

Accepted by S.L.O. letter "E" April 28-1913

Standard  
Book A.

2367

BOOK 2367

# FIELD NOTES

FEB. 24. 1913

OF THE SURVEY OF THE

.....

--- FOURTH STANDARD PARALLEL NORTH ---

Through

RANGE 18 WEST of the

~~of the~~ Gila and Salt River Base and Meridian,  
Territory of Arizona.

AS SURVEYED BY

William B. Alexander, United States Deputy Surveyor,

Under his Contract No. 157, dated May 26, 1909, 1909

Survey commenced May 9, 1910., 190

Survey completed May 10, 1910., 190

NAMES AND DUTIES OF ASSISTANTS.

F. C. Kelton	Chairman
W. A. Campbell	"
N. S. Darlington	"
A. M. Pogue	"
C. H. French	Woundman
Wayne Hubbs	Clyman
W. G. Carleton	Rodman

BOOK 2367  
INDEX DIAGRAM.

Township 17 N, Range 18 W  
EXTERIOR BOOK "A"

Orig. & Supplemental Standard Book "C"

Exterior Book "A"

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32 A <sup>th</sup> Stan. PAR. N. 1 <sup>st</sup> 2	33 2	34 2 <sup>nd</sup> 3	35 3	36 A

Meanders Page \_\_\_\_\_

PRELIMINARY OATHS OF ASSISTANTS.

*F.C. Kelton, W.A. Campbell*  
 WE, *N.S. Darlington,* and *A.M. Fogue*  
 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  
*the Fourth Standard Parallel through range 18 W and the resurvey of the Fifth Guide Meridian W. through T 19 & 20 N*

Subscribed and sworn to before me this 9<sup>th</sup> day of May, 1990

*F.C. Kelton*, Chainman.  
*W.A. Campbell*, Chainman.  
*N.S. Darlington*, "  
*A.M. Fogue*, "  
*William P. Alexander*  
 U.S. Deputy Surveyor

*C.H. French*

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  
*the Fourth Standard Parallel through Range 18 W and resurvey of the 5<sup>th</sup> Guide Meridian W. through T 19 & 20 N*

Subscribed and sworn to before me this 9<sup>th</sup> day of May, 1990

*C.H. French*, Moundman.  
*William P. Alexander*  
 U.S. Deputy Surveyor

*Wayne Stubbs*

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, to the best of our skill and ability, in the survey of  
*the Fourth Standard Parallel through Range 18 W and resurvey of the 5<sup>th</sup> Guide Mer. W. through T 19 & 20 N*

Subscribed and sworn to before me this 9<sup>th</sup> day of May, 1990

*Wayne Stubbs*, Axman.  
*William P. Alexander*  
 U.S. Deputy Surveyor

*W. B. Carleton*

I, *W. B. Carleton*, 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  
*the Fourth Standard Parallel through Range 18 W and resurvey of 5<sup>th</sup> Guide Mer. W. through T 19 & 20 N.*

Subscribed and sworn to before me this 9<sup>th</sup> day of May, 1990

*W.B. Carleton*, Flagman.  
*William P. Alexander*  
 U.S. Deputy Surveyor

*Not being an official available without great expense and loss of time I administer the oaths of assistants.*

Fourth Standard Parallel North, through Range 18 West.

Chains.

Survey commenced May 9, 1910, and was executed with a Young and Sons' Light Mountain Transit No. 7520; the horizontal limb having two double verniers placed opposite to each other, and reading to single minutes of arc.

The instrument was examined, tested on the true meridian at Phoenix, Arizona, found correct, and was approved by the Surveyor General of Arizona, June 25, 1904.

I begin at the standard corner of Township 17 North, Ranges 18 and 19 West, which is a granite stone, 12x12 ins. in a mound of stone, marked and witnessed as described by the Surveyor General.

