

## Index

<u>STATION</u>	<u>PROJECT</u>
BM M - 338	Ajo
GLO Station No. 4 (C&GS)	Ajo
GLO Station No. 5 (C&GS)	Ajo
GLO Station No. 6 (C&GS)	Ajo
Gunsight (C&GS)	Ajo
Kerwo (C&GS)	Ajo
Nine Mile Peak (C&GS)	Ajo
Sec Cor T13S, R3W	Ajo
Sec Cor 21, 22 T14S, R3W	Ajo
Sec Cor T14S R3W	Ajo
Sierra Del Ajo (C&GS)	Ajo
Target No 1 (C&GS)	Ajo
Wind Mill No. 1	Ajo
2 - 78 A	Ajo
3 - 184 A	Ajo
7 - 75 A	Ajo

Ajo Project Master in Ariz. 23 - Book: PH 858

Arizona (57)

Pima County

TARGET NO. 1 (C&GS)

1927 N.A.D.

USC&GS, 1936

J.E. Kallbrier, 1962

Book: PH 858

Described in U. S. Coast and Geodetic Survey Special Publication No. 224,  
page 141. *32 1123-1020*

Note by JEK, 1962: Station found as described, in good condition.

No signal on station.

Image point No. 1: Centerline hwy. at centerline T-rd. S., 57 ft. from  
mark and 2 ft. higher in azimuth  $207^{\circ}24'34''$ .

Image point No. 2: Center bush, 51 ft. from mark and level in azimuth  
 $102^{\circ}29'$ . X=265,349. Y=445,637.

Image point No. 3: Center bush, 30 ft. from mark and level in azimuth  
 $343^{\circ}20'$

USC&GS BM M309, 220 ft. from mark in azimuth  $6^{\circ}55'38''$ .

Photo No. 3-79

ARIZONA ZONE CENTRAL

\*X=265,398.70

Y=445,625.94

Elevation: 1987 ft.

(P.T.L. from BM M309)

\*Latitude:  $32^{\circ}13'22.358''$

Longitude:  $112^{\circ}40'31.066''$

*9 FIVE  
NW 3/66*

\* = Values by C&GS

**NAD 83 VALUES AVAILABLE**

**FILE COPY**

4/27/62 dc *del*

Arizona (57)

Pima County

SIERRA DEL AJO (C&GS)

1927 N.A.D.

USC&GS

N. Watkinson, 1962

Book: PH 858

*32 112 3 - 1019*

Station found as described in U. S. Coast and Geodetic Survey Special Publication No. 224, page 87, except that the station is on the highest point of the S. end of the mountain and approximately the same elevation as the highest point on the mountain.

Station and reference marks found in good condition.

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

Signal data:	TWF	11.0 ft.
	BWF	8.0
	TRXT	7.8
	BRXT	5.2

Station paneled.

Photo No. GS VAHP 5-120

ARIZONA ZONE CENTRAL

\*X=260,398.48

Y=374,293.23

V.A. Elevation: ~~4805~~ ft. *4808 ft. 8/1/60*

\*Latitude: 32°01'36.116"

Longitude: 112°41'23.312"

\* = Values by C&GS

**NAD 83 VALUES AVAILABLE**

**FILE COPY**

4/27/62 dc *del*

Arizona (57)

Pima County

GLO STATION #4 (C&GS)

1927 N.A.D.

USC&GS, 1936

R.N. Gardner, 1962

Book: PH 858

Station found as described in U. S. Coast and Geodetic Survey Special Publication No. 224, page 171. *32 1123-1009*

Station may be reached from main rd. junction at Kerwo by going N. then E. on graded rd. for 3.3 mi., turn right off rd. and go in a southerly direction for 0.2 mi. to station.

Station was occupied from aluminum tower.

Tower was used as the signal.

Top cloth on tower is 37 ft.

Top cloth for Llano sight was 35.9 ft.

Image point No. 1: Center of bush, 42 ft. in azimuth  $135^{\circ}59'34''$ .

Image point No. 3: Center of bush, 75 ft. in azimuth  $20^{\circ}46'10''$ .  
X=312,374. Y=389,568.

Photo No. None

ARIZONA ZONE CENTRAL

\*X=312,400.79

Y=389,638.49

Elevation: 2070 ft.

