

Arizona (26)

Cochise County

CAVE

1927 N.A.D. (Adj. 1958) ~~NAD 83~~ VALUES AVAILABLE

D.W. Ruthven, 1957

Books: PH 491-492

Located about 39 mi. N. of the United States-Mexico Border, 415 mi. W. of the Arizona-New Mexico State Line, on the highest top of a small chain of low hills extending in a easterly direction from the Chiricahua Mountains.

To reach from Rodeo, New Mexico, drive N. on U.S. Highway 80 for 2.6 mi. to rd. forks and sign "PORTAL 8"; take left for 0.7 mi. to rd. forks and sign "CHIRICAHUA NATIONAL MONUMENT"; take right fork 4.8 mi. to driveway to ranch house; (S.) and Bert Roberts mail box; follow driveway 0.2 mi. to ranch house; cross yard and follow fence line S. for 0.2 mi. Continue along fence to top and station. A 10-min. climb.

Station mark: Standard tablet stamped "CAVE 1957" cemented in solid rock.

Reference mark No. 1: Standard reference mark tablet stamped "NO 1 1957" cemented in solid rock, 11.28 ft. from station mark in azimuth 123°42'.

Reference mark No. 2: Standard reference mark tablet stamped "NO 2 1957" cemented in solid rock, 29.91 ft. from station mark in azimuth 10°51'.

## NAD 83 VALUES AVAILABLE

ARIZONA ZONE EAST

X=824,462.6

Y=330,597.7

V.A. elevation 5067 ft.

Latitude: 31°54'16.665"

Longitude: 109°07'15.932"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Portal	30°58'13.2"	210°57'19.8"	16,942.8
Silver Pk.	90 15 09.0	270 12 45.8	23,353.9
Round (C&GS)	146 23 11.2	326 21 57.0	21,809.5
<sup>BM</sup> C&GS "R 131 1934" (C&GS)	257 52 19.1	77 55 02.0	27,164.9
Rodeo	303 50 53.1	123 54 42.9	45,218.0

2/28/58

lg

*m. m.*

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Arizona (26)

Cochise County

DARNELL

1927 N.A.D. (Adj. 1958) ~~NAD 83 VALUES AVAILABLE~~

D.W. Ruthven, 1957

Books: PH 491-492

Located about 33 mi. N. of the United States-Mexico Border and 5.5 mi. W. of the Arizona-New Mexico State Line, on the W. of two small brushy tops. (There is a higher rocky ridge SW. of the station.)

To reach from Rodeo, New Mexico, drive SW. on U.S. Highway 80 for 1.9 mi. to New Mexico-Arizona State Line; thence N. on a dirt rd. along the State Line 0.2 mi. to rd. forks; take left fork 1.3 mi. to rd. forks; continue straight ahead 0.5 mi. to rd. Y-fork; take right fork 0.2 mi. passing to right of house; continue for about 2 mi. on main rd. to fence and cattle guard; leave rd. and drive cross country (SW.) towards first drain S. of Sulphur Draw for 1.1 mi. to Forest Boundary fence. Walk up drain for about 2 mi. to main drain fork; take right fork and climb up drain to ridge line; thence W. along ridge to double top and station. About 4-hour walk.

Station mark: Standard tablet stamped "DARNELL 1957" cemented in drill hole in embedded boulder.

Reference mark No. 1: Standard reference mark tablet stamped "NO 1 1957" cemented in drill hole in embedded boulder, 13.93 ft. from station mark in azimuth 108°58'.

Reference mark No. 2: Standard reference mark tablet stamped "NO 2 1957" cemented in drill hole in embedded boulder, 16.73 ft. from station mark in azimuth 251°11'.

## NAD 83 VALUES AVAILABLE

ARIZONA ZONE EAST

X=818,533.8

V.A. elevation 7404 ft.

