

32°00'
110 30

Index

<u>Station</u>	<u>Project</u>
• Aqua Verde (USGS)	Davis Monthan, <i>Nogales</i>
Aviation Beacon No. 43 (USGS) (Airway Beacon - No. 12) --	
Converse (USGS)	Davis Monthan, <i>Nogales</i>
5 ET 2	Tucson, <i>Nogales</i>
5 ET 3	Tucson, <i>Nogales</i>
• Irene (USGS)	Fort Huachuca, <i>Nogales</i>
• Isolated (USGS)	Davis Monthan, <i>Nogales</i>
Mica Mtn LOT	
Mica (1904-0590-VA) USGS	Davis Monthan, Benson
• Pantano (USGS)	Fort Huachuca
• Pima County Mon 3	<i>Nogales</i>
Post (USGS)	Davis Monthan, Tucson, <i>Nogales</i>
• Rincon USGS Cairn	Davis Monthan, Benson
Saguaro No. 2 (USFS) (USGS)	Davis Monthan, <i>Nogales</i>

SUPPLEMENTAL	
Airway Beacon 12	(INACTIVE FILE Destroyed) (AVIATION Beacon No. 43 (old)) <i>Nogales - update</i>
Happy Valley LOH	Benson
Mica Mtn LOT	Benson
1-243 A	Tucson, <i>Nogales</i>
2-83 A (Inactive file)	Davis Monthan
111-88 A INACTIVE FILE	Davis Monthan

Fort Huachuca Project Master in NONE - Book: PH 492
 Davis Monthan Project Master in ARIZONA 49 - Book: PH 446
 Tucson Project Master in ARIZONA 50 - Book: PH 1263
 Benson Project Master in ARIZONA 30 - Book: PH 1626
Nogales Project Master in AZ 8 - Book: PH 1778

DESCRIPTION
HORIZONTAL CONTROL STATION

32 110 32
DIAGRAM Tucson
USGS QUAD NO. 49

2nd Order

Triangulation

Electronic - Distance Traverse

Intersected Object

Station CONVERSE County Pima State AZ
Established by NGS Year 1936 Project _____

Check one:

New Station: Write full description below USGS PH 446
 Recovery of Old Station: Recovered by USGS Year 1976 Project PH 1778

Object	Bearing	Distance		AZIMUTH
		Feet	Meters	
CLUM				176°52'36.4"

Found as described in National Geodetic Survey Description List 32 110 3, station 1039. All marks in good condition.

Note by USGS, 1976: Station reached by helicopter. Ship can land at station. Occupied only to establish EDVA elevation.

NGS Adjusted Coordinates

ARIZONA CENTRAL ZONE
X= 887981.27
Y= 453589.15
MAPPING ANGLE=+0 40 10

ELEV 3517.2 FT
QUAD 32 110 32

CONVERSE

LAT 32 14 26.9290

LONG 110 39 42.6030

FILE COPY

DESCRIPTION
HORIZONTAL CONTROL STATION

32 110 32
DIAGRAM Tucson
USGS QUAD NO. 49

1st Order

Triangulation Electronic - Distance Traverse Intersected Object
Station IRENE Country Pima State AZ
Established by NGS Year 1935 Project _____

Check one:

New Station: Write full description below USGS PH 492
 Recovery of Old Station: Recovered by USGS Year 1976 Project PH 1778

Object	Bearing	Distance		AZIMUTH
		Feet	Meters	
BEACH				23°24'44.4"

Described in National Geodetic Survey Description List 32 100 3, station 1024. All marks in good condition.

NGS Adjusted Coordinates

ARIZONA CENTRAL ZONE

X= 878921.12

Y= 369861.45

MAPPING ANGLE=+0 38 53

ELEV 3425.108 FT

QUAD 32 110 32

IRENE

LAT 32 0 39.5320

LONG 110 41 39.1330

FILE COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
Form No. 9-3223 Rev. 1968

DESCRIPTION
HORIZONTAL CONTROL STATION

32 110 32
DIAGRAM Tucson
USGS QUAD NO. 49

2nd Order

Triangulation

Electronic - Distance Traverse

Intersected Object

Station ISOLATED Country Pima State AZ
Established by NGS Year 1936 Project _____

Check one:

New Station: Write full description below USGS PH 446
 Recovery of Old Station: Recovered by USGS Year 1976 Project PH 1778

Object	Bearing	Distance		AZIMUTH
		Feet	Meters	
VAIL				71°05'30.3"

Described in National Geodetic Survey Description List 32 110 3, station 1042. All marks in good condition.

