

HORIZONTAL CONTROL DATA

by the
 Coast and Geodetic Survey
 NORTH AMERICAN 1927 DATUM

QUAD 361092 STATION 1001
 ARIZ-NMEX
 LATITUDE 36°00' TO 36°30'
 LONGITUDE 109°00' TO 109°30'
 DIAGRAM NO 12-12 SHIPROCK

DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY
 FORM 568
 10-64

DESCRIPTION OF TRIANGULATION STATION

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: SEZNINI (USGS) STATE: Arizona

COUNTRY: Apache

NAME OF STATION: SEZNINI USGS

YEAR: 1951

CHIEF OF PARTY: Walter R. Helm

Year: 1951

STATE: Ariz.

LOCALITY: Tohachah, N. Mex. to Tuba City, Ariz.

NOTE: HEIGHT OF TELESCOPE ABOVE STATION MARK 1.72 METERS.
 HEIGHT OF LIGHT ABOVE STATION MARK 1.42 METERS.
 DISTANCES AND DIRECTIONS TO AZIMUTH MARK, REFERENCE MARKS AND PROMINENT OBJECTS WHICH CAN BE SEEN FROM THE GROUND AT THE STATION

First-order Triangulation source: G-9321

FIELD SKETCH: ARIZ 32

OBJECT	BEARING	DISTANCE		DIRECTION
		feet	meters	
SONSALA (USGS)	SW	18.735	5.701	00° 00' 00.0"
R.M. #1	NNE	(About 0.8 mile)	262	31 17
Azimuth Mark	NNE	21.126	6.439	262 45 50.2
R.M. #2	NE	(About 5 miles)	302	14 27
Black Pinnacle Lookout House				302 14 45.3

The station is located on the highest point of Fort Defiance, about 35 miles airline north-northeast of Ganado, and about 18 miles airline north-northeast of Fort Defiance.

The station is a standard US Geological Survey disk stamped "SEZNINI 1936" set in a drill hole in an outcropping of bedrock.

Reference mark number one is a standard US Geological Survey disk stamped "WNO 1" set in a drill hole in an outcropping of bedrock and is about 2 feet higher than the station.

Reference mark number two is a standard US Geological Survey disk stamped "WNO 2" set in a drill hole in an outcropping of bedrock and is about 1 foot higher than the station.

The azimuth mark is a standard disk stamped "SEZNINI 1951 USGS" set in a drill hole

in an outcropping of bedrock which is flush with the ground. It is 4 feet west-southwest of a small cairn and 5 feet west of a small piñon tree with a triangle blaze.

To reach the azimuth mark from the cross roads and the hogan, continue straight ahead in a southerly direction for 0.8 mile to a small piñon tree with a triangle blaze which is about 100 yards to the left of the road. From the tree, go about 100 yards east to a small bluff, a cairn, a small piñon tree with a triangle blaze, and the azimuth mark.

To reach the station from the Forest Service Headquarters in Fort Defiance, go north for 0.5 mile to a bridge. Cross the bridge and continue north on the dirt road for 0.5 mile to a fork; take the left fork and follow the main traveled road northerly for 13.7 miles to a fork; take the left fork and follow the main traveled road northerly for 1.3 miles to a fork; take the left fork as per sign "Kachabai" and go 12.7 miles to a bridge and a fork; take the right fork and go 6.3 miles to Wheatfield Lake. Continue north for 1.9 miles to a bridge over Wheatfield Creek; continue north for 6.5 miles to a bridge just before reaching a small church on the left. Continue for 0.8 mile to a side road on the left just after crossing over a small ditch; turn left and go 1.1 miles to a fence corner. Follow the fence line for 0.3 mile; turn left and go 0.1 mile to a corral. Pass to the right of the corral and follow the track road southerly for 0.25 mile to a small canyon; cross the creek, turn left and follow the main right hand track road for 4.5 miles to a dam on the left. Pass to the right of the dam and go south for 1.0 mile to a fork; take the left fork, cross the wash and follow the track road for 0.8 mile to a fork; take the right fork and go 1.2 miles to a fork; take the right fork and go south for 0.8 mile, passing to the right of a lake, to a wash. Continue south for 0.2 mile to a fork; take the right fork and go 0.6 mile to a cross road and a hogan on the right side of the road. Continue straight ahead, south, for 2.0 miles to a piñon tree with a triangle blaze. Turn left and go east for 0.2 mile through the sage brush to the base of the hill and the end of track travel. Pack up hill easterly to the highest point and the station. It is 4.5 miles back.

