

FT. McDOWELL

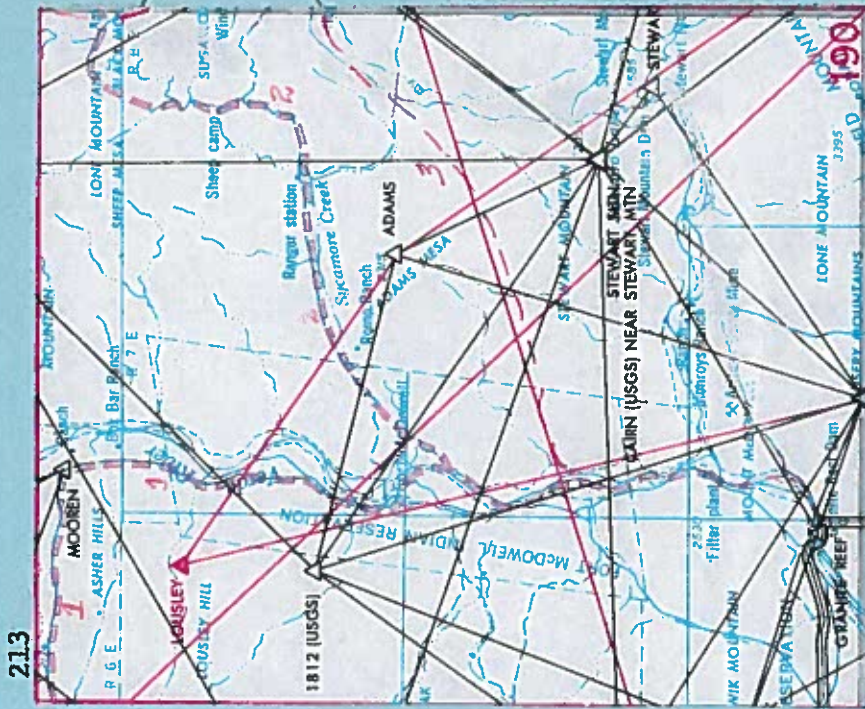
Lat. 33°30'
Long. 111°30'

ARIZONA 190

C&GS 33 111 4

See Ariz. Hwy. - Job 269

- (1) R. Phillips 1905 6624
- (2) " " " "
- (3) H. R. Poulsen 1963 PV 484



A.H.D. line
 Payson to Phoenix along State Highway 87
 Filed in "Outside Control"

33°30'
111°30'

ARIZONA 190

Index

<u>Station</u>	<u>Project</u>
- Adams (C&GS)	McDowell
Fort BM "1812" (C&GS)	McDowell
Lousley	McDowell
- Mooren (C&GS)	McDowell
Stewart Mtn. (C&GS)	McDowell
Texas	- - - -
Usery (USGS)	McDowell
VABM 2000	McDowell
VABM 3125	McDowell
- 1-44 A	McDowell
5-8 A	McDowell

Arizona (190)

Maricopa County

ADAMS (C&GS)

1927 N.A.D.

USC&GS, 1935

W.R. Brown, 1963

Book: PH 930

Found as described in U. S. Coast and Geodetic Survey *Description*
~~Publication No. 224, page 101. List 33114-1005~~

Station was reached by helicopter.

A tie was made to USGS station "TEXAS" as follows:
Standard tablet stamped "TEXAS" cemented in drill
hole in rock 5.44 ft. from station in an azimuth of
219°52'22".

Signal: White flag over red cross-target on 2 x 2 x 8
pole centered over station mark.

Signal data: TWF 10.8 ft.
BWF 8.0
TRXT 7.7
BRXT 5.2

Photo No. Paneled

ARIZONA ZONE CENTRAL

*V.A. Elevation: 2516 ft.

*X=599,245.6
Y=962,056.1

ARIZONA ZONE EAST

*X= 66,645.0
Y=964,883.6

STATION	* LAT.	AZIMUTH	LONG.	BACK AZIMUTH	DISTANCE
21 Adams (C&GS)	33° 38' 39.257"		111° 35' 26.013"		
60 Stewart Mtn. (C&GS)		335° 55' 32.976"		155° 56' 39.037"	24750.35
63 Usery (USGS) (C&GS)		16° 2' 42.715"		196° 1' 4.405"	54471.28
44 Lousley		123° 34' 57.922"		303° 31' 17.720"	40274.60
46 Mooren (C&GS)		146° 4' 25.043"		326° 1' 49.802"	42344.02
47 Otero (C&GS)		189° 44' 43.076"		9° 45' 43.386"	54173.79
5 VABM 3125		194° 49' 33.933"		14° 50' 20.249"	27570.63
54 Rolls (C&GS)		256° 51' 3.437"		76° 54' 50.725"	35598.37
70 1-56A		285° 48' 34.593"		105° 51' 44.473"	30131.42
1 VABM 2000		36° 20' 29.440"		216° 19' 50.166"	10119.29

* = Values by USC&GS

4/24/63 dlw *dlw*

FILE COPY

Arizona (190)

Maricopa County

FORT BM "1812" (B+CS)

1927 N.A.D (Unadj.)

USC&GS, 1935, 1946
D.J. Winstead, 1963

Book: PH 930

Original description in Special Publication No. 224,
page 174.

Found as described in U. S. Coast and Geodetic Survey
Direction List No. ~~909~~, page ~~2~~. *33114-1010*

Reached by helicopter.

Signal: White flag over a fluorescent cross-target
on a 2x2 pole centered over station mark.

Signal data:	TWF	10.7 ft.
	BWF	8.0
	TFXT	7.7
	BFXT	5.2

Photo No. Paneled

ARIZONA ZONE CENTRAL
X=564,277.7
Y=969,634.9

V.A. Elevation: 1811 ft.

ARIZONA ZONE EAST
X= 31,802.6
Y=973,055.1

STATION	BACK AZIMUTH	DISTANCE
35 Fort (C&GS) * LAT. 33° 39' 55.141"	* LONG. 111° 42' 19.466"	
60 Stewart Mtn. (C&GS)	123° 56' 7.487"	54278.95
63 Usery (USGS)(C&GS)	161° 38' 31.893"	63248.32
64 Verde (C&GS)	214° 12' 52.795"	39867.90
8 4-99A	230° 23' 32.341"	26100.51
21 Adams (C&GS)	102° 24' 34.523"	35783.05
1 VABM 2000	118° 40' 31.039"	33000.84

* = Values by B+CS

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4/25/63 dlw

33 30
111 30

Station: LOUSLEY

County: Maricopa

State: Ariz. (190)

Observer: T. M. Bannon

Year: 1904-5 Datum: 1927 N.A.D. (unadjusted) (Revised 1953)

Description:

Books: 3776-3779

Described in U.S.G.S. Bulletin 276, page 173, as follows:

"On the highest point north of the low hills on the west side of the Verdi River and about 4 miles north of old Fort McDowell.

"Station mark: A tablet cemented in a large boulder centered under a large rock monument."

FILE COPY

[Latitude 33 42 19.420

Longitude 111 42 03.140]

To Station—	Azimuth ° ' "	Back Azimuth ° ' "	Distance	
			Log. Meters	Miles Feet
Texas	303 30 49	123 34 29	4.08901	40,271
Usery	346 01 04	166 03 06	4.36983	76,879
			3/19/53 cg ✓	

Arizona (190)

Maricopa County

LOUSLEY

1927 N.A.D. (Unadj.)

~~USGS~~ T.M. Cannon, 1904-5
D.J. Winstead, 1963

Book: PH 930

Found as described in U.S. Geological Survey Bulletin No. 276,
page 173.

Station reached by helicopter.

Signal: White flag over fluorescent cross-target on a 2 x 2
pole centered over station mark.

Signal Data:	TWF	11.0 ft.
	BWF	8.0
	TFXT	7.7
	BFXT	5.2

Photo No. Paneled

ARIZONA ZONE CENTRAL

V.A. Elevation: 2044 ft.

X=565,626.3

Y=984,225.6

ARIZONA ZONE EAST

X= 33,398.6

Y=987,624.5

44 Lousley

LAT. 33° 42' 19.475"
STATION AZIMUTH

LONG. 111° 42' 3.149"

	STATION	AZIMUTH	BACK	AZIMUTH	DISTANCE
46	Mooren (C&GS)	217° 35' 12.794"	37° 36' 17.913"		16238.97
5	VABM 3125	263° 47' 21.264"	83° 51' 48.032"		40842.22
21	Adams (C&GS)	303° 31' 17.721"	123° 34' 57.925"		40274.60
37	Fraesfield	117° 7' 21.952"	297° 3' 46.132"		36875.88
8	4-99A	34° 33' 23.646"	214° 31' 2.735"		37902.60
2	East	72° 49' 12.241"	252° 45' 54.873"		31471.99
7	5-8A	139° 1' 51.459"	319° 1' 30.766"		18719.90

4/24/63 sb *W*

FILE COPY

Arizona (190)

Maricopa County

MOOREN (C&GS)

1927 N.A.D.

USC&GS, 1946

W.F. McElwain, 1963

Book: PH 930

Found as described in U.S. Coast and Geodetic Survey Description
List No. ~~909~~, page 2 - 33114 - 1018.

Station reached by helicopter.

Signal: White flag over red cross-target on a 2 x 2 x 8 pole
centered over station mark.

Signal Data:	TWF	10.9 ft.
	BWF	8.0
	TRXT	7.8
	BRXT	5.2

Photo No. Paneled

ARIZONA ZONE CENTRAL

V.A. Elevation: 1571 ft.

*X=575,503.6

Y=997,113.3

ARIZONA ZONE EAST

*X= 43,495.4

Y=1,000,345.8

46 Mooren (C&GS)

* LAT. 33° 44' 26.766"

LONG. 111° 40' 5.860"

	STATION	AZIMUTH	BACK AZIMUTH	DISTANCE
39	Gran (C&GS)	110° 38' 4.932"	290° 33' 33.896"	43988.42
26	Buford (C&GS)	150° 58' 33.970"	330° 54' 43.499"	71918.31
47	Otero (C&GS)	240° 51' 30.255"	60° 55' 6.181"	37541.53
6	1-127A	255° 53' 23.942"	75° 55' 8.056"	16318.02
44	Lousley	37° 36' 17.888"	217° 35' 12.771"	16238.97

* = Values by USC&GS

4/24/63 sb. *[signature]*

FILE COPY

Arizona (190)

Maricopa County

STEWART MTN. (C&GS)

1927 N.A.D.

USC&GS, 1935, 1946

F.L. Aschert, 1963

Book: PH. 930

Found as described in U.S. Coast and Geodetic Survey Description
List No. 909, page 1, except as noted:

~~33114-1024~~

Note by F.L. Aschert, 1963: Station found as described with the following exceptions:

Reference mark No. 1 was measured to be 32.53 ft. from the station mark and not 34.36 ft. as described.

Reference mark No. 2 was measured to be 28.75 ft. from the station mark and not 28.99 ft. as described.

Station reached by helicopter.

Signal: White flag over fluorescent cross-target on a 2 x 2 pole centered over station mark.

Signal Data:	TWF	17.6 ft.
	BWF	14.8
	TFXT	14.5
	BFXT	12.0

Photo No. Paneled

ARIZONA ZONE CENTRAL

V.A. Elevation: 2988 ft.

*X=609,412.0

Y=939,492.5

ARIZONA ZONE EAST

*X= 76,430.4

Y=942,146.8

60 Stewart Mtn. (C&GS)

* LAT. 33° 34' 55.678"

LONG. 111° 33' 26.682"

	STATION	AZIMUTH	BACK AZIMUTH	DISTANCE
54	Rolls (C&GS)	218° 41' 32.329"	38° 44' 13.354"	39317.31
70	1-56A	232° 43' 47.815"	52° 45' 51.500"	23750.09
69	1-44A	340° 2' 26.134"	160° 3' 36.238"	31474.99
21	Adams (C&GS)	155° 56' 39.051"	335° 55' 32.992"	24750.35

* = Values by USC&GS

4/25/63 sb *pa*

FILE COPY

33 30
111 30

Station: TEXAS (See ADAMS, C&GS) County: Maricopa State: Ariz. (190)
 Observer: T. M. Bannon Year: 1904-5 Datum: 1927 N.A.D. (Revised 1953, unadjusted)
 Description: U.S.C.&G.S. 1935
 Books: 3776-3779

Described in U.S.G.S. Bulletin 276, page 175, as follows:

"A 3-point station on the highest point of the center of three malpais hills on the south side of Sycamore, 6 miles east of old Fort McDowell.

"Station mark: A bronze tablet cemented into solid rock under a large rock monument."

