

ORIGINAL

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FIELD NOTES
OF THE
DEPENDENT RESURVEY OF
A PORTION OF
THE SOUTH BOUNDARY
AND A
METES-AND-BOUNDS SURVEY OF
THE ADMINISTRATIVE BOUNDARY BETWEEN
MARINE CORPS AIR STATION, YUMA
AND LUKE AIR FORCE BASE,
TOWNSHIP 11 SOUTH, RANGE 13 WEST,
OF THE GILA AND SALT RIVER MERIDIAN,
IN THE STATE OF ARIZONA.

EXECUTED BY

Geoffrey A. Graham, Cadastral Surveyor

Under Special Instructions dated November 2, 2006, approved November 2, 2006, which provided for the surveys included under Group No. 1005, and assignment instructions dated November 2, 2006.

Survey commenced November 6, 2006

Survey completed November 15, 2006

INDEX DIAGRAM

TOWNSHIP 11 SOUTH RANGE 13 WEST
 GILA AND SALT RIVER MERIDIAN, ARIZONA

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T. 11 S., R. 13 W., Gila and Salt River Meridian, Arizona

CHAINS

The following field notes describe the dependent resurvey of a portion of the south boundary and a metes-and-bounds survey of the administrative boundary between the Marine Corps Air Station, Yuma and Luke Air Force Base, Township 11 South, Range 13 West, Gila and Salt River Meridian, Arizona.

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

In 1941, Benjamin J. Kinsey surveyed the south boundary.

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, and the Special Instructions dated November 2, 2006, for Group No. 1005, Arizona.

The true meridian direction and length of all lines were determined by real time kinematic and fast static global positioning system observations using Trimble Navigation 5700 and 5800 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.

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) AZBK MCDOT BUCKEYE CORS ARP, AZMO MARICOPA CORS ARP and SRP1 SALT RIVER PROJEC CORS ARP. The NAD 83 (CORS96)(EPOCH:2002), geographic position of the 1/4 section corner of sections 3 and 34, on the south boundary of the township, is as follows:

Latitude: 32°25'06.11" N. Longitude: 113°35'42.71" W.

The mean magnetic declination is 11 3/4° E.

**Dependent Resurvey of a Portion of the South Boundary,
T. 11 S., R. 13 W., Gila and Salt River Meridian, Arizona**

CHAINS	
	<p style="text-align: center;">Restoring the survey executed by Benjamin J. Kinsey, in 1941</p> <hr/>
	<p>Beginning at the 1/4 sec. cor. of secs. 3 and 34, on the S. bdy. of the Tp., monumented with an iron post, 1 in. diam., firmly set, projecting 5 ins. above the ground, with brass cap mkd. S34 1/4 S3 1941, with an accessory mound of stone, 2 ft. base, 1 ft. high, N. of the cor., and with a steel sign post with an attached U.S. Department of Agriculture Biological Survey sign set nearby.</p>
	<p>Add the marks T11S R13W T12S 2006 to the brass cap.</p>
	<p>N. 89°52' W., bet. secs. 3 and 34, gently ascending over nearly level desert.</p>
12.70	<p>Point for mile post 22+62.08 of the metes-and-bounds survey, hereinafter described.</p>
39.91	<p>The cor. of secs. 3, 4, 33 and 34, monumented with an iron post, 2 ins. diam., firmly set, projecting 10 ins. above the ground, in a scattered mound of stone, with brass cap mkd. T11S R13W S33 S34 S4 S3 T12S 1941, with a steel sign post with an attached U.S. Department of Agriculture Biological Survey sign set nearby.</p>
	<p>Rebuild mound of stone, 2 ft. base, to top.</p>
	<p>Add the marks 2006 to the brass cap.</p> <hr/>
	<p>N. 89°54' W., bet. secs. 4 and 33, continuing gentle ascent.</p>
40.02	<p>The 1/4 sec. cor. of secs. 4 and 33, monumented with an iron post, 1 in. diam., firmly set flush with the ground, with brass cap mkd. S33 1/4 S4 1941, with a steel sign post with an attached U.S. Department of Agriculture Biological Survey sign set nearby.</p>
	<p>Add the marks T11S R13W T12S 2006 to the brass cap.</p> <hr/>
	<p>S. 89°59' W., beginning new measurement.</p>

