

Exterior  
BOOK "AO"

2568

BOOK 2568

FIELD NOTES

OF THE SURVEY OF THE

*North Boundary of Tp 30 North, R. 13 East.*

Series of horizontal dashed lines for handwritten notes.

*Of the Gila and Salt River Base and Meridian,*

*in the Territory of Arizona*

EXECUTED  
AS SURVEYED BY

*Van L. White, U.S. Plausitman, United States Deputy Surveyor,  
Special Instructions from the Commissioner of the General Land Office  
Under his Contract No. \_\_\_\_\_, dated Feb 2<sup>nd</sup> 1907, and May 13<sup>th</sup>, 1908*

Survey commenced *February 12<sup>th</sup>*, 1911

Survey completed *February 12<sup>th</sup>*, 1911

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NAMES AND DUTIES OF ASSISTANTS.

T. Y. White	Chairman
Richard L. Shumway	Chairman
George B. Seig	Moundman
Harry Keyops	Moundman
Nelson Polacca	Axman
William R. Carson	Flagman

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# INDEX DIAGRAM.

Township 30 N., Range 13 E

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PRELIMINARY OATHS OF ASSISTANTS.

WE, T. Y. White and Richard L. Shumway  
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain upon even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of N. Bdry Tp 30 N. R. 13 E. of the G. & S. R. Base & Meridian, Arizona

T. Y. White, Chainman.  
Richard L. Shumway, Chainman.

Subscribed and sworn to before me this 8<sup>th</sup>  
day of February, 1911,



Van L. White  
U.S. Transitman

WE, George B. Seig and Harry Keyope  
do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of N. Bdry Tp 30 N. R. 13 E. of the G. & S. R. Base & Meridian, Arizona

George B. Seig, Moundman.  
Harry Keyope, Moundman.

Subscribed and sworn to before me this 8<sup>th</sup>  
day of February, 1911,



Van L. White  
U.S. Transitman

WE, Nelson Polacca  
do solemnly swear that ~~we~~ will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given ~~us~~<sup>me</sup>, to the best of ~~my~~<sup>my</sup> skill and ability, in the survey of N. Bdry Tp 30 N. R. 13 E. of the G. & S. R. Base & Meridian, Arizona

Nelson Polacca, Axman.  
Nelson Polacca, Axman.

Subscribed and sworn to before me this 8<sup>th</sup>  
day of February, 1911,



Van L. White  
U.S. Transitman

I, William R. Carson, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of N. Bdry Tp 30 N. R. 13 E. of the G. & S. R. Base & Mer., Arizona

William R. Carson, Flagman.

Subscribed and sworn to before me this 8<sup>th</sup>  
day of February, 1911,



Van L. White  
U.S. Transitman

North boundary of Tps 30 N, R13 E

chains.

Survey Commenced Feb. 12<sup>th</sup> 1911 and executed with a W & L. E. Surley engineers transit No. 76 with a Burk Solar attachment, the horizontal limb is provided with one double vernier reading to single minutes of arc. The verniers of the latitude and declination arcs read to 0'30" of arc.

I examine the adjustments of the transit and find them correct. and know from recent tests of the solar apparatus by comparing its indications resulting from solar observations made during a.m. and p.m. hours with a meridian determined by observations on Polaris that the instrument is in satisfactory adjustment

I begin at the cor. of Tps. 30 and 31 N, R's 13 and 14 E. <sup>described in Exterior Book "A"</sup> which I established Nov. 16<sup>th</sup> 1910.

Latitude 36° 01' 54" N., Longitude 110° 53' 38" W. Feb. 11<sup>th</sup> 1911. At 8<sup>h</sup> 07<sup>m</sup> a.m. I set off 36° 02' N. on the lat. arc, 14° 12' S. on the decl. arc and determine a meridian with the solar at the above cor., thence I run,

N. 89° 58' W., on a random line, along the N. side of T 30 N, R 13 E., setting 14 sec. and sec. cord at intervals of 40.00 chs.

NOTE: At the temp. point for cor. of sec. 2, 3, 34 and 35 I set off 14° 10' S on the decl. arc and at noon observe the sun on the meridian the resulting latitude being 36° 02' N.

I discontinue the work on this day at the temp point for cor. of sec. 4, 5, 32, and 33 Feb. 12<sup>th</sup> 1911

Feb. 13<sup>th</sup> 1911 At 8<sup>h</sup> 07<sup>m</sup> a.m. I set off 36° 02' N. on the lat. arc. 13° 32 1/2' S on the decl. arc, and determine a meridian with the solar at the temp point for cor. of sec. 4, 5, 32, and 33. which I set last evening, thence I continue my my random line,

N. 89° 58' W., along the North boundary of Tps. 30 N, R 13 E., and at 479.35 chs. Intersect the 3<sup>rd</sup> Guide Meridian east 72 chs N. of the cor. of Tps. 30 and 31 N, R's. 12 and 13 E which.