5 ft from

NOTE: This station is ~~also known as~~ the station "ADAMS" by U.S.C.&G.S. Following is the description for station "ADAMS" from U.S.C.&G.S. Special Pub. No. 224, page 101:

"On the highest point of Adams Mesa, about 4 miles, airline, east of Verde Rive and about 6 miles, airline, north of the Salt River. Marked by a standard bronze dis Reference mark No. 1, a standard bronze reference disk, 6.643 meters (21.79 feet) from station in azimuth 296°37'. Reference mark No. 2, a standard bronze reference disk is 8.500 meters (27.89 feet) from station in azimuth 33°26'. The azimuth mark, a standard bronze disk, is 1/4 mile from station in azimuth 322°19'32".

"Plane coordinates: (C), x=599,245.53 feet; y=962,056.43 feet; the grid azimuth to the azimuth mark=322°08'41".

FILE COPY

* [Latitude 33 38 39.257 * Longitude 111 35 26.013]

To Station—	Azimuth ° ' "	Back Azimuth ° ' "	Distance	
			Log. Meters	Miles Feet
*Usery (USGS)	16 02 42.79	196 01 04.48	4.2201836	54,471.3
Usery	16 02 44.27	196 01 05.95	4.220133	54,472
Superstition	925 34 43.93	145 41 02.68	4.4961625	102,836
* = Values by U. S.C.&G.S.			3/19/53 cg ✓	

Arizona (190)

Maricopa County

USERY (USGS)

1927 N.A.D. (Unadj.)

T.M. Bannon, 1904-5

USC&GS, 1935, 1946

Book: PH 930

R.W. Hendrickson, 1963

Original description in ~~U. S. Geological Survey~~ Bulletin No. 276, page 175.

Found as described in U. S. Coast and Geodetic Survey Description Book No. ~~909~~, except as noted.

33114-1027.

Station reached by helicopter.

Note: Reference Mark No. 1 was searched for but not found.

Signal: White flag over fluorescent cross-target centered over station mark.

Signal data:	TWF	10.8 ft.
	BWF	8.0
	TFXT	7.8
	BFXT	5.2

Photo No.: Paneled with velon for identification.

ARIZONA ZONE CENTRAL

V.A. Elevation: 2972 ft.

X=584,356.2

Y=909,664.5

ARIZONA ZONE EAST

X= 50,869.4

Y=912,739.8

63 Usery (USGS) (C&GS)

LAT. 33° 30' 1.313"

LONG. 111° 38' 23.795"

STATION AZIMUTH

BACK AZIMUTH DISTANCE

60 Stewart Mtn. (C&GS)

220° 11' 4.04"

40° 13' 44.571" 38958.67

57 Sawik (USGS) (C&GS)

109° 41' 54.280"

289° 37' 53.360" 39227.49

64 Verde (C&GS)

122° 35' 15.222"

302° 30' 38.490" 50300.76

8 4-99A

137° 18' 32.480"

317° 14' 10.686" 59066.64

1 VABM 2000

191° 33' 20.652"

11° 34' 19.735" 45117.04

21 Adams (C&GS)

196° 1' 4.415"

16° 2' 42.727" 54471.28

FILE COPY

4/24/63 dcV *442*

Arizona (190)

Maricopa County

VABM 2000

1927 N.A.D. (Unadj.)

W.F. McElwain, 1963

Book: PH 930

Located about 6 mi. (airline) NW. of Stewart Dam, about 6 mi. NE. of the junction of the Verde and Salt Rivers, and about 4 mi. E. of Fort McDowell on the N. end of a low N.-S. ridge.

Reached by helicopter.

Station mark: An old aluminum tablet stamped "VA 2000" cemented in drill hole in rock outcrop.

Reference marks: None set.

Signal: . White flag over red cross-target on 2 x 2 x 8 pole centered over station mark.

Signal Data:	TWF	10.8	ft.
	BWF	8.0	
	TRXT	7.6	
	BRXT	5.2	

Photo No. Paneled

ARIZONA ZONE CENTRAL
 X=593,275.2
 Y=953,886.9

ARIZONA ZONE EAST
 X= 60,536.0
 Y=956,814.9

V.A. Elevation: 1998 ft.

1 VABM 2000

		LAT. 33° 37' 18.611"		LONG. 111° 36' 36.923"				
STATION		AZIMUTH		BACK	AZIMUTH	DISTANCE		
21	Adams (C&GS)	216°	19'	50.206"	36°	20'	29.483"	10119.29
60	Stewart Mtn. (C&GS)	311°	54'	11.897"	131°	55'	57.181"	21625.86
63	Usery (USGS) (C&GS)	11°	34'	19.722"	191°	33'	20.641"	45117.04
57	Sawik (USGS) (C&GS)	56°	2'	22.125"	235°	57'	21.711"	55434.54
64	Verde (C&GS)	71°	36'	37.421"	251°	31'	1.107"	54192.07
8	4-99A	89°	5'	51.524"	269°		30.138"	49093.95
35	Fort (C&GS)	118°	40'	31.039"	298°	37'	21.262"	33000.83
44	Lousley	137°	49'	32.270"	317°	46'	31.438"	41051.33

FILE COPY

4/24/63 ss *WFW*

Arizona (190)

Maricopa County

VABM 3125

1927 N.A.D. (Unadj.)

D.J. Winstead, 1963

Book: PH 930

Located about 8 mi. (airline) NNE. of Fort McDowell; about 4 mi. E. of the Verde River; about 4 mi. N. of Sycamore Creek, and about 0.5 mi. SE. of Sheep Mesa; on the N. end and highest point of a prominent, dark, rocky ridge.

Reached by helicopter.

Station mark: A USGS standard aluminum BM tablet stamped "VA 3125" set in concrete; in drill hole; in bedrock.

Reference mark No. 1: Chiseled cross on bedrock, 11.97 ft. from station mark and about 1 ft. higher and in azimuth 308°39'.

Reference mark No. 2: Chiseled cross on rock, 11.20 ft. from station mark in azimuth 66°58' and about level with station mark.

Signal: White flag over red cross-target on a 2 x 2 in. pole centered over station mark.

Signal Data:	TWF	10.9	ft.
	BWF	8.0	
	TRXT	7.8	
	BRXT	5.2	

Photo No. Paneled

ARIZONA ZONE CENTRAL

V.A. Elevation: 3132 ft.

X=606,215.7
Y=988,728.6

ARIZONA ZONE EAST

X= 74,067.4
Y=991,439.5

5 VABM 3125

	LAT. 33° 43' 2.928"	LONG. 111° 34' 2.497"	
	STATION	BACK AZIMUTH	DISTANCE
21 Adams (C&GS)	14° 50' 20.227"	194° 49' 33.912"	27570.63
6 1-127A	129° 58' 3.020"	309° 56' 25.311"	19384.93
3 West	132° 58' 53.969"	312° 54' 48.201"	51003.36
47 Otero (C&GS)	184° 32' 7.265"	4° 32' 21.228"	26822.85
44 Lousley	83° 51' 48.024"	263° 47' 21.257"	40842.22
54 Rolls (C&GS)	303° 54' 53.441"	123° 57' 54.619"	33265.47

FILE COPY

4/24/63 ss *WJW*

Arizona (190)

Maricopa County

1-44A

1927 N.A.D. (Unadj.)

W.R. Brown, 1963

Book: PH 930

Located about 6 mi. (airline) NNE. of Apache Junction, about 4.5 mi. SSE. of Stewart Mtn. Dam, and on the highest point of the lower one of three prominent tops on the SE. side of the Goldfield Mountains.

Station reached by helicopter.

Station mark: 1/2 in. reinforcing rod driven in ground and protruding 0.8 ft. above ground. (Elevation is on ground.)

Signal: White flag over red cross-target on 2x2x8 pole centered over station mark.

Signal data:	TWF	10.8 ft.
	BWF	8.0
	TRXT	7.7
	BRXT	5.2

Photo No.: Paneled

ARIZONA ZONE CENTRAL

V.A. Elevation: 3047 ft.

X=620,257.6

Y=909,948.0

ARIZONA ZONE EAST

X= 86,777.7

Y=912,418.0

69 1-44A

LAT. 33° 30' 2.970"

LONG. 111° 31' 19.811"

	STATION	AZIMUTH	BACK AZIMUTH	DISTANCE
60	Stewart Mtn. (C&GS)	160° 3' 36.251"	340° 2' 26.150"	31474.99
68	1-40A	272° 23' 25.045"	92° 28' 28.999"	46682.29

FILE COPY

4/25/63 dc *W.R.B.*

Arizona (190)

Maricopa County

5-8A

1927 N.A.D. (Unadj.)

L.B. Mansfield, 1963

Book: PH 930

Located about 20 mi. NE. of Camelback Mountain, 17.5 mi. NW. of Stewart Mountain Dam and 8 mi. SW. of Bartlett Dam. Station is along a dirt rd. at the NE. side of rd. fork.

Station reached by helicopter.

Station mark: Ground at 1/2 in. steel rod projecting 0.5 ft. above.

Signal: White flag over red cross-target on 2 x 2 pole centered over station mark.

Signal Data:	TWF	11.0	ft.
	BWF	8.0	
	TRXT	7.7	
	BRXT	5.2	

Photo No. 5-8A GS-VAOB

ARIZONA ZONE CENTRAL

V.A. Elevation: 2155 ft.

X=553,324.2

Y=998,333.2

ARIZONA ZONE EAST

X= 21,334.5

Y=1,001,942.3

75-8A

LAT. 33° 44' 39.287"

LONG. 111° 44' 28.490"

39 Gran (C&GS)
 44 Lousley
 2 East
 37 Fraesfield

STATION AZIMUTH

126° 48'	18.592"
319° 1'	30.759"
37° 11'	30.542"
97° 24'	1.769"

BACK AZIMUTH DISTANCE

306° 46'	13.506"	23727.35
139° 1'	51.454"	18719.91
217° 9'	33.742"	29421.53
277° 21'	46.583"	20720.62

FILE COPY

4/24/63 ss *dl*

Station: USERY

County: Maricopa

State: Ariz. (190)

Observer: T.M. Bannon

Year 1904-5 Datum: 1927 N.A.D.

Description: U.S.C.&G.S.

1935, 1946

Original description in U.S.G.S. Bulletin No. 276, page 175.

Described in U.S.C.&G.S. Description Book No. 909, page 1, as follows:

"The station is located on the highest point of the Usery Mountains which are in approx. airline distances 2 mi. S. of the jct. of the Salt and Verde Rivers, 16 mi. NE. of Mesa, and 3 mi. SE. of the Granite Reef Dam in the Salt River. The Usery Mountains run in a N.-S. direction and the station is on the second prominent point from the N.; a large rock is about 10 ft. E. by S. of the station.

"To reach the station from "The Buckhorn", a resort located about 7½ mi. E. of Mesa, Arizona on US 60 and 70, go E. on US 60 and 70 for 1.0 mi. to a X-rd. Turn left onto the graded rd. as per sign "BUSH HIGHWAY" and go 0.4 mi. to a X-rd. and two cattle guards. Turn right here through a cattle guard and follow the main traveled rd. for 5.3 mi. to a side rd. right, keep straight ahead on the main rd. for 0.3 mi. to a dim track rd. left and a triangle blaze on a 3½ ft. cactus which is about 30 yds. off the main rd. Turn left on the track rd. which passes just left of the triangle blazed cactus (Another dim rd. angle back along the main rd.), and follow it for 0.65 mi. to the end of the track rd., a triangle blazed cactus, the Azimuth Mark, and the end of truck travel. From here pack across minor drainage to the highest point of the right of two peaks lying NW. of the end of truck travel and the station.

"The station is a standard USGS bench mark stamped 29 VA with 2970 scratched on the mark. It is set in a boulder which projects 2 inches above the surrounding surface.

"Reference Mark No. 1 is a standard reference mark stamped USERY 1935 NO 1, set in a boulder, which projects 3 inches above the surrounding surface and about 15 ft. below the station. It is located W. of the station, 6.902 meters (22.647 ft.) W. from station in true azimuth 98°25'. Reference Mark No. 2 is a standard reference mark stamped USERY 1935 NO 2, set in a boulder, which projects 11 inches above the surrounding surface and is about 10 ft. below the station. It is located N. of the station, 12.660 meters (41.533 ft.) N. from station in true azimuth 177°06'. The cross on the rock is a regular cross with the long leg on arrow pointing toward the station. It is scratched on a boulder which projects 2 ft. above the surrounding surface and is about 6 inches below the station. It is located N. of the station, 4.715 meters (15.469 ft.) N. from station in true azimuth 174°07'.

[Latitude Longitude]

To Station—	Azimuth ° ' "	Back Azimuth ° ' "	Distance	
			Log. Meters	Miles
(Continued on page 2.)				

