

Exterior
BOOK "AE"

BOOK 2558

FIELD NOTES

OF THE SURVEY OF THE

West boundary of Twp. No. 28 N., Range No. 14 E. etc.

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

in the Territory of Arizona.

EXECUTED
AS SURVEYED BY

Sidney E. Blouh., United States ~~Deputy Surveyor~~ *Examined of Surveys*

Special Instructions from the Commissioner of the General Land Office
Under ~~his~~ Contract No. _____, dated *Oct. 2nd 1907 and May 15th 1908*

Survey commenced *January 8th* 1910 ~~1900~~

Survey completed *January 11th* 1910 ~~1900~~

NAMES AND DUTIES OF ASSISTANTS.

Nando White	Comptroller
Fred L. Warner	Chairman
Earl Albright	Chairman
P. G. White	Chairman
Ralph Simpson	Woundman
Chas. L. Shumway	Asst. man
William B. Carson	Plagman

BOOK 2558

INDEX DIAGRAM.

Township *Sec 28 Tc.*, Range *48*

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	33	34	35	36

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(C)

PRELIMINARY OATHS OF ASSISTANTS.

WE, _____ and _____
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 _____

_____, *Chainman.*
_____, *Chainman.*

Subscribed and sworn to before me this _____ }
day of _____, 190 _____ }



WE, _____ and _____
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 _____

_____, *Moundman.*
_____, *Moundman.*

Subscribed and sworn to before me this _____ }
day of _____, 190 _____ }



WE, _____ and _____
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 _____

_____, *Axman.*
_____, *Axman.*

Subscribed and sworn to before me this _____ }
day of _____, 190 _____ }



I, _____, 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 _____

_____, *Flagman.*

Subscribed and sworn to before me this _____ }
day of _____, 190 _____ }



SEE EXTERIOR BOOK "M"

Survey commenced January 8th 1910 and executed with a Waud & Co. Survey engineers transit No. 76 with a Burt 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 examined the adjustments of the transit and correct the level and collimation errors. Then to test the solar apparatus by comparing its indications resulting from solar observations made during a.m. and p.m. hours with a meridian established by observations on Polaris. I proceed as follows.

At my camp which is located near the Cor. of Secs. 15, 16, 21 and 22., T 28 N. R 14 E. Latitude 35° 49' N. Longitude 110 52' W., and at 7^h 10^m p.m. I set off by my watch which is correct local mean time I observe Polaris in accordance with instructions in the Manual and mark the direction thus determined by a tack driven in a stake set in the ground 5.00 Chs N. of my instrument.

Time of observation Jan 8th 1910. 7^h 10^m p.m.

Actual time U.S. Polaris Jan 1 st 1910.	6 ^h 44.7 ^m
Reduction to Jan 8 th Subtract.	37.6
Actual time U.S. Polaris Jan 8 th	6 17.1 Subtract 6 17.1
Hour angle and true azimuth of Polaris, at Obs. for Table VII	0.529
Azimuth of Polaris in Obs. Table VII	0° 20 1/2' W.

January 8th 1910.

1910
January 9th at 8^h 30^m a.m. I lay off the azimuth of Polaris 0° 20 1/2' to the east and mark the meridian thus determined by a tack driven in a stake set in the ground 5.00 N. of my instrument.

At 9^h 00^m a.m. I set off 35° 49' N on the lat arc. 32° 07 1/2' S. on the decl arc and determine a meridian with the solar and mark a point there of on the stake already set 5 Chs N. of my instrument on which the meridian falls 0.1 in. E. of the point established by the Polaris observation.

West boundary of Twp 28 N. R. 14 E.

At 3^h 00^m ^{p.m. lmt.} I set off $35^{\circ}49' N$ on the lat. arc.
 $22^{\circ}06' S$ on the decl. arc. and determine a meridian
 with the solar and mark the direction thus determined
 by a tack down in the stake already set 5.00 Ch.
 N. of my instrument, this point falls 0.1 in West
 of the point determined by the Polaris observation
 The solar apparatus by a.m. and P.m. observations
 defines positions for meridians respectively about
 $0'05''$ East and $0'05''$ west of the meridian established
 by the Polaris observation, there we conclude that
 the adjustments of the instruments are satisfactory.