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- Re-established Feb. 10<sup>th</sup> 1911, as described in Standard Book "S"  
The following answers to a correction of  $0^{\circ}05'$  or  
 $12$  lks. S. per mile counting from the N.E.  
cor. of the Twp., therefore I run,  
N.  $89^{\circ}57'$  E., Sec. 6 and 31, marking and  
blazing the true line,  
Over level sandy and stony land through sage and  
greasewood brush undergrowth and bunch grass.
- 6.00 Leave level land bears N and S. Enter broken stony  
hilly land. ascend abrupt rocky W. slope.
- 33.50 Top of rocky spur 150 ft. high bears N and S. extends  
N. of line about 6.00 chs. descend abrupt E. slope
- 39.35 Saw iron post 3 ft. long 1 in. in diam. 26 ins. in  
the ground for  $\frac{1}{4}$  sec. cor. marked on brass cap.  
 $\frac{1}{4}$  S 31 on N. half and S 6 on S. half.  
Raise a mound of stone 2 ft. base,  $1\frac{1}{2}$  ft. high. N. of  
cor. Pits impracticable
- 40.30 Dry ravine 10 lks. wide course N. and S.
- 49.35 Top of a abrupt ascent on E. wall of canyon 150  
ft. high. bears N  $70^{\circ}$  E and S  $70^{\circ}$  W., continue steep  
ascent over sand ridge
- 58.60 Top of sand ridge bears N and S. desc
- 75.80 Dry ravine 20 lks. wide course N  $60^{\circ}$  E and S.
- 79.35 Saw iron post 3 ft. long 3 ins. in diam. 24 ins. in  
the ground for cor. of Secs. 5, 6, 31 and 32., marked  
on brass cap R 13 E in E. half T 31 N. S. 32. in N.E.  
T 30 N. S 5 in S.E. S 6 in S.W. and S 31 in N.W. quadrant.  
Raise a mound of stone 2 ft. base,  $1\frac{1}{2}$  ft. high. W. of cor.  
Pits impracticable  
Land level, broken and hilly  
Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.  
No timber

N  $89^{\circ}57'$  E. Sec. 5 and 32.ascend N.W. slope over stony hilly land. through  
sage and greasewood brush undergrowth and  
bunch grass.

- 1.60 Top of sand ridge bears N  $60^{\circ}$  E and S  $60^{\circ}$  W. desc. <sup>SE slope</sup>
- 40.00 Saw iron post 3 ft. long 1 in. in diam. 26 ins.  
in the ground for  $\frac{1}{4}$  sec. cor. marked on brass  
cap  $\frac{1}{4}$  S 32 on N. half and S 5 on S. half.

Chain

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57.00 Dig pits 18x18x12 ins E and W. of post 3 ft. dia. and raise a mound of earth 3 1/2 ft base 1 1/2 ft. high N. of cor.

58.10 Begin abrupt descent over E. slope

55.00 Dry ravine 10 lbs. wide course N.E. asc.

58.10 Top of clay ridge bears  $N50^{\circ}E$  and  $S50^{\circ}W$  desc. <sup>S.E. slope</sup>

80.00 Set an iron post 3 ft. long 3 ins. in diam. 24 ins. in the ground for cor. of sec. 4, 5, 32 and 33. marked on base cap N13E in E half, T31 N, S33 in N.E., T30 N, S. 4 in S.E. S5 in S.W. and S32 in N.W. quadrants.

Dig pits 18x18x12 ins. in each sec. 5 1/2 ft. dia. and raise a mound of earth 4 ft. base, 2 ft. high. W. of cor.

Land broken and hilly.  
Soil clayey and sandy 3rd rate.  
No timber

Note:- Set this cor. 13° 30' 1/2 S on the decl. arc and at noon observe the sun on the meridian and obtain a reading of 36° 02' N. on the hor. arc.

N.  $89^{\circ}57'E$ , Cor. sec. 4 and 33,  
Descend N.E. slope over hilly clayey and sandy land through scattering sage brush undergrowth and bunch grass.

25.00 Top of descent in depression bears NE. and SW. drains to the N.E. asc

40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for 1/4 sec. cor. marked on base cap 1/4 S 33 on N. half and S4 on S. half.

Dig pits 18x18x12 ins. E and W. of post 3 ft. dia. and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high N. of cor.

42.00 Ascend steeply.

43.55 Top of steep ascent on clay ridge bears  $N25^{\circ}E$  and  $S25^{\circ}W$  desc.

60.00 Dry ravine course N. asc.

71.26 Top of sand ridge 20 ft. high bears  $N25^{\circ}E$  and  $S25^{\circ}W$  desc.

80.00 Set an iron post 3 ft long, 3 ins in diam. 24 ins.

in the ground for cor. of sec. 3, 4, 33 and 34 marked on brass cap R13E in E half, T31 N, S34 in N.E., T30 N, S33 in S.E. S4 in S.W. and S33 in N.W. quadrants.

