

Book H

BOOK 2332

35

1

FIELD NOTES

2332

Accepted G. L. O. letter "E" dated Dec. 17, 1912

OF THE SURVEY OF THE

West Boundary I 70 P. R 75 E.

Of the

G. S. A.

Meridian,

In the State of

Arizona

EXECUTED BY

Alfred N. Oliver

In the capacity of U. S. ~~Surveyor~~ ^{Traveller}, under instructions dated July 28, 1911,

issued by the United States Surveyor General to govern surveys included in

Group No. 5, which were approved by the Commissioner of the General Land

Office, August 5, 1911, pursuant to authority contained in the Act of

Congress dated March 4, 1911.

Survey commenced September 11, 1911.

Survey completed " 12, 1911.

INDEX DIAGRAM.

Township _____, *Range* _____

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

36
(1A)

BOOK 2332
INDEX DIAGRAM.

Township 200, Range 74E

6	5	4	3	2	1	3
7	8	9	10	11	12	3
18	17	16	15	14	13	✓
19	20	21	22	23	24	✓
30	29	28	27	26	25	✓
31	32	33	34	35	36	✓

Meanders Page

WE, N. R. Harvey and R. L. Bates
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 W. bdy. of P 205 R. 25 E

N. R. Harvey, Chainman.
R. L. Bates, Chainman.

Subscribed and sworn to before me this 11th
day of September, 1911



John P. Hesse
U. S. Transitman

WE, J. L. Gardner 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 ~~me~~ to the best of ~~my~~ skill and ability, in the survey of the W. bdy. of P 205 R. 25 E.

J. L. Gardner, Moundman.
J. L. Gardner, Moundman.

Subscribed and sworn to before me this 11th
day of September, 1911



John P. Hesse
U. S. Transitman

WE, E. Barnes 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 ~~me~~ to the best of ~~my~~ skill and ability, in the survey of the W. bdy. of P 20 S. R. 25 E.

E. Barnes, Axman.
E. Barnes, Axman.

Subscribed and sworn to before me this 11th
day of September, 1911



John P. Hesse
U. S. Transitman

I, A. W. Hendrix, 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 W. bdy. of P 205 R. 25 E.

A. W. Hendrix, Flagman.

Subscribed and sworn to before me this 11th
day of September, 1911



John P. Hesse
U. S. Transitman

West Boundary of Tps. 20 S. Rgs. 25 E.

Chains,

Survey commenced September 11, 1911 and executed with a W. and L.E. Gurley solar compass, not numbered. The horizontal limb is provided with two double verniers placed opposite to each other reading to single minutes of the arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined and approved by the Supervising Surveyor.

I examine the adjustments of the compass and find them correct; 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 determined by observations on Polaris, I proceed as follows;

At camp, near the cor. of Tps. 20 and 21 S., Rgs. 25 and 26 E., latitude $31^{\circ} 38\frac{1}{2}' N.$, longitude $109^{\circ} 45' 29'' W.$ I set off $31^{\circ} 38\frac{1}{2}' N.$ on the lat. arc; $4^{\circ} 43\frac{1}{2}' N.$ on the decl. arc and at 5h.00m. p.m. l.m.t., determine with the solar a meridian, and mark a point thereof, on a stone firmly set in the ground 5 chs. N. of my station.

At 8h.12m. p.m. by my watch, which has correct l.m.t. I observe Polaris at eastern elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground 5 chs N. of my station.

September 11, 1911.

September 12; At 6h.30m. a.m. l.m.t., I lay off the azimuth of Polaris, $1^{\circ} 23'$ to the west and mark the meridian thus determined, by cutting a small groove in the stone set September 11, on which the meridian coincides with the mark determined by the solar.

At 7h.00m. a.m. l.m.t., I set off $31^{\circ} 38\frac{1}{2}' N.$ on the lat. arc; $4^{\circ} 31' N.$ on the decl. arc and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of my station; this mark coincides with the meridian established by the Polaris observations.

