

*Sumner*

Book E.

BOOK 2185 2185

*Filing authorized, Letter E. 3/1/1910.*

NOV 13 1909

# FIELD NOTES

RE  
OF THE SURVEY OF THE

2185

Gila and Salt River Meridian through Tps. 17, 19 and 20 N.

2185

2185

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 19th, 1908., 190

Survey commenced May 15, 1909., 190

Survey completed June 30, 1909., 190

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NAMES AND DUTIES OF ASSISTANTS.

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Will W. Shawk Chainman

Archie Johnston Chainman

Fred Kesi Chainman

Fred W. Rodolf Chainman

W. R. Johnston Axman.

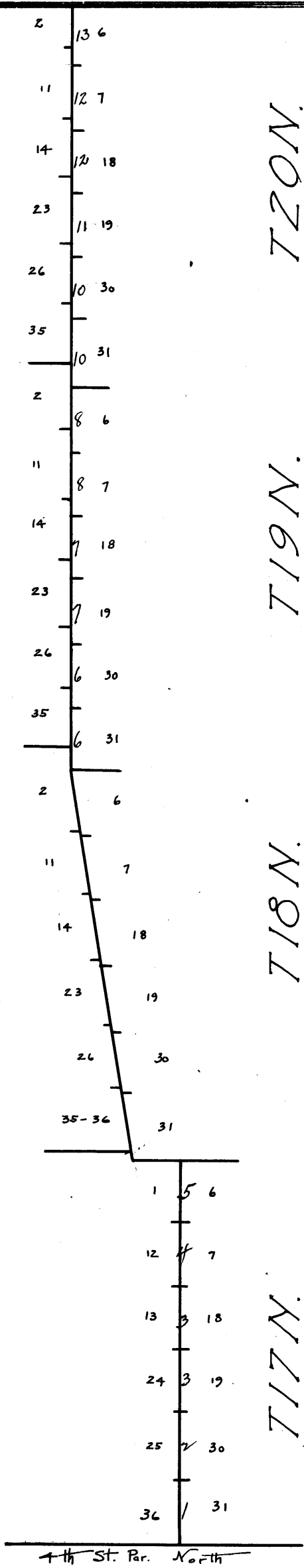
R. R. Lane Flagman.

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5th St. Par. North.

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BOOK 2185

G. & S. R. MERIDIAN.



4th St. Par. North

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PRELIMINARY OATHS OF ASSISTANTS.

WE, Will W. Shawk, Archie Johnston, and Fred Kesl and Fred W. Rodolf  
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 Gila and Salt River Meridian through Tps. 17, 19 and 20 N.

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

Subscribed and sworn to before me this 15th.  
day of May, 1909., 190

Fred Kesl  
Fred W. Rodolf  
Alfred N. Plinn  
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~~ I will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given ~~me~~ me, to the best of ~~my~~ my skill and ability, in the survey of the Gila and Salt River Meridian through Tps. 17, 19 and 20 N.

W. R. Johnston, Axman.  
\_\_\_\_\_, Axman.

Subscribed and sworn to before me this 15th.  
day of May, 1909., 190



Alfred N. Plinn  
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 Gila and Salt River Meridian through Tps. 17, 19 and 20 N.

R. R. Lane, Flagman.

Subscribed and sworn to before me this 15th.  
day of May, 1909., 190



Alfred N. Plinn  
U.S. Deputy Surveyor

## East boundary of Tps. 17 N. Rgs. 1 E. and 1 W.

Chains. Survey commenced May 15, 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 my station, at my camp, which is about one mile south of the standard cor. of Tps. 17 N. Rgs. 1 E. and 1 W. and which I mark by a stone set firmly in the ground and marked with a cross on top; latitude  $34^{\circ} 48' 1/2''$  N., longitude  $112^{\circ} 19' W.$  I set off  $34^{\circ} 48' 1/2''$  N. on the lat. arc;  $18^{\circ} 57' 1/2''$  N. on the decl. arc; and, at 6h. 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.

May 15, 1909.

May 16: At 3h. 55m. 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 15, on which the meridian coincides with the mark determined by the solar.

At 6h. 00m. a.m., l.m.t., I set off  $34^{\circ} 48' 1/2''$  N. on the lat. arc;  $19^{\circ} 04'$  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 Standard cor. of Tps. 16 and 17 N. Rgs. 1 E. and 1 W. which is a limestone  $10 \times 8 \times 4$  ins. above ground marked as described by the surveyor general from which

A cedar 10 ins. diam., bears N.  $78^{\circ} W.$

86 lks. dist. marked SCTXVIIINRIWSXXXVIBT

This is the only bearing tree at the cor. I take additional bearing trees as follows.

A cedar 6 ins. diam., bears N.  $33^{\circ} E.$  55 lks. dist. marked T17NR1ES31BT

A pinon 8 ins. diam., bears S.  $0^{\circ} 05' E.$  63 lks. dist., marked T16NR1ES6BT.

A cedar 8 ins. diam., bears S.  $45^{\circ} W.$  110 lks. dist. marked T16NR1WS1BT.

Thence I run

North bet. secs. 31 and 36

Along rough W. slope of mountain, through dense timber.

