302.9 ± 14.7	Isochron
	9.31	100	8/8		295.5	Total gas
L-39	9.75 ± 0.03	60.9	4/8	0.003	295.5	Plateau
	9.73 ± 0.10	60.9	4/8		300.4 ± 15.3	Isochron
	9.42	100	8/8		295.5	Total gas
L-181	9.51 ± 0.02	100	9/9	85.5	298.0 ± 0.5	Isochron
	9.55	100	9/9		295.5	Total gas
L-187D1	9.75 ± 0.11	64.1	4/8	1.085	296.8 ± 7.5	Isochron
	9.47	100	8/8		295.5	Total gas
L-187B3	9.45 ± 0.09	45.4	4/8	1.94	370.4 ± 17.5	Isochron
	9.38	100	8/8		295.5	Total gas
L-187A2	9.84 ± 0.07	60.7	4/8	0.364	311.3 ± 8.8	Isochron
	9.58	100	8/8		295.5	Total gas
Basalt Mtn., south						
L-38A	9.93 ± 0.06	100	9/9	12.201	271.8 ± 0.88	Isochron
	9.66	100	9/9		295.5	Total gas
K97-8-11E1	10.07 ± 0.17	62.2	5/7	2.208	313.2 ± 13.8	Isochron
	10.05	100	7/7		295.5	Total Gas
K97-8-11E2	10.20 ± 0.07	100	7/7	25.005	293.8 ± 1.1	Isochron
	10.03	100	7/7		295.5	Total Gas
K97-8-11D3	11.87 ± 0.22	100	7/7	9.903	285.1 ± 3.4	Isochron
	11.39	100	7/7		295.5	Total Gas
K97-8-11C1	10.18 ± 0.06	52	4/7	0.053	295.5	Plateau
	10.20 ± 0.16	68.8	5/7		312.6 ± 9.2	Isochron
	10.14	100	7/7		295.5	Total Gas
K97-8-11C3	10.16 ± 0.14	100	6/6	0.796	314.2 ± 2.0	Isochron
	10.92	100	6/6		295.5	Total Gas
K97-8-11B	10.26 ± 0.14	100	7/7	3.441	290.4 ± 1.9	Isochron
	9.87	100	7/7		295.5	Total Gas
K97-8-11A1	10.47 ± 0.21	51.8	4/7	2.255	296.5 ± 4.0	Isochron
	10.14	100	7/7		295.5	Total Gas
K97-8-11A2	10.49 ± 0.07	57.4	5/8	0.619	295.5	Plateau
	10.60 ± 0.24	57.4	5/8		295.2 ± 2.7	Isochron
	10.13	100	8/8		295.5	Total Gas
Grand Mesa, Mesa Lakes						
K98-8-18F2	9.38 ± 0.16	60.2	4/7	0.787	297.6 ± 11.0	Isochron
	9.1	100	7/7		295.5	Total gas
K98-8-18F3	9.85 ± 0.03	65.2	2/8	1.062	295.5	Plateau
	9.60 ± 0.38	81.2	3/8		296.0 ± 23.5	Isochron
	9.6	100	8/8		295.5	Total gas

Table 2. Continued.

Sample	Apparent Age and Error (Ma)	% ³⁹ Ar	# Steps Total Steps	MSWD	⁴⁰ Ar/ ³⁶ Ar	Comment
K98-8-18E4	9.81 ± 0.19	63.4	5/9	0.882	308.0 ± 9.1	Isochron
	9.56	100	9/9		295.5	Total gas
K98-8-18E5	9.71 ± 0.03	51.2	2/9		295.5	Plateau
	9.81 ± 0.21	76.8	5/9	2.019	303.0 ± 10.3	Isochron
	9.63	100	9/9		295.5	Total gas
K98-8-18D1	9.95 ± 0.28	41	3/7	0.054	289.9 ± 6.5	Isochron
	9.25	100	7/7		295.5	Total gas
K98-8-18C1	10.01 ± 0.15	55.7	3/9	0.501	291.4 ± 7.0	Isochron
	9.33	100	9/9		295.5	Total gas
K98-8-18C2	9.91 ± 0.19	36.2	3/8	0.049	292.1 ± 13.9	Isochron
	9.34	100	8/8		295.5	Total gas
K98-8-18B1	9.96 ± 0.04	89.7	5/6		295.5	Plateau
	10.35 ± 0.50	100	6/6	0.566	290.1 ± 28.7	Isochron
	9.94	100	6/6		295.5	Total gas
K98-8-18B2	9.95 ± 0.04	77.8	2/6		295.5	Plateau
	9.80 ± 0.67	89.7	4/6	0.110	410.1 ± 298.3	Isochron
	9.96	100	6/6		295.5	Total gas
K98-8-18A3	9.41 ± 0.30	100	8/8	3.636	292.3 ± 3.7	Isochron
	9.27	100	8/8		295.5	Total gas
K98-8-18A4	9.10 ± 0.30	47.8	4/6	0.450	301.4 ± 5.8	Isochron
	9.16	100	6/6		295.5	Total gas
K98-8-17B6	9.97 ± 0.04	75.2	2/6		295.5	Plateau
	10.09 ± 0.32	94.4	5/6	0.157	343.8 ± 116.8	Isochron
	10.02	100	6/6		295.5	Total gas
K98-8-17A4	10.32 ± 0.13	100	6/6	1.361	270.1 ± 3.1	Isochron
	9.36	100	6/6		295.5	Total gas
Grand Mesa, Lands End						
K98-8-18I1	10.42 ± 0.15	77	5/8	0.075	288.8 ± 13.0	Isochron
	10.34	100	8/8		295.5	Total Gas
K98-8-18I4	10.35 ± 0.04	73.8	3/9		295.5	Plateau
	10.33 ± 0.13	92.2	7/9	0.311	300.7 ± 6.4	Isochron
	10.27	100	9/9		295.5	Total Gas
K98-8-18H4	10.76 ± 0.24	36.9	3/7	0.673	285.7 ± 5.9	Isochron
	9.92	100	7/7		295.5	Total Gas
K98-8-18G2	10.72 ± 0.13	100	8/8	3.742	281.8 ± 1.0	Isochron
	9.74	100	8/8		295.5	Total Gas
K98-8-18G5	9.87 ± 0.08	100	7/7	3.111	270.7 ± 2.1	Isochron
	9.15	100	7/7		295.5	Total Gas
Missouri Heights						
K97-8-15A3	10.63 ± 0.07	90	4/5		295.5	Plateau
	10.19 ± 0.33	80.6	3/5	0.001	300.3 ± 3.4	Isochron
	10.49	100	5/5		295.5	Total gas

Table 2. Continued.

Table 2: Continued.

Sample	Apparent Age and Error (Ma)	% ³⁹ Ar	# Steps Total Steps	MSWD	⁴⁰ Ar/ ³⁶ Ar	Comment
K97-8-15A4	10.56 ± 0.07	65.8	3/6	4.001	295.5	Plateau
	10.72 ± 0.07	50.6	3/6		295.5	Plateau
	10.47 ± 0.20	100	6/6		295.8 ± 2.3	Isochron
	10.46	100	6/6		295.5	Total gas
K97-8-12F1	10.84 ± 0.06	67.4	4/7	0.806	295.5	Plateau
	10.74 ± 0.20	67.4	4/7		297.0 ± 3.7	Isochron
	10.53	100	7/7		295.5	Total gas
K97-8-12F2	11.07 ± 0.17	100	7/7	7.325	294.9 ± 1.6	Isochron
	11.06	100	7/7		295.5	Total gas
K97-8-12E1	10.70 ± 0.15	70.1	4/7	1.243	319.8 ± 4.7	Isochron
	10.21	100	7/7		295.5	Total gas
K97-8-12E2	8.96 ± 0.34	100	7/7	7.3	351.4 ± 14.7	Isochron
	10.11	100	7/7		295.5	Total gas
K97-10-8A2	9.88 ± 0.06	61.2	3/7	2.01	295.5	Plateau
	9.53 ± 0.53	92.6	6/7		399.5 ± 51.4	Isochron
	10.16	100	7/7		295.5	Total gas
K97-10-8A4	9.89 ± 0.07	61	3/7	0.032	295.5	Plateau
	9.70 ± 2.04	61	3/7		309.6 ± 163.0	Isochron
	10.07	100	7/7		295.5	Total gas
Heuschkel Park						
K97-10-8E1	9.75 ± 0.06	64.2	4/7	0.144	295.5	Plateau
	9.67 ± 0.67	73.8	5/7		317.0 ± 35.9	Isochron
	10.39	100	7/7		295.5	Total gas
K97-10-8E3	10.47 ± 2.34	58.7	5/8	2.212	297.9 ± 67.0	Isochron
	10.43	100	8/8		295.5	Total gas
K97-10-8F3	10.72 ± 0.12	100	7/7	4.732	272.6 ± 2.5	Isochron
	10.06	100	7/7		295.5	Total gas
K97-10-8F4	10.28 ± 0.12	100	8/8	4.091	276.4 ± 2.8	Isochron
	9.76	100	8/8		295.5	Total gas
Red Canyon Graben						
K97-10-8B1	11.11 ± 0.23	100	6/6	4.737	286.1 ± 3.5	Isochron
	10.63	100	6/6		295.5	Total gas
K97-10-8B3	9.78 ± 0.23	62.6	5/8	1.091	301.4 ± 5.2	Isochron
	10.01	100	8/8		295.5	Total gas
Upper Cattle Creek						
L60	7.75 ± 0.03	64.6	5/8	0.489	295.5	Plateau
	7.71 ± 0.04	65.2	6/8		301.5 ± 1.5	Isochron
	7.7	100	8/8		295.5	Total gas
Spring Valley II						
K97-10-8D1	7.74 ± 0.05	66.5	2/4	0.108	295.5	Plateau
	7.71 ± 0.51	100	4/4		301.8 ± 40.9	Isochron
	7.84	100	4/4		295.5	Total gas
K97-10-8D2	7.79 ± 0.05	71.6	4/7	0.649	295.5	Plateau
	7.59 ± 0.16	93.4	6/7		338.8 ± 8.0	Isochron
	8.01	100	7/7		295.5	Total gas

Table 2. Continued.

Table 2. Continued.

Sample	Apparent Age and Error (Ma)	% ³⁹ Ar	# Steps Total Steps	MSWD	⁴⁰ Ar/ ³⁶ Ar	Comment
McNulty Pit						
K97-8-12G	3.01 ± 0.01	59.8	7/9	0.212	295.5	Plateau
	2.99 ± 0.11	59.8	7/9		296.8 ± 9.4	Isochron
	2.92	100	9/9		295.5	Total gas
K97-8-12H	3.09 ± 0.02	60.9	3/6	0.171	295.5	Plateau
	3.11 ± 0.14	60.9	3/6		299.9 ± 21.6	Isochron
	3.22	100	6/6		295.5	Total gas
Griffith Pit						
L244-1	2.87 ± 0.01	56.8	2/10	0.201	295.5	Plateau
	2.87 ± 0.01	72.2	2/10		295.5	Plateau
	2.86 ± 0.03	100	10/10		306.0 ± 3.4	Isochron
	2.91	100	10/10		295.5	Total gas
L244-2	2.84 ± 0.02	100	9/9	4.006	322.8 ± 2.2	Isochron
	2.90	100	9/9		295.5	Total gas
L-244	2.90 ± 0.02	LF	10/10	0.87	295.5	Weighted Mean
	2.97 ± 0.02	100	10/10		278.4 ± 5.8	Isochron
L-245	2.96 ± 0.02	LF	10/10	0.36	295.5	Weighted Mean
	2.94 ± 0.03	100	10/10		303.1 ± 10.4	Isochron
Triangle Peak						
K97-8-12B1	1.51 ± 0.01	78.7	4/7	0.074	295.5	Plateau
	1.44 ± 0.13	78.7	4/7		447 ± 267	Isochron
	1.54	100	7/7		295.5	Total Gas
K97-8-12B2	1.4 ± 0.21	77.2	4/7	0.0102	443 ± 235	Isochron
	1.54	100	7/7		295.5	Total Gas
K99-8-22B2	1.34 ± 0.01	75.7	4/6	0.725	295.5	Plateau
	1.33 ± 0.01	100	6/6		304.5 ± 2.9	Isochron
	1.36	100	6/6		295.5	Total Gas
K99-8-22B3	1.34 ± 0.01	79.6	4/7	0.956	295.5	Plateau
	1.33 ± 0.01	100	7/7		307.8 ± 2.9	Isochron
	1.38	100	7/7		295.5	Total Gas
K97-8-12A2	1.88 ± 0.04	39.4	3/7	0.231	290.2 ± 73.7	Isochron
	1.66	100	7/7		295.5	Total Gas
K97-8-22A1	1.40 ± 0.01	72.8	4/6	0.504	295.5	Plateau
	1.36 ± 0.04	72.8	4/6		306.7 ± 11.6	Isochron
	1.42	100	6/6		295.5	Total Gas
K99-8-22A4	1.41 ± 0.01	78.7	5/7	0.748	295.5	Plateau
	1.35 ± 0.04	100	7/7		315.2 ± 4.2	Isochron
	1.44	100	7/7		295.5	Total Gas
Willow Peak						
K97-10-7F	0.310 ± 0.002	63.7	4/6	0.169	295.5	Plateau
	0.26 ± 0.04	93.5	5/6		330.7 ± 22.1	Isochron
	0.389	100	6/6		295.5	Total Gas
K97-10-7G	0.330 ± 0.003	61.5	2/5	1.96	295.5	Plateau
	0.30 ± 0.08	95.9	4/5		302.5 ± 22.5	Isochron
	0.359	100	5/5		295.5	Total Gas

Table 3. Argon isotopic results. Age spectra or Ideograms, and isochrons are on facing page.

Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
(°C)	(% Total)	(%)	(x 10^{-12} mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	

Flank of Mt Soprus

K97-8-11F; single-crystal sanidine; #19KD6, $J=0.00201\pm0.50\%$

09	LF	***	99.0	0.01516950	9.893	39.1	3.401	35.16	0.04
03	LF	***	98.9	0.01926797	9.901	76.8	5.286	35.17	0.03
04	LF	***	98.7	0.01891563	9.925	68.8	3.847	35.17	0.04
10	LF	***	98.9	0.00857536	9.911	69.7	5.062	35.20	0.05
11	LF	***	99.5	0.00779516	9.855	61.3	3.262	35.20	0.04
05	LF	***	99.7	0.00937981	9.844	116.4	5.204	35.25	0.05
06	LF	***	99.7	0.01451519	9.844	120.1	3.903	35.25	0.04
12	LF	***	99.4	0.01009326	9.880	74.5	3.278	35.25	0.04
08	LF	***	99.7	0.02092086	9.844	80.9	3.902	35.26	0.04
07	LF	***	96.8	0.02046475	10.080	54.1	3.978	35.06	0.04
Weighted Mean Age					n=9			35.21	0.03

Dotsero

K97-10-7K5; 0.2539 g, whole rock basalt, #67KD6, $J=0.002016\pm0.50\%$

A	650	8.9	41.1	0.146970	6.290	0.41	57	22.73	0.19
B	750	14.5	92.1	0.239089	6.818	0.26	349	24.63	0.17
C	800	12.2	96.6	0.200196	6.600	0.25	656	23.85	0.12
D	850	14.3	98.3	0.235235	6.491	0.28	878	23.46	0.07
E	950	21.8	93.8	0.358473	6.232	0.30	843	22.53	0.52
F	1050	15.8	86.8	0.260491	6.435	0.37	200	23.25	0.14
G	1450	12.5	60.6	0.205966	7.437	0.04	52	26.85	0.10
Total Gas		100.0	84.6	1.646420	6.587	0.27	483	23.80	
Plateau Age		51.9	steps D-F					23.41	0.13

Castle Peak

2ABS13-9-99; 0.2499 g, whole rock basalt, #49KD16, $J=0.005012\pm0.25\%$

A	650	6.8	22.0	0.530734	2.186	2.74	35	19.66	0.21
B	750	2.7	29.6	0.209957	2.263	1.73	41	20.35	0.26
C	850	11.1	45.8	0.857713	2.497	0.77	71	22.44	0.12
D	950	20.6	80.2	1.598192	2.632	0.47	379	23.64	0.06
E	1050	26.1	91.9	2.026546	2.544	0.47	1488	22.86	0.04
F	1150	17.8	88.7	1.384220	2.524	0.41	631	22.68	0.09
G	1450	14.8	65.8	1.151715	2.451	0.05	115	22.02	0.06
Total Gas		100.0	73.5	7.759077	2.507	0.62	608	22.53	
No Plateau

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
2BBS13-9-99 ; 0.2511 g, whole rock basalt, #51KD16, J=0.005002 $\pm$ 0.25%									
A	650	1.3	6.3	0.088070	2.483	0.91	25	22.27	0.74
B	750	1.1	19.7	0.074634	3.045	0.64	53	27.27	0.62
C	850	8.6	57.6	0.565264	2.844	0.62	422	25.48	0.14
D	950	24.3	79.2	1.601669	2.645	0.53	2384	23.71	0.07
E	1050	30.9	94.9	2.043657	2.552	0.56	5183	22.88	0.03
F	1150	18.6	96.2	1.230109	2.517	0.59	1327	22.57	0.06
G	1450	14.4	79.5	0.951996	2.429	0.05	114	21.79	0.14
H	1650	0.7	62.3	0.049241	2.455	0.03	204	22.02	1.07
Total Gas		100.0	83.6	6.604640	2.579	0.49	2484	23.12	
No Plateau									
2CBS13-9-99 ; 0.2525 g, whole rock basalt, #57KD16, J=0.005021 $\pm$ 0.25%									
A	650	1.8	11.3	0.147996	2.599	0.87	37	23.39	0.61
B	750	0.5	31.8	0.044052	2.539	0.61	81	22.86	0.97
C	850	6.8	65.8	0.543780	2.738	0.49	312	24.63	0.16
D	950	18.4	86.5	1.478697	2.611	0.41	1561	23.50	0.04
E	1050	23.8	95.4	1.906374	2.547	0.54	2104	22.92	0.07
F	1150	21.5	96.8	1.727270	2.532	0.70	677	22.79	0.03
G	1450	26.6	91.0	2.132201	2.507	0.08	196	22.57	0.04
H	1650	0.6	72.4	0.045137	2.482	0.06	215	22.34	1.58
Total Gas		100.0	88.8	8.025507	2.559	0.43	1009	23.03	
No Plateau									
1ABS13-9-99 ; 0.2541 g, whole rock basalt, #43KD16, J=0.004968 $\pm$ 0.25%									
A	650	1.6	7.2	0.119205	2.717	0.58	31	24.19	1.92
B	750	1.5	29.0	0.113278	2.889	0.46	143	25.71	0.61
C	850	9.8	69.7	0.730492	2.852	0.40	1017	25.38	0.16
D	950	19.5	80.6	1.455824	2.683	0.32	2388	23.89	0.09
E	1050	25.6	97.3	1.914283	2.595	0.43	3260	23.11	0.03
F	1150	21.1	97.3	1.575300	2.562	0.63	915	22.81	0.04
G	1450	19.6	86.2	1.467021	2.531	0.07	133	22.55	0.12
H	1650	1.3	66.7	0.100313	2.379	0.04	243	21.20	0.42
Total Gas		100.0	86.3	7.475716	2.621	0.38	1624	23.34	
No Plateau

Table 3. Continued.

Table 3. Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
1CBS13-9-99 ; 0.2526 g, whole rock basalt, #45KD16, J=0.004955 $\pm$ 0.25%									
A	650	1.1	5.4	0.079663	2.552	0.55	15	22.67	2.13
B	750	2.6	31.7	0.191162	3.186	0.50	110	28.26	0.29
C	850	11.0	68.2	0.798846	2.837	0.41	919	25.18	0.06
D	950	21.7	81.0	1.580856	2.663	0.31	2420	23.65	0.06
E	1050	27.6	98.1	2.010648	2.584	0.43	4051	22.96	0.02
F	1150	21.9	97.2	1.597952	2.555	0.66	1235	22.70	0.03
G	1450	12.7	80.6	0.928116	2.520	0.05	118	22.38	0.20
H	1650	1.5	68.5	0.106542	2.465	0.03	305	21.90	0.44
Total Gas		100.0	85.5	7.293785	2.628	0.40	2035	23.34	
No Plateau									
1DBS13-9-99 ; 0.2507 g, whole rock basalt, #47KD16, J=0.005014 $\pm$ 0.25%									
A	750	1.6	20.1	0.119643	3.143	0.59	66	28.20	0.62
B	850	7.1	58.4	0.515526	2.757	0.50	526	24.77	0.10
C	950	20.9	76.6	1.526516	2.661	0.39	2222	23.91	0.07
D	1050	27.0	96.7	1.965768	2.568	0.48	4790	23.08	0.05
E	1150	26.1	97.6	1.902586	2.539	0.75	1093	22.82	0.04
F	1450	16.1	84.9	1.174649	2.506	0.06	136	22.53	0.11
G	1650	1.2	65.5	0.083896	2.286	0.03	314	20.56	0.47
Total Gas		100.0	86.5	7.288584	2.589	0.46	2106	23.27	
No Plateau									
Devils Causeway*									
3BBS13-9-99 ; 0.2528 g, whole rock basalt, #53KD16, J=0.005021 $\pm$ 0.25%									
A	750	1.3	8.5	0.120318	2.443	0.35	21	21.99	1.56
B	850	0.5	27.1	0.047567	2.465	0.51	84	22.19	1.44
C	950	9.8	64.6	0.929466	2.634	0.88	547	23.70	0.17
D	1050	28.2	81.5	2.662790	2.565	1.05	2391	23.08	0.03
E	1150	24.0	94.6	2.261122	2.551	0.69	12498	22.96	0.05
F	1450	36.2	93.0	3.416112	2.500	0.11	377	22.51	0.04
Total Gas		100.0	85.9	9.437375	2.543	0.59	3860	22.89	
Plateau Age		52.2	steps D-E					23.05	0.08

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
3CBS13-9-99; 0.2557 g, whole rock basalt, #55KD16, J=0.005021$\pm$0.25%									
A	650	0.6	13.4	0.050410	2.840	0.99	51	25.55	1.05
B	750	1.6	27.9	0.129114	2.453	0.66	95	22.08	0.46
C	850	7.7	69.9	0.613966	2.723	0.46	354	24.49	0.14
D	950	18.3	87.4	1.458746	2.614	0.38	1600	23.52	0.03
E	1050	23.3	96.5	1.852745	2.551	0.53	1883	22.96	0.06
F	1150	22.2	97.0	1.763517	2.523	0.67	617	22.71	0.03
G	1450	24.8	91.0	1.973679	2.492	0.08	176	22.44	0.04
H	1650	1.4	82.1	0.111875	2.442	0.06	316	21.98	0.44
Total Gas		100.0	89.7	7.954052	2.554	0.42	946	22.98	
No Plateau									
Yarmony Mountain									
K97-8-13A1-3; 0.2457 g, whole rock basalt, #45KD6, J=0.002044$\pm$0.5%									
A	650	6.0	45.4	0.310004	5.258	0.57	40	19.29	0.13
B	750	14.7	91.4	0.754508	6.462	0.43	258	23.67	0.06
C	800	14.2	96.1	0.726790	6.350	0.48	765	23.26	0.05
D	850	17.7	97.9	0.907084	6.289	0.62	1368	23.04	0.07
E	950	28.8	96.0	1.479775	6.226	0.75	967	22.81	0.04
F	1050	12.4	85.6	0.636649	6.128	0.67	229	22.46	0.10
G	1450	6.2	36.6	0.319621	5.914	0.04	33	21.68	0.16
Total Gas		100.0	87.6	5.134431	6.199	0.58	699	22.72	
No Plateau									
K97-8-13A1-4; 0.2553 g, whole rock basalt, #47KD6, J=0.002044$\pm$0.5%									
A	650	6.4	39.1	0.297760	6.019	0.60	29	22.06	0.38
B	750	7.5	74.1	0.350008	6.504	0.38	109	23.82	0.19
C	800	9.1	87.7	0.423050	6.377	0.42	337	23.36	0.12
D	850	13.6	93.6	0.630119	6.327	0.51	708	23.18	0.05
E	950	30.9	94.4	1.433290	6.101	0.65	769	22.36	0.15
F	1050	17.5	92.0	0.812618	6.237	0.65	205	22.85	0.07
G	1450	15.0	58.7	0.694011	6.110	0.07	50	22.39	0.25
Total Gas		100.0	82.8	4.640856	6.207	0.50	418	22.74	
No Plateau

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-8-13A1 ; 0.2510 g, whole rock basalt, #41KD6, J=0.002044 $\pm$ 0.5%									
A	650	8.2	66.8	0.436586	6.629	0.50	144	24.28	0.19
B	750	20.6	97.4	1.092345	6.408	0.53	819	23.47	0.08
C	800	19.2	99.7	1.017301	6.315	0.67	1631	23.14	0.09
D	850	19.4	99.4	1.030644	6.232	0.80	1794	22.84	0.09
E	950	24.2	95.5	1.284809	6.075	0.68	704	22.26	0.14
F	1050	8.4	89.1	0.443336	6.069	0.51	168	22.24	0.21
Total Gas		100.0	94.5	5.305021	6.265	0.64	1026	22.96	
No Plateau									
K97-8-13A2 ; 0.2485 g, whole rock basalt, #43KD6, J=0.002044 $\pm$ 0.5%									
A	650	7.4	74.5	0.332383	6.534	0.46	158	23.93	0.28
B	750	20.7	99.2	0.928723	6.717	0.52	561	24.60	0.14
C	800	19.1	98.9	0.854331	6.299	0.68	1317	23.08	0.11
D	850	19.6	99.3	0.876641	6.253	0.81	1261	22.91	0.10
E	950	24.1	97.4	1.078620	6.238	0.65	465	22.86	0.08
F	1050	9.2	87.7	0.411229	6.071	0.47	104	22.25	0.18
Total Gas		100.0	95.8	4.481927	6.358	0.63	747	23.30	
Plateau Age		62.7	steps C-E					22.92	0.13
K97-8-13B2 ; 0.2448 g, whole rock basalt, #49KD6, J=0.002044 $\pm$ 0.5%									
A	650	8.0	46.1	0.381751	6.349	0.60	33	23.26	0.70
B	750	16.3	85.9	0.776770	6.578	0.42	198	24.09	0.16
C	800	15.9	94.2	0.757449	6.367	0.53	543	23.33	0.13
D	850	17.2	97.3	0.816998	6.283	0.69	942	23.02	0.13
E	950	22.9	96.8	1.090217	6.249	0.73	749	22.90	0.11
F	1050	11.6	89.0	0.554222	6.189	0.63	185	22.68	0.18
G	1450	8.0	57.1	0.382916	5.936	0.04	44	21.76	0.26
Total Gas		100.0	86.5	4.760323	6.303	0.56	480	23.09	
Plateau Age		51.7	steps D-F					22.90	0.13

Table 3. Continued.

Table 8: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-8-13B3 ; 0.2451 g, whole rock basalt, #51KD6, J=0.002044 $\pm$ 0.5%									
A	650	5.2	81.5	0.256991	6.511	0.42	146	23.85	0.18
B	750	15.4	96.4	0.753703	6.562	0.44	637	24.03	0.06
C	800	15.4	98.5	0.756118	6.344	0.53	1260	23.24	0.08
D	850	18.1	99.3	0.888746	6.266	0.66	1682	22.96	0.05
E	950	26.6	98.3	1.306554	6.226	0.73	907	22.82	0.06
F	1050	11.6	89.5	0.571139	6.212	0.63	168	22.76	0.13
G	1450	7.6	50.2	0.373277	5.802	0.05	42	21.27	0.12
Total Gas		100.0	92.7	4.906528	6.284	0.56	869	23.03	
Plateau Age		56.4	steps D-F					22.88	0.13
K97-8-13C2 ; 0.2510 g, whole rock basalt, #53KD6, J=0.002044 $\pm$ 0.5%									
A	750	6.3	64.7	0.292872	7.331	0.48	325	26.83	0.27
B	800	8.7	86.7	0.409192	7.094	0.56	1530	25.97	0.16
C	850	15.5	90.0	0.727400	6.877	0.58	2774	25.18	0.15
D	950	32.2	93.4	1.505135	6.614	0.62	2896	24.22	0.06
E	1050	20.2	99.9	0.946211	6.578	0.72	1162	24.09	0.11
F	1450	17.1	93.7	0.798479	6.941	0.10	142	25.42	0.07
Total Gas		100.0	91.8	4.679289	6.790	0.53	1776	24.87	
Plateau Age		52.4	steps D-E					24.19	0.13
K97-8-13C3 ; 0.2483 g, whole rock basalt, #55KD6, J=0.002044 $\pm$ 0.5%									
A	750	9.9	89.4	0.462514	6.954	0.49	1196	25.46	0.24
B	800	11.3	94.0	0.529474	6.851	0.57	3046	25.09	0.14
C	850	13.5	93.3	0.632363	6.746	0.65	2959	24.71	0.08
D	950	28.6	99.6	1.336369	6.639	0.73	3168	24.31	0.05
E	1050	19.2	99.3	0.896782	6.531	0.93	694	23.92	0.06
F	1450	17.5	90.4	0.815645	6.422	0.14	109	23.53	0.03
Total Gas		100.0	95.4	4.673147	6.650	0.61	1922	24.36	
No Plateau

Table 3. Continued.

Table 3: Continued.

Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
Gypsum								
K99-10-24A3 ; 0.2543 g, whole rock basalt, #5KD16, J=0.004842 $\pm$ 0.25% $\ddot{\text{A}}$								
A 750	0.8	41.8	0.077165	2.950	0.46	69	25.58	0.79
B 850	5.2	83.3	0.516331	2.592	0.38	738	22.50	0.11
C 950	21.9	96.1	2.176509	2.584	0.48	4109	22.43	0.04
D 1050	30.5	98.3	3.026168	2.591	0.69	2521	22.50	0.03
E 1150	21.8	97.5	2.163751	2.599	0.83	480	22.56	0.03
F 1450	18.8	82.9	1.870458	2.566	0.09	90	22.28	0.06
G 1650	1.0	72.2	0.099360	2.414	0.07	120	20.96	0.48
Total Gas	100.0	93.3	9.929742	2.588	0.54	1830	22.46	
Plateau Age	79.4	steps B-E					22.52	0.08
K99-10-24A5 ; 0.2507 g, whole rock basalt, #10KD16, J=0.004916 $\pm$ 0.25%								
A 750	0.5	22.7	0.055067	4.918	0.49	31	43.10	5.38
B 850	3.1	67.4	0.358234	2.756	0.55	331	24.27	0.09
C 900	6.0	92.0	0.700330	2.662	0.58	2711	23.46	0.07
D 950	13.8	96.8	1.598455	2.608	0.58	158864	22.98	0.05
E 1000	24.3	98.3	2.816462	2.563	0.65	12697	22.59	0.02
F 1050	18.0	98.3	2.080229	2.528	0.84	1866	22.28	0.02
G 1150	16.1	97.5	1.858641	2.499	1.00	398	22.03	0.04
H 1450	17.0	88.5	1.964586	2.335	0.10	94	20.59	0.06
I 1650	1.3	60.5	0.145320	2.270	0.08	114	20.02	0.41
Total Gas	100.0	94.1	11.577324	2.534	0.62	25614	22.33	
No Plateau								
Spring Valley								
K97-10-8C2 ; 0.2433 g, whole rock basalt, #77KD7, J=0.002690 $\pm$ 0.50% $\ddot{\text{A}}$								
A 650	4.0	76.4	0.092216	5.287	0.26	160	25.48	0.47
B 750	9.1	99.6	0.210957	4.947	0.27	1198	23.85	0.21
C 800	10.5	98.8	0.244813	4.762	0.32	15322	22.96	0.54
D 850	15.1	100.0	0.351750	4.794	0.42	***	23.11	0.12
E 950	32.1	98.2	0.746850	4.660	0.57	***	22.47	0.06
F 1050	20.0	99.3	0.466519	4.754	0.64	2144	22.92	0.11
G 1450	9.2	87.2	0.213714	4.539	0.04	79	21.89	0.22
Total Gas	100.0	97.0	2.326819	4.742	0.45	2164	22.86	
No Plateau

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-10-8C4 ; 0.2423 g, whole rock basalt, #79KD7, $J=0.002673\pm0.50\%$									
A	650	2.8	71.0	0.066874	5.722	0.28	151	27.38	1.09
B	750	9.6	100.0	0.232322	5.052	0.29	4930	24.20	0.36
C	800	12.0	100.0	0.288667	4.874	0.30	***	23.35	0.25
D	850	18.9	97.9	0.454298	4.640	0.41	***	22.24	0.18
E	950	35.6	98.8	0.856890	4.719	0.61	***	22.61	0.09
F	1050	15.3	99.6	0.368620	4.747	0.77	7320	22.75	0.21
G	1450	5.8	83.9	0.140800	4.515	0.02	50	21.64	0.46
Total Gas		100.0	97.4	2.408471	4.759	0.49	1603	22.80	
Plateau Age		69.8	steps D-F					22.56	0.13
Porphyry Mtn									
JS-98-I3 ; single-crystal sanidine, #127KD12, $J=0.0020185\pm0.25\%$									
01	LF	***	98.1	0.02975949	5.554	53.3	2.218	20.11	0.03
03	LF	***	97.8	0.02520680	5.558	62.7	2.476	20.13	0.04
09	LF	***	99.0	0.01512566	5.560	38.8	2.980	20.13	0.04
08	LF	***	98.8	0.02109378	5.567	24.4	2.648	20.16	0.04
07	LF	***	99.2	0.02529005	5.576	60.6	2.135	20.19	0.03
06	LF	***	98.7	0.02540607	5.581	47.9	2.782	20.21	0.03
04	LF	***	98.8	0.03651664	5.597	46.3	2.008	20.27	0.03
02	LF	***	96.7	0.01790485	5.650	51.1	1.771	20.46	0.04
Weighted Mean Age					n=6			20.15	0.05
JS-98-25 ; single-crystal sanidine, #124KD12, $J=0.0020199\pm0.25\%$									
10	LF	***	97.8	0.01261630	5.311	66.2	2.504	19.25	0.06
01	LF	***	96.8	0.01474393	5.356	55.0	1.841	19.41	0.04
08	LF	***	87.6	0.01985658	5.357	52.5	2.496	19.42	0.05
06	LF	***	97.2	0.04757085	5.359	58.8	2.285	19.42	0.03
04	LF	***	98.5	0.02302597	5.366	57.5	2.037	19.45	0.04
02	LF	***	97.6	0.04135148	5.372	60.8	2.183	19.47	0.02
09	LF	***	98.4	0.02607659	5.376	62.3	2.456	19.49	0.03
05	LF	***	97.6	0.01849182	5.378	50.4	1.934	19.49	0.04
07	LF	***	97.7	0.02889287	5.385	72.5	2.325	19.52	0.03
03	LF	***	40.2	0.01705468	5.483	35.9	1.524	19.87	0.15
Weighted Mean Age					n=9			19.39	0.05

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
JS-98-5 ; single-crystal sanidine, #122KD12, $J=0.0020261\pm0.25\%$									
10	LF	***	98.4	0.01945620	5.315	57.4	1.861	19.32	0.04
09	LF	***	98.3	0.00836388	5.321	46.4	2.770	19.34	0.08
07	LF	***	97.8	0.01867534	5.321	69.5	2.091	19.35	0.04
04	LF	***	97.4	0.00997227	5.336	54.7	2.758	19.40	0.06
08	LF	***	98.6	0.01491417	5.350	60.5	2.159	19.45	0.05
03	LF	***	98.3	0.01311439	5.354	60.1	2.095	19.46	0.05
06	LF	***	98.3	0.02921246	5.358	57.2	2.297	19.48	0.03
02	LF	***	95.5	0.00643894	5.366	3.1	1.968	19.51	0.11
05	LF	***	96.4	0.02140796	5.371	47.3	1.935	19.53	0.04
01	LF	***	98.1	0.01856865	7.914	28.1	2.014	28.70	0.05
Weighted Mean Age					n=9			19.44	0.05
JS-98-93 ; single-crystal sanidine, #125KD12, $J=0.0020252\pm0.25\%$									
08	LF	***	98.0	0.03750574	5.329	58.4	2.280	19.37	0.03
09	LF	***	95.8	0.01853065	5.331	49.3	1.855	19.37	0.04
03	LF	***	98.6	0.02277688	5.340	63.5	2.013	19.40	0.04
04	LF	***	98.0	0.03259294	5.340	59.3	1.880	19.40	0.03
06	LF	***	98.4	0.04435245	5.342	55.8	2.059	19.41	0.02
02	LF	***	97.5	0.03143046	5.342	56.3	2.094	19.41	0.03
01	LF	***	97.5	0.03166982	5.349	74.0	2.079	19.44	0.03
07	LF	***	97.8	0.04517250	5.350	55.3	2.376	19.44	0.03
10	LF	***	97.8	0.04668219	5.358	80.6	1.800	19.47	0.03
Weighted Mean Age					n=9			19.40	0.05
JS-98-2 ; single-crystal sanidine, #121KD12, $J=0.002037\pm0.25\%$									
03	LF	***	98.4	0.01124012	5.348	85.0	2.189	19.55	0.06
08	LF	***	97.9	0.02118851	5.361	57.3	2.042	19.60	0.03
04	LF	***	95.9	0.02014006	5.366	90.3	1.790	19.61	0.04
09	LF	***	97.6	0.01979390	5.368	72.2	2.714	19.62	0.04
02	LF	***	97.9	0.01080192	5.396	52.2	2.614	19.72	0.06
06	LF	***	95.7	0.02500567	5.399	53.2	1.657	19.73	0.03
07	LF	***	98.5	0.02872340	5.407	57.0	1.907	19.76	0.03
Weighted Mean Age					n=4			19.58	0.05

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-8-13D ; single-crystal sanidine, #128KD12, $J=0.0020265\pm 0.25\%$									
03	LF	***	97.5	0.01658627	5.323	56.7	3.171	19.36	0.05
02	LF	***	98.5	0.02708563	5.326	76.6	2.302	19.37	0.03
04	LF	***	98.2	0.02258068	5.328	74.6	1.862	19.37	0.03
07	LF	***	98.0	0.01667124	5.331	61.7	1.555	19.38	0.04
01	LF	***	98.5	0.02799637	5.343	81.9	2.097	19.43	0.03
06	LF	***	98.7	0.02287640	5.351	70.4	2.371	19.46	0.03
09	LF	***	94.8	0.02179100	5.356	69.0	2.288	19.48	0.04
05	LF	***	61.2	0.02319670	5.402	54.3	1.842	19.64	0.09
10	LF	***	97.9	0.01520618	5.475	80.3	1.825	19.91	0.05
Weighted Mean Age					n=7			19.40	0.05
JS-98-17 ; single-crystal sanidine, #123KD12, $J=0.002023\pm 0.25\%$									
02	LF	***	93.7	0.01504055	5.306	94.5	2.390	19.26	0.05
01	LF	***	97.6	0.01407073	5.310	62.4	1.816	19.28	0.05
10	LF	***	98.2	0.01354763	5.326	53.3	2.007	19.33	0.05
03	LF	***	98.2	0.03379408	5.329	59.4	2.477	19.34	0.03
07	LF	***	93.0	0.00824804	5.343	55.2	2.390	19.39	0.09
09	LF	***	98.5	0.01397419	5.347	63.7	2.366	19.41	0.04
04	LF	***	97.4	0.01799024	5.361	60.4	2.100	19.46	0.05
08	LF	***	98.9	0.01475063	5.388	49.5	2.180	19.56	0.05
06	LF	***	97.9	0.01798889	5.501	36.0	2.283	19.96	0.04
Weighted Mean Age					n=7			19.36	0.05
Flat Tops									
K99-8-24A ; 0.2542 g, whole rock basalt, #61KD16, $J=0.004792\pm 0.25\%$									
A	650	2.1	35.9	0.354061	1.379	1.26	45	11.88	0.30
B	750	1.3	74.2	0.215774	1.614	0.94	86	13.90	0.22
C	850	10.8	93.1	1.842960	1.607	0.97	555	13.84	0.03
D	950	35.4	97.7	6.048987	1.563	1.27	2986	13.46	0.01
E	1050	38.0	98.2	6.502008	1.549	1.22	2930	13.34	0.01
F	1150	9.6	93.7	1.646590	1.518	0.80	390	13.07	0.03
G	1450	2.5	69.5	0.431775	1.426	0.03	50	12.29	0.29
H	1650	0.3	64.1	0.055754	1.561	0.03	133	13.45	2.15
Total Gas		100.0	94.6	17.097909	1.551	1.13	2272	13.36	
No Plateau

Table 3. Continued.

Table 3. Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K99-8-24B1 ; 0.2544 g, whole rock basalt, #63KD16, J=0.00498 $\pm$ 0.25%									
A	650	0.5	3.1	0.033262	1.407	0.29	19	12.59	1.82
B	750	0.7	34.8	0.045636	1.729	0.42	72	15.47	0.89
C	850	8.2	82.9	0.527724	1.627	0.37	758	14.56	0.09
D	900	17.2	94.0	1.105773	1.594	0.48	8018	14.26	0.05
E	950	26.2	96.4	1.682793	1.575	0.61	***	14.09	0.03
F	1000	23.0	95.9	1.479033	1.566	0.60	154543	14.02	0.03
G	1050	9.8	91.6	0.626563	1.574	0.36	3874	14.09	0.11
H	1150	6.5	76.6	0.415212	1.521	0.24	623	13.62	0.15
I	1450	7.9	41.5	0.508454	1.331	0.02	53	11.92	0.15
Total Gas		100.0	87.8	6.424450	1.558	0.47	37444	13.94	
Plateau Age		59.0	steps E-G					14.06	0.05
K99-8-24B3 ; 0.2560 g, whole rock basalt, #67KD16, J=0.005002 $\pm$ 0.25%									
A	650	0.8	5.6	0.056362	1.789	0.30	23	16.07	0.99
B	750	1.9	58.0	0.126460	1.761	0.40	151	15.82	0.15
C	850	14.5	88.7	0.975749	1.638	0.39	1214	14.72	0.07
D	900	16.2	94.3	1.087197	1.590	0.50	8824	14.29	0.04
E	950	24.1	95.4	1.620543	1.564	0.56	90046	14.05	0.02
F	1000	16.9	92.8	1.137080	1.557	0.49	8839	14.00	0.03
G	1050	8.0	85.7	0.537016	1.563	0.32	2174	14.05	0.09
H	1150	7.5	65.1	0.502960	1.503	0.25	686	13.51	0.06
I	1450	9.3	40.0	0.628144	1.310	0.02	58	11.78	0.40
J	1650	0.7	39.6	0.048142	1.496	0.02	94	13.45	1.06
Total Gas		100.0	83.7	6.719653	1.554	0.41	25050	13.97	
No Plateau									
K99-8-24C ; 0.2502 g, whole rock basalt, #69KD16, J=0.005002 $\pm$ 0.25%									
A	650	1.0	7.4	0.147778	1.054	1.01	25	9.48	0.62
B	750	2.7	71.4	0.393486	1.560	0.89	101	14.02	0.20
C	850	14.1	93.6	2.042751	1.680	0.83	313	15.09	0.05
D	900	16.5	96.6	2.385731	1.624	0.89	745	14.59	0.02
E	950	19.9	97.0	2.888016	1.602	1.00	939	14.40	0.02
F	1000	19.4	96.7	2.804347	1.598	0.99	862	14.36	0.02
G	1050	12.7	94.3	1.833187	1.593	0.97	450	14.32	0.02
H	1150	10.5	79.1	1.522958	1.571	1.13	115	14.12	0.05
I	1450	2.4	50.5	0.349837	1.488	0.04	33	13.38	0.35
J	1650	0.8	46.3	0.115759	1.478	0.04	70	13.29	0.29
Total Gas		100.0	91.0	14.483850	1.601	0.93	594	14.39	
Plateau Age		52.0	steps E-G					14.36	0.05

