

FIELD NOTES

2330

Fragmentary Accepted G.L.O. letter E dated Dec. 17, 1912.  
OF THE SURVEY OF THE

Subdivisions of T18P. R 29 E

Of the Gila and Salt River Meridian,  
In the State of Arizona

EXECUTED BY

John T. Hesse

Alfred N. Oliver

In the capacity of U.S. <sup>Assistant</sup> Surveyor, under instructions dated May 25, 1911, issued by the United States Surveyor General to govern surveys included in Group No. 5, which were approved by the Commissioner of the General Land Office, June 7, 1911, pursuant to authority contained in the Act of Congress dated March 4, 1911.

Survey commenced August 25, 1911

Survey completed Sept. 5, 1911

# INDEX DIAGRAM.

*Township* \_\_\_\_\_, *Range* \_\_\_\_\_

6	5	4	3	2	1
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(1A)

BOOK 2330

# INDEX DIAGRAM.

Township 18D, Range 29E

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PRELIMINARY OATHS OF ASSISTANTS.

WE, H. R. Harvey, R. A. Coombs, R. L. Bates and J. H. Bates, A. E. Lyon 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 subdivision lines of Tp. 18 S. Rg. 29 E.

A. E. Lyon R. A. Coombs, Chainman.
R. L. Bates J. H. Bates, Chainman.

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

By H. R. Harvey August 19, 1911



John P. Hesse U. S. Transitman.

WE, E. E. Mills, J. L. Gardner and H. R. Harvey 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 the subdivision lines of Tp. 18 S. Rg. 29 E.

J. L. Gardner E. E. Mills, Moundman.
H. R. Harvey, Moundman.

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

By J. L. Gardner August 21, 1911



John P. Hesse U. S. Transitman.

WE, E. Barnes, W. M. Sanders and H. F. Dillman, C. M. Esty 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 us, to the best of our skill and ability, in the survey of the subdivision lines of Tp. 18 S. Rg. 29 E.

W. M. Sanders E. Barnes, Axman.
C. M. Esty H. F. Dillman, Axman.

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



John P. Hesse U. S. Transitman.

WE, A. W. Hendrix, Ralph Brown, W. L. Ray, do solemnly swear that we will well and truly perform the duties of flagman according to instructions given us, to the best of our skill and ability, in the survey of the subdivision lines of Tp. 18 S. Rg. 29 E.

A. W. Hendrix W. L. Ray Ralph Brown, Flagman.

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

By W. L. Ray August 16, 1911



John P. Hesse U. S. Transitman.

Chains

(K)

Survey commenced August 22m 1911, and executed with a W. and L. E. Gurley solar compass, not numbered. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of the arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined and approved by the Supervising Surveyor.

I examine the adjustments of the compass, 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 camp near the  $\frac{1}{4}$  sec. cor., bet. secs. 14 and 15, Tp. 18 S., Rg. 29 E., latitude,  $31^{\circ}52'N.$ ; longitude,  $109^{\circ}23'W.$

I set off  $31^{\circ}52'N.$  on the lat. arc;  $11^{\circ}56'N.$  on the decl. arc, and at 5h.00m.p.m., l.m.t., determine with the solar a meridian, and mark a point thereof, on a stone firmly set in the ground 5 chs. N. of my station.

At 9h. 31m.p.m., by my watch, which has correct l.m.t., I observe Polaris at eastern elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground, 5 chs. N. of my station.

August 22, 1911.

August 23: At 6h.30m., a.m., l.m.t., I lay off the azimuth of Polaris,  $1^{\circ}23'$  to the west, and mark the meridian thus determined, by cutting a small groove in the stone set August 22, on which the meridian coincides with the mark determined by the solar.

At 7h.00m.a.m., l.m.t., I set off  $31^{\circ}52'N.$  on the lat. arc;  $11^{\circ}44'N.$  on the decl. arc, and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of my station; this mark coincides with the meridian established by the Polaris observation.

The solar apparatus by p.m. and a.m. observations defines positions for meridians which coincide with the meridian determined by Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 7h.15m. a.m., l.m.t., is  $N.13^{\circ}30'W.$ ; the angle thus determined gives the mag. decl.  $13^{\circ}30'E.$

I commence at the cor. of secs. 35 and 36 on the South bdy. of the Tp. heretofore described in Book "E" page 2.

Thence I run,

$N.0^{\circ}01'W.$ , bet. secs. 35 and 36.

Ascending SE. slope of mountain, through dense brush and pine timber,

15.00 Top of ridge, bears E. and W.; descend.

18.43 Drain, 5 lks. wide, course E.; ascend.

19.20 Top of ridge, bears NW. and SE.; descend.

20.88 Drain, 5 lks. wide, course E.; ascend.

22.00 Top of ridge, bears E. and W.

23.15 Drain, 6 lks. wide, course SE.; ascend along E. slope of mountain.

25.00 Top of ridge, bears E. and W.; descend.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked on brass cap, S 36 in E. and  $\frac{1}{4}$  S 35 in W. half; raise a mound of stone 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.

August 23: At this  $\frac{1}{4}$  sec. cor., I set off  $11^{\circ}39'N.$  on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is  $31^{\circ}49\frac{1}{2}'N.$

44.90 Cross wash, 25 lks. wide, course W.

80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 25, 26, 35 and 36, marked on

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brass cap,  
 T 18 S R 29 E in N.half;  
 S 26 in NW.,  
 S 25 in NE.,  
 S 36 in SE., and  
 S 35 in SW. quadrant; from which,  
 A pine 10 ins.diam., bears N.25½°W., 66 lks.dist.,  
 marked T 18 S R 29 E S 26 B T.  
 A pine 8 ins.diam., bears N.23½°E., 42 lks.dist.,  
 marked T 18 S R 29 E S 25 B T.  
 A pine, 16 ins.diam., bears S.8½°E., 37 lks.dist.,  
 marked T 18 S R 29 E S 36 B T.  
 A pine 8 ins. diam., bears S.37½°W., 33 lks.dist.,  
 marked T 18 S R 29 E S 35 B T.

Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pine.  
 Undergrowth, oak brush and manzanita.

August 23, 1911.

August 24: At 7h.00m.a.m., l.m.t., I set off 31°50'N. on the lat.arc; 11°24'N. on the decl.arc, and determine a meridian with the solar at the cor.of secs 25,26,35 and 36.

East, on a random line, bet. secs.25 and 36.  
 40.00 Set temp.¼ sec.cor.  
 80.22 Intersect E.bdy. of Tp., 35 lks.S.of true point for cor. of secs. 25,30, 31 and 36.  
 Thence I run,  
 S.89°45'W. on a true line, bet. secs.25 and 36.  
 Descending through dense brush and pine timber.  
 .68 Drain, 6 lks.wide, course SW., and ascend.  
 16.78 Top of ridge, bears N.and S.; descend.  
 39.60 Long John Canyon, 60 lks.wide, course S.; ascend.  
 40.11 Point for ¼ sec.cor. falls on insecure place.  
 40.23 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for ¼ sec.witness cor., marked on brass cap, W C ¼ in E.half,  
 S 25 in NW. and  
 S 36 in SW. quadrant; from which,  
 A pine, 12 ins. diam., bears N.25°E., 53 lks.dist., marked W C ¼ S 25 BT.  
 A pine, 18 ins. diam., bears S. 36°E., 25 lks.dist., marked W C ¼ S 36 BT.

