

ORIGINAL

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

FIELD NOTES

OF

THE SURVEY OF A PORTION OF THE SEVENTH GUIDE MERIDIAN EAST (WEST BOUNDARY),

**TOWNSHIP 29 NORTH, RANGE 29 EAST**

AND

THE SURVEY OF THE SEVENTH STANDARD PARALLEL NORTH (SOUTH BOUDARY),

**TOWNSHIP 29 NORTH, RANGE 28 EAST,**

OF THE GILA AND SALT RIVER MERIDIAN,

IN THE STATE OF ARIZONA

**EXECUTED BY**

**Leonard R. Sandoval, Cadastral Surveyor**

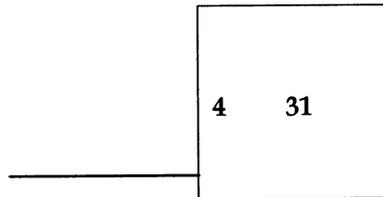
Under Special Instructions dated May 6, 2003, approved May 6, 2003, which provided for the surveys included under Group No. 902, and assignment instructions dated May 6, 2003.

**Survey commenced May 21, 2003**

**Survey completed June 3, 2003**

### INDEX DIAGRAMS

TOWNSHIP 29 NORTH                      RANGE 29 EAST  
GILA AND SALT RIVER MERIDIAN, ARIZONA



TOWNSHIP 29 NORTH                      RANGE 28 EAST  
GILA AND SALT RIVER MERIDIAN, ARIZONA

31	32	33	34	35	36
10	9	8	7	7	6

## T. 29 N., Rs. 28 and 29 E., Gila and Salt River Meridian, Arizona

## CHAINS

The following field notes describe the survey of a portion of the Seventh Guide Meridian East (west boundary), Township 29 North, Range 29 East and the survey of the Seventh Standard Parallel North (south boundary), Township 29 North, Range 28 East, Gila and Salt River Meridian, Arizona.

The standard corner of Township 29 North, Ranges 28 and 29 East, was established by Kevin R. DeRossett in 1988, under Group No. 699, Az., during the survey of the south boundary, identical with the Seventh Standard Parallel North through Range 29 East, Township 29 North, Range 29 East. The standard corner of Township 29 North, Ranges 26 and 27 East was established by Steve D. Cully and William F. Olver in 1990-91, under Group No. 715, Az., during the survey of the Seventh Standard Parallel North (south boundary), Township 29 North, Range 26 East.

The survey was executed in accordance with the specifications as set forth in the Manual of Instructions for the Survey of the Public Lands of the United States, 1973, the Special Instructions dated May 6, 2003, for Group 902, Arizona.

The true meridian direction and length of all lines were determined by real time kinematic global positioning system observations using Trimble Navigation Model 5700 receivers.

Geodetic control was derived from Global Positioning System (GPS) static observations post processed by National Geodetic Survey, Online Positioning User Service (OPUS), utilizing Continuously Operating Reference Stations (CORS) FLAGSTAFF, AZTEC, AND PIE TOWN VLBA. The NAD 83(CORS96)(EPOCH:2002) geographic position of the southeast corner is as follows:

Latitude: 35°52'02.99" N.                      Longitude: 109°16'50.15" W.

The mean magnetic declination is 11 1/2° E.

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Survey of a Portion of the Seventh Guide Meridian East (West Boundary),  
T. 29 N., R. 29 E., Gila and Salt River Meridian, Arizona