FILE COPY

Station: USERY

County: Maricopa

State: Ariz. (190)

Observer: T.M. Bannon

Year: 1904-5 Datum: 1927 N.A.D.

Description: U.S.C.&G.S.

1935, 1946

(Continued from page 1)

"The Azimuth Mark is a standard azimuth mark stamped 'USERY USGS 1946', set in a boulder, which projects 2½ ft. above the surrounding surface. It is located about ½ mi. SE. of the station, 70 ft. NW. of the blazed cactus at the end of truck travel, 38 ft. N. of a wash, and 1 ft. S. of a small rock cairn, 1/2 mi. SE. from station in true azimuth 318°37'44".

FILE COPY

* [Latitude 33 30 01.313

* Longitude 111 38 23.795]

To Station—	Azimuth ° ' "	Back Azimuth ° ' "	Distance	
			Log. Meters	Stat. Feet
* Superstition	293 54 15.29	114 02 11.34	4.3874867	80,070.2
* = Values by U. S. Coast and Geodetic Survey.			3/19/53 cg ✓	

33 111 4

33°30'
111°30'

ARIZONA 190

<u>NAME</u>	<u>STATION</u>
Adams	1005
Fort Bench Mark 1812 USGS	1010
Granite Reef	1012
Mooren	1018
Stewart Dam	1023
Stewart Mountain	1024
Calra USGS	1024
Usery USGS	1027
Cross on Rock	1027



JULY 1966
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 U.S. DEPARTMENT OF COMMERCE
 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.

HORIZONTAL CONTROL DATA

Coast and Geodetic Survey
 by the
 NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1005
 ARIZ
 LATITUDE 33°30' TO 34°00'
 LONGITUDE 111°30' TO 112°00'
 DIAGRAM HI 12-8 MESA

ARIZONA

190

ADJUSTED HORIZONTAL CONTROL DATA

YEAR: 1935

NAME OF STATION: ADAMS
 STATE: ARIZ
 LOCALITY: Tonto National Forest and
 Winkelman to Winblow to Phoenix
 Second-order Triangulation source: G-7605
 FIELD SKETCH:

33° 03' 01"
 111° 30'

Adams (Maricopa County, E. B. Latham, 1885).—On the highest point of Adams Mesa, about 4 miles, air line, east of Verde River and about 6 miles, air line, north of the Salt River. Marked by a standard bronze disk as described in note 2a. Reference mark No. 1, a standard bronze reference disk, note 12a, is 0.643 meters (21.70 feet) from station in azimuth 200°37'. Reference mark No. 2, a standard bronze reference disk, note 12a, is 8,500 meters (27,89 feet) from station in azimuth 33°26'. The azimuth mark, a standard bronze disk, note 12a, is one-fourth mile from station in azimuth 322°19'42".

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ FOR AN ANGLE	MARK
STATE: ARIZ ZONE: E CODE: 0201	x 66,644.99 y 964,883.60	323° 06' 51" - 0 47 20	AZIMUTH MARK
STATE: ARIZ ZONE: C CODE: 0202	x 599,245.54 y 962,056.13	322 08 41 + 0 10 50	AZIMUTH MARK

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION METERS
	LATITUDE	LONGITUDE		
	33° 38' 39" 257	111 35 26.013		

AZIMUTH MARK

THIRD-ORDER
322° 19' 31" 2

TO STATION	GEODETIC AZIMUTH (from south)	DISTANCE METERS

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HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1006
 ARIZ
 LATITUDE 33° 30' TO 34° 00'
 LONGITUDE 111° 30' TO 112° 00'
 DIAGRAM NI 12-8 MESA

Buford (Maricopa County, W. Mussetter, 1924).—About 35 miles north-northeast of Phoenix, 3 miles northeast of the Sears ranch on Camp Creek, 1 1/2 miles northwest of a branding corral on the Camp Creek-Verde River wagon road, and on the highest point of a prominent mountain known on General Land Office maps as Mount Buford, to the Forest Service as Kentuck Mountain, and at the Sears ranch as Buck Basin Mountain. This peak is the highest in the vicinity and can be recognized from the south as the pointed peak with the long slope to the west and steep slope to the east. Marked by a standard bronze disk as described in note 2. The reference mark, a standard bronze reference disk, note 12a, is 5,778 meters (18,987 feet) from station in azimuth 130° 03'.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: BUFORD
 STATE: ARIZ
 LOCALITY: Maricopa-Yavapai Co. Boundary
 First-order Triangulation source: 81625
 FIELD SKETCH: ARIZ 6
 YEAR 1924

GRID DATA	COORDINATES (FMS)	PLANE AZIMUTH θ (from angle)	MARK
STATE: ARIZ ZONE: C CODE: 0202	X 540,462.37 Y 1,059,909.57	+ 0 04 28	
STATE: ZONE: CODE:			
GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
LATITUDE: LONGITUDE:	33° 54' 48.705 111 46 59.565	NORTH WEST	1,529.0 5,016
TO STATION	GEODETIC AZIMUTH (From angle)		DISTANCE
MT ORD	271° 28' 38.32		4,540 2946 34,697.21

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: FOREST SERVICE MARK
 STATE: ARIZ
 LOCALITY: Tombco National Forest and Winkelman to Winslow to Phoenix
 First-order Traverse source: 8-7605
 FIELD SKETCH:
 (No check on this position)

GRID DATA	COORDINATES (FMS)	PLANE AZIMUTH θ (from angle)	MARK
STATE: ARIZ ZONE: E CODE: 0201	X 9,523 Y 1,063,749	- 0 54 08	
STATE: ZONE: CODE:			
GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
LATITUDE: LONGITUDE:	33° 54' 48.745 111 46 59.814	NORTH WEST	METERS FEET
TO STATION	GEODETIC AZIMUTH (From angle)		DISTANCE
Computed from station BUFORD			

RECOVERY NOTE, TRIANGULATION STATION

DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY
 NAME OF STATION: BUFORD STATE: Arizona CODE: Maricopa
 ESTABLISHED BY: W. Mussetter Year: 1924 LOCALITY: Cave Creek, 11 miles northwest of
 RECOVERED BY: G. A. Egner Year: 1946

Detailed statement as to the fitness of the original description:
 The station was recovered and all the marks were found to be in good condition. A new reference mark, (No 2), and a **Asimith** mark were added and stamped as described below. The new measurement to reference mark No 1 was checked and therefore supersedes the old measurement.

The station is located on the highest point of a prominent mountain, which is the highest in the vicinity, and is known on General Land Office maps as Mount Buford, and to the Forest Service as Kentuck Mountain. This peak can be recognized from the south as the pointed peak with the long slope to the west and steep slope to the east. In approximate distance it is located about 40 miles north-northeast of Phoenix, about 38 miles north of Mesa, 16 miles west-northwest of Buckflower, 11 miles northeast of Cave Creek, and is located within the Tombco National Forest.

To reach the station from the Cave Creek Post office, go south and east on the Horse Shoe and Bartlett Dam road for 1.15 miles to the end of the manzanita road, here continue on the well graded road for 2.4 miles to the cattle guard, marking the entrance into the Tombco National Forest. Drive over this cattle guard and continue on the well graded road for 3.95 miles to a fork. Take the left fork as per sign "TO GAUP CREEK" and continue on the main traveled road for 2.85 miles to where the road crosses "BLUE WASH", here continue straight ahead on the main traveled road for 0.1 miles to a fork. Take the right fork as per sign "KEY MARK 3/4" going 0.75 miles to the bottom of a canyon and a fork. Take the right fork going for 50 feet to a gate, here turn sharp left before going through the gate and follow the dim track road along the fence, across the wash and up out of the canyon, going for 0.9 miles to a wash. Turn left up this wash, going for 0.1 mile and then turn right on a dim road up a small wash and go 0.2 miles to where the track road leaves the wash on the left. Turn left here and follow this track road for 0.4 miles to a fork, take the left fork and follow this track road for 3.5 miles to where it makes a left turn and a dim track road turns off to the right. Take the dim right fork and follow the dim track road up the ridge for 0.3 miles to a group of large boulders and the **Asimith** mark. Continue on up the ridge, following the trail for 0.2 miles to the end of track travel. From here bank up the trail to the top of the low saddle to the left of the highest peak on the ridge between the end of track travel and the station. From this saddle angle right and follow the ridge to the highest point and station.

The station is a standard triangulation mark stamped **BUFORD 5008 1A**, set in out-cropping bedrock, note 2, flush with the surrounding surface. It is located 10 1/2 feet southwest of the highest point of the mountain.

Reference mark No 1 is a standard reference mark stamped **BUFORD**, set in out-cropping bedrock which projects 6 inches above the surrounding surface and is about 1 foot higher than the station. It is located northwest of the station.

Reference mark No 2 is a standard reference mark stamped **BUFORD NO 2 1946**, set in out-cropping bedrock, note 12a, which projects about 10 inches above the surrounding surface and is about 1 1/2 feet below the station. It is located east-northeast of the station.

The **Forest Service** mark is a standard Department of Agriculture Forest Service mark stamped **FIRE CONTROL VISIBLE AREA MAP POINT KEYMARK 5 17 38**, set in out-cropping bedrock which projects about 5 inches above the surrounding surface and is about 1 foot above the station. It is located northeast of the station.

The **Asimith** mark is a standard **asimith** mark stamped **BUFORD 1946**, set in a boulder note 12a, which projects about 5 feet above the surrounding surface. It is located about 3/4 mile south-northeast of the station. 40 feet north-northeast of the highest boulder on the small rise, and about 3 feet west of a 4 inch square white witness post.

ORDER	DISTANCE	DIRECTION
MT ORD	0 00 00.0	
Asimith Mark 3/4 mile	78 53 07.0	
RM NO 1, 18,699ft 5.75m	227 39 58	NW
Asimith Mark	258 46 32.5	
Forest Service Mark 1.75m	315 09	NE
RM NO 2 18,922ft 4.84m	358 31.32	NE

JHM

JULY 1966
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 COAST AND GEODETIC SURVEY
 WASHINGTON, D. C.
 Revised Aug 1974

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1009
 ARIZ
 LATITUDE 33°30' TO 34°00'
 LONGITUDE 111°30' TO 112°00'
 DIAGRAM NI 12-8 MESA

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: END	STATE: Arizona	COUNTY: Maricopa
NAME OF PARTY: G.A. Spurr	YEAR: 1946	LOCALITY: Gave Creek, 5 miles southwest of Phoenix
DESCRIPTION: Standard disk monument, 12 inch concrete, 19 inch diameter, 19 feet high, set in top of a 12 inch concrete monument which projects about 2 inches south of the station.	DISTANCE AND DIRECTION TO REFERENCE MARKS AND MONUMENT OBJECTS WHICH CAN BE SEEN FROM THE STATION	
Reference mark, MD 1	MARK: MD 1 21.200T 6.468 W	DIRECTION: S 31.52° E
Reference mark, MD 2	MARK: MD 2 21.658T 6.008 W	DIRECTION: S 28° 42' 08" E
Witness mark, W	MARK: W 0.00 00.0	DIRECTION: 0 00 00.0
Height of light above station mark: 1.2 meters	AZIMUTH: 0 00 00.0	
Height of telescope above station mark: 6.0 meters	AZIMUTH: 0 00 00.0	

Detailed description: The station is located 33 feet northwest of the center of the Gave Creek-Phoenix highway and is approximately 228 miles north-northeast of Phoenix and 5 miles southwest of Gave Creek.

To reach the station from the Gave Creek Post Office, go west and southerly on the Phoenix highway for 0.45 miles to a cattle guard, thence cross this cattle guard and continue on the Phoenix highway for 4.2 miles to a mail box on the left or southeast and the station on the right.

The station is a standard triangulation mark stamped END 1946, set in a square concrete post which projects about 8 inches above the surrounding surface and is about 1 1/2 feet above the station. It is located north-northeast of the station.

Reference mark MD 1 is a standard reference mark stamped MD 1 1946, set in a square concrete post which projects about 8 inches above the surrounding surface and is about 1 1/2 feet above the station. It is located north-northeast of the station.

Reference mark MD 2 is a standard reference mark stamped MD 2 1946, set in a square concrete post which projects about 8 inches above the surrounding surface and is about the same level as the station. It is located west of the station.

Station GAVE CREEK is the Azimuth Mark for this station.