The solar apparatus by p.m. and a.m. observations defines positions for meridians which coincide with the meridian determined by Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 7h.15m. a.m., l.m.t., is $N. 13^{\circ} 15' W.$ the angle thus determined gives the mag. decl. $13^{\circ} 15' E.$

I commence at the standard cor. of Tps 20 S. Rgs. 24 and 25 E. heretofore described in Book "G" page 4

Thence I run

North bet. secs 31 and 36.
Over level land.

40.00 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S36 in W. and S31 in E. half; dig pits 18 x 18 x 12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

78.40 Cross wash 50 lks. wide, course S.E.

80.00 Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 25, 30, 31 and 36, marked on brass cap

T20S in N. half;
R24E, S25 in N.W.
R25E, S30 in N.E.
S31 in S.E. and

S36 in S.W. quadrant; dig pits 18 x 18 x 12 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.
Soil, sandy loam over 2 ft. deep; dry; medium texture; 1st rate.
No timber.
No undergrowth.

(2) West boundary of Township 20 South, Range 25 East.

Chains.

- North, bet. secs. 25 and 30.
Ascending through dense brush.
- 16.53 Top of ridge, bears NW. and SE.; descend.
- 27.38 Cross wash, 10 lks. wide, course SE.
- 36.35 Cross wash, 12 lks. wide, course SE.
- 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 in W. and S 30 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 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. diam., 24 ins. in the ground for cor. of secs. 19, 24, 25 and 30, marked on brass cap,
T 20 S in N. half;
R 24 E, S 24 in NW.,
R 25 E., S 19 in NE.,
S 30 in SE., and
S 25 in SW. quadrant; 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, rolling and hilly.
Soil, calcareous, 4th rate.
No timber.
Undergrowth, mesquite, catclaw and greasewood.
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- North, bet. secs. 19 and 24.
Over rolling land, through dense brush.
- 2.13 Cross wash, 15 lks. wide, course 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 24 in W. and S 19 in E. half; raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
- 67.45 Cross wash, 30 lks. wide, course SE.
- 71.00 Cross wash, 30 lks. wide, course SE.
- 80.00 Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 13, 18, 19 and 24, marked on brass cap,
T 20 S in N. half;
R 24 E, S 13 in NW.,
R 25 E, S 18 in NE.,
S 19 in SE., and
S 24 in SW. quadrant; 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, rolling.
Soil, calcareous, 4th rate.
No timber. Undergrowth, mesquite, catclaw and greasewood.
September 12; At this cor. I set off 4°24'N on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is 31°41'N. ✓
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- North, bet. secs. 13 and 18.
Over rolling land, through dense brush.
- 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 13 in W., and S 18 in E. half; dig pits 18x18x12 ins., N. and S. of cor. 3 ft. dist., and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high W. of cor.
- 48.14 Cross wash, 40 lks. wide, course SE.
- 80.00 Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 7, 12, 13 and 18, marked on brass cap,
T 20 S in N. half,
R 24 E, S 12 in NW.,
R 25 E, S 7 in NE.,
S 18 in SE., and
S 13 in SW. quadrant; 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, rolling.

West Boundary of Tp. 20 S. Rg. 25 E.

Chains.

Soil, calcareous, 4th rate.
No timber.
Undergrowth, mesquite, grease wood and catclaw.

North bet. secs. 7 and 12.
Over rolling land, through dense brush.

2.45 Cross road, bears E. and W.
11.39 Cross wash 12 lks. wide, course E.
19.50 Cross wash 15 lks. wide, course E.
39.40 Cross wash 10 lks. wide, course E.
40.00 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S12 in W. and S7 in E. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W of cor. Pits impracticable.

79.00 Cross wash 15 lks. wide, course E.
80.00 Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 1, 6, 7 and 12, marked on brass cap
T20S in N. half;
R24E., S1 in N.W.
R25E., 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. dist., and raise a mound of earth 4 ft. base 2 ft. high, W. of cor.
Land, rolling.
Soil, calcareous, 4th rate.
No timber.
Undergrowth, mesquite and catclaw.

