

FIELD NOTES

2337

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(1)

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

East Boundary of T 27 R 2 E.

Of the G. S. R. Meridian,

In the State of

Arizona

EXECUTED BY

Alfred N. Oliver

In the capacity of U. S. <sup>Traveller</sup> ~~Surveyor~~, under instructions dated Aug. 25, 1910.,

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, September 9, 1910., pursuant to authority contained in the Act of

Congress dated March 4, 1911.

Survey commenced October 15, 1911.

Survey completed October 16, 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	31	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Book No. 2337

# INDEX DIAGRAM.

Township 27D, Range 21E

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

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PRELIMINARY OATHS OF ASSISTANTS.

(13)

WE, R. L. Bates and H. R. Harvey  
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 East boundary of Twp. 22 S R. 21 E.

R. L. Bates, Chainman.  
H. R. Harvey, Chainman.

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



John P. Hesse  
U. S. Surveyor General

WE, J. J. Gardner and  
do solemnly swear that ~~we~~ I 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 east boundary of Twp. 22 S R. 21 E.

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

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



John P. Hesse  
U. S. Surveyor General

WE, J. E. Barnes and  
do solemnly swear that ~~we~~ I will well and truly perform the duties of axman 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 east boundary of Twp. 22 S R. 21 E.

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

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



John P. Hesse  
U. S. Surveyor General

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 east boundary Twp. 22 S R. 21 E.

A. W. Hendrix, Flagman.

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



John P. Hesse  
U. S. Surveyor General

Chains.

Survey commenced October 15, 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 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 secs. 10, 11, 14 and 15, Tp. 22 S., Rg. 21 E.; latitude 31° 31' N.; longitude, 110° 12' 20" W., I set off 31° 31' N. on the lat. arc; 8° 20 1/2' S. 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; October 15, 1911.

October 16:

At 5h. 51m. a.m., by my watch, which has correct l.m.t., I observe Polaris at western 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.

At 6h. 30m., a.m., l.m.t., I lay off the azimuth of Polaris, 1° 22' to the east, and mark the meridian thus determined, by cutting a small groove in the stone set October 15, on which the meridian coincides with the mark determined by the solar.

At 7h. 00m., a.m., l.m.t., I set off 31° 31' N. on the lat. arc; 8° 34' S. 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° 15' W.; the angle thus determined gives the mag. decl. 13° 15' E.

I commence at the cor. of Tps. 22 and 23 S., Rs. 21 and 22 E., which is a redwood post, marked and witnessed, as described by the Surveyor General.

Thence I run, North, along E. bdy. of Tp. 22 S., Rg. 21 E., bet. secs. 31 and 36.

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 1/4 sec. cor., marked on brass cap, 1/4 S 36 in W., and S 31 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 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. 25, 30, 31 and 36, marked on brass cap,

- T 22 S in N half,
- R 21 E, S 25 in NW.,
- R 22 E, S 30 in NE.,
- S 31 in SE., and
- S 36 in SW. quadrant;

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

Land, rolling.

Soil, sandy loam, mixed with gravel, 2nd rate.

2. East boundary of Township 22 South, Range 21 East.

Chains.

BOOK 2337

No timber.  
Undergrowth, mesquite and catclaw.

North, bet. secs. 25 and 30.

Over rolling land, through dense brush.

18.00 Cross wash, 75 lks. wide, course NE.

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 22 S in N. half;

R 21 E, S 24 in NW.,

R 22 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.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, mesquite and catclaw.

October 16: At this cor. I set off  $8^{\circ} 40\frac{1}{2}'$  S. on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is  $31^{\circ} 29\frac{1}{2}'$  N.

North, bet. secs. 19 and 24.

Over rolling land, through dense brush.

2.30 Fence brs. E. and W.

5.45 Cross wash, 35 lks. wide, course NE.

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; 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.

49.08 Cross road, brs. E. and W.

69.04 Fence brs. E. and W.

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 22 S in N. half;

R 21 E, S 13 in NW.,

R 22 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, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, mesquite and catclaw.

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.

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,

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Chains

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T 22 S in N. half,  
 R 21 E, S 12 in NW.,  
 R 22 E, S 7 in NE.,  
 S 18 in SE., and  
 S 13 in SW. quadrant; dig pits 18x18x12 ins. in  
 each sec. 5½ ft. dist., and raise a mound of earth 4 ft.  
 base, 2 ft. high, W. of cor.

Land, rolling.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, catclaw, mesquite and greasewood.

13.34

North, bet. secs. 7 and 12.

Over rolling land, through dense brush.

Intersect W. bdy. of San Rafael del Valle Private Land  
 Grant, 8.15 chs., S. 13°31½'E. of 21½ mile cor., which  
 is a granite stone, marked and witnessed as described  
 by the Surveyor General.

Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in  
 the ground for closing cor. of E. bdy. of Tp. 22 S., R. 21  
 E., marked on brass cap,

C C, W. of center,

S R D V in NE., and

T 22 S in SW. half;

S 7, R 22 E in SE., and

S 12, R 21 E in SW. sector; dig pits 42x36x12

ins. crosswise on each line, N. 13°31½'W. 4 ft. and S. 7  
 ft. dist., and raise a mound of earth 4 ft. base, 2 ft.  
 high, S. of cor.

Land, rolling.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, mesquite, catclaw and greasewood.

October 16, 1911.

GENERAL DESCRIPTION.

This township is rolling and level, and the soil is gener-  
 ally a sandy loam. There is no timber or water in the  
 township.

*Alfred N. Oliver*

U. S. Transitman.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

BOOK 2337

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(4)

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 east boundary of P. 22 S. R. 21 E.*

showing the respective capacities in which they acted:

*R. L. Bates*, Chainman.

*H. R. Harvey*, Chainman.

*J. L. Gardner*, Moundman.

Moundman.

*E. Barnes*, Axman.

Axman.

*A. W. Hendrix*, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted

*John P. Hesse*

*and A. N. Oliver*

*Transitman*, United States Deputy Surveyor, in surveying all

those parts or portions of the *east boundary of P. 22 S. R. 21 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*

*R. L. Bates*, Chainman.

*H. R. Harvey*, Chainman.

*J. L. Gardner*, Moundman.

Moundman.

*E. Barnes*, Axman.

Axman.

*A. W. Hendrix*, Flagman.

Subscribed and sworn to before me this *16<sup>th</sup>*

day of *October*, 1911

*John P. Hesse*

*U. S. Transitman*



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BOOK 2337

FINAL OATH OF UNITED STATES ~~DEPUTY SURVEYOR~~

*Transitman*

I, Alfred N. Oliver, *Transitman* United States Deputy Surveyor, do solemnly swear that, in pursuance of <sup>instructions</sup> a contract received from Frank D. Ingalls United States Surveyor General for Arizona, bearing date of the 25<sup>th</sup> day of August, 1910, 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 east boundary of P225 R. 21 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 27<sup>th</sup> day of August, 1912

Frank D. 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 Tr & R 21 E. the East Boundary of Gila and Salt River Meridian Arizona

executed by Alfred N. Oliver under his contract No. 5, dated August 25, 1910, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank D. 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.