August 24: At this cor. I set off 11°18½'N. on the decl. arc, and observe the sun on the meridian at noon; the the resulting lat. is 31° 50'N.

56.82 The top of ridge, bears N.and S.; descend.  
 76.44 Drain, 5 lks.wide, course N., ascend.  
 78.71 Top of ridge, bears N.and S.; descend.  
 80.22 The cor.of secs.25,26,35 and 36.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pine.  
 Undergrowth, oak brush and manzanita.

August 24, 1911.

August 25: At 7h.00m., a.m., l.m.t., I set off 31°50'N. on the lat.arc; 11°03½'N. on the decl.arc, and determine a meridian with the solar at the cor.of secs.25,26,35 and 36.

N.0°01'W., bet. secs.25 and 26.  
 Descending through dense brush and pine timber.  
 6.00 Drain, 5 lks.wide, course NW., ascend.  
 22.00 Drain, 5 lks.wide, course NW.  
 36.00 Top of ridge, bears NW.and SE.; descend.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for ¼ sec.cor., marked on brass cap, S 25 in E. and ¼ S 26 in W.half; raise a mound of stone 2

## Subdivision of Township 18 South, Range 29 East.

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ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
 August 25: At this cor. I set off  $10^{\circ}58'N.$  on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is  $31^{\circ}50' N.$

46.25 Cross wash, 20 lks. wide, course NW., ascend.  
 54.60 Drain, 15 lks. wide, course NW.  
 65.00 Top of ridge, bears NW. and SE.; descend.  
 79.20 Cross wash, 10 lks. wide, course SE.; ascend.  
 80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 23, 24, 25 and 26, marked on brass cap,  
 T 18 S R 29 E in N. half;  
 S 23 in NW.,  
 S 24 in NE.,  
 S 25 in SE., and  
 S 26 in SW. quadrant; from which  
 A pine 20 ins. diam., bears  $N.72^{\circ}35'W.$ , 25 lks. dist., marked T 18 S R 29 E S 23 B T.  
 A pine, 16 ins. diam., bears  $N.56^{\circ}42'E.$ , 75 lks. dist., marked T 18 S R 29 E S 24 B T.  
 A pine 20 ins. diam., bears  $S. 16^{\circ} 54' E.$ , 61 lks. dist., marked T 18 S R 29 E S 25 B T.  
 A pine 14 ins. diam., bears  $S. 32^{\circ}16'W.$ , 60 lks. dist., marked T 18 S R 29 E. S 26 B T.

Land, mountainous.

Soil, rocky and worthless, 4th rate.

Timber, pine.

Undergrowth, oak brush and manzanita.

August 25, 1911.

*Alfred N. Christ*  
 U. S. Transitman.

Survey commenced August 25, 1911, and executed with an A. Lietz Co. light mountain transit N. 5631, with solar attachment. The horizontal limb is provided with two double verniers, placed opposite each other, reading to single minutes of the arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined and approved by the Supervising Surveyor.

I examine the adjustments of the transit, and find them correct; then, to test the solar apparatus, by comparing its indications, resulting from solar observations made during a.m. and p.m. hours, with a meridian determined by observations on Polaris, I proceed as follows:

At camp near the  $\frac{1}{4}$  sec. cor., bet. secs. 14 and 15, T 18 S., R. 29 E., latitude,  $31^{\circ}52'N.$ ; longitude,  $109^{\circ}23'W.$ , I set off  $31^{\circ}52'N.$  on the lat. arc;  $10^{\circ}55' N.$  on the decl. arc, and at 5h.00m.p.m., l.m.t., determine with the solar a meridian, and mark a point thereof, on a stone firmly set in the ground, 5 chs. N. of my station.

At 9h.19m.p.m., by my watch, which has correct l.m.t., I observe Polaris at eastern elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground, 5 chs. N. of my station.

August 25, 1911.

August 26: At 6h. 30m., a.m., l.m.t., I lay off the azimuth of Polaris,  $1^{\circ}23'$  to the west, and mark the meridian thus determined, by cutting a small groove in the stone set August 25, on which the meridian coincides with the mark determined by the solar.

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- At 7h.00m.a.m., l.m.t., I set off  $31^{\circ}52'N$ . on the lat.arc;  $10^{\circ}42\frac{1}{2}'N$ . 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 determined by the Polaris observations; therefore I conclude that the adjustments of the instrument are satisfactory.
- The magnetic bearing of the true meridian, at 7h.15m.a.m., l.m.t., is  $N.13^{\circ}30'W$ .; the angle thus determined gives the mag. decl.  $13^{\circ}30'E$ .
- I commence at cor.of secs. 23,24,25 and 26,  
Thence I run,  
East, on a random line, bet. secs.24 and 25.
- 40.00 Set temp.  $\frac{1}{4}$  sec.cor.  
80.28 Intersect E.bdy.of Tp. 5 lks.S.of cor. of secs.19,24,25 and 30.
- Thence I run,  
 $S.89^{\circ}58'W$ . on a true line, bet. secs.24 and 25.  
Descending through dense brush and heavy timber.
- 14.58 Cross wash, 15 lks.wide, course NW.; ascend.  
40.14 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap,  $\frac{1}{4}$  S 24 in N. and S 25 in S.half; from which,  
A pinon, 8 ins.diam., bears  $N.28^{\circ}36'E$ ., 50 lks. dist., marked  $\frac{1}{4}$  S 24 B T.  
A pinon, 9 ins.diam., bears  $S.45^{\circ}47'W$ ., 11 lks. dist., marked  $\frac{1}{4}$  S 25 B T.
- 45.33 Top of ridge, bears N.and S.; descend.  
80.28 The cor.of secs.23,24,25 and 26.  
Land, mountainous.  
Soil, rocky and worthless, 4th rate.  
Timber, pine, pinon, oak, fir and juniper.  
Undergrowth, manzanita, oak brush and needle brush.  
August 26: Cloudy weather prevented observation for lat. at noon.
- 
- $N.0^{\circ}01'W$ ., bet. secs.23 and 24.  
Ascending through dense brush and scattering timber.
- 6.35 Top of ridge, bears NW.and SE.; descend.  
15.00 Cross wash, 10 lks.wide, course NW.; ascend.  
40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap, S 24 in E. and  $\frac{1}{4}$  S 23 in W.half; raise a mound of stone 2 ft. base,  $1\frac{1}{2}$  ft. high, W.of cor. Pits impracticable.
- 43.55 Top of ridge, bears E.and W.; descend.  
80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor.of secs.13,14,23 and 24, marked on brass cap,  
T 18 S R 29 E in N.half;  
S 14 in NW.,  
S 13 in NE.,  
S 24 in SE., and  
S 23 in SW. quadrant; raise a mound of stone 2 ft. base,  $1\frac{1}{2}$  ft. high, W.of cor. Pits impracticable.  
Land, mountainous.  
Soil, rocky and worthless, 4th rate.  
Timber, pine, pinon, fir, juniper, oak and walnut.  
Undergrowth, manzanita, mahogany, oak and needle brush.  
August 26, 1911.
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- August 27: At 7h.00m., a.m., l.m.t., I set off  $31^{\circ}51\frac{1}{2}'N$ . on the lat.arc;  $10^{\circ}22'N$ . on the decl.arc, and determine a meridian with the solar at the cor.of secs.13,14, 23 and 24.