Y=300,330.1

Latitude: 31°49'17.714"

Longitude: 109°08'28.025"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Squaw Mtn.	8°11'12.6"	188°10'25.3"	54,555.9
Fly Pk. L.O.H. (C&GS)	113 02 14.7	292 57 45.4	47,832.0
Portal	170 56 15.9	350 56 00.6	15,879.0
C&GS BM "R 131 1934"(C&GS)	222 22 30.2	42 25 51.0	48,625.3
Rodeo	263 26 39.8	83 31 07.4	44,062.0
Owl	323 23 00.6	143 27 03.5	66,895.1

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lg ✓

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Arizona (26)  
New Mexico (19)

Cochise County  
Hidalgo County

MP 361

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1927 N.A.D. (Unadj.) \*NAD 83 VALVE AVAILABLE

D.W. Ruthven, 1957

Books: PH 491-492

Located about 29 mi. N. of the U.S.-Mexico Border, on the Arizona, New Mexico State Line and about 24 ft. E. of a fence line.

Station mark: A loose rock with an "A" cut on the W. face and an "NM" cut on the E. face.

Signal: White flag over fluorescent X-tgt. on 2 x 4 x 12 ft. pole centered over station mark.

Signal Data:	Top white flag	13.1 ft.
	Bottom white flag	10.1
	Top fluorescent X-tgt.	9.5
	Bottom fluorescent X-tgt.	6.3

Image point R1: Centerline rd. and fenc crossing, 1046 ft. from station mark in azimuth 178°54'.

Photo No. 2B-42

## NAD 83 VALUES AVAILABLE

ARIZONA ZONE EAST  
X=847,462.  
Y=277,897.

V.A. elevation 4247 ft.

Latitude: 31°45'32.91"

Longitude: 109°02'55.44"

<u>TO STATION</u>	<u>AZIMUTH</u>	<u>BACK AZIMUTH</u>	<u>FEET</u>
Squaw Mtn.	49°25'34."	229°21'51."	48,068.
Owl	340 12 07.	160 13 15.	32,946.

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5/14/57 ew *[signature]*

Arizona (26)

Cochise County

PORTAL

1927 N.A.D. (Adj. 1958) ~~NAD 83 VALUES AVAILABLE~~

R.D Mead, 1957

Books: PH 491-492

Located about 7.2 mi. W. by NW. of Rodeo, New Mexico and 3.3 mi. S. of Portal, Arizona, on a high, rocky top on the E. slope of the Chiricahua Mountains.

To reach from Southern Pacific RR. Depot in Rodeo, New Mexico, drive S. for 1.9 mi. on U.S. Highway 80 to the Arizona-New Mexico State Line; thence drive N. on dirt rd. along boundary for 0.2 mi. to dirt rd. leading left (W.) ; proceed W. on dirt rd. for 1.3 mi. to T-rd. left; continue straight ahead 0.5 mi. to Y-rd.; take right fork 0.2 mi. passing to right of a house; continue 2.8 mi. on main-traveled rd. to wire gate on the Coronado National Forest Boundary at the mouth of Sulphur Draw; continue 1.6 mi. W. on dim track rd. up Sulphur Draw to a large canyon on right leading N. From this point proceed on foot up the canyon leading N. for about 0.5 mi. to a canyon fork; take right fork and continue up main canyon to top of main ridge; from this point turn left and continue about 0.4 mi. along the ridge to highest point and station. About 5 to 6 hour back-pack.

Note: Stock cannot be taken to the station due to cliffs and heavy brush.

(There is a flat area on the main ridge SE. of the station that is void of vegetation and would accommodate a helicopter. From this point the station could be reached in about one hour.)

Station mark: Standard bronze tablet stamped "PORTAL 1957" cemented into a naturally embedded boulder.

Reference mark No. 1: Standard bronze reference mark tablet stamped "NO 1 1957" cemented into a naturally embedded boulder, 6.61 ft. from station mark in azimuth 184°50'.

Reference mark No. 2: Standard bronze reference mark tablet stamped "NO 2 1957" cemented into a naturally embedded boulder, 9.84 ft. from station mark in azimuth 91°34'.

## NAD 83 VALUES AVAILABLE

ARIZONA ZONE EAST

X=815,884.2

V.A. elevation 8544 ft.

