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**Location, Age, and Rock Type of Volcanic
Rocks Younger Than 5 Million Years in
Arizona and New Mexico**

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University of California

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Location, Age, and Rock Type of Volcanic Rocks Younger Than 5 Million Years in Arizona and New Mexico

**M. J. Aldrich, Jr.
A. W. Laughlin**

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LOCATION, AGE, AND ROCK TYPE OF VOLCANIC ROCKS YOUNGER THAN
5 MILLION YEARS IN ARIZONA AND NEW MEXICO

by

M. J. Aldrich, Jr., and A. W. Laughlin

ABSTRACT

This report is a compilation of location, age,
and rock type of volcanic rocks younger than 5 Myr
in Arizona and New Mexico.

INTRODUCTION

As part of the Los Alamos National Laboratory assessment of the Hot Dry Rock geothermal energy potential of Arizona and New Mexico, a compilation of the locations and ages of volcanic rocks less than 5 Myr was made. The locations of those rocks less than 3 Myr are shown on a map of the region.* Because the compiled information has many uses in addition to geothermal exploration, the entire compilation is presented as a tabulation (Table I).

The table is organized first by state and secondly by latitude and longitude within each state. Rock type, age and error, method of dating, and original reference are also given. The K-Ar dates have not been recalculated using the most recent decay constants for ^{40}K . A few references gave only verbal descriptions of sample location; these locations were converted to approximate latitude and longitude.

*M. J. Aldrich, Jr., and A. W. Laughlin, "Age and Location of Volcanic Centers <3.0 Myr Old in Arizona, New Mexico, and the Trans-Pecos Area of West Texas," Los Alamos National Laboratory map LA-8812-MAP (April 1981).

TABLE I

LOCATION, AGE, AND ROCK TYPE OF VOLCANIC ROCKS <5.0 MYR OLD
IN ARIZONA AND NEW MEXICO

(K-Ar = Potassium-Argon. GE = Geological estimate.

FT = Fission track. TL = Thermo-luminescence. TR = Tree ring.)

Location		Rock Type	Age	Method	Reference
Latitude	Longitude		(Myr)		
ARIZONA					
31°26.92'N	109°17.46'W	Basalt	0.274 ±0.050	K-Ar	Lynch, 1978
31°33'35"N	109°10'20"W	Basalt	1.0±0.1	K-Ar	Marvin and Cole, 1978
31°36.43'N	109°20.22'W	Basalt	3.30±0.12	K-Ar	Lynch, 1978
32°53.4'N	113°04.1'W	Basalt	1.72±0.46	K-Ar	Shafiqullah and others, 1980
32°56'06"N	113°18'05"W	Basalt	3.0±0.1	K-Ar	Eberly and Stanley, 1978
33°01.10'N	112°59.89'W	Basalt	3.19 ±0.11	K-Ar	Shafiqullah and others, 1980
33°13.79'N	112°48.02'W	Basalt	1.35 ±0.55	K-Ar	Shafiqullah and others, 1980
33°14.15'N	112°46.96'W	Basalt	2.67 ±0.20	K-Ar	Shafiqullah and others, 1980
33°19.67'N	112°45.60'W	Basalt	3.28 ±0.27	K-Ar	Shafiqullah and others, 1980
33°20.03'N	112°43.8'W	Basalt	2.17 ±0.25	K-Ar	Shafiqullah and others, 1980
33°20.57'N	110°28.12'W	Basalt	0.93 ±0.08	K-Ar	Shafiqullah and others, 1980
33°20.73'N	112°46.14'W	Basalt	2.08 ±0.18	K-Ar	Shafiqullah and others, 1980
33°20.77'N	112°44.62'W	Basalt	1.92 ±0.42	K-Ar	Shafiqullah and others, 1980
33°20.94'N	112°45.02'W	Basalt	1.28 ±0.26	K-Ar	Shafiqullah and others, 1980