CHAINS													
	<div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr><td></td><td style="text-align: center;">SC</td><td></td></tr> <tr><td style="text-align: center;">T 29 N</td><td style="border-left: 1px solid black; border-right: 1px solid black;"></td><td style="text-align: center;">T 29 N</td></tr> <tr><td style="text-align: center;">R 28 E</td><td style="border-left: 1px solid black; border-right: 1px solid black;"></td><td style="text-align: center;">R 29 E</td></tr> <tr><td style="text-align: center;">S 36</td><td style="border-left: 1px solid black; border-right: 1px solid black;"></td><td style="text-align: center;">S 31</td></tr> </table> <p>2003</p> <p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p> </div>		SC		T 29 N		T 29 N	R 28 E		R 29 E	S 36		S 31
	SC												
T 29 N		T 29 N											
R 28 E		R 29 E											
S 36		S 31											
18.20	Trail road, bears ENE and WSW.												
40.00	<p>Point for the 1/4 sec. cor. of sec. 31 only.</p> <p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr><td></td><td style="text-align: center;">T 29 N</td><td></td></tr> <tr><td style="text-align: center;">R 28 E</td><td style="border-left: 1px solid black; border-right: 1px solid black;"></td><td style="text-align: center;">R 29 E</td></tr> <tr><td></td><td style="border-left: 1px solid black; border-right: 1px solid black;"></td><td style="text-align: center;">1/4</td></tr> <tr><td></td><td style="border-left: 1px solid black; border-right: 1px solid black;"></td><td style="text-align: center;">S 31</td></tr> </table> <p>2003</p> <p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p> </div>		T 29 N		R 28 E		R 29 E			1/4			S 31
	T 29 N												
R 28 E		R 29 E											
		1/4											
		S 31											
48.40	High voltage transmission line, bears NE and SW.												
51.10	High voltage transmission line, bears NE and SW.												
80.00	<p>Point for the cor. of secs. 30 and 31 only.</p> <p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr><td></td><td style="text-align: center;">T 29 N</td><td style="text-align: center;">T 29 N</td></tr> <tr><td style="text-align: center;">R 28 E</td><td style="border-left: 1px solid black; border-right: 1px solid black;"></td><td style="text-align: center;">R 29 E</td></tr> <tr><td></td><td style="border-left: 1px solid black; border-right: 1px solid black;"></td><td style="text-align: center;">S 30</td></tr> <tr><td style="text-align: center;">S 36</td><td style="border-left: 1px solid black; border-right: 1px solid black;"></td><td style="text-align: center;">S 31</td></tr> </table> <p>2003</p> <p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p> </div>		T 29 N	T 29 N	R 28 E		R 29 E			S 30	S 36		S 31
	T 29 N	T 29 N											
R 28 E		R 29 E											
		S 30											
S 36		S 31											

Survey of a Portion of the Seventh Guide Meridian East (West Boundary),  
T. 29 N., R. 29 E., Gila and Salt River Meridian, Arizona

CHAINS	
	<p>Land, rolling. Soil, sandy and rocky clay. Timber, ponderosa pine, piñon, juniper, and Gambel's oak; undergrowth, brush and native grasses.</p> <hr/> <p>Survey of the Seventh Standard Parallel North (South Boundary), T. 29 N., R. 28 E., Gila and Salt River Meridian, Arizona</p> <hr/> <p>From the stan. cor. of T. 29 N., R. 28 E. only, hereinbefore described.</p> <p>West, on the S. bdy. of sec. 36.</p> <p>Over rolling land.</p>
8.60	Trail road, bears ENE and WSW.
34.70	High voltage transmission line, bears NE and SW.
37.20	High voltage transmission line, bears NE and SW.
40.00	Point for the stan. 1/4 sec. cor. of sec. 36.
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">SC T 29 N R 28 E 1/4 S 36 ----- 2003</p>
	<p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p>
80.00	Point for the stan. cor. of secs. 35 and 36.
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">SC T 29 N R 28 E S 35   S 36 ----- 2003</p>
	<p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p>

**Survey of the Seventh Standard Parallel North (South Boundary),  
T. 29 N., R. 28 E., Gila and Salt River Meridian, Arizona**

CHAINS	
	<p>Land, rolling. Soil, sandy and rocky clay. Timber, ponderosa pine, piñon, juniper, and Gambel's oak; undergrowth, brush and native grasses.</p> <hr/>
	<p>West, on the S. bdy. of sec. 35.</p> <p>Over rolling land.</p>
40.00	<p>Point for the stan. 1/4 sec. cor. of sec. 35.</p> <p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <p align="center">SC T 29 N R 28 E 1/4 S 35</p> <hr/> <p align="center">2003</p>
80.00	<p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p> <p>Point for the stan. cor. of secs. 34 and 35.</p> <p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <p align="center">SC T 29 N R 28 E S 34   S 35</p> <hr/> <p align="center">2003</p>
	<p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p> <p>Land, rolling. Soil, sandy and rocky clay. Timber, ponderosa pine, piñon, juniper, and Gambel's oak; undergrowth, brush and native grasses.</p> <hr/>
	<p>West, on the S. bdy. of sec. 34.</p> <p>Over rolling and broken land.</p>
32.50	<p>The W. rim of a canyon, atop a sandstone ledge, bears SSE and NNW.</p>
40.00	<p>Point for the stan. 1/4 sec. cor. of sec. 34.</p>