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K99-8-24D1 ; 0.2529 g, whole rock basalt, #71KD16, J=0.004952 $\pm$ 0.25%									
A	650	9.6	17.0	0.406562	1.550	1.99	37	13.80	0.31
B	750	9.2	39.3	0.388145	1.475	1.22	52	13.13	0.12
C	850	20.2	60.1	0.853642	1.652	0.29	93	14.70	0.09
D	900	12.7	84.6	0.539847	1.698	0.15	329	15.10	0.18
E	950	14.1	90.3	0.597526	1.678	0.14	574	14.93	0.16
F	1000	11.3	87.0	0.477557	1.635	0.17	410	14.55	0.15
G	1050	7.2	83.5	0.305512	1.643	0.22	178	14.62	0.14
H	1150	9.5	75.7	0.402099	1.544	0.18	112	13.74	0.16
I	1450	6.2	46.1	0.263897	1.406	0.01	39	12.52	0.49
Total Gas		100.0	66.8	4.234787	1.607	0.45	222	14.30	
No Plateau									
K99-8-24D2 ; 0.2545 g, whole rock basalt, #73KD16, J=0.004945 $\pm$ 0.25%									
A	650	5.1	9.6	0.205692	1.689	1.49	26	15.00	0.53
B	750	6.3	36.7	0.252269	1.466	0.92	46	13.04	0.36
C	850	17.0	65.0	0.686659	1.676	0.25	126	14.89	0.11
D	900	13.6	87.4	0.549631	1.731	0.16	496	15.38	0.07
E	950	14.2	91.4	0.571596	1.702	0.16	666	15.12	0.11
F	1000	13.2	89.9	0.531320	1.667	0.20	475	14.81	0.09
G	1050	9.2	87.5	0.371074	1.680	0.28	205	14.92	0.13
H	1150	14.0	80.7	0.566499	1.610	0.28	116	14.30	0.18
I	1450	7.4	52.1	0.299090	1.550	0.01	36	13.77	0.36
Total Gas		100.0	73.8	4.033830	1.655	0.31	288	14.71	
No Plateau									
K99-8-24E ; 0.2501 g, whole rock basalt, #77KD16, J=0.004880 $\pm$ 0.25%									
A	650	0.8	4.7	0.099087	1.707	1.05	34	14.97	0.70
B	750	0.8	21.4	0.100131	1.724	1.11	103	15.12	0.56
C	850	5.2	54.6	0.673651	1.852	0.85	625	16.23	0.10
D	900	8.0	92.1	1.045956	1.821	0.97	8440	15.96	0.07
E	950	16.2	96.9	2.109848	1.806	1.04	***	15.83	0.02
F	1000	20.4	98.3	2.657556	1.772	1.17	***	15.53	0.03
G	1050	20.9	98.6	2.724175	1.756	1.24	8430	15.39	0.02
H	1150	19.9	98.2	2.602550	1.757	1.30	1039	15.40	0.02
I	1450	5.9	84.0	0.773400	1.686	0.07	88	14.78	0.09
J	1650	2.0	78.1	0.261932	1.689	0.05	195	14.81	0.32
Total Gas		100.0	92.8	13.048286	1.771	1.07	2686	15.53	
No Plateau

Table 3. Continued.

Table 8: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
Poison Creek Debris Flow									
JS-98-8A ; 0.2503 g, whole rock basalt, #11KD16, $J=0.004832\pm0.50\%$ $\ddot{A}$									
A	650	7.6	29.5	0.466539	1.777	1.74	23	15.43	0.09
B	750	5.0	52.9	0.307309	1.760	1.04	33	15.28	0.21
C	850	15.5	80.4	0.946718	1.816	0.48	144	15.76	0.07
D	950	28.0	95.1	1.709992	1.761	0.39	1158	15.29	0.09
E	1050	17.8	92.2	1.087620	1.708	0.30	614	14.82	0.05
F	1150	7.2	85.5	0.438130	1.648	0.19	263	14.31	0.23
G	1450	18.9	82.5	1.154003	1.521	0.05	102	13.21	0.21
Total Gas		100.0	82.1	6.110311	1.708	0.45	497	14.83	
No Plateau									
JS-99-8B ; 0.2550 g, whole rock basalt, #13KD16, $J=0.004906\pm0.50\%$									
A	550	4.6	21.5	0.293058	1.520	1.60	24	13.40	0.24
B	650	0.3	43.8	0.017448	1.632	1.66	26	14.39	1.27
C	750	3.1	64.5	0.199188	1.765	0.81	67	15.56	0.20
D	850	16.8	88.1	1.062787	1.756	0.53	302	15.47	0.08
E	950	26.4	93.6	1.671523	1.677	0.38	965	14.78	0.07
F	1050	23.7	92.6	1.496850	1.669	0.53	568	14.72	0.06
G	1150	14.9	87.1	0.940119	1.631	0.29	178	14.38	0.15
H	1450	10.2	61.8	0.647786	1.594	0.02	197	14.05	0.21
Total Gas		100.0	83.8	6.328759	1.668	0.47	490	14.71	
Plateau Age		50.1	steps E-F					14.74	0.08
JS-99-8C ; 0.2537 g, whole rock basalt, #15KD16, $J=0.004964\pm0.50\%$									
A	650	1.8	7.0	0.091830	1.729	0.60	20	15.42	0.73
B	750	2.4	45.3	0.124259	1.810	0.43	71	16.14	0.51
C	850	16.1	84.2	0.832998	1.765	0.30	448	15.74	0.14
D	950	32.8	95.2	1.695717	1.696	0.30	1901	15.12	0.06
E	1050	22.2	93.2	1.148417	1.665	0.48	765	14.85	0.09
F	1150	12.9	87.2	0.667749	1.612	0.36	346	14.37	0.10
G	1450	11.8	63.3	0.611215	1.590	0.03	79	14.18	0.36
Total Gas		100.0	85.4	5.172185	1.680	0.32	921	14.98	
No Plateau

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
JS-99-9 ; 0.2525 g, whole rock basalt, #17KD16, J=0.004968 $\pm$ 0.50%									
A	650	1.5	22.3	0.206697	1.250	1.08	60	11.17	0.34
B	750	4.7	86.3	0.637626	1.692	0.74	200	15.11	0.04
C	850	20.9	96.8	2.836092	1.676	0.80	777	14.96	0.05
D	950	36.2	98.0	4.911192	1.627	1.01	1582	14.52	0.03
E	1050	25.0	96.8	3.391000	1.621	0.93	611	14.47	0.02
F	1150	8.0	77.7	1.082040	1.581	0.76	142	14.11	0.08
G	1450	3.6	49.9	0.492393	1.591	0.05	61	14.20	0.35
Total Gas		100.0	92.4	13.557040	1.628	0.88	912	14.53	
Plateau Age		61.2	steps D-E					14.48	0.08
JS-99-10 ; 0.2519 g, whole rock basalt, #19KD16, J=0.004966 $\pm$ 0.50%									
A	750	3.4	28.2	0.198106	1.489	1.70	27	13.29	0.22
B	850	6.6	61.7	0.384249	1.685	0.76	60	15.04	0.16
C	950	22.6	89.0	1.323534	1.720	0.42	351	15.35	0.05
D	1050	29.6	93.4	1.734575	1.672	0.40	857	14.92	0.05
E	1150	24.2	89.9	1.414813	1.642	0.43	406	14.65	0.05
F	1450	13.7	65.8	0.800304	1.625	0.03	124	14.50	0.16
Total Gas		100.0	83.5	5.855581	1.664	0.43	453	14.85	
No Plateau									
Sopris Bowl									
L-223 ; 0.2472 g, whole rock basalt, #13KD8, J=0.002665 $\pm$ 0.15%									
A	500	5.3	19.9	0.029842	2.392	3.16	44	11.46	0.06
B	600	4.7	33.9	0.026544	2.687	1.62	60	12.87	0.03
C	700	12.6	62.1	0.071074	2.972	1.03	178	14.23	0.03
D	750	6.6	76.3	0.037421	2.948	1.10	626	14.12	0.04
E	800	8.2	82.5	0.046499	2.905	1.27	1385	13.91	0.01
F	850	13.4	88.9	0.075482	2.865	1.42	2458	13.72	0.02
G	900	15.5	91.1	0.087321	2.852	1.48	2628	13.66	0.01
H	950	9.2	87.9	0.051700	2.845	1.51	1581	13.63	0.02
I	1000	10.6	87.2	0.059852	2.839	1.60	922	13.60	0.03
J	1100	9.6	75.5	0.054215	2.822	1.51	433	13.51	0.02
K	1250	2.6	100.0	0.014548	2.773	0.11	***	13.28	0.03
L	1400	1.7	100.0	0.009338	2.853	0.06	***	13.66	0.22
Total Gas		100.0	77.1	0.563836	2.929	1.43	1204	14.03	
No Plateau

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$\frac{^{40}\text{Ar}^*}{^{39}\text{Ar}_K}$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)				and error ($\pm 1\sigma$)	
BR6(3); 0.2525 g, whole rock basalt, #10KD8, J=0.002665$\pm$0.25%									
A	550	2.1	1.2	0.360901	0.232	2.53	71	1.12	0.72
B	650	7.3	77.9	1.254430	2.794	1.59	596	13.38	0.07
C	750	15.1	98.1	2.572864	2.971	1.67	3114	14.23	0.06
D	800	14.0	98.8	2.387945	2.871	2.04	5288	13.75	0.04
E	850	15.1	99.1	2.572864	2.832	2.42	3570	13.57	0.03
F	950	21.1	99.0	3.605060	2.827	2.85	1839	13.54	0.03
G	1050	17.4	97.7	2.982190	2.842	4.35	645	13.61	0.03
H	1450	6.8	88.8	1.165304	2.831	0.39	173	13.56	0.08
I	1650	1.1	78.7	0.193605	2.805	0.35	398	13.43	0.43
Total Gas		100.0	94.1	17.095163	2.801	2.46	2306	13.42	
Plateau Age		61.5	steps E-I					13.57	0.05
Ba36(1); 0.2528 g, whole rock basalt, #14KD8, J=0.002665$\pm$0.25%									
A	550	0.5	3.0	0.06944	1.991	1.55	23	9.55	2.26
B	650	1.1	6.8	0.157636	1.445	1.87	70	6.94	0.48
C	750	1.7	56.5	0.252374	2.671	1.39	325	12.80	0.21
D	800	1.8	89.0	0.256555	2.919	1.27	809	13.98	0.22
E	850	2.5	96.5	0.367386	2.993	1.33	1939	14.33	0.16
F	950	7.4	98.1	1.079418	2.966	1.59	34758	14.20	0.06
G	1050	14.3	98.8	2.087815	2.889	2.02	3072	13.84	0.03
H	1650	70.7	96.3	10.283273	2.810	3.30	2150	13.46	0.02
Total Gas		100.0	94.6	14.553897	2.818	2.85	4607	13.50	
No Plateau									
Basalt Mtn., Top									
K97-8-15C2; 0.2517 g, whole rock basalt, #63KD6, J=0.002026$\pm$0.5%									
A	650	23.6	31.9	1.016963	2.559	3.22	276	9.33	0.07
B	750	8.5	58.4	0.367234	2.880	1.36	736	10.50	0.12
C	800	9.9	87.3	0.426148	3.006	1.18	23430	10.95	0.11
D	850	17.7	95.8	0.760286	2.880	1.19	***	10.50	0.07
E	950	30.1	96.4	1.294893	2.700	0.84	***	9.84	0.04
F	1050	6.7	90.6	0.286592	2.499	0.37	1361	9.11	0.22
G	1450	3.5	28.4	0.152506	1.965	0.07	61	7.17	0.45
Total Gas		100.0	74.1	4.304622	2.705	1.48	2540	9.86	
No Plateau

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-8-15C4 ; 0.2467 g, whole rock basalt, #65KD6, J=0.002017 $\pm$ 0.5%									
A	650	6.1	52.8	0.276923	2.204	0.83	317	8.00	0.20
B	750	8.2	96.9	0.371046	2.996	0.77	4024	10.87	0.14
C	800	10.9	98.8	0.492889	2.897	0.97	***	10.51	0.09
D	850	14.6	99.6	0.660736	2.799	1.25	***	10.16	0.07
E	950	33.4	99.6	1.508646	2.755	1.48	14274	10.00	0.03
F	1050	18.7	97.8	0.846753	2.730	1.51	713	9.91	0.06
G	1450	8.0	82.0	0.360402	2.699	0.19	94	9.79	0.20
Total Gas		100.0	94.7	4.517395	2.754	1.19	5258	9.99	
Plateau Age		60.1	steps E-G					9.97	0.06
K97-8-15B ; 0.2472 g, whole rock basalt, #61KD6, J=0.002044 $\pm$ 0.5%									
A	750	6.4	96.5	0.296167	2.952	0.64	3588	10.85	0.11
B	800	7.0	99.7	0.322523	2.934	0.74	***	10.79	0.16
C	850	10.7	100.0	0.495690	2.795	0.97	***	10.28	0.07
D	950	35.2	99.0	1.623573	2.674	1.51	***	9.84	0.07
E	1050	28.8	98.6	1.328326	2.677	1.84	4934	9.84	0.03
F	1450	12.0	64.8	0.551935	2.661	0.35	149	9.79	0.05
Total Gas		100.0	94.8	4.618214	2.721	1.30	1667	10.00	
Plateau Age		75.9	steps D-F					9.83	0.05
L-37 ; 0.2455 g, whole rock basalt, #5KD8, J=0.002657 $\pm$ 0.5%									
A	500	0.5	6.0	0.001853	1.346	1.24	74	6.44	0.38
B	600	2.0	26.0	0.007478	1.064	0.80	325	5.09	0.14
C	700	10.8	81.7	0.041136	1.858	0.58	1661	8.89	0.02
D	800	19.9	93.9	0.075621	2.188	0.75	***	10.46	0.01
E	900	28.4	95.8	0.107990	2.129	0.83	***	10.17	0.01
F	1000	21.7	94.4	0.082700	2.091	0.54	***	10.00	0.03
G	1100	9.0	86.5	0.034098	2.040	0.73	5167	9.75	0.08
H	1200	5.3	74.0	0.020243	1.930	0.62	1077	9.23	0.02
I	1350	2.5	41.5	0.009410	2.096	0.04	46	10.02	0.17
Total Gas		100.0	88.5	0.380529	2.059	0.68	708	9.84	
No Plateau