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East, on a random line, bet. secs. 13 and 24.  
 40.00 Set temp.  $\frac{1}{4}$  sec.cor.  
 80.20 Intersect E. bdy.of Tp., 3 lks.N.of cor. of secs.13,18,19  
 and 24.  
 Thence I run,  
 N.89°59'W., on a true line, bet. secs.13 and 24.  
 Ascending through dense brush and heavy timber.  
 11.05 Top of ridge, bears N.and S.; descend.  
 21.40 Cross wash, 10 lks.wide, course NW.; ascend.  
 27.20 Top, of ridge, bears N.and S.; descend.  
 32.60 Cross wash, 10 lks.wide, course NW.; ascend.  
 40.10 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
 the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap,  $\frac{1}{4}$  S 13  
 in N. and S 24 in S.half; raise a mound of stone 2 ft.  
 base,  $1\frac{1}{2}$  ft. high, N.of cor. Pits impracticable.  
 45.20 Top of ridge, bears N.and S.; descend.  
 75.10 Cross wash,10 lks.wide, course NW.; ascend.  
 80.20 The cor.of secs.13,14,23 and 24.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pine, pinon, juniper, fir and oak.  
 Undergrowth,manzanita, oak and mahogany brush and cacti.  
 August 27: Cloudy weather prevented observation for lat.  
 at noon.

N.0°01'W., bet. secs.13 and 14.  
 Descending through dense brush and heavy timber.  
 15.00 Turkey Creek, clear running water, 23 lks.wide, 8 ins.deep,  
 course NW.; ascend.  
 16.00 Cross road, bears NW.and SE.  
 35.00 Drain, 6 lks.wide, course SW.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
 the ground, for  $\frac{1}{4}$  sec.cor., marked on brass cap, S 13  
 in E. and  $\frac{1}{4}$  S 14 in W.half; raise a mound of stone 2  
 ft.base,  $1\frac{1}{2}$  ft. high,W.of cor. Pits impracticable.  
 49.80 Top of ridge, bears E.and W.; descend.  
 80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in  
 the ground for cor.of secs.11,12,13 and 14, marked on  
 brass cap,  
 T 18 S R 29 E in N.half,  
 S 11 in NW.,  
 S 12 in NE.,  
 S 13 in SE., and  
 S 14 in SW. quadrant; raise a mound of stone 2 ft.  
 base,  $1\frac{1}{2}$  ft. high,W.of cor. Pits impracticable.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pine, pinon, fir, oak, juniper and walnut.  
 Undergrowth,manzanita, mahogany, oak brush and cacti.  
 August 27, 1911,

August 28: At 7h.00m.a.m., 1.m.t., I set off 31°52 $\frac{1}{2}$ 'N.  
 on the lat.arc; 10°01' N. on the decl.arc, and deter-  
 mine the meridian with the solar at the cor.of secs.  
 11,12,13 and 14.  
 East, on a random line, bet. secs.12 and 13.  
 40.00 Set temp.  $\frac{1}{4}$  sec.cor.  
 80.22 Intersect E.bdy.of Tp.10 lks.S.of cor.of secs.7,12,13  
 and 18.  
 Thence I run,  
 S.89°56'W. on a true line, bet. secs.12 and 13.  
 Descending through dense brush and heavy timber.  
 .67 Cross wash, 5 lks.wide, course SW.; ascend.  
 25.02 Drain, 8 lks.wide, course SW.  
 35.22 Top of ridge, bears N.and S.; descend.  
 40.11 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
 the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap,  $\frac{1}{4}$  S 12  
 in N. and S 13 in S.half; raise a mound of stone 2 ft.

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base,  $1\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.  
 67.22 Cross road, bears NW. and SE.  
 68.72 Cross wash, 8 lks. wide, course NW.  
 80.22 The cor. of secs. 11, 12, 13 and 14.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pine, pinon, fir, oak, juniper and walnut.  
 Undergrowth, oak, mahogany and needle brush, and cacti.  
 August 28: Cloudy weather prevented observation for  
 lat. at noon.

N.  $0^{\circ}01'$  W., bet. secs. 11 and 12.  
 Descending, through dense brush, and scattering timber.  
 2.50 Creek in bottom of Thompkins' Canyon, clear running water,  
 10 lks. wide, 4 ins. deep, course SW.; ascend.  
 4.00 Cross road, bears E. and W.  
 25.00 Top of ridge, bears E. and W.; descend.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
 the ground for  $\frac{1}{4}$  sec. cor., marked on brass cap, S 12 in  
 E. and  $\frac{1}{4}$  S 11 in W. half; from which,  
 An oak, 12 ins. diam., bears N.  $8\frac{3}{4}^{\circ}$  W., 46 lks. dist.,  
 marked  $\frac{1}{4}$  S 11 B T.  
 An oak, 8 ins. diam., bears S.  $20^{\circ}$  E., 13 lks. dist.,  
 marked  $\frac{1}{4}$  S 12 B T.  
 48.85 Drain, 5 lks. wide, course NW.  
 80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in  
 the ground for cor. of secs. 1, 2, 11 and 12, marked on  
 brass cap,  
 T 18 S R 29 E in N. half;  
 S 2 in NW.,  
 S 1 in NE.,  
 S 12 in SE., and  
 S 11 in SW. quadrant; from which,  
 An oak, 12 ins. diam., bears N.  $40^{\circ}$  W., 48 lks. dist.,  
 marked T 18 S R 29 E S 2 B T.  
 An oak, 10 ins. diam., bears N.  $51\frac{3}{4}^{\circ}$  E., 79 lks. dist.,  
 marked T 18 S R 29 E S 1 B T.  
 An oak, 10 ins. diam., bears S.  $48\frac{1}{4}^{\circ}$  E., 28 lks. dist.,  
 marked T 18 S R 29 E S 12 B T.  
 An oak, 12 ins. diam., bears S.  $26\frac{3}{4}^{\circ}$  W., 21 lks. dist.,  
 marked T 18 S R 29 E S 11 B T.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pine and juniper.  
 Undergrowth, oak brush and manzanita.  
 August 28, 1911.

August 29: At 7h. 00m. a.m., 1 m.t., I set off  $31^{\circ}53\frac{1}{2}'$  N. on  
 the lat. arc;  $9^{\circ}40'$  N. on the decl. arc, and determine  
 a meridian with the solar at the cor. of secs. 1, 2, 11  
 and 12.  
 East, on a random line, bet. secs. 1 and 12.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.16 Intersect E. bdy. of Tp. 14 lks. N. of cor. of secs. 1, 6, 7 and  
 12.  
 Thence I run,  
 N.  $89^{\circ}54'$  W. on a true line, bet. secs. 1 and 12.  
 Ascending, through dense brush and timber.  
 7.16 Cross road, bears NE. and SW.  
 38.16 Top of ridge, bears N. and S.; descend.  
 40.08 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground for  $\frac{1}{4}$  sec. cor., marked on brass cap,  $\frac{1}{4}$  S 1 in  
 N. and  $\frac{1}{2}$  S 12 in S. half; raise a mound of stone 2 ft.  
 base,  $1\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.  
 41.41 Cross wash 5 lks. wide, course S.; ascend.  
 58.16 Top of ridge, bears N. and S.; descend.

