## ARIZONA-CALIFORNIA BOUNDARY COMMISSIONS

## GEOGRAPHIC POSITIONS <br> and <br> PLANE COORDINATES

| Station Number | Code |  | $\begin{array}{r} 192 \\ t 164 \end{array}$ | 27 Datum ade |  | ng 1 | order tude | State Plane $x$-reet | Coordinates $y$-reet | $\theta$ or |  | Angle |
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| 0 | 203 | 35. | 00 | 12.45882 | 114 | 38 | 03.31001 | 235184.23 | 1457728.62 | 0 | 30 | 26.1 |
| 0 | 2701 | 35 | 00 | 12.45882 | 114 | 38 | 03.31001 | 784281.48 | 93590.84 | 0 | 32 | 40.0 |
| 0 | 405 | 35 | 00 | 12.45882 | 114 | 38 | 03.31001 | 3007769.34 | 564020.63 | 1 | 53 | 06.7 |
| 1 | 203 | 35 | 00 | 00.12984 | 114 | 37 | 48.0494 .5 | $23644 \% .79$ | 1456470.95 | 0 | 30 | 17.2 |
| 1 | 2701 | 35 | 00 | 00.12986 | 114 | 37 | 48.04945 | 785502.88 | 92356.51 | 0 | 32 | 48.6 |
| 1 | 405 | 35 | 00 | 120.12984 | 114 | 37 | 48.04965 | 3009079.90 | 562807,16 | 1 | 55 | 15.4 |
| $z$ | 203 | 34 | 43 | 23.99286 | 114 | 29 | 32.46678 | 276926.45 | 1355430.62 | 0 | 25 | 22.3 |
| 2 | 405 | 34. | 43 | 23.99286 | 114 | 29 | 32.46678 | 3053797.17 | 463577.27 | 1 | 59 | 57.8 |
| , | 203 | 34 | 10 | 09.30826 | 114 | 16 | 01.35839 | 343602.04 | 1153368.91 | 0 | 17 | 25.4 |
| 7 | 405 | 34 | 10 | 09.30826 | 114 | 16 | 01.35839 | 3128942.45 | 264518.01 | 2 | 07 | 40.2 |
| 9 | 203 | 34 | 10 | 16.61734 | 114 | 17 | 11.37843 | 337722.53 | 1154138.12 | 0 | 18 | 04.8 |
| 9 | 405 | 34 | 10 | 16.61734 | 114 | 17 | 11.37843 | -3133035.66 | 265038.47 | 2 | 07 | 00.3 |
| 10 | 203 | 34 | 14 | 00.84448 | 114 | 17 | 35.21757 | 335711.02 | 1152554.35 | 0 | 18 | 18.1 |
| 10 | 405 | 34. | 17 | 06, 84448 | 114. | 17 | 35.21757 | 3121092.74 | 263371.23 | 2 | $n 6$ | 46.7 |
| 15 | 203 | 32 | 54 | 30.83248 | 114 | 27 | 41.36270 | 281636.87 | 695000.95 | 0 | 23 | 11.6 |
| 15 | 406 | 32 | 54 | 30.83248 | 114 | 27 | 47. 36270 | 2548905.05 | 274641.06 | 0 | 58 | 58.1 |
| 17 | 203 | 32 | 50 | 38.49534 | 114 | 28 | 06. 30594 | 279350.52 | 671534.59 | 0 | 23 | 22.7 |
| 17 | 406 | 32 | 50 | 38.49574 | 1148 | 28 | 06.30594. | 2547180.01 | 251126.84 | 0 | 58 | 4.4.4 |
| 19 | 203 | 32 | 48 | 54.14142 | 116 | 90 | 25.84327 | 267370.11 | 661071.42 | 0 | 24 | 37.3 |
| 10 | 606 | 32 | 48: | 54.1414 ? | 114 | 30 | 25.84327 | 2535452.87 | 240380. 55 | 0 | 57 | 27.8 |
| 20 | 203 | 32 | 45 | 25. 14.7206 | 114 | 31 | 27.71824 | 261935.35 | 640058.43 | 0 | 25 | 08.6 |
| 20 | 496 | 32 | 45 | 25.84204 | 114 | 31 | 27.71824 | 2430521.19 | 219243.76 | 0 | 56 | 53.8 |
| 32 | 203 | 32 | 43 | 46.6484 .1 | 114 | 36 | 54.06637 | 233981.80 | 630047.29 | 0 | 28 | 03.8 |
| 32 | 406 | 32. | 43 | 44.64841 | 114 | 36 | -56.06437 | 2502814.34 | 20856\%.72 | 0 | 53 | 54.4 |
| 34 | 203 | 32 | 43 | 07. 35671 | 114 | 43 | 03.89804 | 202353.43 | 626571.91 | 0 | 31 | 23.2 |
| 34 | 406 | 32 | 43 | 07.55671 | 114 | 43 | 03.89804 | 2471278.22 | 2(14340.58 | 0 | 50 | 31.2 |

- Code 203 marizona West Zone

Code 406 - Califormis Zone VI
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| 3091846.70 | 365422.13 | 2 | 03 | 53.4 |
| 315375.71 | 1256917.33 |  | 20 | 47.1 |
| 1096455.70 | 364783.20 | 2 | . 04 | 24.6 |
| 318984.83 | 1255624.44 |  | 20 | 22.8 |
| 3100031.60 | 365642.03 | 2 | 04 | 49.1 |
| -324073.47 | 1255354.96 |  | 19 | 48.4 |
| 3105126.90 | 365587.64 | 2 | 05 | 23.7 |
| 326590.00 | 1250983.08 |  | 19 | $30=8$ |
| 3107825.70 | 361326.07 | 2 | 05 | 41.0 |
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| 3113314.30 | 358917.73 | 2 | 06 | 17.8 |
| 335052.22 | 1246090.86 |  | 18 | 33.1 |
| $3116486 \cdot 70$ | 356795.65 | 2 | 06 | 38.8 |
| 336802.69 | 1243093.89 |  | 18 | 21.0 |
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| 3126969.30 | 348828.76 | 2 | 07 | 48.1 |
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| 405 | 34 | 15 | 29.7>480 | 114 | 08 | 13.01660 | 3167023.00 | 298370.16 | 2 | 12 | 07.1 |
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| 903 | 34 | 15 | 34.43710 | 114 | 08 | 4 1.77520 | 380665.02 | 1186068.84 |  | 13 | 20.4 |
| 405 | 34 | 15 | 34.43710 | 114 | U8 | 41.77520 | 3164592.60 | 298753.48 | 2 | 11 | 50.8 |
| 203 | 36 | 15 | 28. 19700 | 114 | 09 | 11.29010 | 378185.21 | 1185447.78 |  | 13 | 37.0 |
| 405 | 34 | 15 | 28.19700 | 114 | 09 | 11.29010 | 3162141.20 | 298028.28 | 2 | 11 | 33.9 |
| 203 | 34 | 15 | 34.46750 | 114 | 09 | 49.08670 | 375015.28 | 1186093.95 |  | 13 | $58 \cdot 3$ |
| 405 | 34 | 15 | 34.46350 | 114 | 09 | 49.08670 | 3158946080 | 298540.05 | 2 | 11. | 12.4 |
| 203 | 34 | 15 | 04.39560 | 114 | 09 | 49.81240 | 376942.02 | 1183054.82 |  | 13 | $58 \cdot 5$ |
| 405 | 34 | 15 | 04.39560 | 114 | 09 | 49.81260 | 3159001.90 | 295500.50 | 2 | 11. | 12.0 |
| 203 | 34 | 14 | 55.02236 | 114 | 10 | 08.12840 | $373400 \cdot 62$ | 1182113.62 |  | 14 | 08.8 |
| 405 | 34 | 14 | 55.02230 | 114 | 10 | 08. 12840 | 3157501.60 | 294495.08 | 2 | 11 | 01.5 |
| 203 | 34 | 14 | 46.39880 | 114 | 10 | 28.22640 | 371659.49 | 1181249.12 |  | 14 | 20.4 |
| 405 | 34 | 14 | 46.39880 | 114 | 10 | 28.82640 | 3155798.50 | 29355 2.83 | 2 | 10 | 49.7 |
| 203 | 34 | 14 | 24.76230 | 114 | 10 | 35.88190 | 371058.03 | 1179064 * 50 |  | 14 | 24*2 |
| 405 | 34 | I4 | 24.76230 | 114 | 10 | 35.88190 | 3155289.80 | 291349.79 | 2 | 10 | 45.7 |
| 203 | 34. | 14 | 05.71080 | 114 | 11 | 02.76440 | 368797.94 | 1177148.24 |  | 14 | 39.2 |
| 405 | 94 | 14 | 05.71080 | 114 | 11 | $02 \cdot 76440$ | 3153107.60 | 289339.56 | 2 | 10 | 30.4 |
| 203 | 34 | 13 | 13.71570 | 114 | 12 | 04.78190 | 363562.73 | 1171915.03 |  | 15 | 13.8 |
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| 233 | 34 | 12 | 37.46530 | 114 | 12 | 43.84100 | 360266 *18 | 1168265.42 |  | 15 | 35.5 |
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| 405 | 34 | 12 | 06.32830 | 114 | 13 | 31.16580 | 3141109.70 | 276809.88 | 2 | 09 | 05*8 |
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## DESCRIPTIONS OF 34 BOUNDARY POINTS

 DETERMINED BY GEODETIC METHODS
## U.S. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY

## recovery note, triangulation station

Name of Station: BDRY. PT. NO. 1, Center of Colorado River, Calif-Atiz-Nev

| Established by: C. H. Sinclair | Fesk: 1893 | State: Arizona-California-Nevada |
| :--- | :--- | :--- |
| Recovered by: 1. G. Burdine | Iear: 1964 | County: Mohave-San Bernardino-Clark |

Detailed statement as to the fitness of the original description: including marks found, stampings, changes made, and other pertinent facts:
Boundary Pt. No. 1 is at the intersection of the 35th astronomic parallel and the centerline of the channel of the Colorado River. This point was determined in the 1893-99 survey of the Cailifornia-Nevada boundary: and is common to the boundaries of Arizona, California, and Nevada.

Geodetic azimuth and distance from reference stations to BDRY. PT. NO. 1:

|  |  | Distance |  |
| :---: | :---: | :---: | :---: |
| Station | Azimuth | melter | feet |
| DRT REF PT NO. IA | $313 \quad 46 \quad 06.2$ | 268.348 | $880 .+1$ |

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

DESCRIPTION OF TRIANGULATION INTERSECTION STATION
NAME OF Station: BDRI: PT NO: 3 CALIF-ARIZ


Description, including sketch of objret
Boundary P: Sio: 2 is located in the center of the channel of the Colorado Rivet approximately one-half mile northerly from the AT. AS.E. Railway Bridge at Topock,

BDRI PT No. 1 is 247,195 meters or 811.01 feet in azimuth $234^{\circ}$ (49' $34.9^{\circ}$ from triangulation station REFUGE
U.S DEPARTMENT OF COMMERCE-COAST AND GEODEIIC SURVET

## DESCRIPTION OF TRAVERSE STATION

Name or Station: BDRY: PT, NO 3 CALIF-ARIZ
Chey of Party: L. G. Burdine Year: 1964
State: Callfornia

County: San Bernardino Mohave

Description, inthding sketch of object
The station is the determined center of the railroad bridge at Topock. Arizona. The center of the bridge was determined with a 300 ft . tape and marked with a $3 \times 6$ inch iron plate. screwed toan 8 by 8 inch wood timber The station is a punch hole, surrounded by a chiseled triangle, stamped POINT NO, 31964.
A traverse connection was made to triangulation station SANTAFE. The distance being 754.68 ft . or 1230.026 m.). east.

The geodetic azimuth from station SANTAFE to BDRY. PT. NO. 3 is $89^{\circ} 40^{\circ} 19.6^{\circ}$,

# U.5. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY DESCRIPTION OF TRAVERSE STATION 

Name of Station: BDRI PT. NO. 4 CALIF-ARIZ Chief of Party: L G. Burdine Year: 1964<br>State: Arizona<br>California<br>Cousty: Mohave San Bernardine

## Description, inciuding skench of objecs:

The station is '4 mile west of Topock, Arizona on the concrete center support of the L.S. Highway 60 bridge over the Colorado River. It is Point No. 4 of the interstate compact defining the boundary between the states of Arizona and Califortuia.
The mark io a standard triangulation disk stamped POINT NO. 4 cemented in a drill hole in the concrete of the center pier. It is midway between the east and west edges of the pier and under the center of the roadway 6verhead. This iq nite the exact center of the steeiwork of the bridge bectause the steel is not centered on thr concrete pier.
A traverse connection was made through an eccentric point to triangulation station CENTER which is on the northeast cornet of the center pier. The distance is 5.082 m . ( 16.67 ft ),
The geadetic azimuth from station CENTER to BDRY. PT. NO $+\frac{1}{} 349^{\circ} 10^{\circ} 28^{\circ}$

## U. 2. DEPARTMENT OF COMMERCE-COAST AND GEODELIC SURVEY <br> DESCRIPTION OF TRIANGULATION STATION

Name of Ststion: EL. PASO = BDRI. PT. NO. 5 CALIF-ARIZ<br>Chief of Pinty:<br>L. G. Burdine<br>State: Arizona<br>California<br>Year: 1964<br>Cousty: Mohave<br>San Bernardino<br>Descrised hy: J.E.F.

Sote* Height of telescope above station mark 1.71 meters. $\dagger$ Height of igghtabove station mark meters:

Surface-station mark. underground-station mark

Distances and directions to azimuth mark, reference marks and prominent objects which can be seen from the ground at the station

|  | Bearing | Distance |  | Direction: |
| :---: | :---: | :---: | :---: | :---: |
| Object |  | Eeet | Neters |  |
| $\begin{aligned} & \text { ARIZ } 97 \\ & \text { CENTER } \end{aligned}$ |  |  |  | $\begin{array}{r} 0^{\circ} 00^{\prime} 00,9^{\circ} \\ 229 \quad 0803.5 \end{array}$ |

## Detailed description:

The station is near the center of a steel bridge which supports the El Paso Natural Gas Company and the Pacific Gäs and Electric Company pipes crossing the Colorado River at Topock, Arizona.

To reach the station from the post office in Topoch. Arizona, go west an U'S. Highway 66, crossing the Colorado River Bridge for 0.5 mile to a side road sharp left, just before reaching the Santa Fe Railroad Underpass. Turn sharp left. double back and go southeast on a paved road for 0.2 mile to a side road left. Turn left and go southerly on 2 grakel road for 0.05 mile to a wire linh gate Pass through the gate and go poutheasterly on the gravel road for 0.25 mile to the southwest end of the steel bridge which supports two large gas pipes. Pass through a wire link gate and pack along catwalk to the center of the bridge and the station.

The station is marked by a center punch hole surrounded by a chiseled riangle that is approximately $1_{2}$. inches on a side. The mark is equal distance from both ends of the bridge and near the center of the catwalk. It is stamped ELPASO 1964

Note: Reference marks or an azimuth mark were not set for this station.
Obtain kevs to locked wire link gates at the compressor station on a hill about 4 mile west of Topock. Arizonta.
Note: This station is also POINT NO 3 of the interstate compact defining the boundary between the atates of Arizona and California.

[^1]

# U.S. DEPARTMENT OF COMMERCE-CONST AND GEODETIC SURVEY <br> DESCRIPTION OF TRAVERSE STATION 

Name of Station: BDRI: PT- NO. 6 CALIF-ARIZ
Caief of Party: L. G. Burdine Yeak: 1964 State: $\begin{gathered}\text { Arizona } \\ \text { California Coseth: } \\ \text { Sama Bernardino }\end{gathered}$
Description, including sketch of object:
The station is at the determined centef, east and west. of the Parker Dam sh frich fies acreet the Colarado River 18 miles north of Parker. Atizona.
The station is marked by a standard station mark disk, stamped POINT NO. $6190+$ cemented in a drill hole in the center of the concrete walk along the north side of the top of the dam. It is situated at the measured center, east and west, of the center floodgate of the dam.
A traverse connection was made to triangulation station PARKER DANL, the distance being 20.616 meters or 67.74 feet
The geodetic azimuth from station PARKER DAM to BDR1: PT. NO. © is $267^{\circ}$ If $\mathrm{FT}^{\circ}$
U.5. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY

## DESCRIPTION OF TRIANGULATION INTERSECTION STATION

Nase of Stattos; BDRy, PT, NO. 7 CALIF-ARIZ


Description. including sketch of object:
Boundary Pr. No. 7 lies in the center of the Colorado River approximately 2.\{tw feer upstream from the earth fill of Headgate Rock. Dam.

BDRY. PT. NO. 7 is 162.154 meters or 332.00 feet in azimuth $1+1^{*} 12^{\prime} 32.9$ frony triangulation station DOCK.

## DESCRIPTION OF TRIANGULATION STATION



## Detailed description:

The station is fixed point >10. 8 of the Arizona-Califormia boundary. It is located at the center of the earth fill of the Headgate Rock Dam which is airline, about 2 miles north-northeast of Parker, Arizona.

To reach the station from the intersection of Riverside Drive and California Avenue in Parker. go east on Riverside Drive for 0.9 mile to a fork and sign "DEAD END ROAD". Take the left fork and go north on a paved road for 0.55 mile to a locked cable across the road. hey to the lock can be obtained from the caretakers residence which is the house to the north of the gate) Continue north on the paved road, crossing the concrete spillway, for 0,3 mile to the north end of the spillway. Turn right and go northeast on a track road for 0.3 mile to the center of the Headgate Rock. Dam and the station.

Station mart is a bronze plate, stamped $21+00$ § 115 BMI ELI: 389.91 CRIR, set in the top of an 8 by 14 Inch concrete port fush with the ground surface It is 25 feet east of the center of the dam and 3.8 feet west of a concrete monument which is about 8 feet figh and has the letters. WATHEN DAMUSIS 1941 on the west side, CALIFORNLA on the north side and ARIZONA on the south side.