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
33°20.96'N	112°45.98'W	Basalt	2.28 ± 0.21	K-Ar	Shafiqullah and others, 1980
33°58.83'N	110°34.7'W	Basalt	1.90 ± 0.06 1.76 ± 0.15	K-Ar	Pierce and others, 1979
34°05'N	109°14'W	Basalt	3.86 ± 0.10	K-Ar	Laughlin and others, 1980
34°06'39"N	109°18'56"W	Basalt	3.061 ± 0.080	K-Ar	Laughlin and others, 1979
34°08'N	109°13'W	Basalt	3.67 ± 0.12	K-Ar	Laughlin and others, 1980
34°08'29"N	109°12'35"W	Basalt	0.824 ± 0.040	K-Ar	Laughlin and others, 1979
34°08'29"N	109°12'35"W	Basalt	2.94 ± 0.14	K-Ar	Laughlin and others, 1979
34°12'N	109°17'W	Basalt	1.67 ± 0.09	K-Ar	Laughlin and others, 1980
34°14'N	109°23'W	Basalt	0.75 ± 0.13	K-Ar	Laughlin and others, 1980
34°14'N	109°30'W	Basalt	0.84 ± 0.07	K-Ar	Laughlin and others, 1980
34°49'42"N	112°02'45"W	Basalt	4.5 ± 0.2	K-Ar	McKee and Anderson, 1971
34°52'09"N	112°28'12"W	Basalt	4.5 ± 0.2	K-Ar	McKee and Anderson, 1971
34°54'33"N	112°12'39"W	Basalt	4.7 ± 0.2	K-Ar	McKee and Anderson, 1971
34°57.8'N	11°30.9'W	Dacite	3.1 ± 0.6	K-Ar	Ulrich and McKee, 1976; Luedke and Smith, 1978
34°59'54"N	112°07'18"W	Basalt	4.8 ± 0.2	K-Ar	McKee and Anderson, 1971
35°07'N	111°56'30"W	Basalt	4.75 ± 0.23	K-Ar	Damon and others, 1974

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
35°07'N	111°56'30"W	Basalt	4.30 ±0.45	K-Ar	Damon and others, 1974
35°08'35"N	111°44'57"W	Latite	1.57 ±0.05	K-Ar	Damon and others, 1974
35°09'N	111°59'W	Basalt	1.12 ±0.7	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°09'N	112°00'W	Rhyolite	2.20 ±0.13	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°09.7'N	111°54'W	Rhyolite	3.54 ±0.15	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°10'N	111°54'W	Andesite	0.65 ±0.45	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°10'N	111°54'W	Andesite	1.39 ±0.25	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°10'N	112°01'W	Rhyolite	1.9 ±0.13	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°10'N	112°04'W	Basalt	2.2 ±0.09	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°10'N	112°05'W	Basalt	1.04 ±0.07	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°11'N	111°56'W	Basalt	0.94 ±0.94	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°14'13"N	111°26'23"W	Basaltic Andesite	0.050 ±0.014	K-Ar	Damon and others, 1974

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
35°14.5 'N	112°12.5 'W	Dacite	3.47 ±0.5	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°14.5 'N	112°14 'W	Dacite	3.78 ±0.6	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°14.7 'N	112°13.5 'W	Dacite	3.62 ±0.3	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°15 'N	112°08 'W	Basalt	2.01 ±0.22	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°15.5 'N	111°36 'W	Dacite	0.56 ±0.3	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°16 'N	112°14 'W	Dacite	3.53 ±0.4	K-Ar	Wolfe and McKee, 1976; Luedke and Smith, 1978
35°16.4 'N	111°28 'W	Andesite	0.21 ±0.2	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°16.6 'N	111°38.2 'W	Dacite	0.83 ±0.4	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°18.6 'N	111°57.6 'W	Rhyolite	2.7 ±0.1	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°19 '40" N	111°40 '00" W	Rhyolite	0.922 ±0.084	K-Ar	Damon and others, 1974
35°20 'N	111°37.5 'W	Dacite	0.85 ±0.2	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°20.3 'N	111°39.4 'W	Dacite	0.68 ±0.1	K-Ar	McKee and others, 1974; Luedke and Smith, 1978