**Dependent Resurvey of a Portion of the South Boundary,
T. 11 S., R. 13 W., Gila and Salt River Meridian, Arizona**

CHAINS	
39.99	<p>The cor. of secs. 4, 5, 32 and 33, monumented with an iron post, 2 ins. diam., firmly set, projecting 8 ins. above the ground, with brass cap mkd. T11S R13W S32 S33 S5 S4 T12S 1941, with an accessory mound of stone, 2 ft. base, 2 1/2 ft. high, W. of the cor., and with a steel sign post with an attached U.S. Department of Agriculture Biological Survey sign set nearby.</p> <p>Add the marks 2006 to the brass cap.</p> <hr/>
39.97	<p>N. 89°58' W., bet. secs. 5 and 32, gently ascending over desert terrain.</p> <p>The 1/4 sec. cor. of secs. 5 and 32, monumented with an iron post, 1 in. diam., firmly set flush with the ground, with brass cap mkd. S32 1/4 S5 1941, with an accessory mound of stone, 2 ft. base, 1 ft. high, N. of the cor., and with a steel sign post with an attached U.S. Department of Agriculture Biological Survey sign set nearby.</p> <p>Add the marks T11S R13W T12S 2006 to the brass cap.</p> <hr/>
39.99	<p>N. 89°57' W., beginning new measurement.</p> <p>The cor. of secs. 5, 6, 31 and 32, monumented with an iron post, 2 ins. diam., firmly set, projecting 9 ins. above the ground, with brass cap mkd. T11S R13W S31 S32 S6 S5 T12S 1941, with an accessory mound of stone, 2 1/2 ft. base, 1 1/2 ft. high, W. of the cor., and with a steel sign post with an attached U.S. Department of Agriculture Biological Survey sign set nearby.</p> <p>Add the marks 2006 to the brass cap.</p> <hr/>
40.03	<p>N. 89°58' W., bet. secs. 6 and 31, continuing ascent.</p> <p>The 1/4 sec. cor. of secs. 6 and 31, monumented with an iron post, 1 in. diam., firmly set flush in a supporting mound of stone, 4 ft. base, 2 ft. high, with brass cap mkd. S31 1/4 S6 1941, with a steel sign post with an attached U.S. Department of Agriculture Biological Survey sign set nearby.</p> <p>Add the marks T11S R13W T12S 2006 to the brass cap.</p> <hr/> <p>N. 89°56' W., beginning new measurement.</p>

**Dependent Resurvey of a Portion of the South Boundary,
T. 11 S., R. 13 W., Gila and Salt River Meridian, Arizona**

CHAINS	
38.23	<p>The cor. of Tps. 11 and 12 S., Rs. 13 and 14 W., monumented with a brass tablet, 3 1/2 ins. diam., firmly cemented flush in a granite outcrop, 20 X 20 X 13 ft., with top mkd. T11S R14W R13W S36 S31 S1 S6 T12S 1941, with a steel sign post with an attached U.S. Department of Agriculture Biological Survey sign set nearby.</p> <p>Add the marks 2006 to the brass cap.</p> <p>Cor. is located at the foot of small ridge of the northern extents of the Sierra Pinta Mountains, bears N. 20° E. and S. 20° W.</p> <hr/> <p>Metes-and-Bounds Survey of the Administrative Boundary between the Marine Corps Air Station, Yuma and Luke Air Force Base, T. 11 S., R. 13 W., Gila and Salt River Meridian, Arizona</p> <hr/> <p>Note. ____ The administrative boundary between Marine Corps Air Station, Yuma and Luke Air Force Base on the Barry M. Goldwater Range is described as being along the eastern line of the Federal Aviation Administration (FAA), Special Use Airspace area, designated as R-2301W Ajo West, AZ. This line is controlled by a point determined at the intersection of the United States-Mexico border and longitude 113°30'33" W. (NAD 83) and a point inaccurately described as being along the Southern Pacific Railroad and U.S. Highway at latitude 32°44'15" N., longitude 113°41'08" W. (NAD 83). The geographical position of the latter point actually falls 15.85 chains south of the southerly right-of-way of the existing Southern Pacific Company Railroad.</p> <p>Therefore the administrative boundary between Marine Corps Air Station, Yuma and Luke Air Force Base on the Barry M. Goldwater Range is determined by extending a line from the point on the United States-Mexico border through a point determined at latitude 32°44'15" N., longitude 113°41'08" W. (NAD 83) to the intersection of the southerly right-of-way of the existing Southern Pacific Company Railroad.</p> <hr/> <p>From mile post 16+31.52, located at the intersection of the administrative bdy. and the N. bdy. of the Tp., monumented with an alum. post, 2 1/2 ins. diam., firmly set, projecting 3 ins. above the ground, with alum. cap mkd. T10S R13W MP 16+31.52 S32 T11S 2006, with a steel sign post with an attached Bureau of Land Management standard sign S-201 set nearby.</p> <p>From this mile post, the cor. of secs. 32 and 33 only, monumented with an iron post, 2 ins. diam., firmly set, projecting 8 ins. above the ground, with brass cap mkd. T10S R13W S32 S33 1937 2006, bears S. 89°58' E., 6.14 chs. dist.</p>

