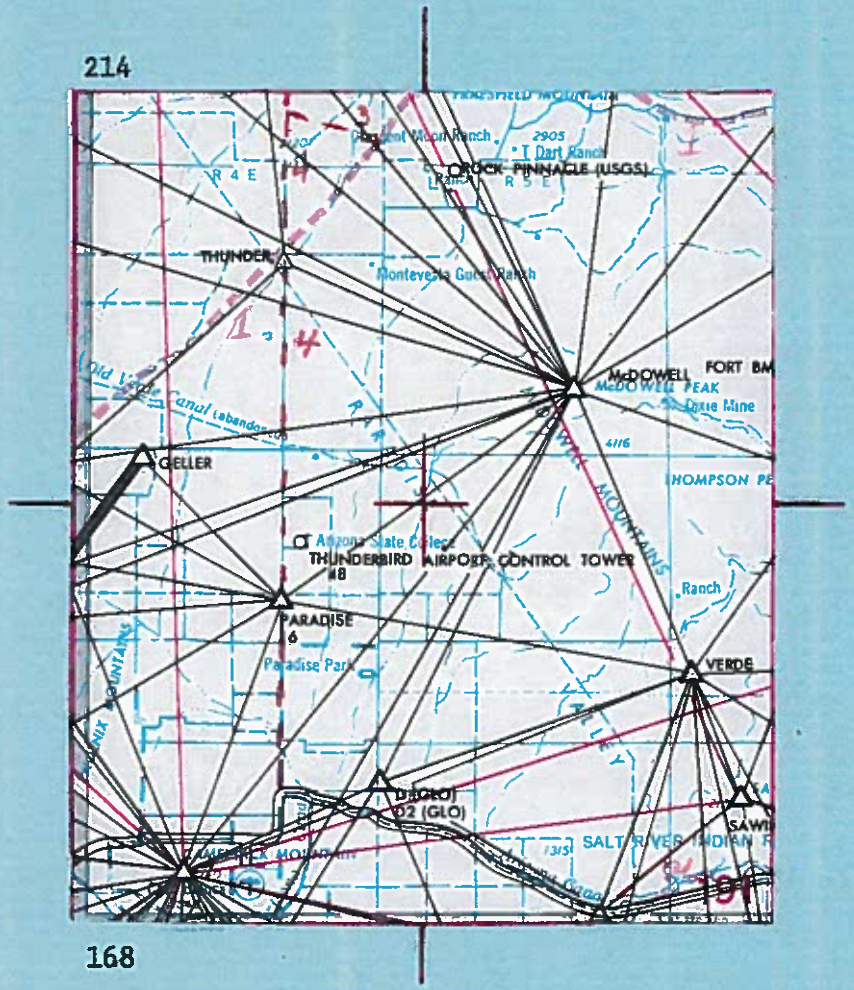
CAMELBACK

Lat. 33°30'
Long. 111°45'

ARIZONA 191

C&GS 33 111 43

(1)	R. Phillips	1905	6624
(2)	"	"	"
(3)	H. R. Poulsen	1963	PV 478
(4)	"	"	"



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

Index

Station	Project
Camels Back	- - - -
Camels Back 2 (C&GS)	New River
D 2 GLO (C&GS)	New River
East	New River
Landing (C&GS)	New River
McDowell (C&GS)	New River
Paradise (C&GS)	New River
Sawik (C&GS)	McDowell
Sheldon Butte ✓	Reclamation Service
Thunder (C&GS)	New River
Thunderbird Airport Control (C&GS)	New River
Verde (C&GS)	New River
1-40 A	New River
1-71 A	New River
4-99 A	McDowell

McDowell Project Master in ARIZONA 165 - Book: PH 930
New River Project Master in ARIZONA 191 - Book: PH 944

33 E c
111 4 2

Station: CAMELS BACK County: Maricopa State: Ariz.(191)

Observer: H. L. Baldwin, Jr. Year: 1900 Datum: 1927 N.A.D. (Revised 1953)

Description:

Described in U.S.G.S. 21st Annual Report, page 344, as follows:

"Near the SE. corner of sec.7, T. 2 N., R. 3 E., about 10 mi. NE. of Phoenix station, on the highest point of a scraggy mountain known as Camels Back.

"Station mark: A bronze tablet cemented in solid rock, over which is built a mound of stone 8 ft. high.

"Reference marks: N. mark, cross cut in stone 14.5 ft. distant, E. mark, cross cut in stone 7.6 ft. distant."

NOTE: In 1935, the U.S.C.&G.S. established station "CAMELS BACK" in immediate vicinity but made no mention of U.S.G.S. station mark (S.P. 224, page 99). This station reported "lost" in 1942 and again in 1947. In 1947 the U.S.C.&G.S. established station "CAMELS BACK NO 2" in same location, but again makes no mention of U.S.G.S. mark (See description book No. 939, page 1). If this station is visited by U.S.G.S. engineer, an attempt should be made to recover the U.S.G.S. mark and tie in distance and azimuth to U.S.C.&G.S. station "CAMELS BACK 2".

FILE COPY

[Latitude 33 30 52.839 Longitude 111 57 39.180]

To Station—	Azimuth	Back Azimuth	Distance	
	° ′ ″	° ′ ″	Log. Meters	Feet
Telegraph Pass	25 14 26.4	205 11 04.8		72,839.27
Syenite	133 14 10.1	312 59 56.7		178,155.09
Pyramid	141 45 23.4	321 38 05.9		107,776.00
Black Mesa	177 55 24.5	357 54 48.9		149,088.25
Four Peaks	252 08 34.9	72 29 41.8		203,242.04
Superstition Pt.	282 17 13.8	102 35 47.0		175,158.79

3/23/53 cg

51

Form 9-107a

U. S. GOVERNMENT PRINTING OFFICE 16—55572-1

FILE COPY

Arizona (191) Maricopa County CAMELS BACK 2 (C&GS)

1927 N.A.D. USC&GS, 1947
W.R. Brown, 1963

Book: PH 944

33 111 4-1001

Found as described in U.S. Coast and Geodetic Survey Arizona ~~Vol. II, page 73.~~ All marks in good condition.

A search was made for the old station "CAMELS BACK" but no evidence could be found.

Station reached by helicopter.

Signal: A light stand centered over station mark.

Signal data: Top light stand 4.3 ft.

Photo No. Paneled

ARIZONA ZONE CENTRAL
*X=486,516.93
Y=914,763.26

* V.A. Elevation: 2704 ft.
(Checked, 1963)

*Latitude: 33°30'52.847" Longitude: 111°57'39.255"

* = Values by USC&GS

6/11/63 ss

FILE COPY

Arizona (191) Maricopa County D 2 GLO (C&GS)

1927 N.A.D. USC&GS, 1947
W.R. Brown, 1963

Book: PH 944

Found as described in U.S. Coast and Geodetic Survey Description List No. ~~939, page 2.~~ 33 1114 -1008.

Station mark and reference mark No. 2 in good condition. Reference mark No. 1 has been pulled out and is lying in fence line near the station.

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

Signal data:

TWF	10.2	ft.
BWF	8.0	
TRXT	7.7	
BRXT	5.2	

Photo No. 1-173 Sketched

ARIZONA ZONE CENTRAL
*X=507,933.69
Y=924,686.81

*V.A. Elevation: 1295 ft.
(Not checked)

*Latitude: 33°32'31.053" Longitude: 111°53'26.262"

* = Values by USC&GS

6/11/63 ss

FILE COPY

Arizona (191) Maricopa County EAST

1927 N.A.D. (Unadj.) D.J. Winstead, 1963

Book: PH 944

Located about 13 mi. (airline) SE. of Cave Creek, about 7 mi. WNW. of Fort McDowell, on the highest part of the NE. portion of the McDowell Mountains.

Reached by helicopter.

* Station mark: A standard USGS brass tablet stamped "EAST 1963" set in concrete in drill hole in 20 ft. boulder.

* Reference mark No. 1: A standard USGS reference mark tablet stamped "NO 1 1963" set in concrete in drill hole in boulder, 14.28 ft. from station mark in azimuth 38°58'47".

* Reference mark No. 2: A standard USGS reference mark tablet stamped "NO 2 1963" set in drill hole in boulder, 18.34 ft. from station mark in azimuth 91°20'54".

Signal: A white flag over fluorescent cross-target on a 2x2x8 pole centered over station mark.

Signal data:

TWF	10.8 ft.
BWF	8.0
TFXT	7.7
BFXT	5.2

Photo No. Paneled

* Recovered in Good Condition March 2011 See photos.

ARIZONA ZONE CENTRAL
X=535,581.
Y=974,868.

V.A. Elevation: 4067 ft.

Latitude: 33°40'47.37"

Longitude: 111°47'58.94"

To Station	Azimuth	Back Azimuth	Feet
Gran (C&GS)	178°07'20"	358°07'12"	37,672.
Lousley	252 45 55	72 49 12	31,472.

6/12/63 dw

FILE COPY

Arizona (191) Maricopa County LANDING (C&GS)

1927 N.A.D. USC&GS, 1935
R.W. Hendrickson, 1963

Book: PH 944

Found as described in U.S. Coast and Geodetic Survey Special Publication No. ~~224, page 103~~. 33 1114 – 1014

All marks found and in good condition.

Note: Reference mark No. 2 should be 50.37 ft., not 51.15 ft. from station mark.

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

Signal data:

TWF	10.8	ft.
BWF	8.0	
TFXT	7.6	
BFXT	5.2	

Photo No. 1-202 Plane Table Sketch

ARIZONA ZONE CENTRAL
*X=532,084.79
Y=910,536.59

Elevation: 1306.782 ft.
(Second-Order Leveling by USC&GS)

*Latitude: 33°30'10.894" Longitude: 111°48'41.082"

* = Values by USC&GS

6/13/63 ss

FILE COPY

Arizona (191) Maricopa County MC DOWELL (C&GS)

1927 N.A:D. USC&GS, 1924, 1935
L.B. Mansfield, 1963

Book: PH 944

Described in U. S. Coast and Geodetic Survey Description List ~~No. 939, page 3.~~ 331114-1016

Note by L. B. Mansfield, 1963: All marks found in good condition.

Station reached by helicopter.

Signal: A white flag over red cross-target on a 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. Paneled

ARIZONA ZONE CENTRAL V.A. Elevation: 3914 ft.
*X=528,408.51
Y=967,701.64

*Latitude: 33°39'36.536" Longitude: 111°49'23.890"

* = Values by USC&GS

6/11/63 dw

FILE COPY

Arizona (191) Maricopa County PARADISE (C&GS)

1927 N.A.D. USC&GS, 1947
W.R. Brown, 1963

Book: PH 944

33 11 14-1002

Found as described in U. S. Coast and Geodetic Survey ~~Description List No. 939, page 2.~~

All marks in good condition.

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

Signal data:

TWF	10.5 ft.
BWF	8.0
TRXT	7.7
BRXT	5.2

Photo No. Sketched for vert 1-38

ARIZONA ZONE CENTRAL
*X=497,337.14
Y=944,555.41

Elevation: 1387.151 ft.
(Leveling by H.R. Poulsen, 1963)

*Latitude: 33°35'47.648" Longitude: 111°55'31.482"

* = Values by USC&GS

6/11/63 dw

Arizona (191) Maricopa County SAWIK (C&GS)

1927 N.A.D. USC&GS, 1935,1953
W.R. Brown, 1963

Book: PH 930

Found as described in U.S. Coast and Geodetic Survey Publication ~~No. 224, page 100.~~ 331114 — 1020

Station reached by helicopter.

Reclamation Service station "SHELDON BUTTE" was tied to the station at the time of occupation as listed:
Station "SHELDON BUTTE" is a standard tablet stamped "21 33 VA" and is 17.85 ft. from station in azimuth 154°41'09".

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

Signal Data:		
	TWF	10.7 ft.
	BWF	8.0
	TRXT	7.7
	BRXT	5.2

Photo No. Paneled

ARIZONA ZONE CENTRAL
*X=547,392.7
Y=922,787.0

*V.A. Elevation: 2131 ft.

ARIZONA ZONE EAST
*X= 14,123.5
Y=926,487.5

57 Sawik (USGS) (C&GS) *LAT. 33° 32' 11.914" LONG. 111° 45' 40.082"

	STATION	AZIMUTH	BACK AZIMUTH	DISTANCE
64	Verde (C&GS)	158° 28' 48.460"	338° 28' 12.753"	14901.39
8	4-99A	174° 2' 14.024"	354° 1' 53.404"	30353.41
1	VABM 2000	235° 57' 21.720"	56° 2' 22.136"	55434.54
63	Usery (USGS) (C&GS)	289° 37' 53.361"	109° 41' 54.283"	39227.49

* = Values by USC&GS

4/25/63 sb

FILE COPY

Arizona (191) Maricopa County THUNDER (C&GS)

1927 N.A.D. USC&GS, 1947
W.F. McElwain, 1963

Book: PH 944

Found as described in U.S. Coast and Geodetic Survey Description List No. ~~939, page 3~~. 331114-1025,

All marks in good condition.

Signal: White flag over red cross-target on a 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. PT. Sketch 1-121

ARIZONA ZONE CENTRAL
*X=497,528.76
Y=981,678.19

Elevation: 1837.982 ft.
(Leveling by H.R. Poulsen, 1963)

*Latitude: 33°41'54.948" Longitude: 111°55'29.251"

* = Values by USC&GS

6/10/63 sb

FILE COPY

Arizona (191) Maricopa County THUNDERBIRD AIRPORT CONTROL (C&GS)

1927 N.A.D.

USC&GS, 1947
W.R. Brown, 1963 (n)

Book: PH 944

Found as described in U.S. Coast and Geodetic Survey Description List No: ~~939, page 2.~~ 331114-1034

All marks in good condition.