11.00 Cross drain course W. and ascend S. slope. 3 lks. wide

14.00 Cross ridge bears E. and W. and descend.

18.50 Cross drain course W. and ascend. 3 lks. wide

23.00 Top, change to NW. slope and descend along N. W. slope.

35.00 Cross wash 20 lks. wide course N. E. and along S. E. slope

## Gila and Salt River Meridian Through Tp. 17 N.

Chains.	Difference between measurements of 40.00 chs., by two sets of chainmen is 10 lks.; position of middle point By 1st. set, 40.05 chs. By 2nd. set, 39.95 chs.; the mean of which is
40.00	Set a malpais stone 18 x 10 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 pinon 4 ins. diam. bears S. 73 1/2° E. 28 lks. dist. marked 09 $\frac{1}{4}$ S31BT A cedar 6 ins. diam., bears N. 20 1/2° W. 20 lks. dist. marked 09 $\frac{1}{4}$ S36BT.
54.00	Cross drain 10 lks. wide course N. E.
66.80	Leave timber and through dense oak brush.
67.50	Cross same drain 10 lks. wide course N. W. and along S. W. slope ascending.
77.00	Cross ridge bears N. W. and S. E. and descend. Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks. ; position of middle point By 1st. set 80.06 chs. By 2nd. set, 79.94 chs.; the mean of which is
80.00	Set a granite stone 20 x 10 x 10 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 and 09 on N. E. face; from which A pinon 4 ins. diam., bears N. 20 1/2° E. 50 lks. dist. marked 09T17NR1ES30BT A cedar 5 ins. diam., bears S. 86° E. 40 lks. dist. marked 09T17NR1ES31BT. A cedar 6 ins. diam., bears S. 20 1/2° W. 96 lks. dist., marked 09T17NR1WS36BT. A pinon 4 ins. diam., bears N. 23 3/4° W. 94 lks. dist. marked 09T17NR1WS25BT. Land, Rough and mountainous. Soil, rocky; 3rd. and 4th. rate. Timber, Cedar and pinon. Underbrush, Oak and cedar. Mountainous land and land covered with heavy timber and dense underbrush, exceptionally difficult to survey 80.00 chs.
	North bet. secs. 25 and 30. Descending N. slope through scattering timber and dense brush.
3.50	Cross wash 15 lks. wide course N. W. and ascend.
8.00	Ridge bears E. and W. and descend.
13.00	Cross wash 25 lks. wide course N. W. and ascend.
26.00	Ridge bears E. and W. and descend.
31.75	Cross wash 20 lks. wide course W. and ascend rough S. slope and timber becomes heavy. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st. set, 40.03 chs. By 2nd. set, 39.97 chs.; the mean of which is
40.00	Set a limestone 20 x 10 x 4 ins. 15 ins. in the ground for $\frac{1}{4}$ sec. cor., marked 09 $\frac{1}{4}$ on W. face; from which A cedar 8 ins. diam., bears N. 27 1/2° E 142 lks. dist. marked 09 $\frac{1}{4}$ S30BT. A cedar 4 ins. diam., bears N. 62° W. 34 lks. dist., marked 09 $\frac{1}{4}$ S25BT.
55.00	Change to S. W. slope.
66.00	Top and descend along N. W. slope.
79.85	Cross wash 10 lks. wide course N. W. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st. set, 80.05 chs. By 2nd. set, 79.95 chs.; the mean of which is
80.00	Set a limestone 20 x 12 x 10 ins. 15 ins. in the ground for cor. of secs. 19, 24, 25, and 30, marked with 2 notches on S. and 4 notches on N. edges, and 09 on N. E. face; from which A pinon 6 ins. diam., bears N. 35 1/2° W. 41 lks.

## Gila and Salt River Meridian through Tp. 17 N.

Chains.

	dist., marked 09T17NR1WS24BT.
	A pinon 5 ins. diam., bears N. $36\ 1/2^\circ$ E. 53 lks.
	dist., marked 09T17NR1ES19BT
	A cedar 7 ins. diam., bears S. $55\ 3/4^\circ$ E 88 lks.
	dist., marked 09T17NR1ES30BT.
	A cedar 6 ins. diam., bears S. $18^\circ$ W. 34 lks. dist., marked 09T17NR1WS25BT.
	Land, rough and mountainous.
	Soil, stony, 4th. rate.
	Timber, cedar and pinon.
	Underbrush, oak and cedar.
	Mountainous land and land covered with dense underbrush and heavy timber, exceptionally difficult to survey 80.00 chs.
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	North bet. secs. 19 and 24
	Descend rough N. W. slope through heavy timber.
5.00	Along W. slope
17.75	Cross wash 10 lks. wide course N. W. and ascend along S. W. slope.
37.00	Ridge bears N. W. and S. E. and descend
	Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st. set, 40.02 chs.
	By 2nd. set, 39.98 chs.; the mean of which is
40.00	Set a limestone $16 \times 10 \times 10$ ins. 11 ins. in the ground for $\frac{1}{2}$ sec. cor. marked 09 on W. face; from which A pinon 5 ins. bears S. $80^\circ$ E. 6 lks. dist., marked 09 $\frac{1}{2}$ S19BT.
	A pinon 7 ins. diam., bears S. $85^\circ$ W. 37 lks. dist., marked 09 $\frac{1}{2}$ S14BT..
52.50	Cross wash 15 lks. wide course N. W.
57.00	Cross bend in same wash bears S. W. course N. W. and asced
62.00	Ridge bears N. W. and S. E. and descend.
67.00	Cross wash 10 lks. wide course N. W.
73.00	Ridge bears N. and S. and along on top of ridge.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st. set, 80.06 chs.
	By 2nd. set, 79.94 chs.; the mean of which is
80.00	Set a limestone $24 \times 12 \times 10$ ins. 18 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 6 ins. diam, bears N. $56\ 1/4^\circ$ E. 84 lks. dist., marked 09T17NR1ES18BT.
	A cedar 4 ins. diam., bears S. $27\ 1/2^\circ$ E. 37 lks. dist., marked 09T17NR1ES19BT.
	A pinon 6 ins. diam., bears S. $26^\circ$ W. 73 lks. dist., marked 09T17NR1WS24BT.
	A pinon 5 ins. diam., bears N. $66\ 3/4^\circ$ W. 55 lks. dist., marked 09T17NR1WS13BT.
	Land, rough and mountainous.
	Soil stony 4th. rate.
	Timber, cedar and pinon.
	Underbrush, oak.
	Mountainous land, and land covered with heavy timber and dense brush; exceptionally difficult to survey, 80.00 chs. At this cor. I set off $19^\circ\ 05\ 1/2'$ N. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is $34^\circ\ 52'$ N.
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	North bet. secs. 13 and 18.
	Along top of ridge through heavy timber and dense brush.
10.00	Descend N. slope of ridge.
18.50	Cross wash 20 lks. wide course N. W. and ascend S. W. slope.
22.00	Descend N. W. slope.
24.50	Cross wash 10 lks. wide course S. W. and ascend .



