

Book H.

2188

Being authorized letter E. 8/21/1910.

FIELD NOTES

2188

OF THE SURVEY OF THE

2188

North, South and West Boundaries of Tp. 18 N. Rg. 1 W. and the

portion of N. bdy of

North Boundary of Tp. 19 N. Rg. 1 W. and Tp. 17 N. Rg. 1 W.

2188

Of the Gila and Salt River Meridian,

Territory of Arizona.

AS SURVEYED BY

Alfred N. Oliver, United States Deputy Surveyor,

Under his Contract No. 153, dated November 19, 1908, 190

Survey commenced May 19, 1909, 190

Survey completed June 13, 1909, 190

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NAMES AND DUTIES OF ASSISTANTS.

Will W. Shawk

Chairman

Archie Johnston

Chairman

W. R. Johnston

AXman

R. R. Lane

Flagman.

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BOOK 2188

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Tula and Salt River Meridian

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PRELIMINARY OATHS OF ASSISTANTS.

WE, Will W. Shawk and Archie Johnston

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 N., S., and W. boundaries of Tp. 18 N. Rg. 1 W. and the N. boundary of Tp. 19 N. Rg. 1 W. and Tp. 17 N. Rg. 1 W.

Will W. Shawk, Chainman.
Archie Johnston, Chainman.

Subscribed and sworn to before me this 18th. day of May, 1909., 190



Alfred N. Bliss
U.S. Deputy Surveyor

WE, _____ 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 us, to the best of our skill and ability, in the survey of _____

_____, Moundman.
_____, Moundman.

Subscribed and sworn to before me this _____ day of _____, 190



WE, I. W. R. Johnston 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 N., S., and W. boundaries of Tp. 18 N. Rg. 1 W. and the N. boundary of Tp. 19 N. Rg. 1 W. and Tp. 17 N. Rg. 1 W.

I. W. R. Johnston, Axman.
_____, Axman.

Subscribed and sworn to before me this 18th. day of May, 1909, 190



Alfred N. Bliss
U.S. Deputy Surveyor

I, R. R. Lane, 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 N., S., and W., boundaries of Tp. 18 N. Rg 1 W., and the N. boundary of Tp. 19 N. Rg. 1 W. and Tp. 17 N. Rg. 1 W.

R. R. Lane, Flagman.

Subscribed and sworn to before me this 18th. day of May, 1909, 190



Alfred N. Bliss
U.S. Deputy Surveyor

No notary available without loss of time and great expense.

South Boundary of Tp. 18 N. Rg. 1 W.

Chains

Survey commenced May 19, 1909, and executed with a Young and Sons light mountain transit, No. 7532, with 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 tested on the true meridian at Phoenix found correct and was approved by the surveyor general for Arizona

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 on Polaris I proceed as follows;

At the cor. of Tps. 17 and 18 N. Rgs. 1 and 2 W.; latitude $34^{\circ} 55' N.$, longitude $112^{\circ} 24' 44'' W.$ I set off $34^{\circ} 55' N.$ on the lat. arc; $19^{\circ} 51 \frac{1}{2}' N.$ on the decl. arc; and, at 6h. 00m, 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.

May 19, 1909

May 20: At 3h. 41m. a.m., by my watch which has correct l.m.t., I observe Polaris at eastern 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 5h. 30m. a.m., l.m.t., I lay off the azimuth of Polaris, $1^{\circ} 26'$ to the west, and mark the meridian thus determined, by cutting a small groove in the stone set May 19, on which the meridian coincides with the mark determined by the solar.

At 6h. 00m., a.m., l.m.t., I set off $34^{\circ} 55' N.$ on the lat. arc; $19^{\circ} 57 \frac{1}{2}' N.$ 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 established by the Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at, 6h. 15m. a. m. is $14^{\circ} 45' W.$; the angle thus determined gives the mag. decl. $14^{\circ} 45' E.$

I commence at the cor. of Tps. 17 and 18 N. Rgs. 1 and 2 W. which has been previously described.

Thence I run

East bet. secs. 6 and 31.

Over rolling mountainous land covered with loose volcanic rocks.

40.00 Set a malpais stone $16 \times 12 \times 8$ ins. 11 ins. in the ground for $\frac{1}{4}$ sec. cor., marked 09 $\frac{1}{4}$ on N. face; dig pits $18 \times 18 \times 12$ ins. E. and W. of stone 3 ft. dist., and raise a mound of earth $3 \frac{1}{2}$ ft. base $1 \frac{1}{2}$ ft. high N. of cor.

60.60 Descend rough rocky E. slope.

66.00 Cross drain 5 lks. wide course N. E. and ascend.

80.00 Set a malpais stone $18 \times 10 \times 6$ ins. 12 ins. in the ground for cor. of secs. 5, 6, 31 and 32, marked 09 on N. E. face with 1 notch on W. and 5 notches on E. edges; dig pits $18 \times 18 \times 12$ ins. in each sec. $5 \frac{1}{2}$ ft. dist. and raise a mound of stone 4 ft. base 2 ft. high W. of cor.

Land, mountainous

Soil, rocky; 4th rate.

Timber, a few cedars.

Mountainous land, covered with loose volcanic rock, exceptionally difficult to survey 80.00 chs.

South boundary of Tp. 18 N. Rg. 1 W.

Chains.

East bet. secs. 5 and 32
 Ascend W. slope, through scattering cedar timber, covered with loose rocks.
 8.00 Ridge bears N. E. and S. W. and descend.
 27.00 Cross wash 50 lks. wide course S. E. and ascend steep W. slope.
 35.30 Ridge bears N. and S. and descend.
 38.70 Cross wash 50 lks. wide course S. and ascend S. W. slope.
 40.00 Set a limestone 20 x 12 x 4 ins. 15 ins. in the ground for $\frac{1}{4}$ sec. cor. marked 09 $\frac{1}{4}$ on N. face; from which
 A cedar 24 ins. diam., bears N. 80° E. 64 lks. dist. marked 09 $\frac{1}{4}$ S32BT.
 No other tree available. Raise a mound of stone 2 ft. base 1 1/2 ft. high N. of cor. Pits impracticable.
 43.00 Descend E. slope
 46.00 Cross wash 25 lks. wide course S. W. and ascend along N. W. slope through dense timber.
 59.60 Cross wash 10 lks. wide course N. W. and change to S. W. slope.
 61.20 Cross wash 10 lks. wide course S. W.
 70.00 Ridge bears N. E. and S. W.
 80.00 Set a limestone 18 x 12 x 4 ins. 12 ins. in the ground for cor. of secs. 4, 5, 32 and 33, marked 09 on N. E. face; with 4 notches on E. and 2 notches on W. edges; dig pits 18 x 18 x 12 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, mountainous.
 Soil, stony 4th rate.
 Timber, cedar.
 Mountainous land, covered with loose rock, exceptionally difficult to survey, 80.00 chs.