(P.T.L. from SBM 2076.9)

\*Latitude:  $32^{\circ}04'11.259''$

Longitude:  $112^{\circ}31'20.264''$

\* = Values by C&GS

**NAD 83 VALUES AVAILABLE**

*OK  
S-Y  
2/88*

4/27/62 dc *del*

**FILE COPY**

Arizona (57)

Pima County

GLO STATION #5 (C&GS)

1927 N.A.D.

USC&GS, 1936

J.E. Kallbrier, 1962

Book: PH 858

Described in U. S. Coast and Geodetic Survey Special Publication No. 224,  
page 172. *32 112 3-1010*

Note by JEK, 1962: Station found as described, all marks in good  
condition.

Reference mark No. 1: Not found.

No signal at station.

Image point No. 1: Center bush, 23.6 ft. from station mark and level in  
azimuth  $185^{\circ}57'55''$ .

Image point No. 2: Center bush, 28.2 ft. from station mark and level in  
azimuth  $246^{\circ}49'00''$ . X=312,708. Y=437,178.

Image point No. 3: Center bush, 10.2 ft. from station mark and level in  
azimuth  $347^{\circ}47'09''$ .

Photo No. 3-22

ARIZONA ZONE CENTRAL

\*X=312,681.95

Y=437,167.34

Elevation: 2138 ft.

(P.T.L. from BM B-37)

\*Latitude:  $32^{\circ}12'01.623''$

Longitude:  $112^{\circ}31'20.102''$

\* = Values by C&GS

*OK  
SOD*

*2/66*

**NAD 83 VALUES AVAILABLE**

**FILE COPY**

4/27/62 dc *dc*

Arizona (57)

Pima County

GLO STATION #6 (C&GS)

1927 N.A.D.

USC&GS, 1936

J.E. Kallbrier, 1962

Book: PH 858

Described in U. S. Coast and Geodetic Survey Special Publication 224,  
page 141. *32 112 3 - 10 11*

Note by J.E.K., 1962: Station found as described.

No reference marks were found. Probably destroyed by road work.

No signal at station.

Image point No. 1: Center bush, 99.8 ft. from station and level in  
azimuth  $150^{\circ}59'44''$ . X=249,514. Y=453,547.

Image point No. 2: Center bush, 58.8 ft. from station and level in  
azimuth  $174^{\circ}39'27''$ .

Image point No. 3: Center bush, 57.3 ft. from station and 2 ft. lower  
in azimuth  $359^{\circ}42'00''$ .

Photo No. Identified on photo 3-109 and 3-110

ARIZONA ZONE CENTRAL

\*X=249,561.76

Y=453,459.11

Elevation: 1837.447 ft. (Second  
order leveling by C&GS)

\*Latitude:  $32^{\circ}14'38.727''$

Longitude:  $112^{\circ}43'36.101''$

\* = Values by C&GS

*OK*  
*S.S.D./*  
*2/68*

**NAD 83 VALUES AVAILABLE**

4/26/62 dc *lal*

**FILE COPY**

Arizona (57)

Pima County

GUNSIGHT (C&GS)

1927 N.A.D.

USC&GS, 1936  
L.B. Mansfield, 1962

Book: PH 858

Described in U. S. Coast and Geodetic Survey Special Publication No. 224,  
page 139. *32 112 3-1012*

Note by L.B.M., 1962: All marks found in good condition.

Station reached by helicopter.

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

Signal data:	TWF	11.0 ft.
	BWF	8.0
	TRXT	7.1
	BRXT	4.6

Photo No. Paneled

ARIZONA ZONE CENTRAL

V.A. Elevation: 2622 ft.

\*X=262,479.17

Y=437,480.63

\*Latitude:  $32^{\circ}12'01.550''$

Longitude:  $112^{\circ}41'04.373''$

\* = Values by C&GS

**NAD 83 VALUES AVAILABLE**

**FILE COPY**

4/26/62 dc *led*

Arizona (57)

Pima County

KERWO (C&GS)

1927 N.A.D.

USC&GS, 1936

D.C. McIntosh, 1961

Book: PH 858

Described in U. S. Coast and Geodetic Survey Special Publication No. 224,  
page 141. *32 1123 - 1013*

Station found as described, all marks in good condition.

Station reached by helicopter.

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

Image point No. 1: Center of bush, 33 ft. from station mark in azimuth  
 $207^{\circ}49'18''$ .