## Gila and Salt River Meridian through Tp. 17 N.

30.00	Ridge bears E. and W. and descend. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st. set, 40.03 chs. By 2nd. set, 39.97 chs.; the mean of which is
40.00	Set a limestone 20 x 14 x 6 ins. 15 ins. in the ground for $\frac{1}{2}$ sec. cor., marked 09 $\frac{1}{4}$ on W. face; from which A pinon 12 ins. diam., bears S. 50° E. 55 lks. dist., marked 09 $\frac{1}{4}$ S18BT. A pinon 7 ins. diam., bears S. 75° W. 25 lks. dist., marked 09 $\frac{1}{4}$ S13BT.
40.20	Cross drain 05 lks. wide course N. E.
43.00	Cross same drain 10 lks. wide course N. W.
48.80	Cross wash 20 lks. wide course W. and ascend.
53.00	Ridge bears E. and W. and descend.
55.00	Cross wash 10 lks. wide course W.
62.00	Ascend steep S slope.
70.00	Ridge bears E. and W. and descend. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st. set 80.05 chs. By 2nd. set 79.95 chs.; the mean of which is
80.00	Set a limestone 16 x 12 x 10 ins. 11 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 notch on N. edges; from which A pinon 5 ins. diam., bears N. 65 1/4° E. 26 lks. dist., marked 09T17NR1ES7BT A pinon 4 ins. diam., bears S. 45 3/4° E. 56 lks. dist., marked 09T17NR1ES18BT. A pinon 4 ins. diam., bears S. 38 1/4° W. 63 lks. dist., marked 09T17NR1WS13BT. A pinon 6 ins. diam., bears N. 58 1/4° W. 40 lks. dist., marked 09T17NR1WS12BT.
	Land, rough and mountainous. Soil, rocky; 4th. rate. Timber, pinon and cedar. Underbrush oak and cedar. Mountainous land and land covered with heavy timber and dense underbrush, exceptionally difficult to survey 80.00 chs.
	North bet. secs. 7 and 12 Descend rough N. slope through heavy timber and dense underbrush.
3.80	Cross wash 10 lks. wide course N. E. and ascend steep S. slope.
11.00	Ridge bears N. E. and S. W. and descend N. W. slope.
20.00	Cross wash 10 lks. wide course N. and along in ravine.
37.00	Leave wash and ravine and ascend S. E. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st. set 40.04 chs. By 2nd. set, 39.96 chs.; the mean of which is
40.00	Set a limestone 18 x 16 x 9 ins. 12 ins. in the ground for $\frac{1}{4}$ sec. cor. marked 09 $\frac{1}{4}$ on W. face; from which A pinon 6 ins. diam., bears N. 65° W. 10 lks. dist., marked 09 $\frac{1}{4}$ S12BT A pinon 4 ins. diam., bears N. 46° E. 20 lks. dist., marked 09 $\frac{1}{4}$ S7BT.
51.00	Descend steep N. slope.
54.50	Cross wash 30 lks. wide course E. and ascend.
57.00	Ridge bears E. and W. and descend. steep N. slope into Verde River canon.
61.00	Cross Verde River 100 lks. wide running water, course E. and ascend. Difference between measurements of 80.00 chs., by two sets of chainmen is 12 lks., position of middle point By 1st. set, 80.06 chs. By 2nd. set, 79.94 chs.; the mean of which is
80.00	

Gila and Salt River Meridian through Tp. 17 N.

Chains  
80.00 Set a limestone 20 x 9 x 7 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 pinon 4 ins. diam., bears N. 24° E. 119 lks. dist., marked 09T17NR1ES6BT.
- A pinon 4 ins. diam., bears S. 44 1/2° E. 193 lks. dist., marked 09T17NR1ES7BT.
- A pinon 4 ins. diam., bears S. 26 1/2° W. 118 lks. dist., marked 09T17NR1WS12BT.
- A pinon 4 ins. diam., bears N. 13 1/2° W. 69 lks. dist., marked 09T17NR1WS1BT.

Land, rough and mountainous.  
Soil, rocky, 4th. rate.  
Timber, cedar and pinon.  
Underbrush, oak and cedar.  
Mountainous land, and land covered with heavy timber and dense underbrush, 80.00 chs.  
*Exceptionally difficult to Survey*

North bet. secs. 1 and 6.  
Ascend steep rocky S. slope through heavy timber, and brush  
9.00 Ridge bears N. W. and S. E. and descend.  
20.00 Ascend S. slope.  
28.00 Ridge bears E. and W. descend.  
37.10 Cross wash 30 lks. wide course W. and ascend.  
Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point,

By 1st. set 40.02 chs.  
By 2nd. set, 39.98 chs.; the mean of which is  
40.00 Set a limestone 16 x 14 x 10 ins. 11 ins. in the ground for 1/4 sec. cor., marked 09 1/4 on W. face; from which

- A cedar 6 ins. diam., bears N. 66 3/4° E. 73 lks. dist., marked 09 1/4 S6BT.
- A cedar 4 ins. diam., bears N. 79 1/2° W. 50 lks. dist., marked 09 1/4 S1BT.

61.50 Ridge bears E and W. and descend.  
81.92 Difference between measurements of 81.92 chs., by two sets of chainmen is 8 lks.; position of middle point  
By 1st. set, 81.96 chs.  
By 2nd. set, 81.88 chs.; the mean of which is

81.92 Intersect S. bdy. of Tp. 18 N. Rg. 1 E. 66.45 chs. E. of the SW cor. of Tp. 18 N. Rg. 1 E.  
Set a limestone 18 x 14 x 8 ins. 12 ins. in the ground for closing cor. of Tps. 17 N. Rgs. 1 E. and 1 W., marked CC09 on S.; with 6 grooves on S, E. and W. faces; from which

- A pinon 7 ins. diam., bears S. 27 3/4° W. 44 lks. dist., marked 09CCT17NR1WS1BT.
- A pinon 7 ins. diam., bears S. 76 1/2° E. 73 lks. dist., marked 09CCT17NR1ES6BT.

