

BOOK "Z"

BOOK 2676

1913

FIELD NOTES

OF THE SURVEY OF THE

South bdy and part of West boundary of Tp. 12 S. Rg. 20 E.

and

parts of the South and East Boundaries of Tp. 7 S. Rg. 19 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 May 22nd 1912,
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, June 29th, 1912, pursuant to authority contained in the Act of
Congress dated June 23rd, 1913.

Survey commenced September 8, 1913

Survey completed October 19, 1913

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INDEX DIAGRAM.

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South Boundary of T12S, R20E.

Chains.

Survey commenced September 8, 1913 and was 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.

This instrument was approved by the Supervising Surveyor August 28, 1912.

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 a meridian determined by observations made on Polaris, I proceed as follows-

At my camp which is situated near the cor. of secs. 25, 26, 35 and 36, T12S R20E, latitude 32°20' N, longitude 110°16' 21" W; I set off 32°20' N on the lat. arc; 5°40' N on the decl. arc; and at 5h.00m p.m., l.m.t., I 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 8h23m.30 p.m., by my watch which has correct local mean time, I observe Polaris at Eastern Elongation, in accordance with the Manual of Instruction, and mark a point in the line thus determined, on a peg driven in the ground, 5 chs. N of my station.

September 8, 1913.

September 9, 1913. At 6h.30m a.m.; l.m.t., I lay off the azimuth of Polaris 1°22' to west and mark a point in the meridian thus determined, by cutting a small groove in the stone already set 5 chs. N of my station; this mark falls 0.3 ins. to the E of the mark determined by the solar.

At 7h.00m a.m., l.m.t., I set off 32°20' N on the lat. arc; 5°26' N on the decl. arc; and determine with the solar a meridian, marking a point thereof by a cross on the stone already set 5 chs, N of my station; this mark falls 0.3 ins. E of the meridian determined by observation of Polaris.

The solar apparatus, by p.m. and a.m. observations defines positions for meridians, respectively about 0'16" W and E of meridian established by Polaris observations; 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 N 13°30' W, the angle thus determined gives the magnetic declination 13°30' E.

September 10, 1913: At 8h.00m a.m., l.m.t., I set off 32°20' N on the lat. arc; 5°25' N on the decl. arc; and determine with the solar a meridian at the cor. of Ts. 12 and 13 S, Rs. 20 and 21 E. which is a stone marked and witnessed as described by the Surveyor General.

Thence I run

West on a random line, along south bdy. of T12S R20E., setting temp. ¼ sec. and sec. cors. at intervals of 40.00 chs.; and 457.08 chs. I intersect the E. bdy. of T^{13S-R19E} 9.22 chs. S. of the cor. of Ts. 12 and 13 S., Rs. 19 and 20 E., which is a post marked and witnessed as described by the Surveyor General. As the post is poorly set and the marking nearly obliterated, I destroy all traces of the old cor. and re-establish it as follows.

Set a granite stone 24 x 14 x 6 ins., 18 ins. in the ground, for cor. of Ts. 12 and 13 S, R19E., marked with 6 notches on N and W edges; and raise a mound of stone 2 ft, base, 1½ ft. high, W. of cor. Pits impracticable.

Then at point of intersection I

Set an iron post 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for closing cor. of Ts. 12 and 13 S., R20E., marked on brass cap 1913,

CC W. of center;

South Boundary of T12S R20E.

Chains.

R20E in E. and
 R19ET12SS36S1T13S in W. half;
 T12SS31 in NE. and
 S6T13S in SE. quadrant.
 Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, E. of
 cor. Pits impracticable.

September 9, 1913.

September 17, 1913. At 7h.30m a.m., l.m.t., I set off 32°
 $20'N.$ on the lat. arc; $2^{\circ}22\frac{1}{2}'N$ on the decl. arc; and deter-
 mine with the solar a meridian at the closing cor. of Ts.
 12 and 13 S., R.20E. above described.