## Subdivision of Township 18 South, Range 29 East.

Chains.

80.16 The cor. of secs. 1, 2, 11 and 12.  
Land, mountainous.  
Soil, rocky and worthless, 4th rate.  
Timber, oak and juniper.  
Undergrowth, oak brush and manzanita.  
August 29: At this cor. I set off  $9^{\circ}34\frac{1}{2}'N.$  on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is  $31^{\circ}53\frac{1}{2}'N.$

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40.00 North, on a random line, bet. secs. 1 and 2.  
Set temp.  $\frac{1}{4}$  sec. cor.  
79.90 Intersect N. bdy. of Tp. 7 lks. E. of cor. of secs. 1, 2, 35 and 36.  
Thence I run,  
S.  $0^{\circ}03'E.$ , on a true line, bet. secs. 1 and 2.  
Descending through dense brush, and scattering timber.  
1.60 Cross wash, 5 lks. wide, course SW.; ascend.  
19.40 Top of ridge, bears NE. and SW.; descend.  
35.80 Rock Creek, clear water, 8 lks. wide, 4 ins. deep, course NW.; ascend.  
39.90 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked on brass cap,  $\frac{1}{4}$  S 1 in E. and S 2 in W. half; from which,  
An oak, 10 ins. diam., bears S.  $57^{\circ}10'E.$ , 56 lks. dist., marked  $\frac{1}{4}$  S 1 B T.  
An oak, 10 ins. diam., bears S.  $55^{\circ}03'W.$ , 95 lks. dist., marked  $\frac{1}{4}$  S 2 B T.  
57.90 Top of ridge, brs. NW. and SE.; descend.  
79.90 The cor. of secs. 1, 2, 11 and 12.  
Land, mountainous.  
Soil, rocky and worthless, 4th rate.  
Timber, pine, pinon, fir, oak, juniper and walnut.  
Undergrowth, oak, mahogany and needle brush and cacti.  
August 29, 1911.

*John D. Nease*  
U.S. Transitman.

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August 26: At 7h.00m. a.m., l.m.t., I set off  $31^{\circ}49'N.$  on the lat. arc;  $10^{\circ}42\frac{1}{2}'N.$  on the decl. arc, and determine a meridian with the solar at the cor. of secs. 34 and 35 on the S. bdy. of the Tp.  
N.  $0^{\circ}01'W.$ , bet. secs. 34 and 35.  
Descending through dense brush and timber.  
.61 Drain, 5 lks. wide, course NE.; ascend.  
15.15 Top of ridge, brs. E. and W.; descend.  
40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked on brass cap, S 35 in E., and  $\frac{1}{4}$  S 34 in W. half; from which,  
A pine 10 ins. diam., bears N.  $82\frac{1}{2}^{\circ}E.$ , 1.06 chs. dist., marked  $\frac{1}{4}$  S 35 B T.  
A pine, 18 ins. diam., bears S.  $85\frac{1}{2}^{\circ}W.$ , 84 lks. dist., marked  $\frac{1}{4}$  S 34 B T.  
August 26: Cloudy weather prevented observation for lat. at noon.  
August 27: At 7h.00m. a.m., l.m.t., I set off  $31^{\circ}49\frac{1}{2}'N.$  on the lat. arc;  $10^{\circ}22'N.$  on the decl. arc, and determine a meridian with the solar at  $\frac{1}{4}$  sec. cor. of secs. 34 and 35.  
Thence I continue,  
N.  $0^{\circ}01'W.$ , bet. secs. 34 and 35.  
Descending through dense brush and timber.  
50.20 Drain, 5 lks. wide, course NW.; ascend.  
60.39 Top of ridge, bears NW. and SE.; descend.  
67.86 Drain, 5 lks. wide, course NE.; ascend.  
72.84 Top of ridge, bears E. and W.; descend.  
80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 26, 27, 34 and 35, marked

Chains

on brass cap,  
 T 18 S R 29 E in N. half;  
 S 27 in NW.,  
 S 26 in NE.,  
 S 35 in SE., and  
 S 34 in SW. quadrant; raise a mound of stone 2 ft.  
 base,  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.

Land, mountainous.

Soil, rocky and worthless, 4th rate.

Timber, pine, oak and juniper.

Undergrowth, oak brush and manzanita.

August 27: Cloudy weather prevented observation for  
 latitude at noon.

August 27, 1911.

August 28: At 7h.00m. a.m., l.m.t., I set off  $31^{\circ}50'N.$  on  
 the lat. arc;  $10^{\circ}01'N.$  on the decl. arc, and determine a  
 meridian with the solar at the cor. of secs. 26, 27, 34  
 and 35.

East, on a random line, bet. secs. 26 and 35.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.

August 28: Cloudy weather prevented observation for lat.  
 at noon.

August 28, 1911.

August 29: At 7h.00m. a.m., l.m.t., I set off  $31^{\circ}50'N.$  on  
 the lat. arc;  $9^{\circ}40'N.$  on the decl. arc, and determine a  
 meridian with the solar at the  $\frac{1}{4}$  sec. cor. of secs. 26  
 and 35.

Thence I continue, random line.

80.20 Intersect N. and S. line, 23 lks. S. of cor. of secs. 25, 26,  
 35 and 36.

August 29: At this cor. I set off  $9^{\circ}34\frac{1}{2}'N.$  on the decl.  
 arc; and observe the sun on the meridian at noon; the  
 resulting lat. is  $31^{\circ}50'N.$

Thence I run,

S.  $89^{\circ}50'W.$ , on a true line, bet. secs. 26 and 35.

Descending through dense brush and timber.

1.51 Drain, 6 lks. wide, course NW.

40.10 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in  
 the ground for  $\frac{1}{4}$  sec. cor., marked on brass cap,  $\frac{1}{4}$  S 26  
 in N. and S 35 in S. half; from which,

A pine 10 ins. diam., bears N.  $85\frac{1}{2}^{\circ}W.$ , 29 lks. dist.,  
 marked  $\frac{1}{4}$  S 26 B T.

A pine 18 ins. diam., bears S.  $86\frac{1}{4}^{\circ}W.$ , 22 lks. dist.,  
 marked  $\frac{1}{4}$  S 35 B T.

53.03 Cross wash, 50 lks. wide, course N.; ascend.

80.20 The cor. of secs. 26, 27, 34 and 35.

Land, mountainous.

Soil, rocky and worthless, 4th rate.

Timber, pine and juniper.

Undergrowth, oak brush and manzanita.

August 29, 1911.

August 30: At 7h.00m. a.m., l.m.t., I set off  $31^{\circ}50'N.$  on  
 the lat. arc;  $9^{\circ}19'N.$  on the decl. arc, and determine a  
 meridian with the solar at the cor. of secs. 26, 27, 34  
 and 35.

West, on a random line, bet. secs. 27 and 34.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.

August 30: Cloudy weather prevented observation for lat.  
 at noon.

August 30, 1911.