Land, mountainous.  
Soil, rocky, 4th. rate.  
Timber, cedar and pinon.  
Underbrush, oak and cedar.  
Mountainous land, and land covered with dense underbrush or heavy timber, exceptionally difficult to survey, 81.92 chains.

May 16, 1909.

## Gila and Salt River Meridian through Tp. 19 N.

June 15: At 6h. 00m., a.m., l.m.t., I set off  $35^{\circ} 00' N.$  on the lat. arc;  $23^{\circ} 20' 1/2' N.$  on the decl. arc; and determine a meridian with the solar at the cor. of Tps. 18 and 19 N. Rg. 1 E. which is a stone firmly set, marked and witnessed as described by the surveyor general.

Thence I run

North along W. bdy. of sec. 31.

Over top of mesa covered with loose volcanic rock and heavy cedar timber.

Difference between measurements of 41.04 chs. by two sets of chainmen is 6 lks.; position of middle point,

By 1st. set 41.07 chs.

By 2nd. set 41.01 chs.; the mean of which is

41.04 Fell 10 lks. W. of  $1/4$  sec. cor., which I destroy and re-establish in the same place as follows: set a malpais stone  $16 \times 7 \times 6$  ins. 11 ins. in the ground for  $1/4$  sec. cor. marked 09  $1/4$  on W. face; and raise a mound of stone 2 ft. base  $1 1/2$  ft. high W. of cor. pits impracticable.

Course of this half mile is  $N. 0^{\circ} 08' E.$  41.04 chs.

Difference <sup>Thence from  $1/4$  sec. cor. North</sup> between measurements of 81.69 chs. by two sets of chainmen is 10 lks.; position of middle point

By 1st. set 81.74 chs.

By 2nd. set 81.64 chs.; the mean of which is

81.69 Fell 2 lks. E. of old cor. which I destroy and reestablish in the same place as follows: set a malpais stone  $20 \times 8 \times 8$  ins. 15 ins. in the ground for cor. of secs. 30 and 31, marked 09 on N. E. face, with 1 notch on S. and 5 notches on N. edges; dig pits  $18 \times 18 \times 12$  ins. in each sec. N. E. and S. E. of stone  $5 1/2$  ft. dist. and raise a mound of earth 4 ft. base 2 ft. high E. of cor.

Course of this half mile is  $N. 0^{\circ} 02' W.$  40.65 chs.

Land, mesa.

Soil, rocky; 4th. rate.

Timber, cedar.

Land heavily timbered and covered with loose rock, exceptionally difficult to survey, 81.69 chs.

North on W. bdy. of sec. 30.

Over nearly level land covered with loose volcanic rock through scattering cedars.

22.25 Cross Rattlesnake Creek, dry, 30 lks. wide course S. E. Difference between measurements of 40.65 chs. by two sets of chainmen is 4 lks. position of middle point

By 1st. set 40.67 chs.

By 2nd. set 40.63 chs. the mean of which is

40.65 Fell 46 lks. E. of  $1/4$  sec. cor. which I destroy and re-establish in the same place as follows; set a sandstone  $18 \times 8 \times 6$  ins. 12 ins. in the ground for  $1/4$  sec. cor. marked 09  $1/4$  on W. face; dig pits  $18 \times 18 \times 12$  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.

Course of this half mile is  $N. 0^{\circ} 39' W.$  40.65 chs.

Thence from  $1/4$  sec. cor. North

65.00 Rattle snake creek course W.

67.50 Rattlesnake creek course S. E.

Difference between measurements of 81.23 chs. by two sets of chainmen is 6 lks., position of middle point

By 1st. set 81.26 chs.

By 2nd. set 81.20 chs.; the mean of which is

81.23 Fell 33 lks. E. of old cor. which I destroy and reestablish in the same place as follows; set a malpais stone  $16 \times 12 \times 5$  ins. 11 ins. in the ground for cor. of secs. 19 and 30, marked 09 on N. E. face, with 2 notches on S. and 4 notches on N. edges; and raise a mound of stone 2 ft. base  $1 1/2$  ft. high E. of cor. Pits impracticable.

Course of this half mile is  $N. 0^{\circ} 28' W.$  40.58 chs.

Land, nearly level.

Soil, rocky; 4th. rate.

Timber, cedar.

## Gila and Salt River Meridian through Tp. 19 N.

Chains.	
	Rough, rocky land, 81.23 chains. <i>Exceptionally difficult to survey</i>
	North on W. bdy. of sec. 19. Over nearly level land covered with loose volcanic rock, through heavy timber and brush.
17.25	Cross road bears N. E. and S. W.
11.25	Cross Rattlesnake Creek, water in pools, course S. W. 30 lks. wide .
17.25	Cross road bears N. E. and S. W.
39.80	Enter Rattlesnake wash course S. E. and along same Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st. set 40.02 chs. By 2nd set 39.98 chs.; the mean of which is
40.00	No trace of old $\frac{1}{4}$ sec. cor. I mark this point and continue my line.
52.85	leave Rattlesnake wash 20 lks. wide bears N. W. Difference between measurements of 80.80 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st. set 80.85 chs. By 2nd. set 80.75 chs.; the mean of which is
80.80	Fell 8 lks. E. of old sec. cor. which I destroy and re- establish in the same place as follows: set a malpais stone 16 x 12 x 5 ins. 11 ins. in the ground for cor. of secs. 18 and 19, marked 09 on N. E. face, with 3 notches on N. and S. edges; and raise a mound of stone 2 ft. base 1 1/2 ft. high E. of cor. <i>Pits impracticable.</i> The course of this mile is N. 0° 03' W. I now return to my 40.00 chain point and run thence west 4 lks. and thence south 71 lk s. and at N. 0° 03' W. 39.29 chs. from the cor. of secs. 19 and 30 I set a mal- pais stone 20 x 8 x 6 ins. 15 ins. in the ground for witness $\frac{1}{4}$ sec. cor. marked 09WC $\frac{1}{4}$ 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. June 15: At the cor. of secs. 18 and 19 I set off 23° 19' N. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is 35° 02 1/2' N. Land, level and broken. Soil, rocky; 4th rate. Timber, cedar. Underbrush; oak and cedar. Mountainous land, land heavily timbered and covered with dense underbrush and land covered with loose rock, exceptionally difficult to survey 80.80 chs.
	North btw. bdy. of sec. 18.
	Ascend over loose volcanic rock thro cedar timber.
13.28	Ridge bears E. and W. and descend.
21.05	Cross drain 5 lks. wide course W. and ascend.
35.25	Ridge bears E. and W. and descend.
40.38	Cross drain 5 lks. wide course W. and ascend. Difference between measurements of 40.55 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st. set 40.58 chs. By 2nd. set 40.52 chs.; the mean of which is
40.55	Fell 171 lks. E. of $\frac{1}{4}$ sec. cor., which I destroy and reestablish in the same place as follows: set a malpais stone 16 x 10 x 6 ins. 11 ins. in the ground for $\frac{1}{4}$ sec cor. marked 09 $\frac{1}{4}$ on W. face; and raise a mound of stone 2 ft. base 1 1/2 ft. high W. of cor. Pits impracticable. Course of this half mile is N. 2° 25' W. 40.59 chs. Thence from $\frac{1}{4}$ sec. cor. North
49.00	Ridge bears N. E. and S. W. and descend. Difference between measurements of 81.28 chs. by two sets of chainmen is 8 lks.; position of middle point