Image point No. 2: Center of bush, 46 ft. from station mark in azimuth  
 $280^{\circ}01'17''$ . X=292,383. Y=393,640.

Image point No. 3: Center of bush, 42 ft. from station mark in azimuth  
 $342^{\circ}01'50''$ .

Photo No. 2-13

ARIZONA ZONE CENTRAL

V.A. Elevation: 2614 ft.

\*X=292,337.73

Y=393,648.48

\*Latitude:  $32^{\circ}04'49.768''$

Longitude:  $112^{\circ}35'13.712''$

\* = Values by C&GS

**NAD 83 VALUES AVAILABLE**

4/27/62 dc *lcl*

**FILE COPY**



Arizona (57)

Pima County

NINE MILE PEAK (C&GS)

1927 N.A.D.

USC&GS, 1920

L.B. Mansfield, 1962

Book: PH 858

Described in U. S. Coast and Geodetic Survey Special Publication No. 224, page 104. *32 112 3 - 1014*

Note by L.B.M., 1962: Station found as described with the following exception: distance S. of the Ajo-Sells Hwy. should be approximately 0.2 mi. instead of 2 mi. All marks in good condition.

Station reached by helicopter.

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

Signal data:	TWF	11.0 ft.
	BWF	8.0
	TRXT	7.2
	BRXT	4.7

*OK*  
*500*  
*2/88*

Identified as a vertical point only.

ARIZONA ZONE CENTRAL

\*X=310,364.04

Y=437,548.50

Elevation: 2560 ft.

(P.T.L. from BM B-37)

\*Latitude: 32°12'05.265"

Longitude: 112°31'47.103"

\* = Values by C&GS

**NAD 83 VALUES AVAILABLE**

**FILE COPY**

4/27/62 dc *led*

Arizona (57)

Pima County

BM M-338

1927 N.A.D. (Unadj.)

D.C. McIntosh, 1962

Book: PH 858

Station is located about 1.9 mi. S. of rd. junction and Indian Village of Kerwo, about 100 ft. W. of N.-S. rd. and under pole line.

Station mark: Standard USC&GS BM tablet set in top of concrete post stamped "M338 1961".

Reference marks: None

Signal: White flag over a red wooden cross-target centered over station mark.

Signal data:	TWF	15.0 ft.
	TRXT	12.0
	BRXT	9.4

Image point No. 1: Center of bush, 21 ft. in azimuth 182°25'18".

Image point No. 2: Center of bush, 45 ft. in azimuth 289°32'19".  
X=293,853. Y=373,198.

Image point No. 3: Center of bush, 21 ft. in azimuth 36°31'46".

BM is identified by PT sketch on photo 5-125 and by T-2 directions with different image points on photo 5-125 duplicate.

ARIZONA ZONE CENTRAL  
X=293,811.  
Y=373,214.

Elevation: 2190.363 ft. (Field values  
(Second order leveling by C&GS)

Latitude: 32°01'27.63"

Longitude: 112°34'55.13"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Can	114°19'31"	194°18'46"	29,436.
Sweetwater (C&GS)	336 30 08	156 31 07	23,963.

**NAD 83 VALUES AVAILABLE**

**FILE COPY**

4/27/62 dc *del*

Arizona (57)

Pima County

*4th Order ✓*  
SEC COR T13S, R3W

1927 N.A.D. (Unadj.)

J.R. Heiser, 1962

Book: PH 858

Station is located about 20 mi. SE. of Ajo, Pima County; about 10.4 mi. E. of Rocky Point Junction; 3 mi. N. of State Highway 86, and 0.4 mi. SE. of a prominent gravel rd. intersection.

To reach from post office at Ajo, Pima County, drive SE. along State Highway 85 for 11 mi. to Rocky Point Junction; take left fork (Hwy. 86) for 11 mi. to a gravel rd. on left; turn left and drive N. for 3 mi. to a track rd. on the right; turn right and drive E. for 0.4 mi.; then turn right and drive S. for 0.2 mi. to station.

Station mark: GLO brass cap, SE. Cor. Sec. 34, T. 13 S., R. 5 W., 1918.

Photo No. Not identified.

ARIZONA ZONE CENTRAL  
X=302,217.  
Y=453,074.