To nearest nearest only, when no other means of triangulation. : Direction-angle measured clockwise, referred to initial station.

GRID DATA	COORDINATES (F+M)	PLANE AZIMUTH & LONG. ANGLE	MARK
STATE: Ariz	X	187°06'15"	AZIMUTH MARK
ZONE: E	Y	+ 0 30 51	
CODE: 0201			
STATE: X			
ZONE: Y			
CODE:			

GEODEIC DATA	POSITION		SECONDS IN METERS	ELEVATION METERS
	LATITUDE	LONGITUDE		
	36°08'53.4472	109°17'42.7715		2324.3
				7626

AZIMUTH MARK

THIRD ORDER
 187°37'06.70"

GEODEIC DATA	POSITION		SECONDS IN METERS	ELEVATION METERS
	LATITUDE	LONGITUDE		
	36°08'53.4472	109°17'42.7715		2324.3
				7626

DO NOT REMOVE

FILE COPY

Arizona (408)

Apache County

INDIAN

1927 N.A.D. (Adj.)

R.B. Steele, 1937

R.B. Wallace, 1949

Books: PH 114, D 2425-34

Located 11.6 mi by rd. NE. of Chinle Indian School, on timbered ridge 0.5 mi W. of Chinle-Lukachukai Rd. and 0.35 mi SW. of a hogan; station is under and about 18 inches NE. of an 8 inch pinon tree which was trimmed of all limbs and built into an observing platform.

To reach from Chinle, drive NE. 10.6 mi along Chinle-Lukachukai Rd. to Y-rd. fork in bottom of draw; then turn left and follow dim rd. 0.5 mi to top of ridge; turn left and follow dim rd. and truck track in southerly direction to station.

Note: ...

Station mark: Standard tablet stamped "INDIAN 1936", cemented in boulder in ground.

Reference mark No. 1: Wire nail cemented in boulder and placed in ground, 23.0 ft from station mark in azimuth 204°41'.

Reference mark No. 2: Standard reference mark tablet stamped "INDIAN 1936", cemented in boulder in ground, 24.94 ft from station mark in azimuth 304°58'.

Note by R.B.W., 1949: Station recovered as described. Station mark and Reference mark No. 1 found in place. Reference mark No. 2 had been removed, a wire nail was set in same hole replacing the mark.

Note: The 8-inch pinon tree used as an instrument stand has been cut down. A 14 ft wooden tower was centered over station for observing.

ARIZONA ZONE EAST

V.A. Elevation: 6810 ft

X= 722,134.59

Y=1,896,043.89

Latitude 36°12'31.370" Longitude 109°24'49.304"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Tuly Bia	16°51'48.76"	196°50'17.88"	43,588.31"
Sibasila	39 04 52.40	219 02 02.54	37,453.70
Slim	67 25 04.04	247 21 54.44	28,509.42
Chin Lee N.E.B.	69 43 57.31	249 38 05.54	52,087.45
Red Mesa	73 12 52.65	253 05 24.39	65,040.25
Dog	112 05 45.65	291 57 38.93	72,742.88
West	136 56 48.79	316 47 46.23	109,664.83
Slag Reset	146 25 02.95	326 23 18.41	26,180.62
Carson Reset	152 37 30.91	332 20 47.10	138,777.85
Hades 2	160 30 46.96	340 26 38.22	102,771.83
Hump Reset	166 31 00.61	346 29 10.70	65,120.66
Rim Reset	227 28 21.50	47 31 45.30	38,299.65
Rock	300 43 27.34	120 45 17.62	17,807.66

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Arizona (408)

Apache County

ANTELOPE

1927 N.A.D. (Adj.)

R.B. Steele, 1937

Book: D 2425-34

Located 9.0 mi by rd. E. of Chinle Indian School, 1.0 mi NE. of Antelope House ruins; on point of high mesa near N. rim of Canyon Del Muerto; opposite island like rock at jct. of Black Rock Canyon with Canyon Del Muerto; on W. rim of a short side canyon; about 50 ft back from S. point of mesa.