At a point 2.32 ft. south of said standard corner, in latitude 34°48'44"N.; long. 114°12'26" W. at 4h. 21.6m. a.m., l.m.t. by my watch, which is accurate, I observe Polaris at eastern elongation, in accordance with instructions in the Manual, and mark the line thus determined by a tack driven in a stake set in the ground five chains north of my station.

At 6h. 00m. a.m., I lay off 1°26' to the west, and mark the true meridian thus determined by a tack driven in a stake set firmly in the ground west of the point determined last night; the magnetic bearing of the true meridian is N. 15°00' W., which gives the magnetic declination, 15°00' E.

At this station (i.e. the point 2.32 ft. south of the standard corner) I turn off from the meridian, an angle 89° 58' E., and run N. 89° 58' E. on the secant on S. bdy. of sec. 31.

Ascend over extremely rough mountainous land.

11.66 Ridge, bears N. and S. Descend.

Difference between measurement of 40.00 chains by two sets of chainmen is 4 lks., the position of the middle point,

By 1st set, 40.02 chs.

By 2nd set, 39.98 chs., the mean of which is

40.00 N. 1.04 ft. from the secant.

Set a porphyry stone 7x7x24 ins., 18 ins. in the ground, for the standard  $\frac{1}{4}$  sec. cor. south of sec. 31, marked S C  $\frac{1}{4}$  on the N. face; and raise a mound of stones 3 ft. base, 2 ft. high, N. of cor. Pits impracticable.

43.50 Rocky gulch, 1 chain wide, course S. Ascend.

51.80 Ridge bears N. and S. Descend.

79.00 Gulch, 30 lks. wide, course SE. Ascend.

The difference between the measurement of 80.00 chains by two sets of chainmen is 6 lks.; the position of middle point

By 1st set, 80.03 chains,

By 2nd set, 79.97 chains; the mean of which is

80.00 Set a tufa stone 4x7x18 ins., 14 ins. in the ground for the standard corner of sections 31 and 32, marked S C on the N. with 5 grooves on the E. and 1 groove on the W. face, and raise a mound of stones 3 ft. base, 2 ft. high, N. of corner. Pits impracticable.

Land, extremely mountainous.

Soil, 4th rate, rock.

Mountainous land, extremely difficult to survey, 80.00 chs.

Scattering catsclaw, greasewood, and cactus brush.

N. 89°59' E., on the secant on S. bdy. of sec. 32.

Ascend over extremely mountainous land.

7.16 Begin descent.

10.00 Rocky gulch, 40 lks. wide, course S. Ascend.

12.00 Ridge brs. N. and S. Descend.

15.50 Rocky gulch, 2 chains wide, course SW. Ascend,

25.00 Begin descent over large loose malpais boulders.

Difference between measurements of 40.00 chs. by two sets of chainmen is 12 lks.; the position of the middle point,

By 1st set, 40.06 chs.

By 2nd set, 39.94 chs., the mean of which is

2. Fourth Standard Parallel North through Range 18 West.

Chains.

40.00 S. 0.81 ft. from the secant.  
Set a malpais stone 6x8x15 ins., 11 ins. in the ground for the standard  $\frac{1}{4}$  sec. cor. south of sec. 32, marked S C  $\frac{1}{4}$  on the N. face, and raise a mound of stones 3 ft. base, 2 ft. high, N. of corner. Pits impracticable.

49.60 Descend steep slope.

64.50 Rocky gulch, 30 lks. wide, course SE. Ascend.

70.00 Descend.

79.00 Canyon, wash 50 lks. wide, course SE. Ascend.  
The difference between the measurement of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point,  
By 1st set, 80.03 chs.,  
By 2nd set, 79.97 chs., the mean of which is,

80.00 S. 1.39 ft. from the secant.  
Set a malpais stone 8x10x12 ins., 9 ins. in the ground for the standard cor. of secs. 32 and 33, marked S C on the N., with 4 grooves on the E. and 2 grooves on the W. face; raise a mound of stones 3 ft. base, 2 ft. high, N. of cor. Pits impracticable.  
Land, extremely mountainous, and covered with loose boulders.  
Soil, 4th rate, rocky.  
Scattering brush of greasewood, catsclaw and cactus.  
No timber.  
Mountainous land, extremely difficult to survey, 80.00 chs.