Signal: Center of control tower.

Signal Data: Top of tower 37.5 ft.
Eaves of building 28.8

Photo No. Point pricked - Not sketched

ARIZONA ZONE CENTRAL
*X=499,020.43
Y=949,853.75

Elevation: 1428 ft.
(PTT from BM "18 HRP" 1429.330 Unadj.)

*Latitude: 33°36'40.072" Longitude: 111°55'11.583"

* = Values by USC&GS
(n) = Not Occupied

6/11/63 sb

FILE COPY

Arizona (191) Maricopa County VERDE (C&GS)

1927 N.A.D. USC&GS, 1935, 1947
Z. Tolentino Jr., 1963

Book: PH 944

Described in U.S. Coast and Geodetic Survey Special Publication No. ~~224, page 100,~~ and in U.S. Coast and Geodetic Survey Description List No. ~~939, page 2.~~ 331114-1029

Station recovered as described. All marks were in good condition.

Station reached by helicopter.

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

Signal Data:		
	TWF	11.3 ft.
	BWF	8.0
	TRXT	7.7
	BRXT	5.2

Photo No. GS VAOB 1-10 Paneled

ARIZONA ZONE CENTRAL
*X=541,906.15
Y=936,640.07

V.A. Elevation: 2388 ft.

*Latitude: 33°34'29.057" Longitude: 111°46'44.684"

* = Values by USC&GS

6/11/63 sb

Station: SHELDON BUTTE County: Maricopa State: Ariz.

Observer: Reclamation Service Year: Datum:

Description:

On highest point of isolated butte about 2 mi. N. 20° W. of bridge over Arizona Canal W. of upper power house. Station was bronze tablet over which was built a rock cairn.

FILE COPY

[Latitude 33 32 07.675 Longitude 111 45 44.473]

To Station—	Azimuth	Back Azimuth	Distance	
	° ′ ″	° ′ ″	Log. Meters	Miles
McDowell	267 33 31		3.8105044	
Camp Signal	16 29 37	196 28 46	3.9251106	
Telegraph Pass	51 17 46	231 07 48	4.5558669	
Camels Back	82 33 06	262 26 29	4.2722069	
Tempe Ditch	32 44 16	212 39 53	4.3574573	
Schlecht's Butte	295 04 31	115 06 56	3.8742516	

Form 9-107a

U. S. GOVERNMENT PRINTING OFFICE 16—55572-1

5/28/52 cg ✓

FILE COPY

Arizona (191) Maricopa County 1-40 A

1927 N.A.D. (Unadj.) D.J. Winstead, 1963

Book: PH 944

Located about 10 mi. NNE. of Scottsdale.

To reach from Scottsdale Post Office, drive N. on Scottsdale Rd. 10.5 mi. to intersection with Bell Rd., drive E. on Bell Rd. 2 mi. to Prima Rd., drive S. 0.7 mi. to T-rd. from E., follow rd. E. for 1.1 mi. to station, about 150 ft. E. of transmission line crossing.

Station mark: A 1/2 in. steel rod driven in ground projecting about 0.2 ft.

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. 1-40 Plane Table Sketch

VA08

ARIZONA ZONE CENTRAL V.A. Elevation: 1523 ft.
X=514,174.
Y=956,567.

Latitude: 33°37'46.47" Longitude: 111°52'12.36"

To Station	Azimuth	Back Azimuth	Feet
McDowell (C&GS)	231°59'34"	52°01'08"	18,073.
Sawik (C&GS)	315 30 23	135 34 00	47,382.

6/12/63 sb

FILE COPY

Arizona (191) Maricopa County 1-71 A

1927 N.A.D. (Unadj.) W.F. McElwain, 1963

Book: PH 944

Located about 3 mi. (airline) N. of Cactus, about 2 mi. S. of Paradise and 67 ft. N. of the center of the intersection of 40th Street and Greenway Rd.

Station mark: A 3/4 in. reinforcing rod projecting 0.2 ft. above the ground.

Reference marks: None set.

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

Signal Data:		
	TWF	10.7 ft.
	BWF	8.0
	TRXT	7.6
	BRXT	5.2

Image Point No. 1: Lone bush, 113.6 ft. from station in azimuth 42°25'35".

Image Point No. 2: Lone bush, 40.5 ft. from station in azimuth 193°32'26".

Image Point No. 3: Large lone tree, 97.1 ft. from station in azimuth 247°56'10".

Photo No. 1-71 Sketched

ARIZONA ZONE CENTRAL
X=476,006.
Y=955,457.

Elevation: 1441 ft.
(PTT from BM 1467.993 Unadj.)

Latitude: 33°37'35.42" Longitude: 111°59'43.77"

To Station	Azimuth	Back Azimuth	Feet
Mc Dowell (C&GS)	256°48'16"	76°54'00"	53,819.
Camels Back 2 (C&GS)	345 28 27	165 29 36	42,034.

6/12/63 sb

Arizona (191) Maricopa County 4-99A

1927 N.A.D. (Unadj.) W.R. Brown, 1963

Book: PH 930

Located about 15 mi. (airline) NNE. of Mesa, 4 mi. SE. of McDowell Peak and on the NW. top of a low NW.-SE. ridge that extends SE. from the McDowell Mountains.

Reached by helicopter.

Station mark: A 3/4 in. reinforcing rod driven in ground and protruding 0.8 ft. above ground. (Elevation is on ground)

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

Signal Data: TWF 10.8 ft.
BWF 8.2
TRXT 7.7
BRXT 5.2

Photo No. Paneled

ARIZONA ZONE CENTRAL V.A. Elevation: 2629 ft.
X=544,194.5
Y=952,968.5

ARIZONA ZONE EAST
X= 11,434.9
Y=956,726.9

.8 4-99A

LAT. 33° 37' 10.584" LONG. 111° 46' 17.367"

	STATION	AZIMUTH	BACK AZIMUTH	DISTANCE
64	Verde (C&GS)	8° 3' 27.976"	188° 3' 12.862"	16489.60
44	Lousley	214° 31' 2.749"	34° 33' 23.662"	37902.60
35	Fort (C&GS)	230° 23' 32.355"	50° 25' 44.155"	26100.51
21	Adams (C&GS)	260° 42' 24.443"	80° 48' 25.200"	55801.39
1	VABM 2000	269° ' 30.143"	89° 5' 51.531"	49093.95
60	Stewart Mtn. (C&GS)	281° 45' 18.472"	101° 52' 24.973"	66601.43
63	Usery (USGS) (C&GS)	317° 14' 10.582"	137° 18' 32.477"	59066.64
57	Sawik (USGS) (C&GS)	354° 1' 53.394"	174° 2' 14.016"	30353.41

4/24/63 ss

North American Datum Conversion
NAD 27 to NAD 83
NADCON Program Version 1.01

==========

Transformation #: 1 Region: Conus

Station name: BM Z 266 1948

	Latitude	Longitude
NAD 27 datum values:	33 37 30.054	112 10 4.077
NAD 83 datum values:	33 37 30.196	112 10 6.631
NAD 83 - NAD 27 shift values:	.142	2.554(secs.)
	4.384	65.827(meters)

Magnitude of total shift: 65.972(meters)

Transformation #: 2 Region: Conus

Station name: TRACK

	Latitude	Longitude
NAD 27 datum values:	33 36 44.302	112 05 16.338
NAD 83 datum values:	33 36 44.448	112 05 18.881
NAD 83 - NAD 27 shift values:	.146	2.543(secs.)
	4.484	65.549(meters)

Magnitude of total shift: 65.702(meters)

Transformation #: 3 Region: Conus

Station name: VOSS

	Latitude	Longitude
NAD 27 datum values:	33 38 7.066	112 12 52.045
NAD 83 datum values:	33 38 7.206	112 12 54.606
NAD 83 - NAD 27 shift values:	.140	2.561(secs.)
	4.316	65.995(meters)

Magnitude of total shift: 66.136(meters)

Transformation #: 4 Region: Conus

Station name: 48=T T 5 EEM 1956

	Latitude	Longitude
NAD 27 datum values:	33 31 26.527	112 11 8.083
NAD 83 datum values:	33 31 26.676	112 11 10.634
NAD 83 - NAD 27 shift values:	.149	2.551(secs.)
	4.599	65.824(meters)

Magnitude of total shift: 65.984(meters)

NAD 27 to NAD 83 Conversion

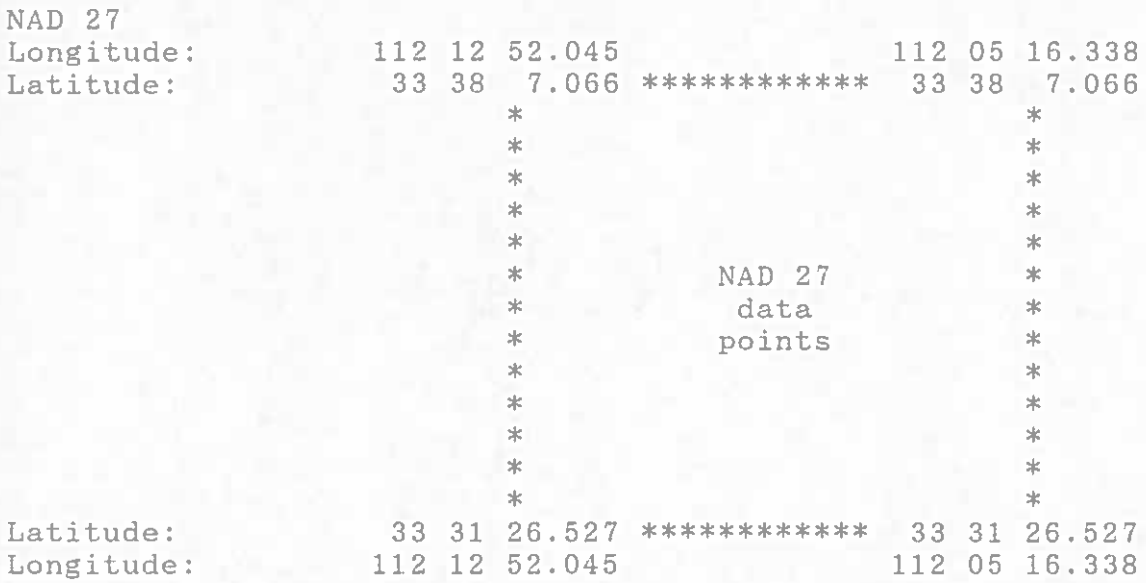
Statistics for Region

	Latitude MIN	Latitude MAX	Longitude MIN	Longitude MAX
Range of shift (meters)	4.316	4.599	65.549	65.995
Range of shift (seconds)	.140	.149	2.543	2.561

Mean shift (meters)	4.446	65.798
Variance of mean shift	.015	.034
Std. Dev. of mean shift	.123	.185
Mean shift (seconds)	.144	2.552
Variance of mean shift	.000	.000
Std. Dev. of mean shift	.004	.007

The total number of conversions: 4

Region of Conversions



NAME	STATION
CAMELS BACK	1001
CAMELS BACK 2	1001
PARADISE	1002
GLO MARK NEAR STA. PARADISE	1002
GELLER	1003
SCOTTSDALE THUNDERBIRD ACADEMY WATER TANK	1004
D GLO	1008
D 2 GLO & D 3 GLO	1008
JOKAKE	1013
LANDING	1014
MC DOWELL	1016
SAWIK	1020
THUNDER	1025
VERDE	1029
ROCK PINNACLE USGS	1032
THUNDERBIRD AIRPORT CONTROL TOWER	1034

ARIZONA 191

JULY 1966

PUBLISHED AND PRINTED BY:
U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON D.C.

HORIZONTAL CONTROL DATA

SHEET 1 of 2

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1001
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33°30'
111°45

Camels Back (Maricopa County, E. B. Latham, 1935; 1938).—About 10 miles northeast of Phoenix, on the west end and highest point of a prominent mountain known locally as Camels Back. Marked by a standard bronze disk as described in note 4. Reference mark No. 1, a standard bronze reference disk, note 12c, is 14.462 meters (47.45 feet) from station in azimuth 32°44'. Reference mark No. 2, a standard bronze reference disk, note 12c, is 6.011 meters (19.72 feet) from station in azimuth 160°12'. Reference mark No. 3, a standard bronze reference disk, note 12c, is 10.118 meters (33.20 feet) from station in azimuth 337°54'. The azimuth mark, a standard bronze disk, is at the entrance to Dr. Holmes' property, on the top of a 4-foot stone post, on the south side of the entrance. It is about 1 mile from station in azimuth 270°04'36".

CAMELS BACK (Maricopa Co., Ariz., E.B.L., 1935; N.B.A., 1942)
—The station was not found nor were reference marks No. 1 and No. 3. Reference mark No. 2 was found in good condition as also was the azimuth mark. The station was searched for in its approximate location but wasn't found.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
FORM 526

RECOVERY NOTE, TRIANGULATION STATION

R 16

NAME OF STATION: CAMELS BACK
STATE: Arizona
COUNTY: Maricopa
ESTABLISHED BY: E.B.L. YEAR: 1935
LOCALITY: Phoenix
RECOVERED BY:* D.".Konichek YEAR: 1947

Detailed statement as to the fitness of the original description:

Station mark, reference marks, and azimuth mark have been completely destroyed. Triangulation station CAMELS BACK 2 1947 was established in the same vicinity.