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
35°20.6 'N	111°58.4 'W	Rhyolite	2.7 ±0.2	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°21 'N	111°38.6 'W	Dacite	1.77 ±0.2	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°21 'N	111°38.6 'W	Dacite	1.0 ±0.2	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°21 'N	111°59 'W	Rhyolite	2.32 ±0.24	K-Ar	Damon and others, 1974
35°21.4 'N	111°53.5 'W	Rhyolite	2.6 ±0.1	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°21.5 'N	111°59 'W	Rhyolite	2.8 ±0.1	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°21.5 'N	111°59 'W	Rhyolite	2.8 ±0.1	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°21 '35"N	111°17 '54"W	Basalt	0.84 ±0.13	K-Ar	Damon and others, 1974
35°22 '42"N	111°36 '42"W	Rhyodacite	2.71 ±0.13	K-Ar	Damon and others, 1974
35°22 '42"N	111°36 '42"W	Rhyolite	2.7 ±1.0	K-Ar	Damon, 1964
35°22.8 'N	111°30.1 'W	Basalt	1064-65 A.D.	TR	Smiley, 1958
35°22.8 'N	111°30.1 'W	Basalt	1066-67 A.D.	TR	Breternitz, 1967
35°23.0 'N	110°08.2 'W	Xenolith in Monchiquite	2.1 ±0.2	FT	Naeser, 1971
35°23 '03"N	111°20 '13"W	Basalt	0.67 ±0.10	K-Ar	Damon and others, 1974
35°23.4 'N	111°45 'W	Rhyolite	1.6 ±0.1	K-Ar	McKee and others, 1974; Luedke and Smith, 1978

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
35°23'24"N	110°42'12"W	Rhyolite	0.85±0.10	K-Ar	Damon and others, 1974
35°23.8'N	111°31.6'W	Rhyolite	0.13±0.1	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°23.8'N	111°31.6'W	Rhyolite	0.24±0.2	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°23'50"N	111°31'36"W	Rhyolite	0.212±0.021	K-Ar	Damon and others, 1974
35°23'50"N	111°31'36"W	Rhyolite	0.233±0.037	K-Ar	Damon and others, 1974
35°24.1'N	111°42.6'W	Rhyolite	1.5±1.1	K-Ar	Damon, 1964
35°24.4'N	111°33.2'W	Rhyolite	0.27±0.2	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°24.4'N	111°33.2'W	Rhyolite	0.15±0.1	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°24.5'N	111°42.5'W	Rhyolite	0.85±0.3	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°24.7'N	111°50.3'W	Rhyolite	1.9±0.1	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°29'15"N	111°22'01"W	Basalt	0.786±0.059	K-Ar	Damon and others, 1974
35°30'01"N	111°19'08"W	Basalt	0.87±0.14	K-Ar	Damon and others, 1974
35°34'45"N	110°03'20"W	Basalt	4.1	K-Ar	Evernden and others, 1964
35°39'30"N	111°34'51"W	Basalt Dike	3.05±0.39	K-Ar	Damon and others, 1974
35°39'32"N	111°35'03"W	Basalt	1.83±0.07	K-Ar	Damon and others, 1974

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
35°39'52"N	111°31'14"W	Basalt	0.90 ± 0.30	K-Ar	Damon and others, 1974
35°40'20"N	111°20'39"W	Basalt	2.39 ± 0.32	K-Ar	Damon, 1966
35°52'09"N	111°50'34"W	Rhyolite	1.49 ± 0.02	K-Ar	Damon and others, 1974
35°52.2'N	111°50.6'W	Rhyolite	1.50 ± 0.1	K-Ar	McKee and others, 1974; Luedke and Smith, 1978
35°53'14"N	111°27'18"W	Basalt	0.510 ± 0.079	K-Ar	Damon and others, 1974
35°55'25"N	114°37'55"W	Camptonite Dike	3.7 ± 0.7	K-Ar	Damon and others, 1967
35°59'46"N	111°26'50"W	Basalt	0.62 ± 0.23	K-Ar	Damon and others, 1974
36°06'32"N	114°06'26"W	Basalt	3.79 ± 0.46	K-Ar	Shafiqullah and others, 1980
36°06'32"N	114°06'26"W	Basalt	2.6 ± 0.9	K-Ar	Damon, 1965
36°11'53"N	113°05'00"W	Basalt	1.16 ± 0.10	K-Ar	Damon, 1966
36°12'09"N	113°04'40"W	Basalt	1.16 ± 0.18	K-Ar	McKee and others, 1968
36°12'18"N	114°01'00"W	Basalt	3.80 ± 0.11	K-Ar	Shafiqullah and others, 1980
36°12'18"N	114°01'00"W	Basalt	2.0 ± 1.4	K-Ar	Damon, 1965
36°13'N	113°04.5'W	Basalt	12,500 yr B.P. TL		Sabels, 1960
36°13'12"N	113°05'06"W	Basalt	~0.01	K-Ar	Damon and others, 1967
36°23'52"N	113°09'16"W	Basalt	3.47 ± 0.63 3.67 ± 0.09	K-Ar	Best and others, 1980
36°25'50"N	113°33'30"W	Basalt	4.75 ± 0.26	K-Ar	Best and others, 1980
36°26'18"N	111°27'51"W	Basaltic Andesite	0.046 ± 0.046	K-Ar	Damon and others, 1974