## Gila and Salt River Meridian through Tp. 19 N

Chains.	By 1st. set 81.32 chs. By 2nd. set 81.24 chs.; the mean of which is
81.28	Fall 37 lks. E. of sec. cor. which I destroy and reestablish in the same place as follows; set a malpais stone 16 x 12 x 8 ins. 11 ins. in the ground for cor. of secs. 7 and 18, marked 09 on N. E. face, with 4 notches on S. and 2 notches on N. edges; from which A cedar 8 ins. diam., bears N. 84° 25' E. 193 lks. dist., marked 09T19NR1ES7BT. No other trees available. Raise a mound of stone 2 ft. base 1 1/2 ft. high, E. of cor. <i>Pits impracticable</i> Course of this half mile is N. 0° 31' W. 40.69 chs. Land, mountainous. Soil, rocky; 4th. rate. Timber cedar. Mountainous land, covered with loose rock, exceptionally difficult to survey 81.28 chs.
	North on W. bdy. of sec. 7. Descend over mountainous land covered with loose volcanic rock.
3.50	Cross old road bears N. E. and S. W.
6.75	Cross drain 5 lks. wide course S. W.
35.00	Ridge bears E. and W. and descend. Difference between measurements of 40.68 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st. set 40.71 chs. By 2nd. set 40.65 chs.; the mean of which is
40.68	Well 15 lks. E. of $\frac{1}{4}$ sec. cor. which I destroy and reestablish in the same place as follows; set a malpais stone 20 x 14 x 8 ins. 15 ins. in the ground for $\frac{1}{4}$ sec. cor. marked 09 $\frac{1}{4}$ on W. face; and raise a mound of stone 2 ft. base 1 1/2 ft. high W. of cor. <i>Pits impracticable</i> Course of this half mile is N. 0° 13' W. 40.68 chs. Thence from $\frac{1}{4}$ sec. cor. I run North on a random line and at
40.55	Fall 18 lks. E. of sec. cor. I return to the $\frac{1}{4}$ sec. cor. and run thence N. 0° 15' W. continuing my chaining from the sec. cor.
44.00	Cross drain 5 lks. wide course S. W.
36.68	Intersect S. line of Tract No. 41 at N. 89° 39' E. 34.79 chs. from cor. No. 4 of tract Difference between measurements of 81.23 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st. set 81.27 chs. By 2nd. set 81.19 chs.; the mean of which is
81.23	The old sec. cor. which I destroy and in the same place set a malpais stone 16 x 8 x 6 ins. 11 ins. in the ground for cor. of secs. 6 and 7, marked 09 on N. E. face, with 5 notches on S. and 1 notch on N. edges; from which A cedar 5 ins. diam., bears S. 45° E. 268 lks. dist., marked 09T19NR1ES7BT. No other trees available. Raise a mound of stone 2 ft. base 1 1/2 ft. high, E. of cor. <i>Pits impracticable</i> . Land, mountainous. Soil, rocky; 4th. rate. Timber cedar. Mountainous land covered with loose rock, exceptionally difficult to survey, 81.23 chs.
	North on a random line on W. bdy. of sec. 6.
39.96	Fall 19 lks. E. of old $\frac{1}{4}$ sec. cor. I return to the sec. cor. and run thence N. 0° 16' W. on a true line on W. bdy. of sec. 6 Over rough mountainous land, ascending over loose volcanic rock.
10.00	Ridge bears N. E. and S. W. and descend. Enter heavy timber.

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Gila and Salt River Meridian through Td. 19 N.

Chains.	
15.31	Intersect N. line of Tract No. 41 at N. 89° 20' W. 6.56 chs. from cor. No. 2.
18.00	Cross drain 8 lks. wide course W. and ascend.
25.00	Spur extends E. descend.
36.75	Cross drain 5 lks. wide course S. W. and ascend. Difference between measurements of 39.96 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st. set 39.98 chs. By 2nd. set 39.94 chs.; the mean of which is
39.96	The 1/4 sec. cor. which I destroy and reestablish in the same place as follows; set a malpais stone 16 x 8 x 6 ins. 11 ins. in the ground for 1/4 sec. cor. marked 09 1/4 on W. face; from which A cedar 5 ins. diam., bears S. 62° E. 26 lks. dist., marked 09 1/4 S6BT. No other tree available. Raise a mound of stone 2 ft. base 1 1/2 ft. high, W. of cor. <i>Pits impracticable</i> Thence from 1/4 sec. cor. North. on a random line. Difference between measurements of 80.33 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st. set 80.38 chs. By 2nd. set 80.28 chs.; the mean of which is
80.33	Fall 30 lks. E. of old cor. which I destroy and reestablish in the same place as follows; set a limestone 16 x 10 x 6 ins. 11 ins. in the ground for cor. of Tps. 19 and 20 N. Rg. 1 E. marked 09 on N. E. face, with 6 notches on N., E., and S. edges; from which A cedar 4 ins. diam., bears N. 20° E. 81 lks. dist., marked 09T20NRLES31BT. A cedar 5 ins. diam., bears S. 68 1/4° E. 352 lks. dist., marked 09T19NRLES6BT. Land, mountainous and rough. True course N0° 26' W. 40.37 Soil, rocky; 4th. rate. Timber, cedar. Mountainous land covered with loose rocks and land heavily timbered, exceptionally difficult to survey 80.33 chs.

