

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFIELD NOTES
OF THE

SURVEY

OF

THE

NINTH STANDARD

PARALLEL NORTH,

(SOUTH BOUNDARY),

TOWNSHIP 37 NORTH, RANGE 17 EAST,

Of the Gila and Salt River Meridian,
In the State of Arizona

EXECUTED BY

Jones Curtiss, Cadastral Surveyor

Under Special Instructions dated and approved June 6, 1996, which provided for the surveys included under Group Number 802 and assignment instructions dated June 6, 1996.

Survey Commenced October 23, 1996Survey Completed January 7, 1997

INDEX DIAGRAM

TOWNSHIP 37 NORTH, RANGE 17 EAST,

GILA AND SALT RIVER MERIDIAN, ARIZONA

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T. 37 N., R. 17 E., Gila and Salt River Meridian, Arizona

CHAINS

The following field notes describe the survey of the Ninth Standard Parallel North, (south boundary), Township 37 North, Range 17 East, Gila and Salt River Meridian, Arizona.

The Ninth Standard Parallel North (south boundary), and the Fourth Guide Meridian East (east boundary), T. 37 N., R. 16 E., was surveyed by Jones Curtiss in 1996-97, concurrently under this same group.

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 June 6, 1996, for Group No. 802, Arizona.

The directions of all lines were determined by the technique of differential positioning using the Ashtech M-Series Geodetic Positioning System and direct hour angle observations on the sun, and refer to the true meridian. Distances and angles were measured with a Sokkia SET2BII total station instrument.

The geographic position of the southeast corner of the township was determined by the technique of differential positioning using the Ashtech M-Series Geodetic Positioning System. First order National Geodetic Survey triangulation stations "COAL MINE 1951" and "KAYENTA 1951" were used as control stations. The geographic position is as follows:

Lat.: 36°33'48.857" N. Long.: 110°27'05.581" W. NAD83 (1992)

The mean magnetic declination is 12 1/2° E.

Survey of the Ninth Standard Parallel North, (South Boundary),
T. 37 N., R. 17 E., Gila and Salt River Meridian, Arizona

CHAINS	
	<p>Beginning at the stan. cor. of Tps. 37 N., Rs. 16 and 17 E., monumented with a stainless steel post, 2 1/2 ins. diam., with brass cap, set, and mkd. as described in the field notes of the survey of the Ninth Standard Parallel North, (south boundary), T. 37 N., R. 16 E., executed concurrently under this same group.</p> <p>East, on the S. bdy. of sec. 31.</p> <p>Over rolling land.</p>
32.15	Trail road, bears NE and SW.
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., 26 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">SC T37N R17E 1/4 S31</p> <hr style="width: 20%; margin: auto;"/> <p style="text-align: center;">1996</p> <p>Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.</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., 26 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">SC T37N R17E S31 S32</p> <hr style="width: 20%; margin: auto;"/> <p style="text-align: center;">1996</p> <p>Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.</p> <p>Cor. is located 1.65 chs. W. of a trail road, bears SSE and NNW.</p> <p>From this cor. point, second order National Geodetic Survey triangulation station, "KLETHLA 1970", bears S. 15°01.9' W., 46.903 chs. dist., monumented with a standard U. S. Geological Survey brass tablet, 3 1/2 ins. diam., cemented flush with sandstone bedrock, with top mkd. KLETHLA 1970 and a triangle.</p>

Survey of the Ninth Standard Parallel North, (South Boundary),
T. 37 N., R. 17 E., Gila and Salt River Meridian, Arizona

CHAINS	
	<p>Land, rolling. Soil, rocky and sandy clay. Timber, sparse piñon and juniper; undergrowth, sagebrush and native grasses.</p>
	<p>East, on the S. bdy. of sec. 32.</p>
	<p>Over rolling land.</p>
40.00	<p>Point for the stan. 1/4 sec. cor. of sec. 32.</p>
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with brass cap mkd.</p>
	<p style="text-align: center;">SC T37N R17E 1/4 S32 ----- 1996</p>
	<p>Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.</p>
44.00	<p>Trail road, bears SE and NW.</p>
80.00	<p>Point for the stan. cor. of secs. 32 and 33.</p>
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with brass cap mkd.</p>
	<p style="text-align: center;">SC T37N R17E S32 S33 ----- 1996</p>
	<p>from which</p>
	<p style="padding-left: 40px;">A piñon, 13 ins. diam., bears N. 36 1/4° W., 2.085 chs. dist., mkd. T37N R17E S32 SC BT.</p>
	<p>Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.</p>

Survey of the Ninth Standard Parallel North, (South Boundary),
T. 37 N., R. 17 E., Gila and Salt River Meridian, Arizona