RECOVERY NOTE, TRIANGULATION STATION 331114 R

NAME OF STATION: **AMU** YEAR: **1946** | STATE: **Arizona** | BENCH MARK ALSO: || ESTABLISHED BY: **C.A.M.** | YEAR: **1974** | COUNTY: **Maricopa** | |
| RECOVERED BY: **Charles Novak** | YEAR: **1974** | COUNTY: **Maricopa** | |
| AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: **5 miles southwest of Gave Creek** | HEIGHT OF LIGHT ABOVE STATION MARK: **5** feet. | | |

OBJECT	BEARING	DISTANCE		DIRECTION
		FEET	METERS	
Gave Creek 1946	S	21.54	6.566	0 06 00.0
AM 2	W	23.18	7.065	169 02 42.6
AM 3	N			50 13 13
				327 41 15

The station mark and reference mark 2 were recovered in good condition. Reference mark 1 was in place at edge of grador bank and exposed for about 2 feet on the east side. The mark was reset in a safe location as reference mark 3. Station mark 1924 which is listed for an azimuth mark is a long peck and reference mark 4 was established.

The station mark is a standard disk stamped, AMU 1946. It is set in top of a 12 inch concrete monument which projects about 5 inches. The mark is 63 feet south of the intersection of Gave Creek Road and Lone Mountain Road, 28 feet west of the corner of Gave Creek Road and 1 1/2 feet east of the witness post and sign.

Reference mark 2 is a standard disk stamped, AMU NO 2 1946. It is set in top of a 12 inch concrete monument which projects about 6 inches. It is 20 feet south of the south bank of a wash and 19 feet west of the witness post.

Reference mark 3 is a standard disk stamped, AMU NO 3 1946 1974. It is set in top of a 12 inch concrete monument which projects about 6 inches. It is 40 feet west of the center of Gave Creek Road, 38 feet south of a repair box for underground cable and 23 feet north of the witness post.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: **END** STATE: **ARIZ** | LOCALITY: **Tonto National Forest and Winkelman to Winslow to Phoenix** | YEAR: **1946** || Second-order Triangulation | SOURCE: **G-7605** | | |

GND DATA	COORDINATES (Feet)	PLANE AZIMUTH FROM ANGLE	MARK	POSITION		ELEVATION	
				NORTH	WEST	METERS	FEET
ARIZ	480,349.33	325°52'30"	AMZIMUTH MARK NH 4	180°56'09.92	4.232 2828	582.6	17,071.94
ZONE: C	1,007,597.51	-0 02 09				1,911	
CODE: 0202							
STATE: ARIZ							
ZONE: C							
CODE: 0202							

GEODEIC DATA	LATITUDE	LONGITUDE	POSITION		ELEVATION	
			NORTH	WEST	METERS	FEET
ARIZ	33°46'11.935	111 58 52.789	180°56'09.92	4.232 2828	582.6	17,071.94
ZONE: C						
CODE: 0202						

Reference mark 4 is a standard disk stamped, AMU NO 4 1946 1974. It is set in top of a 12 inch concrete monument which projects about 2 inches. It is 29 feet east of the center of Gave Creek Road, 19 feet south of the south 1 of 4 large steel culverts and 1 foot west of witness post and sign which is set in the east right of way fence line.

To reach the station from Gave Creek School, in Gave Creek, go west and south along Gave Creek Road for 5.6 miles to intersection with Lone Mountain Road on the left and the station on the right.

Long in field

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 COAST AND GEODETIC SURVEY
 WASHINGTON D.C.

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

Fort (B. M., 1812 U. S. G. S.) (Maricopa County, E. B. Latham, 1935).
 About 3 miles, air line, northwest of Fort McDowell, about 3 miles west of the Verde River on the south end of the most southern ridge of the Louseley Mountains. Marked by a standard U. S. Geological Survey bench mark disk set in bedrock. Reference mark No. 1, a standard bronze reference disk, note 12a, is 12615 meters (4139 feet) from station in azimuth 250°20'. Reference mark No. 2, a standard bronze reference disk, note 12a, is 12896 meters (4222 feet) from station in azimuth 107°03'. No azimuth mark established. Other stations visible from the ground.

RECOVERY NOTE, TRIANGULATION STATION

NAME OF STATION: FORT BU 1812 USGS STATE: Arizona COUNTY: Maricopa
 ESTABLISHED BY: E.B. Latham YEAR: 1935 LOCALITY: Fort McDowell, 3 miles northwest of
 Reference mark No. 1, U.S. G.S. Egan YEAR: 1946

Detailed statement as to the fitness of the original description: Station and one reference mark found and recovered in good condition as described.
 To reach from the valley National Bank in Mesa go west on US 60, 70, and 89 for 0.3 mile to Mesa Boulevard. Here turn right, or north and go 3.8 miles to a graded gravel road right just after a long left turn in the paved road. Turn right and go north on the graded road for 2.1 miles to a cross road. Here turn right or east and go 1.4 miles; then left, north for 0.5 mile; then right, east for 0.6 mile to dam in canal. Continue east on main traveled road for 3.7 miles. Cross canal and continue northerly on the main traveled road for 8.8 miles to a fork in wash. Keep right on main traveled road for 1.5 miles to cross roads. (Fort McDowell Indian Agency is on the left) Then continue north for 0.1 mile and thence left for 50 yards to a fork. Keeping right fork go 0.9 mile. (Keep main traveled road or straight ahead for intervening forks) to a fork. Here leave main traveled road and take left fork westerly on track road for 1.0 mile to gate. Pass through and go 0.65 mile to bottom of small hill. (Azimuth is 0.1 mile beyond this point) Here leave the road and go northerly across small washes where convenient for 0.2 mile to rim tracks leading northwest. Follow rim tracks for 0.2 mile and then bear right across country again to base of low ridge and end of truck travel. From here pack up to top of ridge and station site. A pack of about 5 minutes.
 The station is a standard Geodetic Survey Bench mark stamped: 1812 (elevation) and is set in the top of outcropping boulder that projects about 9 inches above the surface. It is located approximately 17 feet southeast of the highest point.
 R.M. #1 is a standard reference disk stamped: FORT NO. 1 1935 and is set in outcropping boulder that projects about 3 inches above the ground and is about 3 feet lower than station.
 R.M. #3 (newly established) is a standard reference disk stamped: FORT BU USGS 1946 and is about 28 feet lower than station.
 The azimuth mark is a standard reference disk stamped: FORT BU USGS 1946 and is set in outcropping boulder that projects about 4 inches above the ground and is located 144 feet south-southwest of the center of the road and 5 feet west-northwest of a 3 foot rock cairn and is approximately 2 mile south of station.

OBJECT OBSERVED DISTANCE DIRECTION
 ZERO 00 00 00.00
 R.M. #1 12.59m 41.325ft N/E 26 94 23 -
 Azimuth mark 1/8 mile S 144 53 18.0 -
 R.M. #3 25.315m 73.210ft W/NW 250 27 03 -
 R.M. #2 apparently has been removed. No trace was found.
 Distance on R.M. #1 was checked and is believed to be U. S. G. S. value more nearly correct than published distance.

RECOVERY NOTE, TRIANGULATION STATION

NAME OF STATION: FORT BENCH MARK 1812 USGS STATE: Arizona BENCH MARKS ALSO
 ESTABLISHED BY: YEAR: 1935
 RECOVERED BY: Army Map Service YEAR: 1967 COUNTY: Maricopa
 AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN:

Detailed statement as to the fitness of the original description: including marks found, stampings, changes made, and other pertinent facts:

All marks were found in good condition.

AZ 190

QUAD 331114 STATION 1010
 ARIZ
 LATITUDE 33°30' TO 34°00'
 LONGITUDE 111°30' TO 112°00'
 DIAGRAM NI 12-8 MESA

33 30
 111 30

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: FORT BENCH MARK 1812 USGS YEAR: 1935
 STATE: Ariz LOCALITY: Tonto National Forest and Winkelman
 Second-order Triangulation source: G-7605 FIELD SKETCH: ARIZ 23

GRID DATA	COORDINATES (F+U)	PLANE AZIMUTH θ FOR ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0202	X 564,277.64 Y 969,634.89	8 41 46 + 0 07 02	AZIMUTH MARK
STATE: ZONE: CODE:			
GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION METERS FEET
LATITUDE: 33°39'55.141 LONGITUDE: 111°42'19.466	NORTH WEST		553.1 1,815
TO STATION	GEODETIC AZIMUTH (From zero)	DISTANCE	METERS
AZIMUTH MARK	THIRD-ORDER 8°48'47.5		

VA Elev 1811 ft (USGS 1963)

FORM 184 (5-51-61)

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HORIZONTAL CONTROL DATA
 by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1011
 ARIZ
 LATITUDE 33°30' TO 34°00'
 LONGITUDE 111°30' TO 112°00'
 DIAGRAM NI 12-8 MESA

DEPARTMENT OF COMMERCE
 U.S. COAST AND GEODETIC SURVEY
 DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION OR MARK	STATE/Territory	Locality	Country	Approximate S&E of
GRAN	Arizona	Cave Creek	USA	9 miles SSE of
Year: 1946				
Surface-station mark				
Underground-station mark				
Reference mark #1	Sta. 2			
Reference mark #2	Sta. 12a			
Witness mark	Sta. 12b			
Height of light above station mark	None			
Height of telescope above station mark	None			

Detailed description: Station is on a rocky hill known locally as Granite Mountain. It is the highest point in the vicinity and by approximate distance is located 9 miles east-southwest of Cave Creek, 9 miles west of the Verde River, and 2 miles east of Brown's Well. To reach the station from the post office in Cave Creek, go easterly on the Herecacho and Barlett Pass road for 0.05 mile to a side road right. Turn right as per the sign. Here take the right fork for 0.15 mile to a gate. Turn right after crossing a cattle guard. BROWN'S WELL is on the left. Turn right after crossing a cattle guard. Pass through a gate, keep the left fork and go 0.2 mile to a gate. (The azimuth mark is 48 yards southwest of the ranch house on the right and corral on the left.) The azimuth mark is 48 yards west of the ranch house and the corral.) Continue straight ahead for 0.35 mile to a dirt, green the ranch house and the corral. (Contains straight ahead for 0.35 mile to a dirt, green the ranch house and the corral.) Turn left and drive cross country north-northeast corner along the south side of the fence line for 1.6 miles to a gate on the left into lane. Turn left into the lane for 0.15 mile to a gate; pass through and go 0.05 mile, past the reservoir, to another gate. Pass through and drive cross country north-northeast corner the hill for about 0.3 mile. A truck with high clearance can be driven to the base of the hill - about a mile from the gate. From the base of the hill it is about a 9 hour pack trail to the top and the station.

The station, which is a standard triangulation station also stamped GRAN 1946, is set in a drill hole in a bedrock pinnacle which forms the highest point on the hill, and which projects about 12 feet above the surrounding ground.

Reference mark #1, which is a standard reference also stamped GRAN NO 1 1946, is set in a drill hole in outcropping bedrock which projects about 4 feet above the ground, and is located west of the station and about 15 feet lower.

Reference mark #2, which is a standard reference also stamped GRAN NO 2 1946, is set in a drill hole in outcropping bedrock which projects about 6 feet above the ground, and is located north-northeast of the station and about 7 feet lower.

The azimuth mark, which is a standard azimuth also stamped GRAN 1946, is set in a drill hole flush with the surface of a bedrock ledge and near a small rock outcrop in good condition.

