

33° 15'  
111° 00'

ARIZONA 165

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<u>Station</u>	<u>Project</u>
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BM "Y 107 1935"	--
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Gov't Hill	--
S Hewitt Ridge	--
Horrell (P.P. 5-16 B)	--
Iron Mountain (USGS)	Florence "B"
✓ Iron Mountain (C&GS) INACTIVE FILE	Florence "B"
Kings Crown	--
La Barge	--
Magma Smokestack	--
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✓ Picket Post (C&GS)	--
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Pinto (USGS)	--
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Sec Cor 33 <sup>1</sup> / <sub>4</sub> E/1S/13E INACTIVE FILE	--
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33°15'  
111°00'

ARIZONA 165

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<u>Station</u>	<u>Project</u>
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S 2-349 A	. . .
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McDowell Project Master in ARIZONA 165 - Book: PH 930  
Florence "B" Project Master in ARIZONA 119 - Book: PH 1100

Arizona (165)

Pinal County

FRASER (C&GS)

1927 N.A.D.

USC&GS, 1938

R.G. Thompson, 1946

Books: PH 2, PH 1100

D.J. Faulkender, 1965

Described in U. S. Coast and Geodetic Survey Description List  
331112 station 1007.

Reached by helicopter.

ARIZONA ZONE EAST	ARIZONA ZONE CENTRAL	V.A. Elevation:	4617.5 ft.
X= 172,328.43	*X= 706,547.91		
Y= 867,110.12	Y= 866,092.36		

\* $\Delta \alpha = +0^{\circ}22'20''$

\*Latitude  $33^{\circ}22'44.661''$

Longitude  $111^{\circ}14'24.179''$

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Dromedary (C&GS)	5°00'15.17"	184°59'49.24"	45,963.41
Millsite	19 14 00.54	199 13 23.33	17,427.85
CC 1S/10E	89 55 22.09	269 50 59.71	40,443.41
Superstition (USGS)	103 24 32.11	283 19 15.02	50,206.71
Circle (C&GS)	118 42 23.87	298 40 01.98	24,916.18
Black Cross (C&GS)	169 22 42.14	349 21 40.65	51,244.61
La Barge	182 11 28.22	2 11 33.59	21,616.07
Iron Mtn	227 46 32.20	47 48 51.78	29,016.23
Trail	250 24 23.58	70 27 14.13	27,886.87
Kings Crown	288 24 34.71	108 30 10.56	54,624.90
Whiteford	297 08 38.49	117 11 51.01	33,382.51
Apache	307 42 40.81	127 48 34.47	69,105.32
Picket Post (C&GS)	330 21 42.04	150 24 25.97	51,250.36
Summit	356 21 22.96	176 21 37.97	36,481.39

**NAD 83 VALUES AVAILABLE**

\*- Values by USC&GS

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Arizona (165)

Gila County

HORRELL

1927 N.A.D. (Adj.)

B.H. Yoakum, 1944

R.G. Thompson, 1946

Books: IPH 2, H 160

Located about 2.0 mi. NW. of Horrell Ranch house, on W. side of Pinto Creek; about 0.5 mi. N. of main wash, which empties into Pinto Creek opposite Horrell's; near S. end of highest part of rounded ridge, which runs in N.-S. direction, 168.6 ft. N. of gatepost at angle in fence, 37 ft. E. of fence line at right angle, in midst of numerous small limestone outcrop.

To reach from the Horrell Ranch house, go through corral and across Pinto Creek, thence up a main wash for 1.9 mi. to a prominent rocky point between drain forks, at S. end of a rounded ridge; leave truck and climb about 0.5 mi. up ridge (N.) to highest part and station.

Station mark: Standard tablet stamped "HORRELL 1946" cemented in rock flush with ground.

S FNF  
4-83

Reference mark No. 1: Cross chiseled in rock outcrop is 10.1 ft. from station mark in azimuth 131°06'.

Reference mark No. 2: Cross chiseled in rock outcrop is 11.35 ft. from station mark in azimuth 284°41'.

ARIZONA ZONE CENTRAL  
X= 774,013.13  
Y= 906,322.68

ARIZONA ZONE EAST  
X= 240,463.33  
Y= 906,200.68

V.A. Elevation: 3835 ft.

Latitude 33°29'17.627"

Longitude 111°01'04.536"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Gov't Hill	36°14'34.85"	216°12'10.29"	37,610.00
Pinto	72 33 28.95	252 30 10.12	32,012.08
Mound Mtn	81 09 56.02	261 05 58.80	36,865.40
Pine	96 23 58.21	276 20 51.76	28,794.47
Granite Mtn	131 41 32.86	311 40 06.97	17,641.74
Barnes	285 32 58.93	105 34 47.25	17,264.33
Webster (USGS)	299 52 47.28	119 55 10.85	25,437.53
Cone	325 41 48.28	145 43 19.77	24,957.21
Carlota	349 43 24.30	169 44 02.92	33,306.38
Hutton	352 29 33.39	172 30 23.26	58,832.37

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Arizona (165)

Pinal County

PICKETT POST (C&GS)

1927 N.A.D.

USC&GS, 1936

R.G. Thompson, 1946

Books: PH 2, PH 910

V. Jackson, 1963

Described in U. S. Coast and Geodetic Survey Description List  
331112 station 1016.

ARIZONA ZONE EAST

ARIZONA ZONE CENTRAL

\*V.A. Elevation: 4376 ft.

\*X= 197,213.51

\*X= 732,179.66

(Checked, 1963)

Y= 822,306.09

Y= 1821,714.69

\*Latitude 33°15'23.845"

Longitude 111°09'25.736"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Dromedary (C&GS)	87°37'13.12"	267°34'03.58"	29,380.13
Summit	109 30 31.54	289 28 02.81	24,421.65
Trail	181 01 53.67	1 01 59.96	53,904.65
Whitford	188 30 27.69	8 30 56.06	29,637.57
Kings Crown	224 11 01.10	44 13 52.58	38,031.64
Hutton	242 38 22.56	62 43 47.40	56,540.15
Madera	250 53 01.51	71 02 29.35	92,874.06
Pinal (C&GS)	264 43 25.38	84 54 30.19	103,324.09
Apache	265 36 38.53	85 39 47.94	29,412.93
BM 3761	302 22 58.66	122 26 16.30	36,289.04
Lime Point	305 38 59.47	125 42 07.56	35,895.93
Granite Mtn (C&GS)	310 34 22.88	130 38 40.98	52,741.62
Ajax	342 43 58.64	162 44 54.31	29,098.42

NAD 83 VALUES AVAILABLE

\*= Values by USC&GS

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Arizona (165)

Pinal County

APACHE

1927 N.A.D. (Adj.)

R.G. Thompson, 1946  
J.P. Ryan, 1963

Books: PH 2, PH 910

Located about 2.0 mi. (airline) SE. of Superior; on southern and highest point of rocky spine, locally known as "The Apache Leap".

To reach from Superior drive S. on Ray Highway for 1.95 mi.; turn left (E.) for 1.2 mi. to Grand Pacific Ore chute; leave truck and proceed E. up ridge to summit; turn right (SE.) and proceed over low saddle around rocky point into second saddle; climb S. to highest point on summit and station site. (Large rock outcropping on western edge of summit.)

Station mark: A standard tablet stamped "APACHE 1946 VA 4865" cemented in rock outcrop.

Reference mark No. 1: Standard reference mark tablet, stamped "NO 1", cemented in boulder flush with ground, 40.5 ft. from station mark in azimuth 356°31'.

Reference mark No. 2: Standard reference mark tablet, stamped "NO 2", cemented in boulder, 36.8 ft. from station mark in azimuth 283°33'.

ARIZONA ZONE EAST  
X= 226,560.05  
Y= 824,278.92

ARIZONA ZONE CENTRAL  
X= 761,488.31  
Y= 824,178.81

V.A. Elevation: 4875 ft.  
(Checked, 1963)

Latitude 33°15'45.983"

Longitude 111°03'40.377"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Lime Point	00°26'34.41"	180°26'33.25"	23,172.81
Grayback	9 22 45.50	189 21 33.56	68,647.70
Ajax	34 36 38.67	214 34 25.13	36,473.83
Picket Post (C&GS)	85 39 47.94	265 36 38.53	29,412.93
Whitford	137 23 07.25	317 20 26.01	36,801.74
Kings Crown	173 37 19.82	353 37 01.72	25,180.22
BM "Y 107"	202 19 12.31	22 20 03.01	20,643.54
Pinal (C&GS)	264 25 24.20	84 33 19.60	73,916.09
Hagen	288 04 04.00	108 07 13.73	30,916.82
Granite Mtn (C&GS)	343 41 14.19	163 42 23.13	38,098.64
BM 3761 (USGS)	356 34 19.86	176 34 28.24	21,726.65
Hutton	221 24 14.21	41 26 29.49	31,616.97

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Arizona (165)

Pinal County

BM "Y 107 1935"

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

K.B. Miller, 1963

Books: PH 2, PH 910

Described in U. S. Coast and Geodetic Survey Arizona level line No. 55 as follow:

5.9 mi. NE. along U. S. Highway 60 from Superior, Pinal County, 0.1 mi. NE. of the junction of a rd. leading S., at the top of a grade sloping NE., 100 ft. NE. of a wire fence at a cattleguard, 62 ft. SE. of the centerline of the highway, in the top of a large rock outcrop, and about 6 ft. above the level of the highway. A standard disk, stamped "Y 107 1935".

Note by K.B. Miller, 1963: Station mark is about 200 ft. SE. of centerline of highway; about 90 ft. NE. of concrete picnic table at roadside stop; in top of a large rock outcrop, and about 10 ft. higher than highway.

ARIZONA ZONE EAST

ARIZONA ZONE CENTRAL

Elevation: 4156.560 ft.

X= 234,563.30

X= 769,171.41

(Second order levels by

Y= 843,307.57

Y= 843,338.90

C&GS Arizona line 55)

Latitude 33°18'54.914"

Longitude 111°02'07.995"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Apachē	22°20'03.01"	202°19'12.31"	20,643.54
Kings Crown	119 08 33.72	299 07 24.86	12,177.20
Hutton	250 33 17.87	70 34 42.50	13,862.11

NAD 83 VALUES AVAILABLE

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Arizona (165)

Pinal County

GOV'T HILL

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

Book: PH 2

Located about 1.5 mi. (airline) S. of Miles Ranch; on highest of three points on rocky ridge running N.-S.

To reach from Miles Ranch follow Rock Creek Trail to Bull Basin Trail; proceed up Bull Basin Trail to corral; thence follow up main canyon to saddle on E.-W. ridge; proceed W. and N. around first point on N.-S. ridge to second; thence climb to summit to large rock outcropping at crest and station site. A 3 1/2 hours pack with horses.

Station mark: Standard tablet, stamped "GOV'T HILL 1946", cemented in rock outcrop.