* Name of chief of party should be inserted here. The officer who actually visited the station should sign his name at the end of the recovery note.
NOTE.—One of these forms must be used for every station recovered.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: CAMELS BACK — YEAR: 1935
STATE: Ariz — LOCALITY: Yuma to Stewart Dam
First -ORDER Triangulation — SOURCE: G-3022 — FIELD SKETCH: ARIZ 8-II

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (OR Δα) ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0202	x 486,518.29 y 914,765.08	328°28'59" - 0 01 28	AZIMUTH MARK (WHITEM)
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE: 33°30'52".865 NORTH LONGITUDE: 111 57 39.239 WEST			824.7 METERS 2,706 FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
AZIMUTH MARK (WHITEM)	328°27'31".1	4,113 029	12,972.7

FILE COPY

JAN 1967

USCOMM—ESSA—ASHEVILLE

191

JULY 1966

ARIZONA

PUBLISHED AND PRINTED BY:
U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON D.C.

CAMELS BACK (Continued)

33°30'
111°45'

HORIZONTAL CONTROL DATA SHEET 1 of 2

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1001
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
FORM 525
Rev. Oct., 1953

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: CAMELS BACK 2
CHIEF OF PARTY: D.H.Konichek
STATE: Arizona COUNTY: Maricopa
YEAR: 1947 LOCALITY: Phoenix

Surface-station mark, Note.* 2
Underground-station mark, Note.*
Reference mark, No. 1 Note.* 12a
Reference mark, No. 2 Note.* 12a
Azimuth mark, Note.* 11c
Witness mark, Note.*
Height of light above station mark meters.
Height of telescope above station mark 1.6 meters.

DISTANCES AND DIRECTIONS TO REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND

OBJECT	Hor.	DISTANCE	DIRECTION	AZIMUTH
		Meters		
VERDE 1935			00 00 00.00	
R.M. No. 1	SSW	9.834	143 08 59.	
State Capitol SW	approx. 10 mi		171 12 03.5	
Az. Mk. NSW	approx.	2 miles	191 38 20.8	
R.M. No. 2	NNW	6.453	277 16 04.	

Detailed description:

The station is located about 10 miles air line northeast of Phoenix, on the west end and highest point of a prominent mountain known locally as Camels Back; 20 feet southwest of the north brim; approximately 3 inches below the surface and is stamped: "CAMELS BACK 2 1947".

Reference mark No. 1 is approximately 3 feet lower than station, flush with the ground surface and stamped: "CAMELS BACK 2 NO 1 1947".

Reference mark No. 2 is approximately 30 inches higher than the station, 5 feet southwest of north brim, projects 18 inches and is stamped: "CAMELS BACK 2 NO 2 1947".

The azimuth mark is located in the northeast wingwall of the east abutment of a concrete bridge across the Arizona Canal on the Camel Back Road, flush with the ground surface and is stamped: "CAMELS BACK 2 1947".

To reach from the junction of 7th Street North, and East Van Buren Street at the Union High School Building, which is on U.S. Highways 60, 70, 80, and 89 in Phoenix; go north on 7th Street for 4.0 miles to cross streets (Camel Back Road); turn right, east, for 4.1 miles to a bridge over the Arizona Canal and azimuth mark as described above; continue east for 0.9 mile to a road left; turn left, north, and go 0.3 mile to crossroad; this is the third road right after leaving Camel Back Road; turn right, east, and go 0.3 mile to a road left; turn left and follow road for 0.5 mile to an open area on the slope of mountain and end of truck travel; pack northeast over saddle then pick way through large boulder area to the highest point and station site as described above. A one-hour pack.

Form 526
(11-8-55)

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY

RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: CAMELS BACK 2
ESTABLISHED BY: D.H.K. YEAR: 1947 STATE: Arizona
RECOVERED BY:* A.M.S. YEAR: 1955 COUNTY: Maricopa

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

Station recovered as described.

Reference marks 1 and 2 were recovered as described, in good condition.

The azimuth mark was recovered in good condition. A large Neon sign has been erected on the azimuth line; a signal approximately 10 feet high on the azimuth mark will clear tripod height on the station.

The station is set in the tallest point of Camels Back Peak, 3 inches below the surface.

(Continued on next page)

*Name of chief of party should be inserted here. The officer who actually visited the station should sign his notes at the end of the recovery note.
NOTE.—One of these forms must be used for every station recovered.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: CAMELS BACK 2
YEAR: 1947, 1959, 1963
STATE: Arizona LOCALITY: Phoenix to Parker (Vicinity of Phoenix)
First -ORDER Triangulation SOURCE: G-8347, G-11954, G-13304 FIELD SKETCH: Ariz. 26, 38-II, 50, 51

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH (OR Δα) ANGLE	MARK
STATE: Ariz. ZONE: C CODE: 0202	x 486,516.95 y 914,763.26	79 39 35 / 80 05 12 / - 0 01 28	AZIMUTH MARK 1959 / AZIMUTH MARK 1947
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
	LATITUDE: 33° 30' 52.8470 NORTH		824.3 METERS
	LONGITUDE: 111 57 39.2548 WEST		2704 FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE (Meters)
	THIRD-ORDER	
AZIMUTH MARK 1959	79°38'07.4	
AZIMUTH MARK 1947	80 03 44.0	

FORM 351 (1-15-61)

JULY 1966
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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

HORIZONTAL CONTROL DATA SHEET 2 of 2

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

ARIZONA 191

QUAD 331114 STATION 1001
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33°30'
111°45

CAMELS BACK (Continued)

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY
RECOVERY NOTE, TRIANGULATION STATION

R

Name of Station: CAMELS BACK 2
Established By: D.H.K Year: 1947 State: Arizona
Recovered By: *S.L.Hollis Jr. Year: 1959 County: Maricopa

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts: The station mark and reference marks were recovered as described and found to be in good condition. The azimuth mark was searched for but not found. It is believed that it was destroyed when a new bridge was constructed across the Arizona Canal in Phoenix. A new azimuth mark was established. A description of the azimuth mark and a new to reach for the azimuth mark and the station follows:

To reach the station from the intersection of Central Avenue North and Camelback Road, go east on Camelback Road for 4.4 miles to a bridge over the Arizona Canal and the azimuth mark on the right, south. Continue east on Camelback Road 3.1 miles to Invergordon Road, turn left and go north on Invergordon Road for 0.7 mile to a T-road left. Turn left and go west as per sign "Sky Island Mt. Estates", following a graveled road up grade for 0.4 mile to the end of truck travel. Pack southwest up the mountain trail to the highest peak and the station. The trail is in good condition and used by sight seers. It is an hour pack with a load.

The azimuth mark is a standard disk, stamped CAMELS BACK 2 1947 RESET 1959, cemented in a drill hole in the east end of the south guard rail of the bridge over the Arizona Canal.

1959 OBSERVATION

OBJECT	BEARING	DISTANCE feet	DISTANCE meters	DIRECTION
RIVER 1935				0 00 00.0
Azimuth mark	SW	(approx. 2.0 miles)		61 16 37.1

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY
RECOVERY NOTE, TRIANGULATION STATION

R

Name of Station: CAMELS BACK 2
Established By: D. H. K. Year: 1947 State: Arizona
Recovered By:* C. A. A. Year: 1963 County: Maricopa

Detailed statement as to the fitness of the original description; including marks found, stampings, changes made, and other pertinent facts:
Station was recovered as described in the 1947 description and all marks were found to be in good condition. A slight difference was found in the direction to the azimuth mark and reference mark 1, the direction to reference mark 2 was checked. The distance to both reference marks were checked.
The 1947 description and to reach the station and azimuth mark is adequate.
The 1963 observations follow:

OBJECT	BEARING	DISTANCE feet	DISTANCE meters	DIRECTION 00 00 00
VAL VISTA 1935				
Phoenix, Sky Harbor Airport Control Tower	SSW	approx, 9 miles		106 58 21.7
R. M. No. 1	SSW	32.25	9.830	108 47 09
Phoenix, Arizona State Capital Dome	SW	approx, 10 miles		136 51 38.8
Azimuth Mark	SW	approx. 2 miles		156 52 13.1
R. M. No. 2	NNW	21.16	6.446	242 55 30

R. D. Sveum
R. D. Sveum

*Name of chief of party should be inserted here. The officer who actually visited the station should sign his name at the end of the recovery note.
NOTE.—One of these forms must be used for every station recovered.

FILE COPY

JAN 1967

USCOMM—ESSA—ASHEVILLE

AZ 191

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 1002
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33 30
111 45

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 526
Rev. Oct., 1962

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: PARADISE 1947
CHIEF OF PARTY: D.H.K.
Surface-station mark, Note,° 1a
Underground-station mark, Note,° 7a
Reference mark, 1 Note,°11a
Reference mark, 2 Note,°11a
Azimuth mark, Note,°11a
Witness mark, Note,°
Height of light above station mark meters.
Height of telescope above station mark1.5 meters.
Detailed description:

STATE: Arizona COUNTY: Maricopa
YEAR: 1947 LOCALITY: Scottsdale

DISTANCES AND DIRECTIONS TO REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND

OBJECT	Hor.	DISTANCE	DIRECTION	AZIMUTH
CAMELS BACK 2 1947			° ' " 00 00 00.0	° ' "
R.M. 2 W		12.481m	77 57 25	
Control Tower, Thunder Airport			177 39 54.3	
G.L.O. Marker NE		18.114m	216 53 42	
Az. Mark S (0.35 mile)			337 29 36.0	
R.M. 1 S		11.713m	342 07 17	

Located in the northeast corner of Sec. 22, T. 3 N., R. 4 E., on the west side of the Scottsdale Road, 7.25 miles by road north of the Scottsdale Post Office. It is 5.3 feet west of a witness post, 22.0 feet west of a power pole, 35.5 feet south of a dirt road and 49.5 feet west of the center line of the pavement. It is stamped PARADISE 1947 and projects 4 inches.

Reference Mark No. 1 is 49.0 feet west of the center line of the pavement. It is stamped PARADISE NO 1 1947 and projects 5 inches.

Reference Mark No. 2 is 27.0 feet south of the center line of a dirt road. It is stamped PARADISE NO 2 1 47 and projects 5 inches.

A G.L.O. Mark is located 0 inches under the pavement at the center line intersection of two roads.

It is a standard disk stamped T3N R4E S15 S14 S22 S23. The mark has been mutilated and the rest of the stamping is not discernible.

The Azimuth Mark is located on the east side of the Scottsdale Road, 0.35 mile south of the station, 3.5 feet west of a fence line, 48.5 feet north northeast of a telephone pole and 49.5 feet east of the center line of the pavement. It is stamped PARADISE 1947 and projects 0 inches.

FORM 526a
(8-10-60)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

Sag R

RECOVERY NOTE, TRIANGULATION STATION

NAME OF STATION: PARADISE
ESTABLISHED BY: D.H. Konichek YEAR: 1947 STATE: Arizona
RECOVERED BY: C.A. Annis YEAR: 1963 COUNTY: Maricopa

HEIGHT OF TELESCOPE ABOVE STATION MARK 4 METERS. HEIGHT OF LIGHT ABOVE STATION MARK 4 METERS.

DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION
CAMELS BACK 2 1947				00 00 00.0
R.M. No. 2	W	41.11	12.530	77 56 56
Scottsdale, Thunderbird Academy Water Tank	N	approx. 1	mile	184 57 19.8
Azimuth Mark	S	approx. 0.3	mile	337 29 37.55
R.M. No. 1	S	38.41	11.709	342 07 05
G.L.O. Mark (T3N R4E S 14 15 22 23)	NE	59.42	18.109	216 53 42

Station was recovered as described and all marks were found to be in good condition. The direction to all marks checked. The distance to Reference mark No. 1 and G.L.O. Marker checked but a difference was found in the distance to Reference Mark No. 2. Because of road changes a complete new description follows:

Station is located about 13 miles northeast of the center of Phoenix, about 6 miles north of Scottsdale, 3 miles south of Bell Road and in the southwest corner of intersection of Scottsdale Road and Cactus Road.

To reach from the junction of East Mc Dowell Road and Scottsdale Road about 3 miles south of Scottsdale, go north on Scottsdale Road for 9.0 miles to the junction of Cactus Road and station in the southwest corner of intersection as described.

Station mark, a standard triangulation disk stamped PARADISE 1947, is set in the top of a square concrete post which is set flush with the surface of the ground. The mark is 51 feet west of center of North Scottsdale Road, 32 feet south of center of Cactus Drive, 23 feet west-northwest of a power pole, 9 feet southeast of a street sign and 5 feet north of the witness post.