Y=315,986.8

Latitude: 31°51'52.891"

Longitude: 109°08'57.025"

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<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Fly Pk. L.O.H. (C&GS)	94°10'48.8"	274°06'34.6"	41,627.3
Silver Pk.	134 58 32.8	314 57 03.1	20,693.7
Cave	210 57 19.8	30 58 13.2	16,942.8
C&GS "R 131 1934" (C&GS)	240 08 49.8	60 12 26.0	40,668.5
Rodeo	282 57 24.4	103 02 07.5	47,484.8
Darnell	350 56 00.6	170 56 15.9	15,879.0

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orig. 24  
New Mexico (19)

Hidalgo County

RODEO

1927 N.A.D. (Adj. 1958) \*NAD 83 VALUES AVAILABLE

D.W. Ruthven, 1957

Books: PH 491-492

Located about 34.5 mi. N. of the United States-Mexico Border and 2.8 mi. E. of the Arizona-New Mexico State Line on top of a low, red-colored, isolated hill on the W. edge of main mountains.

To reach from Rodeo, New Mexico P.O., drive NE. on U.S. Highway 80 for 0.1 mi.; turn right on dirt rd. 1.4 mi. to ranch buildings; keep to S. of buildings and water tanks; pass through gate and follow dim rd. 0.4 mi. to rd. forks; take left fork 0.1 mi. Leave truck and climb N. to top of rocky hill and station. A 10-min. climb.

Station mark: Standard tablet stamped "RODEO 1957" cemented in solid rock.

Reference mark No. 1: Standard tablet stamped "NO 1 1957" cemented in solid rock, 11.58 ft. from station mark in azimuth 122°53'.

Reference mark No. 2: Standard tablet stamped "NO 2 1957" cemented in solid rock, 18.94 ft. from station mark in azimuth 12°08'.

ARIZONA ZONE EAST

X=862,259.2

Y=305,773.8

NEW MEXICO ZONE WEST

X=137,626.9

Y=305,780.1

V.A. elevation 4672 ft.

## NAD 83 VALUES AVAILABLE

Latitude: 31°50'07.215"

Longitude: 109°00'00.625"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Owl	3°50'54.6"	183°50'30.5"	58,851.1
Squaw Mtn.	41 12 01.1	221 06 46.7	78,366.0
Darnell	83 31 07.4	263 26 39.8	44,062.0
Portal	103 02 07.5	282 57 24.4	47,484.8
Cave	123 54 42.9	303 50 53.1	45,218.0
Round (C&GS)	131 12 01.4	311 06 57.3	65,894.2
C&GS BM "R 131 1934" (C&GS)	160 28 19.1	340 27 11.9	32,791.9

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m. m.  
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Arizona (26)

Cochise County

SENTINEL PK. L.O.T.

1927 N.A.D. (Adj. 1958) \*NAD 83 VALUES AVAILABLE

R.D. Mead, 1957

Books: PH 491-492

Located about 12.5 mi. WSW. of Rodeo, New Mexico and about 7.4 mi. SW. of the U.S. Forest Service Portal Ranger Station, on a high prominent top known as "Sentinel Pk." at the head of the South Fork of Cave Creek.

To reach from U.S. Forest Service Portal Ranger Station, on Cave Creek, drive SW. up Cave Creek for 1.3 mi. to X-rds.; take left fork up South Fork of Cave Creek to end of rd. and jct. with Forest Service trail leading to Sentinel Pk. From this point continue up the South Fork trail for about 8.0 mi. to top and lookout tower.

Station mark: A 1-inch drill hole in the center of a chiseled cross centered under the L.O.T. on a concrete platform supporting a water pump.

Reference mark No. 1: A 1-inch drill hole in the concrete footing of NW. tower leg, 11.56 ft. from the station mark in azimuth 131°59'.

Reference mark No. 2: A 1-inch drill hole in the concrete footing of the SW. tower leg, 11.80 ft. from station mark in azimuth 48°26'.

Note: A 30-ft. U.S. Forest Service Lookout Tower is centered over station mark.

Peak of roof 30.0 ft.  
Eaves 26.0  
Base of cabin 19.3

**NAD 83 VALUES AVAILABLE**

DEST 4/81

ARIZONA ZONE EAST

X=787,191.6

Y=297,159.5

V.A. elevation 8999 ft. (Ground)

Latitude: 31°48'49.122"

Longitude: 109°14'31.563"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Red Hill (C&GS)	1°13'25.7"	181°13'14.2"	88,820.6
Rucker	53 14 09.5"	233 10 12.6"	48,508.2
Silver Pk.	203 09 35.9	23 11 02.8	36,105.9
Squaw Mtn.	335 10 01.6	155 12 25.5	56,310.0

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mm. mm.