Thence I run

East, on a true line, bet. secs. 6 and 31.

Over mountainous land through dense brush.

Ascend along N slope of ridge.

12.00 Ridge bears NE and SW. Descend.

17.08 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 $\frac{1}{4}$ S31 in N.
 and S6 in S. half.

Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of
 cor. Pits impracticable. Ascend from $\frac{1}{4}$ Cor.

18.55 Ridge bears NE and SW. Descend.

36.70 Cross wash 25 lks. wide course SW. Ascend.

42.40 Ridge bears NE and SW. Descend.

57.08 Set an iron post 3 ft. long, 3 ins. in diam, 24 ins. in the
 ground, for cor. of secs. 5, 6, 31 and 32, marked on brass
 cap, 1913;

T12S in N,
 T13S in S. and
 R20E in W. half;
 S31 in NW,
 S32 in NE,
 S 5 in SE. and
 S 6 in SW. quadrant,

Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of
 cor. Pits impracticable.

Land, mountainous.

Soil, gravelly and rocky 3rd and 4th. rate.

No timber.

Undergrowth, mesquite, cacti, catclaw.

East, bet secs. 5 and 32, on true line,

Over mountainous land through dense brush. Descend.

1.20 Cross wash, 12 lks. wide, course SE.

9.80 Cross wash, 15 lks. wide, course SE. Ascend.

22.20 Ridge, bears SE and NW., Descend.

32.85 Cross wash, 20 lks. wide course SE. Ascend.

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 $\frac{1}{4}$ S32 in N.
 and S5 in S. half.

Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of
 cor. Pits impracticable.

Note: On 17, 1913. At this $\frac{1}{4}$ Cor. I set off $2^{\circ}17'N.$ on the decl.
 arc and observe the sun on the meridian at noon; the re-
 sulting lat. is $32^{\circ}20'N.$

Descend along S slope of canyon.

57.00 Hot Springs Canyon. Running-water—20 lks. wide course SW, 4
 ft. deep. Ascend.

68.90 Ridge, bears NW and SE. Descend. Enter scattered timber.

80.00 Set an iron post 3 ft. long, 3 ins. in diam, 24 ins. in the
 ground, for cor. of secs. 4, 5, 32 and 33, marked on brass
 cap, 1913;

T12S in N,

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South Boundary of T12S., R20E.

Chains.

T12S in S. and
R20E in W. half;
S32 in NW,
S33 in NE,
S 4 in SE and
S 5 in SW quadrant.

Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Land, mountainous.

Soil, rocky 4th rate.

Timber, juniper.

Undergrowth, mesquite, cacti, catclaw.

East, bet secs. 4 and 33, on true line,

Over mountainous land, through scattered timber and dense brush. Descend along N. slope.

12.80 Cross gulch 12 lks. wide course NW. Ascend.

16.90 Ridge bears NW and SE. Descend.

28.35 Cross gulch 8 lks. wide course NW. Ascend.

33.80 Ridge bears NW and SE. Descend.

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 ¹⁹¹³ S33 in N. and S4 in S. half.

Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

44.20 Cross gulch 15 lks. wide course NW. Ascend.

56.70 Ridge bears N and S. Descend.

69.40 Cross wash 35 lks. wide course NW. Ascend.

80.00 Set an iron post 3 ft. long, 3 ins. in diam, 24 ins. in the ground, for cor. of secs. 3, 4, 33 and 34, marked on brass cap, 1913;

T12S in N,

T12S in S. and

R20E in W. half;

S33 in NW,

S34 in NE,

S 3 in SE. and

S 4 in SW quadrant.

Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Land, mountainous.

Soil, rocky 4th rate.

Timber, juniper.

Undergrowth, mesquite, cacti.

September 17, 1913.