Reference math 1 is a standard disk, stamped WATHEN NO I 1964, set in the top of a round concrete post. 10 inches in diameter and projects about 2 inches above the ground surface. It is 18 feet west of the center of the dam and about the same eleration as the station.

Reference marh 2 is a standard disk, stamped WATHEN NO 2 1964, set in the top of a round concrete post. 10 inches in diameter and projects about 3 inches above the ground surface. It is 15 feet west of the centet of the dam and about the same elexation as the station.
U.S. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURYEY

## DESCRIPTION OF TRIANGULATION INTERSECTION STATION

Name of Station: BDRY. PT, NO. 9 CALIf-AR1Z
Chief of Party: L. G. Burdine Year: 1964

Description, including sketch of object:
Boundary. Pt. No. 9 lies on the centerline of the river approximately 3.625 feet westerly from Point No. 8.
BDRY. PT. NO, 9 is 57.526 meters or 188.73 feet in azimuth $338^{\circ} 55^{\prime}$ 04. $3^{\circ}$ from triangulation station FL.AT.
U.S. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY

## DESCRIPTION OF TRIANGULATION INTERSECTION STATION

Nishe of Station: BDRY: PT NO. 10 CALIf-ARIZ

Chief of Party: L. G. Burdine Year: 1964 State: Arizona County: Yuma $\begin{gathered}\text { Canifornia Bernardino }\end{gathered}$
Descripnon, including sketch of object:
Boundary Pt. No. 10 lies in the center of the Colorado River at a point where the parallel of $34^{\circ} 10^{\circ}$ north latitude intersects said senterline.

BDRI, PT NO 10 is 99.697 meters or 327.09 feet in azimuth $285^{\circ} 07^{\prime} 426^{\circ}$ from triangulation station VIEN:
U.S. OEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY

## description of traverse station

Name of Statiox: BDRY PT. NO, 11 CALIF-AR1Z
Chief of Party: L. G. Burdine Yeak: 1964 State Atizona $\begin{gathered}\text { California } \\ \text { Cousty: Yuma } \\ \text { San Bernardino }\end{gathered}$
Description, inctuding sketch of object:
The station is located abous 1 mile north of Parker, Arizona in the center of the auto bridge over the Colorado River. This is Point 11 of the interitate compact defining the boundary between the states of Arizona and Caiifornia.
The station is marked by a center punch hole surrounded by a chiseled triangle that is approximately $11 / 2$ inches on a side. The mark is equal distance from both ends of the bridge and in the center line of Sput 95 , It is stamped POINT 111964 on the metal expanision beam of the bridge.
A traverse connection was made to SPAN RM I which is southeast and near the center of the walkway of the bridge. The distance being 8.474 meters. 27.80 feet.
The geoderic azimuth from station SPAN RM I to BDRY. PT. NO, 11 is $103^{\circ} 18^{\prime} 31^{\circ}$.

## DESCRIPTION OF TRIANGULATION STATION

| Note ${ }^{\text {\% }}$ | Height of telescope above station mark 1.65 meters, $\dagger$ Height of light above station mark |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\frac{1 \mathrm{~b}}{7 \mathrm{a}}$ | Surface-station mark, underground-station mar's | Distances and directions to azimuth math, reference marks and prominent objects which can be seen from the ground at the station |  |  |  |  |
|  | Object |  | Distance |  | Direction; |  |
|  |  |  | Feet | Meters |  |  |
|  | SPUR 1995 <br> BDRI. REF, PT. NO. 12 | SW |  |  |  | $\begin{aligned} & 00.00^{\circ} \\ & 30.81 \end{aligned}$ |

## Detailed description:

The station is located at the center of the earth fill section of the Palo Verde Diversion Dam, which is about 10 miles northeast of Blythe, 0.25 mile east of L'S. Highway 95 and 0.05 mile northeast of the flood gates of the Paio Verde Diversion Dam.

To reach the station from the junction of U:S. Highways 60,70 and 95 , which is at the east edge of Blythe. go north on U.S. Highway 95 for 6.3 miles to where the highway turns east. Contimue on U.S. Highway 95 east and northeast for 4.2 miles to a side road right. Turn right, east on grivel road for 10.25 mile to a gate and smanll building on the left Pass through the gate and turn left actoss the concrete dam for 0.05 mille to the station in the center of the road as described
The station mark is a standard disk set in the top of a 12 -inch round concrete monument. It is set fush with the ground and is stamped POINT NO. 12A 196t. It is in the center of the earti dam.

[^2]U.5. OEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY

DESCRIPTION OF TRAVERSE STATION
Name of Station: BDRI PT. NO. 13 CALIF-ARIZ
Chief of Pakty: L. G. Burdine Yeare 1964 Stite: Anzona Colnty: Juma
Califormia Riverside

## Descripnion, including jketch of abject

The station is at the measured center of the L.S. Highway $60-70$ bridge spanume the Colorado River 5 miles eist of Blythe, Califorria

The station is marked by a standard station mark disk, stamped POINT NO 137964, cemented in a drill hoie in the center of the concrete roadbed at the center of the center span of the bridge.
A traverse connection was made to triangulation station EHREN, the distance being 4.607 meters or 15.11 feet.

The geodetic azimuth from station EHREN to BDRY. PT NO 13 is $30^{\circ} 5 t^{\circ} 010^{\circ}$

## DESCRIPTION OF TRAVERSE STATION

Nave of Station: BDRY. PT. NO. $1 \ddagger$ CALIF-ARIZ

Chier of Pakty: L, G. Burdine Year: 1964 State: Arizona Cotifornic | Coty: Yuma |
| :---: |
| Imperial |

## Description, including skettch of object:

This station was established as fixed point number $14.1 t$ is 8 miles south of Ripley, and at the determined center of the CIBOLA TOLL BRIDGE

The station is a punch hole in the top of a 60 penns nail in a wooden plank in the bridge
A traverse connection was made to triangulation CIBOLA the distance being 35.649 meters- 84.15 feet, south.

The geodetic azimuth from station CIBOLA to BDRI. PT. NO. 14 is $177^{\circ} 48^{\prime} 53^{\prime}$

## U.S. DEPARTMENT OF COMMERCE-COAST AND GEODEDIC SURVEY

## DESCRIPTION OF TRIANGULATION INTERSECTION STATION



BDRY. PT NO. 15 is 265.333 meters or 870.32 feet in azimuth $10^{\circ} 06^{\prime} 03.4^{\circ}$ from triangulation station SQUAW.
U.S. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY

## DESCRIPTION OF TRAVERSE STATION

Name of Station: BDRY, PT. NO. 16 CALIF-ARIZ
Chief of Party: L. G. Burdine Year: 1964 State: Arizona County: Yuma

## Description, including sketch of object:

This station was established as fixed point number 16. It is about $14 \frac{1}{2}$ mile northeast of Yuma, $+1 / 2$ miles north of Mittry Lake, 2 miles northwest of the Yuma Proving Grounds Headquarters and at the determined center of the crest of the concrete weir of Imperial Dam.
The center of the weir was determined with a 300 foot steel tape.
The station is a standard station mark disk, stamped POINT NO 161964 . cemented in a drill hole in the determined center of the crest of the concrete weir of Imperial Dam.
A traverse connection was made to triangulation station IMPERIAL, the distance being 227.998 meters, east-northeast.
The traverse conniection was made with an Electrotape.
The geodetic azimuth from station IMPERIAL to BDRI. PT NO. 16 is $95^{\circ} 12^{\prime}+7.0^{\prime \prime}$.

Name of Station: BDRI: PT, NO 17 CALIF-ARIZ
Chief of Paktr: L. G. Burdine Year: 196t State: Arizona County: Yuma
Description, including sketch of object:
Boundary Pr. No. 17 lies at the intersection of the two lines as follows:
(1) A line through Boundary Pt. No. 16 and normal to the longitudinal axis of Imperial Dam
(2) A line extending northeasterly from the center of the ovefflow section of Laguna Dam (Boundary Pe. No.
18) and normal to the longitudinal axis of the said Laguna Dam.

BDRY PT NO. 17 is 42.682 meters or 140.03 feet in azimuth $182^{\circ} 41^{\prime} 34.1^{\prime}$ from triangulation station MITTRY.
This boundary point was not marked in the 1964 C\&GS survey.

U5. DEPARTMENT OR COMMERCE-COAST AND GEODETIC SURVEY

## DESCRIPTION OF TRAVERSE STATION

Name of Stattox: BDRI: PT NO. 18 CALIF-ARIZ

Chief of Party: Lu. Gurdine Jeak: $1964 \quad$ State: Atizona | Caliornia $\quad$ Cousty: Yuma |
| :--- |
| Imperial |

Destription, including sketeh of object:
This station was established as fixed point number 18 . It is about 11 miles northeast of Yuma and 5 miles southwest of the Iuma Proving Grounds Headquarters.
The station is a standard station mark disk, stamped POINT NO 18 . 1967, cemented in a drill hole in the determined center of the crest of the concrete weir of Laguna Dam.
A ttaverse connection was made to triangulation itation LAGUNA, the distance being 60.674 meters, eastsoutheast.
The center of the weir was determined by Electrotape,
The geoderic azimuth from station LAGUNA to BDRY. PT, NO. 18 is $142^{\circ} 12^{\prime} 45.5^{\circ}$.

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

## DESCRIPTION OF TRIANGULATION INTERSECTION STATION

## Name of Station: BDRY PT. NO. 19 CALIF-ARIZ

Curey of Party: E. G. Burdine Yeak: 1964 State: $\begin{gathered}\text { Arizona } \\ \text { California }\end{gathered}$ Countr: $\begin{gathered}\text { Yuma } \\ \text { Imperial }\end{gathered}$

## Description, including sketeh of objert

Boundary Pt . No. 19 lies on the centerline of the Colorado River approximately 5800 feet southwesterly of Point 18.
BDRY PT. NO. 19 is 296.126 meters or 971.54 feet in azimuth $114^{\circ} 10^{\prime} 19.6^{\circ}$ from triangulation station KOOL.

## DESCRIPTION OF TRIANGULATION INTERSECTION STATION

Name of Statiox: BDRY: PT. No. 20 CALIF-ARIZ
Chief of Party: L G. Burdine Year: 1954

Description, including sketch of object:
Boundary Pt. No. 20 lies on the centerline of the Colorado River where said centerline intersects the section line between Sections 4 and 9, Township 8 South, Range 22 West, Gils and Salt River Meridian

BDRY, PT. NO. 20 is 146.176 meters or 479.38 feet in azimuth $89^{\circ} 19^{\prime} 51.6^{\circ}$ from triangulation station T8S R22W WS4 PS9
U.5. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY

## DESCRIPTION OF TRIANGULATION STATION

Name of Station: BDRI: PT, NO, 21 (BLM) CALIF-ARIZ
Chief of Party: L. G. Burdine
Chief of Party: L. G. Burdine Year: 1964 Described by: C. M. Call


|  | Object | Bearing | Distance |  | Direction $\ddagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Feet | Meters |  |
| $\begin{aligned} & 11 \mathrm{~b} \\ & 11 \mathrm{~b} \end{aligned}$ | DELTA (USGS) | $\begin{aligned} & \mathrm{NNE} \\ & \mathrm{SSE} \\ & \text { SSE } \end{aligned}$ |  |  | $00^{\circ} 00^{\prime} 00.0^{\circ}$ |
|  | Reference Mark No 1 |  | 67.25 | 20.498 | 12.44 |
|  | Reference Mark No. 2, |  |  | 20.935 | 1512228. |
|  | Fiuma, Southern Pacific Pipeline Ine., IVest tower of suspension bridge |  | (1) 2 |  | $\begin{array}{llll}152 & 45 & 01.7\end{array}$ |
|  | BDRY. PT NO. 22 (BLM) CALIF-ARIZ |  |  |  | $171 \quad 50159$ |

## Detailed description:

The station is located $43 / 4$ miles northeast of Xuma, $2 \frac{1}{2}$ miles south-southeast of Bard, and 0.65 mile west of the center of the Colorado River. It is in the edge of a field road between a cultivated field and the west bank of an irrigation canal.

To reach the station from the post office in Bard, go north and east on paved road for 1.0 mile to a curve to the left with graveled road straight abead; continue straight east on graveled road 0.8 mile to levee embankment. Turn left and go north 0.1 mile to road on right up to top of levee; turn right up on to levee then sharp right and go south along the top. 1.8 miles to a fork. Take right fork and go southwest and west 0.8 mile to side road on ieft, turn left off levee and go south 0.8 mile to a side road on the left. Turn left and go east 0.1 mile to $=$ corner and the station on right just after turning south.

The station mark is a U.S. Bureau of Land Management Cadastral Survey disk stamped CAL ARIZ PT NO 2164 riveted to the top of a 2 -inch iron pipe set in a mass of concrete. It is about 2 inches beiow the surface of the field road and is 33.4 leet west of the top of the west bank of the irrigation canal and 6.2 feet east of an unpainted, wooden $\ddagger \times \ddagger$ witness post.

[^3][^4]Reference mark number one is a standard disk stamped CAL ARIZ PT NO 21 NO 1 BLM 1964 cemented in the top of a 12 -inch cylindrical concrete monument projecting 8 inches above ground. It is 9 feet west of thie top of the west bank of the irrigation canal and l.4 feet southeast of a metal witness post with sign. It is about 2 feet higher than station elevation.

Reference mark number two is a standard disk stamped CAL ARIZ PT NO 21 NO 2 BLM 1964 cemented in the top of a 14 -inch concrete cylindrical monument projecting 3 inches above ground. It is 10 feet west of the top of the west bank of the irrigation canal, 1.7 feet north of a metal witness post with sign, and 18 inches higher than station elevation.
R.M. NO. 1 to R.M. NO, 2 is 127.19 feet ( 38.768 meters).

# U. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY DESCRIPTION OF TRIANGULATION STATION 

Name of Statrox: BDRY PT, NO. 22 (BLM) CAIIF-ARIZ<br>State: Cabifornia Coustys \(\begin{gathered}Imperial<br>Arizona<br>Iuma\end{gathered}\)<br>Chief of Pikty: L. G. Burdine<br>Year: 1964<br>Described by; II:1:M.

Note ${ }^{*}$ Height of telescope above station mark 4.87 meters, + Height of light above station mark meters.
desc.

Surface-station mark, underground-station mark

Distances and directions to azimuth mark, reference marks and prominent objects which can be seen from the ground at the station

| Object | Bearing | Distance |  | Direction* |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Eeet | Mieters |  |
| POLE |  |  |  | $00^{\circ} 00^{\prime} 00.0 r$ |
| R. ${ }^{\text {d }}$ ! | N | 32.45 | 9.891 | $10924 \quad 33$ |
| R.M. 2 R | E | $29+5$ | 8.977 | $202 \quad 0013$ |
| RAR1; PT NO 21 (BLM) CALIF. |  | 44.80 | 13.65 | 108 58 04:7 |
| T8S R22W W'St PS9 |  |  |  | $166+7 \quad+2.1$ |

The station is located in a vere sandy area 6.0 miles southwest of Laguna Dam, $4^{t}$. miles northeast of Yuma, 3.0 miles south of Bard and 1.0 mile west of the Colorado River

To reach the station from Imperial Dam, drive southerly on a paved road for 4.85 miles to Lagura Dam. Continue south on a paved road for 1.15 miles to a fork. Take the lett fort, straight aheat, and drive southerly on a levee road for 3.65 miies to a fork: Take the right fork and drive southwest and west on a levee road for 0.85 mile to a side road left. Turn left, leaving the levee road, and drive south on a feld road for 0.75 mile to road turning left. Turn left and follow the field road east for 0.05 mile to road turning south. Turn right and follow the road south along the east end of a cuitivated field for $0: 1$ mile to an irrigation ditch along the east end of the cultivated field Leave the road and drive south and west along the west and north side of the irrigation ditch for 0.2 mile to a small wooden bridge over the Irrigation ditch. Turn lefr and Srive south, crossing the bridge, thence turn ieft and drive east on a field road along the north side of a cultivated field for 0.1 mile to the northeast corner of a cultivated feld, Tumn right and drive south along the east end of a cultivated feld 0.05 mile to the southeast corner of a cultivated field. Seiect way south through sand dunes for 0.25 mile to the station.

The station mark is a Bureau of Land Alanagement cap mark riveted to the top of a 21 ; inch gafvanized pipe
 tached.

Reference matk 1 is a standard disk, stamped CAL ARIZ PT NO 22 NO 1964 , set in the top of a cylindrical concrete monument which is 12 inches in diameter and projects 4 nehes above the ground surface. It is 33.0 feet north-northwest of a metal witness post with a sign attached.

Reference mark 2 is a standard disk, stamped CAL ARIZ PT NO 22 NO 1964 , set in the top of a cylindrical concrete monumemt which is 12 inches in diameter and projects 5 inches above the ground suriace. It is 31.0 feet teast of a metal witness post with a sign attached.