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
Basalt Mtn., west flank									
L-176 ; 0.2404 g, whole rock basalt, #7KD8, $J=0.002650\pm0.25\%$ $\ddot{\text{A}}$									
A	550	3.4	18.7	0.294329	1.619	1.69	60	7.72	0.47
B	650	11.2	44.4	0.980160	1.873	0.65	96	8.93	0.02
C	750	14.9	77.0	1.298582	2.093	0.45	385	9.98	0.05
D	800	13.6	89.7	1.189763	2.045	0.56	1365	9.75	0.02
E	850	14.8	93.9	1.293865	2.036	0.66	2030	9.71	0.03
F	950	21.2	95.0	1.850851	2.031	0.73	1564	9.68	0.02
G	1050	15.7	91.4	1.365971	2.023	0.83	429	9.65	0.03
H	1450	5.1	68.6	0.447320	2.009	0.05	69	9.58	0.13
Total Gas		100.0	81.3	8.720841	2.009	0.66	960	9.58	
Plateau Age		56.9	steps E-H					9.68	0.03
Basalt Mtn., north rim									
L-91A1 ; 0.2598 g, whole rock basalt, #4KD8, $J=0.002658\pm0.25\%$ $\ddot{\text{A}}$									
A	550	8.1	23.8	0.785470	1.736	3.57	65	8.30	0.14
B	650	29.4	50.5	2.860736	1.870	1.19	87	8.94	0.05
C	750	18.6	83.8	1.813491	2.033	0.49	361	9.72	0.02
D	800	14.2	95.5	1.384557	2.029	0.57	4437	9.71	0.03
E	850	12.7	96.8	1.236588	2.030	0.63	***	9.71	0.04
F	950	11.2	95.6	1.090815	2.009	0.60	3244	9.61	0.06
G	1050	4.0	86.9	0.390018	1.836	0.32	474	8.78	0.09
H	1450	1.7	55.9	0.164963	1.801	0.02	23	8.61	0.30
Total Gas		100.0	73.4	9.726638	1.946	0.97	1113	9.31	
Plateau Age		56.8	steps C-D					9.71	0.03
L-39 ; 0.2641 g, whole rock basalt, #1KD8, $J=0.002640\pm0.25\%$									
A	550	6.8	18.1	0.686886	1.657	3.20	51	7.87	0.25
B	650	26.3	44.0	2.642945	1.925	0.99	78	9.15	0.05
C	750	22.2	76.0	2.225301	2.058	0.50	349	9.78	0.03
D	800	15.6	89.1	1.567815	2.051	0.61	2672	9.74	0.03
E	850	12.8	91.2	1.285568	2.051	0.69	2861	9.74	0.04
F	950	10.3	88.1	1.031921	2.053	0.65	1789	9.75	0.04
G	1050	4.3	74.3	0.434034	1.880	0.38	384	8.93	0.08
H	1450	1.7	41.1	0.166680	1.899	0.02	21	9.02	0.32
Total Gas		100.0	68.2	10.041150	1.983	0.86	1086	9.42	
Plateau Age		60.9	steps C-F					9.75	0.03

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
L-181 ; 0.2445 g, whole rock basalt, #16KD8, J=0.002665 $\pm$ 0.15%									
A	500	3.9	27.6	0.018893	2.033	4.15	67	9.75	0.04
B	600	28.2	73.8	0.135492	1.943	4.17	98	9.32	0.01
C	700	24.5	83.6	0.117687	1.998	1.83	132	9.58	0.01
D	750	10.1	67.7	0.048502	2.069	1.01	246	9.92	0.03
E	800	10.5	73.5	0.050587	2.094	0.73	516	10.04	0.03
F	900	13.6	77.6	0.065402	2.047	0.50	893	9.82	0.02
G	1000	6.6	65.1	0.031681	1.994	0.30	473	9.56	0.02
H	1150	2.0	24.5	0.009827	1.362	0.16	114	6.54	0.23
I	1350	0.3	4.9	0.001626	1.423	0.01	8	6.83	0.38
Total Gas		100.0	72.5	0.479697	1.992	2.06	298	9.55	
No Plateau									
L-187D1 ; 0.2581 g, whole rock basalt, #11KD8, J=0.002665 $\pm$ 0.25%									
A	550	1.0	11.5	0.087052	1.553	2.06	41	7.45	0.47
B	650	17.4	28.0	1.525676	1.804	1.11	63	8.65	0.05
C	750	13.3	55.3	1.167446	2.031	0.52	164	9.74	0.04
D	800	12.2	78.1	1.075403	2.073	0.58	846	9.94	0.11
E	850	14.9	86.5	1.304363	2.032	0.64	2296	9.74	0.04
F	950	23.6	89.7	2.076246	2.014	0.72	3167	9.66	0.04
G	1050	12.8	76.3	1.121344	1.974	0.83	581	9.46	0.02
H	1450	4.8	52.9	0.421887	1.918	0.05	79	9.20	0.09
Total Gas		100.0	68.2	8.779417	1.975	0.73	1305	9.47	
No Plateau									
L-187B3 ; 0.2432 g, whole rock basalt, #6KD8, J=0.002656 $\pm$ 0.5%									
A	550	28.6	36.2	2.602897	1.867	3.03	78	8.92	0.06
B	650	19.8	63.4	1.797337	2.011	1.01	111	9.61	0.03
C	750	16.2	83.8	1.474837	2.076	0.49	347	9.92	0.03
D	800	8.9	92.8	0.812950	2.041	0.43	1654	9.75	0.04
E	850	8.8	94.4	0.802412	2.000	0.42	2297	9.56	0.04
F	950	11.4	94.0	1.037892	1.991	0.33	2283	9.51	0.03
G	1050	4.3	82.8	0.389533	1.741	0.21	558	8.32	0.07
H	1450	1.9	56.1	0.170220	1.726	0.02	26	8.25	0.24
Total Gas		100.0	68.5	9.088078	1.963	1.27	737	9.38	
No Plateau

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
L-187A2 ; 0.2278 g, whole rock basalt, #3KD8, J=0.002635 $\pm$ 0.25%									
A	550	3.9	19.1	0.244405	1.860	3.86	67	8.82	0.34
B	650	30.2	32.5	1.887900	1.921	1.69	87	9.11	0.07
C	750	15.9	63.5	0.993490	2.140	0.48	223	10.14	0.06
D	800	13.1	93.0	0.819212	2.091	0.43	4319	9.91	0.04
E	850	14.9	96.3	0.929284	2.088	0.49	***	9.90	0.03
F	950	0.0	0.0	1.049300	2.064	0.48	***	9.79	0.03
G	1050	0.0	0.0	0.236290	1.864	0.29	***	8.84	0.15
H	1450	0.0	0.0	0.084314	1.715	0.02	***	8.14	0.44
Total Gas		100.0	0.0	6.244195	2.020	0.00	***	9.58	
No Plateau									
Basalt Mtn., south									
L-38A ; 0.2272 g, whole rock basalt, #2KD8, J=0.002640 $\pm$ 0.5%									
A	550	4.0	3.1	0.463025	0.601	1.11	63	2.86	0.28
B	650	3.5	86.8	0.409491	1.957	0.89	462	9.30	0.10
C	750	13.0	96.5	1.503794	2.220	0.98	1372	10.54	0.03
D	800	15.0	98.6	1.733807	2.161	1.12	1506	10.26	0.03
E	850	15.7	98.6	1.822295	2.092	1.38	1097	9.94	0.03
F	950	21.2	98.3	2.451300	2.061	1.57	553	9.79	0.02
G	1050	15.1	96.3	1.745173	2.059	1.74	176	9.78	0.02
H	1450	10.5	88.5	1.217298	2.024	0.38	102	9.61	0.04
I	1750	2.0	61.1	0.236643	1.937	0.43	152	9.20	0.18
Total Gas		100.0	91.9	11.582826	2.033	1.23	752	9.66	
No Plateau									
K97-8-11E1 ; 0.2570 g, whole rock basalt, #15KD6, J=0.002023 $\pm$ 0.50%									
A	650	19.5	18.2	1.235399	2.536	2.77	44	9.23	0.15
B	750	18.4	35.0	1.166189	2.953	0.95	78	10.75	0.16
C	800	9.1	64.2	0.578709	2.915	0.66	253	10.61	0.20
D	850	10.2	88.7	0.650700	2.847	0.66	1416	10.36	0.15
E	950	24.9	93.2	1.583207	2.701	0.70	6297	9.83	0.06
F	1050	13.5	91.6	0.856463	2.815	0.57	1496	10.24	0.14
G	1450	4.4	51.0	0.278126	2.623	0.05	63	9.55	0.34
Total Gas		100.0	62.8	6.348793	2.762	1.09	1966	10.05	
No Plateau

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-8-11E2 ; 0.2450 g, whole rock basalt, #17KD6, J=0.002024 $\pm$ 0.50%									
A	650	19.0	17.6	1.135353	2.593	3.14	44	9.44	0.16
B	750	16.3	30.4	0.973193	2.864	1.08	67	10.43	0.13
C	800	11.2	59.3	0.669607	2.966	0.68	202	10.80	0.05
D	850	12.4	88.9	0.742195	2.869	0.67	1336	10.45	0.04
E	950	24.6	92.6	1.470672	2.670	0.70	4732	9.72	0.02
F	1050	12.1	90.6	0.722087	2.787	0.56	1404	10.15	0.06
G	1450	4.4	49.7	0.261131	2.537	0.05	53	9.24	0.21
Total Gas		100.0	61.9	5.974238	2.753	1.17	1545	10.03	
No Plateau									
K97-8-11D3 ; 0.2440 g, whole rock basalt, #13KD6, J=0.002021 $\pm$ 0.50%									
A	650	9.5	22.8	0.522912	2.843	0.94	55	10.33	0.32
B	750	12.0	55.3	0.657775	3.583	0.44	219	13.02	0.40
C	800	10.1	81.6	0.556511	3.678	0.45	8676	13.36	0.45
D	850	12.1	95.6	0.662778	3.449	0.54	***	12.53	0.15
E	950	27.8	100.0	1.526195	3.196	0.65	***	11.62	0.07
F	1050	17.7	80.0	0.970082	2.700	0.92	572	9.82	0.23
G	1450	10.8	53.4	0.591863	2.694	0.12	83	9.80	0.16
Total Gas		100.0	76.3	5.488116	3.134	0.61	1021	11.39	
No Plateau									
K97-8-11C1 ; 0.2492 g, whole rock basalt, #8KD6, J=0.001977 $\pm$ 0.50%									
A	550	15.5	18.4	0.827589	2.731	3.08	47	9.71	0.15
B	650	15.7	28.7	0.837340	2.740	1.16	62	9.75	0.19
C	750	16.7	58.0	0.892867	2.992	0.51	171	10.64	0.12
D	800	11.4	90.9	0.605481	2.889	0.50	1797	10.28	0.18
E	850	14.2	98.9	0.757499	2.879	0.59	24783	10.24	0.15
F	950	20.3	97.9	1.079982	2.847	0.55	9469	10.13	0.09
G	1050	6.2	91.1	0.331143	2.913	0.32	848	10.36	0.40
Total Gas		100.0	66.9	5.331901	2.850	1.02	5741	10.14	
Plateau Age		52.0	steps D-G					10.18	0.06

Table 3. Continued.

Table 8: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-8-11C3 ; 0.2546 g, whole rock basalt, #10KD6, $J=0.001999\pm0.50\%$									
A	650	32.3	29.8	1.894854	3.313	1.60	61	11.91	0.13
B	750	20.7	57.5	1.213724	3.108	0.52	158	11.17	0.33
C	800	13.4	89.7	0.785655	2.822	0.51	1390	10.15	0.12
D	850	13.0	98.6	0.766062	2.849	0.56	6865	10.24	0.08
E	950	15.5	99.8	0.908041	2.764	0.54	5762	9.94	0.09
F	1050	5.2	98.2	0.306110	2.878	0.32	753	10.35	0.35
Total Gas		100.0	66.9	5.874446	3.037	0.87	2063	10.92	
No Plateau									
K97-8-11B ; 0.2590 g, whole rock basalt, #6KD6, $J=0.002001\pm0.50\%$									
A	650	24.3	25.8	1.306978	2.708	2.45	60	9.75	0.11
B	750	18.3	43.3	0.984700	2.819	0.76	96	10.15	0.23
C	800	9.4	73.9	0.505664	2.982	0.45	299	10.73	0.17
D	850	11.8	93.7	0.635105	2.866	0.43	1600	10.32	0.12
E	950	21.0	89.6	1.133648	2.571	0.47	4151	9.26	0.30
F	1050	9.6	95.4	0.517095	2.767	0.38	1597	9.96	0.07
G	1450	5.7	66.4	0.305114	2.574	0.05	70	9.27	0.41
Total Gas		100.0	63.9	5.388304	2.742	0.96	1279	9.87	
No Plateau									
K97-8-11A1 ; 0.2515 g, whole rock basalt, #4KD6, $J=0.002001\pm0.50\%$									
A	650	17.7	18.1	0.846422	2.811	1.40	49	10.12	0.58
B	750	12.1	44.4	0.580772	3.095	0.47	133	11.14	0.25
C	800	8.4	83.5	0.400050	2.905	0.43	864	10.46	0.22
D	850	13.6	97.3	0.653255	2.828	0.53	15033	10.18	0.21
E	950	30.1	96.2	1.439893	2.727	0.58	13971	9.82	0.07
F	1050	13.0	94.9	0.622533	2.813	0.36	1827	10.13	0.11
G	1450	5.1	54.7	0.243760	2.516	0.04	51	9.06	0.31
Total Gas		100.0	72.9	4.786685	2.816	0.64	6591	10.14	
No Plateau

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-8-11A2 ; 0.2432 g, whole rock basalt, #2KD6, J=0.001999 $\pm$ 0.50%									
A	550	8.0	15.4	0.356230	2.944	2.70	42	10.59	0.48
B	650	12.3	23.6	0.545835	2.825	1.30	59	10.16	0.50
C	750	14.5	40.2	0.643585	3.016	0.54	107	10.84	0.24
D	800	9.8	76.2	0.435460	3.027	0.41	468	10.88	0.32
E	850	12.8	94.8	0.570681	2.885	0.46	8325	10.38	0.11
F	950	26.4	91.6	1.175535	2.576	0.52	5361	9.27	0.10
G	1050	11.6	92.2	0.516625	2.824	0.36	1214	10.16	0.10
H	1450	4.6	39.8	0.204560	2.646	0.03	44	9.52	0.28
Total Gas		100.0	66.3	4.448511	2.816	0.73	2700	10.13	
Plateau Age		57.4	steps A-E					10.49	0.07
Grand Mesa, Mesa Lakes									
K98-8-18F2 ; 0.2569 g, whole rock basalt, #93KD12, J=0.002023 $\pm$ 0.25%									
A	600	20.1	28.3	0.288291	2.345	2.79	102	8.54	0.08
B	650	9.9	39.7	0.141767	2.387	1.69	115	8.69	0.09
C	700	9.8	47.3	0.140905	2.472	1.00	129	9.00	0.09
D	750	9.8	55.9	0.140218	2.562	0.56	151	9.33	0.15
E	800	10.2	67.9	0.146449	2.624	0.33	215	9.55	0.08
F	850	10.1	80.3	0.144816	2.604	0.25	471	9.48	0.10
G	1150	30.1	89.4	0.432053	2.552	0.22	401	9.29	0.05
Total Gas		100.0	61.7	1.434499	2.500	1.01	250	9.10	
No Plateau									
K98-8-18F3 ; 0.2516 g, whole rock basalt, #95KD12, J=0.002121 $\pm$ 0.25%									
A	600	5.1	19.5	0.073683	2.315	3.34	78	8.84	0.34
B	650	3.5	32.2	0.050514	2.433	4.10	108	9.29	0.27
C	700	2.6	38.3	0.038105	2.412	3.82	107	9.20	0.24
D	750	3.2	40.3	0.046222	2.285	2.87	117	8.72	0.19
E	800	4.4	46.3	0.063999	2.404	1.97	120	9.18	0.21
F	850	6.2	52.2	0.089043	2.481	1.28	132	9.47	0.22
G	1150	59.0	74.0	0.853811	2.583	0.36	272	9.86	0.02
H	1450	16.0	84.7	0.231094	2.462	0.06	189	9.40	0.23
Total Gas		100.0	66.9	1.446471	2.516	0.90	218	9.60	
Plateau Age		65.2	steps F-G					9.85	0.03

