

FIELD NOTES

re-accepted Dec. 17, 1912 B.L.O. letter E
OF THE SURVEY OF THE

South, East and West *Pambour* of

T. P. R. 26 E.

Of the *T. P. R.* Meridian,

In the State of *Arizona*

EXECUTED BY

John J. Hesse

In the capacity of U. S. ^{*Assistant*}~~Surveyor~~, under instructions dated *Aug. 2*, 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, *Aug. 18*, 1911, pursuant to authority contained in the Act of

Congress dated *March 4*, 1911

Survey commenced *September 10*, 1911

Survey completed *15*, 1911

INDEX DIAGRAM.

Township _____, Range _____

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BOOK 2333

INDEX DIAGRAM.

Township 21D, Range 26E

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Meanders Page _____

PRELIMINARY OATHS OF ASSISTANTS.

18 46
BOOK 2333

WE, A. E. Lyon and J. H. 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 S., E., and W. bdys. of Pp. 21 S. Rg. 26 E.

A. E. Lyon J. H. Bates, Chainman.
_____, Chainman.

Subscribed and sworn to before me this 8th
day of September, 1911



John P. Hesse
U. S. Transitman

WE, J. C. E. Mills and _____

do solemnly swear that I will well and truly perform the duties of moundman in the establishment of corners, according to the instructions given me to the best of my skill and ability, in the survey of

the S., E., and W. bdys. of Pp. 21 S. Rg. 26 E.

J. C. E. Mills, Moundman.
_____, Moundman.

Subscribed and sworn to before me this 8th
day of September, 1911



John P. Hesse
U. S. Transitman

WE, J. C. Barnes and _____

do solemnly swear that 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 S., E., and W. bdys. of Pp. 21 S. Rg. 26 E.

J. C. Barnes, Axman.
_____, Axman.

Subscribed and sworn to before me this 8th
day of September, 1911



John P. Hesse
U. S. Transitman

I, W. L. Ray, 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 S., E., and W. bdys. of Pp. 21 S. Rg. 26 E.

W. L. Ray, Flagman.

Subscribed and sworn to before me this 8th
day of September, 1911



John P. Hesse
U. S. Transitman

Chains.

Survey commenced September 10, 1911, and executed with with an A. Lietz Co. light mountain transit, No. 5631, with a solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other reading to single minutes of 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 transit, 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 the meridian determined by observations on Polaris, I proceed as follows:

At camp near the standard cor. of Tp. 20 S., Rs. 25 and 26 E.; latitude, $31^{\circ}38'34''$ N., longitude, $109^{\circ}45'29''$ W., I set off $31^{\circ}38\frac{1}{2}'$ N. on the lat. arc; $5^{\circ}06\frac{1}{2}'$ 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.

September 10: At 8h.16m. 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 10, 1911.

September 11: At 6h.30m. a.m., l.m.t., I lay off the azimuth of Polaris $1^{\circ}22'$ to the west, and mark the meridian thus determined, by cutting a small groove in the stone set September 10, on which the meridian coincides with the mark determined with the solar.

At 7h.00m. a.m., l.m.t., I set off $31^{\circ}38\frac{1}{2}'$ N. on the lat. arc; $4^{\circ}53'$ 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 observation.

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 closing cor. of Tp. 21 S., Rs. 25 and 26 E., which is a post badly rotted with pits nearly obliterated. I destroy all traces of this old cor., and reestablish it in the same place as follows:

Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for closing cor. of Tp. 21 S., Rs. 25 and 26 E., marked on brass cap,

C C, S. of center,

T 20 S, R 25 E, S 35 S 36, in N., and

T 21 S in S. half,

S 6, R 26 E in SE., and

S 1, R 25 E in SW. quadrant; dig pits 30x24x12

ins. crosswise on each line, E. and W. 4 ft. and S. of cor. 8 ft. dist., and raise a mound of earth 5 ft. base, $2\frac{1}{2}$ ft. high, S. of cor.

Thence I run,

South, on W. bdy. of T. 21 S., R. 26 E., finding no trace of cors., until at

480.12

Fall, 30 lks. E. of cor. of Ts. 21 and 22 S., Rs. 25 and 26 E., which is a post nearly rotted away, with a marked stone. I destroy all traces of the old cor., and reestablish it in the same place as follows:

Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for the cor. of Ts. 21 and 22 S., Rs. 25 and 26 E., marked on brass cap,

Chains.