January 9th 1910

I begin at the cor. of Twp. 27 and 28 N. R. 13 and
 14 E. which I established in corner 22nd 1909.

as described in Exterior Book "AC"
 Latitude $35^{\circ}46'14'' N$. Longitude $110^{\circ}5'09''$

January 10th 1910 At 8^h 45^m ^{l.m.t.} I set off $35^{\circ}46' N$ on
 the lat. arc. $21^{\circ}59' S$ on the decl. arc. and determine
 a meridian with the solar. Thence I run,

North, br. recs. 31 and 36,

Descend NW slope over rolling sandy land through
 scattering sage and greasewood brush undergrowth
 and bluegrass.

40.00 Set an 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. 36 on W. half and S. 31 on E. half.

Dig pits $18 \times 18 \times 12$ ins. N and S. of post. 3 ft. dia.
 and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft.
 high W. of cor.

72.40 Road leads to Oraibi Arizona bears N.E. and S.W.

80.00 Set an iron post 3 ft. long 3 ins. in diam. 24 ins
 in the ground for cor. of secs 25, 30, 31 and 36.
 marked on brass cap. T 28 N. on N. half, R 13 E S 25
 in N.W., R 14 E. S 30 in N.E., S 31 in S.E. and S 36 in
 S.W. quadrant.

Dig pits $18 \times 18 \times 12$ ins. in each sec. $5\frac{1}{2}$ ft. dia. and
 raise a mound of earth 4 ft. base, 2 ft. high W.
 of cor.

Land rolling.

Soil sandy, $\frac{3}{4}$ rate.

No timber

- North, beh. sec. 25 and 30,
Descend N.W. slope over rolling sandy land, through
sage and greasewood brush undergrowth and
bunch grass
- 28.55 Intersect left bank of the De Nebito Wash 25 ft.
high bars N.E. and S.W.
- 29.00 Center of De Nebito Wash (dry) course S.W.
- 29.45 South edge of island in wash extends E and
W. of line about 30 lbs.
- 32.68 North end of island from E 20 lbs. and W. 25 lbs.
- 36.08 Right bank of the De Nebito wash 25 ft. high bars N.E.
and S.W., thence over level land.
- 40.00 Set an 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 25 on W. half and S 30 on E. half.
Dig pits 18x18x12 ins N and S. of post 3 ft. dist.
and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high.
W. of cor.
- 80.00 Set an iron post 3 ft long, 3 ins. in diam. 24 ins.
in the ground for cor. of sec. 19, 24, 25 and 30
marked on brass cap. T 28 N. in N. half., R 13 E. S
24 in NW., R 14 E S 19 in N.E., S 30 in S.E. and S 25
in S.W. quadrants
Dig pits 18x18x12 ins in each sec. $5\frac{1}{2}$ ft.
dist. and raise a mound of earth, 4 ft. base
2 ft high W of cor.
Land level and rolling
Soil sandy 3rd rate.
No timber

- North, beh. Secs. 19 and 24,
Over level sandy land, through sage and
greasewood brush undergrowth and bunch
grass
- 17.80 Old road bears N.E. and S.W., ~~leads to Clearing~~
- 40.00 Set an 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 24 on W half. and S 19 on E
half.
Dig pits 18x18x12 ins. N and S. of post 3 ft. dist.
and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$
ft high W of cor.

NOTE: At this cor. I set off. $21^{\circ}59'S$. on the decl. arc and at noon, observed the sun on the meridian and obtain a reading of. $35^{\circ}48\frac{1}{2}'$ N. on the lab. arc.