To reach from Chinle, drive SE. on Chinle-Fort Defiance Rd. 0.45 mi to junction of Lukachukai Rd. and ford crossing of Canyon de Chelly River; thence follow Lukachukai Rd. 7.0 mi to Y-rd. fork; turn right and follow dim rd. toward high mesa keeping to S. of high mesa. Truck can be driven to a point under mesa rim. A 10 minute walk from base of rim to station.

Station mark: Standard tablet stamped "ANTELOPE 1936", cemented in bedrock.

Reference mark No. 1: A 2-inch copper disk cemented in bedrock, and marked "USDINPS" and stamped "STA 2", 10.60 ft from station mark in azimuth 37°45'.

Reference mark No. 2: Standard reference mark tablet stamped "NO 2", cemented in bedrock, 53.50 ft from station mark in azimuth 182°10'.

ARIZONA ZONE EAST

Elevation: None.

X= 717,740.65

Y=1,879,886.70

Latitude 36°09'51.922" Longitude 109°25'44.417"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Sibasila	55°50'31.25"	235°48'13.99"	23,069.93
Slim	103 20 37.07	283 18 00.10	22,410.02
Rock	250 28 50.50	70 31 13.25	21,035.29
New Mexico Hill	325 40 21.51	145 42 22.25	29,801.77

R. B. Steele, 1937 (Not occupied)

Located about 11.4 mi. by rd. NE. of Chinle and 2.7 mi. NW. of Chinle-Lukachukai Road on SE. slope of timbered ridge.

To reach from Chinle, drive NE. on Chinle-Lukachukai Road 7.5 mi. to Y-rd. fork; take left hand rd. and follow 1.6 mi. to Y-rd. fork; take right hand rd. 0.4 mi. to rd. fork; turn right (sharp angle) and follow rd. 1.0 mi. to Y-rd. fork; take left hand rd. to top of mesa; turn right and follow dim rd. 0.1 mi. to station.

Station mark: Standard tablet stamped "PINON 1936", cemented in bedrock.

ARIZONA ZONE EAST

X = ~~714,878.3~~ 714,878.26
Y = ~~1,897,184.8~~ 1,897,184.79

No elevation

Latitude: 36°12'43.200"

Longitude: 109°26'17.741"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Sibasila	28°22'50.5"	208°20'52.9"	34,410.3
Slim	57 30 15.4	237 27 58.0	22,613.4
Chin Lee NE. Base	65 10 24.3	245 05 25.2	45,848.4
Indian	279 21 48.0	99 22 40.2	7,345.3
Rock	294 31 08.2	114 33 50.7	24,794.1
New Mexico Hill	335 00 44.4	155 03 04.8	46,259.2

Arizona (408)

Apache County

LEE

1927 N.A.D. (Adj.)

R.B. Steele, 1937

W.K. Platt, 1955 (n)

Books: PH 388, D 2425-34

Located 20.0 mi by rd. and trail SE. of Chinle Indian School, about 1.25 mi (airline) E. of Lee Dam and double tank; on a well defined hump at N. end of high spur ridge extending northerly from a high and heavily timbered mesa or plateau. This hump was cleared of all timber and brush this date except one bushy-top pinon tree about 35 ft SW. of station mark which was trimmed of all lower limbs leaving a bushy top for a landmark. Station is on highest point of hump.

To reach from Chinle, drive SE. on Chinle-Fort Defiance Rd. 17.5 mi to X-rds.; thence turn left and follow rd. crossing a draw on Lee Dam in 0.25 mi; crossing another draw in 0.3 mi; continuing on another 0.3 mi to a Y-rd. fork on S. side of bottom of another draw; turn right on dim rd. leading up slope through timber and coming out on sagebrush flat; continue following dim rd. and truck tracks northeasterly (about 1.0 mi from main rd.) to E. edge of sage and foot of ridge under signal and station. Hike E. up slope to station (a 45 minute hike.)