East bet. secs. 4 and 33
 Ascend S. W. slope covered with loose rocks.
 9.40 Cross wire fence bears N. E. and S. W. and through dense timber and underbrush.
 12.70 Cross road bears N. W. and S. E. and descend steep E. slope.
 28.00 Leave timber and underbrush.
 32.00 Cross wash 30 lks. wide course S. E. and ascend steep W. slope.
 34.50 Ridge bears N. and S. and descend steep slope.
 36.45 Cross wash 30 lks. wide course S. and ascend.
 40.00 Mark a cross on a rock in place 14 x 10 ft. x 6 ins. above ground for $\frac{1}{4}$ sec. cor. marked 09 $\frac{1}{4}$ on N. of cross; and raise a mound of stone 2 ft. base 1 1/2 ft. high N. of cor. Pits impracticable.
 41.30 Ridge bears N. and S. descend steep E. slope.
 45.00 Cross wash 10 lks. wide course S. and ascend.
 48.00 Ridge bears N. and S. and descend.
 53.30 Cross wash 30 lks. wide course S. E. and ascend.
 60.00 Ridge bears N. and S. and descend
 62.00 Line of old fence posts bears N. and S.
 63.50 Cross wash 15 lks. wide course S. W. and ascend.
 67.00 Ridge bears N. and S. and descend.
 70.00 Cross wash 25 lks. wide course S. W. and ascend.
 74.00 Ridge bears N. and S. and descend.
 77.50 Cross drain 5 lks. wide course N. and ascend.
 80.00 Set a limestone 18 x 7 x 6 ins. 12 ins. in the ground for cor. of secs. 3, 4, 33 and 34, marked 09 on N. E. face, with 3 notches on E. and W. edges; and raise a mound of stone 2 ft. base 1 1/2 ft. high W. of cor. Pits impracticable.
 Land, rough and mountainous and covered with loose rocks.
 Soil, rocky; 4th. rate.
 Timber, cedar.
 Mountainous land covered with loose rocks, and land heavily timbered and covered with dense underbrush exceptionally difficult to survey, 80.00 chs.

South boundary of Tp. 18 N. Rg. 1 W.

- Chains. At this cor. I set off $19^{\circ} 58' 1/2''$ N. on the decl. arc; and observe the sun on the meridian at noon, the resulting lat. is $34^{\circ} 55'$ N. ✓
-
- East bet. secs. 3 and 34.
Ascend steep S. slope covered with loose rocks, through heavy timber and dense underbrush.
- 3.75 Descend precipitous S. E. slope into Verde Canyon.
5.61 Intersect W. line of Tract No. 38 Tp. 18 N. Rg. 1 W. at $N. 0^{\circ} 53'$ W. 7.60 chains from cor. No. 3. and set a limestone $16 \times 12 \times 6$ ins. 11 ins. in the ground for closing cor. of secs. 3 and 34, marked CC09 on W. face PC with 6 grooves on N. and S. faces; from which
A pinon 3 ins. diam., bears N. 61° W. 63 lks. dist., marked 09CCT18NRLWS34BT.
A pinon 5 ins. diam., bears S. $52^{\circ} 1/4'$ W. 181 lks. dist., marked 09CCT17NRLWS3BT.
- Thence across Tract 38 on a blank line.
- 43.15 Intersect E. line of Tract No. 38 at N. $1^{\circ} 01'$ W. 8.27 chs. from cor. No 4 of tract, and set a granite stone $18 \times 16 \times 6$ ins. 12 ins. in the ground for closing cor. of secs. 3 and 34, marked 09CC on E. face, with 6 grooves on N. and S. faces; from which
A cedar 7 ins. diam bears S $57^{\circ} 1/2'$ E. 104 lks. dist., marked 09CCT17NRLWS3BT.
A cedar 11 ind. diam., bears N. $68^{\circ} 05'$ E. 50 lks. dist. marked 09CCT18NRLWS34BT.
- Thence ascend steep W. slope through heavy timber and dense underbrush.
- 50.00 Ridge bears N. and S. descend steep E. slope covered with loose rocks, leave timber and brush.
61.00 Cross wash 35 lks. wide course N. and ascend.
70.00 Ridge bears N. and S. and descend.
76.00 Along steep S. slope through heavy timber.
80.00 Set a sandstone $24 \times 14 \times 10$ ins. 18 ins. in the ground for cor. of secs. 2, 3, 34 and 35, marked 09 on N. E. face; with 2 notches on E. and 4 notches on W. edges; from which
A cedar 8 ins. diam., bears N. $60^{\circ} 1/2'$ E 14 lks. dist., marked 09T18NRLWS35BT.
A cedar 4 ins, diam., bears N. $69^{\circ} 3/4'$ W. 156 lks. dist., marked 09T18NRLWS34BT.
- No other trees available; raise amount of stone 2 ft. base, $1 1/2$ ft. high W. of cor., Pits impracticable.
Land, Rough and mountainous.
Soil, rocky 4th. rate.
Timber, Cedar.
Mountainous land covered with loose rocks, land heavily timbered and covered with dense underbrush, 80.00 chs.
Exceptionally difficult to Survey.
-
- East bet. secs. 2 and 35
Along steep S slope through heavy timber.
- 1.50 Descend Rough S. W. slope covered with loose rocks.
12.10 Enter wash 20 lks. wide course E. and along same to
19.00 Leave wash course S. E.
20.95 Cross wire fence bears N. and S.
23.21 Intersect W. line of Tract No. 40, Tp. 18 N. Rg. 1 W. and set a limestone $20 \times 12 \times 7$ ins. 15 ins. in the ground for closing cor. of secs. 2 and 35, marked CC09 on W. face with 6 grooves on N. and S. faces; from which
A cedar 4 ins. diam., bears S. $63^{\circ} 20'$ W. 92 lks. dist., marked 09CCT17NRLWS2BT.
A cedar 6 ins. diam., bears N. $69^{\circ} 1/2'$ W, 76 lks. dist., marked 09CCT18NRLWS35BT
- Thence across Tract 40 on a blank line.
- 63.20 Intersect E. line of Tract No. 40 at N. $1^{\circ} 09'$ W. 889 lks. from cor. No. 8 and set a granite stone $20 \times 6 \times 5$ ins. 15 ins. in the ground for closing cor. of secs. 2 and

South boundary of T_p. 18 N. R_g. 1 W.