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
36°37'N	111°37'30"W	Basalt	0.071±0.004	K-Ar	Damon and others, 1974
36°50'15"N	113°38'26"W	Basalt	2.28±0.31	K-Ar	Damon and others, 1968
36°55'38"N	113°55'44"W	Basalt	2.87±0.20	K-Ar	Best and others, 1980
NEW MEXICO					
31°56.5'N	108°53.3'W	Basalt	0.44±0.050	K-Ar	Lynch, 1978
31°56.7'N	106°57'W	Basalt	0.5±0.1	K-Ar	Hawley and Kottlowski, 1969
31°57'N	108°52'W	Basalt	0.14±0.02	K-Ar	Marvin and others, 1978
31°57.9'N	106°58'W	Basalt	0.103±0.084	K-Ar	Renault, 1970
31°58.2'N	106°57.8'W	Basalt	141,000±75,000	K-Ar	Hoffer, 1976
31°58.2'N	106°57.8'W	Basalt	103,000±84,000	K-Ar	Hoffer, 1976
32°04'N	106°49.7'W	Basalt	0.126±0.1	K-Ar	Hoffer, 1971
32°04'N	106°49.7'W	Basalt	1.69±0.15	K-Ar	Hawley, 1967
32°04'N	106°49.7'W	Basalt	0.025±0.1	K-Ar	Hoffer, 1971
32°08'N	106°47'W	Basalt	1.84±0.5	K-Ar	Hawley, 1967
32°08'N	106°47'W	Basalt	0.226±0.08	K-Ar	Hoffer, 1971
32°08'N	106°47'W	Basalt	0.150±0.12	K-Ar	Hoffer, 1971
32°10'N	106°46'W	Basalt	0.040±0.133	K-Ar	Hoffer, 1971
32°10'N	106°46'W	Basalt	2.65±0.20	K-Ar	Hawley and Kottlowski, 1969
32°10'N	106°46'W	Basalt	2.35±0.35	K-Ar	Hawley and Kottlowski, 1969
32°10'N	106°46'W	Basalt	0.127±0.13	K-Ar	Hoffer, 1971
32°10'N	106°46'W	Basalt	0.116±0.116	K-Ar	Hoffer, 1971

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
32°10'N	106°46'W	Basalt	0.161±0.08	K-Ar	Hoffer, 1971
33°09'N	107°06'W	Basalt	2.1±0.4	K-Ar	Bachman and Mehnert, 1978
33°21'N	107°11'W	Basalt	2.9±0.3	K-Ar	Bachman and Mehnert, 1978
33°33'N	106°59'W	Basalt	0.76±0.1	K-Ar	Bachman and Mehnert, 1978
33°40'N	106°58'W	Basalt	2.2±0.10	K-Ar	Bachman and Mehnert, 1978
33°46.2'N	105°55.8'W	Basalt	~0.001	GE	Allen, 1951
33°49.5'N	108°37'W	Basalt	0.9±0.2	K-Ar	Bikerman, 1972
34°01'N	106°59'W	Basalt	4.0±0.3	K-Ar	Bachman and Mehnert, 1978
34°08'N	106°30'W	Basalt	3.5±0.2	K-Ar	Bachman and Mehnert, 1978
34°16'N	106°58'W	Basalt	4.5±0.1	K-Ar	Bachman and Mehnert, 1978
34°26'N	107°26'W	Basalt	3.1±0.5	K-Ar	Bachman and Mehnert, 1978
34°27.0'N	108°46.2'W	Basalt	22,900±1,400	¹⁴ C	Bradbury, 1966
34°43'N	107°06'W	Basalt	3.7±0.4	K-Ar	Bachman and Mehnert, 1978
34°44'55"N	108°40'12"W	Basalt	1.41±0.29	K-Ar	Laughlin and others, 1979
34°46'N	106°42'W	Basalt	3.4±0.4	K-Ar	Bachman and Mehnert, 1978
34°48'N	108°00'W	Basalt	~700 A.D.	GE	Nichols, 1946
34°51'45"N	106°47'36"W	Basalt	0.140±0.038	K-Ar	Kudo and others, 1977
34°54'N	107°35'W	Basalt	0.32±0.2	K-Ar	Bachman and Mehnert, 1978

