

ORIGINAL

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

FIELD NOTES
OF THE
DEPENDENT RESURVEY OF A PORTION OF THE NORTH BOUNDARY
OF
THE TOHONO O'ODHAM NATION RESERVATION
(A PORTION OF THE SOUTH BOUNDARY),
TOWNSHIP 7 SOUTH, RANGE 6 EAST,
OF THE GILA AND SALT RIVER MERIDIAN,
IN THE STATE OF ARIZONA.

EXECUTED BY

Blas J. Urena, Cadastral Surveyor

Under Special Instructions dated December 8, 2016, approved December 8, 2016, which provided for the surveys included under Group No. 1165, and assignment instructions dated December 8, 2016.

Survey commenced January 11, 2017

Survey completed February 1, 2017

INDEX DIAGRAM

TOWNSHIP 7 SOUTH RANGE 6 EAST
GILA & SALT RIVER MERIDIAN, ARIZONA

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Tp. 7 S., R. 6 E., Gila and Salt River Meridian, Arizona

CHAINS

The following field notes describe the dependent resurvey of a portion of the North Boundary of the Tohono O'odham Nation Reservation (a portion of the South Boundary) Township 7 South, Range 6 East, Gila and Salt River Meridian, Arizona.

The history of surveys pertaining to this survey is as follows:

Otis O. Gould, U. S. Transitman, resurvey the South and North Boundaries, and a portion of the subdivisional lines of Township 7 South, Range 6 East, (a portion of the South Boundary being identical with a portion of North Boundary of the Tohono O'odham Nation Reservation), in 1928, book 3844.

The survey was executed in accordance with the specifications as set forth in the Manual of Surveying Instructions, 2009, and the Special Instructions dated December 8, 2016, for Group Number 1165, Arizona.

The true meridian direction and length of all lines were determined by static and real time kinematic Global Navigation Satellite System observations using Trimble Navigation R8-3 model receivers.

Preliminary to the resurvey, the lines of the prior surveys were retraced and search was made for all corners and other calls of record. Identified corners were remonumented in their original positions. Lost corners were reestablished and remonumented at proportionate positions based on the official record. The retracement data were thoroughly verified and only the true line field notes are given herein.

The survey was executed at the request of Bryan Bowker, Acting Regional Director, Bureau of Indian Affairs, Western Regional Office, in support of the Tohono O'odham Nation (TON) Reservation's boundary fencing project.

Geodetic control was derived from Global Navigation Satellite System (GNSS) static observations post processed by National Geodetic Survey, Online Positioning User Service (OPUS), utilizing Continuously Operating Reference Stations DL3063 AZTP TEMPE CORS ARP, DP1955 AZMP MARICOPA CORS ARP and AJ6820 SRP1 SALT RIVER PROJEC CORS ARP. The NAD 83 (CORS2011) (EPOCH: 2010.0000), geographic position of the corner of sections 4, 5, 32, and 33, on the south boundary of the township, is as follows:

Latitude: 32°45'46.953" N. Longitude: 111°44'24.095" W.

The NAD 83 (CORS2011) (EPOCH: 2010.0000), geographic position of the corner of the Townships 7 and 8 South, Ranges 5 and 6 East, is as follows:

Latitude: 32°45'46.931" N. Longitude: 111°46'28.155" W.

The mean magnetic declination is 10 1/4° E.

Dependent Resurvey of a portion of the South Boundary,
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Restoring the resurvey executed by
Otis O. Gould, in 1928

Beginning at the cor. of secs. 4, 5, 32, and 33, monumented with a rebar, 5/8 in. diam., firmly set, 8 ins. below the surface of Battaglia Dr., an asphalt surface road, 26 ft. wide, bears S. 89°45' E. and N. 89°45' W., reestablished by persons unknown, found and accepted by John K. Melton, Arizona R.L.S. No. 40279, in 2008, according to Book 23, Page 010, on file at Pinal County Recorder's Office. This is accepted as a careful and faithful reestablishment of the orig. cor. position.

from which

A rebar, 1/2 ins. diam., firmly set, projecting 6 in. above the ground for a reference monument, bears N. 0°13' E., 65.0 ft. dist. with an aluminum cap, 2 ins. diam., mkd. MARVIN H DAVIS & ASSOC. CASA GRANDE AZ LS 20358, with a lath, marked "Az San. Dist. Prop. Cor.", alongside the rebar.

A rebar, 1/2 ins. diam., firmly set, projecting 1 in. above the ground for a reference monument, bears N. 57°28' E., 118.9 ft. dist. with an aluminum cap, 2 ins. diam., mkd. MARVIN H DAVIS & ASSOC. CASA GRANDE AZ LS 20358, with a lath, marked "SE. Cor Az C. Prop", alongside the rebar.