(Ariz. H.D., 1972)--Station and RMI and RMD were recovered in good condition.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: GRAN

YEAR: 1946

STATE: Ariz

LOCALITY: Tonto National Forest and Winkelman to Winkelman

Second-order Triangulation

source: G-7605
 FIELD SURVEY: ARIZ 23

COORDINATES (1940)	PLANE AZIMUTH	MARK
534,303.89	83°08'14"	AZIMUTH MARK
1,012,514.53	+ 0 03 46	

STATE:	ZONE:	COORDINATE SYSTEM:	MARK:
Ariz	X	Y	AZIMUTH MARK

GEODETIC DATA	POSITION	RECORDS IN METERS	ELEVATION
LATITUDE: 33°46'59.959			1,075.9
LONGITUDE: 111°48'13.560			3,530

TO STATION	GEODETIC AZIMUTH (From center)	LOGARITHM (Meters)	DISTANCE METERS
AZIMUTH MARK	83°12'00"±3		
THIRD-ORDER			

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HORIZONTAL CONTROL DATA

by the
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ARIZONA
 QUAD 33114 STATION 1018
 ARIZ
 LATITUDE 33°30' 30 34°00'
 LONGITUDE 111°30' 30 112°00'
 DIAGRAM NI 12-8 MESA

33° 30'

190

DESCRIPTION OF TRIANGULATION STATION

ADJUSTED HORIZONTAL CONTROL DATA

DEPARTMENT OF COMMERCE
 U.S. COAST AND GEODETIC SURVEY
 NAME OF STATION: MOOREN
 CHIEF OF PARTY: G. A. Zenger
 STATE: Arizona
 COUNTY: Maricopa
 LOCALITY: Fort McDowell, 7.6 miles north of
 distance and direction from the monument
 YEAR: 1946

NAME OF STATION: MOOREN

LOCALITY: Tonto National Forest and
 Winkelman to Winslow to Phoenix
 SOURCE: G-7605
 YEAR: 1946

NAME OF MARK	Notes	Year	Distance	Direction	Asimuth
Surface-station mark	Note, 1a				
Underground-station mark	Note, 7a				
Reference mark	Note, 11a				
Witness mark	Note, 11a				
Witness mark	Note, 11a				
Witness mark	Note, 11a				

GNID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (from angle)	AZIMUTH MARK
STATE: ARIZ	X 575,503.54	140°25'48"	AZIMUTH MARK
ZONE: C	Y 997,113.33	+ 0 08 17	
CODE: 0202			

Height of telescope above station mark: Contact
 Detailed description: Station is located by astrile distances about 7.6 miles north of Fort McDowell
 and 17 miles east-southeast of Cave Creek. It is in the Tonto National Forest, about 3/4
 mile west of the Verde River. In southwest angle of crossroads. Sign at crossroads indi-
 cates Moore Ranch 1/2 mile east and Gauging Station 2.6 miles north.
 To reach from the Valley National Bank in Mesa, go west 0.3 mile and turn right on North
 Mesa Blvd. Follow this paved street and road northerly 3.8 miles to Gravel road right just
 after making a left curve. Turn right and follow gravel road northerly 2.1 miles to cross-
 roads; turn right and follow main road 2.6 miles to canal lock; continue easterly on main
 road 3.7 miles to bridge over canal. Cross bridge and follow main road 8.8 miles to fork in
 road; take right fork 1.9 miles; keep straight ahead at crossroad (road to left leads to
 Fort McDowell Agency) for 0.1 mile; turn left 90 yards to fork; take right fork northerly,
 keeping straight ahead at all forks, following main traveled road 3.5 miles to crossroads and
 left fork down into wash and conditions on main traveled road 4.3 miles to crossroads and
 station.

The station is marked by a standard triangulation station disk, stamped MOOREN 1946,
 set in top of square concrete monument which projects 1 inch above ground. It is 52 feet
 west of centerline of north-south road, 60 feet south of east-west road. 114 feet south
 of lone tree in north eye of intersection and 85 feet southeast of lone bush in south eye.
 Reference mark No. 1 is west-northwest of the station; standard reference mark disk,
 stamped MOOREN NO 1 1946, set in top of concrete monument which projects 2 inches above
 ground. It is the same elevation as station mark.
 Reference mark No. 2 is north-northwest of the station, 28 feet south of the road; a
 standard reference mark disk, stamped MOOREN NO 2 1946, set in top of concrete monument
 which projects 2 inches above ground. It is the same elevation as station mark.
 The azimuth mark is northwest of the station; a standard azimuth mark disk, stamped
 MOOREN 1946, set in top of square concrete monument which projects 2 inches above ground.
 Area in vicinity heavily brushed so that more distant location of mark was not visible.

GEODETIC DATA	POSITION	RECORDS IN SYSTEM	ELEVATION METERS
LATITUDE: 33°44'26".66			480.0
LONGITUDE: 111 40 05.860			1,575

TO STATION	GEODETIC AZIMUTH (from mark)	LOANITHM (Feet)	DISTANCE METERS
AZIMUTH MARK	THIRD-ORDER 140°34'05".2		

FILE COPY

JAN 1967

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1019
 ARIZ 33°30' TO 34°00'
 LONGITUDE 111°30' TO 112°00'
 DIAGRAM NI 12-8 MESA

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: OTERO COUNTY: Maricopa
 YEAR: 1946 LOCALITY: Sunflower, 7 miles southeast of
 DISTANCES AND DIRECTIONS TO REFERENCE MARKS AND PROMINENT OBJECTS WHICH
 CAN BE SEEN FROM THE STATION

MARK	DISTANCE	DIRECTION	AZIMUTH
USGS BM 1920	0.00	00°00'	
USGS BM 1921	32.00	37°	
USGS BM 1922	36.00	20.8	
USGS BM 1923	379.18	11	

Underground-calcium mark, No. 4
 Reference mark, NO 1
 Reference mark, USGS BM
 Witness mark
 Height of tide above station mark 1.4 meters.
 Detailed description:
 The station is located on the highest part of a prominent mountain known as Granite Mountain. In approximate air-line distances it is about 18 miles north of the Stewart Mountain Dam, 7 miles southwest of the Sunflower Store and Post Office, 5 miles east of the Verde River, and about 4 miles west of the Sunflower-Verde Mountain Dam road.
 To reach the station from the Beethoven, a road located at NS 60 and 70 about 7.5 miles east of Mesa, Arizona, go east on US 60 and 70 for 1.0 mile to intersections, take to the left road here as per sign, "RUSH HUNTING" and follow the main graded road for 6.25 miles to a fork. Take the right fork which passes over a cattle guard, and once again following the main traveled graded road go for 6.85 miles to the bridge across the river to the Blue Point Forest Service Picnic Grounds. Cross the river and follow the highway for 2.0 miles to a fork. Take the left fork up the hill as per sign "TO PATERSON" and follow the main traveled graded road for 19.55 miles to a cattle guard across the road at the top of a small pass. Cross this cattle guard and continue on the graded road for 0.4 mile to a dirt track road going off to the left. Turn left off the graded road here and follow this track road for 0.1 miles to a gate, pass through the gate and continue on the track road, past the corral, to the edge of the wash and the end of truck travel. This point is 0.6 miles beyond the gate. From here either peak or take a jeep across the wash and down the wash for 0.25 miles to another wash coming into the main wash on the right. Turn right here and go up this wash for 0.15 miles to an smallest spring. Continue on up the wash over some real rocky places going for 0.15 miles to a fork in the washes. Turn right further up the wash to a corral. Pass by this corral and continue for 0.8 miles to another fork. Take the left main traveled wash and go 0.2 miles to the Ashmuth Mark on the small rocky knoll about 100 feet to the left. Continue on up the wash for 1.9 miles; then turn left up a fairly steep wash and go 0.1 miles to the end of jeep travel. (The station can be seen directly ahead up the wash after passing the first fork in the wash after the spring.) From the end of jeep travel peak east up to the top of a small ridge, then turn right and follow this ridge up the mountains to the highest point and the station.
 The station is a standard triangulation mark stamped OTERO 1946, set in a boulder which projects about 5 feet above the surrounding surface. It is located about 40 feet south-southeast of the highest boulder on the top of the mountain.
 Reference Mark No 1 is a standard reference mark stamped OTERO NO 1 1946, set in a boulder which projects about 7 feet above the surrounding surface and is about 4 inches lower than the station. It is located east of the station.
 Reference Mark No. 2 is a standard USGS Bench Mark stamped 4687 VA, set in a boulder which projects 6 feet above the surrounding surface and is 1.23 meters above the station mark. It is located northwest of the station.
 The Ashmuth Mark is a standard azimuth mark stamped OTERO 1946, set in a boulder which projects 5 feet above the surrounding surface. It is located 3/4 mile east of the station, and is 5 feet north and 5 feet below a rock cairn which is on the highest point of the knoll.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: OTERO YEAR: 1946
 STATE: Ariz LOCALITY: Tonto National Forest and Winkelman to Winslow to Phoenix
 First-order Triangulation SOURCE: G-7605 FIELD SKETCH: ARIZ 23, 24

GRID DATA	COORDINATES (FPM)	PLANE AZIMUTH θ (ON Δα) ANGLE	MARK
STATE: Ariz ZONE: E CODE: 0201	X 76,511.75 Y 1,018,149.91	265°42'31" - 0 46 31	AZIMUTH MARK
STATE: Ariz ZONE: C CODE: 0202	X 608,245.93 Y 1,015,472.20	264 44 07 + 0 11 53	AZIMUTH MARK

GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION METERS
LATITUDE: 33°47'27.456 LONGITUDE: 111 33 37.367			1,433.7 4,704

TO STATION	GEODETIC AZIMUTH (From mark)	DISTANCE METERS
AZIMUTH MARK	THIRD-ORDER 264°55'59.75	

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: USGS BENCH MARK YEAR: 1946
 STATE: Ariz LOCALITY: Tonto National Forest and Winkelman to Winslow to Phoenix
 First-order Traverse SOURCE: G-7605 FIELD SKETCH: ARIZ 23, 24
 (No check on this position)

GRID DATA	COORDINATES (FPM)	PLANE AZIMUTH θ (ON Δα) ANGLE	MARK
STATE: Ariz ZONE: E CODE: 0201	X 76,529 Y 1,018,187	- 0 46 31	
STATE: Ariz ZONE: C CODE: 0202	X 608,222 Y 1,015,509	+ 0 11 53	

TO STATION	GEODETIC AZIMUTH (From mark)	DISTANCE METERS
AZIMUTH MARK	THIRD-ORDER 264°55'59.75	

Computed from station OTERO

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

ARIZONA
 QUAD 33114 STATION 1022
 ARIZ
 LATITUDE 33°30' TO 34°00'
 LONGITUDE 111°30' TO 112°00'
 DIAGRAM NI 12-8 MESA

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION	DESCRIPTION	STATE	COUNTY	LOCALITY	GRAB	DATE	HEIGHT	MARK
SEVEN	Standard triangulation station	ARIZ	YAVAPAI	10.2 miles NNE of	10.2	1946	10.2	10.2
NAME OF PATENT	OWNER	STATE	COUNTY	LOCALITY	GRAB	DATE	HEIGHT	MARK
Patent No. 1022	U.S. Army	ARIZ	YAVAPAI	10.2 miles NNE of	10.2	1946	10.2	10.2
Underground station mark	Underground station mark	ARIZ	YAVAPAI	10.2 miles NNE of	10.2	1946	10.2	10.2
Reference mark #1	Reference mark #1	ARIZ	YAVAPAI	10.2 miles NNE of	10.2	1946	10.2	10.2
Reference mark #2	Reference mark #2	ARIZ	YAVAPAI	10.2 miles NNE of	10.2	1946	10.2	10.2
Witness mark	Witness mark	ARIZ	YAVAPAI	10.2 miles NNE of	10.2	1946	10.2	10.2
Height of light above station mark	Height of light above station mark	ARIZ	YAVAPAI	10.2 miles NNE of	10.2	1946	10.2	10.2
Height of telescope above station mark	Height of telescope above station mark	ARIZ	YAVAPAI	10.2 miles NNE of	10.2	1946	10.2	10.2

Detailed description: Station is located on a jar hill by approximate azimuth distances 10.2 miles north-northeast of Cava Creek, 1 mile east-northeast of the Ashdale Ranger Station and 4 miles east of the road where it passes through Seven Springs Park. To reach from the road where it passes through Seven Springs Park, go easterly on the horse-shoe and Bartlett Post road for 8.0 miles to a fork just after crossing a cattle guard. Take the left fork as per sign "BLOODY BASIN SO" and follow the main travelled road 9.5 miles to a side road which to the Humboldt lookout. Here keep straight ahead for 2.5 miles to a side road left to the Ashdale R. St. then continue straight ahead 0.05 mile to a gate in the fence on the right just after passing a triangular blazed tree on the left. To reach the azimuth containing on the main road 1.0 mile to left turn northward on the road as it goes up a long grade. The mark is about 60 feet west-northwest of this left turn and about 25 feet higher. To reach station go through gate on east side of road and peak easterly up steep slope for about 15 minutes to top jar station.

The station, which is a standard triangulation station, is stamped SEVEN 1946, is set in a drill hole in a boulder which projects about 8 inches above the ground, and is located 37 feet south of the boulder which forms about the highest point on the hill. Reference mark #1, which is a standard reference disk stamped SEVEN NO 1 1946, is set in a drill hole in a boulder which projects about 8 feet above the ground and is located northeast of the station and about 28 feet lower. Reference mark #2, which is a standard reference disk stamped SEVEN NO 2 1946, is set in a drill hole in a large boulder which projects about 5 feet above the ground, and is located north of the station and about 4 feet higher. It is about the highest point on the hill. The azimuth mark, which is a standard azimuth disk stamped SEVEN 1946, is set in a drill hole in a boulder which projects about 1 foot above the ground, and is located 28 feet east-southeast of a 4x4 inch white witness post. It is north-northeast of the station.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION	SEVEN	LOCALITY	Tonto National Forest and Winkelman to Winslow to Phoenix	FIELD METHOD	ARIZ 23	YEAR	1946
STATE	ARIZ	Second-order Triangulation	Source: G-7605				
GRID DATA	COORDINATES (FEET)	PLANE AZIMUTH	GEOMAG. ANGLE				
STATE: ARIZ	X 516,964.28	159°12'07"					
ZONE: G	Y 1,080,324.53	+ 0 01 53					
CODE: 0202							
STATE: ARIZ	X						
ZONE: G	Y						
CODE: 0202							

GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
LATITUDE: 33°58'10.899			1,156.1 METERS
LONGITUDE: 111 51 38.566			3,793 FEET

TO STATION	GEODETIC AZIMUTH (From center)	LOGARITHM (Feet)	DISTANCE
AZIMUTH MARK	THIRD-ORDER 159°14'00.3		

ENS

192

190

ARIZONA

JULY 1966
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COAST AND GEODETIC SURVEY
WASHINGTON D. C.