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
34°55'30"N	106°43'00"W	Basalt	2.78 ± 0.12	K-Ar	Kudo and others, 1977
35°00'36"N	108°05'47"W	Basalt	0.199 ± 0.042	K-Ar	Laughlin and others, 1979
35°02'N	107°19'W	Basalt	0.38 ± 0.25	K-Ar	Lipman and Mehnert, 1979a
35°05'N	106°06'W	Basalt	4.4 ± 0.1	K-Ar	Baldrige and others, 1980
35°05'12"N	108°44'18"W	Basalt	0.70 ± 0.55	K-Ar	Laughlin and others, 1979
35°07'N	107°26'W	Basalt	2.42 ± 0.18	K-Ar	Lipman and Mehnert, 1979a
35°07'31"N	107°47'33"W	Basalt	1.57 ± 0.26	K-Ar	Laughlin and others, 1979
35°09'50"N	106°45'30"W	Basalt	0.19 ± 0.04	K-Ar	Bachman and others, 1975
35°10'N	106°45'W	Basalt	0.19 ± 0.04	K-Ar	Bachman and Mehnert, 1978
35°10'N	107°27'W	Basalt	2.65 ± 0.15	K-Ar	Lipman and Mehnert, 1979a
35°10.5'N	107°29.5'W	Basalt	2.92 ± 0.86	K-Ar	Lipman and Mehnert, 1979a
35°12'N	107°28'W	Basalt	1.56 ± 0.17	K-Ar	Lipman and Mehnert, 1979a
35°13'N	107°33'W	Trachyte	4.37 ± 0.27	K-Ar	Lipman and Mehnert, 1979a
35°13'N	107°39'W	Pyroclastic Flow	2.73 ± 0.16	K-Ar	Lipman and Mehnert, 1979a
35°13'N	107°39'W	Pyroclastic Flow	2.51 ± 0.25	K-Ar	Lipman and Mehnert, 1979a
35°13'N	107°45'W	Rhyolite	3.34 ± 0.16	K-Ar	Lipman and Mehnert, 1979a

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
35°13'N	107°44.2'W	Perlite	2.74±0.08	K-Ar	Dalrymple and others, 1967
35°13.3'N	107°39.8'W	Perlite	1.8 1.1	K-Ar	Bassett and others, 1963
35°13.3'N	107°39.8'W	Perlite (sanidine)	2.3 2.8	K-Ar	Bassett and others, 1963
35°13.5'N	107°45'W	Obsidian	2.7 3.1	K-Ar	Bassett and others, 1963
35°21'30"N	106°32'30"W	Basalt	2.61±0.09	K-Ar	Kudo and others, 1977
35°23'N	106°33'W	Basalt	2.5±0.3	K-Ar	Bachman and Mehnert, 1978
35°23'37"N	106°32'44"W	Basalt	2.6±0.2	K-Ar	Armstrong and others, 1976
35°25'N	107°23'W	Trachyte	3.30±0.20	K-Ar	Lipman and Mehnert, 1979a
35°27'18"N	107°01'49"W	Basalt	2.2±0.3	K-Ar	Armstrong and others, 1976
35°28'N	107°16'W	Basalt	2.87±0.20	K-Ar	Lipman and Mehnert, 1979a
35°28'N	107°22'W	Basalt	2.75±0.30	K-Ar	Lipman and Mehnert, 1979a
35°33'N	107°17'W	Basalt	2.8±0.2	K-Ar	Bachman and Mehnert, 1978
35°39'N	106°07'W	Basalt	2.6±0.3	K-Ar	Bachman and Mehnert, 1978
35°39'N	106°07'W	Basalt	2.5±0.2	K-Ar	Bachman and Mehnert, 1978
35°41'N	106°18'W	Basalt	2.5±0.3	K-Ar	Bachman and Mehnert, 1978
35°45'10"N	106°06'26"W	Pumice	2.7±0.4	FT	Manley and Naeser, 1977