Station mark: Standard tablet stamped "LEE 1936", cemented in bedrock.

Reference mark No. 1: Standard reference mark tablet stamped "LEE NO 1 1936", cemented in rock outcrop, 34.75 ft from station mark in azimuth 112°49'.

Reference mark No. 2: Standard reference mark tablet stamped "LEE NO 2 1936", cemented in rock outcrop, 34.21 ft from station mark in azimuth 205°46'.

Note by W.K.P., 1955: Recovered but not occupied.

ARIZONA ZONE EAST

X= 754,011.20

Y=1,828,844.60

V.A. Elevation: ^{7536.1} ~~7533~~ ft

Latitude 36°01'24.212" Longitude 109°18'27.598"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Summit	38°05'20.66"	218°04'10.89"	15,810.95
Snake	77 52 10.75	257 42 00.72	87,262.65
Sage	103 14 02.52	283 09 24.00	39,939.43
Tuly Bia	120 22 56.60	300 17 41.24	50,972.99
Sibasila	124 58 52.62	304 52 18.37	67,036.92
New Mexico Hill	144 31 52.22	324 29 35.63	32,820.67
Yata	148 52 59.64	328 50 14.50	44,521.43
Seznini (USGS)	184 37 57.61	4 38 24.04	45,578.52
Sonsala (USGS)	247 17 04.60	67 25 11.45	73,579.71

(n)= Not occupied

REPORT ON PERMANENT SURVEY MARK

AREA OFFICE

STATE Arizona COUNTY Apache QUADRANGLE Canyon Del Muerto SE
QUOTE PRIMARY REFERENCE See below
(Direction and distance)

Please prepare in triplicate and send to nearest (or indicated) address shown on reverse side.

DESIGNATION { LISTED LEE 1936
STAMPED _____ TYPE OF MARK: BM _____ TT _____ TRIANG. X
Lat. 36 ° 00 ' 24.212 " CONDITION
Long. 109 ° 18 ' 27.598 " Disturbed
Elev. 1978 - 7536.10 feet Destroyed Not Found
ESTABLISHED BY
USGS USBR
USC&GS State GS
USNPS USNFS
USGLO (Other)
USBLM }

REMARKS OR REVISED DESCRIPTION:
Located 20 miles SE of Chinle on a well defined small top at the N. end Of a high ridge ~~XXXXXXXX~~ extending northerly from a higher and heavily timbered mesa.

Reached be helicopter. Ship can land at station.
NOTE: There was a five foot cairn on the highest point of top and the remains of an old signal. The station mark was assumed to be in good condition. Both R. M's were searched for and not found. It appears they have been removed as evidence indicated this.

SUBMITTED BY Robert D. Mead _____ indicated this.
TITLE S. Cartographer _____ DATE 8-78 _____
AGENCY USGS _____

Marks found in good condition need not be reported.

FILL IN ALL AVAILABLE INFORMATION



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Arizona (408)

Apache County

NEW MEXICO HILL

1927 N.A.D. (Adj.)

R.B. Steele, 1937

W.K. Platt, 1955 (n)

Books: PH 388, D2425-34

Located about 15.2 mi by rd. SE. of Chinle Indian School, 4.0 mi NE. of Chinle-Fort Defiance Rd.; 1.0 mi W. of Tatzoka Tank and 2.0 mi S. of Canyon De Chelly. Station is 20 ft S. of highest point at SW. end of prominent timber covered ridge.

To reach from Chinle, drive SE. 11.2 mi on Chinle-Fort Defiance Rd. to Y-rd. fork; turn left and follow main rd. NE. 1.35 mi to junction with another main rd. which bears approximately N.-S.; follow rd. N. 0.15 mi to Y-rd. fork; take left hand dim rd. and follow 0.9 mi to Tatzoka Tank; turn left and follow dim rd. and truck tracks 1.6 mi to station. Car can be driven to station.

Station mark: A 2-inch copper disc marked "USDI-NPS" stamped "NEW MEXICO HILL" (as recovered).

Note: This station was used and two reference marks established as follows:

Reference mark No. 1: Standard reference mark tablet stamped "NEW MEXICO HILL NO 1", cemented in bedrock, 14.13 ft from station mark in azimuth 115°32'.