53030'
111°30'

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1023
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NO. 12-8 MESA

Stewart Dam (Maricopa County, E. B. Latham, 1035).—On a small hill about one-half mile southeast of the east end of the Stewart Dam which is located about 24 miles east of Mesa. Marked by a standard bronze disk as described in note 4. Reference mark No. 1, a standard bronze reference disk, note 12c, is 12,800 meters (41,90 feet) from station in azimuth 293°59'. Reference mark No. 2, a standard bronze reference disk, note 12c, is 20,230 meters (66,37 feet) from station in azimuth 188°07'. The azimuth mark, a small cross made in the floor of the walk on the east side of the dam, is in azimuth 108°30'51".

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: STEWART DAM
STATE: ARIZ
LOCALITY: Yuma to Stewart Dam
Second-order Triangulation source: 0-3022
YEAR: 1935
FIELD SKETCH: ARIZ 8-II

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (Horizontal Angle)	MARK
STATE: ARIZ ZONE: C CODE: 0202	X 617,696.10 Y 933,383.01	108°18'02" + 0 12 49	AZIMUTH MARK (RM NO 3)
STATE: ZONE: CODE:	X Y		

GEODETIC DATA	POSITION		ELEVATION
	LATITUDE:	LONGITUDE:	
	33°33'15.4"935	111°31'49.029	
	NORTH	WEST	METERS FEET

TO STATION	GEODETIC AZIMUTH (From mark)		DISTANCE
	GEODETIC AZIMUTH	LOGARITHM (Meters)	
AZIMUTH MARK (RM NO 3)	THIRD-ORDER 108°30'50.6		

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 NORTH AMERICAN 1927 DATUM

HORIZONTAL CONTROL DATA

QUAD 331114 STATION 1024
 ARIZ 33°30' TO 34°00'
 LONGITUDE 111°30' TO 112°00'
 DIAGRAM NI 12-8 MESA

AZ 190

Stewart Mountain (Maricopa County, E. B. Latham, 1935).—About 20 miles, air line, northeast of Mesa, about 6 miles, air line, east of the Verde River, about 1 1/2 miles, air line, northwest of the Stewart Dam, on the Salt River, on the most western and highest of the three peaks which form the summit of Stewart Mountain. Marked by a standard bronze disk as described in note 2a. Reference mark No. 1, a standard bronze reference disk, note 12a, is 10,472 meters (34,380 feet) from station in azimuth 291°14'. Reference mark No. 2, a standard bronze reference disk, note 12a, is 8,583 meters (28,199 feet) from station in azimuth 138°02'. A rock cairn (U. S. G. S.) is 9.3 meters (31 feet) from station in azimuth 189°. No azimuth mark established. Other stations visible from the ground.

RECOVERY NOTE, TRIANGULATION STATION

NAME OF STATION: STEWART MOUNTAIN STATE: ARIZONA COUNTY: MARICOPA
 ESTABLISHED BY: E. B. LATHAM LOCALITY: FORT McDOWELL, 6 miles southeast of
 RECOVERED BY: C. A. EGERT YEAR: 1946

Detailed statement as to the fitness of the original description: Station recovered and all marks found in good condition. An azimuth mark was established as noted below.

To reach from the northern Mineral section, a resort 7.7 miles east of Mesa on U.S. Highways 60 and 70 go 1.05 miles to a cross road and sign "Santuro Lake Ranch 1 1/2 Here turn left, north, on graded gravel road and go 14.0 miles on the main traveled road to a bridge across the Salt River. Cross bridge and continue for 2.4 miles to a fork. Keep left fork, main traveled road and go 0.9 mile to azimuth mark on the right. Continue for 1.35 miles to a side road right at the top of a divide, and end of truck travel. From here pack westerly to saddle between two "pyramidal peaks" and thence southeasterly across flat and up highest peak to station site. A peak of 1 hour 15 minutes. The station is a standard triangulation disk stamped: STEWART M.T. 1935 and is set in outcropping bedrock that is flush with the ground and is located on the most western and highest of three peaks overlooking Santuro Lake and Stewart Dam to the east and is located 286 feet south of the highest point marked by Old rock cairn. H.M. # 1 is a standard reference disk stamped: STEWART M.T. NO. 1 1935 and is set in outcropping bedrock that projects about 10 inches on the lower side and is about 8 feet lower than station. H.M. #2 is a standard reference disk stamped: STEWART M.T. NO. 2 1935 and is set in outcropping bedrock that projects about 20 inches on the lower side and is about 3 feet lower than station.

The azimuth mark is a standard azimuth disk stamped: STEWART MOUNTAIN 1946 and is set in a large boulder that measures 10 1/2 feet by 7 1/2 feet and sets 3 feet above the ground and is located 70 feet east-southeast of the center of the road and 15 1/2 feet east-southeast of a 4x4 inch white witness post and is by airline about 3/4 mile southeast of station.

CHUCK OBSERVED	DISTANCE	DIRECTION
OTERO # 1	31.494 ft	9.598a
Stewart Dam, NW corner of building	117 07.20.4	111 04.16
azimuth mark	8 mile	SE
R.M. # 2	29.582 ft	8.712 m
	NW	138 09.32.2
		318 44.10-

All stations except OTERO are visible from the ground. Discrepancy in distances to reference marks noted and checked.

RECOVERY NOTE, TRIANGULATION STATION

NAME OF STATION: STEWART MOUNTAIN STATE: ARIZONA COUNTY: MARICOPA
 ESTABLISHED BY: E. B. LATHAM LOCALITY: FORT McDOWELL, 6 miles southeast of
 RECOVERED BY: C. A. EGERT YEAR: 1946

Detailed statement as to the fitness of the original description: Station recovered and all marks found in good condition. Reference marks 1 and 2 found in good condition.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: STEWART MOUNTAIN LOCALITY: Tonto National Forest and Winkelman to Winslow to Phoenix
 STATE: ARIZ SOURCE: G-7605
 YEAR: 1935
 FIRST ORDER Triangulation

GRID DATA	COORDINATES (FPM)	PLANE AZIMUTH @ POINT ANGLE	NAME
STATE: ARIZ ZONE: E CODE: 0201	x 76,430.32 y 942,146.78	318°14'54" - 0 46 10	AZIMUTH MARK
STATE: ARIZ ZONE: C CODE: 0202	x 609,411.93 y 939,492.51	317°16'49" + 0 11 55	AZIMUTH MARK

GEODETIC DATA	POSITION	SECOND IN SECONDS	ELEVATION
LATITUDE: 33°34'15.5" S LONGITUDE: 111°33'26.682		912.2	METERS FEET
TO STATION	GEODETIC AZIMUTH (From center)	LOGARITHM (From center)	DISTANCE METERS

VA Elev 2988 ft (used 1963)
 ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: CAIRN USGS LOCALITY: Tonto National Forest and Winkelman to Winslow to Phoenix
 STATE: ARIZ SOURCE: G-7605
 YEAR: 1935
 Third-order Traverse
 (No check on this position)

GRID DATA	COORDINATES (FPM)	PLANE AZIMUTH @ POINT ANGLE	MARK
STATE: ARIZ ZONE: E CODE: 0201	x 76,434 y 942,177	- 0 46 10	
STATE: ARIZ ZONE: C CODE: 0202	x 609,415 y 939,523	+ 0 11 55	

GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
LATITUDE: 33°34'55.978 LONGITUDE: 111°33'26.645			METERS FEET
TO STATION	GEODETIC AZIMUTH (From center)	LOGARITHM (From center)	DISTANCE METERS

Computed from station STEWART MTN

R

R

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JULY 1966
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COAST AND GEODETIC SURVEY
WASHINGTON, D. C.
REVISED AUG 1974

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1025
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-B MESA

33 30
111 45

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: THUNDER
STATE: ARIZ
LOCALITY: Phoenix to Parker
Second-order Triangulation SOURCE: G-8347
FIELD SKETCH: ARIZ 26

YEAR: 1947

U.S. COAST AND GEODETIC SURVEY
FORM NO. 100, 1953

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: THUNDER COUNTY: Maricopa
YEAR: 1947 LOCALITY: Phoenix
CHIEF OF PARTY: D.H. Knafo
Notes: In
Surface-station mark, Notes: 7a
Underground-station mark, Notes: 7b
Reference mark, No. 1 Notes: 7c
Reference mark, No. 2 Notes: 7d
Azimuth mark, Notes: 7e
Witness mark, Notes: 7f
Height of light above station mark meters.
Height of telescope above station mark, 6 meters.

Detailed description:
The station is located about 19 miles northeast of Phoenix and 14 miles north of Scottsdale in the flat area west of the P. Donnell Mountains. The station mark is a bronze disk set 12 inches west of the centerline of a road, 11 paces southwest of a cattle guard, 4 paces northwest of a fence corner and 3 paces north of a witness post. It projects 2 inches and is stamped, "THUNDER 1947".
Reference mark No. 1 is a bronze disk set 8 inches lower than the station mark, 2 feet north of a fence line, projects 2 inches and is stamped, "THUNDER NO 1 1947".
Reference mark No. 2 is a bronze disk set at the same elevation as the station mark, 11 paces northeast of a cattle guard, projects 2 inches and is stamped, "THUNDER NO 2 1947".
The azimuth mark is a bronze disk set 15 paces east of center line of road, projects 6 inches and is stamped, "THUNDER 1947".
To reach the station from the post office in Scottsdale, go north 13.8 miles to azimuth mark on right; continue 0.3 mile north to buildings on right and a cattle guard and the station on left, A drive station.

RECOVERY NOTE, TRIANGULATION STATION 331114 R

NAME OF STATION: THUNDER BENCH MARK ALSO
ESTABLISHED BY: D.H.K. YEAR: 1947 STATE: Arizona
RECOVERED BY: G. J. L. S. YEAR: 1974 COUNTY: Maricopa
APPROXIMATE DISTANCE AND DIRECTION FROM NEAREST TOWN: 13 1/2 miles north of Scottsdale
HEIGHT OF TELESCOPE ABOVE STATION MARK 5 FEET.
HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET.

OBJECT	DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION	
	BEARING	DISTANCE
hCUMBER 1924		
Rm 1	234° 56'	10.535
Rm 3	158° 25'	158 25 37.4
Rm 2	178° 46'	17.820
		241 07 51

The station mark and reference marks 1 and 2 were recovered in good condition. The azimuth mark was destroyed by road construction. Reference mark 3 was established at this time.
The station mark is a standard disk stamped, THUNDER 1947. It is set in top of a 12 inch concrete monument which is about flush with the ground surface. It is in the southwest angle of the intersection of Scottsdale Road and Rinnacle Peak Road. It is 39 feet west of the center line of Scottsdale Road, 22 feet south of the center of Rinnacle Peak Road, 6 feet southwest of a stop sign and 44 feet east of a cattle guard over Rinnacle Peak Road.
Reference mark 1 is a standard disk stamped, THUNDER NO 1 1947. It is set in top of a 12 inch concrete monument which projects about 1/2 inch. It is 28 feet south of Rinnacle Peak Road, 19 feet east of a railroad tie fence corner and 18 feet southeast of the cattle guard.
Reference mark 2 is a standard disk stamped, THUNDER NO 2 1947. It is set in top of a 12 inch concrete monument which projects about 2 inches. It is 34 feet north of Rinnacle Peak Road, 18 feet northwest of a junction power pole number 104, 8 feet southeast of a railroad tie fence corner and 5 feet southeast of a bell system repair box.
Reference mark 3 is a standard disk stamped, THUNDER 1947 NO 3 1974. It is 1/4 mile west of the station along Rinnacle Peak Road, at entrance to Stephens Shovyard (trapshooting). It is 41 feet west of the entrance road, 37 feet north of the center of Rinnacle Peak Road, 5 feet northwest of a power pole, 1 foot south of the south leg of a sign and 1 foot east of a witness post and sign.
To reach the station from Scottsdale, go north along Scottsdale Road for about 13 1/2 miles to highway on the right, continue north for 1/4 mile to Rinnacle Peak Road and the station on the left.