V.A. Elevation: 2094 ft. (T)

*Ground is 0.8' lower*

Latitude:  $32^{\circ}14'38.44''$

Longitude:  $112^{\circ}33'23.00''$

**NAD 83 VALUES AVAILABLE**

**FILE COPY**

4/27/62 dc *del*

*3rd order*

Arizona (57)

Pima County

SEC COR T14S, R3W  
21 22 T14S R3W  
N. Watkinson, 1962

1927 N.A.D. (Unadj.)

Book: PH 858

Station is about 21 mi. SE. of Ajo, Arizona, and approximately 1 mi. S. of a T-rd. N. on Highway 86 leading to Hickawan. Section corner is on an E.-W. fence line.

Station reached by helicopter.

Station mark: G.L.O. pipe and cap stamped "21, 22 T14S-R3W" and about 2 ft. above ground.

No signal at station.

Station not identified.

ARIZONA ZONE CENTRAL  
X=296,811.  
Y=431,975.

V.A. Elevation: 2234 ft.

*Ground is 2.0' lower*

Latitude: 32°11'09.32"

Longitude: 112°34'24.44"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Redondo (C&GS)	201°21'37"	21°23'16"	43,586.
Nine Mile Peak (C&GS)	247 17 43	67 19 07	14,656.

**NAD 83 VALUES AVAILABLE**

*OK  
SDD  
2/84*

**FILE COPY**

*4/27/62 dc sel*

*4th order*

Arizona (57)

Pima County

SEC COR T14S, R3W

1927 N.A.D. (Unadj.)

J.R. Heiser, 1962

Book: PH 858

Station is located about 19.4 mi. SE. of Ajo, Pima County; about 9.5 mi. SE. of Rocky Point Junction, and 0.5 mi. N. of State Highway 86.

To reach from post office at Ajo, Pima County, drive SE. along State Highway 85 for 11 mi. to Rocky Point Junction; take left fork (Hwy. 86) for 10 mi. to a GLO 1/4 corner on N. side of hwy; turn left and drive N. cross country for 0.5 mi. to station.

Station mark: GLO brass cap, SE. Cor. Sec. 8, T. 14 S., R. 3 W., 1918.

Photo No. Not identified.

ARIZONA ZONE CENTRAL  
X=291,599.  
Y=442,573.

V.A. Elevation: 2134 ft.

*Ground is 1.0' lower*

GRID VALUES

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Gunsight (C&GS)	80°04'53"	260°04'53"	29,562.
3-184 A	145 42 53	325 42 53	13,611.

Station = SC T14S, R3W  
Lat = 32 12 53.8751  
X = 291,599.0000

State Plane Zone = 202  
Lon = 112 35 25.8566  
Y = 442,573.0000

*Lon 112° 35' 25.8566'*

**NAD 83 VALUES AVAILABLE**

**FILE COPY**

4/27/62 dc *ld*

Arizona (57)

Pima County

WIND MILL #1

1927 N.A.D. (Unadj.)

N. Watkinson, 1962 (n)

Book: PH 858

Not described and not occupied.

ARIZONA ZONE CENTRAL  
X=316,995.  
Y=386,748.

V.A. Elevation: 2092 ft.  
(Platform at top)

GRID VALUES

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Llano (C&GS)	227°24'53"	47°24'53"	28,726.
Quite	335 11 04	155 11 04	39,436.

Station = WIND MILL #1

State Plane Zone = 202

Lat = 32 03 42.9062

Lon = 112 30 26.6890

X = 316,995.0000

Y = 386,748.0000

4/27/62 dc *ld*

FILE COPY

Arizona (57)

Pima County

2-78 A

1927 N.A.D. (Unadj.)

J.E. Kallbrier, 1962

Book: PH 858

Located about 9 mi. SE. of Rocky Point Junction, and about 17 mi. SW. of Tracy's Trading Post.

To reach from railroad station at Ajo, drive SE. along Highway 86 for 15.9 mi., turn right on rd. leading to Kerwo and drive 3.6 mi. to crest of a hill on rd. Station is about center of a small black hill E. of rd. approximately 1500 ft.

Station reached by helicopter.

Station mark: 1/2 in. steel reinforcing rod projecting about 6 in. above ground.

Signal: White flag over red cross-target on wood pole centered over mark.