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K98-8-18E4 ; 0.2590 g, whole rock basalt, #89KD12, J=0.002022 $\pm$ 0.25%									
A	550	1.1	9.7	0.024286	2.192	3.21	41	7.98	0.49
B	600	15.9	23.1	0.348598	2.345	2.76	69	8.54	0.05
C	650	10.6	28.9	0.232852	2.465	1.57	78	8.97	0.11
D	700	8.9	35.9	0.195927	2.608	0.95	96	9.49	0.09
E	750	9.4	48.2	0.205911	2.794	0.62	140	10.17	0.12
F	800	10.5	63.6	0.230500	2.817	0.47	269	10.25	0.10
G	850	10.5	76.0	0.230435	2.766	0.40	521	10.06	0.09
H	1150	28.8	79.2	0.630721	2.675	0.36	262	9.73	0.06
I	1450	4.2	61.7	0.093026	2.732	0.03	158	9.94	0.68
Total Gas		100.0	54.7	2.192256	2.627	0.98	207	9.56	
No Plateau									
K98-8-18E5 ; 0.2551 g, whole rock basalt, #91KD12, J=0.002021 $\pm$ 0.25%									
A	550	4.1	15.6	0.078422	2.330	2.39	55	8.48	0.40
B	600	6.5	25.3	0.123675	2.334	1.97	71	8.49	0.08
C	650	6.5	29.9	0.124666	2.402	1.35	77	8.74	0.08
D	700	6.2	37.6	0.118441	2.646	0.95	92	9.62	0.13
E	750	7.5	46.1	0.143220	2.688	0.65	124	9.77	0.16
F	800	8.5	59.7	0.163147	2.846	0.48	197	10.35	0.06
G	850	9.6	69.1	0.184812	2.777	0.39	324	10.10	0.07
H	1150	38.7	76.1	0.741925	2.669	0.34	187	9.71	0.02
I	1450	12.5	74.2	0.238965	2.711	0.08	157	9.86	0.18
Total Gas		100.0	60.4	1.917273	2.647	0.64	166	9.63	
Plateau Age		51.2	steps H-I					9.71	0.03
K98-8-18D1 ; 0.2485 g, whole rock basalt, #85KD12, J=0.001999 $\pm$ 0.25%									
A	650	31.3	24.7	0.719700	2.432	2.65	99	8.75	0.04
B	750	21.5	31.4	0.493604	2.573	1.28	114	9.26	0.07
C	800	16.3	37.8	0.374236	2.681	0.78	139	9.64	0.09
D	850	12.7	45.0	0.292649	2.710	0.49	181	9.75	0.08
E	950	11.9	53.7	0.273742	2.719	0.25	232	9.78	0.08
F	1050	3.7	53.1	0.085862	2.460	0.16	177	8.85	0.29
G	1150	2.5	51.0	0.056772	2.380	0.09	43	8.56	0.33
Total Gas		100.0	36.0	2.296565	2.572	1.33	137	9.25	
No Plateau

Table 3. Continued.

Table 3. Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K98-8-18C1 ; 0.2530 g, whole rock basalt, #81KD12, J=0.002000 $\pm$ 0.25%									
A	550	4.2	13.2	0.120454	2.108	3.53	66	7.59	0.18
B	600	7.2	20.0	0.207557	2.257	3.97	84	8.12	0.15
C	650	8.6	24.6	0.247156	2.375	2.98	91	8.55	0.13
D	700	9.3	28.9	0.266688	2.417	2.02	98	8.70	0.13
E	750	10.3	35.8	0.294172	2.577	1.22	116	9.28	0.09
F	800	11.2	46.5	0.320273	2.723	0.75	155	9.80	0.09
G	850	12.5	62.4	0.357067	2.786	0.51	277	10.03	0.07
H	1000	32.1	85.0	0.918125	2.768	0.32	1054	9.96	0.04
I	1150	4.6	64.4	0.131963	2.283	0.13	76	8.22	0.28
Total Gas		100.0	53.7	2.863455	2.592	1.26	431	9.33	
No Plateau									
K98-8-18C2 ; 0.2498 g, whole rock basalt, #83KD12, J=0.001997 $\pm$ 0.25%									
A	550	9.0	20.9	0.245487	2.345	2.78	84	8.39	0.12
B	650	26.1	33.1	0.708935	2.482	1.79	107	8.88	0.03
C	750	22.5	49.5	0.610951	2.687	0.85	150	9.62	0.06
D	800	14.2	65.6	0.386791	2.751	0.51	251	9.84	0.07
E	850	11.2	77.9	0.305726	2.764	0.35	463	9.89	0.08
F	950	10.8	84.4	0.293053	2.756	0.24	590	9.86	0.11
G	1050	3.6	72.1	0.097246	2.501	0.21	174	8.95	0.12
H	1150	2.6	55.9	0.071658	2.198	0.09	40	7.87	0.35
Total Gas		100.0	52.9	2.719847	2.608	1.06	228	9.34	
No Plateau									
K98-8-18B1 ; 0.2454 g, whole rock basalt, #77KD12, J=0.001999 $\pm$ 0.25%									
A	600	4.6	64.4	0.101670	2.853	0.50	232	10.26	0.22
B	750	1.0	99.7	0.021795	3.186	0.55	627	11.45	0.92
C	800	3.6	90.5	0.079525	2.766	0.58	735	9.95	0.24
D	850	9.1	95.7	0.201454	2.824	0.64	952	10.15	0.12
E	1150	71.5	93.5	1.588516	2.767	0.93	434	9.95	0.02
F	1450	10.3	56.9	0.228623	2.600	0.05	134	9.35	0.13
Total Gas		100.0	88.6	2.221583	2.763	0.78	454	9.94	
Plateau Age		89.7	steps A-E					9.96	0.04

Table 3. Continued.

Table 3. Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K98-8-18B2 ; 0.2426 g, whole rock basalt, #79KD12, J=0.001999 $\pm$ 0.25%									
A	700	1.8	87.8	0.036969	2.933	0.48	468	10.55	0.26
B	750	3.9	91.2	0.079864	2.815	0.55	813	10.12	0.15
C	800	8.1	95.2	0.165294	2.824	0.61	1093	10.16	0.09
D	850	12.4	95.7	0.253386	2.760	0.70	1463	9.93	0.07
E	1150	65.4	94.5	1.338771	2.767	0.92	355	9.95	0.01
F	1450	8.5	57.6	0.173436	2.678	0.04	140	9.63	0.14
Total Gas		100.0	91.3	2.047720	2.768	0.77	553	9.96	
Plateau Age		77.8	steps D-E					9.95	0.04
K98-8-18A3 ; 0.2444 g, whole rock basalt, #73KD12, J=0.001966 $\pm$ 0.25%									
A	600	26.4	23.9	0.379421	2.580	2.60	103	9.13	0.14
B	650	10.7	25.7	0.153799	2.507	2.02	107	8.87	0.16
C	700	11.2	27.8	0.160656	2.540	1.30	114	8.99	0.19
D	750	12.3	31.5	0.177127	2.679	0.77	118	9.48	0.21
E	800	12.2	34.7	0.175132	2.682	0.43	128	9.49	0.08
F	850	10.6	41.4	0.151986	2.805	0.24	144	9.92	0.18
G	1000	14.1	54.5	0.203505	2.699	0.09	241	9.55	0.22
H	1150	2.6	43.3	0.037822	2.140	0.04	23	7.58	0.36
Total Gas		100.0	33.4	1.439448	2.621	1.23	131	9.27	
No Plateau									
K98-8-18A4 ; 0.2522 g, whole rock basalt, #75KD12, J=0.001965 $\pm$ 0.25%									
A	650	50.0	30.9	0.557246	2.556	1.32	112	9.04	0.04
B	750	22.8	35.9	0.253710	2.671	0.48	125	9.44	0.06
C	800	11.9	42.0	0.132701	2.635	0.25	149	9.32	0.12
D	850	7.2	52.6	0.080574	2.685	0.14	197	9.49	0.24
E	950	6.0	65.8	0.066510	2.570	0.08	354	9.09	0.22
F	1050	2.2	51.4	0.024322	2.010	0.07	193	7.11	0.98
Total Gas		100.0	37.5	1.115063	2.590	0.82	142	9.16	
No Plateau

Table 3. Continued.

Table 8: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K98-8-17B6 ; 0.2524 g, whole rock basalt, #71KD12, J=0.001967 $\pm$ 0.25%									
A	700	1.9	87.8	0.041287	2.922	0.48	501	10.34	0.34
B	750	3.9	91.9	0.085089	2.861	0.55	720	10.13	0.20
C	800	7.6	97.2	0.166968	2.919	0.59	1280	10.33	0.09
D	850	11.5	98.6	0.251892	2.886	0.65	2340	10.21	0.05
E	1150	69.6	96.7	1.529098	2.819	1.10	938	9.98	0.02
F	1450	5.6	54.5	0.122355	2.683	0.03	92	9.50	0.50
Total Gas		100.0	94.2	2.196689	2.830	0.91	1061	10.02	
Plateau Age		75.2	steps E-F					9.97	0.04
K98-8-17A4 ; 0.2488 g, whole rock basalt, #67KD12, J=0.001967 $\pm$ 0.25%									
A	650	52.8	38.1	0.790993	2.558	2.55	115	9.06	0.07
B	750	22.6	53.5	0.338339	2.711	0.77	145	9.60	0.09
C	800	10.5	65.1	0.157142	2.819	0.34	189	9.97	0.08
D	850	6.1	76.3	0.090751	2.846	0.17	291	10.07	0.26
E	950	5.6	81.0	0.083766	2.700	0.10	465	9.56	0.36
F	1050	2.6	71.3	0.038252	2.570	0.09	243	9.10	0.46
Total Gas		100.0	49.9	1.499243	2.646	1.57	163	9.36	
Plateau Age		100.0	steps A-F					9.49	0.03
Grand Mesa, Lands End									
K98-8-1811 ; 0.2529 g, whole rock basalt, #105KD12, J=0.002037 $\pm$ 0.25%									
A	650	5.5	27.5	0.084735	2.213	0.48	111	8.11	0.17
B	750	8.1	84.7	0.124004	3.002	0.37	876	11.00	0.14
C	800	9.4	92.8	0.144004	2.950	0.39	2677	10.81	0.19
D	850	12.7	93.2	0.194933	2.828	0.43	4132	10.36	0.12
E	950	26.2	95.0	0.400871	2.867	0.48	1606	10.51	0.04
F	1050	19.2	91.2	0.294493	2.824	0.63	557	10.35	0.04
G	1150	12.4	83.4	0.189604	2.830	0.55	112	10.37	0.14
H	1450	6.4	33.0	0.098575	2.723	0.05	114	9.98	0.38
Total Gas		100.0	83.8	1.531219	2.823	0.47	1404	10.34	
No Plateau

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K98-8-18I4 ; 0.2528 g, whole rock basalt, #107KD12, J=0.002037 $\pm$ 0.25%									
A	550	3.4	6.4	0.048675	2.339	0.85	32	8.58	0.61
B	650	4.3	24.3	0.061442	2.551	0.40	85	9.35	0.32
C	750	9.3	48.3	0.131112	2.899	0.29	210	10.62	0.09
D	800	9.2	69.4	0.130105	2.869	0.28	481	10.51	0.12
E	850	13.4	84.4	0.189314	2.816	0.30	1127	10.32	0.08
F	950	24.9	89.3	0.353169	2.839	0.34	1288	10.40	0.06
G	1050	18.6	76.1	0.263843	2.785	0.41	575	10.21	0.10
H	1150	10.8	59.2	0.152758	2.849	0.39	107	10.44	0.14
I	1450	6.1	25.9	0.086721	2.796	0.04	130	10.25	0.59
Total Gas		100.0	67.8	1.417139	2.803	0.35	667	10.27	
Plateau age		73.8	steps E-G					10.35	0.04
K98-8-18H4 ; 0.2495 g, whole rock basalt, #103KD12, J=0.002037 $\pm$ 0.25%									
A	550	13.4	20.4	0.203026	2.551	2.72	84	9.35	0.12
B	650	21.6	27.5	0.326494	2.597	1.63	101	9.52	0.05
C	750	25.2	33.3	0.380398	2.687	0.73	117	9.85	0.05
D	800	14.7	42.1	0.222119	2.802	0.41	148	10.27	0.06
E	850	11.1	56.2	0.168140	2.885	0.24	244	10.57	0.12
F	950	11.1	75.3	0.167078	2.874	0.15	495	10.53	0.20
G	1050	2.9	68.8	0.043287	2.633	0.10	186	9.65	0.63
Total Gas		100.0	39.8	1.510542	2.707	1.01	171	9.92	
No Plateau									
K98-8-18G2 ; 0.2544 g, whole rock basalt, #97KD12, J=0.002023 $\pm$ 0.25%									
A	550	23.8	14.4	0.446800	2.282	3.90	64	8.31	0.09
B	600	2.1	15.5	0.040154	2.172	4.30	65	7.91	0.53
C	650	5.9	19.2	0.110753	2.467	1.96	74	8.98	0.21
D	700	7.6	24.8	0.142035	2.706	1.17	89	9.85	0.15
E	750	8.6	34.7	0.161266	2.916	0.77	127	10.61	0.05
F	800	10.2	50.6	0.190716	2.980	0.56	229	10.84	0.09
G	850	11.0	70.0	0.205700	2.916	0.44	544	10.61	0.06
H	1150	30.9	79.9	0.578995	2.792	0.26	323	10.16	0.05
Total Gas		100.0	47.2	1.876419	2.675	1.48	221	9.74	
No Plateau