[^5]
## DESCRIPTION OF TRIANGULATION STATION

| Name of Station: BDRy. PT, NO. 23 (GLO) CALIF-ARIZ |  | State: Calliotnia- <br> Arizona |  | Cousmy Imperial-Yuma |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Chier of Party: L. G. Burdine |  | Yese: 1964 |  | Described sy: D. 1-Notal |  |
| Note* | Heighr of telescope above station mark 5.21 meters, $\dagger$ Height of light above station mark |  |  |  | meters: |
| ¢esc. | Surface-station mark, underground-station mark <br> Distances and directions to azimuth mark, reference marks and grominent objects which can be seen from the ground at the station |  |  |  |  |
|  | Object | Beating | Distance |  |  |
|  |  |  | Feet | Meters D | Direction $\ddagger$ |
| 11 b | $\begin{aligned} & \text { BDRI PT: XO, } 22 \text { BLA CALIF-A } \\ & \text { RMI } 2 \\ & \text { RML } 1 \\ & \text { POLE } \end{aligned}$ | ${ }_{\mathrm{S} 12}^{\mathrm{S}}$ | 20881 132.77 | $\begin{array}{cc}(63,6+5) & 900 \\ 1+0.67) & 90 \\ & 270 \\ & 91\end{array}$ | $\begin{array}{lll} 000 & 00.00^{\circ} \\ 26 & 32 \\ 51 & 07 \\ 01 & 38.1 \end{array}$ |

Detailed decriptrons
The station is focated about 33, miles northeast of Juma. $\mathrm{j}^{1}$ \& miles northeast of the Indian Mission and School in morth Yuma, 3 miles south of Bard and in the center of a dual road.
To reach the station from the city hall in Yuma. po eabr on Ist Streer for 0.4 mile to Penitentiary Avenue. Turn leit and go north on Penitentiary Avenue for 0.2 mile to a fork at the north end of the Colorado River bridge. Take the right fork and 80 northerif on a paved road for $(0.25$ mile to a tide road right. Turn right and go east on a levee soad for 3 its miles to a side road leit. Turn left and drive north on a bladed dirt road for 0.4 mile to a farm house on the west side of the road. Continue borth on the biaded dirt paad for 0.6 mile to a crossroad. Continue north on the dirt road for 0.5 mile to the station as described.
The station math is a U.S. General Land Office Surves mark riveted to the top of a 2 -Inch galsanized pipe set in conctete that projects t inches above ground surface. It is stamped ', CAL S12 S7 PT NO 23 ARIZ 1949 1964 It is 13 feet hest of the center of a dirt road, II feet east of the center of a dirt road, 3 feet east of a pink iron pipe that projects + feet above the ground surface 4 nd 1 foot south of a b inch br 10 inct railroad tie that projects 6 feet above the ground surface.
 crete monument that is 12 inches in diameter and projects 3 inches abote the ground surface in is 11 feet west of the center of the dirt road, 9 feet east of the center of a dirt-road. 2 : feet south of a power pole and 1.5 feet northwest of a metal witness post.
Reference mark 2, a stardara dish stamped "GLO \& $\mathrm{SI}_{2} \mathrm{~S}_{7} \mathrm{XO} 2196 f^{\prime}$ ", is set in the top of a cylindrical concrete monument that projects 6 inches above the ground surface It is 11 feet west of the center of the dirt road, 10 feet east of the center of the dirt road. 2 feet north of a power poic and l. 8 feet south-southwest of 2 metal witness post.
Note: No.azimuth mark was estabiished at this station
Observations suere made from a 16 foot stand.

[^6]
## DESCRIPTION OF TRAVERSE STATION

Name of Station: BDRY. PT NO. 24 (GLO) CALIF-ARIZ

Chief of Party: L.G Burdine Yeak: 1964 State: California County; | Imperial |
| :---: |
| Arizona |

Description, intluding shetch of object:
5 miles northeast of Iuma, Arizona, $31^{2}$, miles east of the Government Indian School and the Purisima Conception Mission in the northwest angle of a crossroad and 1 foot southwest of a power pole,
A traverse connection was made to triangulation station POLE, distance being 26.26 feet 8.004 meters east of station POLE. The mark is a L.S General Land Office Survey disk stamped T8S R23W R22W S12 S7 S13 S18 CAL ARIZ PT NO 24 1964, and is tiveted to the top of a $23 / 2$ inch galvanized pipe flush with the surface of the ground.
The geodetic azimuth from station POLE to BDR1; PT. NO. 24 (GLO) is $298^{\circ} 00^{\circ} 17^{*}$.
U.

## DESCRIPTION OF TRAVERSE STATION

Name of Statiox: BDRY PT NO 15 (GLO) CALIF-ARIZ
Chief of Party: LG. Burdine Year: 1964 State: Arizona County: Yuma

Description, inciuding sketch of object:
The itation is 3.7 miles south-southwest of Bard, 2.7 miles portheast of the county courthouse in Yuma, and I mile north of the Colorado River levee. It is on the east side of a field road at a fence corner in an area of irrigated 1 arm land.
The mark is a General Land Office Survey dish of bronze riveted to the top of a 21 -inch iron pipe set in a mass of concrete and is supposed to be stamped CAL. ARIZ PT NO 25 T8S R23W S1 4 S13 S11 S12 4964 but is partil mutilated and not completely legible, It is 105 feet east of the center of a feld road level with the surface of the road, 1.5 feet west southwest of a fence corner post, 0.4 foor west of an unpainted $+x \pm$ withess post. A traverse connection was made to triangulation station COB. The distance is 15.477 meters or 30.68 feet. The geodetic azimath from station COB to BDRI, PT NO. 25. (GLO) is $0^{\circ} 26^{\prime} 53^{\circ}$

## DESCRIPTION OF TRIANGULATION STATION

Name of Station: BDRY. PT. NO. 26 (BLMI) CALIF-ARI2

## State: ArizonaCalifornia

Year: 1964

Coexty: Yuma-Imperial

Described by: J. E Sutton

Chief of Pakty
L. G. Burdine

Note* Height of telescope above station mark 11.95 meters, + Height of light above station mark meters,
Note* Height of telescope above station mark 11.95 meters, + Height of light above station mark meters,
desc;

Sutface-station mark, underground-station mark

Distances and directions to szimuth marh, reference marks and prominent objects which can be seen from the ground at the station

116
Reference Mark No. 1 COB

| Object | Bearing | Distance |  | Direction $\ddagger$ |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Feet | Meters |  |
| BEE M |  |  |  |  |
| Referenct Mark No. 2 | W | 85.70 | 26.120 | 20 39 <br> 3 31 <br> 10  |
| Reference Mark No. 11 COB | SW | 104.61 | (31.885) | $\begin{array}{lll} 320 & 53 & 28 \\ 100 & 45 & 03.0 \end{array}$ |

## Detailed destription:

The station is located about 21 , miles northeast of Yuma and is located in the certer of a crossroad.
To reach she station from the City' Hall in north Yuma, go east on "I" Street for 0,4 mile to Penitentiary Avenue. Turn left, north on Penitentiary Avenue for 0.25 mile to a Y-fork. Turn right up over railroad bridge and go north for 0.25 mile to a side road righr. Turn right, east, down on to a levee road for 2.05 mile to a side road left, Tum left, north. on bladed road for 0.5 mile to a crossroad and the station as described.

The station mark is a Bureau of Land Management mark It is riveted to the rop of a 3 inch galvanized pipe which is 14 inches underground. It is stamped CAL. ARIZ PT NO 26 \% S $\$ 1+S 1319491964$. It is 19 feet east of the center of a north-south field road, 4 feet south of $~ 4 ~ b y ~ 4$ wooden witness piost and is in the center of ati fast-west field road.

Reference mark No 1 is a standard disk set in the top of a 12 inch round concrete monument It projects 7 inches and is stamped CAL ARIZ PT NO $261 / 4 \mathrm{~S} 14 \mathrm{~S} 13 \mathrm{NO} 11964$. It is 74 feet south of an eagt-west freid road. 48 feet west of a north-south field road and 2.2 feet south of a metal witness post and sign.

Reference mark No, 2 is a standard disk set in the top of a 12 -inch round concrete monument. It projects 10 inches and is stamped CAL AR1Z PT NO $261 / 4$ S14 S13 NO 21964 . It is 66 feer West of a north-south field road, 22 feet north of an east-west field road and 17 feet east of a metal witness post and sign

[^7]
## DESCRIPTION OF TRIANGULATION STATION



## Detailed descrionon:

The station is located ${ }^{2}$ a mie north of the porth edge of the city limits of Viumi, Arizons and the Colorado River, about 0.15 mile north of the buildings of the Government Indian School and the Purisima Conception Wlission, and on the cast shoulder of a paved road in the Yuma Indian Reservation.
To reach the station from the city hall in Yuma, go east on 1st Street to Penetentiary Mivenue, turn left and go north on Penetentiary Avenue 0.2 mile to a fork at the north end of the Colorado River bridge. Take the right fork. cross a railtosd overpass and go northerly on a paved road for 0.25 mile to a side road on the right, continue northerly on the paved road for 0.1 mile to the station on the right.
Station mark is a C.S. Dept of The Interior Bur. of Land Management Cadastral Surver disk, stamped CAL. ARIZ PT NO 27 1964, Fiveted to the top of a 2 inch galvanized iron pipe set in concrete ond projects 4 inches. It is 12 feet east of the center of the road.

Reference mark No. 1. a standard dish stamped CAI, ARIZ PT KO 27 NO. 11964 , set in zop of a 12 ineh eongrete cylinder shat projects 3 inches. It is 26.3 feet west of the center of the paved road and 1.5 feet west of a metal witness post with hign,
Reference matk No. 2. a standard disk stamped CAL ARIZ PT NO 27. NO 21964 , set in top of a 12 inch consrete cylindet that projects 3 inches. It is 24.5 feet wem of the center of the paved road and 3.5 feet north of a metal witnesi pust with sign.

[^8]
## U.S. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY

## DESCRIPTION OF TRIANGULATION STATION

Name of Station: $\begin{gathered}\text { BDRY. PT. NO. } 28 \text { (BLM) } \\ \text { CALIF-ARIZ }\end{gathered}$ CALIF-ARIZ

State; California: Coenty; Imperial- Iuma
Arizona
Year: 1964 Descriaed ay: D. 1. Novak


## Detailed description:

The station is located at the Indian Mission Hospital in Yuma, east of the northeast corner of rock wall surrounding the hospital and on road right-ofiwar:
To reach the station from the City Hall in Yuma, go east and north on First Street for 0.6 mile to a fork just after crossing the Colorado River bridge. Turn right and go north on a paved road crossing a wooden bridge for 0.25 mile to the station on the right.

The station matk, a U.S. Department of the Interior Bureau of Latid Matagement Cadastral Survey disk, stamped "CAL AR1Z PT NO 28 1964", is riveted to the top end of a 2-inch cast iron pipe set in concrete and projects 3 inches above the ground surface 1 t is 112 feet south of the center of a T-road intersection, 43 feet southeast of powet pole number 8725 D with a metal witness post sign. 29 feet east of the nigrtheast corner of a rock wall and $1+$ feet easr of the center of a paved road

Reference mark 1, a standard disk stamped "CAL ARIZ PT NO 28 NO $196 \mathrm{t}^{\prime \prime}$ " is cemented in a drill hole in in outcrop and flush with the surface. It is 89 feet southeast of the northeast corner of the rock wall, 68 feet southeast of the center of the paved road and 48 feet south of the center of a track road.

Reference maink 2. a standard disk stamped "CAL ARIZ PT NO 29 NO $196 \mathbf{H}^{\prime \prime}$. is cemented in a drill hole in an out crop and flush with the surface. It is 37.5 feet south of the northeast corner of the rock walh, 19 feet west of the center of the paved road and 4 feet south of the power pole

Note: No azimuth mark established at this station.

[^9]
## DESCRIPTION OF TRIANGULATION STATION

Name of Station: BDRY, PT NO. 29 (BLM) CALIF-ARIZ


## Detailed description:

The station is located at the Indian Aission Hospital in Yuma, at the northeast corner of tock wall surrounding the hospital and on road right-of-way:

To teach the station from the Ciry Hall in Yuma, go east and north on First Street for 0.6 mile to a fork just after crossing the Colorado River bridge. Turn right and go north on a paved road crossing a wooden bridge for 0.25 mile to the station on the lefs.

Station mark, a L.S. Dept of The Interior Bur: of Land Management Cadastral Sursey disk, stamped CAL ARIZ PT NO 29 1964, is tiveted to the top end of a 2 -inch cast iron pipe set in concrete and projects $t$ inches above the ground surface. It is 23 feet south of a power pole with a witness post sign, 14,5 feet west of the center of a blacktop road and 0.7 feet east of the northeast corner of a rock wall.

Reference mark 1. a standard disk stamped CAL ARIZ PT NO 29 NO I 1964 , is cemented in a drill hole in an sutcrop and flush with the surface. It is 37.5 feet south of the northeatt corner of the rock wall. 19 feet west of the center of the blacktop road and + feet south of the power pole.

Reference mark 2, a standard disk stamped CAL ARIZ PT NO 28 NO 1 1964, is cemented in a drill hole in an outcrop and fush with the surface. It is 89 feet southeast of the northeast corner of the rock wall. 68 feet southeast of the center of the blacktop road and 48 feet south of the center of a 1 rack road

Note: No azimuth mark established at this station.
Obsersations were made from a 20 foot stand

[^10][^11]
## DESCRIPTION OF TRAVERSE STATION

Name of Station: BDRY. PT. NO. 30 CALIf-ARIZ


Description, including shetch of object:
The station is located about 0.1 mile north of the Colorado River and the north edge of the city of Yuma. It is in the west curb of the wooden bridge which carries the oiled road to the Fuma Indian Mission and School over the Southern Pacific Railroad tracks.

To reach the station from the city hall in Yuma, go east on 1 st Street to Peritentiary Avenue: turn left and go north on Penitentiary Avenue for a combined distance of 0.6 mile to a fork at the north end of the Cotorado River bridge. Take the right fork over the railroad bridge to the station on the left near the porthwest end of the bridge.

The mark is a center-punched lag bolt screwed into the $6 \times 6$ timber forming the wesr curb of the bridge It is marked by the letters "PT NO $30^{\circ "}$ carved in the timber just south of the bolt

A traverse connection was made to PT NO 30 RM (BLM) the distance being 9.2748 meters or 30,43 feet and the bolt is 0.61 meter figher than the RM.

This station is Point Number 30 of the Interstate Boundary Compact between the states of Arizona and Cali. fornia.

The geodetic azimuth from station BDRI. PT. NO. 30 RM to BDRI. PI. NO. 30 is $89^{\circ}+3^{\prime} 33^{\circ}$

## DESCRIPTION OF TRIANGULATION STATION

Name of Station: BDRY PT. NO. 31 |BLM] CALIF-ARIZ

| State: | California- <br> Arizona | Cousty: Imperial-Iuma |
| :---: | :---: | :---: |
| Year: | 1964 | Described by: G. D. Banks |

Chief of Party: L G. Burdine
Year: 1964
Described by: G. D. Banks
Note* Height of relescope above station mark 12.05 meters. + Height of light above station mark imeters
desc.
none
Surfact-station math.
Distances and directions to azimuth mark, reference marks and utiderground-station mark prominent objects which can be seen from the ground at the station

| Object | Bearing | Distance |  | Direction |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Feet | Neters |  |
| BDRY PT NO. 30 CALIF-ARIZ |  |  |  |  |
| RM ? | NNW | 194.54 | (39 298) (59 | 247816 |
| BDRY PT NO. 33 CALIF-ARIZ |  |  |  | 174.5712 .4 |

## Detailed descrigtion:

The station is located airline, about ${ }^{1} 2$ mile north-northeast of Vuma and 0.2 mile north of the Arizona Check Station on old TS. Highiway 80
To reach the station from the post office in Xuma, go north on Alain Street for 0.25 mile to First Street Turn fight and go east and north on First Street (old L.S. Highwa) 80 for 0.4 mile to a fork at the porth end of a bridge over the Colorado River. Take the left fork (old Highway 80) and continue north on the paved road for (h. 05 mile to the south end of an oid abandoned check station and the station on the right.

Station mark is a U.S. Bureau of Land Management bronze disk, stamped CAI ARIZ PT XO 31 1964, brazed to the top of 3 -itich iros pipe which is set in at irregular mass of concrete flush with the surface of the ground, Ir is 62 feet east of the centerine of old U.S. Highway 80 , 20 fect east-notheast of a wooden flagpole and 13 feet zoutheast of the southeast comet of a brick building.

Reference mark I is a standard disk. stamped CAL ARIZ PT NO 31 NO 1 1964. cemented in a drill hole in the top of she north end of a concrete abutment which projects about 3 feet above the ground sufface. It is 125 feet south of the southwest corner of the brich building. 19 feet east of the centerime of the highway and about 5 feet higher in elevation than the station

Reference matk 2 is a standard disk, stamped CAL ARIZ PT NO 31 NO 2 I96f, cemented in a drill hole in the top of the southwest corner of a railroad signal foundation which projects about 2 feet above the ground surface. In is 87 feet east of the cemterine of the highway. 35 feet east-northeast of the northeast corner of the brick bullding, 10 feet southwest of the southwest raif of a railroad track and about the same elevation as the station.




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

## DESCRIPTION OF TRIANGULATION INTERSECTION STATION

Name of Station: BDRY, PT. NO. 32 CALIF-ARIZ

Chief of Party: L. G. Burdine Year: 1964 State: Arizona
California
lines just downstream from the centerline of the old U .5 . Highway 80 Btidge across the Colorado River.
BDRI: PT NO, 32 is 68.246 meters or 223.90 feet in azimuth $3^{\circ} 17^{\prime} 25.1^{\prime \prime}$ from triangulation station MISSION.
U.S. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY

## DESCRIPTION OF TRAVERSE STATION

Name of Station: BDRy: PI No. 33 CALIE-ARIZ


Destription, including tketch of object:
The station is a standard station mark disk, stamped POINT NO 331964 . cemented in a drill hole in the determined center of U.S. Highway 80 Briage over the Colorado River in Yuma, The disk is 6 inches below the surface of asphalt. The center of the bridge was determined with a 300 ft . steel tape.