NGS Adjusted Coordinates

ARIZONA CENTRAL ZONE
X= 889909.40
Y= 393151.94
MAPPING ANGLE=+0 40 7

ELEV 3534.2 FT

QUAD 32 110 32

ISOLATED LAT 32 4 28.7290 LONG 110 39 28.3860

FILE COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
Form No. 9-3223 Rev. 1968

DESCRIPTION

HORIZONTAL CONTROL STATION

32 110 32
DIAGRAM Tucson
USGS QUAD NO 49

2nd Order

Triangulation

Electronic - Distance Traverse

Intersected Object

Station PANTANO County Pima State Arizona
Established by C&GS Year 1935 Project _____

Check one

New Station: Write full description below

Recovery of Old Station: Recovered by USGS Year 1957 Project PH 492

Object	Bearing	Distance	
		Feet	Meters

Described in U.S. Coast and Geodetic Survey description list 32 110 3, station 1026. All marks in good condition.

C&GS Adjusted Coordinates

ARIZONA EAST ZONE

X= 372404.35

Y= 364413.86

MAPPING ANGLE=-0 13 5

ELEV 3624.70 FT

PANTANO

LAT 32 0 4.4230

LONG 110 34 41.8090

FILE COPY

AUG 29 1973

DESCRIPTION
HORIZONTAL CONTROL STATION

32 110 32
DIAGRAM Tucson
USGS QUAD NO. 49

2nd Order

Triangulation Electronic - Distance Traverse Intersected Object
Station POST Country Pima State AZ
Established by NGS Year 1936 Project

Check one:
 New Station: Write full description below USGS PH 446
 Recovery of Old Station: Recovered by USGS PH 1264
USGS PH 1778
Year 1976 Project

Object	Bearing	Distance		AZIMUTH
		Feet	Meters	
WILMOT				60°18'07.5"

Described in National Geodetic Survey Description List 32 110 3, station 1022. All marks in good condition.

Note by USGS, 1976: Occupied only to verify elevation by planetable traverse.

NGS Adjusted Coordinates

ARIZONA CENTRAL ZONE ELEV 3132.0 FT
X= 867400.00
Y= 430202.66
MAPPING ANGLE=+0 37 57 QUAD 32 110 32

POST LAT 32 10 37.8510 LONG 110 43 45.2000

FILE COPY

FILE COPY

32 110 32

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
Form No. 9-3223 Rev. 1968

DESCRIPTION
HORIZONTAL CONTROL STATION

DIAGRAM Tucson
USGS QUAD NO. 49

3rd Order

Triangulation

Electronic - Distance Traverse

Intersected Object

Station RINCON USGS CAIRN

County Pima

State Arizona

Established by USGS

Year 1903

Project D 3095-3108

Check one:

New Station: Write full description below

Recovery of Old Station: Recovered by USGS

Year 1935

Project A 1165-76

PH 446^D 3095-3103

PH 1626

Object	Bearing	Distance	
		Feet	Meters

Described in U.S. Coast and Geodetic Survey description list 32 110 3, station 1056. All marks in good condition.

Described in Bull. 245, page 169 and Bull. 440, page 120 as follows:

"On the high prominent white peak of the Rincon Mountains 30 mi a little S. of E. from Tucson and 10 mi NE. of Vail station."

A new to reach as follows:

To reach from the post office in Benson drive N. for one block to U.S. Highway 80; turn left and drive W. on U.S. Highway 80 and Interstate Highway 10 for 8.3 mi to the Mescal exit; take the Mescal Exit and drive N. on rd. leading to Mescal RR. siding for 2.2 mi to RR. X-ing; continue straight ahead on main-traveled rd. for 0.45 mi to rd. fk.; take right fork and follow main-traveled graded rd. for 14.2 mi to rd. fk. just N. of Miller Canyon (this point is 0.25 mi N. of the Jess Hopkins ranch house); turn left on track rd. and go 0.05 mi to rd. and trail forks; keep left on track rd. for 0.1 mi to wire gate and end of truck travel. Leave truck and pack up Miller Canyon on dimly marked trail for about 1.4 mi to metal sign on Saguaro National Monument boundary; continue straight ahead on dim trail for about 3.0 mi to intersection of main trail on top of ridge; turn left and go about 0.5 mi to major trail forks (note this point is 8.2 mi E. of Madrona R.S. which is the western approach to Rincon Peak). Turn left as per sign "Rincon Peak 3" and follow a well marked trail to the highest point of top and station; about a 5 hour pack from end of truck travel.