(Continue on next page)

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: PARADISE YEAR: 1947, 1963
STATE: Arizona LOCALITY: Phoenix to Parker (Vicinity of Phoenix)
First -ORDER Triangulation SOURCE: G-8347 G-13304 FIELD SKETCH: Ariz. 26, 51

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH (FROM Δα) ANGLE	MARK
STATE: Ariz. ZONE: C CODE: 0202	x 497,337.09 y 944,555.34	357° 27' 13" - 0 00 17	AZIMUTH MARK
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
	LATITUDE: 33° 35' 47".6473 NORTH LONGITUDE: 111 55 31.4826 WEST		423.2 METERS 1388 FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE (Meters)
AZIMUTH MARK	THIRD-ORDER 357°26'56".2	

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: GLO MARK NEAR Δ PARADISE YEAR: 1947
STATE: Arizona LOCALITY: Phoenix to Parker (Vicinity of Phoenix)
First -ORDER Traverse SOURCE: G-8347 FIELD SKETCH: Ariz. 26
(No check on this position)

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH (FROM Δα) ANGLE	MARK
STATE: Ariz. ZONE: C CODE: 0202	x 497,386.84 y 944,587.83	- 0 00 17	
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
	LATITUDE: 33° 35' 47".9688 NORTH LONGITUDE: 111 55 30.8944 WEST		METERS FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE (Meters)
Position determined by traverse from station PARADISE		

AZ 191

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HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1002
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

PARADISE 1947 (Continued)

Reference mark 1, a standard reference disk stamped PARADISE NO 1 1947, is set in the top of a square concrete post which is set flush with the surface of the ground. The mark is 61.5 feet south of center of Cactus Drive, 51 feet west of center of North Scottsdale Road, 40 feet southeast of a power pole and 33.5 feet south of the witness post.

Reference mark 2, a standard reference disk stamped PARADISE NO 2 1947, is set in the top of a square concrete post which projects about 3 inches above the surface of the ground. The mark is 92 feet west of center of North Scottsdale Road, 40.5 feet west-northwest of the witness post, 26 feet south of center of Cactus Drive and 9 feet north of power pole.

Azimuth mark, a standard azimuth disk stamped PARADISE 1947, is set in the top of a square concrete post which projects about 6 inches and has been reinforced with concrete. The mark is 89 feet south of a power pole, 48 feet east of center of Scottsdale Road, 13.5 feet west of telephone cable line and 1 foot west of the witness post.

To reach the Azimuth Mark from station, go south on North Scottsdale Road for 0.35 mile to mark on left as described.

G.L.O. Marker, is located in the center of intersection of North Scottsdale Road and Cactus Drive. The mark is a 2 inch brass cap located about 6 inches below surface of road and is under a handhole cover. The mark is stamped T3N R4E S15 S14 S22 S23, the mark has been mutilated and the rest of the stamping is not discernible.

Mark are a described in notes 1a 7a, 11a and 16a.

(U.S.E.,1971)--Station and reference marks found in good condition. The azimuth mark has been destroyed.

RECOVERY NOTE, TRIANGULATION STATION R

331114

NAME OF STATION: PARADISE
ESTABLISHED BY: D.H.K. YEAR: 1947 STATE: Arizona BENCH MARK ALSO ☐
RECOVERED BY: L.F. Smith YEAR: 1973 COUNTY: Maricopa
AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: 7 miles north of Scottsdale
HEIGHT OF TELESCOPE ABOVE STATION MARK FEET HEIGHT OF LIGHT ABOVE STATION MARK FEET

DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION ° ' "
Scottsdale, Thunderbird Acadamy Water Tank 1963				0 00 00.0
RM 1	S	38.40	11.709	157 09 43
RM 3	W	126.95		242 40 34
RM 4 0.2 mile	W			249 34 49.6

The underground station mark and reference mark 1 were recovered, the surface station mark, reference mark 2 and the azimuth mark were destroyed by underground cables or other construction. The station was remonumented on the original position at this time and reference marks 3 and 4 were established.

The station mark is a standard disk stamped, PARADISE 1947 1973. It is set in top of a 12 inch concrete monument which projects 2 1/2 inches. It is at the southwest corner of the intersection of North Scottsdale Road and East Cactus Road, 12 feet northwest of the corner of a cinderblock fence and 9 feet south-southwest of a stop sign.

Reference mark 1 is a standard disk stamped, PARADISE NO 1 1947. It is set in the top of a 12 inch concrete monument which is flush with the ground. It is 28 feet south of the cinderblock fence and about 6 feet south of a newly planted palm tree.

Reference mark 3 is a standard disk stamped, PARADISE 1947 NO 3 1973. It is set in the top of a 12 inch concrete monument which projects 3 inches It is 3 feet southeast of a power pole and 1 1/2 feet north of a cinder block fence.

Reference mark 4 is a standard disk stamped, PARADISE 1947 NO 4 1973. It is set in a drill hole in the south curb of a short frontage road which is along the north side of Cactus Road, 36 feet north of the center of Cactus Road, 11 feet south of the center of the frontage road and about 50 feet southeast of the mail box at 7008.

The 1963 route to the station is adequate.

The angle and distance to reference mark 1 are the same as 1963.

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COAST AND GEODETIC SURVEY
WASHINGTON D.C.
Revised AUG 1974

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JUN 2 1975

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1003
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33 30
111 45

FORM 525 (9-18-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: GELLER STATE: Arizona COUNTY: Maricopa

CHIEF OF PARTY: C.T. Annis YEAR: 1963 DESCRIBED BY: H.D. Ellis LMF

NOTE.* HEIGHT OF TELESCOPE ABOVE STATION MARK 30 METERS,† HEIGHT OF LIGHT ABOVE STATION MARK 22 METERS.

1a 7b SURFACE-STATION MARK, UNDERGROUND-STATION MARK | DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

	OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION °	′	″
	PARADISE 1947						
16b	Azimuth Mark	S	approx. 0.6 mile		44	58	57.10
11b	R.M. No. 2	S	79.45	24.218	46	17	53
11b	R.M. No. 1	N	80.64	24.579	226	42	19
	North 1/4 Corner (Phoenix City Survey)	ENE			301	38	00.47
	Scottsdale, Thunderbird Academy, Water Tank	SE	approx. 4 miles		345	41	59.6

Detailed description:

The station is located about 13 miles northeast of the center of Phoenix and about 0.1 mile south of Bell Road on the west right-of-way of Tatum Road.

To reach the station from the junction of the Black Canyon Highway and Bell Road go east on Bell Road for 8 miles to Tatum Road, turn right, go south on Tatum Road for 0.1 mile to the station on right.

Station mark, a standard triangulation disk set in the top of a round concrete post which projects 1 inch and stamped GELLER 1963. The mark is 31 feet west of center of Tatum Road, 10.7 feet south of a fence corner and 9.5 feet south of witness post.

Reference mark 1, a standard reference disk set in the top of a round concrete post which is flush and stamped GELLER NO 1 1963. The mark is 71.1 feet north of witness post, 70 feet north of a fence corner and 31 feet west of center of Tatum Road.

Reference mark 2, a standard reference disk set in the top of a round concrete post which is flush and stamped GELLER NO 2 1963. The mark is 90 feet south of fence corner, 89.8 feet south of witness post and 31 feet west of center of Tatum Road.

Azimuth mark, a standard disk set in the top of a round concrete post which projects 1 inch and stamped GELLER 1963. The mark is 30 feet east of center of Tatum Road, 2.6 feet south of witness post and 3.5 feet north-northeast of a telephone pole.

To reach the azimuth mark from the station go south on Tatum Road for 0.6 mile to the mark on left.

North 1/4 corner, a Phoenix City Survey Mark located in the intersection of North 52nd Street and Bell Road. The mark is a bronze disk set about 9 inches below the surface of the Street under a small handhole cover.

RECOVERY NOTE, TRIANGULATION STATION 331114 R

NAME OF STATION: Geller
ESTABLISHED BY: C.T.A. YEAR: 1963 STATE: Arizona
RECOVERED BY:* Charles Novak YEAR: 1974 COUNTY: Maricopa BENCH MARK ALSO ☐
AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: 13 miles northeast of Phoenix
HEIGHT OF TELESCOPE ABOVE STATION MARK 5 FEET. HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET.

DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION °	′	″
Scottsdale Thunderbird Academy Water Tank		1963				
RM 3 0.15 mile				0	00	00.0
RM 2	S	79.63	24.272	55	20	27.8
RM 1	N	80.66	24.585	60	33	22
				241	00	52

The station mark and reference marks 1 and 2 were recovered, all of the marks were chiped from machinery working in the area. The azimuth mark was destroyed by construction and reference mark 3 was established at this time. The angle and distance to reference mark 2 checked about 2 1/2 minutes and about 0.054 meter.

The station mark is a standard disk stamped, Geller 1963. It is set in top of a 12 inch concrete monument which is about flush with the ground surface. It is 34 feet west of the center line of Tatum Road, 10 feet south of a fence corner and 7 feet south of witness post and sign.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: GELLER YEAR: 1963

STATE: Arizona LOCALITY: Vicinity of Phoenix

First -ORDER Triangulation SOURCE: G-13304 FIELD SKETCH: Ariz. 51

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH (OR Δα) ANGLE	MARK
STATE: Ariz. ZONE: C CODE: 0202	x 481,581.88 y 959,853.19	359° 08′ 21″ - 0 02 01 355 11 46	AZIMUTH MARK AZIMUTH MARK RM 3
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION	SECONDS IN METERS	ELEVATION
	LATITUDE: 33° 38′ 18″.9556 NORTH LONGITUDE: 111 58 37.8653 WEST		449.6 METERS 1475 FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE (Meters)
	SECOND-ORDER	
AZIMUTH MARK	359°06′19″.8	
AZIMUTH MARK RM 3	355 09 45.3	

Reference mark 1 is a standard disk stamped, Geller NO 1 1963. It is set in top of a 12 inch concrete monument which is about flush with the ground surface. The mark is 71 1/2 feet north of the witness post, 70 feet north of a fence corner and 34 feet west of the witness post.

Reference mark 2 is a standard disk stamped, Geller NO 2 1963. It is set in top of a 12 inch concrete monument which is about flush with the ground surface. The mark is 89 feet south of the witness post, 90 feet south of the fence corner and 34 feet west of the witness post.

Reference mark 3 is a standard disk stamped, Geller 1963 NO 3 1974. It is set in top of the east headwall for a culvert 0.15 mile south along Tatum Road.

The 1903 route to the station was checked and found adequate.

Irving W. Wakefield

FILE COPY

A Z 191

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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

JUN 2 1975

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1004
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33 30
111 45

Form 525b
(11-8-53)

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY

DESCRIPTION OF TRIANGULATION INTERSECTION STATION

NAME OF STATION: Scottsdale, Thunderbird Acadamy Water Tank

CHIEF OF PARTY: C.A. Annis YEAR: 1963 STATE: Arizona COUNTY: Maricopa

Description, including sketch of object:

Station is located approximately 6 miles north of the center of Scottsdale, 2.2 miles south of Bell Road and 0.3 mile east of Scottsdale Road.

Station is a silver water tank supported by 4 legs, has set of red lights on top and is approximately 125 feet high.

Point intersected was top and center.

Described by Robert P. Kormelo [signature]

Comm-DC 31313

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SCOTTSDALE THUNDERBIRD ACADEMY WATER TANK YEAR: 1963

STATE: Arizona LOCALITY: Vicinity of Phoenix

Third-ORDER Triangulation SOURCE: G-13304 FIELD SKETCH: Ariz. 51

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH (OR Δα) ANGLE ° ' "	MARK
STATE: Ariz. ZONE: C CODE: 0202	x 499,630.74 y 949,493.00	- 0 00 02	
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE: 33° 36' 36".503	NORTH		METERS
	LONGITUDE: 111 55 04.366	WEST		FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE (Meters)
STATION COMPUTED FROM: PARADISE, SQUAW PEAK, DALY, UNION, GELLER		

FORM 251 (1-25-60)

USCOMM-DC

AZ 191

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

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

sheet 1 of 2

QUAD 331114 STATION 1008
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33 30
111 45

"D" (G. L. O.) (Maricopa County, E. B. Latham, 1935).—In the south one-sixteenth of sec. 6, T. 2 N., R. 5 E., east of a lone windmill. Marked by a General Land Office pipe. Reference mark No. 1, a standard bronze reference disk, note 11a, is 21.080 meters (69.16 feet) from station in azimuth 203°43'. Reference mark No. 2, a standard bronze reference disk, set in the concrete around the well pipe at the windmill, is 23.287 meters (76.40 feet) from station in azimuth 81°16'. The azimuth mark is a General Land Office pipe marking the corners of secs. 6 and 7, T. 2 N., R. 5 E., and one-quarter mile from station in azimuth 0°12'25".

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
FORM 526

RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: D (GLO) STATE: Arizona COUNTY: Maricopa
ESTABLISHED BY: E.B.L. YEAR: 1935 LOCALITY: Scottsdale
RECOVERED BY:* D.H.K. YEAR: 1947

Detailed statement as to the fitness of the original description:

Station and reference marks at this station have been completely destroyed. Station D 2 (GLO) 1947 was established approximately 50 feet east of the old site.

Arthur A. Poling Jr.

* Name of chief of party should be inserted here. The officer who actually visited the station should sign his name at the end of the recovery note.

U. S. GOVERNMENT PRINTING OFFICE

NOTE.—One of these forms must be used for every station recovered.