GRID DATA	COORDINATES (FPM)		MARK
	X	Y	
STATE: ARIZ	407,528.76	356°25'58"	AZIMUTH MARK
ZONE: C	961,678.19	- 0 00 16	
CODE: 0202	92 46 46	AZIMUTH MARK RM 3	
STATE: X			
ZONE: Y			
CODE:			

GEODETIC DATA	POSITION		ELEVATION
	NORTH	WEST	
LATITUDE: 33°41'54.1948			561
LONGITUDE: 111°55'29.251			1,841

TO STATION	GEODETIC AZIMUTH (From south)		DISTANCE
	THIRD-ORDER		
AZIMUTH MARK	356°25'41.7		
AZIMUTH MARK RM 3	92 46 30.5		

FORM 254 (8-11-53)

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HORIZONTAL CONTROL DATA

Coast and Geodetic Survey
 by the
 NORTH AMERICAN 1927 DATUM

QUAD 3311N STATION 1027
 ARIZ
 LATITUDE 33°30' TO 34°00'
 LONGITUDE 111°30' TO 112°00'
 DIAGRAM NI 12-B MESA

AZ 190

USERY (U.S.G.S.) (Maricopa County, Ariz., E.B.L., 1935)--Station is on highest point of Usery Mts., and is about 3 miles SW of Stewart Mt. Dam, and about 15 miles NW of Mesa, Arizona.
 Reference marks are standard bronze disks in boulders as described in note 12c.

Station reached from Mesa by following U.S. 60 E 8.5 miles to Harvey G. Bush Highway leading N; turn L on this road and follow it 6.5 miles and turn L off road on a dirt road following this 0.6 mile to end of truck trail. Some rocks on S side of another hill painted white will be seen from here and passed. From end of truck trail follow wash N and a little E to saddle after reaching saddle head W for highest point of mountain where station will be found.

OBJECT	DISTANCE	DIRECTION
VAL. VISITA	7.962	0°00'00"0
R.M.No.1	23.46	34.0
R.M.No.2	13.11	102 29 02.3

USERY (U.S.G.S.) (Maricopa County, Ariz., E.B.L., 1935):recovered, F.G.J., 1936)--Station is on highest point of Usery Mts. which are about 5 by 2 miles of junction of Salt and Verde Rivers and about 3 miles SE of Granite Reef Dam in Salt River; and about 16 miles NE of Mesa. These mountains run in a N and S direction and station is on second prominent point from N.

Station is best reached from Mesa by going E on U.S. 60, 70, 80, and 89, 8.6 miles to Harvey G. Bush Highway; turn L, N, and go 0.5 mile, turn R and follow main, graded road northerly 5.65 miles. Turn L intersecting dirt track road and follow W and S 0.9 mile. Just before reaching small rocky butte on L, turn R, following first ridge, then wash toward saddle visible to N (station may be seen from here, appearing as a large cairn in a large rock which sits about 10 feet E by S of station mark) 1.4 miles to a wire fence with iron post. This is end of truck trail. From fence pack N up wash to saddle, then W to highest point and station; it is about a 1-hour pack.

Station mark is a U.S.G.S. BM (E.L.E. 2970 initiated by V.A.); it is set in a granite rock about 1-foot square which is loose, and mark is loose in rock. However, there does not appear to have been any movement of either rock or mark.

Reference mark No.1 is a standard U.S.C. & G.S. reference mark set in a granite boulder about 12 feet lower than station on W slope of hill. Reference mark No.2 is a standard U.S.C. & G.S. mark set in a large granite boulder about 6 feet lower than station to N. Distances below are computed and do not check 1935 measurements which are believed to be ground distances. Difference should be considered grounds for believing station mark has moved.

Azimuth mark in 1935 was station GRANITE REEF, angle was not checked in 1938 as 16 positions were taken in 1935.
 Note: this description does not follow 1935 or reconnaissance descriptions.

OBJECT	DISTANCE	DIRECTION
SUBSTATION	feet	0°00'00"0
R.M.No.1	22.65	164 30 42
R.M.No.2	41.52	243 11 46

R

RECOVERY NOTE TRIANGULATION STATION
 RECOVERED BY: R.B. Leeban Year: 1946
 RECOVERED BY: G.A. Egner Year: 1946
 PLATE: Arizona COUNTY: Maricopa
 LOCALITY: Mesa, 16 miles northwest of

The station was reoccupied and all marks were found to be in good condition. A new detailed statement as to the three of the original description/azimuth kept was established. The station is located on the highest point of the Usery Mountains, which are in approximate skyline distance 2 miles south of the junction of the Salt and Verde Rivers, 16 miles northeast of Mesa, and 5 miles southeast of the Granite Reef Dam in the Salt River. The Usery Mountains run in a north-south direction and the station is on the second prominent point from the north; a large rock is about 10 feet east by south of the station. To reach the station from "the benchtop", a resort located about 7 1/2 miles east of Mesa, Arizona on US 60 and 70, go east on US 60 and 70 for 1 1/2 miles to a crossroad and turn left onto the graded road as per sign "BUSH HIGHWAY" and go 1/4 mile to a crossroad and two utility gates. Turn right here through a cattle guard and follow the main traveled road for 5 1/2 miles to a side road right, keep straight ahead on the main road for 0.3 miles to a dirt road road right and a triangle blue on a 9 feet across which is about 30 yards off the main road. Turn left on the creek road which passes just left of the triangle blue on (another dirt road) and follow bear along the main road, and follow it for 0.66 miles to the end of the track road, a triangulated blazed station, the Azimuth mark, and the end of track trail. From here pack across minor drainage to the highest point of the right of two peaks, lying northwest of the end of track trail, and the station.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: USERY USGS LOCALITY: Yuma to Stewart Dam YEAR: 1935

STATE: Ariz SOURCE: G-3022 FIELD SKETCH: ARIZ 8-11

GEODEIC DATA	POSITION	PLANE AZIMUTH FROM ANGLE	MARK	SECONDS IN METERS		ELEVATION METERS
				NORTH	WEST	
STATE: Ariz	LATITUDE: 33°30'01"313	318°21'51"4	AZIMUTH MARK BM3	906.6		2,974
ZONE: C	LONGITUDE: 111°38'23.795	+ 0 09 10	AZIMUTH MARK 1946			
CODE: 0202		318 28 34				

GEODEIC DATA	POSITION	PLANE AZIMUTH FROM ANGLE	MARK	SECONDS IN METERS		ELEVATION METERS
				NORTH	WEST	
STATE: Ariz	LATITUDE: 33°30'01"313	318°31'00"8	AZIMUTH MARK BM3	3,004.6		
ZONE: C	LONGITUDE: 111°38'23.795	318 37 44.1	AZIMUTH MARK 1946			
CODE: 0202						

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: CROSS ON ROCK LOCALITY: Tonto National Forest and Winkelman to Winslow YEAR: 1946

STATE: Ariz SOURCE: G-7605 FIELD SKETCH: ARIZ 23, 24

GEODEIC DATA	POSITION	PLANE AZIMUTH FROM ANGLE	MARK	SECONDS IN METERS		ELEVATION METERS
				NORTH	WEST	
STATE: Ariz	LATITUDE: 33°30'01"313	318°31'00"8	AZIMUTH MARK BM3	3,004.6		
ZONE: C	LONGITUDE: 111°38'23.795	318 37 44.1	AZIMUTH MARK 1946			
CODE: 0202						

GEODEIC DATA	POSITION	PLANE AZIMUTH FROM ANGLE	MARK	SECONDS IN METERS		ELEVATION METERS
				NORTH	WEST	
STATE: Ariz	LATITUDE: 33°30'01"313	318°31'00"8	AZIMUTH MARK BM3	3,004.6		
ZONE: C	LONGITUDE: 111°38'23.795	318 37 44.1	AZIMUTH MARK 1946			
CODE: 0202						

Computed from station USERY USGS

FILE COPY
 JUN 2 1975

AZ 190

JULY 1966
 PUBLISHED AND PRINTED BY:
 U.S. DEPARTMENT OF COMMERCE
 COAST AND GEODETIC SURVEY
 WASHINGTON D. C.
 REVISED AUG 1974

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1027
 ARIZ
 LATITUDE 32°30' TO 34°00'
 LONGITUDE 111°30' TO 112°00'
 DIAGRAM NI 12-8 MESA

USERY USGS (Continued)

The station is a standard USGS bench mark stamped 2894 VA with 2870 scratched on the mark. It is set in a boulder which projects 2 inches above the surrounding surface. Reference mark No 1 is a standard reference mark stamped USERY 1935 NO 1, set in a boulder, note 12c, which projects 3 inches above the surrounding surface and about 15 feet below the station. It is located west of the station.

Reference mark No 2 is a standard reference mark stamped USERY 1935 NO 2, set in a boulder, note 12c, which projects 11 inches above the surrounding surface and is about 10 feet below the station. It is located north of the station.

The MESA on the rock is a regular cross with the long leg an arrow pointing toward the station. It is scratched on a boulder which projects 2 feet above the surrounding surface and is about 6 inches below the station. It is located north of the station.

The Azimuth Mark is a standard azimuth mark stamped USERY 1946 set in a boulder, note 12c, which projects 2 1/2 feet above the surrounding surface. It is located about 4 miles southeast of the station, 70 feet northwest of the blazed cut at the end of track travel, 38 feet north of a wash, and 1 foot south of a small rock cairn.

OBJECT	DISTANCE	DIRECTION
YRDE 1935	00 00-9	V
Pole Target approx. 254 yards	32 39 24	N
Cross on rock 15.488ft. 4.715m	61 31 57	N
RM NO 2 41.653ft 12.689m	64 30 21	N
Azimuth Mark 1/2 mile	198 02 28.9	SE
Hundred, Falcon Field	298 30 27.6	W
RM NO 1 22-687ft 6.902m	335 50 04	W

RECOVERY NOTE, TRIANGULATION STATION 331114 R

NAME OF STATION: USERY (USGS)
 ESTABLISHED BY: S.B.L.
 RECOVERED BY: Charles Kovak
 YEAR: 1935 STATE: ARIZONA BENCH MARK ALSO
 YEAR: 1973 COUNTY: MARICOPA
 AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: 9 miles East-Northeast of Mesa
 HEIGHT OF TELESCOPE ABOVE STATION MARK 5 FEET.
 HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET.

OBJECT	DISTANCE		DIRECTION
	BEARING	METERS	
Vertical 1935 1973		0 00 00.0	
Cross on rock 1946	N	15.47	51 32 16
RM 2	N	41.49	54 30 31
RM 3 Azimuth mark (1/2 mile)	SW	195 55	46.5
RM 1	NNW	22.65	335 50 20

The station mark and boulder in which it was set were removed by vandalism. Reference marks 1 and 2 and the cross on rock were recovered in good condition. A RM 3 azimuth mark believed set in 1935 was found and cut in at this time, however a long search was made for the 1946 azimuth mark without finding the mark. The station was re-monumented on the original position at this time and the angles and distances checked.

The station mark is a standard disk stamped, USERY USGS 1935 1973. It is set in a drill hole in a boulder which is buried 10 inches below the ground surface.

Reference mark 1 is a standard disk stamped, USERY NO 1 1935. It is set in a drill hole in a large boulder which is about 10 feet lower than the station.

Reference mark 2 is a standard disk stamped, USERY NO 2 1935. It is set in a drill hole in a large boulder which projects 1 foot and is about 10 feet lower than the station.

Cross on rock is about a 4 inch cross chipped into a large boulder which is about the same elevation as the station.

Reference mark 3 is a standard reference mark disk stamped, USERY AZIMUTH NO 3 1935. It is set in top of a long low rock outcrop which is at the northwest end of a 10 foot high broken outcrop.

To reach the station from Country Club Street and U.S. Highways 80, 89 and 60 in Mesa, go east along Highways 80, 89 and 60 for 9 1/2 miles to Bush Highway. Turn left along Bush Highway for 0.5 mile to Usery Pass Road on the right (this is just north of University Dr.). Turn right and go northeast and north for 6 miles to a paved road left at sign, Micro-Wave station. Turn left for 0.6 mile to the azimuth mark on the left at a road cut. This point is just past the word PHOENIX written on the mountain, continue ahead 0.5 mile to top of pass near the Micro-Wave Station. Pack in a northwest direction to the top of the second peak and the station. (a 40 minute pack with a load).