Reference mark No. 1: Cross on rock, 9.4 ft. from station mark in azimuth 154°29'.

Reference mark No. 2: Cross on rock, 29.5 ft. from station mark in azimuth 265°48'.

ARIZONA ZONE EAST	ARIZONA ZONE CENTRAL	V.A. Elevation: 5500.6 ft.
X= 217,980.59	X= 752,041.22	
Y= 876,051.17	X= 875,899.10	

Latitude 33°24'17.449"

Longitude 111°05'26.812"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Whiteford	32°50'05.08"	212°48'22.09"	29,299.47
Trail	89 54 18.97	269 52 13.74	19,285.23
Iron Mtn	112 49 21.21	292 46 44.88	26,098.96
Mound Mtn	150 02 58.01	330 01 25.58	28,462.30
Pinto	158 08 07.90	338 07 13.80	22,338.87
Pine	169 11 28.04	349 10 46.36	34,143.82
Granite Mtn	192 07 00.71	12 07 59.54	43,031.49
Horrell	216 12 10.29	36 14 34.85	37,610.00
Hutton	313 03 14.80	133 06 28.87	40,976.23
Kings Crown	346 50 39.62	166 51 20.02	27,390.02

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Base: C. & G. S. Stations, Graham - Line

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ARI Z. 165

HEWITT RIDGE

Pinal County, Arizona 165

Cross

Occupied by A. H. Schadler - 1935

On point of ridge between Hewitt and Millsite Canyon.

Take county road from Thompsons Arboretum westerly five miles; thence, up Hewitt Canyon 4 miles. About 1 mile walk up rockyridge.

Station Mark: Standard U. S. Dept. of Agri. tablet in ledge rock.

Signal:

Datum: N. A. 1927

NAD 83 VALUES AVAILABLE

[ Latitude 33° 21' 02.87" Longitude 111° 13' 13.24" ]

To Station--	Azimuth			Back Azimuth			Distance	
	°	'	"	°	'	"	Log Meters	Miles
Comet	35	19	27.40	215	17	52.37	3.8887697	4.810
Kings Crown	278	40	33.32	98	45	30.10	4.1500359	8.778

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Arizona (165)

Pinal County

IRON MTN (USGS)

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

C.G. Merrick, 1965

Books: PH 2, PH 1100

Located about 0.5 mi. (airline) NE. of Roger's Troughs; on high, rounded, pinon-covered mountain; on highest point of rock outcrop.

To Reach from Roger's Troughs follow U. S. Forest Service Trail from Spring about 1.5 mi. to summit and station site.

Station mark: U. S. Department of Agriculture bronze tablet stamped "IRON MTN FOREST SERVICE 1938 VISIBLE AREA MAP POINT" cemented in rock outcrop.

Iron Mtn (C&GS) is 17.54 ft. from station mark in azimuth 157°37'24".

ARIZONA ZONE EAST	ARIZONA ZONE CENTRAL	Elevation: 6055.680 ft.
X= 194,015.81	X= 727,906.75	(Spirit leveling by K.S.
Y= 886,387.68	Y= 885,730.68	McLean, 1946)

$\Delta \alpha = +0^{\circ}24'42''$

Latitude 33°25'57.514"

Longitude 111°10'10.649"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Fraser (C&GS)	47°48'51.78"	227°46'32.20"	29,016.23
La Barge	95 50 36.34	275 48 22.02	20,767.07
Black Cross (C&GS)	134 58 39.62	314 55 18.25	43,698.65
Reevis	190 35 07.01	10 35 30.97	20,042.70
Boulder	197 40 39.46	17 41 31.68	26,409.63
Mound Mtn	214 03 50.54	34 04 54.53	17,558.38
Pinto	235 58 14.04	55 59 56.36	18,978.41
Gov't Hill	292 46 44.88	112 49 21.21	26,098.96
Trail	334 47 39.32	154 48 10.36	11,219.79

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Arizona (165)

Pinal County

KINGS CROWN

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

Book: PH 2

Located about 2.0 mi. (airline) NE. of Superior; about 0.5 mi. E. of Silver King Mine; on highest prominent rocky point of ridge.

To reach from Superior P. O., take U. S. Highway 60 and 70 W. for 1.7 mi.; turn right on Silver King Rd. for 0.6 mi. to rd. forks; take right fork N. for 4.0 mi. to the abandoned Silver King Mine; climb E. to summit of ridge; proceed left (N.) over first point (Queens Crown) down over saddle, thence up to summit and station site.

Station mark: Standard tablet, stamped "KINGS CROWN 1946", cemented in boulder flush with ground.

Reference mark No. 1: Standard reference mark tablet, stamped "NO 1", cemented in boulder, 22.3 ft. from station mark in azimuth 285°28'.

ARIZONA ZONE EAST	ARIZONA ZONE CENTRAL	V.A. Elevation: 5541.1 ft.
X= 223,977.56	X= 758,486.22	
Y= 849,326.02	Y= 849,178.85	

Latitude 33°19'53.568"

Longitude 111°04'13.342"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Picket Post (C&GS)	44°13'52.58"	224°11'01.10"	38,031.64
Whitford	95 18 45.76	275 16 22.49	22,215.62
Trail	136 14 29.56	316 11 44.04	36,890.06
Gov't Hill	166 51 20.02	346 50 39.62	27,390.02
Craig	249 32 40.48	69 35 06.33	24,023.59
Madera	267 06 38.53	87 13 15.26	61,326.60
Hutton	273 09 24.12	93 11 57.64	23,743.58
Pinal (C&GS)	283 08 43.89	103 16 57.82	78,419.90
BY 107"	299 07 24.86	119 08 33.22	12,177.20
Hagen	317 04 21.62	137 07 49.61	47,267.52
Granite Mtn (C&GS)	347 37 59.30	167 39 26.39	63,051.11
Apache	353 37 01.72	173 37 19.82	25,180.22

NAD 83 VALUES AVAILABLE

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Arizona (165)

Pinal County

LA BARGE

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

Book: PH 2

Located about 3.0 mi. (airline) W. of Roger's Troughs; 2.5 mi. N. of "J.F." Ranch; on highest and most prominent point of flat-topped, rocky butte.

To reach from "J.F." Ranch, follow Tortilla Camp Trail 3.5 mi. N. and W.; climb down S. into Tortilla Creek; thence climb S. to summit and station site. A 3-hr. pack with horses.

Station mark: Standard tablet, stamped "LA BARGE 1946", cemented in rock outcrop.

Reference mark No. 1: Standard reference mark tablet, stamped "NO 1", cemented in boulder, 49.15 ft. from station mark in azimuth 335°10'.

Reference mark No. 2: Drill hole in rock, 18.3 ft. from station mark in azimuth 114°19'.

ARIZONA ZONE EAST	ARIZONA ZONE CENTRAL	V.A. Elevation: 5077.2 ft.
X= 173,377.70	X= 707,233.87	
Y= 888,701.19	Y= 887,696.42	

Latitude 33°26'18.365"

Longitude 111°14'14.427"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Fraser (C&GS)	2°11'33.59"	182°11'28.22"	21,616.07
Black Cross (C&GS)	160 21 02.39	340 19 55.48	30,545.28
Iron Mtn.	275 48 22.02	95 50 36.34	20,767.07
Trail	295 42 21.22	115 45 06.54	28,240.18

**NAD 83 VALUES AVAILABLE**

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Arizona (165)

Pinal County

MAGMA SMOKESTACK

1927 N.A.D. (Sec.)

R.G. Thompson, 1946

Book: PH 2

Located in Superior at the Magma Copper Co. smelter.

Station mark and Signal: 300 ft. brick smokestack.

ARIZONA ZONE EAST

X= 211,593.66

Y= 836,023.02

ARIZONA ZONE CENTRAL

X= 746,327.44

Y= 835,670.23

V.A. Elevation: 2832 ft.  
(Ground at stack)

Latitude 33°17'40.87"

Longitude 111°06'37.87"

**NAD 83 VALUES AVAILABLE**

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Arizona (165)

Maricopa County

MOUND MOUNTAIN

1927 N.A.D. (Adj.)

USFS, 1938

R.G. Thompson, 1946

Book: PH 2

Located about 1.0 mi. (airline) SE. of Reevis Ranch; on round, pine-covered hill on divide between Campaign Creek to the E. and Reevis Creek to the W. and Pine Creek to the N.; on E. edge of highest point of mound-shaped mountain.

To reach from Reevis Ranch, follow Reevis Creek Trail 1.0 mi. S. to Carrol; thence up Forest Service Trail E. to summit of ridge overlooking Campaign Creek; turn right (SW.) on ridge and climb to summit and station site. A 2 hour pack with horses.

Station mark: U. S. Department of Agriculture bronze tablet, stamped "MOUND MOUNTAIN VISIBLE AREA MAP POINT 1938", cemented in rock outcrop.

ARIZONA ZONE EAST

ARIZONA ZONE CENTRAL

V.A. Elevation: 6265.6 ft.

X= 203,990.54

X= 737,636.36

Y= 900,837.74

Y= 900,346.03

Latitude 33°28'21.406"

Longitude 111°08'14.554"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Iron Mtn	34°04'54.53"	214°03'50.54"	17,558.38
Black Cross (C&GS)	111 52 18.59	291 47 53.04	43,901.40
Reevis	129 58 48.12	309 58 08.06	8,027.69
Boulder Mtn	170 18 56.17	350 18 44.37	10,771.05
Granite Mtn	233 08 11.57	53 10 43.02	29,040.84
Horrell	261 05 58.80	81 09 56.02	36,865.40
Pinto	303 40 47.65	123 41 26.00	7,080.90
Gov't Hill	330 01 25.58	150 02 58.01	28,462.30

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Arizona (165)

Maricopa County

PINE

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

W.F. McElwain, 1963

Books: PH 2, PH 930

Located about 2.0 mi. (airline) E. of Reeves Ranch; on low pine covered ridge.

To reach from Reeves Ranch follow Campaign Creek to Pine Creek; turn up Pine Creek for about 1.0 mi.; thence climb E. to summit of ridge and highest point and station. A 1 1/2 hour pack with horses.

Station mark: Standard tablet, stamped "PINE 1946", cemented in boulder flush with ground.

Reference mark No. 1: Drill hole in boulder, 35.2 ft. from station mark in azimuth 355°01'. (Not recovered in 1963)

Note by McElwain 1963: Reference mark No. 1 note recovered.

ARIZONA ZONE EAST

X= 211,875.96

Y= 909,644.59

ARIZONA ZONE CENTRAL

X= 745,372.02

Y= 909,284.23

VA. Elevation: 5714 ft.