A traverse connection was made to triangulation station AIISSION, the distance being 820.215 meters.
The geodetic azimuth from station MISSION to BDRY' PT NO 33 ; $91^{\circ} 3 \psi^{\circ} 32.0^{\circ}$

## U.S. DEPARTMENT OF COMMERCE-COAST AND GRODETIC SURVEY

## DESCRIPTION OF TRIANGULATION INTERSECTION STATION

Name of Station: BDRY: PT No. 34 Calif-ARIZ
Chief of Party: L G. Burdine Year: 1964 State: Arizona $\begin{gathered}\text { Cafifornia } \\ \text { County: } \\ \text { Imperial }\end{gathered}$
Description, including sketch of object:
Boundary Pt. No. 34 is the intersection of the centerline of the Colorado River and the International Boundary Line between California and the United Mexican States, which point is common to the boundaries of Arizona, the United Mexican States, and California. The centerline of the river as determined from this survey was based on an aerial photograph taken July 23, 1962.

Geodetic azimuth and distance from reference stations to BDR1, PT . NO. 34:

|  |  | Ditrance |  |
| :---: | :---: | :---: | :---: |
| TIGS R2IE S35 Station | fuimuth | meters |  |
| T16S R21E S35 S22 | $84^{\circ}+4^{\prime} 164^{\circ}$ | 90.284 | 29621 |
| BDRI: MON. NO, 206 US-MIEXICO | 265. 31351 | 313335 | 102800 |

# DESCRIPTIONS OF STATIONS USED AS REFERENCE FOR THE BOUNDARY POINTS WHICH WERE NOT MONUMENTED 

## U.S DEPARTMENT OF COMAERCE-COAST AND GEODETIC SURYEY

## DESCRIPTION OF TRIANGULATION STATION

Name of Station: BDRY: REF. PT No. IA
Chief of Party: L. G. Burdine
State: California
Countr: San Bernardino
Year: 1964

Described by: D, R
Tomlinson


## Desazled description:

Station is about 11 miles north of Neetles, near the state boundaries of Arizoma. California and Nevada, and on the west bank of the Colorado River. This station was established to determine fixed point number one.

To reach the station from the intersection of Front and H Streets as the northwest corner of the city hall in Needles, go northwest on L.S. Highway 66 for 2.25 miles to a fork. Take the tight fork. River Road and go 4.75 miles to a fork. Take the right fork, paved road and go north for 1.6 miles to 2 crosspoad. Turn right, graveled road and go easterly for 1.05 mies to a T-road. Turn left, on graded road and go northeriy along the west bank of the river for $3.5 \%$ miles to a sign "STATE OF NEVADA" and the station on the lift.

Station marks are standard disks, stamped POINT NO 1 A 1964 . The surface disk is set in the top of a round concrese post projecting 8 inches. It is 61 feet northwest of the sign, 16 feet west of the centerinine of the road and 3,5 feet west of a witness post. The underground disk is set in an irregular mass of concrete 38 inches below the ground surface.

Reference matk I is a standard disk, stamped POINT NO 1 A XO 1 1964, set in the top of a round concrete post projecting 6 inches. It is 54 feet west-northwest of the sign, 35 feet west of the centerline of the road and about 2 feet lower than the station marh.

Reierence mark 2 is a standard disk, stamped POINT NO 1 A NO 2 1964. set in the top of a round concrete post projecting $\pm$ imches, It is 37 feet west of the centerline of the road and about 2 feet lower than the station mark.

According to computations based on the position of BDRI. PT, NO. 1, Center of Colorado River, BDRI: REF, PT NO. LA is 10.0 feet southwest and perpendicular ro the line joining BDRI, PT, NO. 1 and BOUND. ARX POST $1+2$ CALIF-XEL- 1893

The geodetic azimuth and distance to BDRY PT NO. 1 are:


Distance

[^12]
## DESCRIPTION OF TRIANGULATION STATION



## Detailed description:

The station is about 11 miles north of Needies. California, near the state boundaries of California, Nevada and Arizona, and on the east bank of the Colorado River. This sration was established to determine fixed point numberione

To reach the station from the intersection of Front and 8 Streets at the porthwest corner of the city hall in Needles, Califormia, go morth on $H$ Street, crossing thit Santa Fe Railroad. for 0.15 mile to a T-road and a golf course on the north side of the intersection. Turn right and go easterly on paved road for 0.4 mile to a T-road, Turn tight. south and follow along levee road for 1.0 mile to a bridge over the Colorado River. Continue ahead. crossing the bridge for 0.1 mile to a T-road. Turn left and go northwest on paved road 1.0 mile to a road fork Take the right fork and po north on the paved road for 8.2 miles to a crosstoad and sign "OATNAN-DAVIS DAMM" on the right. Turn ieft and go west on a gravel road for 1.6 miles to a fork Take the right fork and go northwest on a gravel road for 0.15 mile to a levee road. Turn right and go north on the levee road for 1.8 miles to a side road of the lefit Turn left and go west for 0.1 mile to a T-road on the east river bank. Tum right and go north on the east bank river road for 0.1 mile to a turn-out and the station on the right.

Station marks are standard dishs stamped POINT NO 1 B 1964. The surface disk is set in the top of a round concrete post projecting 2 inches. Ir is 34 feet east of the centerline of the river road and 4 feet north of the south edge of the fill of the turn-out. The underground disk is set in an irregulat mass of concrete 38 incties below the ground surface:

Reference mark t is a standard disk, stamped SOTO NO 1 1964, set in the top of a round conctete post projecting 6 inches. It is 84 feet cast of the centerline of the road and about 4 feet lower than the station.
Reference mark 2 is a standard disk, stamped SOTO NO 21964 , set in the top of a round concrete post projecting 6 inches It is 68 feet tast of the centerline of the toad and about $\%$ feet lower than the station.

A traverse connection was made to triangulation station SOTO. The distanse being +.563 meters or 14.97 feet, north.
The geodetic azimuth and distance to BDRI. PT, NO, 1 are:

|  |
| :---: |
|  |  |

[^13]Distance

## meters

273.999

[^14]
## U.S. DEPARTMENT OF COMMERCE-COAST AND OEODETIS SURVEY

## DESCRIPTION OF TRIANGULATION STATION

Name of Station: REFUGE
Chief of Party: L. G. Burdine

State: Arizona
Year: 1964

Coustr: Mohave
Described by: D. J. Novak

| Note* | Height of telescope above station mark 1.74 meters, $\dagger$ Height of light above station mark meters. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | Surface-station mark, underground-station mark | Distances and directions to azimuth mark, reference marks and prominent objects which can be seen from the ground at the station |  |  |  |  |
|  |  |  | Distance |  | Direction $\ddagger$ |  |
|  | Object | Bearing | Feet | Meters |  |  |
| 12 c 12 c | $\begin{aligned} & \text { BREEZE } 1934 \\ & \text { R.M. } 1 \\ & \text { R...I. } 2 \end{aligned}$ | W NWW | 47.59 74.48 | 14.305 23.617 |  | $\begin{aligned} & 000^{\circ} \\ & 24 \\ & 47 \end{aligned}$ |

## Detailed description:

The station is located about 10 miles southeast of Needles, about 1 mile northwest of Topock and about 0.2 mile southwest of the Colorasp River.
To reach the station from the post office in Topock, go west on U.S. Highway 66 for 0.55 mile to a railroad underpass. Continue northeriy on Highway 66 for 0.4 mile to the station on the left.
The station mark, a standard disk stamped "REFUGE 1964", is cemented in a drill hole in a boulder that is flush with the surface of the ground. It is 93 feet southwest of the center of U.S. Highway 66,32 feet northwest of the southeast edge of a wash and 4 feet southeast of a metal witress post.

Reference mark 1, a standard disk stamped "REFUGE NO 11964 ", is cemented in a drill hole in a boulder that projects 10 inches above ground surface. It is 135 feet southwest of the center of U.S. Highway 66,45 feet northwest of the southeast edge of the wash, 4 feet west of the metal witness post and about 4 feet higher in eferation than the station.

Reierence mark 2, a standard disk stamped "REFUGE NO 2 1964", is cemented in a drill hole in a boulder that projects 1 foot above ground surface. It is 112 feet southwest of the center of U.S. Highway 66, 73.5 feet northiwest of the metal witness post and about 3 feet higher in cievation than the station;
No azimuth matk was established at this station.
This station was used to locate BDRY. PT. NO, 2 CALIF-ARIZ which is in the center of the channel of the Colorado River

- Reirti io notei in matruali of stastrulation and itase publications of triantulation.
i Reirrico


Name of Station: DOCK

| Chief of Party: L. G. Burdine |  | Yeaz: 1964 |  | Descrised by: B. R. Lewis |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Note* | Height of telescope above station mark 1.00 meters, + Height of light abovestation mark |  |  |  | meters |
| Desc. | Surface-station mark, undergtound-station mark | Distances and directions to azimuth mark, reference marks and prominent objects which can be seen from the ground at the station |  |  |  |
|  |  |  | Distance |  |  |
|  | Object | Bearing | Feet | Meters $\quad$ D | Direction: |
| Desc. <br> Desc. | FILL <br> Reference Mark No. 1 <br> Reference Mark Nó: 2 | WE | 2116 21.10 | $\begin{array}{ll} \\ 6+51 & 0 \\ 6+5 \\ 6+35 & 3+1\end{array}$ | $\begin{aligned} & =10 \\ & 900 \\ & 4901 \\ & 12917 \end{aligned}$ |

## Detailed description:

The station is located about 2 miles northeast of Parker, 2 miles east of Earp, Califormia, and cal the southeast shore line of the Colorado River, It is inside the fenced area of the Blue Water Marine Patk on property of the Colorado River Indian Reservation.

To reach the station from the intersection of California Avenue and River Side Road (Spur 95 and State Highway 95) in Parker, go northeasterly on Rivet Side Road (State Highway 95) for 1.95 mites to the west entrance gate of the Blue Water Marine Park on the left. Turn left, passing through the gate and go northeast for 0.05 mile to the Judges Stand and the station on the northeast corner as described

The station mark is a standard disk cemented in a drill hole, set flush with the concrete foundation and is atamped DOCK 1964 It is 2.6 feet north of the north corner of the Judges. Stand. 1.8 feet southwest of the northeast edge and 1.8 feet southeast of the northwest edge of the foundation.

Reference mark No, 1 is a standard disk cemented in a drill hole, set flush with the concrete foundation and is stamped DOCK NO I 1964, It is 3.8 feet easr of the eas? corner of the fudges. Stand. 1 foot southwest of the northeast edge and ! foot northwest of the southesst edge of the foundiation.

Reference mark $\lambda_{0} \quad 2$ is a standard disk cemented in a drill hole, set flush with the concrete foundation and is stamped DOCK NO 21964 . It is 3.8 feet west of the west corner of the Judges Stand: I foot southeast of the northwest edge and I foot northeast of the southwest edge of the foundation
No azimuth mark was set for this station.
This station was used to locate BDRY. PT. NO. 7 CALIF-ARIZ which is in the center of the Colorado River-

[^15]

## DESCRIPTION OF TRIANGULATION STATION

Name of Station: flat
Chief of Party: L. G. Burdine Year: 1964 Described by: D. R. Tomlinson

| Note* | Height of relescope above station mark 6.05 meters, + Height of light above station mark |  |  |  |  | meters. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\frac{1 \mathrm{a}}{7 \mathrm{~b}}$ | Surface-station mark. underground-station mark | Distances and directions to azimuth mark, Teference marks and prominent objects which esn be seen from the ground at the station |  |  |  |  |
|  | Object |  | Distance |  | Direction $\ddagger$ |  |
|  |  | Bearing | Feet | Meters |  |  |
| ${ }_{11 \mathrm{~b}}^{11 \mathrm{~b}}$ | WATHEN <br> R.M. 1 <br> R.ML. 2 | SE | 50.83 55.20 | 15.493 16.825 | (160 | $\begin{aligned} & 00.0^{\circ} \\ & 23 \\ & 22 \end{aligned}$ |

## Detailed deseription:

Station is about 11, miles north of the center of Parke:. Atizona. I mile northeast of Earp, California, 5 mile west of the earth fill of Headgate Rock Dam and on a silt. grass and brush covered area of the Colorado River.

To reach from the Arizona Inspection Station in the northwest edge of Parker. Arizona, go northwest on State Highway 95 for 0.75 mile to a T-intersection. Turn right and 80 easterly on paved poad for 1.0 mile to a track road tight. Turn right and follow track road toward river for 0.1 mile to the end of track road at river bank and end of truck travel. The station is about 75 yards south in the old river bed

Station marks are standard disks, stamped FLAT 196t. The zufface difk is set in the top of a round conctete post projecting 8 inches It is 2 feet west of a witness post. The underground disk is set in an irregular mass of concrete 38 inches below the ground surface.

Reference mark 1 is a standard disk, stamped FLAT NO 11964 . set in the sof of a round concrete post projecting 8 inches. It is about the same elevation as the station,

Reference mark 2 is a standard disk, stamped FLiIT NO 2 196t, set in the top of a round concrete post projecting 10 inches. It if about the same elevation as the station

This station was used to locate BDRI. PT NO. 9 CALIF-ARIZ which lies on the centerine of the Colorado River.

[^16]DESCRIPTION OF TRIANGULATION STATION

| Name of Station: IIEW | State Cahfornia | County: San Bernardino |
| :--- | :--- | :--- |
| Chief of Party: L. G. Burdine | Year: 1964 | Described by: J.E.F. |

Note* Height of celescope above station mark 1.62 meters; + Height of light above station mark. meters.

16 $\begin{gathered}\text { Surface-station mark, } \\ \text { 7a underground-station mark }\end{gathered}$

| Object | Bearing | Distance |  | Direction! |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Feet | Metets |  |
| FLAT |  |  |  | $0^{\circ} 00^{\prime} 00.00^{*}$ |
| Parker, Muncipal Tank. Elewated | SW |  |  | $\begin{array}{lll}119 & 05 & 57.4 \\ 171 & 35 & 44\end{array}$ |
| Reference mark No. 1 <br> Reference mark No. 2 | SW | 44.46 50.30 | 13.352 | $\begin{array}{lll}171 & 35 & 44 \\ 272 & 45 & 30\end{array}$ |
| R.M. I-R.M. ? |  | 73.30 | 22:343 | $\begin{array}{ll}272 & 42 \\ \end{array}$ |

Detated description:
The station is about 13 , miles north-niorthwest of Parker. Arizona. 0.I mile northeast of the River View Irailer Park, on the crest of a low bluff at the northwest side of the Colorado River and on land of the Colorado River Indian Reservation.

To reach the station from the post office in Parker, Arizona, go northwest on Joshua Ave. for 50 yards to Arizona Ave. Turn right and go northeast on Arizona Ave. for 0.1 mile to California Ave (State Highway 95). Turn left and go northwest on Highway 95 for 0.2 mile to where Highway 95 tarns to the right; continue northwest on State Sput 95 for 0.8 mile to a bridge across the Colorado Rivet. Cross the bridge and go northerfy for 0.5 mile to a T-road. Turn right and go easteriy on a paved road for 0.25 mile to the entrance to the River View Trailer Park on the right; continue easterly on the paved road for 0.3 mile to a track road on the right. Turn right and go southeast on the track road for 30 feet to a fork: take right fork and go 250 feet to a track road on she right. Turn right and go westeriy on the track road for 0.05 mile to the northwest base of the bluff; turn left, go uphill and along the top of the bluff for 0.05 mile to the southeast end of the bluff and the station.

Station marks are standard disks stamped VIEV 1964. The surface disk ies set in 1 round conerete post which projects 3 inches It is 38 feet west of the southeast edge of the bluff and 4.2 feet north of a metal witness post. The underground disk is set in an irregalar mass of concrete 40 inches below the surface of the ground.

Reference mark No. I, a standard disk stamped IIEVI NO I 196 t, is set in a round concrete post which projects 4 inches; It is 30 feet west of the southeast edge of the bluff and about the same elevation as the station:

Reference mark No. 2, a standard disk stamped ITEW 102 1964. is set in a round concrete post which projects 4 inches. It is 7 feet southwest of the north-northeast edge of the biuff and about the same elevation as the station.

Note: An azimuth mark was nor set for this station:
Reference marks were measured using 5 kg , tape sension
This station was used to locate BDRY, PT,NO, 10 CALIF-AR1Z which is in the center of the Colorado River.

[^17]
## DESCRIPTION OF TRIANGULATION STATION

Name of Station: SQUAW
Chief of Pakty: L. G. Burdine
Note ${ }^{*}$ Height of telescope above station mark 1.51 meters, $\dagger$ Height of light above station mark meters.

Distances and directions to azimuth mark, reference marks and prominent objects which can be seen from the ground at the station:

|  | Bearing | Distance |  | Direction $\ddagger$ |
| :---: | :---: | :---: | :---: | :---: |
| Object |  | Feet | Meters |  |
| IMPERIAL <br> Reference Mark No, 2 <br> Reference Mark No. I | NW | 32.12 4.89 | $\begin{array}{r} 9.790 \\ 13.683 \end{array}$ | $\begin{aligned} & 00^{\circ} 000000 \\ & 1+00 \\ & 273 \\ & 273 \\ & 23 \end{aligned}$ |

## Detailed description:

The station is located 19 miles northwest of Laguna, 15 miles northeast of Yuma, and 13, miles north of Imperial Dam. It is on land of the Imperial National Wildife Refuge, on a small island about 100 feet in diameter, in the Colorado River and nearer the Arizona shore.