- Chains. and 35 marked, CC09 on E., PC on W. with 6 notches on N. and S. faces; and raise a mound of stone 2 ft. base 1 1/2 ft. high E. of cor. Pits impracticable.
- 77.00 Thence ascend precipitous S. W. slope out of Verde Canyon. N. side of Verde Canyon and ascend along steep S. W. slope covered with loose rocks.
- 80.00 Set a limestone 18 x 7 x 6 ins. 12 ins. in the ground for cor. of secs. 1, 2, 35 and 36, marked 09 on N. E. face, with 1 notch on E. and 5 notches on W. edges; from which
- A cedar 8 ins. bears N. 54° E. 198 lks. dist. marked 09T18NR1WS36BT.
- A pinon 11 ins. diam., bears N. 42° W. 221 lks. dist., marked 09T18NR1WS35BT.
- No other bearings available. Raise a mound of stone 2 dr ft. base 1 1/2 ft. high, W. of cor. Pits impracticable. Land, rough and mountainous. Soil, rocky; 4th. rate. Timber, cedar and pinon. Mountainous land, covered with loose rocks, land heavily timbered, exceptionally difficult to survey 80.00 chs.

East bet. secs. 1 and 36.

- Ascend steep slope covered with loose rocks.
- 5.00 Ridge bears N. and S. and descend very steep E. slope.
- 12.90 Cross wash 20 lks. wide course S. and ascend steep W. slope.
- 13.48 Intersect Gila and Salt River Meridian N. 7° 33' W. 3.50 chs. from the S. W. cor. of T_p. 18 N. R_g. 1 E. and set a limestone 20 x 8 x 5 ins. 15 ins. in the ground for closing cor. of T_ps. 17 and 18 N. R_g. 1 W. marked CC09 on W.; with 6 grooves on N., S., and W. faces; and raise a mound of stone 2 ft. base 1 1/2 ft. high, W. of cor. Pits impracticable. From the cor.
- A cedar 5 ins. diam., bears S. 40° 20' W. 124 lks. dist., marked 09CCT17NR1WS1BT.
- No other tree available.
- Note: The S. W. cor. of T_p. 18 N. R_g. 1 E. was originally set as a closing cor. of that T_p. and was marked CC on the E. face. I obliterate the CC on the E. face and leave the stone marked with 6 notches on N. and E. edges for cor. of one township. Thence
- I then go S. 7° 33' E. 7.00 chs. To the ^{old} cor of T_ps. 17 and 18 N. R_gs. 1 E. and 1 W. as set by Deputy Hesse and destroy this cor.
- Land mountainous and rough.
Soil rocky; 4th. rate.
Timber a few cedars.
- Mountainous land covered with loose rocks, exceptionally difficult to survey, 13.48 chs.

4/2

North boundary of Tp. 17 N. Rg. 1 W.

Chains.

From the S. W. cor. of Tp. 18 N. Rg. 1 E. I now run East on N. bdy. of sec. 1 Tp. 17 N. Rg. 1 W. Ascending along steep N. W. slope through dense timber and underbrush.

10.00 Ridge bears n. e. and S. W. and descend

14.00 Drain 10 lks. wide course S. W. and along in same to leave drain and ascend.

15.50

20.00 Ridge bears N. E. and S. W. and descend along steep S. E. slope.

26.55 Set a limestone 28 x 12 x 4 ins. 21 ins. in the ground for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face; from which
 A cedar 4 ins. diam., bears S. 75 ° E. 56 lks, dist., marked O9 $\frac{1}{4}$ S1BT
 A cedar 5 ins. diam., bears S. 60 ° W. 168 lks. dist., marked O9 $\frac{1}{4}$ S1BT.

28.50 Ascend steep S. W. slope.

35.50 Ridge bears N. W. and S. E. and descend steep N. E. slope

48.00 Cross wash 15 lks. wide course S. and ascend steep slope.

56.50 Ridge bears N. and S. and descend.

66.45 The closing cor. of Tps. 17 N. Rgs. 1 E. and 1 W. Land, rough and mountainous. previously desc. Soil rocky; 4th rate. Timber, cedar. Underbrush, cedar. Mountainous land, land heavily timbered and covered with dense underbrush, exceptionally difficult to survey, 66.45 chs.

May, 20, 1909.

West boundary of Tp. 18 N. Rg. 1 W.

Chains. June 1: At 6h. 00m. p.m., l.m.t., I set off 22° 07 1/2' N. on the decl. arc; 34° 55' N. on the lat. arc; and at the cor. of Tps. 17 and 18 N. Rgs. 1 and 2 W. determine a meridian with the solar on the meridian determined by an Observat^on on Polaris May. 20th. with which meridian the solar line coincides. June 1, 1909

June 2; At 6h. 00m. a.m., l.m.t., I set off 34° 55' N. on the lat. arc; 22° 11' N. on the decl. arc; and at the cor. of Tps. 17 and 18 N. Rgs. 1 and 2. W. determine a meridian with the solar, which line agrees with the meridian established by observations on Polaris May 20th.

I commence at the cor. of Tps. 17 and 18 N. Rgs. 1 and 2 W. previously described
Thence I run

North on a random line on the W. bdy. of Tp. 18 N. Rg. 1. W. setting temp. 1/4 sec. and sec. cors. at intervals of 40.00 chs.; and, at 481.02 chs., intersect the S. bdy. of Tp. 19 N. Rg. 2 W. 159 lks. W. of the cor. of Tps. 18 and 19 N. Rgs. 1 and 2. W. The falling answers to a correction of 11' or 25 1/2 lks. E. per mile, counting from the S. W. cor. of the Tp.

June 2: At this cor. I set off 22° 11 1/2' N. on the decl. arc; and observe the sun on the meridian; the resulting lat. is 35° 00' N.