T 21 S in N.,
 R 26 E in E.,
 T 22 S in S., and
 R 25 E in W. half;
 S 36 in NW.,
 S 31 in NE.,
 S 6 in SE., and
 S 1 in SW. quadrant; dig pits 24x24x12 ins. in each
 line, N., E. and W., 4 ft. and S. of cor. 8 ft. dist.,
 and raise a mound of earth 5 ft. base, 2½ ft. high, S.
 of cor.

This falling answers to a correction of 5 lks. or 02' per
 mile to the west, beginning at the NW. cor. of Tp., and
 the length of each mile by proportion will be 80.02
 chs.

September 11, 1911.

September 12: At 7h.00m., a.m., l.m.t., I set off 31°38½'
 N. on the lat. arc; 4°30' N. on the decl. arc, and deter-
 mine with the solar a meridian at the closing cor. of
 township 21 S., Rs. 25 and 26 E., previously described.
 Thence I run,
 S. 0°02' W., bet. secs. 1 and 6, marking and blazing true
 line.

Over level land, through dense brush.

40.01 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground for ¼ sec. cor., marked on brass cap, ¼ S 1
 in W. and S 6 in E. half; dig pits 18x18x12 ins. N. and
 S. of cor., 3 ft. dist., and raise a mound of earth 3½
 ft. base, 1½ ft. high, W. of cor.

80.02 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,

T 21 S in N. half;
 R 25 E, S 1 in NW.,
 R 26 E, S 6 in NE.,
 S 7 in SE., and

S 12 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, level.

Soil, sandy loam over 2 ft. deep; dry, medium texture,
1st rate.

No timber.

Undergrowth, mesquite.

S. 0°02' W., bet. secs. 7 and 12.

Over level land, through dense brush.

12.41 Cross wash, 5 lks. wide, course E.

17.65 Cross road, brs. NE. and SW.

28.65 Cross wash, 10 lks. wide, course E.

40.01 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground for ¼ sec. cor., marked on brass cap ¼ S 12
 in W. and S 7 in E. half; dig pits 18x18x12 ins. N. and
 S. of cor. 3 ft. dist., and raise a mound of earth 3½
 ft. base, 1½ ft. high, W. of cor.

48.80 Cross wash, 8 lks. wide, course SE.

53.12 Cross wash, 8 lks. wide, course SE.

80.02 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 21 S in N. half,
 R 25 E, S 12 in NW.,
 R 26 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, level.

Soil, sandy loam over 2 ft. deep; dry, medium texture; 1st
rate.

Chains.

No timber.
Undergrowth, mesquite.

- S.0°02'W., bet. secs.13 and 18.
Over level land, through dense brush.
- 40.01 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.
- 59.39 Cross road, bra. NE and SW.
- 80.02 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 21 S in N.half,
R 25 E, S 13 in NW.,
R 26 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,level.
Soil, sandy loam, over 2 ft.deep; dry,medium texture;
1st rate.
No timber.
Undergrowth, mesquite.
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°36'N.

- S.0°02'W., bet. secs.19 and 24.
Over level land, through dense brush.
- 40.01 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.
- 80.02 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 21 S in N.half;
R 25 E, S 24 in NW.,
R 26 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,level.
Soil, sandy loam, over 2 ft. deep; dry, medium texture;
1st rate.
No timber.
Undergrowth, mesquite.

- S.0°02'W., bet. secs.25 and 30.
Over level land, through dense brush.
- 40.01 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.
- 80.02 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 21 S in N.half,
R 25 E, S 25 in NW.,
R 26 E., S 30 in NE.,
S 31 in SE., and
S 36 in SW. quadrant; dig pits 18x18x12 ins.in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4

Chains.

ft. base, 2 ft. high, W. of cor.
Land, level.
Soil, sandy loam over 2 ft. deep; dry, medium texture;
1st rate.
No timber.
Undergrowth, mesquite.

40.01 S. 0° 02' W., bet. secs. 31 and 36.
Over level land, through dense brush.
Set an iron post 3 ft. long, 1 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.

80.02 The cor. of Tps. 21 and 22 S., Rs. 25 and 26 E., previously
described.
Land, level.
Soil, sandy loam, over 2 ft. deep; dry, medium texture,
1st rate.
No timber. Undergrowth, mesquite.
September, 12, 1911.