August 31: At 7h.00m. a.m., l.m.t., I set off  $31^{\circ}50'N.$  on  
 the lat. arc;  $8^{\circ}57'N.$  on the decl. arc, and determine a  
 meridian with the solar at the  $\frac{1}{4}$  sec. cor. of secs. 27  
 and 34.

Thence I run,

Chains.

80.40 West, on a random line, bet. secs.27 and 34.  
Intersect N and S. line 3 lks.N.of cor. of secs. 27,28,  
33 and 34.  
August 31: At this cor. I set off  $8^{\circ}51\frac{1}{2}'N$ . on the decl.  
arc; and observe the sun on the meridian at noon; the  
resulting lat. is  $31^{\circ}50'N$ .  
Thence I run,  
N.  $89^{\circ}59'E$ . on a true line, bet. secs.27 and 34.  
Descending through dense brush and heavy timber.  
7.65 Cross wash, 15 lks.wide, course SW., ascend.  
15.90 Top of ridge, brs. NW. and SE.; descend.  
30.20 Cross wash, 15 lks.wide, course NW.; ascend.  
35.90 Top of ridge, brs. NE. and SW.; descend.  
40.20 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap,  $\frac{1}{4}$  S  
27 in N. and S 34 in S, half; raise a mound of stone  
2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor. Pits impractica-  
ble.  
58.90 Cross wash, 10 lks.wide, course SW.; ascend.  
64.05 Top of ridge, bears N. and S.; descend.  
80.40 The cor. of secs.26,27, 34 and 35.  
Land, mountainous.  
Soil, rocky and worthless, 4th rate.  
Timber, pine, pinon, fir, juniper and oak.  
Undergrowth, manzanita, oak brush, mahogany and cacti.  
August 31, 1911.

*Alfred N. Howard*  
U. S. Transitman.

August 31: At 7h.00m. a.m., 1 p.m.t., I set off  $31^{\circ}50'N$ .  
on the lat. arc;  $8^{\circ}57'N$ . on the decl. arc, and determine  
a meridian with the solar at the cor. of secs.26,27, 34  
and 35.  
N.  $0^{\circ}01'W$ . bet. secs.26 and 27.  
Descending through dense brush and heavy timber.  
.60 Cross wash, 10 lks.wide, course NE.; ascend.  
4.00 Top of ridge, bears NE. and SW.; descend.  
10.00 Cross wash, 10 lks.wide, course NE.; ascend.  
12.75 Top of ridge, bears NE; descend.  
40.00 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the  
ground for  $\frac{1}{4}$  sec.cor., marked on brass cap, S 26 in  
E. and  $\frac{1}{4}$  S 27 in W. half; raise a mound of stone 2 ft.  
base,  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
79.55 Cross old logging road, bears NW.  
80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the  
ground for cor. of secs.22,23,26 and 27, marked on brass  
cap,  
T 18 S R 29 E in N. half;  
S 22 in NW.,  
S 23 in NE.,  
S 26 in SE., and  
S 27 in SW. quadrant; raise a mound of stone 2 ft.  
base,  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
Land, mountainous.  
Soil, rocky and worthless, 4th rate.  
Timber, pine, fir, oak, juniper and pinon.  
Undergrowth, oak and mahogany brush, manzanita and cacti.  
August 31: At this cor. I set off  $8^{\circ}51\frac{1}{2}'N$ . on the decl.  
arc, and observe the sun on the meridian at noon; the  
resulting lat. is  $31^{\circ}50\frac{1}{2}'N$ .

East, on a random line, bet. secs.23 and 26.  
40.00 Set temp  $\frac{1}{4}$  sec.cor.  
79.96 Intersect N and S. line 14 lks.S. of cor. of secs. 23,24,  
25 and 26.  
Thence I run,  
S.  $89^{\circ}54'W$ . on a true line, bet. secs.23 and 26.  
Ascending through dense brush and scattering timber.

Chains.

- .96 Drain, 5 lks.wide, course SW.  
 4.96 Top of ridge, bears NE.and SW., descend.  
 37.61 Cross wash, 10 lks.wide, course NW.; ascend.  
 39.98 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap,  $\frac{1}{4}$  S 23 in N. and S 26 in S.half; from which,  
     An oak, 10 ins. in diam., bears N.54°53'E., 36 lks.dist., marked  $\frac{1}{4}$  S 23 B T.  
     An oak, 6 ins. diam., bears S.45° 17'E., 47 lks. dist., marked  $\frac{1}{4}$  S 26 B T.  
 48.96 Top of ridge, bears NE.and SW.; descend.  
 65.96 Cross wash, 8 lks.wide, course NE.; ascend.  
 69.46 Top of ridge, brs. N.and S.; descend.  
 79.96 The cor.of secs. 22,23,26 and 27.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pine, pinon, oak, fir and juniper.  
 Undergrowth, oak, mahogany and needle brush, manzanita and cacti.

August 31, 1911.

*John P. Hesse*  
U. S. Transitman.

- September 1: At 7h.00m. a.m., l.m.t., I set off 31°51'N. on the lat.arc; 8°35 $\frac{1}{2}$ 'N. on the decl.arc, and determine a meridian with the solar at the cor.of secs.22,23,26 and 27.  
 West, on a random line, bet. secs. 22 and 27.  
 40.00 Set temp.  $\frac{1}{4}$  sec.cor.  
 80.28 Intersect N.and S. line, 30 lks.N.of cor. of secs.21,22, 27 and 28.  
 Thence I run,  
 N.89°47'E., on a true line, bet. secs.22 and 27.  
 Descending through dense brush and timber.  
 1.08 Cross wash, 10 lks.wide, course NE.; ascend.  
 15.28 Top of ridge, brs.N.and S.; descend.  
 25.68 Drain, 15 lks.wide, course NW.  
 34.03 Cross wash, 20 lks.wide, course NW.; ascend.  
 40.14 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap,  $\frac{1}{4}$  S 22 in N. and S 27 in S. half; raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$  ft. high, N.of cor. Pits impracticable.  
 September 1: At this cor. I set off 8°30'N. on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is 31° 51' N.  
 44.28 Top of ridge, bears NW. and SE.; descend.  
 58.28 Drain, 5 lks.wide, course NW.  
 74.28 Drain, 5 lks.wide, course NW., ascend.  
 80.28 The cor.of secs.22,23,26 and 27.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, oak and juniper.  
 Undergrowth, oak brush and manzanita.

September 1, 1911,

*Alfred N. Oliver*  
U. S. Transitman.

- September 1: At 7h.00m.a.m., l.m.t., I set off 31°50 $\frac{1}{2}$ 'N. on the lat.arc; 8°35 $\frac{1}{2}$ 'N. on the decl.arc, and determine a meridian with the solar at the cor.of secs.22,23,26 and 27.  
 N.0°01'W., bet. secs.22 and 23.  
 Descending through dense brush and heavy timber.  
 2.33 Creek, clear running water, 20 lks.wide, 8 ins.deep, course NW., ascend.