To reach the station from the Burtau of Reclamation boathouse which is 0.1 mile north of the Water Control Communications Headquarters building at the west end of Imperial Dam, go north by boat by various river chatnels for 13 t miles to the island on the starboard side. The best landing point is at an opening in the reeds on the northwest side of the island.
The station math is a standard disk stamped SQUAW 1964 cemented in a drill hole in a depression in decomposed bedrock. It is about + inches below the surrounding surface and about 12 feet above the surface of the river.
Reierence mark number one is a standard disk stamped SQUAW NO 11964 cemented in a drill bole in decomposed bedroch held together with cemens flush with the surrounding surface. It is on the highest point of the island and is about I foos figher than station elevation:

Reierence mark number two is a standard disk stamped SQUAW NO 21964 cemented in a drill hole in a little ridge of jagged bedrock. Iz is on che northwest slope of the istand and about? feet lower than the station mark.
This station was used ta locase BDR1: PT. NO. 15 CAlIF-ARIZ which lies on the centerline of the Colorado River-

[^18]
## DESCRIPTION OF TRIANGULATION STATION

Name of Station: Mittery
State: California
County: Imperial
Chief oe Party: L. G. Burdine
Year: 1964
Described by: W. V. Mast

| Note* | Height of telescope above station mark 19.34 meters, $\dagger$ Height of light above station mark meters. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| desc. | $\begin{array}{c}\text { Surface-station mark, } \\ \text { underground-station mark }\end{array}$ $\begin{array}{c}\text { Dist } \\ \text { promin }\end{array}$ | Distances and directions to azimuth mark, reierence marks and prominent objects which can be seen from the ground at the station |  |  |  |  |
|  | Object | Bearing | Distance |  | Direction+ |  |
|  |  |  | Feet | Meters |  |  |
| desc. dese. desc. | SUGARLOAF 2 (USE) <br> R.M. 2 <br> BLM Sec. Mark T15S R24E <br> (Azimuth Mark) <br> R.M. 1 <br> R.M. 1 to R.M. 2 <br> BDRY. PT NO. 17 CALIF-ARIZ | NW | 62.60 | 19.079 | ${ }^{00} 120^{\circ} \mathrm{O}$ | $\frac{00,0^{\circ}}{36}$ |
|  |  | $\mathrm{N}$ | $\begin{gathered} 0.3 \text { mile } \\ 58.51 \\ 89.21 \end{gathered}$ | 17.834 27.192 42.682 | 162 220 167 167 | $\begin{aligned} & 535 \\ & 36 \\ & 21 \end{aligned}$ |

## Detailed description:

The station is located in a sandy brush covered ates between the All-American Canal and the Colorado River, It is presently in California about 2.65 miles south-southwest of Imperial Dam, 2.15 miles northeast of the center of Laguna Dam, 2.0 mies southwest of the Yuma Proving Ground Headquarters and $\%$ mile west of the west bank of the Colorado River,

To reach the station from Imperial Dam, drive south along the west side of the Colorado Rive; for 0.6 mile to a side road left. Turn left, go east and south along the west side of a canat for 0.5 mile to a side road right and a dike crossing the canal on the left. Turn left, cross the canal on the dike toad. thence turn right and go south along the east side of the canal for 0.4 mile to a side road left Turn left, go east and southeast on a track road through dense brush for 03 mile to a T-road Turn right, go south on a track road for 0.25 mile to a fork. Take the right fork, continue south on the track road for 0.35 mile fo a fork. Take the left fork. continue southi on the track road for 0.3 mile to a crossroad and the azimuth mark in the northwest angie. Continue south on the track road for 0.3 mile to a crossrosd and the station in the southeast angle.
The station matk is a standard disk, stamped M1TTR1 1964, brazed to the Iop of a 2 -inch galvanized pipe which projects 10 inches above the ground surface. It is 70 feet south of the center of an east-west track road, 53 feet east of the center of a north-sourh srack road and 2.6 feet forthwest of a metal witness post with i sign attached.
Reference mark 1 is a standard disk, stamped AITTTRY NO 1 1964, brazed to the top of a 2 -inch galvanized pipe which projects 8 inches above the ground surface. It is 57.6 feet northeast of a metal witness post with a sign attached and 15 feet southwest of the center of the east-west track road.
Reference mark 2 is a standard disk, stamped MITTRY NO 21964 , brazed to the top of a 2 -meh galuanized pipe which projects 8 inches above the ground surface. It is 65 feet northwest of a metal witness post with a sign attached and 11 feet east of the center of the north-south track road
The azimuth mark is a Bureau of Land Management pipe mark with the cap type dish riveted to the top of a $2 \frac{13}{2}$ inch galvanized pipe which projects 8 inches above the ground surface It is $1+$ feet north of an east-west track road, 8 feet west of the center of a north-south track road and 0.4 foot north of a $4 \times 4$ inch witness post. The disk is stamped T15S R24E S20 S21 \$29 S28 1961.
This station was used as a reference for BDRI. PT, NO. 17 CALIF-ARIZ. See description of BDRI: PT 17.

[^19]
# U.5. DEPARTMENT OF COMMERCE-COAST AND GEODETIC SURVEY 

## DESCRIPTION OF TRIANGULATION STATION



## Detailed description

The sration is located about 9 miles northeast of Yuma, 5 miles southwest of Yuma Proving Ground Headquarters, 1 milie southwest of Laguna Dam and on the east banik of the Colorado River-

To reach the station from the main entrance to the Juma Proving Ground Headquarters, go west on a black top road for 0.2 mile to a crossroad at the west end of a bridge over a canal. Turn left and go south along the west side of the canal on a gravel road for 6.0 miles to a food gate on the right. Continue south on the gravel road for 0.15 mile to a side road and canal on the right. Turn right and go west along the north side of the canal on a dirt road for 0.25 mile to the azimuth mark on the tight. Continue west on the dirt road for 0.65 mile to a side road and Irrigation ditch on the right. (Note: In the event the feld is flooded for irrigation it will be a pack from this point.) Turn right and go southwest along the top of a dike for 0.2 mile. thence south along the top of a) sandy dike for 0.1 mile to the station on the left.

The station mark, a standard disk stamped KOOL. 1964. is brazed 20 the top end of a 2 -inch east iron pipe set in concrete land projects 1 foot above the ground surface. It is 31 feet northwest- of the northwest edge of a cultivated feld. 17 feet southeast of the west edge of a bank and 1.6 feet south of a metal witness post.

Reference mark 1, a standard disk stamped KOOL NO 1 1964. is brazed to the top end of a 2 -inch cast iron pipe set in coricrete and projects 4 inches above the ground surface. It is 94.5 feet north of the metal withess post. 49 feet nortiwest of rbe northwest edge of the cultivated feld, 7 feet southeast of the west edge of the bank and 1 foot nortiwest of a metal post.
Reference mark 2, a standard disk stamped KOOL NO 2 1964 is brazed to the top end of a 2-inch cast iron pipe ser in concrete and projects ifoot above the ground surface: It is 103 ieet southwest of the metal witness post. 47 feet northwest of the northwest edge of the cultivated field, 10 feet southeast of the west edge of the bank and 1 loot northwest of a metal post.

Azimuth mark. a standard disk stamped KOOL 1964, is brazed to the top end of a 2 -inch cast iron pipe set in concrete and projects 3 inches above the ground surface. It is. 70 feet north of the north edge of a canal, 58 feet north of the center of a dirt road, 2 feet south of a telephone pole and 1.7 feet north of a metal witness post.
Obsertation was made from a 64 foot tower.
Note: A four wheel drive vehicle required.
This station was used to locate BDRY. PT. NO. 19 CALIF-AR12 which lies on the centerline of the Colorado River.

[^20]
## U.S. DEPARTMENT OF COMMERCE-COAST AND GEOOETIC SURVEY DESCRIPTION OF TRIANGULATION STATION

Name of Station: T8S R22W:WS4 PS9 (BLM)<br>Chief of Party:<br>L. G. Burdine<br>State: Arizoma<br>Cousty: Suma<br>Year: 1964<br>Described by: I. W. Quesinberry

Note*

| Note* | Height of telescope above station mark 19.66 meters, $\dagger$ Height of light above station mark meters. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| desc: | Surface-station mark, underground-station mark | Distances and directions to azimuth mirk, reference marks and prominent objects which can be seen from the ground at the station |  |  |  |
|  |  |  |  |  |  |
|  | Object | Bearing | Feet | Meters | Directiont |
| $\begin{aligned} & \text { 11b } \\ & \text { 11b } \end{aligned}$ | SUGARLOAF 2 (USE) <br> R. M. No. 1 <br> R, M, No. 2 | NSW: | $\begin{aligned} & 74.82 \\ & 88.70 \end{aligned}$ | $\begin{aligned} & 22.805 \\ & 27.034 \end{aligned}$ | $\begin{array}{lll} 0^{*} & 00 & 00.000 \\ 39 & 51 & 02 \\ 300 & 25 & 02 \end{array}$ |

## Desailed description:

The station is located about 5 miles south-southwest of rhe main blacktop road leading to Laguna Dam, 4 miles north of U.S. Highway 95 , at the section line between Section 4 and 9, E-IW, Range 22 W of the Salt River and Gila Meridian and on the cast bank of the Colorado River-

To reach the station from the junction of US. Highways 95 and 80 at the south edge of Yuma, go east on highway 95 for 6.6 miles to a crossroad at the Winnis Gila Store. Turm lefe and go north on a blacktop soad for 4.1 miles to a crossroad Turn left and go west on a dirt road for 0.6 mite to side road left Turn left crose ovet a canal, take left fork and go about 100 feet to a fork. Take left fork and go west on a gravel road for 0.05 mile to a earth bridge over a canal. Turn left cross the bridge thence west and south on a field road for 0.2 mile to the station near a dump area.

Station mark, a L'S. Dept, of The Interior Bur, of Land Management Cadastral Sarvey disk, stamped T8S R22W WS4 PS9 1960, is riveted to the top end of 12 -inch cast iton pipe set in concrete and projects 3 inches above the ground surface. It is 62 feet north of the north edge of a canal. 39 feet west of the center of a track road and 30 feet east of the east edge of the river bank.

Reference mark 1, a standard disk stamped T8S R22W WSH PS9 NO 1 1964, is set in the top of a 12 -inch round concrete monument that projects 3 inches above the ground surface. It is 36 feet cast of the center of the track toad, 24 feet north of the north edge of the canal, 1.7 feet notrh of a metal witness post and about 2 feet higher in elevation than the station.

Reference mark 2, a standard disk stamped T8S R22W WS 4 PS9 NO 2 1964, is set in the top of a 12 -inch round concrete monument that projects 4 inches above the ground surface. It is 23 feet east of the east edge of the river bank, 8 feet west of the center of the track road, 1.7 feet south of a metal witness post and about the same elevation as the station.

Note: No azimuth mark established at this station.
Observations were made from a $6+$ foot tower.
This station was used to locate BDRY. PT, NO. 20 CALIF-ARIZ which lies on the centerime of the Colorado River.

[^21]
# DESCRIPTION OF TRIANGULATION STATION 

| Name of | Tios: MISSION | State: Arizona |  | Yuma |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Chief of | тv: L. G. Burdine | Year: 1964 |  | ED BY : | Call |
| Note* | Height of telescope above | tion mark 1.74 meters, | ght of 1 | bove atat | ark meters. |
| $\frac{16}{7 a}$ | Surface-station mark, underground-station marh | Distances and dir prominent objects w |  | mark, from the | ice marks and ad at the station |
|  |  |  |  |  |  |
|  | Object | Bearing | Feet | Meters | Direction $\ddagger$ |
|  | SUGARLOAF 2 (USE) <br> Reference Mark No 1 <br> T16S R22E 535 S36 <br> Reference Mark No. 2 | $\begin{aligned} & \text { ESE } \\ & \text { SSW } \end{aligned}$ | $\begin{aligned} & 26.32 \\ & 10.68 \\ & 33.97 \end{aligned}$ | $\begin{array}{r} 8.022 \\ 3.256 \\ 10.355 \end{array}$ | $\begin{array}{lll} 00^{\circ} & 00 & 00: 0^{\circ} \\ 37 & 12 & 03 \\ 119 & 21 & \\ 194 & 51 & 08 \end{array}$ |

## Detailed descriptiane

The station is located at the north edge of the city of luma on top of a small, bare, flat-topped. gravel and tock knoll on land of the Iuma Indian Reservation. It is about 0.2 milk south of the buildings of the Government Indian School and the Purisima Concepzion Mission and on or close to the line between Points 31 and 32 of the Interstate Boundary Compact. The knoll is on the north side of the Colorado River about 80 feet above the water and is cut on its tast and north sides by the roadway of old U.S. Highway 80 .

To reach the station from the city hall in Yuma, go east on lst Street to Penetentiary Avenue; turn left and go north on Penetentiary Atenue 0.6 mile to a fork at the north end of the Colorado River bridge. Continue northwest 0.1 mike to the second side road on the left at an old building foundations, turn left and go sonth 100 feet to steep gravel foad up onto knoll and the station.

The station mark is a standard disk stamped MISSION $196 t$ set in the top of a 12 -inch cylandrical concrete monument set fush with the ground. If is 40.6 feet west of the east edge of the bluff and 10.7 feet north of a rock retaining wall.

Reference mari number one is a standard dish stamped AIISSION NO 11964 semented in a drill hole flush with the top of a tock retaining wall. It is 3.1 feet west of the east end of the wall, 0.9 foot north of the south edge of the wall, and at the same elevation as the station.

Reference matk number two is a standard disk stamped MISSION NO 21964 cemented in a drill hole flush with the top of a rock retaining wall. It is 3.2 feet east of the west end of the wall and at the same elevation as the station.

A General Land Office Survey disk stamped T16S R22E S35 S36 MC WC 19 领 cemented in a drill hole flush with the surface of the retaining wall. A distance was measured to the "T" on the disk but it was too close to focus for a closer angle measurement.

This station was used to locate BDRY, PT NO. 32 CALIF-ARIZ which is it the center of the Colorado River.

[^22]| Name of Station: T16S R2IE S35 S22 1 BLMI | State: Arizona | Consty: Yuma: |
| :--- | :--- | :--- |
| Chief of Party: L. G. Burdine | Year: 1964 | Described ay: J.E.F- |



## Detatiled description:

The station is about 53, miles west of Yiuma and on the east shore of the Colorado River, 80 feet east of a gauging station.

To reach the station from the Iuma City Hall, go west on lst street 0.2 mile to 4 th Ahe.iturn left snd go south on the Ave. 0.8 mile to 8 th street. Furn fight and go west on 8 th street 5.3 miles to a crossroad; continue west on 1 gravel mad 0.6 mile to a raiload trach. Cross the railmad trach, then turn tight and go northerly on a levee road 0.5 mile to a side road on the left: turn left and go west on a dint rosd 0.2 mile to a T-road, two large cottonwood trees on the left and the station west of the intersection.

Station mark is a U.S. Burtau Of Land Management Cadastral Surver Disk stamped T16S. R21E, WC.S 35. MC S22, T85. R24W. 61 - fiveted to a $1 / 2$ ithch gatvanized pipe projecting $\$$ inches above the suriace of the ground. It is 18 feet west of the center of a metal gate 55 feet north of a wire fence, and 5 feet east of a telephone pole.
Reference mark Xoo 1. a standard dish stamped S33 $\$ 22$ BLM XO 11964 , is set in a congrete cylinder 12 inches in diameter and projects 3 inches above the surface of the ground. It is 26 feet southeast of the road intersection. I foot southwest of a metal wizness post with sign, and 6 inches tiorthwest of a woven wire fence.
Reference mark Xo. 2, a standard dish stamped S35 S22 BLN/ NO 21964 , is set in a concrete cylinder 12 inches in diameter and projects? inches above the surface of the ground. Is is 10 Ieet east of the center of a gravel road and 6 inches west of a wire fence.
This station was used to locate BDRI; PT.NO, $3+$ CALIF-ARIZ which lies on the centerline of the Colorado River,

[^23]

# ADJUSTED HORIZONTAL CONTROL DATA FOR BOUNDARY POINTS AND FOR BOUNDARY POINT REFERENCE STATIONS 

tame of station: BDRY REF PT NO 1A
STATE CALIFORNIA-NEVADA YEAR: 1964
SECOND ORDER
LOCALITY: ARIZONA-CALIFORNIA ROUNDARY
SOUACE: G-13386
FIELO SKETCH:ARIZ 52-1


| STATE COORDINATES (Fwi) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE 8 IONE | CODE | $\times$ | $\checkmark$ | $\theta$ (on $\Delta \alpha$ ancle |
| ARIZ. W. | 0203 | 235,184.24 | 1,457,728.62 | - $00^{\circ} 30^{\prime} 26^{\circ}$ |
| CALIF. V | 0405 | 3,007,769.35 | 564,010.62 | $+015507$ |
| NEV. E. | 2701 | 784, 221.48 | 93,590.84 | $+003240$ |


|  | to station or object | GEODETIC AZIMUTH (Erny.vowhi) | PLANE AZIMUTH (From sowib) | coos |
| :---: | :---: | :---: | :---: | :---: |
| BDRY RE | PT NO 18 | 314 28 <br> 10.7  | $314^{\circ} 58^{\prime} 47^{\prime}$ | 0203 |
| BDRY RE | PT NO 18 | $\begin{array}{llll}314 & 28 & 20.7\end{array}$ | 3123314 | 0405 |
| BDRY RE | PT NO 18 | $31428 \quad 20.7$ | 3135541 | 2701 |

NAME OF STATION: BDRY REF PT NO IB
STATE ARIZONA YEAR: 1964 SECOND ORDER
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY

```
SOURCE: G-13386
FIELD SKETCH:ARIZ 52-1
```

| GEOOETIC LATITUTE: | 35 | 00 | 00.12984 | ELEVATION: |
| :--- | ---: | ---: | ---: | :--- |
| GEOOETIC LONGITUDE: | 114 | 37 | 48.04945 |  |


| STATE COORDINATES (FEA) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE \& ZONE | coos | $\times$ | $\gamma$ | $\theta$ (on $\Delta \alpha$ ) ANGLE |
| ARIZ. W. CALJF. V NEV. E. | $\begin{aligned} & 0203 \\ & 0405 \\ & 2701 \end{aligned}$ | $\begin{array}{r} 236,442.79 \\ 3,009,079.90 \\ 785,502.87 \end{array}$ | $\begin{array}{r} 1,456,470.95 \\ 562,807.45 \\ 92,356.51 \end{array}$ | $\begin{array}{r} +003017 \\ +\quad 015515 \\ +003249 \end{array}$ |