(Checked 1963)

Latitude 33°29'49.252"

Longitude 111°06'42.419"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Pinto	8°29'54.27"	188°29'41.81"	12,948.63
Boulder Mtn	100 15 24.59	280 14 21.93	9,770.40
Granite Mtn	241 02 56.88	61 04 37.51	17,638.10
Horrell	276 20 51.76	96 23 58.21	28,794.47
Gov't Hill	349 10 46.36	169 11 28.04	34,143.82

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Arizona (165)

Pinal County

PINTO (USGS)

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

Book: PH 2

Located about 2.5 mi. (airline) S. of upper Horrell Ranch; on a prominent, isolated cone-shaped peak at head of Campaign Creek.

To reach from upper Horrell Ranch on Campaign Creek, follow Campaign Creek S. about 3.0 mi. to springs; climb left (E.) to summit and station site. A 2 1/2 hour pack with horses.

Station mark: Standard tablet, stamped "PINTO 1946", cemented in boulder flush with ground.

Reference mark No. 1: Drill hole in boulder, 28.4 ft. from station mark in azimuth 242°58'.

ARIZONA ZONE EAST

ARIZONA ZONE CENTRAL

V.A. Elevation: 5991.2 ft.

X= 209,845.94

X= 743,557.81

Y= 896,856.13

Y= 896,463.74

Latitude 33°27'42.551"

Longitude 111°07'05.006"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Trail	27°49'28.87"	207°48'17.64"	23,481.69
Iron Mtn	55 59 56.36	235 58 14.04	18,978.41
Mound Mtn	123 41 26.00	303 40 47.65	7,080.90
Pine	188 29 41.81	8 29 54.27	12,948.63
Granite Mtn	219 05 56.01	39 07 49.07	27,504.87
Horrell	252 30 10.12	72 33 28.95	32,012.08
Cone	283 49 24.14	103 54 14.28	45,946.76
Gov't Hill	338 07 13.80	158 08 07.90	22,338.87

NAD 83 VALUES AVAILABLE

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3/26/69

cjl

211





Arizona (165)

Maricopa County

REEVIS

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

Book: PH 2

Located about 0.75 mi. (airline) W. of Reeves Ranch; on a pine-covered hill overlooking Reeves Ranch.

To reach from Reeves Ranch climb W. to summit of hill, highest point and station.

Station mark: Standard tablet, stamped "REEVIS 1946", cemented in boulder flush with ground.

ARIZONA ZONE CENTRAL

ARIZONA ZONE EAST

V.A. Elevation: 5409.4 ft.

X= 731,446.69

X= 197,887.63

Y= 905,457.49

Y= 906,052.97

Latitude 33°29'12.430"

Longitude 111°09'27.180"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Iron Mtn	10°35'30.97"	190°35'07.01"	20,042.70
Black Cross (C&GS)	107 55 31.89	287 51 46.38	36,357.03
Boulder Mtn	218 28 03.29	38 28 31.56	6,974.10
Mound Mtn	309 58 08.06	129 58 48.12	8,027.69

NAD 83 VALUES AVAILABLE

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Arizona (165)

Gila County

ROAD T.B.M.

1927 N.A.D. (Sec.)

B.H. Yoakum, 1944

Book: H 160

Located 1.5 mi. (by rd.) S. of the residence of Mr. Horrell, on Pinto Creek; 100 ft. W. of rd. near N. end of low knoll, in notch cut in base of an "All-thorn", or "Crucifixion thron" bush. (This plant is sometimes erroneously referred to as "Palo Verde").

Station mark: Copper nail with washer.

ARIZONA ZONE EAST

ARIZONA ZONE CENTRAL

V.A. Elevation: 3284 ft.

X= 243,148.73

X= 776,936.02

Y= 892,080.36

Y= 892,249.44

Latitude 33°26'58.146"

Longitude 111°00'31.479"

**NAD 83 VALUES AVAILABLE**

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3/28/69 cjl *all*

Arizona (165)

Pinal County

SUMMIT

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

V. Jackson, 1963

Books: PH 2, PH 910

Located about 8.0 mi. (airline) W. of Superior; on the highest top to the N. of U. S. Highways 60 and 70; at a point where the highway passes over the summit (Gonzales Pass). The top, a point on N.-S. ridge is approximately 400 ft. N. and 150 ft. higher than the highway and can be seen from the highway.

To reach from Superior P.O., drive W. on Highways 60 and 70 for 8.8 mi. to the pass; climb N. up the hill (right) to the summit and station.

Station mark: Standard tablet stamped "SUMMIT 1946" cemented flush in ground.

ARIZONA ZONE EAST

X= 174,271.97

Y= 830,679.72

ARIZONA ZONE CENTRAL

X= 709,102.37

Y= 829,702.34

Elevation: 3010.929 ft.

(Third Order leveling by

K.S. McLean, 1946)

Latitude 33°16'44.453"

Longitude 111°13'56.872"

<u>Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Dromedary (C&GS)	34°00'22.14"	213°59'41.26"	11,315.27
Millsite	158 00 31.82	337 59 39.67	21,518.81
Fraser (C&GS)	176 21 39.97	356 21 22.96	36,481.39
Trail	207 38 05.86	27 40 41.18	51,649.74
Whitford	232 17 27.20	52 20 24.48	34,620.24
Picket Post (C&GS)	289 28 02.81	109 30 31.54	24,421.65

NAD 83 VALUES AVAILABLE

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3/28/69 cjl

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Arizona (165)

Pinal County

TRAIL

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

Book: PH 2

Located about 6.0 mi. (airline) NW. of Superior; 1.5 mi. S. of Roger's Troughs; on white limestone hill locally called "Montana Mtn."

To reach from Rogers Troughs go S. on old Superior Ridge Trail (part of Reeves Canyon Trail to Superior) about 1.5 mi. to summit of saddle; climb right (W.) to summit of ridge; follow ridge S. to highest point and station site. A 1 hour pack with horses.

Station mark: Standard tablet, stamped "TRAIL 1946", cemented in rock outcrop.

Reference mark No. 1: Cross on rock, 17.9 ft. from station mark in azimuth 250°45'.

ARIZONA ZONE EAST	ARIZONA ZONE CENTRAL	V.A. Elevation: 5556.6 ft.
X= 198,695.91	X= 732,757.51	
Y= 876,190.54	Y= 875,614.17	

Latitude 33°24'17.076"

Longitude 111°09'14.289"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Picket Post (C&GS)	1°01'59.96"	181°01'53.67"	53,904.65
Summit	27 40 41.18	207 38 05.86	51,649.74
Dromedary (C&GS)	28 49 18.53	208 46 02.32	62,907.66
Millsite	51 10 26.44	231 06 58.77	41,119.73
Fraser (C&GS)	70 27 14.13	250 24 23.58	27,886.87
La Barge	115 45 06.54	295 42 21.22	28,240.18
Iron Mtn	154 48 10.36	334 47 39.32	11,219.79
Pinto	207 48 17.64	27 49 28.87	23,481.69
Gov't Hill	269 52 13.74	89 54 18.97	19,285.23
Kings Crown	316 11 44.04	136 14 29.56	36,890.06
Whitford	352 05 43.24	172 06 05.37	24,820.41

NAD 83 VALUES AVAILABLE

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3/28/69 cjl

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Arizona (165)

Pinal County

WHITFORD

1927 N.A.D. (Adj.)

R.G. Thompson, 1946

Book: PH 2

Located about 3.0 mi. (airline) NW. of Superior; on a round, reddish ridge, part of mountain divide.

To reach from Superior P.O., take U. S. Highways 60 and 70 for 1.7 mi.; turn right (N.) on Silver King Rd. for 0.6 mi. to rd. forks; take left fork (W.) for 1.8 mi.; turn right (N.) on the Happy Camp Rd. for 3.5 mi. to mine dump; continue 0.9 mi. to end of truck travel. Climb W. 0.75mi. to summit of ridge, highest point and station. A 45 minute pack.

Station mark: Standard tablet, stamped "WHITFORD 1946", cemented in rock outcrop.

Reference mark No. 1: Standard reference mark tablet, stamped "NO 1" cemented in rock outcrop, 26.5 ft. from station mark in azimuth 39°53'.

ARIZONA ZONE EAST	ARIZONA ZONE CENTRAL	V.A. Elevation: 3569.4 ft.
X= 201,876.16	X= 736,350.72	
Y= 851,574.64	Y= 851,056.15	

Latitude 33°20'13.843"

Longitude 111°08'34.057"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Picket Post (C&GS)	8°30'56.06"	188°30'27.69"	29,637.57
Summit	52 20 24.48	232 17 27.20	34,620.24
Millsite	88 04 26.85	268 00 37.26	35,468.06
Fraser (C&GS)	117 11 51.01	297 08 38.49	33,382.51
Trail	172 06 05.37	352 05 43.24	24,820.41
Gov't Hill	212 48 22.09	32 50 05.08	29,299.47
Kings Crown	275 16 22.49	95 18 45.76	22,215.68
Apache	317 20 26.01	137 23 07.25	36,801.74

NAD 83 VALUES AVAILABLE

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*OK*  
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Arizona (165)

Maricopa County

1-36 A

1927 N.A.D. (Sec.)

R.W. Hendrickson, 1963

Book: PH 930

Located about 17 mi. (airline) NNE. of Florence Junction; 16 mi. NNW. of Superior; 13 mi. SSW. of Roosevelt Dam; 0.5 mi. N. of Fish Creek on top of large ridge.

Reached by helicopter.

Station mark: Drill hole in rock outcrop.

ARIZONA ZONE CENTRAL	ARIZONA ZONE EAST	V.A. Elevation: 4845 ft.
X= 711,919.9	X= 178,415.6	
Y= 908,604.0	Y= 909,528.3	

Latitude 33°29'44.912"

Longitude 111°13'17.480"

**NAD 83 VALUES AVAILABLE**

**FILE COPY**

3/28/69 cjl

Arizona (165)

Pinal County

2-349 A

1927 N.A.D. (Sec.)

K.B. Miller, 1963

Book: PH 910

Located about 2 mi. S. and 2 mi. W. of Superior, Arizona; on summit of low foothill; about 1500 ft. W. of a gravel rd.

Station mark: A chiseled cross on rock outcrop on highest point of hill.

ARIZONA ZONE CENTRAL

V.A. Elevation: 2803 ft.

X= 742,330

Y= 825,108

Latitude 33°15'56.67"

Longitude 111°07'25.91"

**NAD 83 VALUES AVAILABLE**

**FILE COPY**

3/28/69 *cjl/Blon*

Arizona (165)

Gila County

~~P.P.~~ 4-90A

1927 N.A.D.

B. H. Yoakum, 1944

Books: H 159, H 160

Located about 2.5 mi. (air line) SW. of Horrell Ranch residence on Pinto Creek, about 1.25 mi. W. of rd. leading to Horrell Ranch, on main divide between Pinto Creek E. and West Fork N. It is on highest part of summit at N. end of brush covered ridge, about 0.25 mi. N. of low saddle at heads of branches of Pinto Creek and West Fork, the latter having and earth tank near its headwaters. The station is about 1 ft. E. from SE. corner of large brown boulder.