Station mark and Signal: Large cairn 7 ft wide at the base and 4 ft wide at the top, 7.4 ft high centered over the station mark.

Note: Center of cairn intersected by A.K.A., 1937.

Recovered by M.A.B., 1956: No recovery note given.

C&GS Adjusted Coordinates

ARIZONA EAST ZONE

ELEV 8482.0 FT

X= 389870.8

Y= 407449.1

MAPPING ANGLE=-0 11 21

NOV 29 1973

RINCON USGS CAIRN

LAT 32 7 10.936

LONG 110 31 20.616

Not Found '76

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
Form No. 9-3223 Rev. 1968

DESCRIPTION HORIZONTAL CONTROL STATION

32 113 32
DIAGRAM Tucson
USGS QUAD NO. 49

2nd Order

Triangulation

Electronic - Distance Traverse

Intersected Object

Station SAGUARO NO 2 USFS County Pima State AZ

Established by NGS Year 1936 Project _____

Check one:

New Station: Write full description below

Recovery of Old Station: Recovered by USGS Year 1956 Project PH 446

Object	Bearing	Distance		AZIMUTH
		Feet	Meters	
CONVERSE				264°55'17.7"

Described in National Geodetic Survey Description List 32 110 3, station 1049.

NGS Adjusted Coordinates

ARIZONA CENTRAL ZONE

X= 864678.57

Y= 451260.11

MAPPING ANGLE=+0 37 45

ELEV 2678.0 FT

QUAD 32 110 32

SAGUARO ? USFS

LAT 32 14 6.4980

LONG 110 44 14.1710

FILE COPY

DESCRIPTION

Supplementary Horizontal Control Station

Station ET 2 County Pima State AZ Quad No. 49
 Project PH 1264 Year 1967
 Surveyed by checked (X) or unchecked () methods

Description:

Located about 16 mi SE. of Tucson; 3 mi N. of Vail; 3 mi NE. of U.S. Hwy. 80.

To reach from jct. of U.S. Hwys. 80 and 89 in South Tucson, go 14 mi SE. on Hwy. 80 to Houghton Rd.; thence 2.1 mi N. on Houghton Rd. to rd. jct.; thence 1.7 mi E. on gravel rd. to station on right 69 ft S. of centerline of rd.

Station mark: 1-inch iron pipe flush with ground and witnessed by small red metal flag.

ARIZONA CENTRAL ZONE ELEV 3056.7 FT
 X= 862951.4
 Y= 400874.6
 MAPPING ANGLE=+0 37 22 QUAD 32 110 32

ET 2 LAT 32 5 48.147 LONG 110 44 40.664

STATION	OBSERVED DIRECTION	DISTANCE	A-0	A-0 FT
STATIONS OBSERVED BY THIRD ORDER METHODS FROM PH 1264 1967				
1-243 A	195 43 15.8 S	10705.2	-3.2	-0.1
AIRWAY BEACON NO 12	293 32 22.8	31540.1	1.9	
FT 1	56 32 12.7 S	10203.7	-2.5	-0.2

NAD 83 VALUES AVAILABLE

FILE COPY

DESCRIPTION

32 110 32

Supplementary Horizontal Control Station

Station ET 3 County Pima State AZ Quad No. 49
 Project PH 1264 Year 1967
 Surveyed by checked (X) or unchecked () methods

Description:

Located about 13 mi (airline) ESE. of Tucson; 9 mi N. of Vail; 7.5 mi NE. of U.S. Hwy. 80; about 0.5 mi SW. of entrance to Saguaro National Monument; on low wooded ridge.

To reach from entrance of Saguaro National Monument go S. on old Spanish Trail (rd.) for 0.2 mi to jct. of Spanish Trail and Escalante Rd.; go W. on Escalante Rd. for 0.6 mi to dirt rd. S.; go S. on dirt rd. for 0.15 mi to Y-rd.; go left (SE.) for 0.05 mi to Y-rd.; go left (E.) for 0.2 mi to station on right about 20 ft S. of centerline of rd. and witnessed by small red metal tag.