CHAINS	
	<p>Land, rolling. Soil, rocky and sandy clay. Timber, sparse piñon and juniper; undergrowth, sagebrush and native grasses.</p> <hr/> <p>East, on the S. bdy. of sec. 33.</p> <p>Over rolling land.</p>
13.46	Chainlink and barbed wire fence, bears ENE and WSW.
17.55	Chainlink and barbed wire fence, bears SSE and NNW.
35.30	Trail road, bears N. and S.
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., 25 ins. in sandstone bedrock, with brass cap mkd.</p> <p style="text-align: center;">SC T37N R17E 1/4 S33</p> <hr style="width: 20%; margin: auto;"/> <p style="text-align: center;">1996</p> <p>from which</p> <p style="margin-left: 40px;">A forked piñon, 24 ins. diam. at base, bears N. 24 1/2° E., 1.25 chs. dist., mkd. 1/4 S33 SC BT.</p> <p>Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.</p>
45.80	Telephone line, bears N. and S.
46.10	Power line, bears N. and S.
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., 26 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">SC T37N R17E S33 S34</p> <hr style="width: 20%; margin: auto;"/> <p style="text-align: center;">1996</p>

Survey of the Ninth Standard Parallel North, (South Boundary),
T. 37 N., R. 17 E., Gila and Salt River Meridian, Arizona

CHAINS	
	<p>Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.</p> <p>Land, rolling. Soil, rocky and sandy clay with sandstone outcrops. Timber, sparse piñon and juniper; undergrowth, sagebrush and native grasses.</p>
	<p>East, on the S. bdy. of sec. 34.</p> <p>Over rolling land.</p>
5.00	Trail road, bears SE and NW.
11.05	Center of Arizona State Highway 564, asphalt pavement, 26 ft. wide, bears N. in curve to right.
28.36	SE cor. of a stuccoed house, 40 x 28 ft., bears North, 1.60 chs. dist., long side bears N.
31.51	NW right-of-way fence of U. S. Highway 160, barbed wire, 5 strands, parallels highway.
37.90	Center of U. S. Highway 160, asphalt pavement, 26 ft. wide, bears ENE and WSW.
40.00	Point for the stan. 1/4 sec. cor. of sec. 34.
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">SC T37N R17E 1/4 S34</p> <hr style="width: 10%; margin: auto;"/> <p style="text-align: center;">1996</p>
	<p>from which</p> <p style="padding-left: 40px;">A stainless steel post, 28 ins. long, 2 1/2 ins. diam., set 26 ins. in the ground, for a reference monument, bears N. 80°00' E., 106.0 ft. dist., with brass cap mkd. T37N R17E SC 1/4 S34 RM 106.0 FT. TO COR. 1996 and an arrow pointing to the cor. Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.</p> <p>Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post at the 1/4 sec. cor.</p>

Survey of the Ninth Standard Parallel North, (South Boundary),
T. 37 N., R. 17 E., Gila and Salt River Meridian, Arizona

CHAINS	
	<p>Cor. is located within the right-of-way of U. S. Highway 160, 1.08 chs. W. of SE right-of-way fence, barbed wire, 5 strands, bears ENE and WSW.</p>
	<p>From this cor. point, National Geodetic Survey first order vertical control station "S 512 1983", bears S. 38°12' E., 0.493 ch. dist., monumented with a stainless steel rod, 1/2 in. diam., set in a monument well in a concrete collar set flush with the surface of the ground, with hinged aluminum well top mkd. NOAA S 512.</p>
49.50	Underground gas pipeline, bears NE and SW.
77.50	High voltage transmission line, bears NNE and SSW.
79.40	Wash, 11 ft. wide, 7 ft. deep, drains NNE.
80.00	Point for the stan. cor. of secs. 34 and 35.
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with brass cap mkd.</p>
	<p style="text-align: center;">SC T37N R17E S34 S35 ----- 1996</p>
	<p>Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.</p>
	<p>Land, rolling. Soil, rocky and sandy clay. Timber, sparse piñon and juniper; undergrowth, sagebrush, greasewood and native grasses.</p>
	<p>East, on the S. bdy. of sec. 35.</p>
	<p>Over broken land on ascent of steep face of a hogback ridge.</p>
14.10	Top of a hogback ridge, bears NE and SW; thence over rolling and broken land on descent from hogback ridge.
40.00	Point for the stan. 1/4 sec. cor. of sec. 35.
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with brass cap mkd.</p>