September 18, 1913, At 7h.00m a.m., l.m.t., I set off 32° $20'N$ on the lat. arc; $2^{\circ}00'N$ on the decl. arc; and determine with the solar a meridian at the cor. of secs. 3, 4, 33 and 34, on S bdy. of T12S, R20E., above described.

Thence I run

East, bet secs. 3 and 34, on true line,

Over mountainous land, through scattered timber and dense brush. Ascend from cor.

2.10 Top of S. side of high peak. Descend.

34.60 Cross gulch, 26 lks. wide course SW. Ascend.

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 ¹⁹¹³ S34 in N. and S3 in S. half.

Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

51.00 Ridge bears N and S. Descend.

59.40 Cross wash 15 lks. wide course NW. Ascend.

75.50 Ridge bears N and S. Descend.

80.00 Point for cor. of secs. 2, 3, 34 and 35, falls in wash 10 lks. wide course S.

Land, mountainous.

South Boundary of T12S, R20E.

Chains.

Soil, rocky 4th rate.
 Timber, juniper.
 Undergrowth, mesquite, cacti, catclaw.

-
- East, bet secs. 2 and 35, on true line, from point for cor. in wash.
 Over mountainous land, through scattered timber and dense
 brush. Ascend from cor. point.
- 0.50 Set an iron post 3 ft. long, 3 ins. in diam, 24 ins. in the
 ground, for witness cor. of secs. 2, 3, 34 and 35, marked
 on brass cap, 1913;
 WC N. of center;
 T12S in N.,
 T13S in S. and
 R20E in W. half;
 S34 in NW,
 S35 in NE,
 S 2 in SE. and
 S 3 in SW. quadrant.
 Raise a mound of stone 2 ft. base, 1½ ft. high, W. of
 cor. Pits impracticable.
- 8.50 Ridge, bears N and S. Descend.
- 25.65 Cross wire fence, bears NE and SW. Ascend.
- 37.60 Ridge, bears NW and SE. Descend.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam, 26 ins. in the
 ground, for ¼ sec. cor., marked on brass cap, 1913; S35 in N.
 and S2 in S. half; from which—
 A juniper, 8 ins. in diam, bears N 81°E, 58 lks. dist.;
 marked S35BT.
 A juniper 5 ins. in diam, bears S 12°W, 152 lks. dist.,
 marked S2BT.
- November 20, 1913. At this ^{¼ sec.} cor. I set off 1°54'N. on the
 decl. arc and observe the sun on the meridian at noon;
 the resulting lat. is 32°20'N.
- 41.00 Cross gulch, 20 lks. wide course NW. Ascend.
- 47.70 Top of ridge, bears NE and SW. Descend.
- 73.00 Cross wire fence, bears NW and SE.
- 80.00 Set an iron post 3 ft. long, 3 ins. in diam, 24 ins. in
 the ground, for cor. of secs. 1, 2, 35 and 36, marked on
 brass cap, 1913;
 T12S in N.,
 T13S in S. and
 R20E in W. half;
 S35 in NW,
 S36 in NE,
 S 1 in SE. and
 S 2 in SW. quadrant; from which
 A cedar, 18 ins. in diam, bears N 11¼°E, 407 lks.
 dist., marked T12SR20ES36BT.
 A cedar, 14 ins. in diam, bears N 50¼°W, 642 lks.
 dist., marked T12SR20ES35BT. No other trees
 available
 Raise a mound of stone 2 ft. base, 1½ ft. high, W. of
 cor. Pits impracticable.
- Land, mountainous.
 Soil, rocky 4th rate.
 Timber, cedar, juniper.
 Undergrowth, mesquite, cacti, catclaw.

-
- East, bet. secs. 1 and 36, on true line,
 Over mountainous land, through scattered timber and dense
 brush. Descend.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam, 26 ins. in the
 ground, for ¼ sec. cor., marked on brass cap, 1913; S36 in N.
 and S1 in S. half.
 Raise a mound of stone 2 ft. base, 1½ ft. high, N. of
 cor. Pits impracticable.
- 49.20 Cross wash, 15 lks. wide, course NE. Ascend.
- 51.90 Cross wash, 15 lks. wide, course SE.