I commence at the cor. of Tps. 17 and 18 N. Rgs. 1 and 2 W. previously described,

Thence I run

N. 0° 11' E. bet. secs. 31 and 36

Over nearly level land

40.00 Set a malpais stone 16 x 8 x 8 ins. 11 ins. in the ground for 1/4 sec. cor. marked 09 1/4 on W. face; dig pits 18 x 18 x 12 ins. N. and S. of stone 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 a malpais stone 20 x 14 x 12 ins. 15 ins. in the ground for cor. of secs. 25, 30, 31 and 36, marked with 1 notch on S. and 5 notches on N. edges; from which mound a cedar 16 ins. diam. bears N. 42 1/4° E. 250 lks. dist., marked 09T18NRLWS30BT.

No other trees available. Dig pits 18 x 18 x 12 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, level.
Soil, rocky 3rd. rate.
Timber, cedar.

N. 0° 11' E. bet. secs. 25 and 30

Over nearly level land, covered with loose volcanic rock.

40.00 Set a malpais stone 16 x 10 x 8 ins. 11 ins. in the ground for 1/4 sec. cor., marked 09 1/4 on W. face; dig pits 18 x 18 x 12 ins. N. and S. of stone 3 ft. dist., and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high, W. of cor.

55.05 Cross road, bears N. E. and S. W.

80.00 Set a limestone 16 x 8 x 6 ins. 11 ins. in the ground for cor. of secs. 19, 24, 25 and 30, marked 09 on N. E. face, with 2 notches on S. and 4 notches on N. edges; dig pits 18 x 18 x 12 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, nearly level.
Soil, malpais rock, 4th. rate.
A very few cedars.
Land covered with volcanic rock 80.00 chs.

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West boundary of Twp. 18 N. Rg. 1 W.

Chains.

N. 0° 11' E. bet. secs. 19 and 24.
 Over gradual S. slope.
 14.51 Cross under telegraph line bears N. E. and S. W.
 15.84 Cross S. F. P and P. R. R. bears N. E. and S. W.
 17.16 Cross under telegraph line bears N. E. and S. W.
 20.92 Cross road bears N. E. and S. W.
 40.00 Set a malpais stone 18 x 10 x 8 ins. 12 ins. in the
 ground for $\frac{1}{4}$ sec. cor., marked 09 $\frac{1}{4}$ on W. face; from which
 A cedar 18 ins. diam., bears N. 22 1/2° E. 68 lks.
 dist., marked 09 $\frac{1}{4}$ S19BT.
 No other tree available. Dig pits 18 x 18 x 12 ins. N.
 and S. of stone 3 ft. dist., and raise a mound of earth
 3 1/2 ft. base 1 1/2 ft. high W. of cor.
 65:00 Enter heavy timber and dense underbrush, bears E. and W.
 80.00 Set a malpais stone 20 x 6 x 6 ins. 15 ins. in the ground
 for cor. of secs. 13, 18, 19 and 24, marked 09 on N. E.
 face, with 3 notches on N. and S. edges; from which
 A cedar 24 ins. diam, bears N. 42° 20' E. 603 lks.
 dist., marked 09T18NR1WS18BT.
 A cedar 8 ins. diam., bears S. 40 $\frac{1}{4}$ ° E. 300 lks.
 dist., marked 09T18NR1WS19BT.
 A cedar 24 ins. diam., bears S. 10 $\frac{1}{4}$ ° W. 209 lks.
 dist., marked 09T18NR2WS24BT.
 A cedar 6 ins. diam., bears N. 66° W. 36 lks.
 dist., marked 09T18NR2WS13BT.
 Land, level.
 Soil, sandy 2nd. rate.
 Timber, cedar.
 Underbrush, cedar.
 Land covered with heavy timber and dense underbrush
 exceptionally difficult to survey 17.00 chs.

40.00 N. 0° 11' E. bet. secs. 13 and 18.
 Over level land through cedar timber and brush, scattering
 Set a limestone 18 x 10 x 8 ins. 12 ins. in the ground
 for $\frac{1}{4}$ sec. cor. marked 09 $\frac{1}{4}$ on W. face; from which
 A cedar 18 ins. diam, bears N. 44° 05' W. 294 lks.
 dist., marked 09 $\frac{1}{4}$ S13BT. *No other tree available*
Dig pits 18x18x12 ins. N and S of stone 3 ft. dist. and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high, W. of cor.
 Timber and underbrush becomes dense.
 74.30 Cross road bears N. E. and S. W.
 80.00 Set a limestone 20 x 8 x 6 ins. 15 ins. in the ground
 for cor. of secs. 7, 12, 13 and 18, marked 09 on N. E.
 face, with 4 notches on S. and 2 nitches on N. edges;
 from which
 A cedar 10 ins. diam, bears N. 65° 10' E., 88 lks.
 dist., marked 09T18NR1WS7BT.
 A cedar 10 ins. diam, bears S. 47° 50' E. 61 lks.
 dist., marked 09T18NR1WS18BT.
 A cedar 8 ins. diam., bears S. 26° 05' W. 228 lks.
 dist., marked 09T18NR2WS13BT.
 A cedar 4 ins. diam., bears N. 31° 15' W. 37 lks.
 dist., marked 09T18NR2WS12BT.
 Land, level.
 Soil, sandy loam, 1st. rate.
 Timber cedar.
 Underbrush, cedar.
 Land covered with heavy timber and dense underbrush,
 exceptionally difficult to survey 40.00 chs.

June 2, 1909.

June 3; At 6h. 00m. a.m., l.m.t., I set off 34° 58' N.
 on the lat. arc; 22° 19' N. on the decl. arc; and deter-
 mine a meridian with the solar at the cor. of secs.
 7, 12, 13, and 18 on the W. bdy. of the township.
 Thence I run
 N. 0° 11' E. bet. secs. 7 and 12.