To reach station from Horrell's residence, drive S. on rd. 1.8 mi. to sharp bend in rd. at drain X-ing; leave truck and walk W. up ridge between drains about 1.0 mi. to N.-S. fence; cross fence and continue about 0.25 mi. to highest point on N. end of summit.

Station mark: Chiseled cross inside a triangle on small fixed granite boulder.

Reference mark No. 1: Chiseled cross on top of rock in place is 12.5 ft. from station mark in azimuth  $7^{\circ}37'$ .

Reference mark No. 2: Chiseled cross on top of rock in place is 14.26 ft. from station mark in azimuth  $150^{\circ}04'$ .

Signal: Century plant seed stalk set against a large boulder and surrounded by rock, 4.7 ft. from station mark in azimuth  $93^{\circ}24'$ .

V.A. Elevation: 4316 ft.

Latitude:  $33^{\circ}26'25.214''$

Longitude:  $111^{\circ}01'30.433''$

**NAD 83 VALUES AVAILABLE**

12/20/60 hd *ce*

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Arizona (165)

Pinal County

7-1112 A

1927 N.A.D. (Unadj.)

R. W. Hendrickson, 1965

Book: PH 1100

Located about 18 mi. (Airline) E. of Apache Junction; about 11 mi. NE. of Florence Junction; on a low ridge between Fraser Canyon and Randolph Canyon.

Station reached by helicopter.

Station mark: Railroad spike driven in top.

Reference marks: None set.

Signal: White flag over red cross-target on 2 x 4 pole centered over station mark.

Signal data:	TWF	13.0 ft.
	BWF	10.0
	TRXT	9.3
	BRXT	6.8

Photo No.: Paneled

ARIZONA ZONE CENTRAL  
X=704,554.0  
Y=875,229.7

V. A. Elevation: 3403.9 ft.

$\Delta \alpha = +0^{\circ}22'08''$

	LAT. $33^{\circ} 24' 15.193''$	LONG. $111^{\circ} 14' 46.998''$	
STATION	AZIMUTH	BACK AZIMUTH	DISTANCE
Iron Mtn. (C&GS)	$246^{\circ} 6' 58.664''$	$66^{\circ} 9' 30.814''$	25606.19
7-1113 X	$347^{\circ} 35' 29.243''$	$167^{\circ} 35' 41.864''$	9049.80

NAD 83 VALUES AVAILABLE

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4-7-65 sms *walk*

Arizona (165)

Pinal County

7-1113 X

1927 N.A.D. (Unadj.)

H.R. Poulsen, 1965

Book: PH 1100

Located approximately 300 ft. N. of triangulation station Frazer (C&GS) on high point.

Station Mark: Ring of rocks on highest part of hill.

Signal: None

Photo No.: Not identified.

ARIZONA ZONE CENTRAL

V.A. Elevation: 4615.3 ft.

X=706,555.4

Y=866,404.5

$\Delta \alpha = +0^{\circ}22'20''$

	LAT. $33^{\circ} 22' 47.749''$	LONG. $111^{\circ} 14' 24.067''$	
STATION	AZIMUTH	BACK AZIMUTH	DISTANCE
Superstition (USGS) (C&GS)	$103^{\circ} 3' 34.375''$	$282^{\circ} 58' 17.217''$	50144.52
7-1111 B	$138^{\circ} 10' 1.895''$	$318^{\circ} 8' 28.466''$	21567.93
7-1112 A	$167^{\circ} 35' 41.887''$	$347^{\circ} 35' 29.268''$	9049.80
Black Cross (C&GS)	$169^{\circ} 18' 11.469''$	$349^{\circ} 17' 9.918''$	50939.65
7-1106 A	$172^{\circ} 52' 38.403''$	$352^{\circ} 52' .857''$	46527.79
Iron Mtn. (C&GS)	$228^{\circ} 11' 16.708''$	$48^{\circ} 13' 36.185''$	28805.87
Frazer (C&GS)	$1^{\circ} 44' 35.531''$	$181^{\circ} 44' 35.471''$	312.15

NAD 83 VALUES AVAILABLE

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4/8/65 slh *slh*



Arizona (165)

Pinal County

11-1564 A

1927 N.A.D. (Sec.)

K.B. Miller, 1963

Book: PH 910

Located about 6 mi. N. and 1 mi. W. of Ray; Arizona; on the divide between Devils Canyon and Rawhide Canyon; on highest point of small top on ridge.

Station mark: A chiseled cross on boulder flush with ground.

ARIZONA ZONE CENTRAL

ARIZONA ZONE EAST

V.A. Elevation: 4071 ft.

X= 774,693

X= 239,799

Y= 826,338

Y= 826,218

Latitude 33°16'06.26"

Longitude 111°01'04.65"

**NAD 83 VALUES AVAILABLE**

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3/28/69 cjl *WJA*

33 111 2

33°15'  
111°00'

ARIZONA 165

<u>NAME</u>	<u>STATION</u>
✓ Fraser	1007
✓ Iron Mountain	1009
✓ Miles	1011
✓ Nick	1012
✓ Pickett Post	1016
✓ Superior	1021

FILE COPY ✓

# HORIZONTAL CONTROL DATA

by the  
Coast and Geodetic Survey  
NORTH AMERICAN 1927 DATUM

ARIZONA 165  
QUAD 331112 STATION 1007  
ARIZ  
LATITUDE 33°00' TO 33°30'  
LONGITUDE 111°00' TO 111°30'  
DIAGRAM NI 12-8 MESA

FRASER (Pinal County, Ariz., F.G.J., 1938)--About 9 miles N and 5 1/2 miles E of Florence Junction and 8 miles W and 6 miles N of Superior, Ariz. Station is on highest point of divide between Mill-site Creek on E and Fraser Creek on W. Peak has almost vertical cliffs on E and N.

Surface, reference, and azimuth marks are standard bronze disks in outcropping bedrock as described in notes 2 and 12a.

Station is reached from post office in Florence Junction, Ariz. by going NW on Ariz. 70, 0.05 mile to a paved road leading R. Thence turn R and follow paved road 2.1 miles to Queen Creek Bridge. Continue on 0.05 mile to a track road leading R. Turn R and follow main-traveled road 3.15 miles to a fork. Thence take L fork and follow main-traveled road 2.45 miles to a dim R fork. Thence keep straight ahead, L fork main-traveled road 0.4 mile to a dim R fork. Main-traveled road goes L 0.25 mile to a ranchhouse. Turn R on dim road and go northerly 2.45 miles to a fork. Take R fork and continue on 0.05 mile to a wire gate. Thence continue 0.2 mile to a point where road curves to R and end of truck travel. From here station site is visible about 2 1/2 miles distant at 46° magnetic. From here go northerly on, bearing 350° magnetic about 0.2 mile to a wash. Here turn R up wash and continue in left-hand main wash to a saddle on ridge. Thence R along ridge to highest point and station site. This station is about a 3-hour pack.

Reference mark No. 1 is W of station at about same elevation. Reference mark No. 2 is N by E of station at about same elevation. Azimuth mark is about 2 1/2 miles SW of station and about 2000 feet lower in elevation. It is about 100 feet NE of end of truck travel on western slope of a hill.

Reference mark No. 1 is W of station at about same elevation. Reference mark No. 2 is N by E of station at about same elevation. Azimuth mark is about 2 1/2 miles SW of station and about 2000 feet lower in elevation. It is about 100 feet NE of end of truck travel on western slope of a hill.

OBJECT		DISTANCE		DIRECTION
DROMEDARY	feet	meters		0°00'00"0
R.H.No.1	W	11.995	3.657	83 48 48
R.H.No.2	NxE	13.460	4.403	187 47 12
Azimuth mark	SW	approx. 2 1/2 miles	50 40 09.0	
Height of telescope above station mark - 1.4 meters.				

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
Form 588

RECOVERY NOTE, TRIANGULATION STATION

NAME OF STATION: FRASER STATE: Arizona COUNTY: Pinal  
ESTABLISHED BY: F.G.J. YEAR: 1938 LOCALITY: Superior  
RECOVERED BY: D.H.Konichek YEAR: 1946

Detailed statement as to the fitness of the original description:

Station and reference marks found as described and in good condition except that the published distance to reference mark No. 2 as given in meters is incorrect. The correct distance is given below. The azimuth mark was not searched for as the original description was not followed to reach the station.

The station is located about 11 miles air line northeast of Florence Junction and about 9 miles air line northwest of Superior, on the highest point of the divide between Mill Site Creek on the east and Fraser Creek on the west. The station mark is a bronze disk stamped; "FRASER 1938", set in outcropping bedrock flush with ground on the highest point of a rounded peak, 8 paces north of the south brim and 8 paces south of north brim.

Reference mark No. 1 is a bronze disk stamped: "FRASER NO 1 1938", set in outcropping bedrock flush with ground, 5 paces north of the south brim and 1 pace south of the north brim. It is at the same elevation as the station mark.

Reference mark No. 2 is a bronze disk stamped: "FRASER NO 2 1938", set in outcropping bedrock flush with ground, 4 paces west of the east brim and 4 paces northwest of the highest point of peak. It is at the same elevation as the station mark.

To reach station from post office in Superior; go west on highway U.S.#60 & 70 to a dirt road right at sign "SNOW WHITE PERLITES MINES 5 miles"; turn right, go 0.05 mile to fork; turn right and follow main traveled road 4.8 miles to a dim road right;

turn right down into Queen Creek, then right, across creek and up Hewitt Canyon 0.35 mile to a wire gate; pass through gate, follow canyon 1.9 mile to a dim road left leading up canyon; turn left and go 1.4 mile to end of truck travel at large bedrock in bottom of canyon. From here walk up main canyon keeping to the right of the large rock projection, to mouth of another canyon on the left; at which point a large rock butte can be seen to the northwest; walk up left hand canyon, to right of butte, to the head of the canyon at saddle; thence right, northeast, up ridge to highest point and station as described above. A three hour pack.

OBJECT		HOR. DISTANCE		DIRECTION
ROADSIDE 1938 (Az. Mk.)		Meters		0 00 00
R.H.No.2 1938	NNE	4.109		102 16 56
R.H.No.1 1938	"	3.645		358 17 55

Observations made from a 1.3 meter tripod.

## ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: FRASER YEAR: 1938  
STATE: Ariz LOCALITY: Tonto National Forest and Winkelman to Winslow to Phoenix  
First-order Triangulation SOURCE: G-7605 FIELD SKETCH: ARIZ 24

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH & INTERIOR ANGLE	MARK
STATE: Ariz ZONE: E CODE: 0201	x 172,328.44 y 867,110.20	56°15'56" - 0 35 26	AZIMUTH MARK
STATE: Ariz ZONE: C CODE: 0202	x 706,547.91 y 866,092.36	55°18'10" + 0 22 20	AZIMUTH MARK

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE:	LONGITUDE:		
	33°22'44".661	111 14 24.179		1,407.3 4,617
				METERS FEET

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE	
		LOGARITHM (Meters)	METERS
AZIMUTH MARK	THIRD-ORDER 55°40'29".9		

V.A.ELEV. 4617.5 FT (USGS 1965)

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AUG 1969

JULY 1966

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

REVISED JUNE 1969

# HORIZONTAL CONTROL DATA

by the  
 Coast and Geodetic Survey  
 NORTH AMERICAN 1927 DATUM

QUAD 331112 STATION 1008  
 ARIZ  
 LATITUDE 33°00' TO 33°30'  
 LONGITUDE 111°00' TO 111°30'  
 DIAGRAM NI 12-8 MESA

**Granite Mountain** (Pinal County, E. B. Latham, 1935; 1936).—About 10½ miles south-southeast of Superior and 3 miles west of the mining town of Ray, on the summit of the westerly and highest peak of Granite Mountain, a prominent and well-known peak lying at the north end of the extensive and rugged range known as The Spine and about 1½ miles south of the Ray-Superior Highway; in the center of the bare summit, about on the centerline of the shallow saddle to the north. Marked by a standard disk set in concrete in a depression in bedrock, note 3. Reference mark No. 1, a standard bronze reference disk, note 12a, is southeast of the station on a slight, rocky rise and 8.290 meters (27.20 feet) from station in azimuth 278°38'. Reference mark No. 2, a standard bronze reference disk, note 12a, is at south edge of the summit and 10.998 meters (36.08 feet) from station in azimuth 15°08'. The azimuth mark (1936), a standard bronze disk, note 12a, is 200 feet south of the Ray-Superior Highway, 140 feet east of dirt track road leading towards base of ridge, on the lower summit at the north end of a small limestone knoll, on the ridge line, in a low, sharp, outcrop of bedrock and 2 miles from station in azimuth 148°12'50".

DEPARTMENT OF COMMERCE  
 U. S. COAST AND GEODETIC SURVEY  
 Form 534

## RECOVERY NOTE, TRIANGULATION STATION

NAME OF STATION: GRANITE MT. STATE: Arizona COUNTY: Pinal  
 ESTABLISHED BY: E. B. Latham YEAR: 1935 LOCALITY: Superior  
 RECOVERED BY: D. H. Konichek YEAR: 1947

Detailed statement as to the fitness of the original description:

Station recovered and all marks found in good condition as described with the exception of difference in direction to Reference mark No. 1 and difference in distance to Reference mark No. 2, correct direction and distances listed below.

OBJECT	DISTANCE	DIRECTION
PICKET POST 1936	Meters	00 00 00.00
Azimuth mark 1936 <i>NI</i> Approx. 2.0 miles		17 34 10.5 "
R.M. No. 1 1935 ESE "	8.290	147 54 11. "
R.M. No. 2 1935 SSW "	10.990	244 29 40. "

The station is located about 10.5 miles south-southeast of Superior and 3.0 miles west of the mining town of Ray, on the summit of the westerly and highest peak of Granite Mountain; in the center of a bare summit set in outcropping bedrock flush with the ground surface and is stamped "GRANITE MT. 1935".

Reference mark No. 1 is approximately the same elevation as the station, set in outcropping bedrock flush with the ground surface and stamped "GRANITE MT NO 1 1935".

Reference mark No. 2 is approximately 14 inches lower than the station, set in outcropping bedrock flush with the ground surface and stamped "GRANITE MT NO 2 1935".

The azimuth mark is on a low knoll 200 feet south of the Ray Superior Highway, 132 feet southeast of center line of road to station just after right turn off highway mentioned in description, on the lower summit at the north end of a small limestone knoll set in outcropping bedrock which projects 6 inches and stamped "GRANITE MOUNTAIN 1935&1936".

To reach from the post office in Superior; go northeast on the Globe Highway for 0.15 mile to the junction of the Ray Highway with U.S. routes #60 & #70 just after crossing Queen Creek bridge; here keep straight ahead on the Ray Highway for 11.0 miles to the remains of several old buildings on the right at the bottom of a canyon, continue straight ahead for 0.6 mile to the intersection of a side road right; turn right leaving main highway (Azimuth mark is on the low knoll to the left) and go 0.15 mile to an old slag pile on the left and end of truck travel; from this point pack south-southeast to the highest point and station site. A 1½ hour pack.  
 Observations made from a 1.3 meter tripod.

## ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: GRANITE MOUNTAIN  
 STATE: ARIZONA YEAR: 1935, 1947 FIRST-ORDER  
 LOCALITY: TONTO NAT FOREST AND WINKELMAN TO WINSLOW TO PHOENIX  
 SOURCE: G-3058, G-3083, G-7605 FIELD SKETCH: ARIZ 9, 14, 24

GEODETIC LATITUDE:	33 09 44.19570	ELEVATION:	1234.9 METERS
GEODETIC LONGITUDE:	111 01 34.50090		4052 FEET

STATE COORDINATES (Feet)				
STATE & ZONE	CODE	X	Y	θ (OR Δ α) ANGLE
ARIZ. E.	0201	236,947.92	787,624.49	- 0 28 13
ARIZ. C.	0202	772,487.92	787,703.32	+ 0 29 14

TO STATION OR OBJECT	GEODETIC AZIMUTH (From mark)	PLANE AZIMUTH (From mark)	CODE
AZIMUTH MARK 1936	148 12 49.9	148 41 03	0201
AZIMUTH MARK 1936	148 12 49.9	147 43 36	0202

JULY 1966

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

ARIZONA 165

QUAD 331112 STATION 1009  
ARIZ  
LATITUDE 33°00' TO 33°30'  
LONGITUDE 111°00' TO 111°30'  
DIAGRAM NI 12-8 MESA

33°15'  
111°00'

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
FORM 502  
Rev. Oct., 1952

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: IRON MT.  
CHIEF OF PARTY: U.H. Konichek  
Surface-station mark, Note, 2  
Underground-station mark, Note, 0  
Reference mark, No. 1 Note, 12a  
Reference mark, No. 2 Note, 12a  
Azimuth mark, Note, 12a  
Witness mark, Note, 0  
Height of light above station mark meters.  
Height of telescope above station mark 1.0 meters.

STATE: Arizona COUNTY: Pinal  
YEAR: 1947 LOCALITY: Superior

DISTANCES AND DIRECTIONS TO REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND			
OBJECT	BG	DIRECTION	ADJUST
	MARKS		
FRASER 1938		00 00 00.00	
R.M. No. 1 1947 NE	8.967	192 23 50.	
R.M. No. 2 1947 SE	10.882	272 42 17.	
As. Mk. 1947 SSW approx.			
1.0 mile airline.		326 03 31.0	

Detailed description:  
The station is located about 15 miles airline northwest of Florence Junction, about 10.5 miles north-northwest of Superior, on the highest point of the divide between Heavis Creek and Rogers Canyon, on what is locally known as Iron Mountain and sometimes used by the Forest Service as a Look Out. It is on the highest point of a north-south ridge, projects 8 inches and is stamped "IRON MT 1946".

Reference mark No. 1 is approximately 3 feet lower than the station, projects 8 inches and is stamped "IRON MT NO 1 1946".

Reference mark No. 2 is approximately the same elevation as the station, projects 10 inches and is stamped "IRON MT NO 2 1946".

The azimuth mark is located in a low saddle approximately 1.0 mile by road before reaching the end of truck travel, 20 paces west of center line of road, 6 inches east of a B.M. painted on rock, projects 1 foot and stamped "IRON MT 1946".

To reach from the post office in Superior; go west on routes U.S. #60 and #70 for 4.6 miles to a side road right as per sign "Snow White Perlite Mine"; turn right and follow the main traveled road for 3.3 miles to Hewitts School House on the right; continue for 1.6 miles to a dim track road right going down into Queen Creek; turn right cross Queen Creek and follow road up Hewitt Canyon for 0.35 mile to a wire gate; pass through gate and continue up canyon for 2.0 miles to a fork; keep right up Hewitt Canyon on dim tracks for 5.4 miles to point where road leaves canyon and the end of truck travel, a small fenced in area and a car loading dump ahead on the left. A jeep can be driven over the old trail which goes to the base of Iron Mountain about 8 miles from this point. From the end of truck travel continue on the old road for 0.5 mile to a point where it comes out of canyon; turn sharp left and follow winding road for 0.8 mile to the north side of wash and another fork; take left fork and follow the old road which is very plain for 3.7 miles to the top of ridge and azimuth mark; continue down wash for 0.7 mile to an old cabin and watering troughs and end of truck travel for a jeep. From this point pack up canyon along old pipe line which runs to a spring; here cross to the right side of wash and continue north-northeast along a good trail to top of mountain and station site as described above. A 1 hour pack.

(Army Map Service, 1967)--Station, reference and azimuth marks were recovered in good condition. Description adequate.

U.G. BURDINE

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: IRON MOUNTAIN YEAR: 1947  
STATE: Ariz LOCALITY: Tonto National Forest and Winkelman to Winslow to Phoenix  
First-order Triangulation SOURCE: G-7605 FIELD SKETCH: ARIZ 24

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH & (ORDERS ANGLE	MARK
STATE: Ariz ZONE: E CODE: 0201	x 194,008.46 y 886,404.53	14°23'28" - 0 33 10	AZIMUTH MARK
STATE: Ariz ZONE: C CODE: 0202	x 727,899.12 y 885,747.37	13 25 36 + 0 24 42	AZIMUTH MARK

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE:	NORTH WEST		
	33°25'57"679	111 10 10.738		1,844.8 6,052

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE	
		LOGARITHM (74000)	METERS
AZIMUTH MARK	THIRD-ORDER 13°50'18"5		

ELEV. 6054.7 FT (PTL USGS 1965, PH 1100)

FILE COPY

OCT 1972

JULY 1966

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

REVISED JUNE 1969, MAY 1972

# HORIZONTAL CONTROL DATA

by the  
Coast and Geodetic Survey  
NORTH AMERICAN 1927 DATUM

QUAD 331112 STATION 1010  
ARIZ  
LATITUDE 33°00' TO 33°30'  
LONGITUDE 111°00' TO 111°30'  
DIAGRAM NI 12-8 MESA

**Lore (Pinal County, J. Bowie, Jr., 1936).**—About 15 miles north of Florence on U. S. Highway No. 80, 0.7 mile south of the junctions of U. S. Highways Nos. 80, 80, 70 and 89, 56 feet east of the center line of U. S. Highway No. 80, and 100 feet south of a metal yellow sign painted "Curve." Marked by a standard disk cast in a 1-inch bronze rod and projecting 6 inches above the ground. Reference mark No. 1, a standard bronze reference disk cast in a 1-inch bronze rod projecting 6 inches above the ground is 14.690 meters (48.20 feet) from station in azimuth 278°28'. Reference mark No. 2, a standard bronze reference disk cast in a 1-inch bronze rod projecting 6 inches above the ground is 17.134 meters (56.21 feet) from station in azimuth 7°27'. The azimuth mark, a standard bronze disk, note 11a, is 135 feet east of the center line of U. S. Highway No. 80 and 315 yards from station in azimuth 197°52'23".

## ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: LORE  
STATE: ARIZONA YEAR: 1936 SECOND-ORDER  
LOCALITY: PAPAGO INDIAN RESERVATION  
SOURCE: G-3083 FIELD SKETCH: ARIZ 14

GEODETIC LATITUDE:	33 14 56.88179	ELEVATION:	METERS
GEODETIC LONGITUDE:	111 20 25.50526		FEET

STATE COORDINATES (Fm)				
STATE & ZONE	CODE	X	Y	θ (OR Δ α) ANGLE
ARIZ. C.	0202	676,169.59	818,631.49	+ 0 18 57

TO STATION OR OBJECT	GEODETIC AZIMUTH (From mark)	PLANE AZIMUTH (From mark)	CODE
AZIMUTH MARK	197 52 21.9	197 33 25	0202

THESE DATA OBTAINED FROM READJUSTMENT OF 3-69.

55-008

COGS FORM 6402

### RECOVERY NOTE, TRIANGULATION STATION

R

Form 526  
(11-4-45)

NAME OF STATION: LORE  
ESTABLISHED BY: J.B. Jr. YEAR: 1936 STATE: Arizona  
RECOVERED BY: L.P. Smith YEAR: 1956 COUNTY: Pinal

Detailed statement as to the status of the original description, including marks found, stampings, changes made, and other pertinent facts:  
Station recovered as described.  
Reference marks were found in good condition.

### RECOVERY NOTE, TRIANGULATION STATION QUAD 331112

R

NAME OF STATION: LORE  
ESTABLISHED BY: J.B. Jr. YEAR: 1936 STATE: Arizona BENCH MARK ALSO   
RECOVERED BY: L.P. Smith YEAR: 1971 COUNTY: Pinal  
AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN: 3/4 mile south of Florence Junction  
HEIGHT OF TELESCOPE ABOVE STATION MARK 5 FEET. HEIGHT OF LIGHT ABOVE STATION MARK 5 FEET.

OBJECT	BEARING	DISTANCE		DIRECTION
		FEET	METERS	
Azimuth mark 1936 (0.3 mile, RM 3)	N			00 00 00
RM 3	N6	75.56	23.030	23 12 36
RM 1	E	48.20	14.690	70 35 54
Stem RM 2	S	56.22	17.136	169 34 14

Reference mark 1 and the azimuth mark were recovered and found in good condition. The stems of the rod type station mark and reference mark 2 were recovered below ground surface at the top of the concrete monuments. A check run and measurements showed both stems were on position. The station was re-monumented and reference mark 3 was established at this time. An underground station was set 3 feet deep.

The station mark is a standard disk set in the top of a 10 inch concrete monument which is 1 inch below the ground surface. It is 63.2 feet east of the center line of the highway, 41.1 feet west of the right of way fence line and 1 foot west of a witness post and sign. The mark is stamped LORE 1936 1971.

Reference mark 1 is a standard disk set on top of a brass rod which projects 6 inches above the ground surface. It is 6 feet east of the right of way fence line. The mark is stamped, LORE NO 1 1936.

Stem reference mark 2 is the center of a 1 inch brass rod which is broken off at the base of a concrete monument 6 inches below the ground surface, 62 feet east of the center line of the highway and 37 feet west of the right of fence line.

Reference mark 3 is a standard disk set in the top of a 12 inch concrete monument which projects 1 inch. It is 74.9 feet west of the witness post and sign and 1 foot west of a witness sign in the fence line.

The azimuth mark is a standard disk stamped, LORE 1936. It is set in the top of a 10 inch concrete monument which projects 6 inches. It is about 39 yards east of the center line of the highway and 28 feet east of a witness sign in the right of way fence.

To reach the station from the post office in Florence Junction go south along Arizona Highways 80 and 89 for 0.45 miles to the azimuth mark on the left, continue south for 0.35 mile to the station on the left.



165

JULY 1966  
U.S. DEPARTMENT OF COMMERCE  
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION  
COAST AND GEODETIC SURVEY

ARIZONA

## HORIZONTAL CONTROL DATA

REVISED JUNE 1969

33 15'  
111° 00'

by the  
Coast and Geodetic Survey  
NORTH AMERICAN 1927 DATUM

QUAD 331112 STATION 1016  
ARIZ  
LATITUDE 33°00' TO 33°30'  
LONGITUDE 111°00' TO 111°30'  
DIAGRAM NI 12-8 MESA

Picket Post (Pinal County, J. Bowie, Jr., 1838).—On the highest point and on the south edge of Picket Post Mountain, a prominent peak consisting of vertical cliffs that tower above the local mountains, about 20 miles northeast of Florence, about 10 miles east of Florence Junction, and about 6 feet northwest of a large rock cairn. Marked by a standard bronze disk as described in note 4. Reference mark No. 1, a standard bronze reference disk, note 12c, is 4.250 meters (13.94 feet) from station in azimuth 242°52'. Reference mark No. 2, a standard bronze reference disk, note 12c, is 10.310 meters (33.83 feet) from station in azimuth 114°08'. The azimuth mark, a standard bronze disk, note 12c, on the northeast point of the flat top and approximately at the same elevation as the station, is 0.3 mile from station in azimuth 221°34'02".

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
FORM 535

## RECOVERY NOTE, TRIANGULATION STATION

R

NAME OF STATION: PICKET POST STATE: Arizona COUNTY: Pinal  
ESTABLISHED BY: J.S.Jr. YEAR: 1936 LOCALITY: Superior  
RECOVERED BY: D.H. Konichek YEAR: 1946

Detailed statement as to the fitness of the original description:

Station and all marks found as previously described and in good condition.

The station is located about 20 miles air line northeast of Florence, about 4 miles southwest of Superior on the south edge and highest point of Picket Post Mountain, a prominent mountain with vertical cliffs on all sides. The station mark is a bronze disk stamped: "PICKET POST 1936", set in a boulder which projects 10 inches. It is 10 paces west of the east brim and 4 paces north of the south brim.

Reference mark No. 1 is a bronze disk stamped: "PICKET POST NO 1 1936", set in a boulder which projects 2 feet. It is 6 paces west of the east brim, 3 paces north of the south brim, 18 inches higher than the station mark.

Reference mark No. 2 is a bronze disk stamped: "PICKET POST NO 2 1936", set in a boulder which projects 1 foot. It is 10 paces east of the west brim and on the west-northwest brim, and is 5 feet lower than station mark.

The azimuth mark is a bronze disk stamped: "PICKET POST 1936", set in a boulder on a flat-topped raise 15 feet south of the north edge and 15 feet north of the south edge.

To reach station from the Queen Creek bridge in Superior; go south on the Ray road 0.6 mile to a road right; turn right, go 0.55 mile to a fork; turn left, go 1.8 mile to a fork; keep right, go 0.4 mile to a gate; pass through the gate and continue 0.8 mile to another gate; pass through gate and continue on road 1.2 mile to end of truck travel at top of a small ridge. From here walk northerly up ridge to base of mountain, thence up steep slope to top keeping to the left of the vertical cliffs; thence right to highest point and station as described above. A 2 hour pack.

OBJECT	HOR. DISTANCE	DIRECTION
NICK 1946	Meters	0 00 00
R.M.No.2 1936 NNW	10.325	0 46 58
Azi.Mk. 1936 NE	0.3 mile	108 11 49.8
R.M.No.1 1936 NE	4.238	129 29 49

Observations made from a 1.2 meter trirod.

R.W. Warner

## ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: PICKET POST  
STATE: ARIZONA YEAR: 1936, 1946 FIRST -ORDER  
LOCALITY: TONTO NAT FOREST AND WINKELMAN TO WINSLOW TO PHOENIX  
SOURCE: G-3083, G-7605 FIELD SKETCH: ARIZ 14, 24

GEODETIC LATITUDE	33 15 23.84530	ELEVATION	1333.9 METERS
GEODETIC LONGITUDE	111 09 25.73650		4376 FEET

STATE COORDINATES (Feet)				
STATE & ZONE	CODE	X	Y	θ (OR Δ σ) ANGLE
ARIZ. C.	0202	732,179.61	821,714.72	+ 0 25 00

TO STATION OR OBJECT	GEODETIC AZIMUTH (From mark)	PLANE AZIMUTH (From mark)	CODE
AZIMUTH MARK	221 33 56.3	221 08 56	0202

FILE COPY

55-906

AUG 1969

JULY 1966

U. S. DEPARTMENT OF COMMERCE  
 ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION  
 COAST AND GEODETIC SURVEY  
 REVISED JUNE 1969

HORIZONTAL CONTROL DATA

by the  
 Coast and Geodetic Survey  
 NORTH AMERICAN 1927 DATUM

ARIZONA 165

QUAD 331112 STATION 1015  
 ARIZ  
 LATITUDE 33°00' TO 33°30'  
 LONGITUDE 111°00' TO 111°30'  
 DIAGRAM NI 12-8 MESA

Pasture (Pinal County, J. Bowie, Jr., 1836).—About 10 miles north of Florence on U. S. Highway No. 80, 8.6 miles south of Florence Junction, which is the junction of Highways Nos. 70, 80, and 60; 40 feet west of the center line of the highway, 12 feet off the fence line, 0.6 mile north of a sign "Florence 10 miles," on a ridge which is the highest point on the highway between Florence Junction and Florence. The station and reference marks are standard disks cast on 1-inch bronze rods and projecting about 6 inches above the ground. Reference mark No. 1 is 27.124 meters (88.96 feet) from station in azimuth 276°47'. Reference mark No. 2 is 27.934 meters (91.65 feet) from station in azimuth 14°15'. The azimuth mark is a standard U. S. Coast and Geodetic Survey bench mark stamped "M 108 1034," on the right-of-way fence line on the west side of the highway and 0.5 mile from the station in azimuth 197°08'26".

ADJUSTED HORIZONTAL CONTROL DATA

33°15'  
 111°00'

NAME OF STATION: PASTURE  
 STATE: ARIZONA YEAR: 1936 SECOND-ORDER  
 LOCALITY: PAPAGO INDIAN RESERVATION  
 SOURCE: G-3083 FIELD SKETCH: ARIZ 14

Form 528  
 (11-9-55)

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

R

NAME OF STATION: PASTURE  
 ESTABLISHED BY: J. B. Jr. YEAR: 1936 STATE: Arizona  
 RECOVERED BY: A. M. S. YEAR: 1956 COUNTY: Pinal

Detailed statement as to the fitness of the original description, including marks found, stampings, changes made, and other pertinent facts:  
 Station unable to locate.  
 Reference marks 1 and 2 were found.  
 Appearance of grading along highway right-of-way indicated probable destruction of mark.