NAME OF STATION: COCK
state ARIZONA
YEAR: 1964
SECOND -ORDER
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY

```
SOURCE: 6-13386
    FIELD sXETCM, ARIZ 52-1
```



| ' state coondinates (Fmi) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE E ZONE | CODE | * | $Y$ | $\theta(\mathrm{ob} \triangle \alpha)$ angle |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. } \mathrm{V} \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ | $\begin{array}{r} 343,602.04 \\ 3,128,942.45 \end{array}$ | $\begin{array}{r} 1,153,368.91 \\ 264,518.02 \end{array}$ | $\begin{aligned} & -001725^{\circ} \\ & +020740 \end{aligned}$ |


|  | to station or obiect | GEODETIS AZIMUTH. (Fren sexth) | plane azimuth (Fmon iautib) | coos |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { FILL } \\ & \text { FILL } \end{aligned}$ |  | $\begin{array}{lll} 94 & 29 & 08.4 \\ 94 & 29 & 08.4 \end{array}$ | 94 <br> 96 <br> 92 <br> 21 | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ |

ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: FLAT
STATE CALIFORNIA
YEAR: 1964
SECDND -ORDER
LOCALITY: ARIZONA-CALIFDRNIA BOUNDARY
SOURCE: G-13386 FIELD SKETCH: ARIZ 52-1

| GEODETIC LATITUTE: | 34 | 10 | 16.61734 | METERS |  |
| :--- | ---: | ---: | ---: | :--- | :--- |
| GEOOETIC LONGITUOE: | 114 | 17 | 11.37843 | ELEVATION: | FEET |


| STATE COORDINATES (Fm) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A TONE | CODE | x | $Y$ | $\theta(0, \Delta \alpha)$ ANGLE |
| $\begin{aligned} & A R I Z_{*} \\ & \text { CALIF. } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ | $\begin{array}{r} 337,722.53 \\ 3,123,035.66 \end{array}$ | $\begin{array}{r} 1,154,138.12 \\ 265,038.47 \end{array}$ | $\begin{aligned} & -001805^{\circ} \\ & +020700 \end{aligned}$ |


|  | TO STATION OR OBJECT | GEODETIC AZIMUTH <br> (From saith) | PLANE AZIMUTH <br> (Frym ioatb) | COOE |
| :---: | :---: | :---: | :---: | :---: |
| WATHEN <br> WATHEN |  | $\begin{array}{lll} 264 & 16 & 29.9 \\ 264 & 16 & 29.9 \end{array}$ | 264 34 $35^{\prime}$ <br> 262 09 30 | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ |

YEAR: 1964
LOCALITY ARIZONA-CALIFORNIA BOUNDARY
SOURCE G-13386
FIELO SKETCH: ARIZ 52-II

| GEODETIC LATITUTE: | $32^{\circ}$ | 48 | 54.14142 |  |
| :--- | ---: | ---: | ---: | ---: |
| GEODETIC LONGITUDE: | 114 | 30 | 25.84327 | MELEVATION: |


| STATE COORDINATES (Fm) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | CODE | $x$ | $x$ | $\theta$ (ORA $\alpha$ )ANGLE |  |  |
| ARIZ. W. | 0203 | $267,370.11$ | $661,071.42$ | -002437 |  |  |
| CALIF. VI | 0406 | $2,535,452.87$ | $240,380.55$ | +005728 |  |  |
|  |  |  |  |  |  |  |


|  | TO StATION OR OEJECT | geodetic azimuth (From(avib) | plane atimuth (Frne sowh) | CODE |
| :---: | :---: | :---: | :---: | :---: |
| AZIMUTH | MARK | $267^{\circ} 2218.5$ | $267^{*} 46^{\prime} 56^{\circ}$ | 0203 |
| AZIMUTH | MARK | 2672218.5 | 2662451 | 0406 |

STATE ARIZONA
YEAR 1964
SECOND-ORDER
LOCALTTY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE: G-13386
FIELD SKETCH: ARIZ 52-II

| GEODETIC LATITUTEI | 32 | 43 | 44.64841 | METERS |  |
| :--- | ---: | :--- | :--- | :--- | :--- |
| GEODETIC LONGITUDEI | 114 | 36 | 54.06437 | ELEVATION: |  |

STATE COORDINATES (FAt)

| STATE A ZONE | coos | $x$ | Y | $\theta$ (OA $\triangle \alpha$ ) ANGLE |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 233,981.80 \\ 2,502,814.34 \end{array}$ | $\begin{aligned} & 630,047.29 \\ & 208,568.71 \end{aligned}$ | $\begin{aligned} & +002804 \\ & +005354 \end{aligned}$ |



NAME OF STATION: MITTRY

STATE CALIFURNIA
YEAR: 1964
SECOND-ORDER
LOGALITY: ARIZONA-CALIFORNIA BOUNOARY
SOURCE: G-13386
FIELO SKETCH: ARIZ 52-II


| STATE COOROINATES (Fm) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | coot | $\times$ | $Y$ | $\theta$ (OR $\triangle \alpha$ ) ANGLE |
| $\begin{aligned} & \text { ARIZ. We } \\ & \text { CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 279,350.53 \\ 2.547,180.01 \end{array}$ | $\begin{aligned} & 671,534.59 \\ & 251,126.83 \end{aligned}$ | $\begin{array}{r}  \\ -002323 \\ +\quad 005844 \end{array}$ |


STATE CALIFORNIA

YEAM: 1964
SECDND ORDEA
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE: $\quad G-13386$
FIELO SKETCH: ARIZ 52-1


STATE COORDINATES (FAI)

| STATE A ZONE | CODE | $x$ | $\gamma$ | $\theta$ (OA $\Delta \alpha$ ) ANGLE |
| :---: | :---: | :---: | :---: | :---: |
| ARIZ. W. | 0203 | $276,926.45$ | $1,355,430.62$ | -002522 |
| CALIF. V | 0405 | $3,053,797.17$ | $463,577.27$ | +01.5958 |


|  | TO STATION OR OBJECT | EEODETIC AZIMUTH <br> (Frow | pLANE AZIMUTH <br> (Frse nutb) | CODE |
| :---: | :---: | :---: | :---: | :---: |
| BREEZE BREEZE |  | $\begin{array}{lll} 195 & 46 & 20.9 \\ 195 & 46 & 20.9 \end{array}$ | $\begin{array}{lll} 196 & 11 & 43^{*} \\ 193 & 46 & 23 \end{array}$ | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ |

```
STATE ARIZONA
```

YEAR: 1964
SECOND -ORDER
LOCALTY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE G-13386
FIELO SKETCH: ARIZ 52-1I

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| GEODETIC LATITUTE: 32 54 30.83248 ELEVATION: <br> GEODETIC LONGITUDE: $114 \quad 27$ 41.36270  METERS |  |  |  |  |  |  |  |  |  |  |  |  |


| STATE COOADINATES (FECt) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | COOE | $\times$ | $\gamma$ | $\theta$ (ORA $\alpha$ )ANGLE |  |
| ARIZ. W. | 0203 | $281,636.87$ | $695,000.95$ | -002312 |  |
| CALIF. VI | 0406 | $2,548.905 .05$ | 274.641 .06 | +005858 |  |
|  |  |  |  |  |  |


| to station or object | GEDDETIC AZIMUTH (From, jouth) | PLANE AZIMUTTH <br> (From anwib) | CODE |
| :---: | :---: | :---: | :---: |
| IMPERIAL IMPERIAL | $\begin{array}{llll}0 & 04 & 31.2 \\ 0 & 04 & 31.2\end{array}$ | $0 \%$ 359 359 | $\begin{aligned} & 0203 \\ & 0408 \end{aligned}$ |

## NAME OF STATION: VIEW

STATE CALIFORNIA.
vear: 1964
SEC OND -ORDEA

## LOCALITY: ARIZONA-CAL IFORNIA BOUNDARY

SOURCE: G-13386
FIELO SKETCH: ARIZ 52-1


| STATE COORDINATES (fme) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | coob | $\times$ | Y | $\theta$ (or $\triangle(\alpha)$ AnGle |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. V } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ | $\begin{array}{r} 335,711.02 \\ 3,121,092.73 \end{array}$ | $\begin{array}{r} 1,152,554.35 \\ 263,371.22 \end{array}$ | $\begin{array}{r} -001818 \\ +\quad 020647 \end{array}$ |


|  | TO STATION OR OBJECT | GEODETIC AZIMLTH <br> (From justh) | plane azimuth (Frem soutib) | code |
| :---: | :---: | :---: | :---: | :---: |
| FLAT FLAT |  | $\begin{array}{llll}231 & 28 & 47.0 \\ 231 & 28 & 47.0\end{array}$ | $231^{\circ} 47^{\prime} 05^{\prime}$ 2292200 | 0203 0405 |

NAME OF STATION: T8S R22W WS4 PS9


STATE COORDINATES (FM)

| STATE B ZONE | CODE | $x$ | $r$ | $\theta$ (OR $\triangle \alpha$ ) ANGLE |
| :--- | ---: | :---: | :---: | :---: |
| ARIZ. W. | 0203 | $261,935.36$ | $640,058.43$ | -002508 |
| CALIF. VI | 0406 | $2,530,521.19$ | 219.243 .76 | +005654 |
|  |  |  |  |  |


nAME of station T1GS R21E S35 $\$ 22$
STATE ARIZONA
yEARE 1964
SECOND -ORDEA
LOCALITY: ARIZONA-CALIFORNIA BOUNOARY
SOURCE: G-13386 FIELD SKETCHZARIZ 52-1I

| CEODETIC LATITUTE: | $32^{*}$ | 43 | 07.55671 | ELEVATION: |
| :--- | ---: | ---: | ---: | :--- |
| GEODETIC LONGITUDE: | 114 | 43 | 03.89804 |  |


| STATE COORDINATES (Fm) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE \& IONE | CODE | * | $\checkmark$ | $\theta$ (or $\triangle$ a angle |
| $\begin{aligned} & \text { ARIZ. We } \\ & \text { CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 202,353,44 \\ 2,471,278,22 \end{array}$ | $\begin{aligned} & 626,571.91 \\ & 204+340.59 \end{aligned}$ | $\begin{aligned} & -0031 \\ & +0053 \\ & +0051 \end{aligned}$ |


|  | to station on object | CEOOETIC AZIMUTH (Frow youth) | plane azimuth <br> (From sasth) | CODE |
| :---: | :---: | :---: | :---: | :---: |
| BOUNDARY | MONUMENT NO 206 | $85^{\circ} 21^{\circ} 06.6$ | $85^{\circ} 5230^{\circ}$ | 0203 |
| BOUNDARY | MONUMENT NO 206 | $85 \quad 2106.6$ | 843036 | 0406 | STATE ARIZ-CALIF-NEVADA YEAR: 1893,1964 THIRD ORDER

## LOCALITY: CALIFORNIA-NEVADA BOUNDARY

SOURCE: G-10055, G-13386 FIELO SkETCH: ARIZ 52-I


| state coordinates (Frel) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | CODE | x | r | $\theta$ ( OR $\triangle \alpha$ ) ANGLE |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. V } \\ & \text { NEV. E. } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0405 \\ & 2701 \end{aligned}$ | $\begin{array}{r} 235,814.61 \\ 3,008,425.11 \\ 784,863.01 \end{array}$ | $\begin{array}{r} 1,457,113.99 \\ 563,423.29 \\ 92,987.90 \end{array}$ | $\begin{aligned} & +0030 \\ & +0152 \\ & +015511 \\ & +003244 \end{aligned}$ |



NAME OF STATION BDRY PT NO 2 ARTZ-CAITI
STATE ARIZONA-CALIPORNIA YEAN: 1964
SECOND ORDER
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE: G-13386
FIELO SKETCH:

| geodetic latitute: GEODETIC LONGITUDE: | $\begin{array}{r} 34^{\circ} 43^{\prime} \\ 11^{\prime} 8^{\circ} .68990 \\ \hline \end{array}$ | elevation: | meters FEET |
| :---: | :---: | :---: | :---: |


| State COORDINATES (Eer) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A zone | CODE | $\times$ | $\checkmark$ | $\theta$ (on $\triangle \alpha$ ) angle |
| ARIZ W. CALIF V | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ | $\begin{array}{r} 277,587.37 \\ 3,054,437.59 \end{array}$ | $\begin{array}{r} 1,355,900.62 \\ 464,074.75 \end{array}$ | $\begin{array}{r} 0 \\ -025 \\ +200 \end{array}$ |


| to station or object | GEODETIC AZIMUTH (Frow yuuh) | plane azimuth <br> (From sostb) | COOE |
| :---: | :---: | :---: | :---: |
| This station was determined by photogrammetric methods and is referenced from triangulation station REFUGE (*AR1z. 52-I). | * , * | - , - |  |

LOCALITY: ARIZONA-CALIFORNIA BOUNDARY

```
source: G-13386
FIELO SKETCH: ARIZ 52-I
```

NO CHECK ON THIS POSIMTON

| GEODETIC LATITUTE: | $34^{\circ}$ | $43^{\prime}$ | $05^{\circ} .36265$ | ELEVATION: |
| :--- | ---: | :--- | :--- | :--- |
| GEODETIC LONGITUOET | 114 | 29 | 15.20339 |  |


| state coordinates (fme) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | coos | x | y | $\theta(08 \triangle \alpha)$ ANGLE |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ | $\begin{array}{r} 278,353.65 \\ 3,055,303.05 \end{array}$ | $\begin{array}{r} 1,353,536.62 \\ 461,745.41 \end{array}$ | $\begin{aligned} & -002512 \\ & +020008 \end{aligned}$ |


| TO STATION OR OBJECT | GEODETIC AZIMUTH (FNos with) | PLANE AZIMUTH <br> (FNow sosth) | CODE |
| :---: | :---: | :---: | :---: |
| SANTAFE | 2694014.5 | $270^{\circ} 05^{\prime} 27^{\prime}$ | 0203 |
| SANTAFE | 2694014.5 | 2674007 | 0405 |
| Position Cetermined by traverse from station SANTAFE. |  |  |  |

NAME OF STATION: BQRY PT NO 4 ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECDND -ORDER
LOCALITY: ARIZORA-CALIFORNIA BOUNDARY

```
SOURCE G-13386
FIELO SKETCH: AR12 52-1
```



| STATE COORDINATES (Fm) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | CODE | $\times$ | $\checkmark$ | $\theta$ Ior $\triangle \alpha$ ) ANGLE |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. V } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ | $\begin{array}{r} 278,573.42 \\ 3,055,546.68 \end{array}$ | $\begin{array}{r} 1,352,966.84 \\ 461,185.46 \end{array}$ | $\begin{aligned} & -002511 \\ & +020009 \end{aligned}$ |


| TO STATION OR OBIECT IVI | GEODETIC AZIMUTH <br> (Frow fouth) | PLANE AZIMUTH (From iowit) | coos |
| :---: | :---: | :---: | :---: |
| Position determined by traverse from station CENTER and checked by additional observations. | * - |  |  |

NAME OF STATION: ELPASO $=$ BDRY PT NO 5 ARI2-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECOND -order
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE G-13386 FIELD SKETCH:ARIZ 52-1

| GEODETIC LATITUTE: | 34 | 42 | 54.70265 |
| :--- | ---: | ---: | ---: |
| GEODETIC LONEITUDE: | 114.29 .02 .04375 | ELEVATION: | METERS |


| STATE COORDINATES (Fme) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE - ZONE | CODE | $\times$ | $\checkmark$ | $\theta$ (or $\triangle a)$ angle |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. } V \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ | $\begin{array}{r} 279,444.33 \\ 3,056,438.56 \end{array}$ | $\begin{array}{r} 2,352,450.93 \\ 460,706.86 \end{array}$ | $\begin{aligned} & +002505 \\ & +\quad 020015 \end{aligned}$ |


|  | TO STATION OR OBJECT | GEODETIC AZIMUTM (Frov suith) | plane azimuth (Enen jowith) | CODE |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{ll} A R I Z & 97 \\ \text { ARIZ } & 97 \end{array}$ |  | $\begin{array}{llll}251 & 47 & 34.9 \\ 251 & 47 & 34.9\end{array}$ | $\begin{array}{lll}252 & \\ 242 & 40 \\ 249 & 4 & \end{array}$ | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ |


| STATE ARIZONA-CALIFORNIA YEAR: 1964 |  | SECOND -order |
| :---: | :---: | :---: |
| LOCALITM ARIZONA-CALIFORNIA BOUNDARY |  |  |
| source: G-13386 <br> NO CHECK ON THIS POSITION | Field sketch: ARİ 52-1 |  |
| GEODETIC LATITUTE: $34^{\circ}$ 17 47.92195 <br> GEODETIC LONGITUDE: 114 08 18.43732 | elimation: | METEAS FEET |


| State coordinates (Eme) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | CODE | x | r | $\theta$ (or $\triangle \alpha$ ) ANGLE |
| ARIZ. W. CALIF. V | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ | $\begin{array}{r} 382,675.39 \\ 3,166,031.79 \end{array}$ | $\begin{array}{r} 1,199,554.50 \\ 312,312.11 \end{array}$ | $\begin{aligned} & -001308 \\ & +021204 \end{aligned}$ |


| TO Station or object At | geodetic azimuth (From rusib). | plane azimuth <br> (Frmm suytb) | CODE |
| :---: | :---: | :---: | :---: |
| Position determined by traverse from station PARKER DAM. | $\cdots{ }^{*}$ | * * |  |

NAME OF STATION: BDRY PT NO 7 ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECOND-ADER
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
sources G-13386
FIELO SKETCH: *