Survey of the Ninth Standard Parallel North, (South Boundary),
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CHAINS	
	<p style="text-align: center;">SC T37N R17E 1/4 S35</p> <hr style="width: 10%; margin: auto;"/> <p style="text-align: center;">1996</p> <p>Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.</p> <p>Cor. is located 50 lks. W. of a trail road, bears NE and SW.</p> <p>Thence over rolling and broken land on ascent of W. slope of Black Mesa.</p>
77.10	<p>W. rim of Black Mesa, bears NE and SW; thence over broken land atop mesa.</p>
80.00	<p>Point for the stan. cor. of secs. 35 and 36.</p> <p>Set a brass tablet, 3 1/4 ins. diam., 2 1/2 ins. stem, cemented in place, in a drill hole, in sandstone bedrock, with top mkd.</p>
	<p style="text-align: center;">SC T37N R17E S35 S36</p> <hr style="width: 10%; margin: auto;"/> <p style="text-align: center;">1997</p> <p>from which</p> <p style="padding-left: 40px;">A piñon, 10 ins. diam., bears N. 17 1/2° W., 69 lks. dist., mkd. T37N R17E S35 SC BT.</p> <p>Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case in the drill hole beneath the brass tablet.</p> <p>Land, broken and rolling. Soil, rocky and sandy clay with sandstone outcrops. Timber, piñon and juniper; undergrowth, sagebrush, greasewood and native grasses.</p>
40.00	<p>East, on the S. bdy. of sec. 36.</p> <p>Over rolling and broken land atop Black Mesa.</p> <p>Point for the stan. 1/4 sec. cor. of sec. 36.</p> <p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with brass cap mkd.</p>

Survey of the Ninth Standard Parallel North, (South Boundary),
T. 37 N., R. 17 E., Gila and Salt River Meridian, Arizona

CHAINS	
	SC T37N R17E 1/4 S36 <hr/> 1997
	Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.
70.50	Graded road, 20 ft. wide, bears NE and SW.
70.64	From this cor. point, a closed end iron pipe, 3 ins. diam., firmly set, projecting 7 ins. above ground, bears North, 47 lks. dist., with top mkd. PEABODY COAL CO. COR. #1 NAVAJO.
80.00	Point for the stan. cor. of Tps. 37 N., Rs. 17 and 18 E.
	Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with brass cap mkd.
	SC T37N R17E R18E S36 S31 <hr/> 1996
	Deposit a magnet in a 1 x 1 x 2 ins. white colored plastic case beneath the stainless steel post.
	Land, rolling and broken. Soil, sandy and rocky clay. Timber, piñon and juniper; undergrowth, sagebrush and native grasses.

T. 37 N., R. 17 E., Gila and Salt River Meridian, Arizona

CHAINS

GENERAL DESCRIPTION

The area surveyed is within the Navajo Indian Reservation, approximately 20 miles southwest of the community of Kayenta. The terrain varies from rolling to broken. The eastern portion is on the west slope and top of Black Mesa.

The elevation varies from 6,400 to 7,400 feet above sea level. The soil is mostly sandy and rocky clay. There are some sandstone outcrops. The vegetation principally consists of sparse piñon and juniper with sagebrush and native grasses in the western portion, transitioning to extensive cover of piñon and juniper in the eastern portion.

Principal access to the south boundary of the township is provided by U. S. Highway 160 and Arizona State Highway 564, which cross the south boundary of sec. 34. The area is primarily used for grazing of livestock. There is no evidence of current mining activity.

The mean magnetic declination of $12\ 1/2^\circ$ E. was derived from the United States Geological Survey computer program GEOMAGIX utilizing the Regional Magnetic Field Model for Epoch 1995 for the dates of survey.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FIELD ASSISTANTS

NAMES	CAPACITY
William F. Olver	Cadastral Surveyor
Daniel Bryan	Engineering Technician
Wilfred Chee	Engineering Technician
Edward Clarke	Engineering Technician
Reuben Mason	Engineering Technician
Barney Woodie	Engineering Technician

CERTIFICATE OF SURVEY

I, Jones Curtiss, Cadastral Surveyor, HEREBY CERTIFY upon honor that, in pursuance of Special Instructions bearing date of the 6th day of June, 1996, I have surveyed the Ninth Standard Parallel North, (south boundary), Township 37 North, Range 17 East, 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; and that 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.

July 27, 1998
(Date)

Jones Curtiss
(Cadastral Surveyor)

CERTIFICATE OF APPROVAL

BUREAU OF LAND MANAGEMENT
Arizona State Office
Phoenix, Arizona

The foregoing field notes of the survey of the Ninth Standard Parallel North, (south boundary), Township 37 North, Range 17 East, Gila and Salt River Meridian, Arizona, executed by Jones Curtiss, Cadastral Surveyor, having been critically examined and found correct, are hereby approved.

August 31, 1998
(Date)

Lenny D. Ravnikar
(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. 37 N., R. 17 E., Gila and Salt River Meridian, Arizona, is a true copy of the original field notes.~~

~~_____~~
(Date)

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