Chains

12.55 Drain, 8 lks.wide, course SW.  
 14.00 Drain, 10 lks.wide, course SW.  
 40.00 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap, S 23 in E., and  $\frac{1}{4}$  S 22 in W.half; raise a mound of stone 2 ft. base,  $1\frac{1}{2}$  ft. high, W.of cor. Pits impracticable.  
 44.75 Ridge, bears E.and W., descend.  
 59.35 Drain, 8 lks.wide, course NE.  
 67.25 Drain, 12 lks.wide, course NE.  
 69.55 Drain, 10 lks.wide, course NE.  
 80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor.of secs.14,15,22 and 23, marked on brass cap,  
 T 18 S R 29 E in N.half;  
 S 15 in NW.,  
 S 14 in NE.,  
 S 23 in SE., and  
 S 22 in SW. quadrant; from which,  
 A pine, 26 ins.diam., bears N.16°18'W., 207 lks. dist., marked T 18 S R 29 E S 15 B T.  
 An oak, 8 ins. diam., bears N.71°55'E., 84 lks. dist., marked T 18 S R 29 E S 14 B T.  
 A pine, 12 ins. diam., bears S.06° 30'E., 71 lks. dist., marked T 18 S R 29 E S 23 B T.  
 A pine, 9 ins. diam., bears S.81° 18'W., 62 lks. dist., marked T 18 S R 29 E S 22 B T.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pine, pinon, fir, oak, juniper and sycamore.  
 Undergrowth, oak and mahogany brush, manzanita and cacti.  
 September 1: At this cor. I set off 8°30'N. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat.is 31° 51 $\frac{1}{2}$ 'N.

East, on a random line, bet. secs.14 and 23.  
 40.00 Set temp.  $\frac{1}{4}$  sec.cor.  
 80.10 Intersect N.and S. line, 5 lks.N.of cor. of secs.13,14, 23 and 24.  
 Thence I run,  
 N.89°58'W., on a true line, bet. secs.14 and 23.  
 Ascending through dense brush and heavy timber.  
 1.35 Top of ridge, brs.N.and S.; descend.  
 20.10 Cross wash, 10 lks.wide, course NW.; ascend.  
 40.05 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap,  $\frac{1}{4}$  S 14 in N. and S 23 in S.half; from which,  
 A juniper, 18 ins. diam., bears N.28°30'W., 98 lks.dist., marked  $\frac{1}{4}$  S 14 B T.  
 A pinon, 7 ins.diam., bears S.07°45'W., 31 lks. dist., marked  $\frac{1}{4}$  S 23 B T.  
 42.50 Top of mountain, bears N.and S.; descend.  
 64.90 Cross wash, 10 lks.wide, course NW.; ascend.  
 69.10 Top of ridge, brs.NW.and SE.; descend.  
 78.35 Creek, clear running water 20 lks.wide, 8 ins.deep, course NW.; ascend.  
 80.10 The cor.of secs. 14, 15, 22 and 23.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pine, pinon, oak, fir and juniper.  
 Undergrowth, manzanita, oak and mahogany brush and cacti.  
 September 1, 1911.

*John P. Hesse*  
 U. S. Transitman.

September 2: At 7h.00m. a.m., l.m.t., I set off 31°51 $\frac{1}{2}$ 'N. on the lat.arc; 8°14'N. on the decl.arc, and determine a meridian with the solar at the cor.of secs.14,15,

Chains.

- 22 and 23.  
 West, on a random line, bet. secs.15 and 22.  
 40.00 Set temp.  $\frac{1}{4}$  sec.cor.  
 80.42 Intersect N.and S. line, 3 lks S.of cor. of secs.15,16,  
 21 and 22.  
 September 2: At this cor. I set off  $8^{\circ}08'N.$  on the decl.  
 arc, and observe the sun on the meridian at noon; the  
 resulting lat.is  $31^{\circ}51\frac{1}{2}'N.$   
 Thence I run,  
 S. $89^{\circ}59'E.$  on a true line, bet. secs.15 and 22.  
 Ascending through dense brush and timber.  
 20.42 Top of ridge, bears N.and S., descend.  
 25.44 Drain, 7 lks.wide, course NW.; ascend.  
 40.21 Set an iron post 3 ft. long, 1 in. in diam., 26ins, in  
 the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap,  $\frac{1}{4}$  S  
 15 in N. and S 22 in S.half; from which,  
 A pine 8 ins. diam., bears N. $10^{\circ}E.$ , 11 lks.dist.,  
 marked  $\frac{1}{4}$  S 15 B T.  
 A pine, 6 ins. diam., bears S. $20^{\circ}W.$ , 16 lks.dist.,  
 marked  $\frac{1}{4}$  S 22 B T.  
 41.22 Top of ridge, bears N.and S.; descend.  
 58.42 Drain 6 lks.wide, course NW.; ascend.  
 71.42 Top of ridge, brs. N and S.; descend.  
 80.42 The cor.of secs.14,15,22 and 23.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, oak and pine.  
 Undergrowth, oak brush and manzanita.

September 2, 1911.

*Alfred N. Oliver*  
 U.S.Transitman.

- September 2: At 7h.00m.a.m., 1.m.t., I set off  $31^{\circ}51\frac{1}{2}'N.$   
 on the lat.arc;  $8^{\circ}14'N.$  on the decl.arc, and determine  
 a meridian with the solar at the cor.of secs.14,15,22  
 and 23.  
 N. $0^{\circ}01'W.$ , bet. secs.14 and 15.  
 Descending, through dense brush and heavy timber.  
 4.35 Creek, clear running water, 15 lks.wide, 6 ins.deep,  
 course W.; ascend.  
 27.35 Top of ridge, bears E.and W., descend.  
 39.89 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
 the ground for  $\frac{1}{4}$  sec.witness cor., marked on brass  
 cap,  
 W C  $\frac{1}{4}$  in N.half;  
 S 14 in SE., and  
 S 15 in SW. quadrant; from which,  
 A juniper, 40 ins.diam., bears S. $81^{\circ}26'E.$ , 156 lks.  
 dist., marked W C  $\frac{1}{4}$  S 14 B T.  
 A juniper 20 ins.diam., bears N. $64^{\circ}35'W.$ , 60 lks.  
 dist., marked W C  $\frac{1}{4}$  S 15 B T.  
 39.94 Turkey Creek, clear running water, 20 lks.wide, 8 ins.  
 deep, course W.  
 40.00 Point for  $\frac{1}{4}$  sec.cor. falls in creek.  
 40.65 Fence bears NE.and SW.  
 48.05 Fence bears NE.and SW.  
 49.10 Cross road, bears NE.and SW.  
 52.15 Creek in Thompkins' Canyon, clear running water, 20 lks.  
 wide, 8 ins. deep, course SW.; ascend.  
 72.00 Drain 5 lks.wide, course SE.  
 80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in  
 the ground for cor.of secs. 10,11,14 and 15, marked  
 on brass cap,  
 T 18 S R 29 E in N.half;  
 S 10 in NW.,  
 S 11 in NE.,  
 S 14 in SE., and  
 S 15 in SW. quadrant; raise a mound of stone 2 ft.  
 base,  $1\frac{1}{2}$  ft. high, W.of cor. Pits impracticable.



Chains.

Land, mountainous.  
Soil, rocky and worthless, 4th rate, except about 10.00  
chs., which is rich black loam, 1st rate.  
Timber, pine, juniper, oak, sycamore, fir and piñon.  
Undergrowth, mahogany, oak, manzanita and cacti.