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
35°46'N	106°44'W	Rhyolite tuff (sanidine) (sanidine)	1.02±0.04 1.06±0.03	K-Ar K-Ar	Doell and others, 1968
35°46'17"N	106°07'05"W	Basalt	1.96±0.06	K-Ar	Manley, 1976
35°46'36"N	106°13'30"W	Basalt	2.6±0.4	K-Ar	Manley, 1976
35°47'N	106°14'W	Basalt	2.6±0.4	K-Ar	Bachman and Mehnert, 1978
35°47'N	106°47'W	Basalt	1.12±0.04	K-Ar	Bachman and Mehnert, 1978
35°47.1'N	106°15.5'W	Rhyolite	2.8±0.1	K-Ar	Silberman and others, 1976; Luedke and Smith, 1978
35°47.1'N	106°15.5'W	Rhyolite	2.7±0.1	K-Ar	Silberman and others, 1976; Luedke and Smith, 1978
35°47'30"N	106°47'05"W	Basalt	1.12±0.04	K-Ar	Bachman and others, 1975
35°47.6'N	103°58'W	Organic	<8000 B.C.	¹⁴ C	Muehlberger, 1955
35°47'50"N	106°48'00"W	Basalt	1.01±0.10	K-Ar	Bachman and others, 1975
35°48'N	106°48'W	Basalt	1.01±0.10	K-Ar	Bachman and Mehnert, 1978
35°48'10"N	106°45'55"W	Basalt	1.31±0.05	K-Ar	Bachman and others, 1975
35°49'N	106°32'W	Rhyolite	0.494±0.015	K-Ar	Doell and others, 1968
35°49'N	106°35'W	Rhyolite	0.57±0.08	FT	Marvin and Dobson, 1979
35°49'N	106°38'W	Rhyolite	0.13±0.10	FT	Marvin and Dobson, 1979
35°50'N	106°19'W	Rhyolite tuff (sanidine)	1.37±0.04	K-Ar	Doell and others, 1968

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
35°50'N	106°20'W	Rhyolite tuff (sanidine)	1.09±0.03	K-Ar	Doell and others, 1968
35°50'N	106°20'W	Rhyolite tuff (anorthite)	1.19±0.04	K-Ar	Doell and others, 1968
35°50'N	106°23.8'W	Rhyodacite	3.67±0.12	K-Ar	Dalrymple and others, 1967
35°50'N	106°39'W	Rhyolite tuff (sanidine)	1.48±0.09	K-Ar	Doell and others, 1968
35°51.5'N	106°26.5'W	Dacite	4.2±0.3 5.0±0.7	K-Ar	Silberman and others, 1976; Luedke and Smith, 1978
35°52'N	106°30'W	Rhyolite	0.502±0.015	K-Ar	Doell and others, 1968
35°52'N	106°36'W	Rhyolite tuff (anorthite)	1.24±0.05	K-Ar	Doell and others, 1968
35°53'N	106°36'W	Rhyolite	1.25±0.11	K-Ar	Doell and others, 1968
35°53.1'N	106°13.1'W	Basalt	2.4±0.3	K-Ar	Silberman and others, 1976; Luedke and Smith, 1978
35°54'N	106°38'W	Rhyolite	0.535±0.015	K-Ar	Doell and others, 1968
35°54'N	106°38'W	Rhyolite	0.78±0.21	FT	Marvin and Dobson, 1979
35°54'N	106°38'W	Rhyolite	1.71±0.12	FT	Marvin and Dobson, 1979
35°54.8'N	106°16.8'W	Quartz Latite	5.50±0.82	K-Ar	Dalrymple and others, 1967
35°55'N	106°28'W	Rhyolite	1.15±0.03	K-Ar	Doell and others, 1968
35°55'N	106°29'W	Rhyolite	1.04±0.05	K-Ar	Doell and others, 1968