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South Boundary of T12S R20E.

Chains.

- 59.10 Cross wash, 8 lks. wide, course NE.
62.90 Cross wash, 8 lks. wide, course NE.
75.40 Cross wash, 8 lks. wide, course NE. Ascend.
77.20 Ridge, bears NE and SW. Descend.
80.00 The⁴ cor. of Ts. 12 and 13 S., Rs. 20 and 21 E., previously
described.

Land, mountainous.

Soil, rocky 4th rate.

Timber, cedar, juniper.

Undergrowth, mesquite, cacti, catclaw.

September 18, 1913.

Portion of West Boundary of T12S R20E.

Chains.

September 16, 1913.

T. 12S. R. 19E described by me in Book "ZA"

- 6.80 Thence I run, from re-established cor. of secs. 25 and 36, North on E. bdy. of sec. 25, Mountainous land, dense brush.
- 12.30 Cross wash 25 lks. wide course W. Ascend.
- 19.40 Ridge bears NE and SW. Descend.
- 36.40 Cross wash 25 lks. wide course SW. Ascend.
- 40.00 Ridge bears NE and SW. Descend.
- 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 $\frac{1}{4}$ S25 in W. half.
 Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
- 42.30 Cross wash 8 lks. wide course W. Ascend.
- 46.60 Ridge bears E and W, Descend.
- 69.60 Cross gulch 18 lks. wide course NW. Ascend. Scattered timber.
- 79.32 Set an iron post 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for witness cor. of secs. 24 and 25, T12S R19E, marked on brass cap, 1913;
 WC S. of center;
 T12S in N. and
 S19S30R20E in E. half;
 S24 in NW. and
 S25R19E in SW. quadrant; from which
 A cedar, 28 ins. in dia., bears N. 82° W, 17 lks. dist., marked WCT12SR19ES24BT. No other trees available.
 Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
- 80.00 Point for cor. of secs. 24 and 25, ^{T. 12S. R. 19E in} Wash, 25 lks. wide, course NW.
 Land, mountainous.
 Soil, rocky 4th rate.
 Timber, cedar.
 Undergrowth, mesquite, cacti, catclaw, ocatilla.

September 16, 1913.

General Description.

The land in this township is generally mountainous and broken. The drainage is to the southwest. There is a dense growth of brush, consisting of mesquite, catclaw, cacti and greasewood; there is also a scattered growth of timber, consisting of juniper and cedar. The soil is rocky, 4th rate. There is no water in this township.

John A. Hesse
 U.S. Surveyor.

Boundaries of surveyed portion of T. 12 South, R. 20 East.

Latitudes, departures and closing errors.

Lines designated.	Bearing.	Dist.	Latitudes.		Departures.	
			N	S	E	W
		Chs.	Chs.	Chs.	Chs.	Chs.
South boundary R20E.	West.	457.08				457.08
W. bdy. T12S, R20E.	North.	9.22	9.22			
West boundary	N 0°05' W	39.81	39.81			0.06
	N 0°53' W	39.30	39.30			0.62
Bet secs. 25 & 30	North	71.72	71.72			
	East	57.54			57.54	
Bet secs. 30 & 39	N 89°55' E	80.02	0.12		80.02	
North line of secs 38 & 25, 26, 27, 28, 29 & 30	S 89°57' E	80.14		0.07	80.14	
	S 89°56' E	80.24		0.09	80.24	
Bet secs. 33 & 36	S 89°55' E	80.12		0.12	80.12	
Bet secs. 34 & 35	S 89°51' E	80.10		0.21	80.10	
East boundary R20E.	South	160.00		160.00		
Convergency						0.15

Totals

160.17	160.49	458.31	457.76
	-160.17	457.76	Error
Error in Lat.	0.32	0.55	in Dep.