Station mark: 1-inch iron pipe flush with ground.

ARIZONA CENTRAL ZONE

X= 862646.2

Y= 429239.2

MAPPING ANGLE=+0 37 27

FLEV 3035.3 FT

QUAD 32 110 32

ET 3

LAT 32 10 28.834

LONG 110 44 40.624

STATION	OBSERVED DIRECTION	DISTANCE	A-O	A-O FT
---------	--------------------	----------	-----	--------

STATIONS OBSERVED BY THIRD ORDER METHODS FROM PH 1264 1967

WILMOT RM 3	58 7 2.1	41188.1	-2.5	
POST	259 9 55.6 S	4850.2	6.6	-0.0
1-243 A	350 53 8.6 S	18290.9	3.9	-0.1

NAD 83 VALUES AVAILABLE

FILE COPY

DESCRIPTION

Supplementary Horizontal Control Station

Station MICA MTN LOT County Pima State AZ Quad No. 49
 Project PH 1626 Year 1973
 Surveyed by checked (x) or unchecked () methods

Description:

Located about 12 mi (airline) ENE. of the Saguaro National Monument headquarters and about 14.25 mi SSW. of Redington at the highest point of Mica Mtn.

Station mark: Peaked roof of metal cabin on a steel lookout tower.

To reach from Madrona Ranger Station, Saguaro National Monument, take the trail leading to Manning Camp for 4.2 mi to trail forks; keep to right fork for 0.7 mi to Grass Chack Spring and campground; continue straight ahead for 3.5 mi to trail forks; keep to left fork for 1.0 mi and Manning Camp. At Manning Camp take the westernmost trail towards Helens Dome for 0.6 mi to trail forks; keep to right fork 0.8 mi to crest of rise and sign rading "Spud Rock". Station is about 400 ft NW. of trail at the highest point of Spud Rock. From Madrona Ranger Station it is about a 5 hour pack.

Note: This lookout was called Reef Rock by C&GS in 1947. This is in error as no lookout was ever built on Reef Rock. This station is surrounded by timber and would not be suitable for extension of control from the ground.

Not Paneled.

ARIZONA EAST ZONE

ELEV 8664.5 FT

X= 383690.6

Y= 443864.8

MAPPING ANGLE=-0 12 2

MICA MTN LOT

LAT 32 13 11.110

LONG 110 32 33.960

NAD 83 VALUES AVAILABLE

FILE COPY

AUG 29 1973

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
Form No. 9-3223 Rev. 1968

DESCRIPTION
HORIZONTAL CONTROL STATION

DIAGRAM Tucson
USGS QUAD NO. 49

3rd Order
Triangulation Electronic - Distance Traverse Intersected Object
Station MICA USGS County Pima State Arizona
Established by USGS Year 1956 Project PH 446

Check one:

New Station: Write full description below
 Recovery of Old Station: Recovered by USGS Year 1973 Project PH 1626

Object	Bearing	Distance		Azimuth
		Feet	Meters	
PIETY		48767.4		181°15'12.9"

Located about 15.0 mi (airline) SSW. of Redington and 11.0 mi ENE. of Saguaro National Monument headquarters, about 0.4 mi WSW. of Mica Mtn. Look-out Tower on top of the northwest end and highest point of Spud Rock.

To reach from Madrona Ranger Station, Saguaro National Monument take the trail leading to Manning Camp for 4.2 mi to trail forks; keep to right fork for 0.7 mi to Grass Shack Spring and campground; continue straight ahead for 3.5 mi to trail forks; keep to left fork for 1.0 mi and Manning Camp. At Manning Camp take the westernmost trail towards Helens Dome for 0.6 mi to trail forks; keep to right fork 0.8 mi to crest of rise and sign reading "Spud Rock". Station is about 400 ft NW. of trail at the highest point of Spud Rock. From Madrona Ranger Station it is about a 5-hour pack.

Note: This station can also be reached from the N. by way of the Italian Ranch trail which begins near Park Tank (Sec. 30/13S/18E a total distance of about 6.4 mi.

Note: This stations sees in all directions and could be used for extension of control on future mapping projects.

Station mark: Standard USGS tablet stamped "1904 8590 VA" cemented in bedrock. Note: "MICA" is not stamped on this tablet.