Resurvey of the South Bdy. of Township 21 S., R.26 E.

September 13: At 7h.00m.a.m., 1.m.t., I set off 31°33 1/2' N.
on the lat. arc; 4°07 1/2' N. on the decl. arc, and deter-
mine with the solar a meridian at the cor. of Ts. 21
and 22 S., Rs. 25 and 26 E., previously described.
Thence I retrace East on S. bdy. of Tp., bet. secs. 6 and
31.

40.43 Fall 12 lks. S. of old 1/4 sec. cor., which is a mesquite
stake, badly rotted and pits obliterated.
Thence east from 1/4 sec. cor.

40.00 Find no trace of old sec. cor. I continue in the same course

40.00 East bet. secs. 5 and 32.
Find no trace of old 1/4 sec. cor.
Thence east in same course.

80.66 Fall 42 lks. S. of old sec. cor., which is a mesquite stake,
badly rotted and pits obliterated.

40.70 East, bet. secs. 4 and 33.
Fall 26 lks. N. of old 1/4 sec. cor., which is a mesquite
stake badly rotted and pits obliterated.
Thence E. from 1/4 sec. cor.

40.26 Fall 6 lks. S. of old sec. cor., which is a mesquite stake
badly rotted and pits obliterated.

40.00 East, bet. secs. 3 and 34.
Find no trace of old 1/4 sec. cor.
Thence E. in same course.

80.50 Fall 14 lks. S. of old sec. cor., which is a mesquite stake
badly rotted and pits obliterated.

September 13: At the cor. of Ts. 21 and 22 S., Rs. 25 and
26 E., I set off 4°01 1/2' N. on the decl. arc, and ob-
serve the sun on the meridian at noon; the resulting
lat. is 31°33 1/2' N.

Thence I run,
N. 89°50' E., bet. secs. 6 and 31.
Over level land, through dense brush.

40.43 I destroy all traces of the old 1/4 sec. cor., and reestab-
lish it in the same place as follows:

Resurvey of the South Boundary of Township 21 South, Range 26 E. 5

Chains.

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 31 in N., and S 6 in S.half; dig pits 18x18x12 ins.E.and W.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,N.of cor.
Thence N.89°48'E., from $\frac{1}{4}$ sec.cor.

58.67 Cross road, bears NE.and SW.
80.65 Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor.of secs.5,6,31 and 32, marked on brass cap,
T 21 S in N.,
T 22 S in S., and
R 26 E in W.half,
S 31 in NW.,
S 32 in NE.,
S 5 in SE., and
S 6 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,level.
Soil, sandy loam over 2 ft. deep; dry, medium texture;1st rate.
No timber.
Undergrowth, mesquite.

N.89°48'E., bet. secs.5 and 32.
Over level land.

14.15 Cross wash, 15 lks.wide, course NE.
34.55 Cross wash, 15 lks.wide, course SE.
39.34 Cross road, bears SE.and NW.
40.22 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 32 in N. and S. 5 in S.half; dig pits 18x18x12 ins.E.and W.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N.of cor.
Thence N.89°48'E. from $\frac{1}{4}$ sec.cor.

40.60 Cross road, bears NE.and SW.
40.78 Cross White River Wash,80 lks.wide, course SW.
65.78 Cross road, bears NW.and SE.
80.44 I destroy all traces of the old sec.cor., and reestablish it in the same place as follows:
Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor.of secs. 4,5,32 and 33, marked on brass cap,
T 21 S in N.,
T 22 S in S., and
R 26 E in W.half;
S 32 in NW.,
S 33 in NE.,
S 4 in SE., and
S 5 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,level.
Soil, sandy loam over 2 ft. deep; dry, medium texture; 1st rate.
No timber.
No undergrowth.

S.89° 38'E., bet. secs.4 and 33.
Over level land.

40.70 I destroy all traces of the old $\frac{1}{4}$ sec.cor., and reestablish it in the same place as follows:
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 33 in N. and S 4 in S.half; dig pits 18x18x12 ins. E.and W.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft.base, $1\frac{1}{2}$ ft. high,N.of cor.