West boundary of Tps. 18 N. Rgs. 1 W.	
Chains.	Over rolling land, through dense timber and underbrush.
40.00	Set a limestone 18 x 12 x 10 ins. 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked 09 $\frac{1}{4}$ on W. face; from which A cedar 9 ins. diam., bears N. 81 1/2° E. 36 lks. dist., marked 09 $\frac{1}{4}$ S7BT1W A cedar 22 ins. diam., bears S. 55 $\frac{1}{4}$ ° W. 22 lks. dist., marked 09 $\frac{1}{4}$ S12BT.
75.50	Cross wash 15 lks. wide course E.
80.00	Set a limestone 20 x 8 x 6 ins. 15 ins. in the ground for cor. of secs. 1, 6, 7, and 12, marked 09 on N. E. face, with 5 notches on S. and 1 notch on N. edges. from which A cedar 20 ins. diam., bears N. 62° 10' W. 171 lks. dist., marked 09T18NR2WS1BT. No other tree available. Dig pits 18 x 18 x 12 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; 1st. rate. Timber, cedar and pinon. Underbrush, cedar. Land heavily timbered and covered with dense underbrush exceptionally difficult to survey, 80.00 chs.
N. 0° 11' E. bet. secs. 1 and 6.	
	Over rolling land.
5.00	Through dense timber and underbrush
11.40	Cross road bears E. and W.
38.00	Cross wash 15 lks. wide course E., old road bears E. and W. and ascend over mountainous land.
40.00	Set a limestone 16 x 8 x 5 ins. 11 ins. in the ground for $\frac{1}{4}$ sec. cor. marked 09 $\frac{1}{4}$ on W. face; from which A cedar 20 ins. diam., bears N. 13° 20' E. 67 lks. dist., marked 09 $\frac{1}{4}$ S6BT. A cedar 8 ins. diam., bears S. 27° 05' W. 142 lks. dist., marked 09 $\frac{1}{4}$ S1BT.
50.95	Cross road bears E. and W. and descend N. slope.
56.00	Cross wash 10 lks. wide course E. and ascend
64.00	Ridge bears E. and W. and descend.
79.10	Cross wash 30 lks. wide course E. and ascend.
81.02	The cor. of Tps. 18 and 19 N. Rgs. 1 and 2. W. A lime stone 18 x 8 x 7 ins. set 12 ins. in the ground, marked 09 on N. E. face, with 6 notches on each edge; from which A cedar 10 ins. diam., bears S. 36° 35' W. 59 lks. dist., marked 09T18NR2WS1BT. A cedar 12 ins. diam., bears N. 82° E. 84 lks. dist., marked 09T19NR1WS31BT. A cedar 7 ins. diam., bears S. 23 $\frac{1}{4}$ ° E. 15 lks. dist., marked 09T18NR1WS6BT. A cedar 12 ins. diam., bears N. 63° W. 34 lks. dist., marked 09T19NR2WS36BT. Land, rolling and mountainous. Soil: sandy and stony; 2nd, and 4th. rate. Timber cedar and pinon. Underbrush, cedar. Mountainous land, land heavily timbered and covered with dense underbrush, exceptionally difficult to survey 76.02 chs

North boundary of T₁₈ N. R₁ W

Chains

June 3; from the cor. of Tps. 18 and 19 N. Rg. I and 2 W. I now run

East bet. secs. 6 and 31

Ascend rocky slope through dense timber and underbrush.

- 3.00 Ridge bears N. and S. and over loose rocks, descending.
- 5.10 Cross drain 10 lks. wide course S. and ascend steep slope.
- 9.00 Cross road on ridge bears N. W. and S. E. and descend.
- 18.75 Cross wash 50 lks. wide course N. E. and ascend.
- 29.00 Cross ridge bears N. and S. and descend.
- 33.40 Cross drain 6 lks. wide course N. E.

40.00 Set a malpais stone 20 x 7 x 5 ins. 15 ins. in the ground for 1/4 sec. cor. marked 09 1/4 on N. face; from which

A cedar 5 ins. diam., bears S 68° 35' E. 84 lks. dist., marked 09 1/4 S6BT.

A cedar 8 ins. diam., bears N. 86° 55' W. 129 lks. dist., marked 09 1/4 S31BT.

- 49.80 Cross road bears N. W. and S. E.
- 58.00 Cross road bears S. W. and N. E.
- 58.65 Cross wash 75 lks. wide course N. E. and ascend.
- 60.35 Cross road bears N. E. and S. W.
- 63.00 Ridge bears N. and S. and descend.
- 64.00 Cross road bears N. E. and S. W.
- 68.00 Cross drain 5 lks. wide course S. E. and ascend.
- 71.60 Cross wash 25 lks. wide course N. E.
- 78.00 Ridge bears N. and S. and descend.
- 80.00 Mark a cross on a limestone in place 12 x 10 x 6 ins. above ground for cor. of secs. 5, 6, 31 and 32, marked 09 on N. E. and 5 grooves E. and 1 groove W. of cross; from which

A cedar 12 ins. diam., bears N. 84 1/2° E. 145 lks dist., marked 09T19NR1WS32BT.

A cedar 10 ins. diam., bears S. 45 1/4° E. 28 lks. dist., marked 09T18NR1WS5 BT.

A cedar 10 ins. diam., bears S. 81 3/4° W. 41 lks. dist., marked 09T18NR1WS6BT.

A cedar 6 ins. diam., bears N. 17° 50' W. 66 lks. dist., marked 09T19NR1WS31BT.

Land, mountainous and rocky.

Soil, rocky, 4th rate.

Timber, cedar and pinon.

Underbrush cedar.

Mountainous land heavily timbered and covered with dense underbrush and loose rock. 80.00 chs.

Exceptionally difficult to survey

East bet. secs. 5 and 32

Descending through dense timber and underbrush over loose (rock)

- 9.60 Cross drain 10 lks. wide course N. E.
- 15.00 Cross wash 75 lks. wide course S. E. and ascend steep slope.
- 17.00 Ridge bears N. and S. and descend.
- 23.00 Cross drain 5 lks. wide course S. W. and ascend.
- 33.00 Puntenney lime quarry bears S. 75 lks.
- 38.30 Cross wash 55 lks. wide course N. and ascend.
- 40.00 Set a malpais stone 18 x 8 x 6 ins. 12 ins. in the ground for 1/4 sec. cor. marked 09 1/4 on N. face; from which
- A cedar 4 ins. diam., bears N. 22° E. 254 lks. dist., marked 09 1/4 S32BT
- A cedar 5 ins. diam., bears S. 36 1/4° E. 173 lks. dist., marked 09 1/4 S5BT.
- 45.00 Ridge bears N. and S. and descend steep slope into Hell Canyon.
- 48.30 Cross drain 5 lks. wide course N. E. and ascend S. W. slope
- 52.00 Descend N. E. slope.
- 55.60 Cross Hell Canyon Wash 90 lks. wide course S. E. and ascend steep rough slope.
- 63.50 Top and over nearly level land covered with loose volcanic rock.
- 63.67 Telegraph line bears N.E. and S. W.
- 66.00 Cross S. F. P. and P. R.R. bears N. E. and S. W.