Raise a mound of stone 2 ft. base, 1½ ft. high W. of cor. Pits impracticable

Sand hilly.

Soil clayey and sandy 3<sup>rd</sup> and 4<sup>th</sup> rate.

No timber

N. 89° 57' E., bet. sec. 3 and 34,

Descend E slope over hilly land, through sage and greasewood brush undergrowth, and bunch grass

13.00 Dry ravine 50 lbs. wide 8 ft. deep, course N30°W acc.

28.60 Old road bears N.E. and S.W.

29.70 Same road bears N.W. and S.E.

31.00 Top of rocky spur bears N.E. and S.W. desc.

34.60 Dry rocky ravine course S.W. acc.

36.50 Same road bears N.E. and S.W.

37.40 Dry ravine 10 lbs. wide 8 ft. deep course S.W. acc.

40.00 The point for the ¼ sec. cor. falls on ledge of solid rock, where I am unable to establish a post cor. therefore I set a cross at the exact cor. point, and at

39.00 Set an iron post 3 ft. long, 1 in. in diam. for witness cor. to the ¼ sec. cor. marked on brass cap, T31 N, T30 N R13E in N. half, S3, S34 in W. half and W.C. ¼ in E half.

Dig pits 18x18x12 ins. East W. of post 3 ft. dist and raise a mound of earth 3½ ft. base, 1½ ft. high N. of cor. This cor. on sand ridge bears N and S.

41.40 Dry rocky ravine 20 ft. below the W.C. to the ¼ sec. cor. course S.W. acc.

66.00 Top of ridge bears N.E. and S.W. desc.

69.00 Foot of ditch in depression bears N.E. and S.W. drains to the N.E. acc.

80.00 Set an iron post 3 ft. long 3 ins. in diam. 24 ins. in the ground for cor. of sec. 2, 3, 34 and 35. marked on brass cap R13E in E half



T<sub>31</sub>N, S<sub>35</sub> in N.E. T<sub>30</sub>N, S<sub>2</sub> in S.E. S<sub>3</sub> in S.W. and S<sub>34</sub> in N.W. quadrants.

Dig pits 18x18x12 ins. in each sec, 5 1/2 ft. dia. and raise a mound of earth 4 ft. base, 2 ft. high. W of Cor.

Land hilly.  
Soil clayey and stony 3<sup>rd</sup> and 4<sup>th</sup> rate  
No timber

N. 89° 57' E., beh. sec. 2 and 35,

Ascend N.W. slope of ridge over stony and sandy hilly land. through scattering sage bush. undergrowth dead bunch grass

15.50 Top of sand ridge bears N 35° E and S 35° W. desc.

36.50 Road bears N 60° W and S 60° E. to Oraibi, Arizona.

40.00 Saw iron post 3 ft. long 1 in in diam, 26 ins. in the ground for 1/4 sec. cor. marked on base top 1/4 S 35 on N. half and S 2 on S. half  
Dig pits 18x18x12 ins. E and W of post 3 ft. dia. and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high. N. of cor.

70.50 Top of desert in depression bears N and S. draws to the N. ascend gradually over rolling land.

80.00 Saw iron post 3 ft. long 3 ins in diam 24 ins. in the ground for cor. of sec. 1, 2, 35: and 36. marked on base top R 13 E. in E half. T<sub>31</sub>N S<sub>36</sub> in N.E. T<sub>30</sub>N S<sub>1</sub> in S.E. S<sub>2</sub> in S.W. and S<sub>35</sub> in N.W. quadrants.  
Dig pits 18x18x12 ins. in each sec. 5 1/2 ft. dia. and raise a mound of earth 4 ft. base, 2 ft. high. W. of cor

Land rolling and hilly.  
Soil sandy and stony 3<sup>rd</sup> and 4<sup>th</sup> rate.  
No timber

N. 89° 57' E., beh. sec. 1 and 36,

Ascend West Slope over rolling sandy land through scattering sage and greasewood

North boundary of Twp. 30 N., R 13 E

brush undergrowth and bunch grass  
 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for  $\frac{1}{4}$  sec. marked on brass cap N 4 S 36 on N. half and S 1 on S. half. Dig pits 18x18x12 ins. East & W. of post 3 ft. dist. and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high N. of cor.  
 54.00 Top of sand ridge bears N 15° W and S 15° E <sup>E. slope.</sup>  
 80.00 Intersect the cor. of Twp. 30 and 31 N., R 13, and 14 E., described in Exterior Book "AR".  
 Land rolling.  
 Soil sandy 3<sup>rd</sup> rate  
 No timber

February 13<sup>th</sup> 1911.