Chains	
	Thence N.89°55'E., from $\frac{1}{4}$ sec.cor.
61.45	Cross road, bears NE. and SW.
80.96	I destroy all traces of the old sec. cor., and reestablish it in the same place as follows: Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for the cor. of secs. 3, 4, 33 and 34, marked on brass cap, T 21 S in N., T 22 S in S., and R. 26 E in W. half; S 33 in NW., S 34 in NE., S 3 in SE., and S 4 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, level. Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate. No timber. No undergrowth.
	N.89°54'E., bet. secs. 3 and 34.
	Over level land.
40.25	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 $\frac{1}{2}$ S 34 in N. and S 3 in S. half; dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Thence,
	N.89° 54'E. from $\frac{1}{4}$ sec.cor.
80.50	I destroy all traces of the old sec. cor. and reestablish it in the same place as follows: Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 2, 3, 34 and 35, marked on brass cap, T 21 S in N., T 22 S. in S., and R 26 E in W. half; S 34 in NW., S 35 in NE., S 2 in SE., and S 3 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, level. Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate. No timber. No undergrowth.
	September 13, 1911.
	September 14: At 7h.00m., a.m., 1.m.t., I set off $31^{\circ}33\frac{1}{2}'N.$ on the lat. arc; $3^{\circ}44\frac{1}{2}'N.$ on the decl. arc, and determine a meridian with the solar at the cor. of secs. 2, 3, 34 and 35.
	Thence I retrace east on S. bdy. of Tp., bet. secs. 2 and 35.
41.00	Fall 5 lks. S. of the old $\frac{1}{4}$ sec. cor., which is a mesquite stake, badly rotted and pits obliterated.
	Thence east from $\frac{1}{4}$ sec. cor.
39.64	Fall 5 lks. S. of old sec. cor, which is a mesquite stake badly rotted and pits obliterated.
	East, bet. secs. 1 and 36.
40.00	Find no trace of old $\frac{1}{4}$ sec. cor. Thence continue east.
80.52	The old cor. of Tps. 21 and 22 S., Rs. 26 and 27 E.

Chains .

September 14: At the cor. of secs. 2, 3, 34 and 35, I set off $3^{\circ}38\frac{1}{2}'N.$ on the decl. arc, and observe the sun on the meridian at noon; the resulting latitude is $31^{\circ}32\frac{1}{2}'N.$

Thence I run, $N.89^{\circ}56'E.$, bet. secs. 2 and 35.

Over level land.

41.00 I destroy all traces of the old $\frac{1}{4}$ sec. cor., and reestablish it in the same place as follows:

Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 35 in N., and S. 2 in S. half; dig pits $18 \times 18 \times 12$ ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Thence $N.89^{\circ}56'E.$, from $\frac{1}{4}$ cor.

79.50 Cross road, bears NNW. and SSE.

79.72 Telegraph line, NNW. and SSE.

80.55 El Paso and Southwestern R.R. bears NNW. and SSE.

80.64 I destroy all traces of old sec. cor., and reestablish it in the same place as follows:

Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for the cor. of secs. 1, 2, 35 and 36, marked on brass cap,

T 21 S in N.,

T 22 S in S., and

R 26 E in W. half;

S 35 in NW.,

S 36 in NE.,

S 1 in SE., and

S 2 in SW. quadrant; dig pits $18 \times 18 \times 12$ 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.

East, bet. secs. 1 and 36.

Over level land.

40.26 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, $\frac{1}{4}$ S 36 in N. and S 1 in S. half; dig pits $18 \times 18 \times 12$ ins., E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Thence east from $\frac{1}{4}$ sec. cor.

80.52 I destroy old cor. of Tps. 21 and 22 S., Rs. 26 and 27 E., and reestablish it in the same place as follows:

Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for the cor. of Tps. 21 and 22 S., Rs. 26 and 27 E., marked on brass cap,

T 21 S in N.,

R 27 E in E.,

T 22 S in S., and

R 26 E in W. half;

S 36 in NW.,

S 31 in NE.,

S 6 in SE., and

S 1 in SW. quadrant; dig pits $24 \times 24 \times 12$ ins. on each line, N., E. and W., 4 ft. and S. of cor. 8 ft. dist., and raise a mound of earth 5 ft. base, $2\frac{1}{2}$ ft. high, S. of cor.

Land, level.

Soil, sandy loam over 2 ft. deep; dry, medium texture; 1st rate.

No timber. No undergrowth.

September 14, 1911.

Chains.