North boundary of Td. 18 N. Rg. 1 W.

Chains.	
66.84	Telegraph line bears N. E. and S. W.
80.00	Set a malpais stone 18 x 7 x 6 ins. 12 ins. in the ground for cor. of secs. 4, 5, 32 and 33, marked 09 on N. E. face; with 2 notches on W. and 4 notches on E. edges; from which
	A cedar 8 ins. diam., bears N. 13 3/4° E. 252 lks. dist., marked 09T19NRLWS33BT.
	A cedar 24 ins. diam., bears S. 14° 40' E. 505 lks. dist., marked 09T18NRLWS4BT.
	A cedar 8 ins. diam., bears S. 46 1/2° W. 307 lks. dist., marked 09T18NRLWS5BT.
	A cedar 22 ins. diam., bears N. 57° W. 311 lks. dist., marked 09T19NRLWS32BT.
	From this cor. Puntteney lime kiln bears S. 54° 45' W.
	Warehouse bears S. 55° 40' W.
	House bears S. 57° 45' W.
	At this cor. I set off 22° 19' N. on the decl. arc; and observe the sun on the meridian at noon; the resulting ht. is 35° N.
	Land, Mountainous and broken and level.
	Soil, rocky; 4th. rate.
	Timber, cedar.
	Underbrush, cedar.
	Mountainous land, heavily timbered and covered with dense underbrush and loose rock, exceptionally difficult to survey 80.00 chs.
	<hr/>
	East. bet. secs. 4 and 33
	Ascending through cedar timber and underbrush over loose volcanic rocks.
31.65	Cross road bears N. W. and S. E.
40.00	Set a malpais stone 24 x 7 x 5 ins. 18 ins. in the ground for 1/4 sec. cor. marked 09 1/4 on N. face; from which
	A cedar 16 ins. diam., bears S. 39° W. 374 lks. dist., marked 09 1/4 S4BT.
	A cedar 4 ins. diam., bears N. 49° W. 531 lks. dist., marked 09 1/4 S33BT.
42.00	Low ridge bears N. and S. and descend.
60.00	Cross draw course S.
80.00	Set a malpais stone 28 x 8 x 5 ins. 21 ins. in the ground for cor. of secs. 3, 4, 33 and 34, marked 09 on N. E. face, with 3 notches on E. and W. edges; from which
	A cedar 6 ins. diam., bears N. 27 1/2° E. 31 lks. dist., marked 09T19NRLWS34BT.
	A cedar 6 ins. diam., bears S. 37° 10' E. 62 lks. dist., marked 09T18NRLWS3BT.
	A cedar 7 ins. diam., bears S. 47° 10' W. 165 lks. dist., marked 09T18NRLWS4BT.
	A cedar 6 ins. diam., bears N. 17 1/2° W. 72 lks. dist., marked 09T18 NRLWS33BT.
	Land, rolling.
	Soil, rocky; 4th. rate.
	Timber cedar, and pinon.
	Underbrush, cedar.
	Land heavily timbered and covered with dense underbrush and loose rocks, exceptionally difficult to survey, 80.00 chs.
	<hr/>
	East bet. secs. 3 and 34.
	Over level land, covered with loose volcanic rocks, through heavy timber and dense underbrush.
38.00	Cross road bears N. W. and S. E.
40.00	Set a malpais stone 20 x 9 x 8 ins. 15 ins. in the ground for 1/4 sec. cor. marked 09 1/4 on N. face; from which
	A cedar 6 ins. diam., bears N. 72° 45' E. 57 lks. dist., marked 09 1/4 S34BT.

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North boundary of Tp. 18 N. Rg. 1 W.

Chains. A cedar 14 ins. diam., bears S. 10 1/2° E. 81 lks. dist., marked 09 1/2 SBT.
 46.00 Descend into Wagon Tire canyon, leave timber.
 59.20 Cross wash 75 lks. wide course S. E. and ascend steep slope.
 71.00 Ridge bears N. and S. and descend.
 80.00 Set a malpais stone 18 x 10 x 6 ins. 12 ins. in the ground for cor. of secs. 2, 3, 34 and 35, marked 09 on N. E. face, with 2 notches on E. and 4 notches on W. edges; and raise a mound of stone 2 ft. base 1 1/2 ft. high W. of cor. Pits impracticable.
 Land, rolling and mountainous.
 Timber, cedar.
 Soil; rocks; 4th. rate.
 Underbrush, cedar.
 Mountainous land, land heavily timbered and covered with dense underbrush and loose rock, exceptionally difficult to survey 80.00 chs.

8.70 East bet. secs. 2 and 35
 31.51 Descend over loose rock.
 Cross wash 35 lks. wide course S. W.
 Intersect Gila and Salt River Meridian N. 0° 08' E. 32.60 chs. from the cor. of Tps. 18 and 19 N. Rgs. 1 E. and 1 W. which is a stone marked and witnessed as described by the surveyor general, and set a malpais stone 24 x 12 x 8 ins. 18 ins. in the ground, for closing cor. of Tps. 18 and 19 N. Rg. 1 W., marked CC09 on W; with 6 grooves on N., S., and W. faces; dig pits, 30 x 24 x 12 ins., crosswise on each line, N. and S., 4 ft. and W. of stone 8 ft. dist.; and raise a mound of earth, 5 ft. base 2 1/2 ft. high, W. of cor. (I change old cor. to refer to east tps. only)
 Land, mountainous.
 Soil, rocks; 4th. rate.
 No timber.
 Mountainous land covered with loose rock, exceptionally difficult to survey 31.51 chs.

June 3, 1909

Boundaries of Tp. 18 N. Rg. 1 W.
 Latitudes, departures, and closing errors.

Line designated	True bearing	Distance	Latitudes		Departures	
			N	S	E	W
N. bdy. T. 18 N. R. 1 W.	West	351.51				351.51
W. bdy. T. 18 N. R. 1 W.	S 0° 11' W	481.02		481.02		1.59
S. bdy. T. 18 N. R. 1 W.	East	412.81			412.81	
G. & S. R. Mer. thro. T. 18 N.	N. 7° 33' W.	451.74	447.82			59.35
W. bdy. Sec. 31 T. 18 N. R. 1 E.	N 0° 08' E	32.60	32.60		.08	
Convergency						42
Totals			480.42	481.02	412.89	412.87
Error in lat.			481.02			412.89
			.60 Error in dep.			.02

General Description.