-----

N. 89° 59 $\frac{1}{2}$ ' E. on the secant on S. bdy. of sec. 33. Ascend over mountainous land.

7.84 Top of ascent. Descend.

10.00 Descend into canyon.

14.50 Rocky wash, 50 lks. wide, course SE. Ascend.

21.80 Descend.  
Difference between measurements of 40.00 chains by two sets of chainmen is 6 lks.; the position of the middle point,  
By 1st set, 40.03 chs.,  
By 2nd set, 39.97 chs., the mean of which is

40.00 S. 1.74 ft. from the secant.  
Set a malpais stone 8x8x18 ins., 14 ins. in the ground for standard  $\frac{1}{4}$  sec. cor., marked S C  $\frac{1}{4}$  on the N. face; raise a mound of stones 3 ft. base, 2 ft. high, N. of cor. Pits impracticable.

43.00 Rocky gulch, 1 chain wide, course S. Ascend.

52.15 Descend. Ground covered with loose malpais boulders.  
Difference between the measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of the middle point,  
By 1st set, 80.05 chs.,  
By 2nd set, 79.95 chs., the mean of which is

80.00 S. 1.86 ft. from the secant.  
Set a malpais stone 10x10x20 ins., 15 ins. in the ground marked S C on the N. face, 3 grooves on the E. and W. face, for the standard corner of sections 33 and 34; raise a mound of stones 3 ft. base, 2 ft. high, N. of corner. Pits impracticable.  
Mountainous land.  
Soil, 4th rate, rocky.  
Scattering brush of catsclaw, greasewood and cactus.  
No timber.  
Mountainous land, extremely difficult to survey, 80.00 chs.

-----

At noon, I set off 17° 17' on the decl. arc, and observe the sun on the meridian; the resulting lat. is 34° 48 $\frac{1}{2}$ ' N.  
S. 89° 59 $\frac{1}{2}$ ' E. on the secant on S. bdy. sec. 34.  
Var. 15° 00' E.

37.40 Wash in canyon, 30 lks. wide, course SE. Ascend.  
Difference between measurement of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point is

Chains.