- From the cor. of Ts. 21 and 22 S., Rs. 26 and 27 E., previously described, I retrace North, on E. bdy. of Tp. 21 S., Rg. 26 E., bet. secs. 31 and 36.
- 40.00 Find no trace of old $\frac{1}{4}$ sec. cor.
Thence I continue north in same course.
- 80.64 Fall 3 lks. W. of old sec. cor. of secs. 25, 30, 31 and 36, which is a mesquite stake badly rotted and pits obliterated.
-
- North, bet. secs. 25 and 30.
- 40.23 Fall 19 lks. E. of old $\frac{1}{4}$ sec. cor., which is a mesquite stake badly rotted and pits obliterated.
Thence North from $\frac{1}{4}$ sec. cor.
- 40.23 Fall 13 lks. E. of old cor. of secs. 19, 24, 25 and 30, which is a mesquite stake badly rotted and pits obliterated.
-
- I commence at the cor. of Ts. 21 and 22 S., Rs. 26 and 27 E., hereinbefore described.
Thence I run,
N. 0° 01' E., bet. secs. 31 and 36.
Over level land.
- 40.32 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 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 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
- 80.64 I destroy all traces of the old sec. cor., and reestablish it in the same place as follows:
Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for the cor. of secs. 25, 30, 31 and 36, marked on brass cap,
T 21 S in N. half;
R 26 E, S 25 in NW.,
R 27 E, S 30 in NE.,
S 31 in SE., and
S 36 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, level.
Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate.
No timber.
No undergrowth.
-
- N. 0° 16' W., bet. secs. 25 and 30.
Over level land.
- 40.23 I destroy all traces of the old $\frac{1}{4}$ sec. cor., and reestablish it in the same place as follows:
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.
Thence, N. 0° 11' W., from $\frac{1}{4}$ cor.
- 80.46 I destroy all traces of the old sec. cor., and reestablish it in the same place as follows:
Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for the cor. of secs. 19, 24, 25 and 26, marked on brass cap,
T 21 S in N. half;
R 26 E, S 24 in NW.,
R 27 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.

Chains.

Land, level.
Soil, sandy loam over 2 ft. deep; dry, medium texture;
1st rate.
No timber.
No undergrowth.

September 14, 1911.

September 15: At 7h.00m., a.m., l.m.t., I set off $31^{\circ}35'$ N. on the lat. arc; $3^{\circ}21\frac{1}{2}'$ N. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 19, 24, 25 and 30.

Thence I retrace north, on E. bdy. of Tp., bet. secs. 19 and 24.

- 40.00 Find no trace of old $\frac{1}{4}$ sec. cor.
Thence I continue north in same course.
80.86 Fall 23 lks. E. of old sec. cor., which is a mesquite stake, badly rotted, and pits obliterated.

North, bet. secs. 13 and 18.

- 40.00 Find no trace of old $\frac{1}{4}$ sec. cor.
Thence I continue north, in same course.
80.64 Fall, 3 lks. W. of old sec. cor., which is a mesquite stake, badly rotted and pits obliterated.

North, bet. secs. 7 and 12.

- 40.00 Find no trace of old $\frac{1}{4}$ sec. cor.
Thence I continue in same course.
80.62 Fall 3 lks. W. of old sec. cor., which is a mesquite stake, badly rotted and pits obliterated.

North, bet. secs. 1 and 6.

- 40.40 Fall 12 lks. E. of old $\frac{1}{4}$ sec. cor., which is a mesquite stake, badly rotted and pits obliterated.
Thence north from $\frac{1}{4}$ sec. cor.
35.89 Fall 1 lk. west of old standard closing cor. of Tp. 21 S., Rs. 26 and 27 E., which is a mesquite stake badly rotted and pits obliterated.

September 15: At the cor. of secs. 19, 24, 25 and 30, I set off $3^{\circ}15\frac{1}{2}'$ N. on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is $31^{\circ}35'$ N.

Thence I run,
N. $0^{\circ}10'$ W., bet. secs. 19 and 24.

- 40.43 Over level land.
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.
80.86 I destroy all traces of the old sec. cor., and reestablish it in the same place as follows:
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 21 S in E. half;
R 26 E, S 13 in NW.,
R 27 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, level.
Soil, sandy loam over 2 ft. deep; dry, medium texture,
1st rate.

Chains

No timber.
No undergrowth.

N.0°01' E., bet. secs. 13 and 18.

Over level land.

40.32 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.