- East, on a random line, bet. secs. 11 and 14.  
40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
80.04 Intersect N. and S. line, 7 lks. S. of cor. of secs. 11, 12,  
13 and 14.  
Thence I run,  
S.  $89^{\circ}57'W.$ , on a true line, bet. secs. 11 and 14.  
Descending through dense brush and scattering timber.  
35.75 Creek in Thompkins' Canyon, clear running water 20 lks.  
wide, 8 ins. deep, course SW.; ascend.  
39.94 Cross road, bears NE. and SW.  
40.02 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
the ground for  $\frac{1}{4}$  sec. cor., marked on brass cap,  $\frac{1}{4}$  S 11  
in N. and S 14 in S. half; from which,  
A juniper 24 ins. diam., bears N.  $0^{\circ}23'E.$ , 55 lks.  
dist., marked  $\frac{1}{4}$  S 11 B T.  
An oak, 15 ins. diam., bears S.  $05^{\circ}30'W.$ , 120 lks.  
dist., marked  $\frac{1}{4}$  S 14 B T.  
44.89 Top of ridge, bears N. and S.; descend.  
50.04 Cross road, bears NW. and SE.  
54.29 Drain, 8 lks. wide, course SW.  
63.04 Drain, 10 lks. wide, course SW.  
80.04 The cor. of secs. 10, 11, 14 and 15.

Land, mountainous.  
Soil, rocky and worthless, 4th rate, except about 4.00  
chs. on each side of the creek, which slopes gently to  
the creek, and is a rich black loam, from  $1\frac{1}{2}$  ft. to 2 ft.  
deep, moist, medium texture, 1st rate.  
Timber, pine, piñon, oak, fir, juniper, sycamore and wal-  
nut.  
Undergrowth, oak, mahogany and cacti.

September 2, 1911.

*John P. Hesse*  
U.S. Transitman.

- September 4: At 7h. 0<sup>m.</sup>, a.m., 1.m.t., I set off  $31^{\circ}52\frac{1}{2}'N.$   
on the lat. arc;  $7^{\circ}30'N.$  on the decl. arc, and determine  
a meridian with the solar at the cor. of secs. 10, 11, 14  
and 15.  
West, on a random line, bet. secs. 10 and 15.  
40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
80.30 Intersect N. and S. line, at cor. of secs. 9, 10, 15 and 16.  
September 4: At this cor. I set off  $7^{\circ}24'N.$  on the  
decl. arc, and observe the sun on the meridian at noon;  
the resulting lat. is  $31^{\circ}52\frac{1}{2}'N.$   
Thence I run,  
East, on a true line, bet. secs. 10 and 15.  
Over rolling land, through dense brush and heavy timber.  
5.10 Cross road, bears NE. and SW.  
11.85 Cross wash, 8 lks. wide, course SW.; ascend.  
40.15 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
the ground for  $\frac{1}{4}$  sec. cor., marked on brass cap,  $\frac{1}{4}$  S 10  
in N. and S 15 in S. half; from which,  
An oak, 6 ins. diam., bears N.  $49^{\circ}18'E.$ , 17 lks.  
dist., marked  $\frac{1}{4}$  S 10 B T.  
An oak, 10 ins. diam., bears S.  $55^{\circ}30'E.$ , 146 lks.  
dist., marked  $\frac{1}{4}$  S 15 B T.  
42.00 Top of ridge, bears N. and S.; descend.  
57.80 Cross wash, 15 lks. wide, course SW.  
66.00 Cross wash, 15 lks. wide, course S.; ascend.

Chains.

74.00 Top of ridge, bears N. and S.; descend.  
 80.30 The cor. of secs. 10, 11, 14 and 15.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pine, pinon, oak, juniper and fir.  
 Undergrowth, oak brush, mahogany and cacti.

September 4, 1911.

*Alfred N. Olsson*  
 U. S. Transitman.

September 4: At 7h.00m. a.m., l.m.t., I set off  $31^{\circ}52\frac{1}{2}'N.$  on the lat. arc;  $7^{\circ}30'N.$  on the decl. arc, and determine a meridian with the solar at the cor. of secs. 10, 11, 14 and 15.

N.  $0^{\circ}01'W.$ , bet. secs. 10 and 11.  
 Ascending through dense brush and scattering timber.  
 18.35 Top of ridge, bears E. and W.; descend.  
 23.50 Drain, 16 lks. wide, course SE.; ascend.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked on brass cap  $\frac{1}{4}$  S 10 in W. and S 11 in E. half; from which,  
 An oak, 12 ins. diam., bears N.  $70^{\circ}18'W.$ , 66 lks. dist., marked  $\frac{1}{4}$  S 10 B T.  
 An oak, 10 ins. diam., bears N.  $07^{\circ}45'E.$ , 57 lks. dist., marked  $\frac{1}{4}$  S 11 B T.  
 50.00 Top of ridge, brs. NE. and SW., descend.  
 70.50 Cross wash, 10 lks. wide, course NW.; ascend.  
 80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 2, 3, 10 and 11, marked on brass cap,  
 T 18 S, R 29 E in N. half;  
 S 3 in NW.,  
 S 2 in NE.,  
 S 11 in SE., and  
 S 10 in SW. quadrant; raise a mound of stone 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.  
 Timber, pinon and oak.  
 Undergrowth, oak, mahogany and cacti.  
 September 4: At this cor. I set off  $7^{\circ}24'N.$  on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is  $31^{\circ}53\frac{1}{2}'N.$

East, on a random line, bet. secs. 2 and 11.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.10 Intersect N. and S. line, 9 lks. N. of cor. of secs. 1, 2, 11 and 12.  
 Thence I run,  
 N.  $89^{\circ}56'W.$ , on a true line, bet. secs. 2 and 11.  
 Descending through dense brush and scattering timber.  
 15.10 Cross wash, 10 lks. wide, course NW.; ascend.  
 32.60 Top of ridge, bears NW. and SE.; descend.  
 40.05 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked on brass cap,  $\frac{1}{4}$  S 2 in N. and S 11 in S. half; from which,  
 An oak, 14 ins. diam., bears N.  $34^{\circ}26'E.$ , 27 lks. dist., marked  $\frac{1}{4}$  S 2 B T.  
 An oak 12 ins. diam., bears S.  $15^{\circ}22'W.$ , 49 lks. dist., marked  $\frac{1}{4}$  S 11 B T.  
 50.25 Cross wash, 10 lks. wide, course NW.; ascend.  
 51.60 Top of ridge, brs. NW. and SE.; descend.  
 52.75 Cross wash, 10 lks. wide, course NW.; ascend.  
 59.10 Top of ridge, bears NW. and SE.; descend.  
 63.10 Cross wash, 10 lks. wide, course NW.; ascend.  
 76.60 Top of ridge, bears NW. and SE.; descend.  
 80.10 The cor. of secs. 2, 3, 10 and 11.  
 Land, mountainous.  
 Soil, rocky and worthless, 4th rate.

Chains.

Timber, oak, pine, pinon, and juniper.  
Undergrowth, oak, mahogany, needle brush and cacti.  
September 4, 1911.