63.00 Level level land bears N.E. and S.W., Enter rolling land bears N.E. and S.W. are gradually over S.E. slope

80.00 Set an iron post. 3 ft long. 3 ins. in diam. 24 ins. in the ground for cor. of secs. 13, 18, 19, and 24, marked on brass cap. T 28 N. on N. half. R13 E. S13 in N.W., R14 E S18 in N.E. S19 in S.E. and S24 in S.W. quadrants.

Dig pits $18 \times 18 \times 12$ ins. in each sec. $5\frac{1}{2}$ ft. dia. and raise a mound of earth 4 ft base. 2 ft. high W. of cor

Land level and rolling.

Soil sandy 3rd rate.

No timber

North, bet. secs. 13 and 18,
ascend S.E. slope over rolling sandy land through sage and greasewood bush 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 cor., marked on brass cap. $\frac{1}{4}$ S13 on W. half. and S18 on E half.

Raise a mound of earth $3\frac{1}{2}$ ft base, $1\frac{1}{2}$ ft high. W. of cor.

80.00 Set an iron post 3 ft long 3 ins. in diam. 24 ins. in the ground for cor. of secs. 7, 12, 13 and 18 marked on brass cap T 28 N. on N. half., R13 E. S12 in N.W., R14 E. S7 in N.E. S18 in S.E. and S13 in S.W. quadrants

Dig pits $18 \times 18 \times 12$ ins. in each sec. $5\frac{1}{2}$ ft. dia. and raise a mound of earth 4 ft. base. 2 ft. high. W. of cor.

Land rolling

Soil sandy 3rd rate.

No timber

West boundary of T28N, R14E

Behans

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- North, beh. sec. 7 and 12,
Ascend gently over S.E. slope over rolling sandy land
through scattering sage and greasewood bush
undergrowth and bunch grass.
- 6.00 Top of sand ridge, bears N.W. and S.E. desc. N.E.
slope
- 40.00 Set an 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 12 on W. half and S 7 on E half.
Dig pits 18 x 18 x 12 ins. N. and S. of post 3 ft. deep
and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$
ft. high W. of cor
- 50.60 Dry sand wash 50 lbs. wide, 2 ft deep course
S.E. are
- 80.00 Set an iron post 3 ft long 3 ins in diam. 24
ins in the ground for cor. of sec. 1, 6, 7 and 12
marked on brass cap T28N in N. half, R13E. S
1 in N.W., R14E S6 in N.E. S7 in S.E. and S12
in S.W. quadrant.
Dig pits 18 x 18 x 12 ins. in each sec. $5\frac{1}{2}$ ft. dish,
and raise a mound of earth 4 ft base, 2 ft
high. W. of cor
Good rolling.
Soil sandy 3rd rate.
No timber

January 10th 1910

- January 11th 1910 At 4^h 15^m p.m. L. M. L. & set off $35^{\circ}50\frac{1}{2}'$ N.
on the lat. arc, $21^{\circ}45'$ S on the decl. arc and
determine a meridian with the solar on the cor.
of sec. 1, 6, 7, and 12^{above described} ¹ hence done,
North, beh. sec. 1 and 6,
Ascend S.E. slope over rolling and hilly sandy land
through sage and greasewood bush undergrowth
and bunch grass
- 8.00 Top of sand ridge bears N.W. and S.E. desc
- 13.00 Top of descent, bear hilly land bears N.W. and S.E.
Enter nearly level land bears N.W. and S.E.
- 40.00 Set an 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 10 on W. half and S 6 on E half.
Dig pits 18 x 18 x 12 ins. N and S. of post 3 ft. deep.