June 15, 1909.

## Gila and Salt River Meridian through Tp. 20 N.

Chains.

- June 29: At 6h. oom., 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 E., previously set by me.
- Thence I run North on a random line along W. bdy. of sec. 31.
- 40.08 Fall 40 lks. W. of the old  $\frac{1}{4}$  sec. cor.  
I now return to the cor. of Tps. 19 and 20 N. Rg., 1 E.
- Thence I run  
N.  $0^{\circ} 34'$  E. on a true line along W. bdy. of sec. 31  
Descend over loose rocks through dense timber and underbrush.
- 17.13 Intersect S. bdy. of Tract No. 48, 5.79 chs. S.  $86^{\circ} 10'$   
W. of cor. No. 6.
- 25.10 Cross wash 30 lks. wide course S. W. and ascend steep slope.  
Difference between measurements of 40.08 chs., by two sets of chainmen is 10 lks., position of middle point
- By 1st. set 40.13 chs.  
By 2nd. set 40.03 chs., the mean of which is
- 40.08 The old  $\frac{1}{4}$  sec. cor., which I destroy and in the same place set a malpais stone 18 x 12 x 6 ins. 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $09\frac{1}{4}$  on W. face; from which  
A cedar 6 ins. diam., bears S.  $29^{\circ}$  E. 17 lks. dist., marked  $09\frac{1}{4}S31BT$   
No other tree available. Raise a mound of stone 3 ft. base  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
Thence from  $\frac{1}{4}$  sec. cor. North
- 9.00 Ridge bears N. E. and S. W. and descend.  
Difference between measurements of 39.65 chs. by two sets of chainmen is 8 lks., position of middle point  
By 1st. set 39.69 chs.  
By 2nd. set 39.61 chs., the mean of which is
- 39.65 Fall 29 lks. E. of the old cor. of secs. 25, 30, 31 and 36, which I destroy and in the same place set a malpais stone 18 x 12 x 6 ins. 12 ins. in the ground, for cor. of secs. 30 and 31, marked 09 on NE. face, with 5 notches on N. and 1 notch on S. edges; from which  
A cedar 16 ins. diam., bears N.  $42^{\circ}$  E. 79 lks. dist., marked  $09T20NR1ES30BT$ .  
A cedar 8 ins. diam., bears S.  $70^{\circ}$  E. 7 lks. dist., marked  $09T20NR1ES31BT$   
Course of this half mile is N.  $0^{\circ} 25'$  W. 39.65 chs. Land, mountainous.  
Soil, rocky; 4th. rate.  
Timber, cedar.  
Underbrush, cedar and oak.  
Mountainous land, land heavily timbered and covered with dense undergrowth and loose rocks, exceptionally difficult to survey 79.73 chs.
- 40.14 North on a random line on W. bdy. of sec. 30  
Fall 21 lks. E. of old  $\frac{1}{4}$  sec. cor.  
I now return to the cor. of secs. 30 and 31.  
Thence I run  
N.  $0^{\circ} 18'$  W. on a true line on W. bdy. of sec. 30  
Descend over loose volcanic rock, through dense timber and underbrush.
- 6.00 Cross drain course SW. and ascend.
- 15.49 Intersect N. bdy. of Tract No. 48, 5.56 chs. S.  $85^{\circ} 56'$   
W. of cor. No. 2.  
Difference between measurements of 40.14 chs. by two sets of chainmen is 10 lks., position of middle point

Gila and Salt River Meridian through Tp. 30 N.