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
35°55'N	106°37'W	Rhyolite			Doell and others, 1968
		(biotite)	1.71±0.07	K-Ar	
		(sanidine)	1.28±0.06	K-Ar	
		(biotite)	1.60±0.11	K-Ar	
		(plagioclase)	3.25±0.32	K-Ar	
35°56'N	106°33'W	Rhyolite	0.823±0.074 0.692±0.015	K-Ar	Doell and others, 1968
35°56'N	106°35'W	Rhyolite	0.434±0.015	K-Ar	Doell and others, 1968
35°56'N	106°43'W	Rhyolite tuff (sanidine)	1.44±0.04	K-Ar	Doell and others, 1968
35°57'N	106°30'W	Rhyolite	0.884±0.028	K-Ar	Doell and others, 1968
35°57'N	106°34'W	Rhyolite	0.726±0.015	K-Ar	Doell and others, 1968
35°57'36"N	106°09'02"W	Pumice	2.9±0.5	FT	Manley and Naeser, 1977
35°58'N	106°20'W	Quartz Latite	4.1±0.2	FT	Marvin and Dobson, 1979
35°58'N	106°29'W	Rhyolite	0.886±0.019	K-Ar	Doell and others, 1968
35°58'N	106°30'W	Rhyolite	0.707±0.019	K-Ar	Doell and others, 1968
35°58'N	106°34'W	Rhyolite	1.22±0.04	K-Ar	Doell and others, 1968
36°02.7'N	103°49.3'W	Basalt	3.5±1.3 3.3±0.8	K-Ar	Trauger, 1973
36°04'N	106°25.5'W	Rhyolite	2.02±0.06	K-Ar	Dalrymple and others, 1967
36°06.2'N	106°26.7'W	Quartz Latite	5.03±0.13	K-Ar	Dalrymple and others, 1967
36°07'N	106°25'W	Dacite	3.15±0.28	K-Ar	Dalrymple and others, 1967

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
36°08.2'N	103°56.7'W	Basalt	1.3±1.0 1.6±0.6 0.7±1.4	K-Ar	Trauger, 1973
36°08'50"N	106°01'50"W	Basalt	2.78±0.44	K-Ar	Manley, 1976
36°19'N	106°21'W	Basalt	3.2±0.1	K-Ar	Baldrige and others, (in press)
36°10.5'N	106°20.7'W	Rhyolite	2.8±0.1	K-Ar	Silberman and others, 1976; Luedke and Smith, 1978
36°11'N	106°20.7'W	Basalt	2.8±0.1	K-Ar	Silberman and others, 1976; Luedke and Smith, 1978
36°15'N	106°15'W	Basalt	4.8±0.1	K-Ar	Baldrige and others, (in press)
36°24.8'N	103°09'W	Basalt	2.5±0.8	K-Ar	Stormer, 1972
36°30'N	106°11'W	Basalt	2.8±0.1	K-Ar	Bachman and Mehnert, 1978
36°35'N	105°48'W	Basalt	3.75±0.77	K-Ar	Lipman and Mehnert, 1979b
36°40'N	106°35'W	Basalt	0.24±0.06	K-Ar	Lipman and Mehnert, 1979b
36°41.5'N	103°34.3'W	Basalt	2.2±0.3	K-Ar	Stormer, 1972
36°43'N	105°55'W	Andesite	3.52±0.20	K-Ar	Lipman and Mehnert, 1979b
36°44'N	105°48'W	Andesite	2.31±0.14	K-Ar	Lipman and Mehnert, 1979b
36°44.7'N	103°53.7'W	Andesite	1.9±0.05	K-Ar	Stormer, 1972
36°45'N	105°58'W	Rhyolite	3.91±0.27	K-Ar	Lipman and Mehnert, 1979b
36°46'N	105°38'W	Rhyodacite	5.84±0.24	K-Ar	Lipman and Mehnert, 1979b

TABLE I (cont.)

Location		Rock Type	Age (Myr)	Method	Reference
Latitude	Longitude				
35°48'N	106°46'W	Basalt	1.31 ± 0.05	K-Ar	Bachman and Mehnert, 1978
35°51'N	106°19'W	Basalt	0.24 ± 0.14	K-Ar	Lipman and Mehnert, 1975
36°52'N	105°43'W	Basalt	4.6 ± 0.6	K-Ar	Baldrige and others, (in press)
36°52'N	105°59'W	Rhyodacite	3.12 ± 0.17	K-Ar	Lipman and Mehnert, 1979b
36°53'N	105°56'W	Basaltic Andesite	1.84 ± 0.72	K-Ar	Lipman and Mehnert, 1979b
36°53.5'N	103°53.8'W	Basalt	1.8 ± 0.1	K-Ar	Stormer, 1972
36°55'N	105°59'W	Basaltic Andesite	2.24 ± 0.15	K-Ar	Lipman and Mehnert, 1979b
36°56'N	105°56'W	Basalt	3.35 ± 1.48	K-Ar	Lipman and Mehnert, 1979b

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