USGS Adjusted 1957 Coordinates

ARIZONA EAST ZONE

X= 381468.6

Y= 443500.6

MAPPING ANGLE=-0 12 16

ELEV 8613.0 FT

MICA 1904

LAT 32 13 7.429

LONG 110 32 59.811

NAD 83 VALUES AVAILABLE

FILE COPY

ASG 29 1973

DESCRIPTION
HORIZONTAL CONTROL STATION

32 113 32
DIAGRAM Tucson
USGS QUAD NO. 49

3rd Order

Triangulation

Electronic - Distance Traverse

Intersected Object

Station PIMA COUNTY MON 3 County Pima State AZ
Established by USGS Year 1976 Project PH 1778

Check one:

New Station: Write full description below

Recovery of Old Station: Recovered by _____ Year _____ Project _____

Object	Bearing	Distance		AZIMUTH
		Feet	Meters	
IRENE CENTERLINE OF AIRWAY BEACON 12 (Dismanteled)		4.86		35°36'35.2" 194 41

Located about 3.6 mi (airline) ENE. of Vail on highest point of Pistol Hill, in northwest 1/4 section 7, T16S, R17E.

To reach from Vail, drive easterly on paved rd. for 2.4 mi to graded rd. left (NE.), thence 1.3 mi to dirt rd. SE., turn right and drive 0.15 mi to end of truck travel and trail; follow trail to top and station. About a 15-minute pack.

Station mark: 1 1/2-inch brass disk stamped "PIMA COUNTY MON 3", cemented in concrete monument.

USGS Unadjusted 1976 Coordinates

ARIZONA CENTRAL ZONE
X= 892003.2
Y= 388587.3
MAPPING ANGLE=+0 40 18

ELFV 4134.0 FT

QUAD 32 110 32

PIMA COUNTY MON 3

LAT 32 3 43.323

LONG 110 39 4.678

NAD 83 VALUES AVAILABLE

FILE COPY

PRGU Form 25

DESCRIPTION

Supplementary Horizontal Control Station

Station HAPPY VALLEY LOH County Pima State AZ Quad No. 49
 Project PH 1626 Year 1973
 Surveyed by checked (x) or unchecked () methods

Description:

Located about 18 mi (airline) NW. of Pomerene and about 12.25 mi ESE. of the Saguaro National Monument Headquarters on the first prominent top N. of Happy Valley Saddle.

Station mark: Center of a 16 x 16 ft lookout house.

Note: LOH has a gabled roof and could be occupied for future control operations on the Rincon Valley quadrangle.

Not Paneled.

ARIZONA EAST ZONE

X= 389932.8

Y= 424854.6

MAPPING ANGLE=-0 11 22

ELEV 7351.5 FT

HAPPY VALLY LOH

LAT 32 10 3.190

LONG 110 31 20.564

NAD 83 VALUES AVAILABLE

FILE COPY

AUG 29 1973

DESCRIPTION

32 110 32

Supplementary Horizontal Control Station

Station 1-243 A County Pima State AZ Quad No. 49
 Project PH 1264 Year 1967
 Surveyed by checked (X) or unchecked () methods

Description:

Located about 15.5 mi (airline) SE. of Tucson; 7 mi N. of Vail; 4 mi S. of entrance to Saguaro National Monument; 0.5 mi E. of Pantano Wash; on low ridge.

To reach from entrance to Saguaro National Monument SE. of Tucson, go S. on old Spanish Trail Rd. for 3.5 mi, thence right on dirt rd. for 0.5 mi to turnout at mouth of small draw; climb SE. up ridge about 400 ft to station on top of ridge.

Station mark: 1-inch iron pipe projecting 0.7 ft above ground.

ARIZONA CENTRAL ZONE

X= 865739.8
 Y= 411210.9
 MAPPING ANGLE=+0 37 42

ELEV 2984.4 FT

QUAD 32 110 32

1-243 A LAT 32 7 30.118 LONG 110 44 6.938

STATION	OBSERVED DIRECTION	DISTANCE	A-O	A-O FT
STATIONS OBSERVED BY THIRD ORDER METHODS FROM PH 1264 1967				
ET 2	15 43 30.0 S	10705.2	0.6	-0.1
ET 3	170 53 30.8 S	18290.9	-0.3	-0.1

NAD 83 VALUES AVAILABLE

FILE COPY