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K98-8-18G5 ; 0.2532 g, whole rock basalt, #99KD12, J=0.002009 $\pm$ 0.25%									
A	650	49.6	42.9	1.035476	2.456	2.19	121	8.88	0.02
B	750	23.9	59.2	0.498375	2.577	0.75	145	9.32	0.05
C	800	12.2	70.8	0.254045	2.681	0.37	186	9.69	0.10
D	850	6.5	79.7	0.134930	2.743	0.20	262	9.92	0.24
E	950	4.5	77.0	0.094023	2.520	0.12	329	9.11	0.28
F	1050	2.0	74.2	0.041482	2.401	0.16	183	8.68	0.19
G	1150	1.4	55.4	0.030227	2.250	0.04	25	8.14	0.56
Total Gas		100.0	54.9	2.088558	2.530	1.33	153	9.15	
No Plateau									
Missouri Heights									
K97-8-15A3 ; 0.2497 g, whole rock basalt, #57KD6, J=0.002044 $\pm$ 0.5%									
A	650	41.0	23.1	0.971015	2.927	2.04	29	10.76	0.16
B	750	28.4	36.2	0.673331	2.853	0.56	49	10.49	0.16
C	800	11.2	59.9	0.265045	2.798	0.30	165	10.29	0.37
D	850	9.4	80.0	0.222899	2.988	0.25	416	10.98	0.35
E	950	10.0	69.0	0.237055	2.492	0.19	401	9.17	0.39
Total Gas		100.0	40.9	2.369345	2.854	1.07	124	10.49	
Plateau Age		90.0	steps A-D					10.63	0.07
K97-8-15A4 ; 0.2554 g, whole rock basalt, #59KD6, J=0.002044 $\pm$ 0.5%									
A	650	28.1	23.5	0.688557	2.832	1.90	32	10.41	0.13
B	750	22.5	30.6	0.551295	2.887	0.76	44	10.61	0.13
C	800	15.1	40.5	0.369916	2.906	0.43	79	10.68	0.16
D	850	12.9	53.3	0.316823	2.963	0.32	146	10.89	0.16
E	950	16.0	54.4	0.392068	2.639	0.22	159	9.71	0.14
F	1050	5.3	52.3	0.129787	2.881	0.16	82	10.59	0.34
Total Gas		100.0	38.0	2.448446	2.844	0.86	79	10.46	
Plateau Age		65.8	steps A-C					10.56	0.07
Plateau Age		50.6	steps B-D					10.72	0.07

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-8-12F1 ; 0.2552 g, whole rock basalt, #35KD6, J=0.002044 $\pm$ 0.5%									
A	650	17.0	30.8	0.320511	2.960	0.73	66	10.88	0.21
B	750	25.9	65.9	0.486521	2.826	0.45	247	10.39	0.32
C	800	14.3	80.3	0.269813	2.948	0.30	546	10.84	0.06
D	850	10.1	91.0	0.190696	2.963	0.24	721	10.89	0.11
E	950	12.8	100.0	0.239906	2.874	0.23	432	10.57	0.08
F	1050	9.0	100.0	0.168965	2.868	0.22	149	10.55	0.12
G	1450	10.9	86.8	0.204106	2.658	0.05	50	9.78	0.52
Total Gas		100.0	74.2	1.880518	2.865	0.36	301	10.53	
Plateau Age		67.4	steps A-D					10.84	0.06
K97-8-12F2 ; 0.2547 g, whole rock basalt, #37KD6, J=0.002044 $\pm$ 0.5%									
A	550	16.2	17.4	0.218451	3.068	1.27	34	11.28	0.20
B	650	16.9	32.9	0.228113	2.905	0.75	58	10.68	0.08
C	750	30.3	41.1	0.408029	2.762	0.38	99	10.16	0.31
D	800	12.1	48.4	0.162426	3.271	0.21	150	12.02	0.14
E	850	8.1	60.4	0.109109	3.249	0.16	648	11.94	0.38
F	950	8.8	92.0	0.118782	3.245	0.13	852	11.92	0.17
G	1050	7.5	94.1	0.101615	3.150	0.12	253	11.58	0.19
Total Gas		100.0	46.8	1.346525	3.009	0.51	210	11.06	
No Plateau									
K97-8-12E1 ; 0.2554 g, whole rock basalt, #31KD6, J=0.002044 $\pm$ 0.5%									
A	650	40.8	50.3	0.689925	3.169	0.81	5	11.65	0.09
B	750	14.2	81.1	0.239677	2.950	0.27	5	10.85	0.12
C	800	8.0	92.2	0.134884	3.015	0.17	7	11.09	0.19
D	850	7.2	92.1	0.121634	2.848	0.15	10	10.47	0.26
E	950	8.8	98.2	0.149480	2.667	0.15	13	9.81	0.17
F	1050	6.5	99.4	0.110798	1.924	0.15	17	7.08	0.28
G	1450	14.5	79.0	0.245565	1.794	0.08	11	6.60	0.26
Total Gas		100.0	72.6	1.691963	2.777	0.43	8	10.21	
No Plateau

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-8-12E2 ; 0.2493 g, whole rock basalt, #33KD6, J=0.002044 $\pm$ 0.5%									
A	650	49.1	56.4	0.813113	2.884	0.98	7	10.60	0.13
B	750	16.4	62.9	0.271154	2.627	0.22	11	9.66	0.10
C	800	7.1	75.5	0.117424	3.035	0.14	17	11.16	0.53
D	850	5.4	85.8	0.088622	3.069	0.13	20	11.28	0.24
E	950	6.3	100.0	0.104586	2.980	0.12	20	10.95	0.32
F	1050	4.8	100.0	0.078781	2.429	0.11	22	8.94	0.36
G	1450	11.0	74.4	0.182747	2.010	0.05	12	7.40	0.09
Total Gas		100.0	67.2	1.656427	2.750	0.55	11	10.11	
No Plateau									
K97-10-8A2 ; 0.2470 g, whole rock basalt, #69KD6, J=0.002023 $\pm$ 0.5%									
A	650	7.4	33.1	0.129690	2.586	0.32	92	9.41	0.31
B	750	10.3	73.7	0.180232	3.081	0.25	238	11.21	0.20
C	800	9.6	80.1	0.167708	2.905	0.24	370	10.57	0.24
D	850	11.6	88.1	0.203250	2.911	0.25	456	10.59	0.18
E	950	21.5	83.4	0.377153	2.689	0.26	408	9.79	0.10
F	1050	21.4	81.6	0.374953	2.782	0.50	147	10.12	0.16
G	1450	18.3	67.4	0.321120	2.708	0.11	68	9.86	0.12
Total Gas		100.0	75.6	1.754106	2.792	0.28	251	10.16	
Plateau Age		61.2	steps E-G					9.88	0.06
K97-10-8A4 ; 0.2590 g, whole rock basalt, #71KD6, J=0.002019 $\pm$ 0.5%									
A	650	7.5	27.2	0.135027	2.673	0.56	63	9.71	0.55
B	750	9.2	47.5	0.165111	2.801	0.35	128	10.18	0.43
C	800	10.3	62.7	0.185619	2.914	0.28	229	10.58	0.41
D	850	12.0	74.4	0.215550	2.968	0.25	373	10.78	0.34
E	950	20.5	74.7	0.369256	2.692	0.24	421	9.78	0.20
F	1050	17.5	75.9	0.314341	2.734	0.38	197	9.93	0.20
G	1450	23.0	67.4	0.414703	2.733	0.15	86	9.93	0.15
Total Gas		100.0	65.9	1.799607	2.774	0.28	225	10.07	
Plateau Age		61.0	steps E-G					9.89	0.07

Table 3. Continued.

Table 3: Continued.

Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
Heuschkel Park								
K97-10-8E1 ; 0.2575 g, whole rock basalt, #85KD7, J=0.002651 $\pm$ 0.50% $\ddot{A}$								
A 650	11.9	35.7	0.189943	2.250	0.43	28	10.73	0.16
B 750	14.3	70.9	0.227056	2.418	0.24	73	11.53	0.21
C 800	12.9	78.0	0.205582	2.158	0.20	147	10.29	0.84
D 850	14.6	81.2	0.232615	2.060	0.18	215	9.82	0.13
E 950	20.4	78.3	0.324596	2.035	0.16	189	9.71	0.10
F 1050	16.2	55.0	0.258403	2.038	0.22	64	9.72	0.19
G 1450	9.6	33.1	0.153577	2.483	0.03	26	11.84	0.98
Total Gas	100.0	64.4	1.591772	2.178	0.21	116	10.39	
Plateau Age	64.2	steps C-F					9.75	0.06
K97-10-8E3 ; 0.2445 g, whole rock basalt, #87KD7, J=0.002653 $\pm$ 0.5%								
A 550	19.1	23.2	0.308509	1.906	1.72	24	9.10	0.32
B 650	11.0	44.8	0.176924	2.015	0.95	29	9.62	0.52
C 750	20.3	56.3	0.328158	2.236	0.46	43	10.67	0.21
D 800	9.5	52.5	0.153458	2.359	0.24	44	11.26	0.44
E 850	8.2	54.5	0.132172	2.567	0.14	54	12.25	0.68
F 950	9.7	45.7	0.156973	2.164	0.09	45	10.33	0.33
G 1050	8.6	35.2	0.139226	1.840	0.11	28	8.78	0.88
H 1450	13.6	39.2	0.219148	2.517	0.04	22	12.01	0.21
Total Gas	100.0	43.0	1.614568	2.185	0.58	35	10.43	
No Plateau								
K97-10-8F3 ; 0.2471 g, whole rock basalt, #89KD7, J=0.002655 $\pm$ 0.5%								
A 650	30.3	35.9	0.955707	1.970	2.20	107	9.41	0.09
B 750	21.4	57.3	0.675493	2.130	0.60	170	10.17	0.19
C 800	9.7	83.6	0.306610	2.294	0.36	519	10.95	0.13
D 850	9.9	97.3	0.311034	2.265	0.33	2527	10.81	0.14
E 950	17.7	92.9	0.557729	2.067	0.32	9659	9.87	0.10
F 1050	7.1	96.0	0.222223	2.331	0.22	1276	11.13	0.17
G 1450	3.9	48.3	0.122786	1.908	0.03	49	9.12	0.32
Total Gas	100.0	66.0	3.151582	2.105	0.94	2170	10.06	
No Plateau

Table 3. Continued.

Table 8: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K97-10-8F4 ; 0.2535 g, whole rock basalt, #91KD7, J=0.002613 $\pm$ 0.5%									
A	650	17.2	37.8	0.475209	1.982	3.78	122	9.32	0.07
B	750	14.0	54.2	0.385652	2.051	2.40	141	9.64	0.13
C	800	9.3	61.2	0.256609	2.061	1.51	150	9.69	0.07
D	850	7.3	67.6	0.200202	2.118	0.80	168	9.96	0.12
E	950	11.2	82.1	0.308250	2.283	0.37	275	10.73	0.09
F	1050	12.8	90.8	0.351544	2.196	0.26	873	10.32	0.32
G	1450	24.8	88.3	0.682359	2.033	0.21	2062	9.56	0.04
H	1650	3.5	47.2	0.096164	1.811	0.02	33	8.52	0.13
Total Gas		100.0	69.0	2.755989	2.076	1.31	721	9.76	
No Plateau									
Red Canyon Graben									
K97-10-8B1 ; 0.2444 g, whole rock basalt, #73KD6, J=0.002019 $\pm$ 0.25%									
A	550	26.1	18.6	0.277775	2.818	2.37	25	10.24	0.44
B	650	11.7	35.3	0.125077	2.648	1.27	38	9.62	0.23
C	750	27.2	48.6	0.289336	2.956	0.46	44	10.74	0.20
D	800	11.9	64.3	0.126513	3.094	0.21	73	11.23	0.27
E	850	11.3	85.4	0.120837	3.299	0.12	217	11.98	0.25
F	950	11.8	76.5	0.125703	2.853	0.09	442	10.36	0.48
Total Gas		100.0	48.6	1.065241	2.927	0.94	109	10.63	
No Plateau									
K97-10-8B3 ; 0.2452 g, whole rock basalt, #75KD7, J=0.002691 $\pm$ 0.5%									
A	550	27.2	23.8	0.519927	2.005	2.08	35	9.71	0.09
B	650	16.8	37.8	0.320761	2.075	0.79	39	10.05	0.10
C	750	20.5	48.6	0.390496	2.094	0.28	57	10.14	0.08
D	800	9.6	59.5	0.183677	2.033	0.16	107	9.84	0.16
E	850	7.5	65.3	0.142534	1.972	0.12	157	9.55	0.25
F	950	8.2	64.2	0.156677	2.062	0.10	176	9.98	0.20
G	1050	5.2	58.6	0.098545	2.451	0.15	104	11.86	0.24
H	1450	5.0	37.4	0.095914	2.079	0.02	25	10.07	0.35
Total Gas		100.0	43.6	1.908531	2.067	0.80	71	10.01	
No Plateau

Table 3. Continued.

Table 3. Continued.

Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
Upper Cattle Creek								
L60 ; 0.2486 g, whole rock basalt, #15KD8, $J=0.002665\pm0.25\%$ Å								
A 550	0.5	5.6	0.044046	2.582	0.28	11	12.37	1.10
B 650	12.2	50.6	1.019083	1.620	0.53	197	7.77	0.05
C 750	24.7	82.9	2.062169	1.611	0.92	1645	7.73	0.02
D 800	10.1	81.1	0.839866	1.613	1.09	2251	7.74	0.06
E 850	7.3	86.2	0.613566	1.627	0.75	1242	7.81	0.05
F 950	10.4	88.6	0.866660	1.623	0.56	1129	7.79	0.04
G 1050	13.3	89.0	1.114793	1.580	0.82	1037	7.58	0.02
H 1450	21.5	79.4	1.796288	1.557	0.09	158	7.47	0.04
Total Gas	100.0	79.3	8.356471	1.604	0.65	1037	7.70	
Plateau Age	64.6	steps B-F					7.75	0.03
Spring Valley II								
K97-10-8D1 ; 0.2586 g, whole rock basalt, #81KD7, $J=0.002674\pm0.50\%$								
A 850	4.3	100.0	0.089105	1.586	1.28	***	7.64	0.75
B 950	62.3	94.4	1.297887	1.607	1.12	6293	7.74	0.06
C 1050	26.0	82.8	0.541194	1.685	0.70	577	8.11	0.14
D 1450	7.5	23.6	0.156380	1.635	0.03	39	7.87	0.47
Total Gas	100.0	86.3	2.084566	1.628	0.94	4071	7.84	
Plateau Age	66.5	steps A-B					7.74	0.05
K97-10-8D2 ; 0.2479 g, whole rock basalt, #83KD7, $J=0.002674\pm0.50\%$								
A 650	8.0	46.4	0.330176	1.904	0.46	99	9.16	0.19
B 750	14.0	78.7	0.578970	1.604	0.52	736	7.72	0.14
C 800	14.1	87.9	0.581167	1.619	0.75	2166	7.79	0.21
D 850	16.2	93.8	0.668949	1.678	1.00	2607	8.08	0.13
E 950	27.3	86.7	1.127827	1.606	1.17	1763	7.73	0.07
F 1050	13.9	65.4	0.575919	1.701	0.95	355	8.19	0.10
G 1450	6.6	21.6	0.271517	1.736	0.05	53	8.36	0.39
Total Gas	100.0	76.5	4.134525	1.665	0.83	1371	8.01	
Plateau Age	71.6	steps B-E					7.79	0.05

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
McNulty Pit									
K97-8-12G ; 0.5114 g, whole rock basalt, #17,18KD15, J=0.000249 $\pm$ 0.5%									
A	850	2.6	29.5	0.025987	6.896	2.16	32	3.10	0.18
B	950	3.6	38.8	0.037056	6.566	1.93	38	2.95	0.09
C	1050	4.9	42.6	0.050308	6.439	1.45	47	2.89	0.09
D	1150	7.9	49.2	0.080609	6.691	1.00	75	3.00	0.04
E	1250	7.5	56.3	0.076698	6.833	0.85	125	3.07	0.04
F	1350	14.9	64.5	0.151502	6.729	0.85	216	3.02	0.03
G	1450	18.3	66.5	0.186475	6.651	0.92	261	2.99	0.03
H	1650	27.8	60.5	0.282898	6.393	0.88	237	2.87	0.02
I	1750	12.4	44.6	0.126493	5.940	0.43	127	2.67	0.03
Total Gas		100.0	56.5	1.018026	6.512	0.93	182	2.92	
Plateau Age		59.8	steps A-G					3.01	0.01
K97-8-12H ; 0.2455 g, whole rock basalt, #39KD6, J=0.002044 $\pm$ 0.5%									
A	750	8.6	89.3	0.376893	0.997	0.57	914	3.67	0.14
B	800	11.6	100.0	0.508400	0.929	0.82	10278	3.42	0.10
C	850	19.0	99.7	0.833551	0.895	1.23	***	3.30	0.10
D	950	38.8	92.7	1.706773	0.831	1.43	***	3.06	0.04
E	1050	17.9	92.0	0.787829	0.861	1.71	2112	3.17	0.06
F	1450	4.2	14.4	0.183607	0.911	0.04	39	3.36	0.34
Total Gas		100.0	91.2	4.397053	0.873	1.24	1647	3.22	
Plateau Age		60.9	steps D-F					3.09	0.02
Griffith Pit									
L244-1 ; 0.2475 g, whole rock basalt, #8KD8, J=0.002665 $\pm$ 0.15%									
A	500	0.1	3.9	0.000545	2.072	0.45	16	9.93	3.26
B	600	1.5	20.2	0.008357	0.744	0.76	179	3.57	0.26
C	700	19.4	82.6	0.107826	0.605	0.98	5820	2.91	0.02
D	800	37.4	93.3	0.208242	0.598	1.70	***	2.87	0.01
E	850	25.6	92.2	0.142601	0.592	2.04	***	2.84	0.02
F	900	9.2	86.3	0.051124	0.599	1.36	8238	2.88	0.02
G	1000	3.4	70.0	0.019157	0.616	0.68	643	2.96	0.05
H	1100	1.7	47.0	0.009335	0.596	0.42	201	2.86	0.19
I	1250	1.4	19.9	0.007711	0.719	0.03	26	3.46	0.11
J	1400	0.3	10.8	0.001654	1.252	0.01	24	6.01	0.87
Total Gas		100.0	86.3	0.556552	0.606	1.52	1913	2.91	
Plateau Age		56.8	steps C-D					2.87	0.01
Plateau Age		72.2	steps D-E					2.87	0.01

Table 3. Continued.

Table 6: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
L244-2 ; 0.2599 g, whole rock basalt, #12KD8, J=0.002665 $\pm$ 0.25%									
A	550	2.6	18.2	0.331162	0.673	0.83	200	3.23	0.11
B	650	4.8	79.1	0.622718	0.567	0.81	2535	2.72	0.03
C	750	25.0	93.2	3.232410	0.604	1.27	***	2.90	0.01
D	800	25.1	95.9	3.250782	0.598	1.87	***	2.88	0.01
E	850	22.2	96.6	2.870759	0.603	2.00	***	2.90	0.01
F	950	14.4	90.4	1.865167	0.596	1.14	2468	2.86	0.02
G	1050	3.4	58.2	0.434742	0.553	0.49	273	2.66	0.10
H	1150	1.7	24.3	0.219894	0.561	0.09	29	2.70	0.16
I	1450	0.9	14.7	0.112943	1.230	0.01	34	5.90	0.25
Total Gas		100.0	88.6	12.940577	0.604	1.47	493	2.90	
No Plateau									
L-244 ; single-crystal sanidine, #21KD8, J=0.002612 $\pm$ 0.45%									
05	LF	***	73.3	0.00002999	0.616	74.7	1.874	2.902	0.024
09	LF	***	67.6	0.03207688	0.618	27.3	1.903	2.907	0.032
07	LF	***	85.0	0.03329507	0.619	30.8	2.698	2.916	0.020
02	LF	***	91.9	0.03329084	0.624	27.6	1.893	2.938	0.017
10	LF	***	91.2	0.03175724	0.625	32.1	2.226	2.944	0.017
08	LF	***	91.6	0.03274811	0.626	33.0	1.913	2.948	0.018
06	LF	***	90.6	0.02972324	0.628	39.1	1.969	2.955	0.017
01	LF	***	92.7	0.03064652	0.629	25.2	2.482	2.961	0.016
04	LF	***	94.5	0.03614500	0.631	52.5	2.486	2.969	0.014
03	LF	***	90.4	0.03529113	0.632	24.7	1.927	2.975	0.017
Weighted Mean Age					n=10			2.902	0.016
L-245 ; single-crystal sanidine, #22KD8, J=0.002642 $\pm$ 0.45%									
10	LF	***	80.0	0.03300525	0.616	22.8	2.122	2.934	0.025
05	LF	***	76.9	0.03152267	0.620	38.9	2.296	2.953	0.028
04	LF	***	77.3	0.03103184	0.620	54.0	2.244	2.953	0.025
06	LF	***	79.0	0.03058501	0.620	29.8	2.301	2.954	0.025
09	LF	***	83.7	0.03023286	0.620	33.8	2.448	2.955	0.021
01	LF	***	80.7	0.03382442	0.624	35.0	1.907	2.970	0.024
08	LF	***	73.1	0.03458988	0.624	33.9	2.179	2.971	0.024
02	LF	***	74.6	0.03392541	0.625	43.7	2.239	2.977	0.027
03	LF	***	68.3	0.03331096	0.625	31.1	1.947	2.979	0.028
07	LF	***	82.9	0.03141027	0.626	34.3	1.890	2.983	0.025
Weighted Mean Age					n=10			2.962	0.017

Table 3. Continued.

Table 8: Continued.

Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
Triangle Peak								
K97-8-12B1 ; 0.2563 g, whole rock basalt, #27KD6, J=0.002044 $\pm$ 0.50%								
A 650	4.3	31.5	0.181492	0.590	0.67	169	2.17	0.25
B 750	15.3	86.0	0.645888	0.428	1.25	2551	1.58	0.06
C 800	21.1	95.9	0.894525	0.401	1.62	756577	1.48	0.04
D 850	22.0	96.6	0.932346	0.393	1.74	***	1.45	0.05
E 950	20.3	93.6	0.857648	0.425	1.12	6068	1.57	0.05
F 1050	9.0	88.9	0.381008	0.486	0.54	689	1.79	0.11
G 1450	8.0	23.2	0.339969	0.333	0.06	66	1.23	0.13
Total Gas	100.0	84.9	4.232876	0.419	1.23	161579	1.54	
Plateau Age	78.7	steps B-E					1.51	0.01
K97-8-12B2 ; 0.2463 g, whole rock basalt, #29KD6, J=0.002045 $\pm$ 0.50%								
A 650	4.3	41.8	0.184688	0.567	0.74	299	2.09	0.24
B 750	17.3	79.9	0.744876	0.420	1.35	2524	1.55	0.02
C 800	21.4	87.5	0.920823	0.399	1.68	49108	1.47	0.01
D 850	21.2	90.1	0.912336	0.404	1.73	626476	1.49	0.02
E 950	17.3	84.6	0.742840	0.429	1.01	3175	1.58	0.03
F 1050	9.2	85.2	0.396200	0.494	0.53	658	1.82	0.05
G 1450	9.3	24.9	0.401136	0.309	0.07	69	1.14	0.06
Total Gas	100.0	78.2	4.302899	0.416	1.22	144405	1.54	
No Plateau								
K99-8-22B2 ; 0.5066 g, whole rock basalt, #35,36KD15, J=0.000250 $\pm$ 0.25%								
A 650	4.9	13.1	0.067285	3.728	0.70	14	1.68	0.10
B 750	19.4	70.9	0.264600	3.037	1.07	57	1.37	0.01
C 850	44.0	83.0	0.600905	2.967	1.04	259	1.34	0.01
D 950	20.6	72.0	0.281274	2.971	0.70	769	1.34	0.02
E 1050	7.7	58.1	0.105373	3.000	0.33	492	1.35	0.04
F 1150	3.3	42.8	0.045123	2.745	0.25	141	1.24	0.09
Total Gas	100.0	71.7	1.364560	3.014	0.88	327	1.36	
Plateau Age	75.7	steps C-F					1.34	0.01

Table 3. Continued.

Table 3. Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K99-8-22B3 ; 0.5073 g, whole rock basalt, #37,38KD15, J=0.000250 $\pm$ 0.25%									
A	650	4.0	11.3	0.057948	4.349	0.54	19	1.96	0.14
B	750	14.0	70.7	0.205536	3.087	1.14	118	1.39	0.01
C	850	36.6	82.0	0.535666	2.967	1.04	414	1.34	0.01
D	950	25.8	78.4	0.377560	2.990	0.86	1148	1.35	0.01
E	1050	11.4	66.0	0.166395	2.938	0.54	652	1.33	0.02
F	1150	5.9	59.3	0.087017	2.918	0.37	186	1.32	0.04
G	1450	2.4	30.6	0.034813	3.457	0.02	40	1.56	0.11
Total Gas		100.0	72.3	1.464935	3.050	0.87	551	1.38	
Plateau Age		79.6	steps C-F					1.34	0.01
K-97-8-12A2 ; 0.2585 g, whole rock basalt, #23KD6, J=0.002022 $\pm$ 0.25%									
A	650	17.4	41.6	0.615778	0.477	2.22	20	1.738	0.035
B	750	36.7	69.0	1.295492	0.389	1.01	79	1.419	0.013
C	800	15.8	98.4	0.559483	0.515	0.64	360	1.878	0.039
D	850	11.6	91.5	0.411506	0.512	0.59	864	1.866	0.041
E	950	7.5	78.6	0.264957	0.534	0.49	522	1.948	0.169
F	1050	4.4	73.0	0.154155	0.483	0.47	259	1.759	0.116
G	1450	6.5	44.0	0.231334	0.397	0.04	46	1.447	0.118
Total Gas		100.0	70.8	3.532705	0.454	0.99	244	1.656	
No Plateau									
K99-8-22A1 ; 0.5042 g, whole rock basalt, #21,22KD15, J=0.000246 $\pm$ 0.25%									
A	750	18.9	26.0	0.249662	3.581	1.33	21	1.59	0.02
B	850	28.2	52.7	0.372769	3.183	0.96	64	1.41	0.01
C	950	25.6	66.1	0.339092	3.160	0.73	175	1.40	0.01
D	1050	12.3	65.9	0.163326	3.101	0.60	370	1.38	0.02
E	1150	6.6	61.0	0.087957	3.088	0.44	236	1.37	0.04
F	1450	8.4	42.5	0.110732	2.875	0.06	72	1.28	0.04
Total Gas		100.0	52.4	1.323538	3.210	0.82	134	1.42	
Plateau Age		72.8	steps B-E					1.40	0.01

Table 3. Continued.

Table 3: Continued.

	Temp	^{39}Ar	$^{40}\text{Ar}^*$	$^{39}\text{Ar}_K$	$^{40}\text{Ar}^*$	K/Ca	K/Cl	Apparent Age (Ma)	
	(°C)	(% Total)	(%)	($\times 10^{-12}$ mol)	$^{39}\text{Ar}_K$			and error ($\pm 1\sigma$)	
K99-8-22A4 ; 0.5029 g, whole rock basalt, #27,28KD15, J=0.000249 $\pm$ 0.25%									
A	650	9.0	20.3	0.119294	4.046	1.39	16	1.82	0.08
B	750	12.3	43.2	0.162061	3.444	1.44	30	1.55	0.06
C	850	37.2	61.9	0.492217	3.170	0.87	84	1.42	0.02
D	950	22.7	70.9	0.299614	3.115	0.63	350	1.40	0.03
E	1050	8.4	59.8	0.111270	2.964	0.52	326	1.33	0.08
F	1150	4.9	51.7	0.064240	2.635	0.43	267	1.18	0.14
G	1450	5.6	38.0	0.073410	2.796	0.04	49	1.26	0.13
Total Gas		100.0	55.9	1.322106	3.206	0.84	159	1.44	
Plateau Age		78.7	steps C-G					1.41	0.01
Willow Peak									
K97-10-7F ; 0.9900 g, whole rock basalt, #5,6,7,8KD15, J=0.000246 $\pm$ 0.25%									
A	850	2.3	25.0	0.046882	0.936	0.55	331	0.415	0.064
B	950	11.1	39.5	0.228560	0.665	0.99	1635	0.295	0.013
C	1050	23.9	50.8	0.491184	0.673	1.17	3945	0.299	0.009
D	1150	26.3	49.3	0.539548	0.702	1.17	2920	0.312	0.006
E	1450	29.8	35.4	0.611204	0.778	0.63	1196	0.345	0.005
F	1650	6.5	34.4	0.133900	3.127	0.07	111	1.387	0.067
Total Gas		100.0	42.9	2.051278	0.877	0.90	2266	0.389	
Plateau Age		63.7	steps A-D					0.310	0.002
K97-10-7G ; 0.7467 g, whole rock basalt, #9,10,11KD15, J=0.000242 $\pm$ 0.25%									
A	950	4.1	29.2	0.058113	2.684	0.45	184	1.171	0.235
B	1050	11.5	24.4	0.163290	0.807	0.74	506	0.352	0.018
C	1150	22.9	28.8	0.326038	0.670	1.11	911	0.292	0.009
D	1450	53.9	25.9	0.766227	0.757	0.89	600	0.331	0.006
E	1650	7.6	7.6	0.108177	0.771	0.28	90	0.337	0.095
Total Gas		100.0	25.2	1.421845	0.823	0.86	605	0.359	
Plateau Age		61.5	steps D-E					0.330	0.003

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