Reference mark No. 2: Standard reference mark tablet stamped "NEW MEXICO HILL NO 2", cemented in rock outcrop, 20.0 ft from station mark in azimuth 224°50'.

Note by W.K.P., 1955: Station recovered but not occupied.

ARIZONA ZONE EAST
X= 734,732.12
Y=1,855,404.84

V.A. Elevation: 6942 ft

Latitude 36°05'48.491" Longitude 109°22'19.647"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Tuly Bia	87°46'49.67"	267°43'50.74"	24,946.38
Sibasila	108 01 32.67	287 57 14.83	37,741.65
Slim	127 40 44.34	307 36 06.74	48,763.07
Antelope	145 42 22.25	325 40 21.51	29,801.77
Yata	160 46 05.20	340 45 36.68	12,055.47
Indian	163 14 45.74	343 13 17.45	42,548.53
Rock	185 29 12.80	5 29 34.67	31,783.42
Seznini (USGS)	230 30 48.51	50 33 31.76	29,430.06
Lee	324 29 35.63	144 31 52.22	32,820.67
Summit	346 37 11.01	166 38 17.71	40,260.93

(n)= Not occupied

12/14/70 blm *ak*

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Arizona (408)

Apache County

TULY BIA

1927 N.A.D. (Adj.)

R.B. Steele, 1936

W.K. Platt, 1955

Books: PH 388, D2425-34

Located 8.9 mi by rd. and trail SE. of Chinle Indian School, about 0.8 mi S. of Chinle-Fort Defiance Rd. where it passes head of Wild Cherry Canyon and 0.5 mi SW. of Indian settlement of Tuly Bia; on point projecting out to NE. from ridge which is sparsley covered with juniper and pinon.

To reach from Chinle, drive SE. 8.1 mi on Chinle-Fort Defiance Rd. to dim Y-rd. forks; turn right and follow dim rd. and after crossing rocky draw swing left and go through gap in fence at NE. corner of fenced field; thence back through same fence at SE. corner of same fence at SE. corner of same field; thence keep to backbone of ridge following in SW. direction to summit and station. (Car can be driven to station.)

Station mark: Standard tablet stamped "TULY BIA 1936", cemented in boulder set in ground.

Reference mark No. 1: A 2-inch copper disk marked "USDI-NPS" and stamped "STA 6", 189.73 ft from station mark in azimuth 129°47'.

Reference mark No. 2: Standard reference mark tablet stamped "NO 2", cemented in boulder, 118.33 ft from station mark in azimuth 298°29'.

Note by W.K.P., 1955: Found as described and all marks found in place.

ARIZONA ZONE EAST
X= 709,814.27
Y=1,854,235.12

V.A. Elevation: ^{6421.2}~~6421~~ ft

Latitude 36°05'38.830" Longitude 109°27'23.368"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Beautiful (C&GS)	79°03'16.47"	258°57'53.37"	45,874.73
Sibasila	139 01 46.20	319 00 27.37	16,734.78
Slim	156 00 15.57	335 58 37.08	33,669.92
Indian	196 50 17.88	16 51 48.76	43,588.31
Rock	220 34 20.38	40 37 41.36	42,955.25
Snake <i>AD 1000 1955 0.11</i>	222 58 11.55	43 03 06.92	60,460.48
Yata	239 26 28.90	59 28 59.37	24,324.39
Seznini (USGS)	247 30 16.73	67 35 59.03	51,546.04
New Mexico Hill	267 43 50.74	87 46 49.67	24,946.38
Lee	300 17 41.24	120 22 56.60	50,972.99
Summit	318 04 37.18	138 08 42.58	51,303.78
Rock Mesa	339 37 06.21	159 39 28.85	57,268.74
Sage	342 53 19.04	162 53 55.74	17,399.63

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Arizona (408)

Apache County

ROCK

1927 N.A.D. (Adj.)

R.B. Steele, 1937

W.K. Platt, 1955 (n)

Books: D2425-34, PH 388

Located 40 mi by rd. NE. of Chinle Indian School, on SE. end of mesa between Canyon Del Muerto and Black Rock Canyon; 0.3 mi N. of Black Rock Canyon. Station is 75 ft back from edge of rimrock and under a 12-inch pinon tree which was trimmed of all lower limbs and used as signal tree.