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Completion of ... East boundary of Tp. 7 S. Rg. 19 E.

Chains.

Survey commenced October 16, 1913, and executed with a W. and L. E. Gurley 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, 1912.

I examine 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 determined by observations on Polaris, I proceed as follows:-

At my camp which is located near the cor. of secs. 23, 24, 25 and 26, Tp. 7 S. Rg. 19 E.; latitude 32° 47' 44" N., longitude 110° 21' 55" W.; I set off 32° 47 1/2' N. on the lat. arc; 8° 54 1/2' S. on the decl. arc; and at 4h. 30 m. 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 16, 1913.

October 17¹⁹¹³ At 5h. 46m. a.m., by my watch, which has correct l.m.t., I observe Polaris at western elongation in accordance with 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 7h. 00m. a.m., l.m.t., I lay off the azimuth of Polaris, 1° 22 1/2' to the east, and mark the meridian thus determined, by cutting a small groove in the stone set October 16, on which the meridian falls 0.4 ins. west of the mark determined by the solar.

At 7h. 30m. a.m., l.m.t., I set off 32° 47 1/2' N. on the lat. arc; 9° 08 1/2' 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 falls 0.3 ins. west 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' 21" east and 0' 16" west of the meridian established by the Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 7h. 45m. a.m., is N. 13° 15' W.; the angle thus determined gives the mag. decl. 13° 15' E.

The^{old} cor. of secs. 13, 18, 19 and 24 on the E. bdy. of Tp. 7 S. Rg. 19 E. is a stone poorly set and with marks almost illegible. I destroy this^{old} cor. and reestablish it in its original position as follows:

Set a granite stone 18, x 8 x 5 ins. 12 ins. in the ground for cor. of secs. 13, 18, 19 and 24, marked with 3 notches on N. and S. edges; from which

A pinon 5 ins. diam., bears N. 8° E. 88 lks. dist., marked T7SR20ES18BT.

No other bearings available. Raise a mound of stone 2 ft. base 1 1/2 ft. high, W. of cor. Pits impracticable.

Thence I run

South, bet secs. 19 and 24 on true line. Ascending over rough broken land through dense brush and scattering timber.

Ridge, bears N. E. and S. W. descend.

Ascend.

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 S24 in W. S19 in E. and 1913 in S. half; and raise a mound of stone 2 ft. base 1 1/2 ft. high, W. of cor. Pits impracticable.

28.00
36.00
40.00

31.00

Completion of East boundary of Tp. 7 S. Rg. 19 E.

Chains.	
.41.00	Ridge, bears N. E. and S. W. descend.
58.00	Cross wash, 25 lks. wide, course N. E. ascend.
76.10	Ridge, bears E. and W., descend.
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 T7S in N. and 1913 in S. half; R19 ES24 in N. W. R20 ES19 in N. E. S30 in S. E. and S25 in S. W. quadrant; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Land, rough, broken and mountainous. Soil, rocky; 4th. rate. Timber, scattering oak and juniper. Undergrowth, oak.
NOTE	October 17; At this cor. I set off $9^{\circ} 14'$ S. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is $32^{\circ} 47\frac{1}{2}'$ N.
	—
	South, bet. secs. 25 and 30, on true line. Ascend over rough broken land, through dense brush.
25.80	Ridge, bears N. E. and S. W., descend.
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 $\frac{1}{4}$ S25 in W. S30 in E. and 1913 in S. half; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Ascend
47.75	Ridge, bears S. E. and N. W. descend.
72.40	Cross wash, 50 lks. wide, course N. E. ascend.
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 T7S in N. and 1913 in S. half; R19 ES25 in N. W. R20 ES30 in N. E. S31 in S. E. and S36 in S. W. quadrant; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Land, rough, broken and mountainous. Soil, rocky; 4th. rate. No timber. Undergrowth, catclaw, mesquite and blackbrush.
	October 17, 1913.
	—
	October 18 ¹⁹¹³ At 7h. 30m. a.m., l.m.t., I set off $32^{\circ} 47'$ N. on the lat. arc: $9^{\circ} 30\frac{1}{2}'$ S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 25, 30, 31 and 36, on the E. bdy. of T. 7 S. R. 19 E. above Thence I run, described
	South, bet. secs. 31 and 36, on true line. Ascend rough broken N. W. slope, through dense brush.
32.50	Ridge, bears N. E. and S. W., descend.
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. S31 in E. and 1913 in S. half; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Ascend
57.00	Ridge bears E. & W. descend.
80.00	Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of Tps. 7 and 8 S. Rgs. 19 and 20 E. marked on brass cap T7S in N., R20E in E.,