Form 528  
 (11-9-55)

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

R

NAME OF STATION: PASTURE  
 ESTABLISHED BY: J. Bowie Jr. YEAR: 1936 STATE: Arizona  
 RECOVERED BY: P. A. Weber YEAR: 1964 COUNTY: Pinal

Detailed statement as to the fitness of the original description, including marks found, stampings, changes made, and other pertinent facts:  
 The station was not recovered. A thorough search and local enquiry indicates the station has been destroyed in the new road construction. An hour was spent in searching for the station.

(Army Map Service, 1966)--All marks were searched for but not found. Apparently been destroyed by road improvement.

*John W. Rudman*

\* 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.

GEODETIC LATITUDE:	33 10 00.66988	ELEVATION:	METERS
GEODETIC LONGITUDE:	111 21 12.22768		FEET

STATE COORDINATES (Feet)				
STATE & ZONE	CODE	X	Y	θ (OR Δ θ) ANGLE
ARIZ. C.	0202	672,362.98	788,673.46	+ 0 18 29

TO STATION OR OBJECT	GEODETIC AZIMUTH (From mark)	PLANE AZIMUTH (From mark)	CODE
AZIMUTH MARK=BENCH MARK M 108	187 08 24.4	186 49 55	0202

THESE DATA OBTAINED FROM READJUSTMENT OF 3-69.

55-010

# HORIZONTAL CONTROL DATA

by the  
 Coast and Geodetic Survey  
 NORTH AMERICAN 1927 DATUM

# ARIZONA

165

QUAD 331112 STATION 1011  
 ARIZ  
 LATITUDE 33°00' TO 33°30'  
 LONGITUDE 111°00' TO 111°30'  
 DIAGRAM NO 12-8 MESA

33 15  
 111 20

DEPARTMENT OF COMMERCE  
 U. S. COAST AND GEODETIC SURVEY  
 FORM 535  
 REV. DEC., 1952

## DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: MILES  
 CHIEF OF PARTY: D.H. Konichek  
 Surface-station mark, Note, \* 2  
 Underground-station mark, Note, \*  
 Reference mark, No. 1, Note, \* 12a  
 Reference mark, No. 2, Note, \* 12a  
 Azimuth mark, Note, \* 12a  
 Witness mark, Note, \*  
 Height of flight above station mark, meters.  
 Height of telescope above station mark, meters.  
 Detailed description:

STATE: Arizona COUNTY: Pinal  
 YEAR: 1946 LOCALITY: Miami

DISTANCES AND DIRECTIONS TO REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND			
OBJECT	DISTANCE Meters	DIRECTION	AZIMUTH
HATTON 1947		00 00 00.00	
R.M. No. 1 ENE	10.756	296 49 25	
R.M. No. 2 SE	8.715	21 03 09	
Az. Mk. N approx.		226 18 09.0	
0.8 mile airline.			

The station is located about 12 miles west-northwest of Miami, about 9 miles north-northeast of Superior, on a hill between the west fork of Pinto Creek and Haunted Canyon, it is on the highest point of a hill with higher hills to the west and southwest, 8 paces south of the north brim, 3 feet east of the west brim, set in outcropping bedrock which projects 3 inches and is stamped "MILES 1946".

Reference mark No. 1 is approximately 4 feet lower than the station, 7 paces south of the north brim, set in outcropping bedrock which projects 4 inches and is stamped "MILES NO 1 1946".

Reference mark No. 2 is approximately 4 feet lower than the station, 8 paces southeast of the northwest brim, set in outcropping bedrock flush with the ground surface and is stamped "MILES NO 2 1946".

The azimuth mark is 1.1 mile by road north from the end of truck travel, at a sharp curve in road to the right, approximately 30 feet northeast of and approximately 15 feet higher than the center line of road, set in outcropping bedrock flush with the ground surface and is stamped "MILES 1946".

To reach from Miami, go west on U.S. Highway # 60 & #70 for 5.0 miles to the junction with Castle Dome Road; turn right (N) for 2.4 miles to a side road left (Pinto Creek road); turn left down hill for 2.2 miles to a fork and sign "Miles Ranch and Pinto Creek road"; take the right fork down hill for 3.9 miles to a fork; take left fork on Miles Ranch road, cross Pinto Creek and follow main graded road for 2.95 miles to the second cattle guard; continue 0.35 mile to end of truck travel at a triangular blazed oak tree on left. This point is 0.1 mile before reaching summit. From here walk west about 100 yards to a wash, then right up wash to base of ridge, then right up ridge to highest point and station as described above. A 45 minute pack.

## ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: MILES

YEAR: 1946

STATE: Ariz

LOCALITY: Tonto National Forest and

Second -ORDER Triangulation

Winkelman to Winslow to Phoenix

SOURCE: G-7605

FIELD SKETCH: ARIZ 24

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH θ (OR Δ) ANGLE	MARK
STATE: Ariz ZONE: E CODE: 0201	x 228,086.52 y 881,381.85	185°18'43" - 0 29 27	AZIMUTH MARK
STATE: Ariz ZONE: C CODE: 0202	x 762,055.93 y 881,298.92	184 20 53 + 0 28 23	AZIMUTH MARK

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION		
	LATITUDE:	LONGITUDE:		NORTH	WEST	METERS
	33°25'11".059	111 03 28.150			1,462.9	
					4,800	

TO STATION	GEODETIC AZIMUTH (From center)	DISTANCE	
		LOGARITHM (Meters)	METERS
AZIMUTH MARK	THIRD-ORDER 184°49'16".5		

FILE COPY

ARIZONA

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

HORIZONTAL CONTROL DATA

by the  
Coast and Geodetic Survey  
NORTH AMERICAN 1927 DATUM

QUAD 331112 STATION 1012  
ARIZ  
LATITUDE 33°00' TO 33°30'  
LONGITUDE 111°00' TO 111°30'  
DIAGRAM NI 12-8 MESA

165  
33 15  
11 20

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
Form 555  
Rev. Oct., 1953

DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: NICK  
CHIEF OF PARTY: D.H. Konicheik  
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, meters.

STATE: Arizona COUNTY: Pinal  
YEAR: 1940 LOCALITY: Superior

DISTANCES AND DIRECTIONS TO REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND			
OBJECT	DISTANCE	DIRECTION	AZIMUTH
FRASER 1938		00 00 00.00	
R.M. No. 1 1946 E	22.934	114 22 00.	
R.M. No. 2 1946 N	5.171	317 13 57.	
AZ. MK. 1946 approx.		288 45 21.7	
0.7 mile airline.			

Detailed description:  
The station is located about 8 miles airline east of Florence Junction and about 0.5 miles airline west-southwest of Superior, about 1.3 mile south-southwest of the point where Whitford Canyon junctions with Queen Creek, it is on a small knoll about 125 yards north of U.S. Highway #60 & 70, 6 paces east of the west break of knoll, set in outcropping bedrock which is 4 inches below the ground surface and is stamped "NICK 1946".

Reference mark No. 1 is approximately 4 feet lower than the station 12 feet west of a large cactus, set in an outcropping bedrock flush with the ground surface and is stamped "NICK NO 1 1946".

Reference mark No. 2 is approximately 6 inches lower than the station, set in outcropping bedrock flush with the ground and is stamped "NICK NO 2 1946".

The azimuth mark is 1.1 mile by road west of station on U.S. Highway # 60 & # 70, 12 feet south of highway set in the south end of a concrete culvert which projects approximately 14 inches and is stamped "NICK 1946".

To reach from the post office in Superior; go west on U.S. Highway # 60 & # 70 for 4.8 miles to bridge across Queen Creek; continue 2.4 miles to a roadside parking area and the end of truck travel; from this point pack north to top of small knoll and station site approximately 125 yards.

L.G. Bordine is.

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: NICK

YEAR: 1946

STATE: Ariz

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

Second-order Triangulation

FIELD SKETCH: ARIZ 24

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH & TORION ANGLE	MARK
STATE: Ariz ZONE: E CODE: 0201	x 183,549.39 y 828,364.68	92°36'14" - 0 34 05	AZIMUTH MARK
STATE: Ariz ZONE: C CODE: 0202	x 718,416.66 y 827,543.19	91 38 38 + 0 23 31	AZIMUTH MARK

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION
	LATITUDE:	LONGITUDE:	NORTH WEST	METERS FEET
	33°16'22".473	111 12 07.335		795.2 2,609

TO STATION	GEODETIC AZIMUTH (From south)	DISTANCE	
		LOGARITHM (Meters)	METERS
AZIMUTH MARK	THIRD-ORDER 92°02'08"8		

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

# HORIZONTAL CONTROL DATA

by the  
 Coast and Geodetic Survey  
 NORTH AMERICAN 1927 DATUM

ARIZONA 165  
 QUAD 331112 STATION 1021  
 ARIZ  
 LATITUDE 33°00' TO 33°30'  
 LONGITUDE 111°00' TO 111°30'  
 DIAGRAM NI 12-8 MESA

DEPARTMENT OF COMMERCE  
 U.S. COAST AND GEODETIC SURVEY  
 FORM 566  
 REV. 5-22-64

## DESCRIPTION OF TRIANGULATION STATION

NAME OF STATION: SUPERIOR  
 CHIEF OF PARTY: D.H. Konichok  
 Surface-station mark, Note, 4  
 Underground-station mark, Note,  
 Reference mark, No. 1 Note, 12c  
 Reference mark, No. 2 Note, 12c  
 Azimuth mark, Note, 12c  
 Witness mark, Note,  
 Height of light above station mark meters.  
 Height of (telescope above station mark) 6 meters.

STATE: Arizona COUNTY: Pinal  
 YEAR: 1946 LOCALITY: Superior

DISTANCES AND DIRECTIONS TO REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND			
OBJECT	Hori. DISTANCE	DIRECTION	AZIMUTH
PICKET POST 1936	Meters	00 00 00.00	
R.M. No. 2 NW	4.792	106 46 58.	
R.M. No. 1 NNE	7.038	177 42 04.	
Az. Mk. 0.2 mile NE		206 56 27.4	

### Detailed description:

The station is located about 1.5 mile air line northwest of Superior and about 2 miles southwest of the Silver King mine on a small brush covered hill. The station mark is stamped: "SUPERIOR 1946" and is set in a boulder which projects 3 inches. It is 100 feet northwest of and 5 feet higher than the road.

Reference mark No. 1 is stamped: "SUPERIOR NO 1 1946" and is set in a boulder which projects 4 inches. It is 6 inches higher than station mark.

Reference mark No. 2 is a bronze disk stamped: "SUPERIOR NO 2 1946" and is set in a boulder which projects 3 inches. It is at the same elevation as the station mark.

The azimuth mark is stamped: "SUPERIOR 1946" and is set in a boulder which projects 6 inches. It is 3 feet west of a four-foot rock cairn on highest point of the ridge.

To reach station from the post office in Superior, go west on U. S. Highway #60 and 70 for 1.8 mile to airport on left and a road right; turn right off highway, go 0.6 mile to a fork; turn right, go 1.3 mile to station on left. A drive station.