Boundaries of T 30 N., R 13 E.  
 Latitudes, Departures and Closing Errors.

Line Designated	True Bearing	Distance	Latitudes		Departures	
			N	S	E	W
South Boundary	N 89° 58' W	479.64	.28			479.64
West Boundary (Guide Meridian East)	North	480.00	480.00			
North Boundary	N 89° 57' E	479.35	.42		479.35	
East Boundary	South	480.00		480.00		
Convergency					.52	
TOTALS			480.70	480.00	479.87	479.64
			480.00		479.64	
Error in Lat.			90.70			
						0.23
Error in Dep.						

General Description.

This township is very rough and broken in the northern and north eastern parts, and rolling in the southwestern part, while prairie land is found over the larger portion of the western and southern portions.

The township has very little water and no timber.

The soil which is nearly all 3<sup>rd</sup> rate, produced a good growth of bunch grass over the prairie portions of the township which furnished fine grazing for cattle and horses, and for this reason the township should be subdivided

February 13<sup>th</sup> 1911

Van L. White  
U.S. Transmitter

U.S. TRANSITMAN  
FINAL OATHS OF ~~DEPUTY SURVEYOR~~ AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by Van L. White  
U.S. Transitman, ~~United States Deputy Surveyor~~, to assist in running, measuring, and  
marking the lines and corners described in the foregoing field notes of the survey of N. Bdry of  
Tp 30 N. R. 13 E. of the G. & S. R. Base & Meridian, Arizona  
showing the respective capacities in which they acted:

- T. J. White ..... Chainman.
- Richard L. Shumway ..... Chainman.
- George B. Seig ..... Moundman.
- Harry Keyope ..... Moundman.
- Nelson Polacca ..... Arman.
- ..... ~~Arman.~~
- William R Carson ..... Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Van L. White  
U.S. Transitman, ~~United States Deputy Surveyor~~, in surveying all  
those parts or portions of the N. Bdry of Tp. 30 N. R. 13 E.

..... of the Sila and  
Salt River Bas<sup>e</sup> of Meridian, Territory of Arizona, which are represented  
in the foregoing field notes as having been surveyed by him and under his direction; and that said survey  
has been in all respects, to the best of our knowledge and belief, well and faithfully ~~surveyed~~ <sup>executed</sup>, and the  
corner monuments established, according to the instructions furnished by the ~~United States Surveyor~~

~~General for~~ Commissioner of the General Land Office

- T. J. White ..... Chainman.
- Richard L. Shumway ..... Chainman.
- George B. Seig ..... Moundman.
- Harry Keyope ..... Moundman.
- Nelson Polacca ..... Arman.
- ..... ~~Arman.~~
- William R Carson ..... Flagman.

Subscribed and sworn to before me this 15<sup>th</sup>  
day of May, 1911

Van L. White  
U.S. Transitman



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TRANSITMAN  
FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Van L. White, <sup>Transitman</sup> United States Deputy Surveyor, do solemnly swear that, in pursuance of ~~contract~~ <sup>Special Instructions</sup> received from ~~the Commissioner of the General United States Surveyor General for~~ <sup>the Commissioner of the General Land Office</sup>, bearing date of the ~~2<sup>nd</sup> day of Oct. 1907~~ <sup>15<sup>th</sup> day of May, 1908</sup>, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the ~~United States Surveyor General~~ <sup>Commissioner of the General Land Office</sup>, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the North boundary of Township No. 30 North, of Range No. 13 East

of the Gila and Salt River Base Meridian, in the Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the ~~United States Surveyor General~~ <sup>Commissioner of the General Land Office</sup> and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Van L. White  
~~United States Deputy Surveyor~~  
Transitman

Subscribed by said Van L. White, and sworn to before me }  
this 27<sup>th</sup> day of December, 1912



Lytton R. Naylor  
U.S. Commissioner  
at Las Cruces, N.M.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona, APR 25, 1914

The foregoing field notes of the survey of the

North boundary of

Township No. 30 North, Range No. 13 East of the  
Gila and Salt River Base and Meridian, Arizona

executed by VAN L. WHITE, U.S. Transitman, under Special Instructions from  
executed by the Commissioner of the General Land Office

under his contract No. \_\_\_\_\_, dated October 2 - 1907 and May 15, 1908, having been  
critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank S. Ingalls  
~~United States Surveyor General~~  
SURVEYOR-GENERAL OF ARIZONA

I certify that the foregoing transcript of the field notes of the above described surveys in \_\_\_\_\_  
\_\_\_\_\_, has been correctly copied from the original notes on file in this office \_\_\_\_\_

~~United States Surveyor General.~~