**Metes-and-Bounds Survey of the Administrative Boundary between
the Marine Corps Air Station, Yuma and Luke Air Force Base,
T. 11 S., R. 13 W., Gila and Salt River Meridian, Arizona**

CHAINS	
	<p>From this same mile post, the 1/4 sec. cor. of sec. 32 only, monumented with an iron post, 1 in. diam., firmly set, projecting 8 ins. above the ground, with brass cap mkd. T10S R13W S32 1/4 1937 2006, with an accessory mound of stone, 2 ft. base, 1 ft. high, N. of the cor., bears N. 89°58' W., 33.87 chs. dist.</p>
	<p>S. 13°05' E., along mile 16 of the administrative bdy., gently ascending over nearly level desert.</p>
48.48	<p>Point for mile post 17.</p>
	<p>Set an alum. post, 30 ins. long, 2 1/2 ins. diam., flush with the ground, with alum. cap mkd.</p>
	<p style="text-align: center;">T 11 S R 13 W MP 17 2006</p>
	<p>Deposit a magnet in a white plastic case at the base of the alum. post.</p>
	<p>Set a steel sign post with an attached Bureau of Land Management standard sign S-201 nearby.</p>
	<p>S. 13°05' E., along mile 17 of the administrative bdy., continuing ascent over nearly level terrain.</p>
80.00	<p>Point for mile post 18.</p>
	<p>Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 27 ins. in the ground, with alum. cap mkd.</p>
	<p style="text-align: center;">T 11 S R 13 W MP 18 2006</p>
	<p>Deposit a magnet in a white plastic case at the base of the alum. post.</p>
	<p>Set a steel sign post with an attached Bureau of Land Management standard sign S-201 nearby.</p>
	<p>S. 13°05' E., along mile 18 of the administrative bdy., ascending over nearly level desert.</p>
80.00	<p>Point for mile post 19.</p>

**Metes-and-Bounds Survey of the Administrative Boundary between
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T. 11 S., R. 13 W., Gila and Salt River Meridian, Arizona**

CHAINS	
	<p>Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 27 ins. in the ground, with alum. cap mkd.</p> <p style="text-align: center;">T 11 S R 13 W MP 19 \\ 2006</p> <p>Deposit a magnet in a white plastic case at the base of the alum. post.</p> <p>Set a steel sign post with an attached Bureau of Land Management standard sign S-201 nearby.</p> <hr/> <p>S. 13°05' E., along mile 19 of the administrative bdy., gently ascending over nearly level terrain.</p>
80.00	<p>Point for mile post 20.</p> <p>Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 27 ins. in the ground, with alum. cap mkd.</p> <p style="text-align: center;">T 11 S R 13 W MP 20 \\ 2006</p> <p>Deposit a magnet in a white plastic case at the base of the alum. post.</p> <p>Set a steel sign post with an attached Bureau of Land Management standard sign S-201 nearby.</p> <hr/> <p>S. 13°05' E., along mile 20 of the administrative bdy., continuing ascent over nearly level desert.</p>
80.00	<p>Point for mile post 21.</p> <p>Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with alum. cap mkd.</p> <p style="text-align: center;">T 11 S R 13 W MP 21 \\ 2006</p>