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27 NE

Arizona (26)

Cochise County

SILVER PK.

1927 N.A.D. (Adj. 1958) \* NAD 83 VALUES AVAILABLE

R.D. Mead, 1957

Books: PH 491-492 /

Located about 11.0 mi. NW. of Rodeo, New Mexico, 2.1 mi. WNW. of the Portal Ranger Station and 1.6 mi. NNE. of the American Museum of Natural History Research Station on the highest point of top.

To reach from the U.S. Forest Service Portal Ranger Station on Cave Creek, take the Forest Service trail leading to "Silver Peak L.O.H." (The trail intersects the main ridge at the U.S.F.S. tool house under "Silver Peak L.O.H."); from this point turn left and walk about 0.1 mi. to top and station.

Station mark: Standard bronze tablet stamped "SILVER 1957 PK", set in rock outcropping.

Reference mark No. 1: Standard bronze reference mark tablet stamped "NO 1 1957" set in naturally embedded boulder, 6.71 ft. from station mark in azimuth 138°41'.

Reference mark No. 2: Standard bronze reference mark tablet stamped "NO 2 1957" set in naturally embedded boulder, 17.66 ft. from station mark in azimuth 302°04'.

Note: The U.S.F.S. "Silver Peak L.O.H." is 749.5 stadia ft. from station mark in azimuth 111°48'15".

Peak of roof 14.3 ft.  
Eaves 8.9

ARIZONA ZONE EAST  
X=801,108.7  
Y=330,475.3

ET 1974 7974.8  
V.A. elevation 7975 ft.

Latitude: 31°54'17.603"

Longitude: 109°11'46.837"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Sentinel Pk. L.O.T.	23°11'02.8"	203°09'35.9"	36,105.9
Fly Pk. L.O.H. (C&GS)	66 38 42.5	246 35 57.9	29,271.0
Barfoot L.O.H.	99 59 15.3	279 56 49.2	24,188.7
Shaw (C&GS)	131 50 25.5	311 47 50.9	33,794.7
Round (C&GS)	211 56 56.6	31 58 05.8	21,293.2
C&GS BM "R 131 1934" (C&GS)	263 33 13.1	83 38 19.2	50,226.0
Cave	270 12 45.8	90 15 09.0	23,353.9
Portal	314 57 03.1	134 58 32.8	20,693.7

NAD 83 VALUES AVAILABLE

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Arizona (26)

Cochise County

SILVER PK L.O.H.

1927 N.A.D. (Adj. Secondary 1958) \*NAD 83 VALUES AVAILABLE R.D. Mead, 1957 (n)

Books: PH 491-492

Located about 11.0 mi. NW. of Rodeo, New Mexico 2.1 mi. WNW. of the Portal Ranger Station and 1.6 mi. NNE. of the American Museum of Natural History Research Station.

Station mark and signal: Center of L.O.H:

Peak of roof	14.3 ft.
Eaves	8.9

Note: This is a stadia tie. No check on this position.

## NAD 83 VALUES AVAILABLE

ARIZONA ZONE EAST

X=800,411.

V.A. elevation 7997 ft. (Ground)

Y=330,748.

Latitude: 31°54'20.36"

Longitude: 109°11'54.90"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Stadia Feet</u>
Silver Pk.	291°48'11."	111°48'15."	749.5

(n) = Not occupied

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lg ✓

*mv. mv.*

27NE

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Arizona (26)

Cochise County

2-61 A

1927 N.A.D. (Unadj.)

D. W. Ruthven, 1957

Books: FH 491-492

Located about 29 mi. N. of the United States-Mexico Border and 6 mi. W. of the Arizona-New Mexico State Line, on the highest top S. of the jct. of North Fork Canyon and Horseshoe Canyon.

To reach from Douglas Post Office, drive NE. on U.S. Hwy. 80 for 39.9 mi. to railroad mile post No. 1150; leave hwy., cross track 0.1 mi. to fence; pass through right hand gate and head cross country towards mouth of large drain for 0.8 mi. Climb up drain, keeping to N. side at the upper end, to station. A 2-hour climb.

Station mark: Chiseled square on top of rock outcrop.

Signal: White flag over red X-tgt. on 2 x 2 x 8 ft. pole centered over station mark.