Signal data:	TWF	11.2 ft.
	TRXT	8.0
	BRXT	5.4

Image point No. 1: Center of bush, 50 ft. from station mark and 4 ft. lower in grid azimuth 193°34'14".

Image point No. 2: Center of bush, 60 ft. from station mark and 5.8 ft. lower in grid azimuth 234°44'27". X=277,335. Y=412,995.

Image point No. 3: Center of bush, 54 ft. from station mark and 9.4 ft. lower in grid azimuth 297°39'09".

V44P Photo No. 2-78

ARIZONA ZONE CENTRAL  
X=277,286.  
Y=412,960.

V.A. Elevation: 2354 ft.

GRID VALUES

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Sierra del Ajo (C&GS)	23°35'35"	203°35'35"	42,194.
Kerwo (C&GS)	322 04 04	142 04 04	24,485.

Station = 2-78 A

Lat = 32 07 59.9131

X = 277,286.0000

State Plane Zone = 202

Lon = 112 38 10.1488

Y = 412,960.0000

FILE COPY

NAD 83 VALUES AVAILABLE

Arizona (57)

Pima County

3-184 A

1927 N.A.D. (Unadj.)

L.B. Mansfield, 1962

Book: PH 858

Located about 17 mi. SE. of Ajo and 7.5 mi. ESE. of Rocky Point Jct. Station is on the westernmost top of a low, lone, double topped butte that lies just to the SW. of an Indian Village.

Station reached by helicopter.

Station mark: Shallow drill hole in top of large rock in place and 0.8 ft. above ground.

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

Signal data:	TWF	11.0 ft.
	BWF	8.0
	TRXT	7.2
	BRXT	4.6

Image point No. 1: E. edge of lone tree, 20 ft. from and 0.8 ft. lower than station mark in grid azimuth  $94^{\circ}51'25''$ .

Image point No. 2: Center of lone tree, 89 ft. from station in grid azimuth  $118^{\circ}13'25''$ . X=283,854. Y=453,861.

Image point No. 3: Center of northernmost of two trees, 54 ft. from station in grid azimuth  $286^{\circ}07'42''$ .

Photo No. 3-184 GS-VAHP

ARIZONA ZONE CENTRAL  
X=283,932.  
Y=453,819.

V.A. Elevation: 2282 ft.

GRID VALUES

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Gunsight (C&GS)	$52^{\circ}42'25''$	$232^{\circ}42'25''$	26,966.
Paso (C&GS)	149 55 10	329 55 10	22,977.

Station = 3-184 A

State Plane Zone = 202

Lat = 32 14 44.6780

Lon = 112 36 55.9490

X = 283,932.0000

Y = 453,819.0000

Lon. 112. 36. 55. 9490

FILE COPY

NAD 83 VALUES AVAILABLE



Arizona (57)

Pima County

7-75 A

1927 N.A.D. (Unadj.)

D.J. Winstead, 1962

Book: PH 858

Station is located 15 mi. (airline) SE. from Ajo, Arizona.

To reach from Ajo, follow Highway 85 toward Tucson 11 mi. to Rocky Point Junction. Take Rocky Point-Sonoyta 10 mi. to N. side of prominent drain and T-rd. junction. Follow dirt rd. E. 1.1 mi. along drain to flat topped ridge and station.

Station mark: 3/8" reinforcing rod driven in ground.

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

Signal data:	TWF	11.0 ft.
	BWF	8.0
	TXT	7.7
	BXT	5.2

Image point No. 1: Center of bush, 97 ft. from station mark in grid azimuth 73°13'51".

Image point No. 2: Center of bush, 87.6 ft. from station mark in grid azimuth 182°54'17".

Image point No. 3: Center of bush, 116 ft. from station mark and 0.2 ft. lower in grid azimuth 3°03'35". X=242,949. Y=408,362.

Photo No. 7-75 Duplicate

ARIZONA ZONE CENTRAL  
X=242,955.  
Y=408,478.

Elevation: 1928 ft.  
(P.T.L. from BM T-307)

GRID VALUES

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Ajo 2	158°45'29"	338°45'29"	79,590.
Gunsight (C&GS)	213 56 53	33 56 53	34,962.

Station = 7-75 A

Lat = 32 07 13.1169

X = 242,955.0000

State Plane Zone = 202

Lon = 112 44 48.9808

Y = 408,478.0000

FILE COPY