A stainless steel post, 28 ins. long, 2 1/2 ins. diam., set 27 ins. in the ground for a reference monument, bears S. 75°00' W., 250.0 ft. dist. with brass cap mkd. RM T8S R6E 250.0 FT TO COR. S5 T O N 2017 and an arrow pointing to the cor. Deposit a magnet, in a white plastic case, at the base of the stainless steel post. Set a steel fence post nearby. From this reference monument the same southerly right-of-way fence of Battaglia Dr., bears N., 47.5 lks., barbed wire, 4 strand, bears S. 89°39' E. and N. 89°39' W., and the westerly right-of-way fence of Trezell road, bears E., 48.5 lks., barbed wire, 4 strand, bears S. 4°11' E. and N. 4°11' W.

The cor. is located in the east bound lane of Battaglia Dr., 6.8 lks. (4.5 ft.), S. from the center line.

From this cor. a fence corner on the southerly right-of-way fence of Battaglia Dr., bears S. 16°49' W., 52.2 lks., barbed wire, 4 strand, with fences extending S. 33°31' E. and S. 89°21' W., and a fence corner on the same right-of-way fence, bears S. 1°50' E., 76.5 lks., 4 strand, with fences extending S. 89°00' E., S. 4°15' W. and N. 33°31' W.

Dependent Resurvey of a portion of the South Boundary,
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CHAINS	
	<p>From this same cor. a 60d nail, flush with the surface of the road, set by persons unknown, bears N. 89°45' E., 5.9 lks. dist.</p>
	<p>N. 89°59' W., bet. secs. 5 and 32, along the N. bdy. of TON Reservation.</p>
	<p>Along the east bound lane of Battaglia Dr., an asphalt surface road, 26 ft. wide.</p>
0.15	<p>From this point, a fence corner on the southerly right-of-way fence of Battaglia Dr., bears South, 50.0 lks., barbed wire, 4 strand, with fences extending S. 33°31' E. and S. 89°21' W.</p>
0.77	<p>From this point, the center line of Battaglia Dr., bears N., 7 lks., bears S. 89°45' E. and N. 89°45' W.</p>
1.62	<p>From this point, the same southerly right-of-way fence, bears S., 51.7 lks., bears N. 89°21' E. and S. 89°21' W.</p>
2.664	<p>From this point, the intersection of Battaglia Dr. and Trekell road, bears North, 8.6 lks., asphalt surface, 26 ft. wide, bears S. 4°21' E.</p>
3.207	<p>From this point, a fence corner on the southerly right-of-way fence of Battaglia Dr., and the westerly right-of-way fence of Trekell road, bears South, 50.8 lks., barbed wire, 4 strand, with fences extending S. 4°11' E. and N. 89°39' W.</p>
4.53	<p>From this point, the same southerly right-of-way fence, bears South, 50.0 lks., bears S. 89°39' E. and N. 89°39' W.</p>
4.99	<p>From this point, the center line of Battaglia Dr., bears North, 8.7 lks., bears S. 89°45' E. and N. 89°45' W.</p>
38.70	<p>From this point, the center line of Battaglia Dr., bears North, 9.6 lks., bears S. 89°58' E. and N. 89°58' W.</p>
38.88	<p>From this point, the most northern right-of-way fence of the southerly right-of-way of Battaglia Dr., being 0.7 lks. North of the southern fence, bears S., 48.9 lks., bears N. 89°51' E. and S. 89°51' W.</p>
40.085	<p>Point for the 1/4 sec. cor. of secs. 5 and 32, at proportionate dist., there is no remaining evidence of the 1928 monument.</p>
	<p>Set a mag nail, 2 1/2 ins. long, mkd. MAG, flush with the surface of the road, with a brass washer, 1 1/2 ins. diam., mkd. BLM 2017.</p>

Dependent Resurvey of a portion of the South Boundary,
Tp. 7 S., R. 6 E., Gila and Salt River Meridian, Arizona