To reach from Chinle, drive NE. on Chinle-Wheatfield Rd. 27 mi to Sheep Dip Corral on Tsaile Creek; turn right 0.25 mi and ford Tsaile Creek; thence 3.5 mi to Y-rd. fork; take left hand rd. 0.5 mi to Y-rd. fork; take right hand rd. 0.4 mi to Y-rd. fork; take rd. to right 3.4 mi to Y-rd. fork; take rd. to right 5.5 mi to a hogan and field; leave truck at hogan on right and hike up slope in SW. direction to top of ridge; go left along top to point of mesa and station.

¹⁹⁵⁵
Destroyed

Station mark: Standard tablet stamped "ROCK 1937", cemented in boulder set in ground.

Reference mark No. 1: Standard reference mark tablet stamped "NO 1", cemented in rimrock, 49.21 ft from station mark in azimuth 71°11'.

Reference mark No. 2: Standard reference mark tablet stamped "NO 2", cemented in rimrock, 53.81 ft from station mark in azimuth 340°19'.

Note by W.K.P., 1955: Station recovered but not occupied.

ARIZONA ZONE EAST

Elevation: None.

X= 737,512.23

Y=1,887,065.28

Latitude 36°11'01.359" Longitude 109°21'42.576"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
New Mexico Hill	5°29'34.67"	185°29'12.80"	31,783.42
Yata	19 05 46.29	199 04 55.86	21,433.85
Tuly Bia	40 37 41.36	220 34 20.38	42,955.25
Sibasila	62 51 41.41	242 47 01.44	43,746.59
Antelope	70 31 13.25	250 28 50.50	21,035.29
Slim	87 29 11.35	267 24 11.57	41,672.76
Indian	120 45 17.62	300 43 27.34	17,807.66
Seznini (USGS)	303 18 19.71	123 20 41.26	23,539.11

(n)= Not occupied

12/14/70 blm

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Arizona (408)

Apache County

SAGE

1927 N.A.D. (Adj.)

W.K. Platt, 1955

Book: PH 388

Located about 10.0 mi SE. of Chinle Post Office between Three Turkey Canyon and Little White House Canyon on a low sage-covered hill.

To reach from Chinle Post Office, follow Chinle-Nazlini Rd. for 4.6 mi to rd. forks; take left fork and follow main-traveled rd. 10.8 mi to station. Station mark is about 300 ft S. of rd. on a sage-covered hill and near a lone juniper tree.

Not found 179

Station mark: Standard tablet stamped "SAGE 1955" cemented in rock.

Not found 179

Reference mark No. 1: Standard reference mark tablet stamped "SAGE 1955 NO 1" cemented in rock, 37.60 ft from station mark in azimuth 129°57'.

Not found 179

Reference mark No. 2: Copper nail and washer set in root of juniper tree, 75.60 ft from station mark in azimuth 213°40'.

ARIZONA ZONE EAST

V.A. Elevation: 6598 ft

X= 715,054.74

Y=1,837,644.31

Latitude 36°02'54.374" Longitude 109°26'21.027"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Ganado (C&GS)	20°56'09.91"	200°52'26.61"	87,692.19
Snake	59 18 20.96	239 12 49.10	53,957.61
Beautiful (C&GS)	98 58 54.26	278 52 54.65	50,780.96
Tuly Bia	162 53 55.74	342 53 19.04	17,399.63
Lee	283 09 24.00	103 14 02.52	39,939.43
Summit	306 28 05.38	126 31 33.99	36,253.15
Rock Mesa	338 12 12.53	158 13 58.46	39,909.79

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Arizona (408)

Apache County

SEZNINI (USGS) (C&GS)

1927 N.A.D. (Adj.)

R.B. Steele, 1936

USC&GS, 1951

Books: D 2425-34, PH 114, PH 388

W.L. Settlemyer, 1955

Recovered by U.S. Coast and Geodetic Survey description list No. 1071, p. 4.

