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BOOK "U"

BOOK 2671

MAY 11 1914

FIELD NOTES

OF THE SURVEY OF THE

West boundary of Tp. 16 S. Rg. 27 E.

Of the Gila and Salt River Base and Meridian,

In the State of Arizona.

EXECUTED BY

John F. Hesse

In the capacity of U. S. Surveyor, under instructions dated April 23rd, 1913, issued by the United States Surveyor General to govern surveys included in Group No. 18, which were approved by the Commissioner of the General Land Office, May 7th, 1913, pursuant to authority contained in the Act of Congress dated June 23rd, 1913.

Survey commenced July 18, 1913.

Survey completed July 19, 1913.

BOOK 2671

INDEX DIAGRAM.

Township 16 South, Range 27 East.

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

West boundary of Tp. 16S. Rg. 27 E.

Chains.

Survey commenced July 18, 1913 and executed with a W. and L.E. Gurly transit, not numbered, with solar attachment. The horizontal limb is provided with one double vernier, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was approved by the Supervising Surveyor August 28, 1913.

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, I proceed as follows:

At my camp which is situated at the corner of T.16 and 17S. R.26 and 27 E., latitude $31^{\circ}59'N$, longitude $109^{\circ}38'04''W$, I set off $31^{\circ}59'N$ on the lat. arc; $21^{\circ}02'N$ on the decl. arc; and at 5h.30m p.m., l.m.t., determine a meridian with the solar, and mark a point thereof on a stone firmly set in the ground, 5 chs. N of my station.

At 11h.47m p.m., by my watch which has correct l.m.t., I observe Polaris at Eastern Elongation in accordance with the Manuel of Instructions, and mark a point in the line thus determined, on a peg driven in the ground 5 chs. N of my station.

July 18, 1913.

July 19, 1913. At 6h.30m a.m., l.m.t., I lay off the azimuth of Polaris which is $1^{\circ}22\frac{1}{2}'$ to west, and mark a point in the meridian thus determined by cutting a small groove in the stone set July 18, 5 chs. N of my station. The meridian determined by observation on Polaris falls 0.3 ins. east of the mark determined by the solar.

At 7h.00m a.m., l.m.t., I set off $31^{\circ}59'N$ on the lat. arc; $20^{\circ}55\frac{1}{2}'N$ on the decl. arc; and determine with the solar a meridian and mark a point thereof on the stone already set 5 chs. N of my station; this mark falls 0.3 ins. east of the meridian established by the Polaris observation. The solar apparatus by p.m. and a.m. observations, defines positions for meridians, respectively, about $0'16''E$ and W of meridian established by the Polaris observation; therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 7h.30m a.m. l.m.t., is $N13^{\circ}40'W$; the angle thus determined gives the magnetic declination $13^{\circ}40'E$.

I commenced at the cor. of Tps.16 and 17 S., Rgs.26 and 27 E., reestab. by me April 9, 1913, as described in Book "J." Thence I run

North bet secs. 31 and 36.

Over level land.

40.00 Set an iron post 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, S36 in W and S31 in E half. 1913,

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.

80.00 Set an iron post 3 ft. long; 3 ins. in dia., 24 ins. in ground, for cor. of secs. 25, 30, 31 and 36, marked on brass cap, 1913,

T16S in N half;

R26ES25 in NW,

R27ES30 in NE,

S31 in SE and

S36 in SW 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, dry rich sandy loam medium texture over 2 ft. deep 1st rate.

No timber.

West boundary of T 16 S R 27 E.

| Chains. | |
|---------|---|
| | North bet secs. 25 and 30. Over level land. |
| 40.00 | Set an iron post 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, ¹⁹¹³ S35 in W and S30 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. |
| 80.00 | Set an iron post 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for cor. of secs. 19, 24, 25 and 30, marked on brass cap, 1913; T16S in N half; R26ES24 in NW, R27ES19 in NE, S30 in SE and S25 in SW 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, dry rich sandy loam medium texture over 2 ft. deep 1st rate. No timber. |
| | ----- |
| | North, bet secs. 19 and 24. Over level land. |
| 14.60 | Cross road bears NE and SW. |
| 40.00 | Set an iron post 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, ¹⁹¹³ S24 in W and S19 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. |
| 80.00 | Set an iron post 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for cor. of secs. 13, 18, 19 and 24, marked on brass cap, 1913; T16S in N half; R26ES13 in NW, R27ES18 in NE, S19 in SE and S24 in SW 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, dry rich sandy loam medium texture over 2 ft. deep 1st rate. No timber. |
| | Note: 19, 1913. At this cor. I set off $20^{\circ}52\frac{1}{2}'$ N on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is $32^{\circ}02'$ N. |
| | ----- |
| | North, bet secs. 13 and 18. Over level land. |
| 40.00 | Set an iron post 3 ft. long, 1 in. in dia., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, ¹⁹¹³ S13 in W and S18 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. |
| 80.00 | Set an iron post 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for cor. of secs. 7, 12, 13 and 18, marked on brass cap, 1913; T16S in N half; R26ES12 in NW, R27ES 7 in NE, S18 in SE and S13 in SW quadrant. |

BOOK 2671

West boundary of T16S R27E.

Chains.

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

No timber.

North, bet secs. 7 and 12.

Over level land.

19.90 Cross road bears NW and SE.

40.00 Set an iron post 3 ft. long, 1 in. in dia., 26 ins. in the
ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, $\frac{1}{4}$ S 12 in
W and S7 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.

61.53 Cross road bears E and W.

80.00 Set an iron post 3 ft. long, 3 ins. in dia., 24 ins. in the
ground, for cor. of secs. 1, 6, 7 and 12, marked on brass
cap, 1913;

T16S in N half;

R26ES12 in NW,

R27ES6 in NE,

S7 in SE and

S12 in SW 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, dry rich sandy loam medium texture over 2 ft. deep
1st rate.

No timber.

North, bet secs. 1 and 6.

Over level land.

40.00 Set an iron post 3 ft. long, 1 in. in dia., 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. 1913;

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.

68.70 Cross road bears NW and SE. S.

78.94 Intersect 3rd Standard Parallel, 6.20 chs. S. $89^{\circ}56'E$ of the
Std. $\frac{1}{4}$ sec. cor. of sec. 36, which is a mound and desposit
with stake in E pit, marked and witnessed as described
by the Surveyor General. At point of intersection

Set an iron post 3 ft. long, 3 ins. in dia., 24 ins. in
the ground, for closing cor. of T 16 S Rs. 26 and 27 E.,
marked on brass cap, 1913;

CC S of centre.

T15SR26ES36R27ES31 in N and

T16S in S half;

S6R27E in SE and

S1R26E in SW quadrant.

Dig pits 30 x 24 x 12 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.

Land, level.

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

No timber.

July 19, 1913.

John P. Hesse
U. S. Surveyor.

FINAL OATH OF UNITED STATES SURVEYOR.

I, John F. Hesse, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for Arizona, for Group 18 bearing date of the 23rd day of April, 1913, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the west boundary of Tp. 16 S. Rg. 27 E.

of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed 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 U. S. 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 F. Hesse
U. S. Surveyor.

Subscribed by said John F. Hesse, and sworn to before me }
this 11th day of May, 1914



Frank Ingalls
Surveyor General of Arizona.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix Arizona, July 21, 1914

The foregoing field notes of the survey of the

West boundary of

Township N° 16 South, Range N° 27 East
of the Gila and Salt River Base and Meridian, Arizona.

executed by John F. Hesse, U. S. Surveyor under his special instructions dated April 23rd, 1913, 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
U. S. 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.~~