CHAINS	
	<p>from which</p>
	<p>An open ended iron pipe, 2 1/4 ins. diam., firmly set, projecting 10 ins. above the ground for a reference monument, bears S. 44°53' E., 46.0 ft. dist. This pipe is located bet. the two southerly right-of-way fences of Battaglia Dr.</p>
	<p>An open ended iron pipe, 2 1/4 ins. diam., firmly set, projecting 3 ins. above the ground for a reference monument, bears S. 45°50' W., 46.7 ft. dist. This pipe is located bet. the two southerly right-of-way fences of Battaglia Dr.</p>
	<p>A stainless steel post, 28 ins. long, 2 1/2 ins. diam., set 28 ins. in the ground for a reference monument, bears S. 45°50' W., 100.0 ft. dist. with brass cap mkd. RM T8S R6E 100.0 FT TO 1/4 COR. S5 T O N 2017 and an arrow pointing to the cor. Deposit a magnet, in a white plastic case, at the base of the stainless steel post. Set a steel fence post, SW of reference monument.</p>
	<p>The cor. is located in the east bound lane of Battaglia Dr., 10 lks. South of the center line.</p>
	<p>From this cor., a fence corner on the same southerly right-of-way fence, bears S. 18°40' E., 51.9 lks., barbed wire, 4 stand, with two fences, 0.7 lks. apart, extending N. 89°51' E., with one fence extending S. 0°18' E. and two fences, 0.7 lks. apart, extending N. 89°42' W.</p>
40.82	<p>From this point, the center line of Battaglia Dr., bears N., 9.6 lks., bears S. 89°58' E. and N. 89°58' W.</p>
40.86	<p>From this point, the most northern right-of-way fence of the southerly right-of-way of Battaglia Dr., being 0.7 lks. North of the southern fence, bears S., 48.7 lks., bears S. 89°42' E. and N. 89°42' W.</p>
78.69	<p>From this point the same southerly right-of-way fence of Battaglia Dr., bears S., 47.2 lks., bears N. 89°35' E. and S. 89°35' W.</p>
79.593	<p>From this point, a fence corner on the same southerly right-of-way fence of Battaglia Dr., barbed wire, 4 strand, and the easterly right-of-way fence of Chuichu road, bears South, 47.8 lks., with fences extending N. 89°35' E., S. 0°56' W. and S. 85°56' W.</p>
79.824	<p>From this point, the terminus of the same southerly right-of-way fence of Battaglia Dr., bears S., 49.5 lks., bears N. 85°56' E.</p>

Dependent Resurvey of a portion of the South Boundary,
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CHAINS

80.17

The cor. of sec. 5, 6, 31, and 32, monumented with a punched aluminum cap, 3 ins. diam., flush in concrete cylinder, 6 ins. diam., 3 ins. below the surface of the road, in a hand hole, 12 ins. diam., mkd. ADOT HIGHWAY DIV . 19, with a steel lip, marked "SURVEY", reestablished by persons unknown, found and accepted by Michael D. Skroch, R.L.S. No. 27753, in 1998, according to Survey Book 2, Page 301, on file at Pinal County Recorder's Office. This is accepted as a careful and faithful reestablishment of the orig. cor. position.

from which

A stainless steel post, 28 ins. long, 2 1/2 ins. diam., set 28 ins. in the ground for a reference monument, bears S. 44°59' E., 132.0 ft. dist. with brass cap mkd. RM T8S R6E 132.0 FT TO COR. S5 T O N 2017 and an arrow pointing to the cor. Deposit a magnet, in a white plastic case, at the base of the stainless steel post. Set a steel fence post, SE of reference monument. This reference monument is located 94.2 lks. S. from the same the southerly right-of-way fence of Battaglia Dr., barbed wire, 4 strand, bears N. 89°35' E. and S. 89°35' W., and 85.1 lks. East from the same easterly right-of-way fence of Chuichu road, barbed wire, 4 strand, bears N. 0°56' E. and S. 0°56' W.

A stainless steel post, 28 ins. long, 2 1/2 ins. diam., set 28 ins. in the ground for a reference monument, bears S. 45°00' W., 100.0 ft. dist. with brass cap mkd. RM T8S R6E 100.0 FT TO COR. S6 T O N 2017 and an arrow pointing to the cor. Deposit a magnet, in a white plastic case, at the base of the stainless steel post. Set a steel fence post, SW of reference monument. This reference monument is located 58.6 lks. S. from a barbed wire fence, 4 strand, bears S. 89°07' E. and N. 89°07' W., and 28.2 lks. West from a fence on the westerly right-of-way of Chuichu road, barbed wire, 4 strand, bears N. 2°55' E. and S. 2°55' W.

From this cor., the intersection of Chuichu Road, an asphalt surface road, 26 ft. wide, bears S. and N. 0°12' W., and Battaglia Dr., an asphalt surface road, 26 ft. wide, extends S. 88°58' E., bears North, 11.5 lks.

The top SE corner of a concrete pad of an abandoned water well, 8.8 ft. sq., bears N. 61°51' W., 197.9 ft. dist.