Chains.	
40.14	<p>By 1st. set 40.19 chs.                      By 2nd. set 40.09 chs.; the mean of which is                      The old <math>\frac{1}{4}</math> sec. cor. which I destroy and in the same place                      set a malpais stone 18 x 6 x 6 ins. 12 ins. in the                      ground for <math>\frac{1}{4}</math> sec. cor., marked 09<math>\frac{1}{4}</math> on W. face; from which                      A cedar 8 ins. diam., bears S. 35<math>\frac{1}{2}</math>° E. 27 lks.                      dist., marked 09<math>\frac{1}{4}</math>S3OBT                      No other tree available. Raise a mound of stone 2 ft.                      base <math>\frac{1}{2}</math> ft. high, W. of cor. Pits impracticable.                      Thence from <math>\frac{1}{4}</math> sec. cor. North                      Difference between measurements of 59.20 chs. by two sets                      of chainmen is 8 lks., position of middle point                      By 1st. set, 39.16 chs.                      By 2nd. set, 39.24 chs.; the mean of which is</p>
39.20	<p>Fall 1.23 chs. W. of the cor. of secs. 19, 24, 25 and 30                      which I destroy and in the same place set a malpais                      stone 18 x 10 x 8 ins. 12 ins. in the ground for cor.                      of secs. 19 and 30, marked 09 on NE. with 2 notches on S.                      and 4 notches on N. edges; from which                      A cedar 7 ins. diam., bears N. 40<math>\frac{1}{2}</math>° E. 75 lks.                      dist., marked 09T2ONRLES19BT.                      A cedar 14 ins. diam., bears S. 43<math>\frac{1}{2}</math>° E. 45 lks.                      dist., marked 09T2ONRLES3OBT.                      Course of this half mile is N. 1°48' E. 39.22 chs.                      Land, mountainous.                      Soil, rocky; 4th. rate.                      Timber, cedar and pinon.                      Mountainous land and land covered with dense undergrowth                      and loose rocks and heavily timbered, exceptionally                      difficult to survey 79.36 chs.                      June 20: At this cor. I set off 23° 15' N. on the decl.                      arc; and observe the sun on the meridian at noon; the                      resulting lat. is 35° 07' N.</p>
39.88	<p>North on a random line on W. bdy. of sec. 19.                      Fall 118 lks. E. of old <math>\frac{1}{4}</math> sec cor.                      I return to the cor. of secs. 19 and 30                      Thence I run                      N. 1° 42' W. on a true line on the W. bdy. of sec. 19.                      Ascend over loose volcanic rock through dense timber and                      underbrush.</p>
12.97	<p>Intersect S. bdy. of Tract No. 44, 5.24 chs. S. 89° 34' W.                      of cor. No. 6.</p>
19.00	<p>Ridge bears NE. and SW. and descend.</p>
36.25	<p>Head of wash course SW. and ascend.                      Difference between measurements of 39.90 chs. by two sets                      of chainmen is 8 lks., position of middle point                      By 1st. set 39.94 chs.                      By 2nd. set 39.86 chs., the mean of which is</p>
39.90	<p>The old <math>\frac{1}{4}</math> sec. cor. which is a pinon tree 6 ins. diam.,                      which I remark 09<math>\frac{1}{4}</math>S83 on W. and 19 on E. face; from which                      A pinon 8 ins. diam., bears S. 7° E. 5 lks.                      dist., marked 09<math>\frac{1}{4}</math>S19BT                      No other tree available. Raise a mound of stone 2 ft.                      base <math>\frac{1}{2}</math> ft. high, W. of cor. Pits impracticable,                      Thence from <math>\frac{1}{4}</math> sec. cor. North</p>
10.00	<p>Ridge bears NE. and SW. and descend.</p>
30.00	<p>Cross wash 20 lks. wide course SW. and ascend.                      Difference between measurements of 39.69 chs. by two sets                      of chainmen is 8 lks., position of middle point                      By 1st. set 39.73 chs.                      By 2nd. set 39.65 chs., the mean of which is</p>
39.69	<p>Fall 147 lks. E. of the old cor. of secs. 13, 18, 19 and                      24 which I destroy and in the same place set a malpais                      stone 18 x 10 x 6 ins. 12 ins. in the ground for cor. of                      secs. 18 and 19, marked 09 on NE. face; with 3 notches on                      N. and S. edges; from which</p>



## Gila and Salt River Meridian through Twp. 20 N

Chains. A cedar 10 ins. diam., bears N.  $53^{\circ}$  E. 44 lks. dist., marked O9T2ONR1ES18BT.  
 A cedar 8 ins. diam., bears S.  $65^{\circ}$  E. 47 lks. dist., marked O9T2ONR1ES19BT  
 Course of this half mile is N.  $2^{\circ}$  07' W. 39.72 chs.  
 Land, mountainous.  
 Soil, rocky; 4th rate.  
 Timber, cedar and pinon.  
 Undergrowth, cedar.  
 Mountainous land, land heavily timbered and covered with dense undergrowth and loose rocks, exceptionally difficult to survey 79.62 chs.

June 29, 1909.

June 30; At 6h. 00m., a.m., l.m.t., I set off  $35^{\circ}$  07 $\frac{1}{2}$ ' N. on the lat. arc;  $23^{\circ}$  14 $\frac{1}{2}$ ' N. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 18 and 19.

Thence I run

39.88 North on a random line on W. bdy. of sec. 18.

Fall 14 lks. E. of old  $\frac{1}{4}$  sec. cor.

I now return to the cor. of secs. 18 and 19

Thence I run

N.  $0^{\circ}$  12' W. on a true line on W. bdy. of sec. 18.

Ascend over loose volcanic rock through dense timber and an underbrush.

14.09 Intersect N. bdy. of Tract No. 44, 6.46 chs. S.  $89^{\circ}$  29' W. of cor. No. 2.

38.00 Ridge bears NE. and SW. and descend.

Difference between measurements of 39.88 chs. by two sets of chainmen is 10 lks.; position of middle point

By 1st. set 39.93 chs.

By 2nd. set 39.83 chs.; the mean of which is

39.88 The old  $\frac{1}{4}$  sec. cor. which I destroy and in the same place set a malpais stone 18 x 12 x 6 ins. 12 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked O9 $\frac{1}{4}$  on W. face; from which

A cedar 10 ins. diam., bears S.  $83^{\circ}$  E. 12 lks. dist., marked O9 $\frac{1}{4}$ S18BT.

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

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

17.50 Rim on S. side of Hell Canyon, bears NE. and SW. and Descend steep slope into canyon.

21.70 Wash in bottom of Hell Canyon 75 lks. wide course SW. and ascend precipitous slope out of canyon.

32.00 North rim of Hell Canyon bears NE. and SW. and ascend.

Difference between measurements of 45.87 chs. by two sets of chainmen is 16 lks.; position of middle point

By 1st. set 45.95 chs.

By 2nd. set 45.79 chs.; the mean of which is

45.87 Fall 270 lks. E. of old cor. of secs. 7, 12, 13 and 18, which I destroy and in the same place set a malpais stone 18 x 12 x 6 ins. 12 ins. in the ground for cor. of secs. 7 and 18, marked O9 on NE. face, with 4 notches on S. and 2 notches on N. edges; from which

A pinon 9 ins. diam., bears N.  $50^{\circ}$  15' E. 98 lks. dist., marked O9T2ONR1ES7BT

A cedar 5 ins. diam., bears S.  $32^{\circ}$  E. 24 lks. dist., marked O9T2ONR1ES18BT.

Course of this half mile is N.  $3^{\circ}$  22' W. 45.92 chs.

Land, mountainous.

Soil, rocky; 4th rate.

Timber, cedar and pinon.

Undergrowth, cedar and oak.

Mountainous land, land heavily timbered and covered with dense undergrowth and loose rocks, exceptionally difficult to survey 85.80 chs.