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Completion of Sec. 1. East boundary of Tp. 7 S. Rg. 19 E.

Chains.

T8S1913 in S. and
 R19E in W. half;
 S36 in N. W.
 S31 in N. E.
 S6 in S. E. and
 S1 in S. W. quadrant; and raise a mound of stone 2 ft.
 base $1\frac{1}{2}$ ft. high, S. of cor. Pits impracticable.
 Land, rough, broken, mountainous.
 Soil, rocky, 4th. rate.
 No timber.
 Undergrowth, catclaw and oak.
 Note: Oct 18: At this cor. I set off $9^{\circ} 36'$ S. on the decl.
 arc; and observe the sun on the meridian at noon, the
 resulting lat. is $32^{\circ} 46'$ N.

October 18, 1913.

East half of south boundary of Tp. 7 S. Rg. 19 E.

~~October 18, 1913~~
 Chains. From cor. of Ts. 7 & 8 S. Rs. 19 & 20 E., estab. by me this day as hereinbefore described, I run West, bet. secs. 1 and 36, on true line,
 Ascending rough broken E. slope, through dense brush.
 33.80 Ridge, bears N. E. and S. W., descend.
 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 N. and S1 1913 in S. half; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
 54.40 Cross wash 25 lks. wide course N. E. ascend.
 72.80 Ridge bears N. and S. descend.
 80.00 Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 1, 2, 35 and 36, marked on brass cap
 T7S in N.
 T8S 1913 in S. and
 R19 E in W. half;
 S35 in N. W.
 S36 in N. E.
 S1 in S. E. and
 S2 in S. W. quadrant; from which
 A mesquite 9 ins. diam., bears S. $83\frac{1}{2}^{\circ}$ E., 88 lks. dist., marked T8SR19ES1BT.
 No other trees available. Raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

~~October~~

October 18, 1913.

October 19¹⁹¹³ At 7h. 30m. a.m., l.m.t., I set off $32^{\circ} 46'$ N. on the lat. arc; $9^{\circ} 52'$ S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 1, 2, 35 and 36 on the S. bdy. of the Tp. above described.
 Thence I run

West, bet. secs. 2 and 35 on true line.
 Descend rough broken W. slope, covered with loose rocks, through dense brush.
 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 $\frac{1}{4}$ S35 in N. and S2 1913 in S. half; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
 49.90 Cross wash, 70 lks. wide, course N. and ascend.
 80.00 Set and 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
 T7S in N.,
 T8S 1913 in S. and
 R19E in W. half;
 S34 in N. W.
 S35 in N. E.
 S2 in S. E. and
 S3 in S. W. quadrant; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 Land, rough and mountainous.
 Soil, rocky; 4th. rate.
 No timber.
 Undergrowth, Oak, mesquite, catclaw, blackbrush and cactus
 Note: At this cor. I set off $9^{\circ} 57\frac{1}{2}'$ S. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is $32^{\circ} 46'$ N.