STATE COORDINATES (Fui)

| STATE A ZONE | CODE | $x$ | $r$ | $\theta$ (OR $\triangle \alpha$ ) ANGLE |
| :---: | :---: | :---: | :---: | ---: |
| ARTZ W. | 0203 | $343,270.87$ | $1,253,785.24$ | -0.1728 |
| CALIFV V | 0405 | $3,128,594.00$ | $264,920.00$ | +20738 |




| STATE COORDINATES (FMt) |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| STATE \& ZONE | CODE | $\times$ | $r$ | $\theta$ (OR- $\Delta \alpha$ )ANGLE |  |
| ARIZ. W. | 0203 | $341,335.53$ | $1+154.481 .15$ | -001741 |  |
| CALIF.V | 0405 | $3.126,631.00$ | $265,533.64$ | +020725 |  |
|  |  |  |  |  |  |


|  | to station or onject | GEODETIC AZIMUTH (Fnow 4201 ib) | PLANE AZIMUTM (Frow testh) | CODE |
| :---: | :---: | :---: | :---: | :---: |
| BLUFF BLUFF |  | 269 31 <br> 269 40.0 <br> 31 40.0 | $\begin{array}{ll} 269^{\circ} 49 & 21^{\prime} \\ 26724 & 15 \end{array}$ | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ |

```
NAME OF station: BDRY PT NO 9 ARIZ-CAIIF
STATE ARIZONA-CALIFORNIA YEAR: 1964 SECOND ORDER
LOCALITM ARIZONA-CAIIFONNIA BOUNDARY
source: G-13386
FIELO SNETCH: *
```

| GEODETIC LATITUTE: | 34 | 10 | 14.87530 | ELEVATION: |
| :--- | ---: | ---: | :--- | :--- |
| GEOOETIG LONGTUDE: | 114 | 17 | 20.57050 |  |

STATE COORDINATES (Frm)

| state a zone | coor | $x$ | $x$ | $\theta$ (OR $\Delta \alpha$ )ANGLE |
| :---: | :---: | :---: | :---: | :---: |
| ARIZ W. | 0203 | $337,789.49$ | $1,153,961.67$ | $-0^{\circ} 18.04$ |
| CALIF V | 0405 | $3,123,210.00$ | $264,865.00$ | +20701 |
|  |  |  |  |  |


| TO STATION OR OBJECT | geodetic azimute (From wouth) | PLANE AZIMUTH (From savib) | CODE |
| :---: | :---: | :---: | :---: |
| This station was determined by photogrammetric methods and is referenced from triangulation station FLAT (*ANIz. 52-I). |  | - | 74 |

ADJUSTED HORIZONTAL CONTROL DATA
name of station: EDRY PT NO 10 ARIZ-GALIR
STATE ARTZONA-CALIFORNIA YEAR: 1964 SECOND ORDER
LOCALTTY ARIZONA-CALIFORNIA BOUNDARY
SOURCE G-13386
FIELO SKETCH: *


| State coordinates (Fmy) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | coor | $\times$ | $r$ | $\theta$ (or $\Delta \alpha$ ) Ancle |
| ARII W. CALIF V | $\begin{aligned} & 0203 \\ & 0405 \end{aligned}$ | $\begin{array}{r} 336,026.30 \\ 3,121,411.41 \end{array}$ | $\begin{array}{r} 1,152,467.31 \\ 263,297.57 \end{array}$ | $\begin{aligned} & -0^{\circ} 18^{\prime} 16^{\circ} \\ & +20649 \end{aligned}$ |


| to station or object | CEODETIE AZIMUTH (fnem Autio) | PLANE AZIMUTH (Frpm jow/h) | coos |
| :---: | :---: | :---: | :---: |
| This station was determined by photogrammetric methods and is referenced from triangulation station VIEN ("Arlz. 52-I). |  |  |  |

NAME OF STATION: BDRY PT NO IL ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECOND-ORDER
LOCALITY ARIZONA-CALIFORNIA BOUNDARY

```
source G-13336
FIELD SKETCH: ARIZ 52-1
```

NO CHECK ON THIS POSITION


STATE COORDINATES (FIN)

| STATE \& ZONE | CODE | $x$ | $r$ | $\theta$ (OR $\triangle \alpha$ )ANGLE |
| :---: | :---: | :---: | :---: | :---: |
| ARLZ.W. W. | 0203 | $334,192.65$ | $1,149.883 .27$ | -001828 |
| CALIF.V | 0405 | $3,119,688.40$ | $260,638.44$ | +020637 |
|  |  |  |  |  |


| TO STATION OR OEJECT | GEODETIC AZIMUTH <br> (from mperth) | PLANE AZIMUTH (Fnom masth) | COOE |
| :---: | :---: | :---: | :---: |
| Position determined by traverse from station SPAN RM 1. | - * |  |  |

## ADJUSTED HORIZONTAL CONTROL DATA

NAME OF STATION: BDRY PT NO 12 ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAA: 1964
SECOND ORDER
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE: G-13386 FIELO SKETCH:ARIZ 52-1

| GEODETIC LATITUTE: | $33^{*}$ | 43 | 58.11276 |
| :--- | ---: | ---: | ---: |
| OEODETIC LONGITUDE: | 114 | 30 | 36.04447 |


| STATE COORDINATES (Fm) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | CODE | $x$ | $r$ | 8 lor $\Delta \alpha$ /ANGLE |  |
| ARIZ. W. | 0203 | $268,929.84$ | $995,010.66$ | -002519 |  |
| CALIF. VI | 0406 | $2,529,009.94$ | $574,251.40$ | +005722 |  |


|  | TO Station or onject | GEODETIC AZIMUTH <br> (frie savib) | pLANE AZIMUTH (From soutb) | CODE |
| :---: | :---: | :---: | :---: | :---: |
| BDRY RE | PT NO 12 | $35^{\circ} 59^{*} 32.2$ | $36^{\circ} 24^{\prime} 51^{\prime}$ | 0203 |
| BDRY RE | PT NO 12 | $35 \quad 5932.2$ | $\begin{array}{llll}35 & 02 & 10\end{array}$ | 0406 |

LOCALITY: ARIZONA-CALIFORNIA BOUNOARY
sourge G-13386
FIELD SKETCM: ARIZ 52-I
NO GHECK ON THIS P POSITION

| GECDETIC LATITUTE: | $33^{*}$ | 36 | 27.31038 |
| :--- | ---: | ---: | ---: |
| GEDORTIC LONGITUDEi | 114 | 31 | 48.52488 |


| STATE COORDINATES (Fmi) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATEA ZONE | code | $\times$ | 4 | $\theta$ (oa $\triangle$ c) Angle |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 262,456.82 \\ 2,523,657.56 \end{array}$ | $\begin{aligned} & 948,479.94 \\ & 527,579.67 \end{aligned}$ | $\begin{array}{r} +002555^{\circ} \\ +005642 \end{array}$ |


| TO STATION OR OBJECT | GEODETIC AZIMUTH <br> (Frne sustb) | plane azimuth <br> (From jowth) | CODE |
| :---: | :---: | :---: | :---: |
|  | - . ${ }^{\text {- }}$ | * ${ }^{\text {• }}$ |  |
| Position determined by traverse from station EHREN. |  |  |  |

NAME OF STATION: BDRY PT NO 14 ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECOND -ORDER
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
source: G-13386
FIELD SKETCH: ARIL 52-I
110 CHECK ON THIS POSITION

| GEODETIC LATITUTE: | 33 | 24 | 46.54852 | ELEVATIONA |
| :--- | ---: | ---: | ---: | ---: |
| GEOOETIC LONGITUOE: | 114 | 39 | 24.79576 | METERS |


| STATE COORDINATES (Fet) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | coor | x | $Y$ | $\theta$ (OA $\triangle \alpha$ ) ANGLE |
| ARIZ. W. CALIF. VI | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 223,254.41 \\ 2,486,137.29 \end{array}$ | $\begin{aligned} & 878,975.36 \\ & 457,157.28 \end{aligned}$ | -002958 +005232 |


| TO STATION OA OBAECT As | geooetic azimuth (Fner nactib) | PLANE AzIMUTH (Fn*s weutib) | CODE |
| :---: | :---: | :---: | :---: |
| Position determined by traverse from station CIBOLA. | - , | - |  |

name or station: BDRY PT NO 15 ARIZ-CALIF
STATE ARTZONA-CALTFORNIA YEAR: 1964 SECOND -OROER
LOCALTY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE: G-13386 FIELD SKETCH:

| GEODETIC Latitute: 32 54 $22.3527^{\prime}$ <br> GEODETIC LONGITUDE: 114 27 43.15340 | ELEVATION: | METERS <br> FEET |
| :---: | :---: | :---: |


| STATE COOADINATES (Fmi |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| STATE Q ZONE | CODE | $\times$ | $\gamma$ | $\theta$ (OR $\Delta \alpha$ aNGLE |  |
| ARIZ V. | 0203 | $281,478.42$ | $694,144.98$ | -0.2312 |  |
| CALTP VI | 0406 | $2,548,767.10$ | $273,781.55$ | +05857 |  |


| TO Station or object | GEODETIG AZIMUTH (From soutio) | PLANE AZ1MUTH (Fnow munt) | CODE |
| :---: | :---: | :---: | :---: |
| This station was determined by photogrammetric methocis and is referenced from triangulation station SQUAW (sAriz. 52-II). | - - . | - - | 17 |

NAME OR STATION: BDRY PT NO 16 ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECOND -order
LOCALITY: ARIZONA-GALIFORNIA BOUNDARY
SOURCE: G-13386
FIELD SKETCH: ARIZ 52-II

| GEODETIC LATITUTE: | 32 | 52 | 58.82283 | METERS |
| :--- | ---: | ---: | ---: | :--- |
| GEODETIC LONGITUDE: | 114 | 27 | 50.24197 |  |


| STATE COORDINATES (Fel) |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| STATE \& ZONE | COOE | $x$ | $x$ | $\theta$ (OR $\triangle \alpha$ ) ANGLE |  |
| ARIZ. W. | 0203 | $280,816.94$ | $685,707.23$ | -002316 |  |
| CALIF. VI | 0406 | $2,548,307.43$ | $265,330.45$ | +005853 |  |
|  |  |  |  |  |  |



NAME OF STATION BDRY PT NO 17 ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEARE 1964
SECOND -ORDER
LOCALITY: ARIZONA-CAL IFORNIA BOUNDARY
SOURCE G-13386
FIELO SKETCH: ARIZ S2-II

| CEODETIC LATITUTE: | 32 | 50 | 39.87937 | ELEVATION: |
| :--- | ---: | ---: | ---: | :--- |
| GEOORTIC LONGITUDE: | 114 | 28 | 06.22867 |  |


| STATE COORDINATES (FMt) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | CODE | $x$ | $x$ | $\theta$ (ORA $\alpha$ ) ANGLE |  |
| ARIZ. W. | 0203 | $279,358.06$ | $571,674.42$ | -002323 |  |
| CALIF. VI | 0406 | $2,547,184.20$ | $251,266.81$ | +005845 |  |
|  |  |  |  |  |  |


| TO STATION OR OBJECT | GEODETIC AZIMUTH <br> (From mowht) | PLANE AZIMUTH (From iowib) | CODE |
| :---: | :---: | :---: | :---: |
|  |  | $\cdots$. |  |
| Tnis boundary point was not |  |  |  |
| marked in the 1964 CsGG survey. |  |  |  |
| The position is at the intersection |  |  |  |
| of the lines nommal to the |  |  |  |
| Iongitudinal axis of the Imperial |  |  |  |
| and Laguna dams. (See description) |  |  |  |

NAME OF STATION: BDRY PT NO 18 ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964
SEC OND -order
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE: G-13386 FIELD SKETCH:ARIZ 52-II

| GEODETIC LATITUTE: | 32 | 49 | 24.14592 | ELEVATION: |
| :--- | ---: | ---: | :--- | :--- |
| GEODETIC LONGITUEE: | 114 | 29 | 36.00955 |  |


| STATE COORDINATES (FeCt) |  |  |  |  |  |
| :--- | ---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | CODE | x | r | $\theta$ (OR- $\triangle \alpha$ ) ANGLE |  |
| ARIZ. W. | 0203 | $271,644.46$ | $664,073.58$ | -0024.11 |  |
| CALIF. VI | 0406 | $2,539,654.32$ | $243,483.90$ | +005755 |  |
|  |  |  |  |  |  |


|  | TOSTATION OR OBJECT |  |  | GEODETIC AZIMUTM (From south) | PLANE AZIMUTM (From. jowih) | CODE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BDRY REF | PT BOLT | B LAGUNA | DAM | $315^{\circ} 01{ }^{\prime} 10.0$ | $315^{\circ} 25^{\prime} 21^{\prime}$ | 0203 |
| BDRY REF | PT BQLT | B LAGUNA | DAM | 3150110.0 | 3140315 | 0406 |

NAME OF STATION: BDRY PT NO 19 ARIZ-CAIIR
STATE ARIZONA-CAIJFORNIA YEAR 1964 SECOND -ORDER
LOCALITY: ARIZONA-CAIIFORNIA BOUNDARY
source, G-13386
FIELD SKETCH:

| GEODETIC LATITUTE | $32^{\circ} 48$ | 48.07760 | ELEVATION: |
| :--- | ---: | ---: | ---: |
| GEODETIC LONGITUDE: | 11430 | 36.22870 | METERS |


| STATE COORDINATES (Fm) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | cope | $\star$ | Y | $\theta$ (on $\triangle$ a ANGLE |
| $\begin{aligned} & \text { ARIZ W. } \\ & \text { CALIF VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 266,486.64 \\ 2,534,560.00 \end{array}$ | $661,475.58$ $240,763.50$ | $\begin{aligned} & -02443 \\ & +05722 \end{aligned}$ |



NAME OF STATION: FDRY PT NO 20 ARTZ-CALIF
STATE ARIZONA-CAIIEORNIA YEAR: 1964
SECOND ORDEA
LOCALITK: ARIZONA-CAIIFORNIA BOUNDARY
SOURCE G-13386 FIELD SKETCH: *

| geooetic latifute 32 45 25.78600 <br> ogooetic Lonatuoz: 124 31 33.33340 | Elevation: | METERS <br> FEET |
| :---: | :---: | :---: |


| state coordinates (fmu) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE \& ZONE | cooe | * | $\checkmark$ | $\theta(0, \triangle \alpha)$ ancle |
| ARIZ $W$. CAIIF VII | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 261,455.78 \\ 2,530,042.79 \end{array}$ | $\begin{aligned} & 640,056.34 \\ & 219,230.23 \end{aligned}$ | $\begin{aligned} & 0 \\ & -02512 \\ & +05651 \end{aligned}$ |


| TO Station or osujet and | GEODETIC AZIMUTH (From soutb) | Plane azimuth (From fouta) | CODE |
| :---: | :---: | :---: | :---: |
| Inis station was determined by photogrammetric methods and is referenced from triangulation station T8S R22W WS4 PS9 (* Axiz. 52-II). | - , | - |  |

NAME OF STATION: BDRY PT ND 21 BLM ARIZ-CALIF

```
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECOND-ORDER
```

LOCALITY: ARIZONA-CALIFORNIA BDUNCARY

```
SOURCE: G-13386 FIELD SKETCH: ARIZ 52-11
```

| GEODETIC LATITUTE: | $32^{*} 45^{\prime} 25^{\prime} .34781$ | ELEVATION: | METERS |
| :--- | ---: | ---: | :--- |
| GEODETIC LONGITUDE: | 1143217.55283 |  | FEET |


| State COOROINATES (Fit) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | CODE | $\times$ | $\gamma$ | $\theta$ (on $\triangle \alpha$ ) Angle |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 257,679.12 \\ 2,526,266.58 \end{array}$ | $\begin{aligned} & 640,039.89 \\ & 219+123.67 \end{aligned}$ | $\begin{aligned} & -\quad 00 \times 25^{\prime} 3{ }^{\prime} \\ & +\quad 005626 \end{aligned}$ |


| to station on object |  |  |  | GEODETIC AZIMUTH (Fros apib) | PLANE AZIMUTH (fran uaih) | COOE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BDRY PT | NO 22 | BLM | -RIL-CALIF | 00045.0 | 026 | 0203 |
| BDRY PT | NO 22 | BLM | ARIZ-CALIF | 00045.0 | 3590419 | 0406 |

NAME OF STATION: BDRY PT NO 22 BLM ARIZ-CALIF
STATE ARIZONA-CALIFQRNIA YEAR: 1964
SECOND -ORDER

LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE: G-13386 FIELO SKETCH:ARIZ 52-II

| GEODETIC LKTITUTE: | 32 | 44 | 59.36240 | ELLEVATION: |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| GEODETIC LONGITUDE: | 114 | 32 | 17.55954 |  |  |

STATE COQRDINATES (FAR')

| STATE A ZONE | CODE | $x$ | $v$ | $\theta$ (OR $\triangle a$ )ANGLE |
| :---: | :---: | :---: | :---: | :---: |
| ARIZ.W. W. | 0203 | $257,658.99$ | $637,413.75$ | $-002535^{\circ}$ |
| CALIF.VI | 0406 | $2,526.309 .12$ | $216,497.79$ | +005626 |
|  |  |  |  |  |


nAme of station: BDRY PT NO 23 GLO ARIZ-CALIf
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECOND-ORDER
LOCALIT: ARIZONA-CALIFORNIA BOUNDARY
SOUNCE G-13386
FIELD SKETCH: ARIZ 52-1I


| State COOADINATES (Fwi) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A Z ONE | coos | $\times$ | $\checkmark$ | $\theta$ (on $\triangle \alpha$ ) Angle |
| ARIZ. W. CALIF. VI | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 249,819.94 \\ 2,518,472.62 \end{array}$ | $\begin{aligned} & 637,399.10 \\ & 216,296.13 \end{aligned}$ | $\begin{aligned} & -002625^{\circ} \\ & +005536 \end{aligned}$ |


|  | TO STATION OR OBJECT | GEODETIC AZIMUTH <br> (From (jwib) | PLANE AZIMUTH <br> (From auib) | CODE |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { POLE } \\ & \text { POLE } \end{aligned}$ |  | $\begin{array}{ll} 0 & 29 \\ 0 & 29.0 \\ 0 & 29 \\ 08.0 \end{array}$ | $\begin{array}{rrr} \hline 0 & 55 & 33^{\prime} \\ 359 & 33 & 32 \end{array}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ |

NAME OF STATION: BORY PT NO 24 GLO ARIZ-CALIF
STATE ARIZONA-こLLIFORNIA YEARE 1964
SECOND -DRDEA
LOCALITY: ARIZONA-CAL IFORNIA BOUNDARY
SOURC: G-1きЗ36́
Fielo sketch: ARIZ 52-11
ITO लनF ता חAT MHTS DOSTMTOM

| GEODETIC LATITUTE: | $32^{\circ}$ | $44^{\prime}$ | 32.51389 | ELEVATION: |
| :--- | ---: | ---: | ---: | :--- |
| GEODETIC LONGITUDE: | 114 | 33 | 49.32668 |  |


| State coordinates (fer) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| State a zone | CODE | $\times$ | * | $\theta$ (on $\Delta \alpha$ ) angle |
| $\begin{aligned} & \text { ARIZ. } \mathrm{H}_{-} \\ & \text {CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 249,800.58 \\ 2,518,516.23 \end{array}$ | $634,759.66$ $213,656.98$ | -002624 +005536 |


| TO STATION OR OBJECT | GEODETIC AZIMUTH (Frow गouzh) | plane azimuth (From sourt) | CODE |
| :---: | :---: | :---: | :---: |
|  |  | - . |  |
| Position determined by traverse from station POIE. |  |  |  |

NAME OF STATION: BDRY PT NO 25 GLO ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECOND-ORDER
LOCALITM ARIZONA-CALIFORNIA BOUNDARY
SOURCE G-1332s
FIELD SKETCH: ARI2 S2-II
YO CNECK CN THIS POSTSION

| GEODETIC LATITUTE: | $32^{\circ}$ | $44^{\prime}$ | $32^{*} .49668$ | ELEVATION: | METERS |
| :--- | ---: | ---: | ---: | ---: | ---: | :--- |
| GEODETIC LONGITUOE: | 114 | 34 | 51.19491 | FEET |  |


| STATE COORDINATES (Fel) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE \& ZONE | CODE | x | $Y$ | $\theta$ (on $\triangle$ a a anale |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 244,516,13 \\ 2,513,232.34 \end{array}$ | $\begin{aligned} & 634,798.94 \\ & 213,570.21 \end{aligned}$ | $\begin{aligned} & +00^{\circ} 25^{\prime} 58 \\ & +005502 \end{aligned}$ |



NAME OF STATION: BDRY PT NO 26 BLM ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964 SECOND-ORDER
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE: G-13386 FIELD SKETCH:ARI2 52-11


| STATE COORDINATES (Fm) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STATE \& ZONE | CODE | $\times$ | $\gamma$ | $\theta$ (OR $\triangle \alpha$ )ANGLE |  |  |
| ARIZ. W. | 0203 | $244,496.86$ | $632,159.17$ | -002658 |  |  |
| CALIF. VI | 0406 | $2,513,276.04$ | $210,930.72$ | +005502 |  |  |
|  |  |  |  |  |  |  |


|  | TO STATION OR OBAECT | GEODETIC AZIMUTH <br> (Frem soulib) | PLANE AZIMUTH (From aunth) | CODE |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \mathrm{COB} \\ & \mathrm{COB} \end{aligned}$ |  | $\begin{array}{llll}179 & 58 & 40.4 \\ 179 & 58 & 40.4\end{array}$ | $\begin{aligned} & 180 \\ & 17903 \\ & 1798 \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ |

name of stationa bory pi no 27 bLM ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR 1964
SECOND -ORDER
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE: G-13386 FIELD SKETCH: ARIZ 52-II

state coordinates (Fen)

| STATE G ZONE | CODE | $x$ | $x$ | $\theta$ (OR $\triangle \alpha$ )ANGLE |
| :--- | :---: | :---: | :---: | :---: |
| ARIZ. W. | 0203 | $234,219.23$ | $632,010.94$ | -0028.03 |
| CALIF. VI | 0406 | $2,503,004.89$ | $210,537.46$ | +005356 |
|  |  |  |  |  |



NAME OF STATION BORY PT NO 28 BLM ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEARI 1964 SECOND-OROEA LOCALITY: ARIZONA-CALIFORNIA BOUNDARY

SOURCE. G-13386 FIELD SKETCH: ARI2 52-11


| STATE COORDINATES (Fm) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | coot | $\times$ | Y | $\theta$ (on $\triangle \alpha$ ) ANGLE |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 234,276.11 \\ 2,503,078.59 \end{array}$ | $\begin{aligned} & 631,304.55 \\ & 209,832.63 \end{aligned}$ | $\begin{aligned} & -0028^{\prime} 02 \\ & +005356 \end{aligned}$ |


| TO STATION OR OBJECT | GEODETIC AZIMUTM (From Jown) | PLANE AZIMUTH (From soutb) | CODE |
| :---: | :---: | :---: | :---: |
| DELTA USGS <br> DELTA USGS | $\begin{array}{lllll}214 & 37 & 53.4 \\ 214 & 37 & 53.4\end{array}$ | 215 213 | 0203 0406 |

NAME OF STATION: BDRY PT NO 29 BLM ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECOND-ORDER
LOCALITM: ARIZONA-CALIFORNIA BOUNDARY
SOURGE: G-13386 FIELD SKETCH:ARIZ 52-II


| STATE COORDINATES (Fm) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A IONE | CODE | $\times$ | Y | $\theta$ (or $\Delta \alpha)$ angle |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 234,247.96 \\ 2,503,050.43 \end{array}$ | $\begin{aligned} & 631,304.76 \\ & 209,832.17 \end{aligned}$ | $\begin{aligned} & -00^{\circ} 28^{\prime} 02 \\ & +005356 \end{aligned}$ |


name of station: BDRY PT ND 30 ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964 SECDND -ORDER
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
SOURCE: G-13386
FIELO SKETGH: ARIZ 52-II


| state coordinates (Fme) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| State a zone | coos | x | $\times$ | $\theta$ (ot $\Delta(\alpha)$ angis |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 234,063.64 \\ 2,502,888.71 \end{array}$ | $\begin{aligned} & 630,359.28 \\ & 208,882+58 \end{aligned}$ | $\begin{aligned} & -0028^{\circ} 03^{\circ} \\ & +005355 \end{aligned}$ |



NAME OF STATION: BDRY PT NO 31 BLM ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR 1964
SECOND -ORDER
LOCALITY: ARIZONA-CALIFORNIA BOUNDARY
SOURCS: G-13383 FIELD SKETCH: ARIZ 52-II

| GEODETIC LATITUTE: | $32^{*} 43$ | 47.74164 | METERATION: | METE |
| :--- | :--- | :--- | :--- | :--- |
| GEODETIC LONGITUOE, | 114.36 | 54.06545 | FEET |  |


| STATE COORDINATES (Fwt). |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE O ZONE | CODE | x | $x$ | $\theta$ (OR $\triangle \alpha$ ) ANGLE |
| $\begin{aligned} & \text { ARIZ. W. } \\ & \text { CALIF. VI } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 233,984.26 \\ 2,502,809.34 \end{array}$ | $\begin{aligned} & 630,359.90 \\ & 208,881.29 \end{aligned}$ | $\begin{aligned} & -002804 \\ & +005354 \end{aligned}$ |



## name of station: BDRI PI NO 32 ARIZ-CALIB

STATE ARIZONIA-CALIFORNIA YEAR: 1964

## SECOND -order

LOCALIT: ARIZONIA-CAIIFORNIA EOUNDARY
source G-13385
FiELO skerch: *

| GEODETC LATTUTE: | 32 | 43 | 42.43660 | MLEVATION: |
| :--- | ---: | ---: | ---: | ---: |
| GEODETIC LONGITUDE: | 214 | 36 | 54.21480 |  |


| STATE SOORDINATES (FMr) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| state a zone | CODE | $\times$ | $\checkmark$ | $\theta$ tor $\triangle \alpha$ ) ANGLE |
| ARIZ W. CALIF VI | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 233,967,12 \\ 2,502,805.00 \end{array}$ | $\begin{aligned} & 629,823.86 \\ & 208,345.00 \end{aligned}$ | $\begin{array}{r} 02804 \\ +05354 \end{array}$ |


| TO STATION OR OBJECT + ? | GEODETIC Azimuth | PLANE AZIMITTM (From wuith) | CODE |
| :---: | :---: | :---: | :---: |
| This station was detemmined by photogrammetric methods and is referenced from triangulation station MISSION (*Ariz, 52-II). |  |  |  |

name of station bDRY PT NO 33 ARIZ-CALIF
STATE ARIZONA-CALIFORNIA YEAR: 1964
SECOND -ORDER
LOCALITY: ARIZONA-CALIFORNTA BOUNDARY
SOURCE G-13386
FIELD SKETCH:ARIZ 52-11


| STATE COORDINATES (FEM) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | CODE | x | * | $\theta(\mathrm{OR} \triangle \alpha$ angle |
| ARIZ. W. CALIF. VI | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 231,292.48 \\ 2,500,123.51 \end{array}$ | $\begin{aligned} & 630,143.24 \\ & 208,600.51 \end{aligned}$ | $\begin{aligned} & +00^{\circ} 2821 \\ & +005337 \end{aligned}$ |


| TO STATION OR OBAECT | GEOCETIC AZIMUTH (Frun :-path) | PLANE AZIMUTH (From iouth) | CODE |
| :---: | :---: | :---: | :---: |
| NISSION | $271 * 3415.0$ | $272^{\circ} 02^{*} 36^{\circ}$ | 0203 |
| MISSION | $\begin{array}{llllll}271 & 34 & 15.0\end{array}$ | 2704038 | 0406 |

name or station: EDRY PT NO 34 ARIZ-CALIF
STATE ARIZONIA-CALIFORNIA YEAR 1964
SECOND ORDER
LOCALTM ARIZONIA-CALIPORNIA BOUNDARY
SOURCE: G-13386 FiELD SXETCM: *


| state coordinates (fat) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STATE A ZONE | coos | $\times$ | $\gamma$ | O (OR $\triangle$ a) ancle |
| $\begin{aligned} & \text { ARIZ } W_{*} \\ & \text { CALIT V } \end{aligned}$ | $\begin{aligned} & 0203 \\ & 0406 \end{aligned}$ | $\begin{array}{r} 202,058.22 \\ 2,470,983.68 \end{array}$ | $\begin{aligned} & 626,547.44 \\ & 204,309.08 \end{aligned}$ | $\begin{array}{r} 03125 \\ +050 \quad 29 \end{array}$ |


| TO STATION OR OEJECT | GEODETIC AZIMUTH (Fran motb) | $\underset{\text { Plave azimuth }}{\text { (Fnam outiol }}$ | CODE |
| :---: | :---: | :---: | :---: |
| This station was determined by photogranmetric methoas and is reiepenced from triangulation stations T16S R21E S35 S22 and EOUADARY FONUMENT NO 206 CALIT NEXICO (*Ariz. 52-II). | - . | - |  |

## COLORADO RIVER BOUNDARY COMMISSION OF ARIZONA

## CERTIFICATION OF CONFORMITY OF SURVEY AND BOUNDARY DESCRIPTION

Whereas, the Interstate Compact executed between the States of Arizons and Californis, as set forth in Arizone Session Laws 1963. Chapter 7T, fixes by reference to stations of latitude and longitude the location of the boundary line between Arizona and California on the Colorado River from the southern boundary of the State of Nevada to the point on the international boundary which is common to the bonndaries of Arizona and Califorma and the Tinted Mexican States; am)

Whireas, said Compact provides that said boundary shall be in accordanier with a description in general terms of 34 points on the boundary and that said 34 points will be marked on the existing bridges and dams and where appropriate will be monumented, and thit between each of these 34 points there will be a number of subpoints not monumiented, and that the total number of points and subpoints will approximate 284 : and

Wazrens, said Compact does further provide that the United States Coast and Geodetic Survey will locate the above-mentioned 34 points ou the boundary by precise geodetic surveys and will locate the remaining approximately 200 unmonumented subpoints br precise photogrammetric methods and will provide a list of the georraphic positions and state coordinate positions (Transverse Mercator projection for Arizona and Lambert conformal comic projection for Callfornial of each of the 234 points on the boundary; and does further provide thit the approximatelv 200 unmonumented subpoints will be identified on copies of the aerial photomraphs to defime the boundary; mid that the saif Coast and Geodetic Survey will then locate the points so identifed by analytic aerotriangulation (photogrammetric methods);

Now, Therefore, the Colorado River Boundary Commission of Arizona hereby certifies that the surver and boundary description has been completed by the United States Coast and Geodetie Survey and contams 215 unmmumented subpoints which are identiffed on copies of the aerial photographs, and that the total number of points and subpoints are 249 , and that it is in conformity with the general description of the boundary between Arizma and Californis set forth in Article II of the INTERSTATE COMPACT DEFINTNG THE BOUNDART BETITEEN THE STATES OF IRIZONA IND GAITFOR. NIA ; and, when said survey and boundary description has been similarly certified by the Coborado River Boundary Commission of California. it is ordered that this Certification be attached to the aforesaid survey and boundery descrip. tion: which said survey and boundary description (with said Certifications attached thereto shall thereupon be marked Exhibit " $A$ " and affixed to the אaid INTERSTATE COMPACT DEFINING THE BOYNDARY BETVEEN TIIE STATES OF ARIZONA AND CALTFORNIA.

I certify that the foregoing is a full, true and eorrect eopy of a Certifieation iluls adopted by the Colorado River Boundary Commission of Arizona at its meeting held on November 23. 1965, at which a quorum was present and acting:
/e OBED IL LASSEN
Oaen M. Lisses, Chairman, Colorado River Boundary Commission of Arizona

## CERTIFICATION OF CONFORMITY OF SURVEY AND BOUNDARY DESCRIPTION

## Whereas, the Interstate Compact exeeuted between the States of Arizona and

 Catifornia, as set forth in Chapter 3.5. Division 1, Title 1. Californis Government Code. fixes by reference to stations of latitude and longitude the location of the boundary line between Arizons and California on the Colorado River from the wouthern boundary of the State of Sexada to the point on the international boundary which is common to the boundaries of Arizona and California and the Thited Mexican States; andWhereas. said Compact provides that said boundary shall be in aceordance with a description in general terms of 34 points on the boundary and that said 34 points will be marked on existing briages and dams and, where appropriate, will be monumented and that between pach of these 34 points there will be a number of sshboints not monumented and that the total number of points and xubpointe will approximate 234 and

Wurreas, said Compact does further provide that the Tinited States Coast and Geodetic Surtry will locate the abore-mentioned 34 points on the boundary by previse geodetic survers and will locate the semainmg approsimately 200 tumommented subpoints by precise photogrammetrie methods and will provide a fist of the peographic pasitions and state coordinate positions (Transverse Mereator vrojection for Arizoua and Lambert conformal conic projection for California of each of the 234 points on the boundary ; and does further provide that the approximately 200 unnonumented subpoints will be identified on copies of the aurial photorranhe to define the boundary: and that the said Coast and Combiri- surves will then locate the points si identified by analytic aerotriauguation (photogrammetris methods):

XiOW THEREFORE, the Coirrado River Bomdary Commission of Califorma hotoby vertifien that thr surtey and boundary description has been completed byzhe Thited States Coast and Geolotic Surres and eontains 215 mmonumented sutipuints which are identified on copies of the aerial photographs, and that the total mumber of points and subpoints are 249. and that is is in conformity with The seneral dencription of the benndary between Arizom and Cailornia sel forth in Article 2 of the INTERSTATE COMPACT DEFINING THE BOLXDARY BETWEES THE STATES OF ARIZONA AXD CALIFORNIA ; and when xaid surver and boumdary dexrrption has bern smilarls rertifeil by the Colorate River Boundary Commission of Arizona. it is ordrted that this Certifieafion be attarhed to the aforesilid survey and boundars deseription, which said survy and boundare deseription (with said Certifications atrached thereto) shall Therempon be marked Exhibit "A" and affixed th the said INTERSTATE COMPACT DEFINTNG THE ROFNDARY BETWEEN THE STATES OF ABIZONA AND CALIFORSIA

I certify that the forepome wa tull, true and correx copy-of a Certification iluly adapted by thr Colorado Rier Boumdary Conmission of
 was presellt and actime.
5. F. 1 HORTIG
F. J. Hoathg. Clairinan, Colorath River Bomindary Commission of California


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    0
    ${ }_{8}^{a}$
    $\frac{0}{6}$
    $3=$
    $\frac{-}{6}$
    $\frac{N}{0}$ $\frac{N}{0}$ $\frac{m}{0}$ $\frac{m}{5}$ $\frac{a}{5}$ $\frac{5}{5}$ $\frac{n}{6}$ $\frac{n}{0}$ $\frac{0}{5} \frac{0}{0} \frac{5}{2} \frac{\infty}{0}$

[^1]:    
    

[^2]:    
    
    

[^3]:    * Relors to potes in hranuals of triangustion and usate publicatiees of trumcalation.

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    : Dipaction-aingir oibi-iarad zockwit, selerted to imitul station
    
    

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[^19]:    * Refers tu sonta im manalali of irampulation and alate peblications of trialauktion.
    

[^20]:    

    - Thetaret metry oni) alith nh triposometnic ievaline is being dotis.
    

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