## Gila and Salt River Meridian through Tp. 20 N.

## Chains

	<p>North on west bdy. of sec. 7. Over level land covered with loose volcanic rock through dense timber and underbrush. Difference between measurements of 39.67 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st. set 39.71 chs. By 2nd. set 39.63 chs.; the mean of which is</p>
39.67	<p>Fall 218 lks. W. of old <math>\frac{1}{4}</math> sec. cor. which I destroy and in the same place set a malpais stone 18 x 12 x 10 ins. 12 ins. in the ground for <math>\frac{1}{4}</math> sec. cor., marked 09<math>\frac{1}{4}</math> on W. face from which A cedar 12 ins. diam., bears East 51 lks. dist., marked 09<math>\frac{1}{4}</math>S7BT. No other tree available. Raise a mound of stone 2 ft. base <math>1\frac{1}{2}</math> ft. high W. of cor. Pits impracticable. Course of this half mile is N. 3° 09' E. 39.73 chs. Thence from <math>\frac{1}{4}</math> sec. cor. I run</p>
37.70	<p>North on a random line Fall 14 lks. E. of the old cor. of secs. 1, 6, 7 and 12. I return to the <math>\frac{1}{4}</math> sec. cor. and run thence N. 0° 12' W. on a true line continuing my chaining.</p>
2.00	<p>Descend into canyon.</p>
6.62	<p>Intersect S. bdy. of Tract No. 40, 9.70 chs. N. 89° 45' W. of cor. No. 4.</p>
12.77	<p>Cross wash 70 lks. wide course W. and ascend steep slope out of canyon.</p>
18.00	<p>N. rim of canyon and descend steep slope.</p>
29.00	<p>Cross wash 20 lks. wide course SW. and ascend steep slope.</p>
31.00	<p>Cross drain 10 lks. wide course SW. and ascend steep slope. Leave timber and through dense brush. Difference between measurements of 37.70 chains by two sets of chainmen is 10 lks. position of middle point By 1st. set 37.75 chs. By 2nd. set 37.65 chs.; the mean of which is</p>
37.70	<p>The old cor. of secs. 1, 6, 7 and 12, which I destroy and in the same place set a sandstone 28 x 14 x 6 ins. 21 ins. in the ground for cor. of secs. 6 and 7 marked 09 on NE. face; with 5 notches on S. and 1 notch on N. edges; and raise a mound of stone 2 ft. base <math>1\frac{1}{2}</math> ft. high, W. of cor. Pits impracticable. Land, mountainous. Soil, rocky; 4th. rate. Timber, cedar and pinon. Undergrowth, cedar and oak. Mountainous land, land heavily timbered and covered with dense undergrowth and loose rocks, exceptionally difficult to survey 77.43 chs. June 30: At this cor. I set off 23° 12' N. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is 35° 9<math>\frac{1}{2}</math>' N.</p>
39.60	<p>North on a random line on W. bdy. of sec. 6 Fall 11 lks. E. of old <math>\frac{1}{4}</math> sec. cor. I return to the cor. of secs. 6 and 7 Thence I run N. 0° 09' W. on a true line on W. bdy. of sec. 6. Ascending steep slope over loose volcanic rock, through dense undergrowth.</p>
8.32	<p>Intersect N. bdy. of Tract No. 40, 10.05 chs. N. 88° 43' W. of cor. No. 1.</p>
23.00	<p>Saddle in ridge bears NE. and SW. Descend steep slope. Difference between measurements of 39.60 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st. set 39.66 chs. By 2nd. set 39.54 chs.; the mean of which is</p>
39.60	<p>The old <math>\frac{1}{4}</math> sec. cor., which I destroy and in the same</p>

## Cila and Salt River Meridian through Tps. 20 N.

Chains.	place set a sandstone 24 x 9 x 6 ins. 18 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\odot 9\frac{1}{4}$ on W. face; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
	Thence from $\frac{1}{4}$ sec. cor. North.
6.00	Cross wash 25 lks. wide course W. and ascend steep slope.
12.00	Ridge bears E. and W. and descend steep slope.
16.00	Cross draib 8 lks. wide course W. and ascend steep slope.
20.00	Ridge bears E and W. and descabd steep slope.
	Difference between measurements of 39.13 chs. by two sets of chainmen is 6 lks., position of middle point
	By 1st set. 39.10 chs.
	By 2nd. set 39.16 chs.; the mean of which is
39.13	Fall 4 lks. E. of the cor. of Tps. 20 and 21 N. Rgs. 1 E. and L W. previously set by me.
	The course of this half mile is N. $0^{\circ} 04'$ W. 39.13 chs.
	Land, mountainous.
	Soil, rocky; 4th. rate.
	Undergrowth, Cedar and buck brush.
	Mountainous land covered with dense undergrowth and loose rocks, exceptionally difficult to survey 78.73 chs.

June 30, 1909.

Alfred N. Bliss  
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 Gila and Salt River Meridian through Tps. 17, 19 and 20 N. showing the respective capacities in which they acted:

- Will W. Shawk, Archie Johnston, Chainman.
Fred Kesl, Fred W. Rodolf, Chainman.
Moundman.
Moundman.
W. R. Johnston, Axman.
Axman.
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 The Gila and Salt River Meridian through Tps. 17, 19 and 20 N.

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.
Fred Kesl, Moundman.
Fred W. Rodolf, Moundman.
W. R. Johnston, Axman.
Axman.
R. R. Lane, Flagman.

Subscribed and sworn to before me this 30th day of June, 1909, 190



Alfred N. Oliver, U.S. Deputy Surveyor

No notary available without loss of time and great expense.

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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, 1909, 1909, 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 Gila and Salt river Meridian through Tps. 17, 19 and 20 N.

River of the Gila and Salt 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 14th day of November, 1909



Frank S. Ingalls  
United States Surveyor General  
for Arizona

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

The foregoing field notes of the survey of Phoenix, Arizona April 27, 1910 the Gila and Salt River Meridian through Townships 17, 19 and 20 North, 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.