- September 5: At 7h.00m., a.m., l.m.t., I set off  $31^{\circ}53\frac{1}{2}'N$ . on the lat.arc;  $7^{\circ}08'N$ . on the decl.arc, and determine a meridian with the solar at the cor.of secs.2,3,10 and 11.  
North, on a random line, bet. secs.2 and 3.
- 40.00 Set temp.  $\frac{1}{4}$  sec.cor.  
80.14 Intersect N.bdy.of Tp. 28 lks.E.of cor.of secs. 2,3,34 and 35.
- September 5: At this cor. I set off  $7^{\circ}02' N$ . on the decl. arc, and observe the sun on the meridian at noon; the resulting lat.is  $31^{\circ} 54'N$ .  
Thence I run,  
S. $0^{\circ}12'E$ .on a true line, bet. secs. 2 and 3.  
Ascending through dense brush and scattering timber.
- 8.14 Top of ridge, bears E.and W.; descend.  
21.14 Cross wash, 8 lks.wide, course SW.; ascend.  
32.14 Top of ridge, bears NE.and SW.; descend.  
40.14 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap,  $\frac{1}{4}$  S 3 in W. and S 2 in E.half; from which,  
An oak, 8 ins.diam., bears N. $65^{\circ}24'W$ ., 40 lks.dist., marked  $\frac{1}{4}$  S 3 B T.  
An oak, 17 ins.diam., bears S. $41^{\circ}53'E$ ., 112 lks. dist., marked  $\frac{1}{4}$  S 2 B T.
- 58.78 Cross road, bears NE.and SW.  
59.64 Rock Creek, clear running water, 8 lks.wide, 4 ins.deep, course SW.; ascend.  
80.14 The cor.of secs.2,3,10 and 11.  
Land, mountainous.  
Soil, rocky and worthless, 4th rate.  
Timber, pine, pinon, oak, juniper and walnut.  
Undergrowth, oak, mahogany, needle brush and cacti.  
September 5, 1911.

*John P. Hease*  
U.S.Transitman.

- September 5: At 7h.00m., a.m., l.m.t., I set off  $31^{\circ}53\frac{1}{2}'N$ . on the lat.arc;  $7^{\circ}08'N$ . on the decl.arc, and determine a meridian with the solar at the cor.of secs. 2,3, 10 and 11.  
West, on a random line, bet. secs. 3 and 10.
- 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
80.36 Intersect N.and S. line 18 lks.S.of cor.of secs.3,4,9 and 10.
- September 5: At this cor. I set off  $7^{\circ}02' N$ .on the decl. arc; and observe the sun on the meridian at noon;the resulting lat.is  $31^{\circ}53\frac{1}{2}'N$ .  
Thence I run,  
S. $89^{\circ}52'E$ ., on a true line, bet. secs.3 and 10.  
Ascending through dense brush and timber.
- 15.36 Top of ridge, bears N.and S.; descend.  
30.46 Cross wash, 10 lks.wide, course SW.; ascend.  
34.36 Top of ridge, brs.N.and S.; descend.  
37.61 Cross wash, 5 lks.wide, course SW.; ascend.  
40.18 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for  $\frac{1}{4}$  sec.cor., marked on brass cap,  $\frac{1}{4}$  S 3 in N. and S 10 in S.half; from which,  
An oak, 12 ins. diam., bears N. $76^{\circ}51'E$ ., 69 lks. dist., marked  $\frac{1}{4}$  S 3 B T.  
A juniper, 18 ins. diam., bears S. $9^{\circ}44'W$ ., 114 lks.dist., marked  $\frac{1}{4}$  S 10 B T.
- 42.36 Top of ridge, brs.N.and S.; descend.

Chains.

51.46 Rock Creek, clear running water, 8 lks.wide, 4 ins. deep,  
course SW.; ascend.  
60.86 Cross wash, 10 lks.wide, course NW.  
80.36 The cor.of secs.2,3,10 and 11.  
Land, mountainous.  
Soil, rocky and worthless, 4th rate.  
Timber, pine, juniper, oak and fir.  
Undergrowth, oak and mahogany brush and cacti.

September 5, 1911.

*Alfred N. Oliver*  
U.S.Transitman.

GENERAL DESCRIPTION.

This township is extremely rough and mountainous, and covered with a dense growth of underbrush and oak, pine and juniper timber. The soil generally is worthless for agricultural purposes being rocky, but in the bottom of the small valleys along the small creeks there is considerable land, which is very fertile and will grow fine crops of fruits. The township is well watered by Turkey Creek, Rock Creek, Tompkins' Creek, and other unnamed small brooks. There is no mineral in the township. There is one settler in sec.15, and one in sec.14, but on account of the very dense timber and brush it was impossible to get bearings from any point on the lines, and as it would have taken at least a day each to locate the houses by a traverse line, I considered the expense too great.

*John F. Hesse*  
U. S. Transitman.

LIST OF NAMES. BOOK 2330

A list of the names of the individuals employed by John F. Hesse, United States Transitman to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the Subdivision lines of Tp. 18 S. Rg. 29 E. showing the respective capacities in which they acted:

- R. A. Coombs, R. L. Bates, Chainman.
H. R. Harvey, J. H. Bates, A. E. Lyon, Chainman.
F. E. Mills, Moundman.
J. L. Gardner, H. R. Harvey, Moundman.
H. F. Dillman, Axman.
F. Barnes, Axman.
A. W. Hendrix, W. L. Ray, Ralph Brown, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted John F. Hesse, United States Transitman, in surveying all those parts or portions of the subdivision lines of Tp. 18 S. Rg. 29 E.

of the Gila and Salt River meridian, Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for Arizona

Handwritten signatures of assistants: H. R. Harvey, J. H. Bates, J. L. Gardner, W. L. Ray, R. A. Coombs, J. H. Bates, E. E. Mills, H. R. Harvey, J. M. Sanders, E. Barnes, F. Dillman, Ralph Brown.

Subscribed and sworn to before me this day of August 19, 1911. By R. A. Coombs August 19, 1911. By Ralph Brown August 24, 1911. By H. F. Dillman August 28, 1911.

Signature of John F. Hesse, U. S. Transitman.

18  
BOOK 2330

*Transitmen*  
FINAL OATH OF UNITED STATES ~~DEPUTY~~ SURVEYOR.

I, We, John F. Hesse and Alfred N. Oliver, United States <sup>Transitmen</sup> ~~Deputy Surveyor~~, do solemnly swear that, in pursuance of <sup>instructions</sup> ~~a contract~~ received from Frank S. Ingalls, United States Surveyor General for Arizona, bearing date of the 25<sup>th</sup> day of May, 1911, we have well, faithfully, and truly, in ~~our~~ own proper person ~~s~~ 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 subdivision lines of Tp. 18 S. Rg. 29 E.

of the Gila and Salt River meridian, in the Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by us, and under our direction; and we do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

*John F. Hesse*  
*Alfred N. Oliver*  
United States ~~Deputy Surveyor~~  
Transitmen

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

by said Alfred N. Oliver, Aug. 2, 1912 *Frank S. Ingalls*  
SEAL  
SURVEYOR-GENERAL OF ARIZONA

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

*Phoenix, Ariz Aug 3, 1912*

The foregoing field notes of the survey of the remaining subdivisions

of T. 18 S. R. 29 E.

executed by Frank S. Ingalls under his contract No. 5, dated Aug. 25, 1910, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

*Frank 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.