16—30489-1

33 111 IE

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: D GLO YEAR: 1935

STATE: Ariz LOCALITY: Yuma to Stewart Dam

First -ORDER Triangulation SOURCE: G-3022 FIELD SKETCH: ARIZ 8-II

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (OR Δα) ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0202	x 507,896.87 y 924,686.70	0°11'33" + 0 00 52	AZIMUTH MARK (GLO)
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION	
	LATITUDE: 33°32'31".052	NORTH		395.1	METERS
	LONGITUDE: 111 53 26 697	WEST		1,296	FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE	
		LOGARITHM (Meters)	METERS
AZIMUTH MARK (GLO)	THIRD-ORDER 0°12'24".9		

USCOMM-DC 5257

FILE COPY

JUN 2 1975

USCOMM—NOAA—ASHEVILLE

AZ 191

JULY 1966
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U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON D.C.
Revised NOV 1974

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1008
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33 30
111 45

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 525
Rev. Oct., 1952

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: D 2 (G.L.O.) 1947
STATE: Arizona COUNTY: Maricopa
YEAR: 1947 LOCALITY: Phoenix
CHIEF OF PARTY: D. H. Konichek

Surface-station mark,	Note,*	1a
Underground-station mark,	Note,*	7a
Reference mark, No. 1	Note,*	11a
Reference mark, No. 2	Note,*	11a
Azimuth mark,	Note,*	11a
Witness mark,	Note,*	
Height of light above station mark	meters.	
Height of telescope above station mark	1.5meters.	

DISTANCES AND DIRECTIONS TO REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND

OBJECT	Hor.	DISTANCE	DIRECTION	AZIMUTH
		Meters	° ′ ″	° ′ ″
CAMELS BACK 2 1947			00 00 00.00	
R.M. No. 1	E	7.587	20? 44 57.	
R.M. No. 2	S	7.809	20? 38 20.	
Az. MK. 0.4 mile SW			?41 08 17.1	

Detailed description: The station is located about 12 miles air line northeast of Phoenix and about 5 miles air line northeast of Scottsdale. The station mark is stamped: "D 2 GLO 1947", and projects 6 inches. It is set 10 paces east of center line of road, 2 paces east of a north and south fence line and 5 feet east of a white witness post.

Reference mark No. 1 is stamped: "D 2 GLO NO 1 1947", projects 4 inches, and is set 12 paces east of a north and south fence line at same elevation as station mark.

Reference mark No. 2 is stamped: "D 2 GLO NO 2 1947", projects 4 inches, and is set 2 paces east of a north and south fence line at same elevation as station mark.

The azimuth mark is stamped: "D 2 GLO 1947", set flush, 11 paces north of center line of road and 6 inches north of an east and west fence line.

To reach the station from the Post Office in Scottsdale, go north on paved road 3.0 miles to a gravel road right; turn right, go 1.7 mile to azimuth mark on left; continue 0.25 mile to a "T" road; turn left, go 0.25 mile to station on right. A drive station.

(U.S.E.,1971)--Station found in good condition. A wire fence has been built over the station. RM 2 is in good condition.

Station is on east side of Pima Road, 0.25 mile N of Indian Bend Rd. Azimuth mark has been destroyed by grading operations along N side of Indian Bend Road. Fence is gone.

RECOVERY NOTE, TRIANGULATION STATION 331114 R

NAME OF STATION: D2 (GLO)
ESTABLISHED BY: D.H.K. YEAR: 1947 STATE: Arizona BENCH MARK ALSO ☐
RECOVERED BY: L.F. Smith YEAR: 1973 COUNTY: Maricopa
AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: 12 miles northeast of Phoenix
HEIGHT OF TELESCOPE ABOVE STATION MARK 5 FEET. HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET.

DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION ° ′ ″
VERDE 1935 1973				0 00 00.0
D3 (GLO) traverse distance	S	(24.846)	7.573?	19 32 16.0
RM 2 traverse distance	S	(25.620)	7.809?	110 06 27.1
D3 (GLO) RM 4 0.15 mile	N			282 33 32.4

The station mark was found nearly eroded at the west side of a small wash, reference mark 1 and the azimuth mark were destroyed by construction in the area. Reference mark 2 was in good condition. The station was moved at this time and all marks were left in place.

Larry W. Wakefield

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: D 2 GLO YEAR: 1947
STATE: Ariz LOCALITY: Phoenix to Parker
Second ORDER Triangulation SOURCE: G-8347 FIELD SKETCH: ARIZ 26

GRID DATA		COORDINATES (Feet)	PLANE AZIMUTH OF LAPLACE ANGLE	MARK
STATE: Ariz	x	507,933.69	46°18'22"	AZIMUTH MARK
ZONE: C	y	924,686.81	- 0 00 52	
CODE: 0202				
STATE:	x			
ZONE:	y			
CODE:				

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION	
LATITUDE:	33°32'31".053	NORTH		394.8	METERS
LONGITUDE:	111 53 26.262	WEST		1,295	FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
AZIMUTH MARK	THIRD-ORDER 46°17'30"5		

FORM 284 (8-1-66)

USCOMM-DC 8367

AZ 191

NOVEMBER 1974
U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

sheet 2 of 2

QUAD 331114 STATION 1008
ARIZ
LATITUDE 33°30′ TO 34°00′
LONGITUDE 111°30′ TO 112°00′
DIAGRAM NI 12-8 (ESA

33 30
111 45

C&GS FORM 525
10-681

U. S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTION OF TRIANGULATION STATION 331114

NAME OF STATION: D3 (GLO) STATE: Arizona COUNTY: Maricopa

CHIEF OF PARTY: L.F. Smith YEAR: 1973 DESCRIBED BY: L. Wakefield

NOTE.* desc. '78 HEIGHT OF TELESCOPE ABOVE STATION MARK 1.5 METERS,† HEIGHT OF LIGHT ABOVE STATION MARK 1.5 METERS.

SURFACE-STATION MARK, UNDERGROUND-STATION MARK | DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTIONS ° ′ ″
AM 4 (AZIMUTH MARK)	N	0.15 mile		0 00 00.0
AM 3	S	23.20	7.070	99 14 22
AM 2 traverse	SW	(35.870)	10.933	233 27 16.6
D2 GLO 1947 traverse	W	(24.846)	7.573	279 01 49.8

Detailed description:

The station is located in the northeast part of Scottsdale along the east side of Pima Road and 0.25 mile north of Indian Bend Road. It is in the northwest part of a grass and brush covered field which is just south of a golf course.

The station mark is a standard disk stamped, D3 GLO 1973. It is set in the top of a 12 inch concrete monument which projects 6 inches. It is 21 paces east of the center of Pima Road, 2 feet west of a witness post and sign and 1 foot south of a east-west fence line.

Reference mark 2 is a standard disk stamped, D2 GLO NO 2 1947. It is set in the top of a 12 inch concrete monument which projects about 2 inches. It is 14 paces east of the center of Pima Road, 27 feet south of the east-west fence line and 37 feet southwest of the witness post.

Reference mark 3 is a standard disk stamped, D3 GLO NO 3 1973. It is set in the top of a 12 inch concrete monument which projects 6 inches. It is 28 paces east of the center of Pima Road, 22 feet east of the witness post and 1 foot south of the east-west fence line.

Reference mark 4 is a standard disk stamped, D3 GLO NO 4 1973. It is set in a drill hole at the southwest corner of a short sidewalk which extends south about 100 feet from Intercircle Road. The mark is at the southeast corner of a small parking lot for the golf course.

To reach the station from the intersection of East McDowell Road and Pima Road in Scottsdale, go north along Pima Road for 6.3 miles to Indian Bend Road, continue north for 0.25 mile to the station on the right at the south end of a golf course.

To reach the azimuth mark (AM 4) from the station, go north for 0.15 mile to Intercircle Road. Turn left then sharp left to the southeast corner of the parking lot and the mark

*Refers to notes in manuals of triangulation and state publications of triangulation. ‡Direction-angle measured clockwise, referred to initial station.
†To nearest meter only, when no trigonometric leveling is being done.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION D 3 GLO

STATE Arizona YEAR 1973 Second-order

LOCALITY

SOURCE G-10947 FIELD SKETCH

No observational check on this position

GEODETIC LATITUDE	33 32 31.05228	ELEVATION	394.8 METERS
GEODETIC LONGITUDE	111 53 25.96847		1295 FEET

STATE COORDINATES (Feet)

STATE & ZONE	CODE	X	Y	β (OR Δ) AT ANGLE ° ′ ″
Ariz. C	0202	507,958.53	924,686.75	+ 0 00 52

*PLANE AZIMUTH HAS BEEN COMPUTED BY THE β (OR Δ) AT FORMULA NEGLECTING THE SECOND TERM

TO STATION OR OBJECT	GEODETIC AZIMUTH (From south)	PLANE AZIMUTH* (From south)	CODE
AZIMUTH MARK (AM 4	171°08′17.8	171°07′26″	0202
Position determined by traverse from station D 2 GLO			

USCOMM—NOAA—ASHEVILLE

AZ 191

JULY 1966
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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1013
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33 30
111 45

Jokake (Maricopa County, J. Bowie, Jr., 1930).—About 10 miles northeast of the courthouse in Phoenix, 0.3 mile west of the Jokake Inn, 1 mile southeast of the summit of Camel Back Mountain, 30 feet north of the center line of east and west road, and 71.7 feet northwest of the northwest corner of booster pumphouse No. 2 which is on the south side of the road. The station mark is a standard disk cast on a 1-inch bronze rod and projecting about 10 inches above the ground. Reference mark No. 1, a standard disk cast on a 1-inch bronze rod and projecting about 10 inches above the ground, is 11.590 meters (38.04 feet) from station in azimuth 85°23'. Reference mark No. 2, a standard disk cast on a 1-inch bronze rod and projecting about 10 inches above the ground, is 9.850 meters (32.35 feet) from station in azimuth 175°37'. The azimuth mark, a standard bronze disk, note 11a, is in the southwest angle of the intersecting roads, 3 feet northeast of the northeast corner of booster pumphouse No. 1, and 0.3 mile from station in azimuth 87°16'33".

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
FORM 526
(Rev. Feb. 1948)

RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: JOKAKE
ESTABLISHED BY: J.B.,Jr. YEAR: 1936 STATE: Arizona
RECOVERED BY:* N. E. Sylar YEAR: 1960 COUNTY: Maricopa

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

The Station Mark, Reference Mark No. 2 and the Azimuth Mark were recovered. The Station Mark had been hit repeatedly by road equipment and was found badly bent and leaning out of position. There was no underground mark.
Reference Mark No. 2 and the Azimuth Mark were destroyed by this unit.

FORM 526
(11-8-55)

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY

RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: JOKAKE
ESTABLISHED BY: J.B.,Jr. YEAR: 1936 STATE: Arizona
RECOVERED BY:* USGS YEAR: 1963 COUNTY: Maricopa

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

Station mark was searched for and not found, probably destroyed during road construction.

* Name of chief of party should be inserted here. The officer who actually visited the station should sign his name at the end of the recovery note.
NOTE.—One of these forms must be used for every station recovered.

COMM-DC 34314

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: JOKAKE YEAR: 1936
STATE: Ariz LOCALITY: Papago Indian Reservation
Second -ORDER Triangulation SOURCE: G-3083 FIELD SKETCH: ARIZ 14

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH & FOR Δα ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0202	x 488,195.93 y 910,106.43	87°17'50" - 0 01 17	AZIMUTH MARK
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE: 33°30'06".777	NORTH		METERS
	LONGITUDE: 111 57 19.403	WEST		FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
AZIMUTH MARK	THIRD-ORDER 87°16'33".2		

FORM 284 (9-51-58)
C 17

USCOMM-DC 8267

A 2 191

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HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1014
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33 30
111 45

Landing (Maricopa County, E. B. Latham, 1035).—On the top of a gatehouse on the south side of the Arizona Canal, about 6½ miles east of Scottsdale (air line). There is a landing field southwest of station. Marked by a standard bronze disk, set in the top of the house, 1.250 meters (4.10 feet) from the south side and equidistant from the east and west sides. Reference mark No. 1, a standard bronze reference disk, in top of floodgate, is 13.045 meters (42.80 feet) from station in azimuth 199°38'. Reference mark No. 2, a standard bronze reference disk, in top of main gate, is 15.590 meters (51.15 feet) from station in azimuth 280°09'. The azimuth mark, a standard bronze disk, is on the north side of the road about one-fourth mile from the station in azimuth 84°50'12".

Form 526
(11-8-65)

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY
RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: [illegible]
ESTABLISHED BY: [illegible] YEAR: [illegible] STATE: Arizona
RECOVERED BY:* [illegible] YEAR: 1960 COUNTY: Maricopa

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

Station recovered. The station is 15 feet S of centerline road [illegible] and bridge; 75 feet W of centerline [illegible] road and centerline drive [illegible] feet W of centerline [illegible] road and S end of dam.

Form 526
(11-8-65)

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY
RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: LANDING
ESTABLISHED BY: E.B.L. YEAR: 1935 STATE: Arizona
RECOVERED BY:* A.F.S. YEAR: 1960 COUNTY: Maricopa

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

The station mark and reference marks were recovered in good condition. The Azimuth mark was searched for but not found.

To reach the station from the intersection of West Main St. and North Country Club Drive in Mesa, Arizona, go north on North Country Club Drive for 3.6 miles to junction of Beeline Highway on the right (Northeast). Turn right and follow Beeline Highway for 2.3 miles to a dirt road on the left(north). Turn left and follow the dirt road 0.9 miles to a "T" road intersection. Turn right (east) and go about 300 ft. to a concrete gatehouse on the south side of the Arizona Canal and the station site.

Form 526
(11-8-65)

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY
RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: LANDING
ESTABLISHED BY: C&GS YEAR: 1935 STATE: Arizona
RECOVERED BY:* Carl H. Davis YEAR: 1967 COUNTY: Maricopa

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

The station mark, stamped "LANDING 1935", is about 2.5 miles north along North Scottsdale Road from the post office at Scottsdale, thence 0.6 mile east along MacDonald Drive, thence 7.3 miles east along a dirt road which parallels the south side of the Arizona Canal, in section 23, T 2 N, R 5 E, at a concrete dam on the Arizona Canal and a large concrete structure containing 3 large floodgates controlling water flow to a canal which leads south, set in the top and 3½ feet north of the south edge of a concrete building on the south side of the canal, 20 feet north of the center line of the road along the canal, and about 10 feet above the level of the road.