**Survey of the Seventh Standard Parallel North (South Boundary),  
T. 29 N., R. 28 E., Gila and Salt River Meridian, Arizona**

CHAINS	
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <p align="center">SC T 29 N R 28 E <u>1/4 S 34</u></p> <p align="center">2003</p> <p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p>
44.10	<p>The S. rim of Lone Tule Wash canyon, atop a sandstone ledge, bears ENE and WSW, thence descend into the canyon.</p>
80.00	<p>Point for the stan. cor. of secs. 33 and 34.</p> <p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <p align="center">SC T 29 N R 28 E <u>S 33   S 34</u></p> <p align="center">2003</p> <p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p> <p>Land, rolling and broken. Soil, sandy and rocky clay with sandstone outcrops. Timber, ponderosa pine, piñon, juniper, and Gambel's oak; undergrowth, brush and native grasses.</p> <hr/> <p>West, on the S. bdy. of sec. 33.</p> <p>Over rugged and broken land, descend over S. slope into Lone Tule Wash canyon.</p>
40.00	<p>Point for the stan. 1/4 sec. cor. of sec. 33.</p> <p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <p align="center">SC T 29 N R 28 E <u>1/4 S 33</u></p> <p align="center">2003</p>

**Survey of the Seventh Standard Parallel North (South Boundary),  
T. 29 N., R. 28 E., Gila and Salt River Meridian, Arizona**

CHAINS	
	<p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p> <p>Cor. is located 85 lks. S. of a trail road, bears E. and W.</p>
56.85	Trail road, bears NE and SW.
79.20	The SE bank of Lone Tule Wash, 10 ft. high, bears NE and SW.
80.00	Point for stan. cor. of secs. 32 and 33.
	<p>Deposit a magnet in a white plastic case, 24 ins. in the ground.</p> <p>from which</p> <p style="padding-left: 40px;">A stainless steel post, 28 ins. long, 2 1/2 ins. diam., set 24 ins. in the ground for a reference monument, bears N. 45°00' E., 220.00 ft. dist. with brass cap mkd. T29N R28E S33 SC RM 220.0 FT. TO COR. and an arrow pointing to the corner. Deposit a magnet in a white plastic beneath the stainless steel post.</p> <p style="padding-left: 40px;">A brass tablet, 3 1/4 ins. diam., 2 1/2 ins. stem., set flush in sandstone bedrock, cemented in place, for a reference monument, bears N. 45°00' W., 90.00 ft. dist., with top mkd. T29N R28E S32 SC RM 90.0 FT TO COR. and an arrow pointing to the corner. Deposit a magnet in a white plastic beneath the brass tablet.</p> <p>Cor. is located 24 lks. S. of the center of Lone Tule Wash, 30 ft. wide, 12 ft. deep, drains WNW.</p> <p>Land, rolling, rugged and broken. Soil, sandy and rocky clay with sandstone outcrops. Timber, ponderosa pine, piñon, juniper, and Gambel's oak; undergrowth, brush and native grasses.</p> <hr/> <p>West, on the S. bdy. of sec. 32.</p> <p>Over rolling and broken land.</p>
1.05	The SW bank of Lone Tule Wash, 10 ft. high, bears E. and WNW.
35.85	The SE bank of Lone Tule Wash, 10 ft. high, bears NE and SW.
39.05	The NW bank of Lone Tule Wash, 15 ft. high, atop a sandstone ledge, bears ENE and WSW.
40.00	Point for the stan. 1/4 sec. cor. of sec. 32.
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p>

Survey of the Seventh Standard Parallel North (South Boundary),  
T. 29 N., R. 28 E., Gila and Salt River Meridian, Arizona