**Metes-and-Bounds Survey of the Administrative Boundary between
the Marine Corps Air Station, Yuma and Luke Air Force Base,
T. 11 S., R. 13 W., Gila and Salt River Meridian, Arizona**

CHAINS	
	<p>Deposit a magnet in a white plastic case at the base of the alum. post.</p> <p>Set a steel sign post with an attached Bureau of Land Management standard sign S-201 nearby.</p> <hr/> <p>S. 13°05' E., along mile 21 of the administrative bdy., ascending over nearly level terrain.</p>
80.00	<p>Point for mile post 22.</p> <p>Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 27 ins. in the ground, with alum. cap mkd.</p> <div style="text-align: center;"> <p>T 11 S R 13 W</p> <p>MP 22 \</p> <p>2006</p> </div> <p>Deposit a magnet in a white plastic case at the base of the alum. post.</p> <p>Set a steel sign post with an attached Bureau of Land Management standard sign S-201 nearby.</p> <hr/> <p>S. 13°05' E., along mile 22 of the administrative bdy., gently ascending over nearly level desert.</p>
62.08	<p>Point for mile post 22+62.08, at intersection with the S. bdy. of the Tp.</p> <p>Set an alum. post, 30 ins. long, 2 1/2 ins. diam., 27 ins. in the ground, with alum. cap mkd.</p> <div style="text-align: center;"> <p>T 11 S R 13 W</p> <p>MP 22+62.08 \ S 34</p> <hr style="width: 50px; margin: 0 auto;"/> <p>S3</p> <p>T12S</p> <p>2006</p> </div> <p>Deposit a magnet in a white plastic case at the base of the alum. post.</p> <p>Set a steel sign post with an attached Bureau of Land Management standard sign S-201 nearby.</p>

**Metes-and-Bounds Survey of the Administrative Boundary between
the Marine Corps Air Station, Yuma and Luke Air Force Base,
T. 11 S., R. 13 W., Gila and Salt River Meridian, Arizona**

CHAINS

From this mile post, the point determined at the intersection of the United States-Mexico Border and longitude 113°30'33" W. (NAD 83), bears S. 13°05' E., 1835.40 chs. dist.

From this intersection point, International Boundary Monument No. 180, bears S. 69°46' E., 361.28 chs. dist., monumented with an iron obelisk, 6 1/2 ft. high, 1 ft. square base, bolted onto a concrete pad, 3 ft. square, mkd. 180.

From this same intersection point, International Boundary Monument No. 181, bears N. 69°46' W., 21.98 chs. dist., monumented with an iron obelisk, 6 1/2 ft. high, 1 ft. square base, bolted onto a concrete pad, 3 ft. square, mkd. 181.

GENERAL DESCRIPTION

The purpose of this survey was to identify the boundary of that portion of the Barry M. Goldwater Military Reservation, managed by the Marine Corps Air Station, Yuma. This survey is located 27 miles southeast of the small community of Tacna AZ. Access to the area is reached by turning south off of Interstate 8 on an unidentified dirt road, leading to the Cabeza Prieta Wilderness and National Wildlife Refuge, which is the S. bdy. of this project. The majority of the points for this survey are reached by cross country travel.

Elevations for the area range between 600 and 800 ft. above sea level. The higher elevations are on the south boundary, in the northern foothills of the Sierra Pintta Mountains and the lower elevations are in the nearly level terrain through the center of the project area. The vegetation is typical of the lower Sonoran Desert, with creosote and scattered grasses on the open ground and ironwood and mesquite along the drainages.

The mean magnetic declination of 11 3/4° E. was derived from the National Geophysical Data Center's magnetic declination calculator, GEOMAG v6.0, utilizing the International Geomagnetic Reference Field model for years 2005 through 2010, for the dates of survey.