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 JUN 2 1975

FT. McDOWELL (190)

Arizona

R. Philips, 1905

Third Order

Adjusted Elevations Based
on Sea Level Datum of 1929

FILE COPY

Book: 6624

P. 9

Latitude 33°30'

Longitude 111°30'

(1) FROM CAMELBACK QUADRANGLE (191) EAST TO ASHERS RANCH THENCE SOUTH
TO A POINT 9.5 MILES SOUTH OF FORT McDOWELL

Ashers Ranch, 5.2 mi. W. of; 5.0 mi. W. of Verde River; at rd. jet.; 10 ft. W. of rd. on N. side of wash; standard iron post with bronze cap stamped "2175 PHHX"	2174.267
Ashers Ranch, 3 mi. W. of; 2.2 mi. W. of Verde River Road; 10 ft. N. of rd.; standard iron post with bronze cap stamped "1859 PHHX"	1858.346
Ashers Ranch, 0.5 mi. N.W. of; at crossroads; standard iron post with bronze cap stamped "1572 PHHX"	1571.339
Ashers Ranch, 4.0 mi. S. of; in rd. jet. at foot of hill; standard iron post with bronze cap stamped "1488 PHHX"	1487.664
McDowell, 500 ft. S.E. of Post Office at N.E. corner of fence; 10 ft. W. of rd.; standard iron post with bronze cap stamped "1444 PHHX"	1443.490
McDowell, 4.0 mi. S. and E. of; 0.5 mi. E. of ford on rd. from Phoenix to Reno Pass; at mouth of dry wash; at N. end of small rocky ridge; in boulder; aluminum tablet stamped "1424 PHHX"	1423.359
McDowell, 6.2 mi. S. of; 400 ft. S. of schoolhouse; 200 ft. S. of rd.; at foot of hill; in boulder; aluminum tablet stamped "1402 PHHX"	1401.911
McDowell, 9.5 mi. S. of; 0.5 mi. above jet. of Salt River and Verde River; near large bluff; on S. side of Salt River; 500 ft. W. of old ford on rd. to Cuba and Fort McDowell; on point leading out into river; bronze tablet stamped "1340 PHHX"	1340.236

FT. McDOWELL (190)

Arizona

R. Phillips, 1905

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

FILE COPY

Book: 6624

p. 14

Latitude 33°30'

Longitude 111°30'

(*) FROM FORT McDOWELL NORTHEAST ALONG RENO PASS ROAD INTO CAVE CREEK
NO. 1 QUADRANGLE (213)

McDowell, 4.8 mi. E. of; on hillside; 500 ft. N.E. of Adams ranch
house; 150 ft. W. of rd.; 100 ft. N.E. of corral; in boulder;
aluminum tablet stamped "1540 PHIX"

1539.613

McDowell, 7.8 mi. E. of along dim track road up Sycamore Creek;
0.7 mi. W. of abandoned Rio Verde Ranger Station; about 1500 ft.
N.W. of center of Sycamore Creek, 200 ft. S.E. of track rd.;
standard iron post with bronze cap stamped "1643 PHIX"

1642.627

McDowell, 11.8 mi. E. of; on W. side of and at foot of Sugar Loaf
Mountain; at point where wagon rd. crosses creek; on W. bank of
creek; 250 ft. E. of old corral; 50 ft. E. of rd.; in large
boulder; aluminum tablet stamped "1786 PHIX"

1785.375

McDowell, 14.0 mi. E. of; 1.0 mi. E. of point where rd. leaves
creek; 50 ft. W. of rd.; on W. bank of wash; in boulder; aluminum
tablet stamped "2214 PHIX"

2213.085

McDowell, 16.8 mi. N.E. of; 1.0 mi. E. of divide; 200 ft. S. of
point where rd. enters large wash; 40 ft. N.E. of large willow
tree; 15 ft. E. of rd.; in boulder; aluminum tablet stamped
"2188 PHIX"

2187.264

6-16-64 sms *SK*

Third Order

Adjusted Elevations Based
on Sea Level Datum of 1929

FILE COPY

Book: PV 484

Latitude 33°30'

Longitude 111°30'

- (3) FROM A POINT NEAR GRANITE REEF DAM NORTHEAST ALONG HIGHWAY NO. 87, JOGS INTO WEST EDGE OF ROOSEVELT NO. 3 QUADRANGLE (189) THENCE NORTH INTO THE SOUTHEAST CORNER OF CAVE CREEK NO. 1 QUADRANGLE (123)

USCGS BM "1314.14-5" (USRS) (USCGS Arizona Line No. 70) 1313.797

Granite Reef Dam, 1 mi. N.E. of; 31 ft. N.W. of rd.; on concrete vent box No. 16 for City of Phoenix water main; chiseled square 1340.610

Granite Reef Dam, 1.5 mi. N.E. of; 62 ft. N.W. of rd.; on concrete vent box for City of Phoenix water main; chiseled square 1357.289

Granite Reef Dam, 1.7 mi. N.E. of; at a "Y" jet.; 36 ft. N.W. of a rd.; 26 ft. S.E. of main rd.; in concrete box for manhole; a standard tablet stamped "22 HRP 1963 1338" 1338.318 ✓

Reference mark, 179 ft. N. of tablet; 10 in. iron pipe projecting 3 ft. above ground; highest point of pipe elbow 1338.727

Granite Reef Dam, 2.4 mi. N.E. of; 15 ft. N.W. of rd.; on concrete box for manhole; chiseled square 1341.634

Granite Reef Dam, 2.8 mi. N.E. of; near Verde water treatment plant; 174 ft. N.W. of rd.; 25 ft. S.E. of gate entrance; 4 ft. N. of a fence corner; in a concrete post projecting 0.5 ft. above ground; standard tablet stamped "23 HRP 1963 1383" 1383.257 ✓

Granite Reef Dam, 3.7 mi. N.E. of; 160 ft. N.W. of verde Pumping Station; on N.E. corner of concrete slab and 12 ft. S.W. and 3 ft. above rd.; chiseled square 1354.696

Granite Reef Dam, 4.4 mi. N.E. of; W. end of concrete cattle guard; chiseled square 1381.293

Granite Reef Dam, 5.2 mi. N.E. of; at intersection with Highway 87; 97 ft. S. of Highway 87; on E. concrete headwall of cattle guard; chiseled square 1379.339

Granite Reef Dam, 5.2 mi. N.E. of; thence 0.45 mi. E.; at E. end of bridge; in S. curbing; standard tablet stamped "24 HRP 1963 1369" 1368.602

Granite Reef Dam, 5.2 mi. N.E. of; thence 1.1 mi. E. on concrete at S. side of bridge and 400 ft. W. of mile post "192"; chiseled square 1397.989

Third Order

Adjusted Elevations Based
on Sea Level Datum of 1929

FILE COPY

Book: PV 484

- (3) Granite Reef Dam, 5.2 mi. N.E. of; thence 1.75 mi. E.; on top of concrete; at S. side of small bridge; chiseled square 1436.341
- Granite Reef Dam, 5.2 mi. N.E. of; thence 2.3 mi. E.; in N. headwall of cattle guard; Arizona Highway Department tablet stamped "1464.73 1029+90.31 1955" 1464.034
- Granite Reef Dam, 5.2 mi. N.E. of; thence 2.4 mi. E.; 80 ft. N. and 137 ft. E. of Tonto National Forest sign; 40 ft. N. of rd. on small knoll; in concrete post projecting 0.6 ft. above ground; standard tablet stamped "25 HRP 1963 1474" 1474.138
- Granite Reef Dam, 5.2 mi. N.E. of; thence 3.3 mi. E. from; on concrete headwall in S.W. corner of small bridge; chiseled square 1512.626
- Granite Reef Dam, 5.2 mi. N.E. of; thence 4.3 mi. E.; in N. concrete headwall of small bridge; Arizona Highway Department tablet stamped "1624.98 1139+00 1955" 1624.069
- Granite Reef Dam, 5.2 mi. N.E. of; thence 5.4 mi. E.; in N. headwall of culvert; Arizona Highway Department tablet stamped "1751.49 1191+00 1955" 1750.572
- Granite Reef Dam, 5.2 mi. N.E. of; thence 5.5 mi. E.; 27 ft. S.E. of rd.; 2 ft. N. of cairn; 7 ft. above centerline of rd.; in rock flush with ground; standard tablet stamped "26 HRP 1963 1770" 1770.123
- Granite Reef Dam, 5.2 mi. N.E. of; thence 6.1 mi. N.E.; in N. headwall of culvert and in line with fence N; Arizona Highway Department tablet stamped "1837.66 1228+16 1955" 1836.759
- Granite Reef Dam, 5.2 mi. N.E. of; thence 6.3 mi. N.E. along Highway 87; in N. concrete headwall; Arizona Highway Department tablet stamped "1860.09 1237+0938 1955" 1859.154
- Granite Reef Dam, 5.2 mi. N.E. of; thence 7 mi. N.E. along Highway 87; in concrete headwall; Arizona Highway Department tablet stamped "1917.07 1273+20 1955" 1916.095
- Granite Reef Dam, 5.2 mi. N.E. of; thence 7.3 mi. N.E. along Highway 87; in N. concrete headwall of large culvert; Arizona Highway Department tablet stamped "1938.68 1289+10.88 1955" 1937.727
- Granite Reef Dam, 5.2 mi. N.E. of; thence 8.4 mi. N.E. along Highway 87; 19.4 mi. S.W. of Sunflower; at a T-rd. S.E.; 56 ft. W. of "T" jet.; 52 ft. N.W. of Highway 87; in a concrete post projecting 0.3 ft.; standard tablet stamped "27 HRP 1963 2083" 2082.922

Third Order

Adjusted Elevations Based On
Sea Level Datum of 1929

FILE COPY

Book: PV 484

(1) 56 ft. E. of BM "27 HRP" in "Y" junction, copper nail and washer	2080.931
Sunflower, 18.4 mi. S.W. of; 0.1 mi. N.E. of mile post "200"; 39 ft. S.E. of Highway 87; 12 ft. W. of palo verde tree; on rock projecting 0.4 ft.; chiseled square	2167.206
Sunflower, 17.2 mi. S.W. of; 210 ft. N. of a T-rd. S.E.; 34 ft. N.W. of rd.) in concrete post projecting 0.5 ft. above ground; standard tablet stamped "28 HRP 1963 2304"	2304.218
145 ft. S. of mile post "202" in "Y" junction; copper nail and washer	2406.459
Sunflower, 16.5 mi. S.W. of; at "202" mile post in N. concrete headwall of a culvert; Arizona Highway Department tablet stamped "2410.35 1498+90 1955"	2409.307
Sunflower, 16.25 mi. S.W. of; in N. concrete headwall of a culvert; Arizona Highway Department tablet stamped "2441.60 1511+23"	2440.560
At Y-rd. E.; a copper nail and washer	2480.603
Sunflower, 15.1 mi. S.W. of; 46 ft. WNW. of rd.; on top of small knoll; in concrete post projecting 0.7 ft. above ground; standard tablet stamped "29 HRP 1963 2464"	2463.850
Sunflower, 13.6 mi. S.W. of; 60 ft. E. of highway; on large rounded rock; chiseled square	2468.680
Sunflower, 13 mi. S.W. of; 0.1 mi. S. of cut near the top of summit; 74 ft. E. of rd.; in large boulder; standard tablet stamped "30 HRP 1963 2637"	2636.471
Sunflower, 12.2 mi. S.W. of; in deep cut; 20 ft. E. and 3 ft. higher than rd.; on rock wall; chiseled square	2438.827
Sunflower, 11.9 mi. S.W. of; on S.W. headwall of culvert; Arizona Highway Department tablet stamped "2339.75 1733+25 1957"	2338.864
Sunflower, 11.85 mi. S.W. of; in S.W. headwall of culvert; Arizona Highway Department tablet stamped "2326.56 1735+25 1957"	2325.656
Sunflower, 11.25 mi. S.W. of; 107 ft. S. of T-rd. E.; in concrete at E. end of small bridge; Arizona Highway Department tablet stamped "2151.30 1766+25 1957"	2150.396

FT. McDOWELL (190)

Arizona

H.R. Poulsen, 1963

Third Order

Adjusted Elevations Based On
Sea Level Datum of 1929

FILE COPY

Book: FV 484

(3) Sunflower, 10.9 mi. S.W. of; 40 ft. E. of rd. and 6 ft. above rd.;
in concrete post projecting 0.1 ft. above ground; standard tablet
stamped "31 HRP 1963 2097"

2097.046

Sunflower, 10.7 mi. S.W. of; 0.4 mi. N. of mile post "207"; in
concrete at S.W. corner of bridge over large drain; Arizona
Highway Department tablet stamped "2061.96 1793+40"

2061.244

Sunflower, 10.4 mi. S.W. of; 0.14 mi. S.W. of mile post "208"; in
concrete at E. end of cattle guard; Arizona Highway Department
tablet stamped "2082.05 1807+95 1958"

2081.273

Page 4 of 4

6-16-64 sus