West boundary of Twp. 28 N., R. 14 E

and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high. W. of cor.
 77.46 Intersect the South Standard Parallel North 512 lks. East of the Standard 1/4 Sec. cor. on the S. side of sec. 36 T. 29 N., R. 13 E., estab. by me this day as described in Standard Book "K" Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground for closing cor. of Twp. 28 N., R. 13 and 14 E., marked on brass cap C.T. 29 N., R. 13 E. R. 14 E. S. 31, S. 36 in N. half. R. 14 E. S. 6 in S. E. and R. 13 E. S. 1 in S. W. quadrant
 Dig pits 30 x 24 x 12 ins. crosswise on each line E and W. 4 ft. and S of post 8 ft. dish., and raise a mound of earth 5 ft. base, 2 1/2 ft. high S of cor. Land rolling.
 Soil sandy 3rd rate.
 No timber

January 11th 1910

Boundaries of Twp. 28 N., R. 14 E.
 Latitudes, Departures and Closing Errors

LINE DESIGNATED	TRUE COURSE	DISTANCE	LATITUDES		DEPARTURES	
			N	S	E	W
South Boundary	West	478.66				478.66
West Boundary	North	477.46	477.46			
North Boundary (7 th Stand. Parallel, N)	East	477.38			477.38	
East Boundary	South	477.76		477.76		
Convergency					.51	
TOTALS			477.46	477.76	477.89	478.66
		Error in Lat.		0.30		477.89
				Error in Dep.		0.77

General Description
 Townships 28 N., R. 13 and 14 East are generally rolling sandy mesa land which produces an abundant growth of bunch grass. There is also some good farming land along the De Nebets Wash. These townships should be surveyed

January 11th 1910
 Sidney E. Blouh
 U.S. Examiner of Surveys

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

LIST OF NAMES.

A list of the names of the individuals employed by Sidney E. Blouh
Examiner of Surveys
~~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 West
boundary of Twp. 28 N. R. 14 E. of the G. & S. R. Base & Meridian, Arizona.
showing the respective capacities in which they acted:

- Fred L. Warner, Van L. White - Compassman, Chainman.
- Carl Albright, Chainman.
- J. J. White, Chairman, Moundman.
- Ralph Sampson, Moundman.
- Chas. L. Shumway, Axman.
- William B. Carson, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Sidney E. Blouh
Examiner of Surveys
~~United States Deputy Surveyor~~, in surveying all

those parts or portions of the West boundary of Twp. No. 28 N., Range No.
14 East.

_____ of the Gila and
Salt River Base and 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 ^{executed} surveyed, and the
corner monuments established, according to the instructions furnished by the ~~United States Surveyor~~ ^{Commissioner}
~~General~~ ^{of the General Land Office}, Van L. White, Compassman
Carl Albright and Fred L. Warner, Chainman.
J. J. White, Chainman.
Ralph C. Sampson, Moundman.
_____, Moundman.
Chas. L. Shumway, Axman.
_____, Axman.
William B. Carson, Flagman.

Subscribed and sworn to before me this 28th
day of July 1910.



Sidney E. Blouh
U.S. Examiner of Surveys

EXAMINER OF SURVEYS
FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Sidney E. Blout, ^{Examiner of Surveys} ~~United States Deputy Surveyor~~, do solemnly swear that, in pursuance of ^{Special Instructions} ~~a contract~~ received from the Commissioner of the General Land Office, bearing dates of the 3rd day of Feb. 1907 ~~day~~ and the 15th day of May, 1908, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the ^{Commissioner} ~~United States Surveyor General~~ of the General Land Office, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of The West boundary of Twp No. 28 North, Range No. 14 East

of the Gila and Salt River Base and 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 ^{Commissioner} ~~United States Surveyor General~~ of the General Land Office and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Sidney E. Blout
~~United States Deputy Surveyor~~
^{Examiner of Surveys}

Subscribed by said Sidney E. Blout, and sworn to before me }
this 14th day of March, 1901

Frank Ingalls
SURVEYOR-GENERAL OF ARIZONA



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona, APR 25, 1901

The foregoing field notes of the survey of the
West boundary of
Township No 28 North, Range No 14 East of the
Gila and Salt River Base and Meridian, Arizona.

executed by Sidney E. Blout - U.S. Examiner of Surveys
under ^{Special Instructions from the Commissioner of the General Land Office} ~~his contract No.~~, dated October 2, 1907 and May 15, 1908, ~~190~~, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank 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.~~