Located about 18 mi E. of Chinle Indian School, 23.0 mi by rd. S. of Lukachukai Post Office. Station is on most northerly one of twin top of Seznini Butte.

To reach from Chinle, drive northeasterly on Chinle-Wheatfield Rd. 27.0 mi to Sheep Dip Corral; turn right and drive as follows: 0.25 mi and ford Tsaile Creek; thence 3.5 mi to Y-rd. forks; take left hand rd. 0.5 mi to Y-rd. fork; take right hand rd. for 0.4 mi to Y-rd. fork; take left hand rd. 1.8 mi to Y-rd. fork; take right hand rd. 0.2 mi to Y-rd. fork; swinging left across draw in 0.1 mi; thence 0.3 mi to Y-rd. fork; take right hand rd. 1.4 mi to X-ing of draw; thence 1.0 mi to X-rds. and hogan; thence straight ahead 0.9 mi to X-ing of draw; thence 0.8 mi to a point on rd. opposite Seznini Butte; turn left and drive through sagebrush toward the butte and into a cove on N. side of butte; hike up N. slope to top of butte and station. (A 45-minute hike)

Station mark: Standard tablet stamped "SEZNINI 1936", cemented in top of butte.

Reference mark No. 1: Standard reference mark tablet stamped "NO 1", cemented in top of butte, 18.65 ft from station mark in azimuth $46^{\circ}23'$.

Reference mark No. 2: Standard reference mark tablet stamped "NO 2", cemented in top of butte, 21.10 ft from station mark in azimuth $187^{\circ}48'$.

Note by W.L.S., 1955: Station found as described; all marks in good condition.

ARIZONA ZONE EAST

V.A. Elevation: ^{76215 SDVA '78} ~~7618~~ ft

*X= 757,291.02

Y=1,874,303.84

*Latitude $36^{\circ}08'53.472''$ Longitude $109^{\circ}17'42.715''$

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
	°		
Lee	4 38' 24.04"	184° 37' 57.61"	45,578.52
Summit	13 04 35.49	193 02 59.19	59,412.58
New Mexico Hill	50 33 31.76	230 30 48.51	29,430.06
Tuly Bia	67 35 59.03	247 30 16.73	51,546.04
Yata	74 40 54.81	254 37 42.95	27,673.26
Sibasila	83 11 58.14	263 04 56.83	59,023.37
Indian	122 14 46.72	302 10 34.90	41,336.72
Rock	123 20 41.26	303 18 19.71	23,539.11
Black Pinn. LO	227 05 57.81	47 10 52.81	55,849.37
White Cone 2	257 13 38.13	77 21 10.48	64,430.61
Sonsala (USGS)	284 51 15.55	104 58 56.66	66,408.4
Fluted Rock (USGS)	351 45 16.29	171 46 55.08	96,399.5

* = Values by USC&GS

12/21/70 slb *slm*

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Arizona (408)

Apache County

SIBASILA

1927 N.A.D. (Adj.)

R.B. Steele, 1937

C. Broome, 1949

Books: PH 114, PH 388, D2425-34

W.K. Platt, 1955

Located 5.0 mi by rd. SE. of Chinle Indian School, on S. side of Chinle-Fort Defiance Rd. Station is on W. edge near N. end of most northerly one of two hills. Car can be driven to station.

Station mark: Standard tablet stamped "SIBASILA 1937", cemented in bedrock.

Reference mark No. 1: Standard reference mark tablet stamped "NO 1 1937", cemented in bedrock, 122.95 ft from station mark in azimuth 223°33'. (Replaced 1949)

Reference mark No. 2: Standard reference mark tablet stamped "NO 2 1937" cemented in bedrock, 154.52 ft from station mark in azimuth 301°48'.

Note by C.B., 1949: Station mark and reference mark No. 2 found as described. Reference mark No. 1 found destroyed and was replaced as follows:

Reference mark No. 1: Standard reference mark tablet stamped "1 1949", cemented in bedrock, 115.93 ft from station mark in azimuth 224°05'39".

Note by W.K.P., 1955: Found as described and all marks found in place.