Signal Data:	Top white flag	11.2 ft.
	Bottom white flag	7.9
	Top red X-tgt.	8.2
	Bottom red X-tgt.	4.8

Image points: none

## NAD 83 VALUES AVAILABLE

ARIZONA ZONE EAST

X=815,317.

Y=277,194.

V.A. elevation 6362 ft.

Latitude: 31°45'29.07"

Longitude: 109°09'07.81"

<u>TO STATION</u>	<u>AZIMUTH</u>	<u>BACK AZIMUTH</u>	<u>FEET</u>
Squaw Mtn.	7°58'45."	187°58'18."	31,198.
Owl	305 12 40.	125 17 03.	53,044.

5/13/57 ew

*[Handwritten signature]*

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Arizona (26)

Cochise County

ROUND (C&GS)

1927 N.A.D.

USC&GS, 1935  
A.E. Letey, 1948  
D.W. Ruthven, 1957

Books: PH 81-82; PH 491-492

Described by U.S. Coast and Geodetic Survey in description list No. 671,  
page 6. *31 1091-1011*

Note by A.E.L., 1948: Station found as described.

Located about 11 mi. NW. of Rodeo.

Note by D.W.R., 1957: Station found as described by C&GS. All marks in good condition.

Reference mark No. 2: USGS standard tablet originally stamped "5252 VA 1916" and restamped by C&GS "USC&GS ROUND RM NO 2 1935", 21.6 ft. from station mark in azimuth 294°16'34.2" (G.P. by C&GS)

ARIZONA ZONE EAST

\*X=812,214.14

V.A. elevation 5254 ft.

\*Y=348,643.36

\*Latitude: 31°57'16.381"

\*Longitude: 109°09'36.061"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Silver Pk.	31°58'05.8"	211°56'56.6"	21,293.2
Barfoot L.O.H.	68 26 53.2	248 23 17.8	37,732.4
*Shaw (C&GS)	97 01 11.83	276 57 27.91	36,718.6
Jasper	187 20 21.0	7 20 55.4	43,816.2
*GLO Station 2 (C&GS)	217 17 06.0	37 20 39.8	57,247.
*Cienega (C&GS)	222 32 05.44	42 37 21.72	75,872.6
*C&GS BM "R 131 1934" (C&GS)	287 50 57.7	107 54 54.8	40,590.
Rodeo	311 06 57.3	131 12 01.4	65,894.2
Cave	326 21 57.0	146 23 11.2	21,809.5

\*=Values by C&GS

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27 NE

*Aug. 26*  
New Mexico (19)

Hidalgo County

C&GS BM "R 131 1934" (C&GS)

1927 N.A.D.

USC&GS, 1938  
D.W. Ruthven, 1957

Books: PH 491-492

Described by USC&GS in New Mexico Level Line No. 88 "Steins to Rodeo, New Mexico" as follows:

"About 6.0 mi. N. along U.S. Highway 80 from Rodeo, Hidalgo County, about 160 ft. SW. of a cattle guard; about 100 ft. SW. of the centerline of the jct. with State Highway 14; 60 ft. W. of the centerline of the highway and 1 ft. E. of the fence line. A standard disk stamped "R 131 1934" and set in top of a concrete post."

Described by U.S. Coast and Geodetic Survey in description list No. 261, pages 14, 19 and 20. *31 1041-1051*

Note by D.W. R., 1957: Station found as described and all marks in good condition.

ARIZONA ZONE EAST

X=850,965.8

Y=336,561.1

Elevation 4140.566 ft. (Second-order leveling  
by C&GS in New Mexico Level Line No. 88)

NEW MEXICO ZONE WEST

X=126,998.0

Y=336,841.1

\*Latitude: 31°55'13.040"

\*Longitude: 109°02'07.798"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Darnell	42°25'51.0"	222°22'30.2"	48,625.3
Portal	60 12 26.0	240 08 49.8	40,668.5
Cave	77 55 02.0	257 52 19.1	27,164.9
Silver Pk.	83 38 19.2	263 33 13.1	50,226.0
*Round (C&GS)	107 54 54.8	287 50 57.7	40,590.
Rodeo	340 27 11.9	160 28 19.1	32,791.9

\*=Values by C&GS

2/28/58 lg *mm. mm*

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