R.M. 1, stamped "LANDING NO 1 1935", is 43.5 feet north of the station mark, 63 feet north of the center line of the road along the canal, set in the center of the top of a concrete walkway over the dam, and about 10 feet above the level of the road.

R.M. 2, stamped "LANDING NO 2 1935", is 50.0 feet east of the station mark, set in the northeast end of a concrete structure containing 3 large floodgates controlling water flow to a canal which leads south, 1.4 feet west of the east end of the structure, and about 3 feet above the level of the road.

*Name of chief of party should be inserted here. The officer who actually visited the station should sign his name at the end of the recovery note
Note.—One of these forms must be used for every station recovered.

COAST-DC 34316

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: LANDING YEAR: 1935
STATE: Ariz LOCALITY: Yuma to Stewart Dam
Second -ORDER Triangulation SOURCE: G-3022 FIELD SKETCH: ARIZ 8-II

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (OR Δα) ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0202	x 532,084.79 y 910,536.60	84°46'43" + 0 03 29 106 35 46	AZIMUTH MARK [illegible] 3) AZIMUTH MARK RM 3
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION	
	LATITUDE: 33°30'10".894	NORTH		398.17	METERS
	LONGITUDE: 111 48 41.082	WEST		1306.3	FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
AZIMUTH MARK 3)	THIRD-ORDER 84°50'12".2		
AZIMUTH MARK RM 3	106 39 14.5		

RECOVERY NOTE, TRIANGULATION STATION 331114 R

NAME OF STATION: LANDING
ESTABLISHED BY: E.B.L. YEAR: 1935 STATE: Arizona BENCH MARK ALSO ☐
RECOVERED BY:* Charles Novak YEAR: 1974 COUNTY: Maricopa
AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: 6 1/2 miles east of Scottsdale
HEIGHT OF TELESCOPE ABOVE STATION MARK 5 FEET. HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET.

DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION
VENUS 1935 1973				° 0 ' 00 " 00.0
RM 2	E	50.31	15.334	85 25 56
RM 3 1/2 mile	W			265 58 37.9
RM 1	NE	42.63	12.994	358 56 47

The station mark and reference marks 1 and 2 were recovered as described and found in good condition. The 1935 distances are believed to be measured in slope distance. The azimuth mark was destroyed by farming or road construction and reference mark 3 was established at this time.

Reference mark 3 is a standard disk stamped, LANDING 1935 NO 3 1974. It is set in a drill hole in the north bridge abuttment for an old bridge which is out at this time.

To reach the station from the intersection of McDowell Road and Pima Road in Scottsdale, go north along Pima Road for 3.0 miles to Chaparral Road. Turn right and go east for 2.0 miles to Alma School Road. Turn left and go north for 0.8 mile to a cross road along the south side of the Arizona Canal. Turn right and go east for 2.4 miles to a gate valve on the left and bench mark Y 268 in concrete foundation. The azimuth mark (RM 3) is about 150 feet south of this point, continue east along the road for 1/2 mile to a concrete gatehouse on the left and station.

AZ 191

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 1016
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33 30
111 45

McDowell (Maricopa County, W. Mussetter, 1924; 1935).—About 25 miles, air line, northeast of Phoenix, on the westerly and lower summit of McDowell Peak, the highest point in the McDowell Mountains lying east of Paradise Valley, and west of Fort McDowell. The highest point of McDowell Peak is on the same ridge as the station, and about one-half mile east by south. In 1935 the station disk had been pried loose from the shank, but was still in the drill hole. Reference mark No. 1 (1935), a standard bronze reference disk, note 12a, is 17.620 meters (57.81 feet) from station in azimuth 214°25'. Reference mark No. 2 (1935), a standard bronze reference disk note 12a, is 6.850 meters (22.47 feet) from station in azimuth 332°50'. The azimuth mark, rock cairn on highest point about one-half mile south-southeast of station, is in azimuth 327°41'58".

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 536

RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: MCDOWELL STATE: Arizona COUNTY: Maricopa
ESTABLISHED BY: W. Mussetter YEAR: 1924 LOCALITY: Scottsdale, 13 miles north-northeast of
RECOVERED BY: C. A. Egner 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. Original description is adequate except as noted.

To reach from the post office in Scottsdale, go north on the black top road for 8.0 miles to end of black top road. Continue straight ahead, north, for 6.3 miles to a T intersection and cattle guard on the left. Here turn right, east, and go 2.0 miles to another T intersection. Here turn right, south, and go 1.7 miles to a cross road; road to right is dim and little used. Here turn left, east, off main road and follow track road for 1.8 miles to old adobe house. Circle right around far side for 0.05 mile to wood gate. Pass through and go for 0.55 mile on rough track road to T intersection of an old mining road. Here bear left and go 1.4 miles to end of truck travel. (Azimuth mark is 0.6 mile beyond at end of track road on rocky knoll across wash to right.) From here pack southeast up ridge that bows to the left, to highest point on western end of top ridge. There are twin peaks to the east about ¼ mile that are higher. A pack of one hour.

The station is a standard triangulation disk stamped: MCDOWELL 1924 1935 and is set in outcropping bedrock that projects about 8 inches above the ground.

R.M.#1 is a standard reference disk stamped: MCDOWELL NO. 1 1924 1935 and is set in outcropping bedrock that projects about 3 feet on lower side and 4 inches on upper side and is about 25 feet lower than station.

R.M.#2 is a standard reference disk stamped: MCDOWELL NO. 2 1924 1935 and is set in outcropping bedrock that projects about 1 foot and is about 3 feet lower than station.

The azimuth mark is a standard azimuth disk stamped: MCDOWELL 1946 and is set in outcropping bedrock that projects about 1 foot above the ground and is located about ¼ mile southwest of a mining camp and ¼ mile north of station.

OBJECT OBSERVED	DISTANCE		DIRECTION
MESA 1924			00 00 00.00
Azimuth mark	¼ mile	N	28 19 41.3
R.M. #2 22.315ft	6.800m	E	108 12 57
Thunderbird Field No. 2 Control Tower			264 53 07.9
R.M. #1 53.693ft	16.366m	NNW	349 51 40

Discrepancy in distance to reference marks was noted and checked.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 536

RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: MC DOWELL STATE: Arizona COUNTY: Maricopa
ESTABLISHED BY: W.M. YEAR: 1924 LOCALITY: Phoenix
RECOVERED BY: D.M.Konichek YEAR: 1947

Detailed statement as to the fitness of the original description:
Station and reference marks recovered and found in good condition. The correct distances to reference marks are listed below. The cairn originally used as an azimuth mark has been destroyed and a thorough search was made for the 1946 azimuth mark but it could not be found so a GLO mark was used.

The station is located about 25 miles air line northeast of Phoenix on a round knoll which is 0.5 mile west of and on the same ridge as the highest point of McDowell Mountain. The station mark is a bronze disk as described in note 2, projects 8 inches and is stamped: "MC DOWELL 1924 1935".

Reference mark No. 1 is a bronze disk as described in note 12a, projects 6 inches, is 10 feet lower than station mark and is stamped: "MC DOWELL NO 1 1924 1935".

Reference mark No. 2 is a bronze disk as described in note 12a, projects 10 inches, is 2 feet lower than station mark and is stamped: "MC DOWELL NO 2 1924 1935".

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: MC DOWELL YEAR 1924
STATE: Ariz LOCALITY: Maricopa-Yavapai Co. Boundary
First -ORDER Triangulation SOURCE: 81625 FIELD SKETCH: ARIZ 6

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH @ IOR Arc ANGLE	MARK
STATE: Ariz	x 528,408.50	107°07'27"	AZIMUTH MARK RM 3
ZONE: C	y 967,701.63	+ 0.03 06	
CODE: 0202			
STATE:	x		
ZONE:	y		
CODE:			

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
LATITUDE:	33°39'36".536	NORTH		1,193.9 METERS
LONGITUDE:	111 49 23.890	WEST		3,917 FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
	THIRD-ORDER		
AZIMUTH MARK	84°51'01.6		
AZIMUTH MARK RM 3	107 10 32.8		

FORM 284 (10-31-56) 87

USCOMM-DC 6267

AZ 191

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

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1016
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

MC DOWELL (Continued)

The azimuth mark is a GLO mark set in the top of a 3 inch pipe, 4 paces east of the center line of road, projects 6 inches and is stamped: "T4N,R5E,R4E,S25,S26,S30,S31 1914".

To reach the station from Phoenix, go north on 7th street from E. Van Buren Avenue for 8.3 miles to a five point intersection at Sunnyslope; turn right, go northeast on diagonal road 2.8 miles to post office at Cactus; continue north 3.2 miles to the Bell road; turn right, go 6.2 miles to a crossroad; continue east 1.5 mile to a wire gate; pass through gate, go 0.1 mile to another gate; pass through gate, go 0.5 mile to a road and gate on left; turn left through gate, go 1.1 mile to azimuth mark on right as described above; continue 1.3 mile to a "T" road; turn right, go 1.9 mile to an old adobe building on right; turn right, pass through gate and follow road south and southeast 0.6 mile to a fork; turn left, go 1.6 mile to end of truck travel at point where road crosses wash. From here, walk south up steep ridge to round knoll and station. A 1-hour pack.

OBJECT		HOR. DISTANCE Meters	DIRECTION
VERDE 1935			00 00 00.00
Control Tower, Thunder Bird Field	SW	8 mile	82 12 57.2
Az. Mk. (GLO 1914) 1947	W	3 miles	108 17 08.7
R.M. No. 1 1924	NW	16.399 m	167 10 48.
Pinnacle Pk.	NW	6 miles	176 40
R.M. No. 2 1924	E	6.813 m	285 33 14.

Observations made from a 1.2 m tripod.

Form 526
(11-8-55)

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY

RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: MCDOWELL
ESTABLISHED BY: W.M. YEAR: 1924 STATE: Arizona
RECOVERED BY: A.M.S. YEAR: 1960 COUNTY: Maricopa

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

Station mark and reference marks recovered in good condition.

To reach the station from the intersection of Indian School Rd. and Scottsdale Rd. in Scottsdale, proceed north on Scottsdale Rd. for 8.0 miles to Bell Rd. Turn right (east) for 2.0 miles. Turn left (north) through cattle-guard for 2.4 miles to a dirt road to the right and a track road to the left. Turn right (east) for 1.9 miles to adobe ruins on right. Turn right (south) and follow main road south and southeast for 0.6 miles to a "T" junction, turn left for 1.4 miles to where the road makes a sharp left turn across a wash. Proceed afoot up the steep ridge on the right to the station on the high point.

Pack time is approximately one hour and thirty minutes.

The azimuth mark described in 1947 description was not recovered at the place described but a GLO pipe and disk stamped "T4N,R5E,S30,S31,1919" were recovered at that place.

RECOVERY NOTE, TRIANGULATION STATION 331114

R

NAME OF STATION: MCDOWELL
ESTABLISHED BY: W.M. YEAR: 1924 STATE: Arizona BENCH MARK ALSO ☐
RECOVERED BY:* Charles Novak YEAR: 1974 COUNTY Maricopa
AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: 25 miles northeast of Phoenix
HEIGHT OF TELESCOPE ABOVE STATION MARK 5 FEET. HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET.

DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION
VERDE 1935 1973				° 00 00.0
RM 3 approx. 2 miles	aNW			130 36 40.3
RM 1	NW	53.80	16.399	167 10 31
RM 2	E	22.35	6.814	285 34 48

The station mark and reference marks 1 and 2 were recovered as described and found in good condition. The GLO mark which was used for an azimuth mark was searched for and not recovered. Reference mark 3 was established at this time.

Reference mark 3 is a standard disk stamped, MCDOWELL 1924 RM 3 1974. It is set in a drill hole in the east end of a concrete water trough.

To reach the station from Scottsdale, go north along Scottsdale Road for about 13 1/2 miles to Rawhide on the right, continue north for 1/4 mile to Pinnacle Peak Road. Turn right and go east for 2 miles to Pima Road. Turn right and go south for 1.7 miles to a track cross road. Turn left and go east for 1.0 mile to a side road right and a water trough. Reference mark 3 is in the east end of water trough. Continue east along the track road for 0.7 mile to a fork, take the right fork and continue east for 0.2 mile to adobe ruins on the right and a concrete water trough on the left. Turn right about 100 feet beyond this point and take a dim track road south for 0.5 mile to a T-intersection. Turn left and go east along track road which follows the south canyon wall for 1.8 miles to a sharp left turn at a deep wash. Pack south up ridges to station on second high point. A 2 hour pack.

Harry M. Caldfield

*Name of chief of party should be inserted here. The person who actually visited the station should sign his name at the end of the recovery note.

FORM C&GS-526a (12-55)
USCOMM-DC 55231-P65

U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

JULY 1966
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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

ARIZONA 191

QUAD 331114 STATION 1020
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33°30'
111°45'

Sawik (Maricopa County, E. B. Latham, 1935).—On the highest point of Sawik Mountain, a lone butte which lies about 3 miles north of the Salt River, and about 6 miles west of the confluence of the Salt and Verde Rivers. Station is about 15 feet south of a rock cairn. Marked by a standard bronze disk as described in note 2. Reference mark No. 1, a standard bronze reference disk, note 12a, is 21.778 meters (71.45 feet) from station in azimuth 54°43'. Reference mark No. 2, a standard bronze reference disk, note 12a, is 14.735 meters (48.34 feet) from station in azimuth 142°13'. No azimuth mark established. Other stations visible from the ground.