S. 89°57' W., bet. secs. 6 and 31, along the N. bdy. of TON Reservation.

Leaving the asphalt surface road, and thence over nearly level terrain.

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CHAINS	
0.428	From this point, the terminus of a barbed wire fence, bears South, 50 lks., 4 strand, bears N. 88°21' W.
0.76	From this point, a fence corner on the same barbed wire fence, and the westerly right-of-way fence of Chuichu Road, bears South, 49 lks., with fences extending S. 88°21' E., S. 2°55' W. and N. 89°07' W.
1.42	From this point, the same barbed wire fence, bears South, 48 lks., bears S. 89°07' E. and N. 89°07' W.
19.25	From this point, the same barbed wire fence, bears South, 37 lks., bears S. 89°43' E. and N. 89°43' W.
20.10	<p>A local monument, established by persons unknown, monumented with a rebar, 1/2 in. diam., firmly set, 1 in. below the surface of the ground, with a rebar 1/2 in diam., firmly set, projecting approximately 4 ft. above ground, nearby, and alongside the remains of an old and down barbed wire fence.</p> <p>This local monument is located, N. of the N. edge of a graded dirt road, 20 ft. wide, road parallels the fence, and from which the same barbed wire fence bears S., 36.6 lks., bears S. 89°43' E. and N. 89°43' W.</p>
20.81	From this point, the same barbed wire fence, bears South, 36.1 lks., bears S. 89°43' E. and N. 89°43' W.
39.44	From this point, the same barbed wire fence, bears South, 25.9 lks., bears S. 89°31' E. and N. 89°31' W.
40.20	<p>The 1/4 sec. cor. of secs. 6 and 31, monumented with an iron post, 29 ins. long, 1 in. diam., filled with concrete, firmly set, flush with the surface of the same graded dirt road, 15 ft. wide bears S. 89°31' E. and N. 89°31' W., with a marked stone 12 x 4 x 4 ins., marked X on the W. face, alongside the iron post.</p> <p>At the corner point</p> <p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 41 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">T 7 S R 6 E S 31 1/4 ——— S 6 T 8 S T O N 2017</p> <p>from which</p>

Dependent Resurvey of a portion of the South Boundary,
Tp. 7 S., R. 6 E., Gila and Salt River Meridian, Arizona

CHAINS	
	<p>A rebar, 5/8 ins. diam., firmly set, projecting 3 ins. above the ground for a reference monument, bears N. 0°21' W., 33.2 ft. dist. with an aluminum cap, 2 ins. dia., mkd. HANSEN ENGINEERING 520-723-3261 + RLS 37512. From this rebar a barbed wire fence, bears S., 0.8 lks., 4 strand, bears S. 0°42' E. and N. 0°42' W.</p> <p>Deposit a magnet, in a white plastic case, at the base of the stainless steel post.</p> <p>Deposit the iron post, in 4 pieces, inside the stainless steel post.</p> <p>Deposit the marked stone alongside the stainless steel post.</p> <p>The cor. is located near the northern edge of the same graded dirt road, from which the same barbed wire fence, bears South, 25.2 lks., bears S. 89°31' E. and N. 89°31' W., and from which the terminus of a barbed wire fence, bears N. 1°06' W., 44.7 lks., 4 strand, extends N. 0°42' W.</p> <hr/> <p>S. 89°58' W., beginning new measurement.</p>
0.99	From this point, the same barbed wire fence, bears South, 24.2 lks., bears S. 89°31' E. and N. 89°31' W.
15.64	From this point, the same barbed wire fence, bears South, 18.6 lks., bears N. 89°57' E. and S. 89°57' W.
16.38	From this point, the same barbed wire fence, bears South, 18.6 lks., bears N. 89°57' E. and N. 88°07' W.
19.11	From this point, the same barbed wire fence, bears South, 9.4 lks., bears S. 88°07' E. and S. 89°01' W.
20.08	<p>A local monument, established by persons unknown, monumented with a rebar, 1/2 in. diam., firmly set, projecting 2 ins. above ground.</p> <p>From this local monument the same barbed wire fence, bears South, 11 lks., bears N. 89°01' E. and S. 89°01' W.</p>
20.366	From this point, the same barbed wire fence, bears South, 11.5 lks., bears N. 89°01' E. and N. 86°23' W.
21.842	From this point, the same barbed wire fence, bears South, 2.1 lks., bears S. 86°23' E. S. 89°40' W.
29.465	From this point, the same barbed wire fence, bears South, 6 lks., bears N. 89°40' E. and N. 89°50' W.
30.868	From this point, the same barbed wire fence, bears South, 5.5 lks., bears S. 89°50' E. and N. 89°50' W.