R.W. Warner

## ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SUPERIOR YEAR: 1946  
 STATE: Ariz LOCALITY: Tonto National Forest and Winkelman to Winslow to Phoenix  
 Second-ORDER Triangulation SOURCE: G-7605 FIELD SKETCH: ARIZ 24

GRID DATA	COORDINATES (Feet)	PLANE AZIMUTH @ TOP OF ANGLE	MARK
STATE: Ariz ZONE: E CODE: 0201	x 210,595.71 y 841,063.54	242°26'48" - 0 31 13	AZIMUTH MARK
STATE: Ariz ZONE: C CODE: 0202	x 745,245.12 y 840,693.16	241 29 08 + 0 26 27	AZIMUTH MARK

GEODETIC DATA	POSITION		SECONDS IN METERS	ELEVATION	
	LATITUDE:	LONGITUDE:		NORTH WEST	METERS FEET
	33°18'30".648	111 06 50.165		960.6 3,152	

TO STATION	GEODETIC AZIMUTH (From 0000)	DISTANCE	
		LOGARITHM (Meters)	METERS
AZIMUTH MARK	THIRD-ORDER 241°55'34".9		

FILE COPY

USCOMM-ESSA-ASHEVILLE

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

A2165

=====  
 Transformation #: 1 Region: Conus

Station name: APACHE

	Latitude	Longitude
NAD 27 datum values:	33 15 45.983	111 03 40.377
NAD 83 datum values:	33 15 46.189	111 03 42.801
NAD 83 - NAD 27 shift values:	.206	2.424(secs.)
	6.338	62.735(meters)
Magnitude of total shift:		63.054(meters)

Transformation #: 2 Region: Conus

Station name: BM "Y 107 1935"

	Latitude	Longitude
NAD 27 datum values:	33 18 54.914	111 02 7.995
NAD 83 datum values:	33 18 55.116	111 02 10.416
NAD 83 - NAD 27 shift values:	.202	2.421(secs.)
	6.211	62.620(meters)
Magnitude of total shift:		62.928(meters)

Transformation #: 3 Region: Conus

Station name: GOV'T HILL

	Latitude	Longitude
NAD 27 datum values:	33 24 17.449	111 05 26.812
NAD 83 datum values:	33 24 17.641	111 05 29.242
NAD 83 - NAD 27 shift values:	.192	2.430(secs.)
	5.920	62.796(meters)
Magnitude of total shift:		63.074(meters)

Transformation #: 4 Region: Conus

Station name: HEWITT RIDGE

	Latitude	Longitude
NAD 27 datum values:	33 21 2.870	111 13 13.240
NAD 83 datum values:	33 21 3.064	111 13 15.688
NAD 83 - NAD 27 shift values:	.194	2.448(secs.)
	5.971	63.299(meters)
Magnitude of total shift:		63.580(meters)

Transformation #: 5 Region: Conus

Station name: HORRELL

	Latitude	Longitude
NAD 27 datum values:	33 29 17.627	111 01 4.536
NAD 83 datum values:	33 29 17.813	111 01 6.958
NAD 83 - NAD 27 shift values:	.186	2.422(secs.)
	5.741	62.522(meters)
Magnitude of total shift:		62.785(meters)

Transformation #: 6 Region: Conus

Station name: IRON MTN (USGS)

	Latitude	Longitude
NAD 27 datum values:	33 25 57.514	111 10 10.649
NAD 83 datum values:	33 25 57.702	111 10 13.090
NAD 83 - NAD 27 shift values:	.188	2.441(secs.)
	5.784	63.058(meters)
Magnitude of total shift:		63.323(meters)

Transformation #: 7 Region: Conus

Station name: KINGS CROWN

	Latitude	Longitude
NAD 27 datum values:	33 19 53.568	111 04 13.342
NAD 83 datum values:	33 19 53.767	111 04 15.768
NAD 83 - NAD 27 shift values:	.199	2.426(secs.)
	6.139	62.748(meters)
Magnitude of total shift:		63.048(meters)

Transformation #: 8 Region: Conus

Station name: LA BARGE

	Latitude	Longitude
NAD 27 datum values:	33 26 18.365	111 14 14.427
NAD 83 datum values:	33 26 18.551	111 14 16.877
NAD 83 - NAD 27 shift values:	.186	2.450(secs.)
	5.718	63.289(meters)
Magnitude of total shift:		63.547(meters)

Transformation #: 9 Region: Conus

Station name: MAGMA SMOKESTACK

	Latitude	Longitude
NAD 27 datum values:	33 17 40.870	111 06 37.870
NAD 83 datum values:	33 17 41.072	111 06 40.302
NAD 83 - NAD 27 shift values:	.202	2.432(secs.)
	6.210	62.917(meters)
Magnitude of total shift:		63.222(meters)

Transformation #: 10 Region: Conus

Station name: MOUND MOUNTAIN

	Latitude	Longitude
NAD 27 datum values:	33 28 21.406	111 08 14.554
NAD 83 datum values:	33 28 21.591	111 08 16.991
NAD 83 - NAD 27 shift values:	.185	2.437(secs.)
	5.698	62.925(meters)
Magnitude of total shift:		63.182(meters)

Transformation #: 11 Region: Conus

Station name: PINE

	Latitude	Longitude
NAD 27 datum values:	33 29 49.252	111 06 42.419
NAD 83 datum values:	33 29 49.435	111 06 44.853
NAD 83 - NAD 27 shift values:	.183	2.434(secs.)
	5.649	62.828(meters)
Magnitude of total shift:		63.081(meters)

Transformation #: 12 Region: Conus

Station name: PINTO (USGS)

	Latitude	Longitude
NAD 27 datum values:	33 27 42.551	111 07 5.006
NAD 83 datum values:	33 27 42.737	111 07 7.440
NAD 83 - NAD 27 shift values:	.186	2.434(secs.)
	5.742	62.865(meters)
Magnitude of total shift:		63.127(meters)

Transformation #: 13 Region: Conus

Station name: REEVIS

	Latitude	Longitude
NAD 27 datum values:	33 29 12.430	111 09 27.180
NAD 83 datum values:	33 29 12.613	111 09 29.620
NAD 83 - NAD 27 shift values:	.183	2.440(secs.)
	5.644	62.984(meters)
Magnitude of total shift:		63.236(meters)

Transformation #: 14 Region: Conus

Station name: ROAD T.B.M.

	Latitude	Longitude
NAD 27 datum values:	33 26 58.146	111 00 31.479
NAD 83 datum values:	33 26 58.336	111 00 33.899
NAD 83 - NAD 27 shift values:	.190	2.420(secs.)
	5.856	62.497(meters)
Magnitude of total shift:		62.771(meters)



Transformation #: 15 Region: Conus

Station name: SUMMIT

	Latitude	Longitude
NAD 27 datum values:	33 16 44.453	111 13 56.872
NAD 83 datum values:	33 16 44.653	111 13 59.322
NAD 83 - NAD 27 shift values:	.200	2.450(secs.)
	6.158	63.403(meters)
Magnitude of total shift:		63.702(meters)

Transformation #: 16 Region: Conus

Station name: TRAIL

	Latitude	Longitude
NAD 27 datum values:	33 24 17.076	111 09 14.289
NAD 83 datum values:	33 24 17.267	111 09 16.728
NAD 83 - NAD 27 shift values:	.191	2.439(secs.)
	5.873	63.021(meters)
Magnitude of total shift:		63.294(meters)

Transformation #: 17 Region: Conus

Station name: WHITFORD

	Latitude	Longitude
NAD 27 datum values:	33 20 13.843	111 08 34.057
NAD 83 datum values:	33 20 14.040	111 08 36.494
NAD 83 - NAD 27 shift values:	.197	2.437(secs.)
	6.068	63.018(meters)
Magnitude of total shift:		63.310(meters)

Transformation #: 18 Region: Conus

Station name: 1-36 A

	Latitude	Longitude
NAD 27 datum values:	33 29 44.912	111 13 17.480
NAD 83 datum values:	33 29 45.093	111 13 19.928
NAD 83 - NAD 27 shift values:	.181	2.448(secs.)
	5.573	63.189(meters)
Magnitude of total shift:		63.434(meters)

Transformation #: 19 Region: Conus

Station name: 2-349 A

	Latitude	Longitude
NAD 27 datum values:	33 15 56.670	111 07 25.910
NAD 83 datum values:	33 15 56.874	111 07 28.344
NAD 83 - NAD 27 shift values:	.204	2.434(secs.)
	6.280	62.983(meters)
Magnitude of total shift:		63.295(meters)

Transformation #: 20 Region: Conus

Station name: 4-90 A

	Latitude	Longitude
NAD 27 datum values:	33 26 25.214	111 01 30.433
NAD 83 datum values:	33 26 25.405	111 01 32.855
NAD 83 - NAD 27 shift values:	.191	2.422(secs.)
	5.870	62.555(meters)
Magnitude of total shift:		62.830(meters)

Transformation #: 21 Region: Conus

Station name: 7-1112 A

	Latitude	Longitude
NAD 27 datum values:	33 24 15.193	111 14 46.998
NAD 83 datum values:	33 24 15.381	111 14 49.450
NAD 83 - NAD 27 shift values:	.188	2.452(secs.)
	5.805	63.350(meters)
Magnitude of total shift:		63.615(meters)

Transformation #: 22 Region: Conus

Station name: 7-1113 X

	Latitude	Longitude
NAD 27 datum values:	33 22 47.749	111 14 24.067
NAD 83 datum values:	33 22 47.940	111 14 26.518
NAD 83 - NAD 27 shift values:	.191	2.451(secs.)
	5.876	63.348(meters)
Magnitude of total shift:		63.620(meters)

Transformation #: 23 Region: Conus

Station name: 11-1564 A

	Latitude	Longitude
NAD 27 datum values:	33 16 6.260	111 01 4.650
NAD 83 datum values:	33 16 6.466	111 01 7.067
NAD 83 - NAD 27 shift values:	.206	2.417(secs.)
	6.356	62.562(meters)
Magnitude of total shift:		62.884(meters)

NAD 27 to NAD 83 Conversion

Statistics for Region

	Latitude		Longitude	
	MIN	MAX	MIN	MAX
Range of shift (meters)	5.573	6.356	62.497	63.403
Range of shift (seconds)	.181	.206	2.417	2.452
Mean shift (meters)		5.934		62.935
Variance of mean shift		.057		.081
Std. Dev. of mean shift		.239		.284
Mean shift (seconds)		.193		2.435
Variance of mean shift		.000		.000
Std. Dev. of mean shift		.008		.011

The total number of conversions: 23

Region of Conversions

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NAD 27
Longitude: 111 14 46.998 111 00 31.479
Latitude: 33 29 49.252 ***** 33 29 49.252
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          *
Latitude: 33 15 45.983 ***** 33 15 45.983
Longitude: 111 14 46.998 111 00 31.479
    
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