West, bet. secs. 3 and 34 on true line.
 Ascend through dense brush and scattering timber.
 1.40 Ridge, bears N. and S., descend.
 24.20 Cross wash, 40 lks. wide, course N. E., ascend.
 25.50 Cross road, bears N. E. and S. W.
 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 $\frac{1}{4}$ S34 in N. and S3 1913 in S. half; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

BOOK 2676

East half of E. south boundary of Tp. 7 S. Rg. 19 E.

Chains.

45.50

80.00

Ridge bears N. E. and S. W. descend, along N. W. slope.
Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the
ground for cor. of secs. 3, 4, 33 and 34, marked on brass
cap

T7S in N.,

T8S 1913 in S. and

R19E in W. half;

S33 in N. W.

S34 in N. E.

S3 in S. E. and

S4 in S. W. quadrant; from which

A pinon 4 ins. diam., bears N. 74° E. 210 lks.
dist., marked T7SR19ES34BT

No other trees available. Raise a mound of stone 2 ft.
base $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Land, rough and mountainous.

Soil, rocky; 4th. rate.

Timber, scattering cedar, pinon and oak.

Undergrowth, oak, mesquite and catclaw.

October 19, 1913.

John P. Hesse
U.S. Surveyor.

CERTIFICATE OF ASSISTANTS.
(Same applies to Book "A" of Group No 6)

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,
 John F. Hesse, U. S. Surveyor, during the periods and in the capacities
 stated opposite our several signatures, in surveying all those parts or portions of
 the South and final West boundaries of Tp. 12 S. Rg. 20 E.

of the final South and East boundaries of Tp. 7 S. Rg. 19 E. under Group 18

and part of South boundary of Tp. 8 S. Rg. 20 E. under Group 6

 of the Gila and Salt River ^{Base &} Meridian, in the State of Arizona.
 which are represented in the foregoing field notes as having been executed by him, and under his direc-
 tion; and that said survey has been, in all respects, to the best of our knowledge and belief, well and
 faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
<u>R. A. Sheridan</u>	<u>October 1, 1913</u>	<u>October 31, 1913</u>	<u>Axman</u>
<u>L. B. Gardner</u>	<u>August 12, 1913</u>	<u>October 31, 1913</u>	<u>Cornerman</u>
<u>J. S. Hughes</u>	<u>February 9, 1913</u>	<u>October 31, 1913</u>	<u>Flagman</u>
<u>J. I. Lissou</u>	<u>November 1, 1913</u>	<u>November 5, 1913</u>	<u>Axman</u>
<u>W. E. Francis</u>	<u>November 1, 1913</u>	<u>November 5, 1913</u>	<u>Flagman</u>
<u>C. J. Power</u>	<u>November 4, 1913</u>	<u>November 5, 1913</u>	<u>Cornerman</u>
<u>C. E. Kealey</u>	<u>March 18, 1913</u>	<u>November 5, 1913</u>	<u>Chairman</u>
<u>F. G. Ayers</u>	<u>August 10, 1913</u>	<u>November 5, 1913</u>	<u>Chairman</u>

Subscribed and certified to before me on the dates of the final service as shown above.

John F. Hesse

U. S. Surveyor.

BOOK 2676

FINAL OATH OF UNITED STATES SURVEYOR.
(Same applies to Book "A" of Group N° 6)

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 Groups 6 and 18 bearing dates of the 25th of Aug. 1910 (GROUP 6) and the 22nd of May, 1912 (GROUP 18), 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 South and part of West boundaries of Tp. 12 S. Rg. 20 E.

parts of the South and East boundaries of Tp. 7 S. Rg. 19 E. under Group N° 18, and part of the South boundary of Tp. 8 S. Rg. 20 E. under Group N° 6

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 S. 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 South boundary and part of the West boundary of Township N° 12 South, Range N° 20 East and parts of the South and East boundaries of Township N° 7 South Range N° 19 East of the Gila and Salt River Base and Meridian, Arizona.

executed by John F. Hesse, U. S. Surveyor under his special instructions dated May 22nd, 1912, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank S. Ingalls

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.~~