CHAINS	
	<p style="text-align: center;">SC T 29 N R 28 E 1/4 S 32 <hr style="width: 10%; margin: auto;"/></p> <p style="text-align: center;">2003</p>
	<p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p>
46.65	<p>Trail road, bears ENE and WSW.</p>
80.00	<p>Point for the stan. cor. of secs. 31 and 32.</p>
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p>
	<p style="text-align: center;">SC T 29 N R 28 E S 31   S 32 <hr style="width: 10%; margin: auto;"/></p> <p style="text-align: center;">2003</p>
	<p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p>
	<p>Cor. is located 15 lks. N. of a trail road, bears E. and W.</p>
	<p>Land, rolling and broken. Soil, sandy and rocky clay with sandstone outcrops. Timber, ponderosa pine, piñon, juniper, and Gambel's oak; undergrowth, brush and native grasses.</p>
	<hr/> <p>West, on the S. bdy. of sec. 31.</p> <p>Over rolling and broken land, ascend out of Lone Tule Wash canyon.</p>
40.00	<p>Point for the stan. 1/4 sec. cor. of sec. 31.</p>
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p>
	<p style="text-align: center;">SC T 29 N R 28 E 1/4 S 31 <hr style="width: 10%; margin: auto;"/></p> <p style="text-align: center;">2003</p>
	<p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p>

Survey of the Seventh Standard Parallel North (South Boundary),  
T. 29 N., R. 28 E., Gila and Salt River Meridian, Arizona

CHAINS	<p>42.10 The W. rim of Lone Tule Wash canyon, atop a sandstone ledge, bears ENE and WSW, thence over gently rolling land.</p> <p>80.00 Point for the stan. cor. of T. 29 N., Rs. 27 and 28 E.</p> <p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">SC T 29 N R 27 E R 28 E <u>S 36   S 31</u></p> <p style="text-align: center;">2003</p> <p>Deposit a magnet in a white plastic case at the base of the stainless steel post.</p> <p>Land, rolling and broken. Soil, sandy and rocky clay with sandstone outcrops. Timber, ponderosa pine, piñon, juniper, and Gambel's oak; undergrowth, brush and native grasses.</p> <hr/>
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## T. 29 N., Rs. 28 and 29 E., Gila and Salt River Meridian, Arizona

CHAINS	<p data-bbox="771 310 1068 338" style="text-align: center;">GENERAL DESCRIPTION</p> <hr data-bbox="409 363 1432 367"/> <p data-bbox="409 401 1446 548">The area surveyed is about 8 miles southeast of the community of Nazlini, Arizona, on the Navajo Indian Reservation. The area is on the western part of the Defiance plateau, where the land is mostly rolling and broken by rocky canyons. Lone Tule Wash is the main southwest drainage.</p> <p data-bbox="409 579 1446 726">The elevation varies from 7100 to 7900 feet above sea level. The soil is mostly sandy and rocky clay with sandstone outcrops. The timber consists of ponderosa pine, piñon, juniper, and Gambel's oak. Undergrowth consists of various brush and native grasses.</p> <p data-bbox="409 758 1446 905">The main access to the area is provided by Navajo Route 26, a graded road, which is north of and parallel to the south boundary of the township. There are several scattered pastures for grazing livestock in Lone Tule Wash canyon. There is no evidence of any current mining activity.</p> <p data-bbox="409 936 1446 1031">The mean magnetic declination of 11 1/2° E. was derived from the computer program GEOMAGIX utilizing the World Magnetic Model for Epoch 2000 for the dates of survey.</p> <hr data-bbox="409 1056 1432 1060"/>
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## CERTIFICATE OF SURVEY

I, Leonard R. Sandoval, Cadastral Surveyor, HEREBY CERTIFY upon honor, that in pursuance of special instructions bearing date of the 6th day of May, 2003, I have surveyed a portion of the Seventh Guide Meridian East (west boundary), T. 29 N., R. 29 E. and surveyed the Seventh Standard Parallel North (south boundary), T. 29 N., R. 28 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 Instructions for the Survey of the Public Lands of the United States, 1973, and in specific manner described in the foregoing field notes.

3-7-05

(Date)

Leonard R. Sandoval  
(Cadastral Surveyor)

## CERTIFICATE OF APPROVAL

BUREAU OF LAND MANAGEMENT  
Phoenix, Arizona

The foregoing field notes of the survey of a portion of the Seventh Guide Meridian East (west boundary), T. 29 N., R. 29 E. and the survey of the Seventh Standard Parallel North (south boundary), T. 29 N., R. 28 E., Gila and Salt River Meridian, in the State of Arizona, executed by Leonard R. Sandoval, Cadastral Surveyor, having been critically examined and found correct, are hereby approved.

3-22-05

(Date)

Stephen K. Hamm  
(Acting 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. 29 N., Rs. 28 and 29 E., Gila and Salt River Meridian, Arizona, is a true copy of the original field notes.~~

~~(Date)~~

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