SAWIK (Maricopa County,Ariz.,E.B.L.,1935;L.W.Q.,1953)
The station and reference marks were recovered in good condition. The description is adequate. Distances to the reference marks were not checked.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SAWIK YEAR: 1935

STATE: Ariz LOCALITY: Yuma to Stewart Dam

First-ORDER Triangulation SOURCE: G-3022 FIELD SKETCH: ARIZ 8-II

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH & CORRECTION ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0202	x 547,392.60 y 922,787.02	51°19'50" + 0 05 09	AZIMUTH MARK (LANDING)
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE: 33°32'11".914	NORTH		METERS
	LONGITUDE: 111 45 40.082	WEST		FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
AZIMUTH MARK (LANDING)	51°24'59".0	3.776 452	5,976.6

FILE COPY

JAN 1967

USCOMM—ESSA—ASHEVILLE

JULY 1966
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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1021
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

Sears (Maricopa County, W. Mussetter, 1924).—About 4 miles east of the Sears K ranch on the Verde River, 1 mile south of Davenport wash, and 1½ miles southwest of Davenport Peak, a high conical rocky peak lying just south of Davenport wash about 8 miles by trail from the Verde River. Station is on a long ridge forming the divide between Davenport wash and Sheep Creek. This ridge continues to rise in elevation as it extends eastward, and the station is on a low knoll with a higher swell one-quarter mile to the eastward. Marked by a standard bronze disk as described in note 4.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SEARS YEAR: 1924

STATE: Ariz LOCALITY: Maricopa-Yavapai Co. Boundary

First-ORDER Triangulation SOURCE: 81625 FIELD SKETCH: ARIZ 6

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH or DIRECTION ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0202	x 588,290.85 y 1,082,204.20	+ 0 09 46 ~	
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE: 33°58'28".301 NORTH LONGITUDE: 111 37 31.576 WEST			METERS FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE	
		LOGARITHM (Meters)	METERS

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HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

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

Stewart Mountain (Maricopa County, E. B. Latham, 1935).—About 20 miles, air line, northeast of Mesa, about 8 miles, air line, east of the Verde River, about 1½ 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 (34.36 feet) from station in azimuth 291°14'. Reference mark No. 2, a standard bronze reference disk, note 12a, is 8.835 meters (28.99 feet) from station in azimuth 138°03'. A rock cairn (U. S. G. S.) is 9.3 meters (31 feet) from station in azimuth 186°. No azimuth mark established. Other stations visible from the ground.

DEPARTMENT OF COMMERCE — U. S. COAST AND GEODETIC SURVEY — Form 526

RECOVERY NOTE, TRIANGULATION STATION

2.

R

NAME OF STATION: STEWART MOUNTAIN — STATE: Arizona — COUNTY: Maricopa
ESTABLISHED BY: E.B. Latham — YEAR: 1935 — LOCALITY: Fort McDowell, 8 miles southeast of
RECOVERED BY:* C.A. Egner — 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 Buckhorn Mineral baths, 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 "Sahuaro Lake Ranch 17" 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 prominent peaks and thence southwesterly across flat and up highest peak to station site. A pack of 1 hour 15 minutes.

The station is a standard triangulation disk stamped: STEWART MT. 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 Sahuaro Lake and Stewart Dam to the southeast and is located 28½ feet south of the highest point marked by old rock cairn.

R.M. # 1 is a standard reference disk stamped: STEWART MT. 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.

R.M. #2 is a standard reference disk stamped: STEWART MT. 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 10½ feet by 7½ feet and sets 3 feet above the ground and is located 70 feet east-southeast of the center of the road and 15½ feet east-southeast of a 4x4 inch white witness post and is by airline about ½ mile southeast of station.

OBJECT OBSERVED		DISTANCE		DIRECTION
OTERO				00 00 00.00
R.M. # 1	31.494 ft	9.598m	ESE	111 54 16
Stewart Dam, NW corner of building				127 07 20.4
Azimuth mark	½ mile		SE	138 09 32.2
R.M. # 2	28.582 ft	8.712 m	NW	318 44 10

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

Form 526 (11-9-55) — U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY

RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: STEWART MOUNTAIN
ESTABLISHED BY: E.B.L. — YEAR: 1935 STATE: Arizona
RECOVERED BY:* A.M.S. — YEAR: 1956 COUNTY: Maricopa

2

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

Station recovered as described.
Reference marks 1 and 2 found in good condition.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: STEWART MOUNTAIN — YEAR: 1935
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 (Feet)	PLANE AZIMUTH & for Δα ANGLE	MARK
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		SECONDS IN METERS	ELEVATION	
	LATITUDE: 33°34'55".678	NORTH		912.2	METERS
	LONGITUDE: 111 33 26.682	WEST		2,993	FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
AZIMUTH MARK	THIRD-ORDER 317°28'44".4		

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: CAIRN USGS — YEAR: 1935
STATE: Ariz — LOCALITY: Tonto National Forest and Winkelman to Winslow to Phoenix
Third -ORDER Traverse (No check on this position) — SOURCE: G-7605 — FIELD SKETCH: ARIZ 23, 24

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH & for Δα 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	NORTH			METERS
	LONGITUDE: 111 33 26.645	WEST			FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
Computed from station STEWART MTN			

AZ 191

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HORIZONTAL CONTROL DATA

by the
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NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1025
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33 30
111 45

U. S. COAST AND GEODETIC SURVEY
Form 525
Rev. Oct., 1952

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: THUNDER
STATE: Arizona COUNTY: Maricopa
CHIEF OF PARTY: D.H.Koniehek
YEAR: 1947 LOCALITY: Phoenix

Surface-station mark, Note,° 1a
Underground-station mark, Note,° 7a
Reference mark, No.1 Note,° 11a
Reference mark, No.2 Note,° 11a
Azimuth mark, Note,° 11a
Witness mark, Note,°
Height of light above station mark meters.
Height of telescope above station mark, 6meters.)
Detailed description:

DISTANCES AND DIRECTIONS TO REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND

OBJECT	Hor.	DISTANCE	DIRECTION	AZIMUTH
MT DOWELL 1924			° 00 00	° ' "
Azi.Mk. 1947	S	0.3 mi.	62 04 50.4	
R.M.No.1 1947	WSW	10.528m	144 28 19	
R.M.No.2 1947	W	17.800m	241 08 06	

The station is located about 19 miles northeast of Phoenix and 14 mile north of Scottsdale in the flat area west of the Mc Dowell Mountains. The station mark is a bronze disk set 12 paces 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 northwest 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
ESTABLISHED BY: U.S.C.&G.S. YEAR: 1947 STATE: Arizona BENCH MARK ALSO ☐
RECOVERED BY: Charles Novak YEAR: 1974 COUNTY: Maricopa
AIRLINE 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.

DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION
MCDOWELL 1924				° 00 00.0"
RM 1	SW	34.50	10.535	144 28 38
RM 3 0.25 mile	W			158 25 37.4
RM 2	N	58.46	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 Pinnacle Peak Road. It is 39 feet west of the center line of Scottsdale Road, 22 feet south of the center of Pinnacle Peak Road, 6 feet southwest of a stop sign and 44 feet east of a cattle guard over Pinnacle 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 Pinnacle 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 Pinnacle Peak Road, 18 feet northwest of a junction power pole number 10 T, 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 Pinnacle Peak Road, at entrance to Stepheys Shotyard (trapshooting). It is 41 feet west of the entrance road, 37 feet north of the center of Pinnacle 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 Rawhide on the right, continue north for 1/4 mile to Pinnacle Peak Road and the station on the left.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: THUNDER YEAR: 1947
STATE: Ariz LOCALITY: Phoenix to Parker
Second -ORDER Triangulation -SOURCE: G-8347 FIELD SKETCH: ARIZ 26

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (or Δα) ANGLE	MARK
STATE: Ariz	x 497,528.76	356°25'58"	AZIMUTH MARK
ZONE: C	y 981,678.19	- 0 00 16	
CODE: 0202		92 46 46	AZIMUTH MARK RM 3
STATE:	x		
ZONE:	y		
CODE:			

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION	
LATITUDE:	33°41'54".948	NORTH		561	METERS
LONGITUDE:	111 55 29.251	WEST		1,841	FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
AZIMUTH MARK	THIRD-ORDER		
AZIMUTH MARK RM 3	356°25'41".7		
	92 46 30.5		

Form 254 (1951-961) USCOMM-DC 6251

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AZ 191

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WASHINGTON D.C.
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HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1029
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33 30
111 45

VERDE (Maricopa County,Ariz.,E.B.L.,1935)--Station is located on highest and SE end of a prominent black butte in southern part of McDowell Mts., about 6 miles airline N of Salt River and about 6.5 miles airline W of Verde River. Butte is easily identified by prominent bump on SE end.

Surface mark is a standard bronze disk in outcropping bedrock and surrounded by a triangle chiseled in rock as described in note 2a; reference marks are standard bronze disks in outcropping bedrock as described in note 12a.

Station reached from Phoenix by going N on Central Ave. about 3.0 miles and turning R on Indian School drive; go E 5.5 miles, turn L at sign reading Jokoke Inn, and go N 0.8 mile, turn R, go E 1.8 miles, continue E at sign reading Judson School 0.9 mile, turn N just W of a ditch and go 2.6 miles, turn R, go E 1.9 miles, turn L, "station G.L.O.D. 1/4 mile N," continue N 1.8 miles, take a R fork at a fence corner, follow main-traveled road 1.2 miles and turn R on graded road, follow E, 5.4 miles and continue E across wash, go 0.1 mile, turn R, go 0.1 mile to end of truck travel. Cross wash and ascend ridge to L of wash to top of ridge, then E to SE and of butte and station.

OBJECT			DISTANCE	DIRECTION
FORE (U.S.G.S.)			meters	0°00'00"0
R.M.No.2	SE	slope	11.110	97 34 19.8
R.M.No.1	S	"	2.990	150 40 00.0

Height of telescope above station mark - 1.4 meters.

VERDE (Maricopa County,Ariz.,E.B.L.,1935;recovered,F.G.J., 1938)--Station recovered as described.

Station is about 6 miles airline N of Salt River and about 6.5 miles airline W of Verde River in Arizona. It is located on highest point at SE end of a prominent black, rocky butte in southern part of McDowell Mts. This butte is easily identified by prominent rocky knoll on SE end.

Station is reached from Phoenix, Arizona, by going N on Central Ave. about 3.0 miles to Indian School drive to R. Here turn R and go easterly 5.5 miles. Thence turn L at sign (Jokoke Inn) and go northerly 0.8 mile. Thence turn R and go easterly 1.8 miles to a sign (Judson School). Here continue easterly 0.9 mile and turn N just W of a ditch. Thence go 2.6 miles. Here turn R and go E 1.9 miles. Here turn L and continue N 2.0 miles. Thence take R fork at a fence corner and follow main-traveled road 1.2 miles. Thence turn R on graded road and continue E 5.4 miles to a wash. Here continue E across wash 0.1 mile and then turn R and go 0.1 mile to end of truck travel. From here cross wash and climb steep rocky slope to L of wash to top of ridge. Thence continue easterly to SE end of butte and station site.

OBJECT		DISTANCE		DIRECTION
SUPERSTITION 1910		feet	meters	0°00'00"0
R.M.No.1	S	9.638	2.939	67 27 46
R.M.No.2	SE	35.036	10.679	14 35 35

Reference mark No.1 is S of station and about 2 feet lower in elevation. Reference mark No.2 is SE of station and about 20 feet lower in elevation.

Note: present measurements to reference marks differ from measurement taken in 1935 as present measurements are horizontal distances while those taken in 1935 are on slope distance.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
FORM 526

RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: VERDE STATE: Arizona COUNTY: Maricopa
ESTABLISHED BY: E.B. Latham YEAR: 1936 LOCALITY: Mesa, 12 miles east of north 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 Azimuth Mark was established as describe below. The measurement to reference mark no. 2 was found to differ from the old measurement a good deal, however,the new measurement was check and so is believed right.

The station is located on the highest and southeast end of a prominent black butte in the southern part ofthe McDowell Mountains, about 12 miles airline east of north of Mesa, 6 miles airline north of the Salt River, and about 6.5 miles airline west of the Verde River. The butte is easily identified by the prominent bump on the southeast end and is sometimes locally called the "Sphinx".