This Tp. is generally rolling except the S. E. cor. which is mountainous. The Verde river runs through the south portion of secs. 34 and 35. The township is well covered with cedar timber. The soil is generally rocky. While running the boundaries of this Tp. I destroyed the old cors.

Alfred N. Oliver
 U. S. Deputy Surveyor.

Notth boundary of Tp. 19 N. Rg. 1 W.

Chains

- June 14: At 6h. 00m. a.m., l.m.t., I set off $35^{\circ} 05' N.$ on the lat. arc; $23^{\circ} 17\frac{1}{2}' N.$ on the decl. arc; and determine a meridian with the solar at the cor. of Tps. 19 and 20 N. Rgs. 1 and 2. W., previously described,
Thence I run
East bet. secs. 6 and 31.
Descending through old cutting and dense brush over loose volcanic rock.
- 25.15 Cross road bears N. and S.
25.70 cross wash bears N. course S. and ascend.
39.00 Ridge bears N. and S. and descend.
40.00 Set a malpais stone $18 \times 10 \times 6$ ins. 12 ins. in the ground for $\frac{1}{4}$ sec. cor. marked $09\frac{1}{4}$ on N. face; from which
A cedar 6 ins. diam., bears S. $75^{\circ} E.$ 50 lks..
dist., marked $09\frac{1}{4}S6BT.$
No other tree available. Raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
- 47.00 Cross drain course S. and ascend.
60.00 Over nearly level land, ascending.
80.00 Set a malpais stone $16 \times 10 \times 8$ ins. 11 ins. in the ground for cor. of secs. 5, 6, 31 and 32, marked 09 on N. E, face, with 5. notches on E. and 1 notch on W. edges; from which
A cedar 6 ins. diam., bears N. $57\frac{1}{2}^{\circ} W.$ 147 lks.
dist., marked $T20NR1WS31BT.$
No other trees available. Raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
Land, mountainous and level.
Soil, rocks; 4th. rate.
Timber cedar.
Underbrush, cedar.
Mountainous land, covered with dense brush and covered with loose volcanic rock, exceptionally difficult to survey, 80.00 chs.
-
- East bet. secs. 5 and 32.
Descending across old cutting through dense young timber and underbrush over loose volcanic rock.
- 2.05 Cross old wood road bears N. and S.
10.00 Leave cutting and through heavy timber and dense brush.
23.00 Cross drain course S. and ascend.
39.00 Cross ridge bears N. and S. and descend.
40.00 Set a malpais stone $18 \times 8 \times 6$ ins. 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $09\frac{1}{4}$ on N. face; from which
A cedar 5 ins. diam., bears N. $62\frac{1}{2}^{\circ} E.$ 14 lks.
dist., marked $09\frac{1}{4}S32BT.$
A cedar 6 ins. diam., bears S. $24\frac{3}{4}^{\circ} E.$ 181 lks.
dist., marked $09\frac{1}{4}S5BT.$
- 62.10 Cross wash 25 lks. wide course S. E. and ascend.
72.58 Intersect W. line of Tract No. 47, Tp. 20 N. Rg. 1W., N. $0^{\circ} 09' E.$ 13.51 chs. from cor. No. 5 of tract and set a malpais $18 \times 10 \times 6$ ins. 12 ins. in the ground for closing cor. of secs. 32 and 33, marked $CC09$ on W. PC on E., with 6 grooves on N. and S. faces; from which
A cedar 6 ins. diam., bears S. $72^{\circ} W.$ 108 lks.
dist., marked $09CCT19NR1WS5BT$
A cedar 8 ins. diam., bears N. $64\frac{1}{2}^{\circ} W.$ 96 lks.
dist., marked $09CCT20NR1WS32BT.$
- 80.00 Thence I run on a blank line across tract No. 47.
Point for cor. of secs. 4, 5, 32 and 33 falls in Tract No. 47.
Land, Rolling mountains.
Soil; rocks, 4th. rate.
Timber, cedar and pinon.
Underbrush, cedar.
Mountainous land, land heavily timbered and covered with dense underbrush and loose rock, 80.00 chs.
Exceptionally difficult to Survey

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North boundary of Td. 19 N. Rg. 1 W.

Chains.

East bet. secs. 4 and 33
 On a blank line across Tract No. 47 from point where sec. cor. fell.
 73.77 Intersect E. line of Tract No. 47 N. 0° 09' W. 13.33 chs. from cor. No. 7 of tract, and mark across on a malpais rock in place 14 x 10 x 6 ins. above ground, for closing cor. of secs. 4 and 33, marked CC09 on E., PC on W, with 6 grooves N. and S. of cross; from which
 A cedar 8 ins. diam., bears N. 48 1/2° E. 52 lks. dist. marked CC09T20NRLWS33BT.
 A cedar 5 ins. diam., bears S. 23 1/2° E. 77 lks. dist., marked CC09T19NRLWS4BT.

80.00 Thence ascend through heavy timber and dense brush over losse volcanic rock.
 Set a Malpais stone 18 x 10 x 6 ins. 12 ins. in the ground for cor. of secs. 3, 4, 33 and 34, marked 09 on N. E. face, with 3 notches on E. and W. edges; from which
 A cedar 6 ins. diam., bears N. 45° E. 3 lks. dist. marked 09T20NRLWS34BT.
 A cedar 6 ins. diam., bears N. 77° W. 7 lks. dist., marked 09T20NRLWS33BT.

Land, rolling mountains.
 Soil, stony; 4th. rate.
 Timber, cedar
 Underbrush, cedar.

Mountainous land, land heavily timbered and covered with dense underbrush and loose rock; 80.00 chs. *Exceptionally difficult to Survey*
 June 14; At this cor. I set off 23° 16 1/2' N. on the decl. arc; and observe the sun on the meridian at noon, the resulting lat. is 35° 05' N.

East bet. secs. 3 and 34

Ascending over mountainous land, through dense timber and underbrush over losse volcanic boulders.

14.00 Ridge bears N. E. and S. W. and descend.
 40.00 Set a malpais stone 18 x 8 x 6 ins. 12 ins. in the ground for sec. cor. marked 09 1/4 on N. face; from which
 A cedar 8 ins. diam., bears N. 21 1/2° W. 65 lks. dist., marked 09 1/4 S34BT.
 A cedar 6 ins. diam., bears S. 59° E. 18 lks. dist., marked 09 1/4 S3BT.