Dependent Resurvey of a portion of the South Boundary,
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CHAINS																												
39.56	From this point, a down fence, bears North, 1.3 lks., bears S. 89°10' E. and N. 89°10' W.																											
40.16	<p>The cor. of Tps. 7 and 8 S., Rs. 5 and 6 E., monumented with an iron post, 3 ins. diam., firmly set, projecting 11 ins. above ground, with brass cap mkd.</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>T 7 S</td><td></td></tr> <tr><td>R 5 E</td><td> </td><td>R 6 E</td></tr> <tr><td>S 36</td><td> </td><td>S 31</td></tr> <tr><td colspan="3"><hr/></td></tr> <tr><td>S 1</td><td> </td><td>S 6</td></tr> <tr><td colspan="3">P I R</td></tr> <tr><td colspan="3">T 8 S</td></tr> <tr><td colspan="3">2017</td></tr> <tr><td colspan="3">1915</td></tr> </table> <p>from which</p> <p>The top SW corner of a concrete pad, 5.6 ft. sq., bears N. 57°23 1/2' E., 82.9 ft. dist.</p> <p>A brass cap, 3 1/2 ins. diam., flush in concrete cylinder, 2 ft. diam., 2 ins. below the surface of the ground for a reference monument, bears S. 30°56' W., 194.5 ft. dist. mkd. CORPS OF ENGINEERS - U.S. ARMY SURVEY MARK AC 52 STATION DESIGNATION YEAR 1966 AGENCY ARMY MAP SERVICE, at the center of a concrete aerial panel, with 4 arms, each being approximately 25 ft. long, and 16 ft. wide at the wide end, 2.6 ft. wide at the narrow end, and approximately 5 ft. from the brass cap. National Geodetic Survey (NGS) Permanent Identifier (PID) CZ2308.</p> <p>From this cor., a fence corner on the same barbed wire fence, bears S. 0°38' W., 2.2 lks., 4 strand, with a fence extending N. 0°47' E. and a down fence extending S. 89°10' E.</p> <hr/>		T 7 S		R 5 E		R 6 E	S 36		S 31	<hr/>			S 1		S 6	P I R			T 8 S			2017			1915		
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Dependent Resurvey of a portion of the South Boundary,
Tp. 7 S., R. 6 E., Gila and Salt River Meridian, Arizona

CHAINS

GENERAL DESCRIPTION

The lines resurveyed within T. 7 S., R. 6 E., are identical with a portion of the north boundary of the Tohono O'odham Nation Reservation, and are located approximately 8 miles S. 3° W., of Casa Grande, Arizona. The terrain is nearly level. The elevation ranges from 1455 to 1465 ft. above sea level.

Access to the area resurveyed is provided by Interstate Highway No. 8, Thornton Road, Hanna Road, Chuichu Road and Battaglia Dr.

The mean magnetic declination of 10 1/4° E. was derived from the United States Geological Survey computer program GEOMAG, utilizing the World Magnetic Model for Epoch 2015 for the dates of survey.

CERTIFICATE OF SURVEY

I, Blas J. Urena, Cadastral Surveyor, HEREBY CERTIFY upon honor, that in pursuance of special instructions bearing date of the 8th day of December, 2016, I have dependently resurveyed a portion of the north boundary of the Tohono O'odham Nation Reservation (a portion of the south boundary) T. 7 S., R. 6 E., of the Gila and Salt River Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed by me and under my direction. Said survey has been made in strict conformity with said special instructions, the Manual of Surveying Instructions, (2009), and in specific manner described in the foregoing field notes.

10/11/2017
(Date)

Blas J. Urena
(Cadastral Surveyor)

CERTIFICATE OF APPROVAL

BUREAU OF LAND MANAGEMENT
Phoenix, Arizona

The foregoing field notes of the dependent resurvey of a portion of the north boundary of the Tohono O'odham Nation Reservation (a portion of the south boundary) T. 7 S., R. 6 E., Gila and Salt River Meridian, in the State of Arizona, executed by Blas J. Urena, Cadastral Surveyor, having been critically examined and found correct, are hereby approved.

11/29/2017
(Date)

[Signature]
(Chief Cadastral Surveyor of Arizona)

~~CERTIFICATE OF TRANSCRIPT~~

~~I CERTIFY That the foregoing transcript of the field notes of the above described surveys in T. 7 S., R. 6 E., Gila and Salt River Meridian, Arizona, is a true copy of the original field notes.~~

~~_____
(Date)~~

~~_____
(Chief Cadastral Surveyor of Arizona)~~