ARIZONA ZONE EAST
X= 698,750.33
Y=1,866,789.53

Elevation: 6178 ft (By Plane
table leveling)

Latitude 36°07'43.764" Longitude 109°29'37.116"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Ganado (C&GS)	7°46'40.26"	187°44'51.93"	112,211.35
Snake	28 03 01.00	207 59 24.22	64,391.43
Beautiful (C&GS)	57 54 28.48	237 50 24.05	40,202.72
Ridge	85 39 26.70	265 35 41.05	31,493.48
Cone	92 52 21.26	272 50 04.55	19,045.99
Lohali (C&GS)	94 08 38.45	273 57 11.93	95,729.38
Red Mesa	104 51 33.73	284 46 55.64	40,003.73
Chin Lee NEB	113 32 59.64	293 29 57.96	27,554.96
Dog	142 08 42.35	322 03 26.10	71,431.92
West	154 48 39.07	334 42 27.32	120,637.19
Valley	157 35 18.36	337 32 32.33	60,365.02
Slim	171 26 35.97	351 26 16.35	18,327.44
Indian	219 02 02.54	39 04 52.40	37,453.70
Antelope	235 48 13.99	55 50 31.25	23,069.93

FILE COPY

Arizona (408)

Apache County

YATA

1927 N.A.D. (Adj.)

R.B. Steele, 1937

W.K. Platt, 1955 (N)

Books: D 2425-34, PH 388

Located about 12 mi E. of Chinle Indian School, 4.0 mi NW. of jct. of Monument Canyon with Canyon de Chelly; 500 ft N. of rd. which leads from Sheep Dip Corral to jct. of Canyon Del Muerto and Canyon de Chelly. (This rd. leads between the two main canyons). Station is on low timbered-covered hill locally known as Yata Hill, and is near E. end, apparently the highest point on hill.

To reach from Chinle, drive NE. on Chinle-Wheatfield Rd. 27.0 mi to Sheep Dip Corral; turn right (S.) for 0.25 mi and ford Tsaile Creek; thence 3.5 mi to Y-rd. fork; take left hand rd. 0.5 mi to Y-rd. fork; take right hand rd. 0.4 mi to Y-rd. fork; take left hand rd. 1.8 mi to Y-rd. fork; take right hand rd. 0.2 mi swinging left across draw in 0.1 mi; thence 0.3 mi to Y-rd. fork; take right hand rd. 1.4 mi to crossing of draw; thence 1.0 mi to X-rd. and hogan; go straight ahead 0.9 mi to X-ing of draw; thence 1.1 mi to X-ing of draw W. of Seznini Butte; thence 5.5 mi to Yata Hill.

Note: Standard brass tablet of National Park Service was found cemented in 50-pound boulder and stamped "USDI-NPS". Boulder was in forks of three-pronged pinon tree about 2 ft above ground. Two prongs of tree were cut off and third prong trimmed of all branches and used as signal pole. Tablet was centered under top of signal pole. Boulder was not fastened.

Not Found 1/6

Station mark: Standard tablet centered under top of pole.

Not Found 1/6

Reference mark No. 1: Standard reference mark tablet stamped "YATA NO 1 1937", cemented in rimrock, 96.65 ft from station mark in azimuth 2° 25'.

Not Found 1/6

Reference mark No. 2: Standard reference mark tablet stamped "YATA NO 2 1937", cemented in bedrock, 80.62 ft from station mark in azimuth 148° 33'.

Not Found 1/6

Reference mark No. 3: Standard reference mark tablet stamped "YATA NO 3 1937", cemented in boulder, 43.90 ft from station mark in azimuth 242° 55'.

Note by W.K.P., 1955: Recovered but not occupied.

ARIZONA ZONE EAST

V.A. Elevation: 6864 ft

X= 730,668.40

Y=1,866,754.26

Latitude 36°07'41.053" Longitude 109°23'08.050"

<u>To Station</u>	<u>Azimuth</u>	<u>Back Azimuth</u>	<u>Feet</u>
Tuly Bia	59°28'59.37"	239°26'28.90"	24,324.39
Indian	164 13 01.21	344 12 01.45	30,508.78
Rock	199 04 55.86	19 05 46.29	21,433.85
Seznini (C&GS)	254 37 42.95	74 40 54.81	27,673.26