80.64 I destroy all traces of the old sec. cor., and reestablish it in the same place as follows:

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 21 S in N. half,
R 26 E, S 12 in NW.,
R 27 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, level.

Soil, sandy loam over 2 ft. deep; dry, medium texture; 1st rate.

No timber.

No undergrowth.

N.0°01' E., bet. secs. 7 and 12.

Over level land, through dense brush.

40.31 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 in W. and S 7 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.

80.62 I destroy all traces of the old sec. cor., and reestablish it in the same place as follows:

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,

T 21 S in N. half;
R 26 E, S 1 in NW.,
R 27 E, S 6 in NE.,
S 7 in SE., and

S 12 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, level.

Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate.

No timber.

Undergrowth, mesquite.

N.0°10' W., bet. secs. 1 and 6.

Over level land, through dense brush.

40.40 I destroy all traces of the old $\frac{1}{4}$ sec. cor., and reestablish it in the same place as follows:

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 1 in W. and S 6 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.

N.0°01' E., from $\frac{1}{4}$ sec. cor.

76.29 The old closing cor. of Tp. 21 S., Rs. 26 and 27 E. (For re-establishment see Book "G.")

Land, level.

Chains.

Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate.

No timber; undergrowth, mesquite.

September 15, 1911.

GENERAL DESCRIPTION.

This township is level, and the soil generally, is a rich sandy loam, very fertile. There is no timber in the township. White River runs through the township, a running stream in wet seasons.

Latitudes, departures, and closing errors.

Line Designated.	True Bearing.	Distance.	Latitudes.		Departures.	
			N.	S.	E.	W.
S. Bdy.	N. 89° 50' E.	40.43	.12		40.43	
	N. 89° 48' E.	120.66	.42		120.66	
	S. 89° 38' E.	40.70		.26	40.70	
	N. 89° 55' E.	40.26	.06		40.26	
	N. 89° 54' E.	80.50	.14		80.50	
	N. 89° 56' E.	80.64	.10		80.64	
East Bdy.	East,	80.52			80.52	
	N. 0° 1' E.	80.64	80.64		.03	
	N. 0° 16' W.	40.23	40.23			.19
	N. 0° 11' W.	40.23	40.23			.13
	N. 0° 10' W.	80.86	80.86			.23
	N. 0° 1' E.	161.26	1 61.26		.06	
North Bdy.	N. 0° 10' W.	40.40	40.40			.12
	N. 0° 1' E.	35.89	35.89		.01	
	S. 89° 50' W.	109.00		.34		109.00
	S. 89° 53' W.	160.16		.32		160.16
West Bdy.	N. 89° 46' W.	160.24	.66			160.24
	N. 89° 45' W.	52.60	.22			52.60
Convergency,	S. 0° 2' W.	480.12		480.12		.30
Totals,			481.23	481.04	483.81	483.42
			481.04		483.42	
Error in lat.-----			.19		0.39	
Error in dep.-----						

John P. Heese
U.S. Transitman.

LIST OF NAMES.

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 S. E. and W. bdy. of Tp. 21 S. Rg. 26 E. showing the respective capacities in which they acted:

A. E. Lyon Chairman.

J. H. Bates Chairman.

E. E. Mills Moundman.

E. Barnes Axman.

W. L. Ray 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 S. E. and W. bdy. of Tp. 21 S. Rg. 26 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

J. H. Bates Chairman.

A. E. Lyon Chairman.

E. E. Mills Moundman.

E. Barnes Axman.

W. L. Ray Flagman.

Subscribed and sworn to before me this 15th day of September, 1911

John P. Hesse
U. S. Transitman



59 13
BOOK

2333 FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, John P. Hesse, ^{Transitman} United States Deputy Surveyor, do solemnly swear that, in pursuance of ^{instructions} a contract received from Frank C. Ingalls, United States Surveyor General for Arizona, bearing date of the 18th 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 S. E. and W. b'dys. of Twp. 21 S. Rg. 26 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.

John P. Hesse
United States Deputy Surveyor.
^{Transitman}

Subscribed by said John P. Hesse, and sworn to before me }
this 18 day of July, 1912 and

by said Alfred N. Oliver Aug 7, 1912 Frank C. 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 South East and West Boundaries of Twp. 21 S. R. 26 E

executed by John P. Hesse
under his ^{contract} contract No. 1, dated Aug 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 C. 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.