- By 1st set, 40.02 chs.  
 By 2nd set, 39.98 chs., the mean of which is  
 40.00 S.1.74 ft. from the secant.  
 Set a malpais stone 6x6x24 ins., 18 ins. in the ground, marked S C  $\frac{1}{2}$  on the N. face for standard  $\frac{1}{4}$  sec. cor.; raise a mound of stones 3 ft. base, 2 ft. high, N. of corner. Pits impracticable.
- 76.35 Descend.  
 Rocky gulch, 30 lks. wide, course SE. Ascend.  
 Difference between the measurement of 80.00 chains by two sets of chainmen is 6 lks.; position of the middle point is  
 By 1st set, 80.03 chs.,  
 By 2nd set, 79.97 chs., the mean of which is  
 80.00 S.1.39 ft. from the secant.  
 Set a malpais stone 10x10x20 ins., 15 ins. in the ground for standard corner of sections 34 and 35, marked S C on the N. face, with 2 grooves on the E. and 4 grooves on the W. face; and raise a mound of stones 3 ft. base 2 ft. high N. of corner. Pits impracticable.  
 Well at Haviland station on the Santa Fe R.R. brs. S. 29°20'W.  
 Mountainous land.  
 Soil, 4th rate, rocky.  
 Scattering brush of greasewood, cactus, catsclaw.  
 No timber.  
 Mountainous land, extremely difficult to survey, 80.00 chs.
- 
- S.89° 59' E. on the secant on S. bdy. of sec. 35.  
 Va. 15° 00' E.  
 Descend.
- 2.50 Rocky gulch, 10 lks. wide, course SW. Ascend.  
 7.50 Top of spur bears S. Descend.  
 8.55 Well at Haviland Station on the Santa Fe R.R. brs. S. 37° 55' W.
- 32.10 Rocky gulch, 10 lks. wide, course S. Santa Fe R.R. parallel to line, and about 3 chains S. Ascend.  
 Difference between the measurement of 40.00 chains by two sets of chainmen is 10 lks.; position of middle point is  
 By 1st set, 40.05 chs.  
 By 2nd set, 39.95 chs., the mean of which is  
 40.00 S.0.81 ft. from the secant.  
 Set a tufa stone 5x8x20 ins., 15 ins. in the ground for standard  $\frac{1}{4}$  sec. cor. marked S C  $\frac{1}{2}$  on the N. face, and raise a mound of stones 3 ft. base, 2 ft. high, N. of corner. Pits impracticable.  
 Center of Santa Fe R.R. milepost 545, brs. S. 60° 5' E. 2.58° chs.
- 50.00 Telegraph line, brs. N. 70° E. and S. 70° 0' W.  
 51.20 Santa Fe R.R. brs. N. 70° E. and S. 70° 0' W. Descend.  
 52.40 Telegraph line brs. N. 70° E. and S. 80° W.  
 55.00 West bank of Sacramento Wash, course SW. Leave mountainous land and enter level land, covered with dense undergrowth of mesquite, catsclaw, palo verde, greasewood and cactus.
- 73.50 Leave Sacramento Wash at east bank, course SW. Ascend over rolling land, covered with dense undergrowth.  
 Width of wash, 18.50 chs.  
 Difference between the measurement of 80.00 chs. by two sets of chainmen is 12 lks.; position of the middle point  
 By 1st set, 80.06 chs.  
 By 2nd set, 79.94 chs., the mean of which is  
 80.00 Set a granite stone 6x8x14 ins., 10 ins. in the ground for the standard section cor. of secs. 35 and 36, marked S C on the N., with 1 groove on the E. and 5 grooves on the W. face; dig pits 24x18x12 ins. crosswise on each line, E. and W. 3 ft., and N. of stone 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft.

## 4. Fourth Standard Parallel North, through Range 18 West.

Chains.

A palo verde tree, 9 ins. in diam., brs. N. 2° 30' W., 3.21 chs. distant, marked T 17 N, R 18 W S 35 B T. No other tree available.

Land, level, rolling and mountainous.

Soil, rocky, 3rd and 4th rate.

Timber, palo verde and mesquite, catclaw and greasewood brush.

Level land, 18.50 chs.

Rolling land, 6.50 chs.

Mountainous land, 55.00 chs.

Mountainous land, or land covered with dense undergrowth, and exceptionally difficult to survey, 80.00 chs.

S. 89° 58' E., on the secant on S. bdy. of sec. 36.

Over rolling land, through dense undergrowth of mesquite, cactus and greasewood, palo verde and catclaw.

Ascend gradually.

Difference between the measurement of 40.00 chs. by two sets of chainmen is 12 lks.; position of the middle point,

By 1st set, 40.06 chs.

By 2nd set, 39.94 chs., the mean of which is

40.00 N. 1.04 ft. from the secant.

Set a granite stone 5x7x15 ins., 11 ins. in the ground for standard  $\frac{1}{4}$  sec. cor., marked S C  $\frac{1}{4}$  on the N. face; and raise a mound of stones 3 ft. base, 2 ft. high, N. of cor.

A palo verde tree, 6 ins. in diam., brs. N. 52° W., 4.07 chs. dist., marked S C  $\frac{1}{4}$  S 36 B T. No other tree available.