North bet. secs. 1 and 6.
Over rolling land, through scattering brush.

18.45 Cross wash 12 lks. wide, course E.
27.30 Cross wash 10 lks. wide, course E.
40.00 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S1 in W. and S6 in E. half; dig pits 18 x 18 x 12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

47.30 Cross wash 12 lks. wide, course E.
68.90 Cross wash 10 lks. wide, course E.
75.00 Cross wash 15 lks. wide, course S.E.
79.30 Cross wash 20 lks. wide, course S.E.
81.28 Intersect S. bdy. of Tp. 19 S. Rg. 25 E., 6.88 chs. W. of $\frac{1}{4}$ sec. cor. on S. bdy. of sec. 31.
Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in ground for closing cor. of Tp. 20 S. Rgs. 24 and 25 E., marked on brass cap
CC S. of center.
T19S., R24E, S36., R25E, S31 in N. and
T20S., in S. half;
S6, R25E, in S.E. and
S1, R24E, in S.W. quadrant; dig pits 24 x 18 x 12 ins. crosswise of each line, E. and W. 3 ft. and S. of cor. 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft high, S. of cor.

September 12, 1911

General Description.

This township is generally level and rolling. There are low hills in the N. W. cor. of the township. There is no water or timber in the township.

41 (4)
BCOK

2332 Boundary T. 20 S., R. 25 E.
Latitudes, departures, and closing errors.

Line Designated	True Bearing	Distance	Latitudes		Departures	
			N. Chs.	S. Chs.	E. Chs.	W. Chs.
S. Boundary	N. 89° 45' W.	400.70	1.70			400.70
" "	N. 89° 40' W.	40.00	.23			40.00
" "	N. 89° 55' W.	40.08	6			40.08
W. Boundary	North	481.28	481.28			
N. Boundary	East	462.58			462.58	
E. Boundary	S. 2° 07' E.	483.54		483.21	17.86	
Convergency:					.45	
Totals			483.27	483.21	480.89	480.78
			483.21	Error	480.78	
Error in lat.			.06	in dep. +	11	

Alfred N. Olcott
U. S. Transitman

FINAL OATHS OF ~~DEPUTY SURVEYOR~~ AND HIS ASSISTANTS.

LIST OF NAMES.

BOOK 2332

42 (5)

A list of the names of the individuals employed by John P. Hesse

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 the W.

bdy. of P20 S. R. 25 E.

showing the respective capacities in which they acted:

H. R. Harvey, Chainman.

R. L. Bates, Chainman.

J. L. Gardner, Moundman.

E. Barnes, Axman.

A. W. Hendrix, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted John P. Hesse

Transitman, United States ~~Deputy Surveyor~~, in surveying all those parts or portions of the W. bdy. of P20 S R. 25 E.

of the Gila and 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

H. R. Harvey, Chainman.

R. L. Bates, Chainman.

J. L. Gardner, Moundman.

E. Barnes, Axman.

A. W. Hendrix, Flagman.

Subscribed and sworn to before me this 12th day of September, 1911



John P. Hesse
U. S. Transitman

BOOK 43(6)
2332

FINAL OATH OF UNITED STATES ~~DEPUTY~~ SURVEYOR.

I, Alfred N. Oliver, ^{Transitman} United States Deputy Surveyor, do solemnly swear that, in pursuance of a ^{instructions} contract received from Frank P. Ingalls United States Surveyor General for Arizona, bearing date of the 28th day of July, 1911, 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 W. bdy. of P20 S. R 25 E.

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.

Alfred N. Oliver
United States Deputy Surveyor.
^{Transitman}

Subscribed by said Alfred N. Oliver, and sworn to before me }
this 2nd day of August, 1912

Frank Ingalls
SURVEYOR-GENERAL OF ARIZONA



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix Ariz. Aug. 3, 1912

The foregoing field notes of the survey of the West Boundary of
P20 S. R 25 E.

executed by Alfred N. Oliver
under ^{his} contract No. 5, dated Aug 21, 1911, 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.

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.