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: VERDE YEAR: 1935
STATE: Ariz LOCALITY: Yuma to Stewart Dam
First-ORDER Triangulation SOURCE: G-3022 FIELD SKETCH: ARIZ 8-II

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (OR ∠ ANGLE	MARK
STATE: Ariz	x 541,906.15	155°52'13"	AZIMUTH MARK 1946
ZONE: C	y 936,640.06	+ 0 04 34	
CODE: 0202		42 38 16	AZIMUTH MARK GLO MARK
STATE:	x		
ZONE:	y		
CODE:			

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
LATITUDE:	33°34'29"057	NORTH		728.6 METERS
LONGITUDE:	111 46 44.684	WEST		2,390 FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
AZIMUTH MARK 1946	155°56'46"9		
AZIMUTH MARK GLO MARK	42-42 50.1	3.929 50[illegible]	[illegible]

FORM 284 (3-31-50)

USCOMM-DC 6267

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JUN 2 1975

AZ 191

JULY 1966
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COAST AND GEODETIC SURVEY
WASHINGTON D.C.
Revised AUG 1974
VERDE (Continued)

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1029
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

To reach the station from the Scottsdale Post Office, go north on the paved road for 0.6 miles to the large canal; thence continue straight ahead for 2.6 miles to an intersection, with a large cement walled ranch in the northeast corner. Turn right here onto a graded road and go for 2.0 miles in a easterly direction; thence turn left with the main traveled road and go north for 3.1 miles to a T-intersection, here turn right as per sign "Rainbow Guest Ranch" and go east for 6.1 miles to where the main traveled road turns north or left. Take the least traveled road straight ahead and then turning right, keeping on all right forks, for 0.2 miles to a fork, here take the left fork and go 0.1 miles to another fork. Take the left fork again and follow the track road around the base of the butte for 0.3 miles. (The Azimuth Mark is located about 100 feet southwest and 100 feet above the trail road at this point. It is located on the highest point of the small rock bluff.) Continue on the track road for 0.7 miles and then turn right and go cross country for 0.1 mile to the end of turck travel. From here pack a little north of west, up the steep slopes of the butte to the southeast end and the station.

The station is a standard triangulation mark stamped VERDE 1935, set in outcropping bedrock, note 2, which projects about 2 inches above the surrounding surface. It is located 77 feet southeast of the highest point on the butte.

Reference Mark No 1 is a standard reference mark stamped VERDE NO 1 1935, set in outcropping bedrock, note 12a, which projects just slightly above the surrounding surface and is about 8 inches lower than the station. It is located south of the station.

Reference Mark No 2 is a standard reference mark stamped VERDE NO 2 1935, set in a boulder, note 12a, which projects about 5 feet above the surrounding surface and is about 9 feet below the station. It is located southeast of the station. NOTE: The telescope must be at least 1.8 meters above the mark to see this reference mark.

The Azimuth Mark is a standerd azimuth mark stamped VERDE 1946, set in a boulder, note 12a, which projects about 2 feet above the surrounding surface. It is located about. ¼ mile north-northwest of the station and 3 feet west of the edge of the bluff overlooking the track road to the station.

OBJECT	DISTANCE	DIRECTION
MCDOWELL 1924		0 00 00.0
RM NO 2	34.651 feet 10.564 meters SE	155 12 10
Windsock, Falcon Field		184 21 52.3
RM NO 1	9.631 feet 2.934 meters S	208 04 53
Control Tower, Thunderbird Field No. 2		310 36 53.2
Azimuth Mark	¼ mile NNW	359 21 27.6

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 526

RECOVERY NOTE, TRIANGULATION STATION R

NAME OF STATION: VERDE — STATE: Arizona — COUNTY: Maricopa
ESTABLISHED BY: C.B.L. — YEAR: 1935 — LOCALITY: Scottsdale
RECOVERED BY: D.H.Konichek — YEAR: 1947

Detailed statement as to the fitness of the original description: All marks found in good condition and as described with the exception of slight differences in distance and direction to reference marks. A General Land Office mark was used for an azimuth. The 1946 azimuth was not observed in 1947. The correct distances and directions are given below.

The station is located on the highest and southeast end of a prominent black butte in the southern part of the McDowell Mountains, about 6.5 miles air line west of the Verde River and about 6.0 miles air line north of the Salt River. The butte is easily identified by the prominent bump on the southeast end. Marked by a bronze disk as described in note 2, about 6 feet lower and approximately 10 paces southeast of the highest point, projects 2 inches and is stamped: "VERDE 1935".

Reference mark No. 1 is approximately 6 inches lower than the station, 3 feet north of the south brim, a bronze disk as described in note 12a, projects 3 inches and is stamped: "VERDE NO 1 1935".

Reference mark No. 2 is approximately 5 feet lower than the station, on the extreme southeast end of ridge, a bronze disk as described in note 12a, projects 16 inches and is stamped: "VERDE NO 2 1935".

The 1946 azimuth mark is a standard bronze disk stamped: "VERDE 1946", set in a boulder, note 12c, which projects about 2 feet above the surrounding surface. It is located about 3 feet west of the edge of the bluff overlooking a track road leading to the station.

The 1947 azimuth is a G.L.O. disk set in pipe, 10 paces north-northwest of a gate, 4 paces west of center line of road, projects 10 inches and is stamped: "RS ET 3, NR 6 ET S 36 S 31 SR IR". To reach, continue on road for 0.5 mile from the end of truck travel.

To reach the station from the post office in Scottsdale, go north on the main road for 6.1 miles to a graded corssroad at sign "Rainbow Ranch"; turn right, east, on graded road for 8.0 miles to a point where the road turns north, left, and sign "Rainbow Guest Ranch"; continue straight ahead, east and south, on main traveled road for 0.3 mile to the end of truck travel. From here, pack east up slope and along ridge to the highest point at the south end of ridge and station site. An hour pack.

OBJECT	HOR. DISTANCE	DIRECTION
CAMELS BACK 2 1947	Meters	00 00 00.00
Az. Mk. 1946 NW	approx. ¼ mile	87 25 22.6
R.M. No. 2 1935 SE	10.551	243 15 52.
R.M. No. 1 1935 S	2.932	296 10 24.
Az. Mk. (G.L.O.) 1947 SW	approx. 0.6 mile	334 11 24.3

Observations made from a 1.3 m tripod.

RECOVERY NOTE, TRIANGULATION STATION 331114 R

NAME OF STATION: VERDE
ESTABLISHED BY: C.B.L. — YEAR: 1935 — STATE: Arizona
RECOVERED BY: L.P. Smith — YEAR: 1973 — COUNTY: Maricopa — BENCH MARK ALSO ☐
AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: About 14 miles East of Scottsdale
HEIGHT OF TELESCOPE ABOVE STATION MARK 5 FEET — HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET

DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

OBJECT	BEARING	DISTANCE FEET	DISTANCE METERS	DIRECTION
Azimuth mark 1946 (approx. 1/4 mile north-northwest)				0 00 00.0
RM 2	SE	34.63	10.557	155 50 12
RM 1	S	9.63	2.934	208 40 06
RM 3	NNW	13.00	4.208	349 33 09

Reference marks 1 and 2 and the 1946 azimuth mark were recovered. The station mark had been removed by vandals. A new station mark was set on the original position and reference mark 3 established.

The station mark is a standard disk stamped, VERDE 1935 1973. It is set in a drill hole in a buried boulder which is 3 inches below the ground surface.

Reference mark 1 is in place but has been battered by vandals. The mark is about the same elevation as the new station.

Reference mark 2 is in good condition, set in a drill hole in a very large boulder on the east edge of the cliff. The mark is about 15 feet lower than the station.

Reference mark 3 is a standard disk stamped, VERDE 1935 1973. It is set in a drill hole in a large boulder which is about 2 1/2 feet higher than the station.

The 1946 azimuth mark is a standard disk stamped, VERDE 1946. It is set in a drill hole in a large boulder at the northwest end and high point of a spur ridge which leads almost to Shea Blvd.

To reach the station from the intersection of East McDowell Road and Pima Road in eastern part of Scottsdale, go north along Pima Road for 8.3 miles to East Shea Blvd. Turn right and go east along East Shea Blvd for 6.3 miles to a side road right which leads south toward the west end of a prominent butte. Turn right and take the left fork for about 0.1 mile to a dry wash. The azimuth mark is about 0.1 mile ahead at the northwest end of the spur ridge which ends at a cliff. The west end of the butte is the best route for packing. About a 1 hour pack.

Larry W. Wakefield

* Name of chief of party should be inserted here. The person who actually visited the station should sign his name at the end of the recovery note.

FORM C&GS-526a (12-68)
USCOMM-DC 56291-P68

U.S. DEPARTMENT OF COMMERCE
C554
COAST AND GEODETIC SURVEY

JULY 1966
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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

ARIZONA

191

QUAD 331114 STATIONS 1031, 1032
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

33°30'
111° 45'

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: HUMBOLDT LOOKOUT HOUSE YEAR: 1946

STATE: Ariz LOCALITY: Tonto National Forest and Winkelman to Winslow to Phoenix

Third ORDER Triangulation SOURCE: G-7605 FIELD SKETCH: ARIZ 23

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH @ IOR Δα ANGLE	MARK
STATE: Ariz ZONE: E CODE: 0201	x 5,680.55 y 1,088,414.66	- 0 54 41	
STATE: Ariz ZONE: C CODE: 0202	x 536,206.26 y 1,084,503.36	+ 0 04 00	

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION	
	LATITUDE: 33°58'52".080	NORTH		1,595	METERS
	LONGITUDE: 111 47 50.041	WEST		5,233 (top)	FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
Computed from stations SEVEN, ROVER, BUFORD			

Form 526
(11-8-55)

U.S. DEPARTMENT OF COMMERCE - COAST AND GEODETIC SURVEY

RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: HUMBOLDT LOOKOUT HOUSE
ESTABLISHED BY: YEAR: 1936 STATE: Arizona
RECOVERED BY:* USGS YEAR: 1963 COUNTY: Maricopa (No Previous Description)

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

Station was not found. Old US Forest Service Lookout House was probably destroyed and a new Lookout tower constructed in the near vicinity.

* Name of chief of party should be inserted here. The officer who actually visited the station should sign his name at the end of the recovery note.
NOTE.—One of these forms must be used for every station recovered.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: ROCK PINNACLE USGS YEAR: 1924

STATE: Ariz LOCALITY: Maricopa-Yavapai Co. Boundary

Third ORDER Triangulation SOURCE: 81625 FIELD SKETCH: ARIZ 6
(No check on this position)

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH @ IOR Δα ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0202	x 516,047 y 992,203	+ 0 01 46	
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION	
	LATITUDE: 33°43'39".04	NORTH			METERS
	LONGITUDE: 111 51 50.00	WEST			FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
Computed from stations MESA, BUFORD			

Rock Pinnacle (U. S. G. S.) Maricopa County, W. Mussetter, 1924)

USCOMM—ESSA—ASHEVILLE

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ARIZONA

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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

33°30'
111°45'

HORIZONTAL CONTROL DATA

by the
Coast and Geodetic Survey
NORTH AMERICAN 1927 DATUM

QUAD 331114 STATION 1033, 1034
ARIZ
LATITUDE 33°30' TO 34°00'
LONGITUDE 111°30' TO 112°00'
DIAGRAM NI 12-8 MESA

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SADDLE MOUNTAIN YEAR: 1924

STATE: Ariz LOCALITY: Maricopa-Yavapai Co. Boundary

Third-ORDER Triangulation SOURCE: 81625 FIELD SKETCH: ARIZ 6
(No check on this position)

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ IOR Δα) ANGLE	MARK
STATE: Ariz ZONE: E CODE: 0201	x 89,192 y 1,078,438	- 0 45 24	
STATE: Ariz ZONE: C CODE: 0202	x 619,855 y 1,075,956	+ 0 13 15	

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE: 33°57'25.04	NORTH		METERS
	LONGITUDE: 111 31 17.05	WEST		FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
Computed from stations BUFORD, MAZATZAL			

Saddle Mountain (Maricopa County, W. Musselter, 1924)

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: THUNDERBIRD AIRPORT CONTROL TOWER YEAR: 1947

STATE: Ariz LOCALITY: Phoenix to Parker

Third -ORDER Triangulation SOURCE: G-8347 FIELD SKETCH: ARIZ 26

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ IOR Δα) ANGLE	MARK
STATE: Ariz ZONE: C CODE: 0202	x 499,020.43 y 949,853.75	- 0 00 06	
STATE: ZONE: CODE:	x y		

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE: 33°36'40".072	NORTH		447 METERS
	LONGITUDE: 111 55 11.583	WEST		1,467 FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE LOGARITHM (Meters)	DISTANCE METERS
Computed from stations PARADISE, CAMELS BACK 2, MC DOWELL			

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 525
Rev. Oct., 1935

INTERSECTION

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: Thunderbird Field, Control Tower 1947
CHIEF OF PARTY: D.H.Konichek
STATE: Arizona COUNTY: Maricopa
YEAR: 1947 LOCALITY: Scottsdale

Surface-station mark, Note,*
Underground-station mark, Note,*
Reference mark, Note,*
Reference mark, Note,*
Azimuth mark, Note,*
Witness mark, Note,*
Height of light above station mark meters.
Height of telescope above station mark meters.†

DISTANCES AND DIRECTIONS TO REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND

OBJECT	DISTANCE	DIRECTION ° ′ ″	AZIMUTH ° ′ ″

Detailed description:

Located about 10 miles northeast of Phoenix, at the Thunderbird Airport. The control tower is an octagon shaped, glass enclosed room atop a square stuccoed building which is the most northerly building at Thunderbird Field. It is approximately 40 feet high. Finial of roof was point observed on.

To reach from the post office in Scottsdale, go north 7.8 miles to a road right; turn right, and go east 0.3 mile then north 0.1 mile to gate at entrance to Thunderbird Field. The control tower is 0.1 mile north of gate.

Described by R.J.H. Marked by .....

NOTE.—The initial direction must be to main scheme station.

* Refer to pages 108 and 109, Special Publication No. 136, or to pages 113 and 114, Special Publication No. 148.
† To nearest meter only, when no trigonometric leveling is being done.

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JAN 1967