Difference between the measurement of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point

By 1st set, 80.06 chs.,

By 2nd set, 79.94 chs., the mean of which is

80.00 N. 2.32 ft. from the secant.

Set a granite stone 10x12x24 ins., 19 ins. in the ground for standard cor. of T. 17 N., R. 17 and 18 W., marked S C 17 N on N., 17 W on E., and 18 W on W. face; 6 notches on N., E. and W. faces; dig pits 30x24x12 ins., crosswise on each line, E. and W. 4 ft., and N. of stone 8 ft. dist., and raise a mound of earth 5 ft. base, 2 ft. high, N. of cor.

Gently rolling land.

Soil, gravel, 3rd rate.

Dense undergrowth of mesquite, catclaw, palo verde, greasewood and cactus.

Scattering palo verde and mesquite timber.

Land, covered with dense undergrowth, and extremely difficult to survey, 80.00 chs.

May 9, 1910.

GENERAL DESCRIPTION.

This line through range 18 west runs across the southern end of what is known as the Black Mountains. The said mountains have a northwesterly trend, being extremely rugged, and are for the greater part unsurveyable, and therefore impracticable to subdivide. The canyons and gulches, in every case absolutely dry, have a general south and southwesterly bearing. The only water that could be secured was from the well at Haviland Station on the Santa Fe R.R. at a depth of approximately 500 feet. The land to the south is of a broken character, partly mountainous and partly rolling, with apparently no water, and but little timber. The land to the southeast and northeast appears to be more uniform in surface contour, the southeast to the

Fourth Standard Parallel North. through Range 18 West. 5.

horizon and the northeast for a distance of about six or seven miles, and, being thickly covered with brush of mesquite, catsclaw, palo verde, and greasewood with a generally rolling surface, could be practically subdivided. Haviland Station is about a half mile south of the line from a point midway between the standard  $\frac{1}{4}$  section corner south of section 34, and the standard corner of sec. 35.

*William D. Alexander*  
U.S. Deputy Surveyor.

May 19, 1910.

---

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by

*William D. Alexander*

*Alexander*, 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 *the Fourth Standard Parallel through Range 18 W and resurvey of 5th Guide Meridian W through T 19 + 20 N.* showing the respective capacities in which they acted:

- F. C. Kelton*, Chairman; *W. A. Campbell*, Chairman.
- N. S. Darlington*, " ; *A. M. Pogue*, Chairman.
- C. H. French*, Moundman.
- Wayne Hubbs*, Axman.
- W. G. Carlston*, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted

*William D. Alexander*

*Alexander*, United States Deputy Surveyor, in surveying all those parts or portions of the

*Fourth Standard Parallel through range 18 west resurvey of 5th Guide Mer. W. through T 19 + 20 N* of the *Salt River* 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, and the corner monuments established, according to the instructions furnished by the United States Surveyor

General for *Arizona*

- F. C. Kelton*, Chairman.
- W. A. Campbell*, Chairman.
- N. S. Darlington*, Moundman.
- A. M. Pogue*, Moundman.
- Wayne Hubbs*, Axman.
- C. H. French*, Moundman.
- W. G. Carlston*, Flagman.

Subscribed and sworn to before me this *11th* day of *June*, 19*00*

*William D. Alexander*

*Note: There being no official U.S. Deputy Surveyor available without great expense and loss of time I administered the oaths of assistants.*

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, William B. Alexander, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank S. Ingalls United States Surveyor General for Arizona, bearing date of the 26<sup>th</sup> day of May, 1909, 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 for Arizona, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of

The Fourth Standard Parallel Through Range 18 West of the survey of the 5<sup>th</sup> Guide Meridian West through T 19 and 20 N of the Gila and Salt River 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 for Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

William B. Alexander  
United States Deputy Surveyor.

Subscribed by said William B. Alexander, and sworn to before me this 19<sup>th</sup> day of September, 1910

W. C. [Signature]  
[Signature]



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona, Feb. 26, 1913,

The foregoing field notes of the survey of

the Fourth Standard

Parallel North through Range 18 West of the Gila & Salt River Base and Meridian, State of Arizona

executed by William B. Alexander, U. S. Deputy Surveyor under his contract No. 157, dated May 26-1909, 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.

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.