57.00 Descend into Rattlesnake Canyon.
 63.00 Cross wash 30 lks. wide course S. and ascend. out of canyon.

68.50 Rim of canyon and over nearly level land.

73.50 Intersect E. line of Tract No. 48, Tp. 20 N. Rg. 1 W. and set a Malpais 18 x 8 x 8 ins. 12 ins. in the ground for closing cor. of secs. 3 and 34, marked 09CC on W. PC on E. with 6 grooves on N. and S. faces; from which
 A cedar 12 ins. diam., bears N. 32° W. 9 lks. dist., marked CC09T20NRLWS34BT
 A cedar 5 ins. diam., bears S. 50° W. 78 lks. d dist., marked 09CCT19NRLWS3BT.

80.00 Thence on a blank line across Tract 48.
 Point for cor. falls on tract.
 Land, rough and mountainous.
 Soil, rocks; 4th. rate.
 Timber, cedar and pinon.
 Underbrush, cedar.
 Mountainous land, land heavily timbered and covered with dense underbrush and loose rock 80.00 chs.
Exceptionally difficult to Survey

East bet. secs. 2 and 35

On a blank line across tract No. 48, from point for sec. cor.

27.40 Intersect Gila and Salt River Meridian S. 0° 34' W. 14.00

N North boundary of Tp. 19 N. Rg. 1 W.

Chains. chs. from the $\frac{1}{4}$ sec. cor. on the W. bdy. of sec. 31 N Tp. 20 N. Rg. 1 E. and set a malpais stone 18 x 10 x 8 ins. 12 ins. in the ground for closing cor. of Tps. 19 and 20 N. Rg. 1 W., marked 09CC on W. face, with 6 grooves on N. S., and W. faces; from which
 A cedar 5 ins. diam., bears N. 48° W. 48 lks. dist., marked 09CCT20NRLWS35BT.
 A cedar 8 ins. diam., bears S. 69 1/2° W. 100 lks. dist., marked 09CCT19NRLWS2BT.
 Land, mountainous.
 Soil, rocks; 4th. rate.
 Timber, cedar.
 Underbrush, .cedar.
 Mountainous land, land heavily timbered and covered with dense brush and loose rocks 27.40 chs.
 Exceptionally difficult to Survey

June 14, 1909.

Boundaries of Tp. 19 N. Rg. 1 W.
 Latitudes, departures, and closing errors.

Line designated	True bearing	Distance	Latitudes		Departures	
			N	S	E	W
N. bdy. T. 19 N. R. 1 W.	West	347.40				347.40
W. bdy. T. 19 N. R. 1 W.	S 1° 30' W.	40.10		40.09		1.05
	S 0° 46' E.	39.96		39.96	54	
	S 0° 19' E.	40.28		40.28	22	
	S 0° 06' W.	40.27		40.27		07
	S 0° 02' E.	39.93		39.93	03	
	S 0° 07' E.	39.93		39.93	08	
	S 0° 05' E.	39.97		39.97	06	
	S 0° 34' W.	39.95		39.95		40
	S 0° 12' E.	39.90		39.90	14	
	S 0° 18' E.	40.01		40.01	21	
	S 0° 09' E.	40.02		40.02	11	
	S 0° 09' W.	40.02		40.02		11
S. bdy. T. 19 N. R. 1 W. G & S. R. Mer. thro T. 19 N.	East	351.51			351.51	
	N. 0° 08' E.	8.44	8.44		02	
	N. 0° 02' W.	40.65	40.65			02
	N. 0° 39' W.	40.65	40.65			46
	N. 0° 28' W.	40.58	40.58			33
	N. 0° 03' W.	40.40	40.40			03
	N. 0° 03' W.	40.40	40.40			04
	N. 2° 25' W.	40.59	40.55			171
	N. 0° 31' W.	40.69	40.69			37
	N. 0° 13' W.	40.68	40.68			15
	N. 0° 15' W.	40.55	40.55			18
	N. 0° 16' W.	39.96	39.96			19
	N. 0° 26' W.	40.37	40.37			30
	N. 0° 34' E.	26.08	26.08		26	
Convergency						37
Totals.			480.00	480.33	353.18	353.18
Error in lat.				33		100
				Error in dep.		

General description.
 This township is generally rolling, and mostly covered with cedar timber. The soil is rocky. In running the boundaries of this township I destroyed the old cors.

Alfred N. Olson
 U. S. Deputy Surveyor.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by Alfred N. Oliver

....., 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 N. S.

and W. boundaries of Tp. 18 N. Rg. 1W. and the N. boundary of Tp. 19 N. Rg. 1 W. and Tp. 17 N. Rg. 1 W. showing the respective capacities in which they acted:

Will W. Shawk....., *Chainman.*

Archie Johnston....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

W. R. Johnston....., *Arman.*

....., *Arman.*

R. R. Lane......, *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Alfred N. Oliver

....., United States Deputy Surveyor, in surveying all those parts or portions of the N., S., and W., boundaries of Tp. 18 N. and the N. boundary of Tp. 19 N. Rg. 1W. and Tp. 17 N. Rg. 1 W.

..... 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.

Will W. Shawk....., *Chainman.*
Archie Johnston....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

W.R. Johnston....., *Arman.*

....., *Arman.*

R. R. Lane....., *Flagman.*

Subscribed and sworn to before me this 13th.

day of June, 1909. 190



Alfred N. Oliver
U.S. Deputy Surveyor

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FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Alfred N. Oliver, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank S. Ingalls United States Surveyor General for Arizona, bearing date of the 19th day of November, 1908, 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 N., S., and W. boundaries of Tp. 18 N. Rg. 1 W. and the N. boundary of Tp. 19 N. Rg. 1 W. and Tp. 17 N. Rg. 1 W.

_____ 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.

Subscribed by said Alfred N. Oliver, and sworn to before me }
this 19th day of November, 1908



Frank S. Ingalls
United States Surveyor General
for Arizona

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona, April 27, 190-1910
The foregoing field notes of the survey of the North South and West Boundaries of Tp. 18 N. Rg. 1 W. and North Boundary of Tp. 19 N. Rg. 1 W. and portion of N. by Tp. 17 N. Rg. 1 W. of the Gila and Salt River Base and Meridian, Arizona.

executed by Alfred N. Oliver U.S. Deputy Surveyor under his contract No. 153, dated November 19, 1908, 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
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.