

FIELD NOTES

2338

Accepted B.L.O. letter "E" dated Dec. 17, 1912.
OF THE SURVEY OF THE

Subdivisions of T22 R. R 21 E.

and

Retracement of the North Bdy. of T22 R 21 E.

Of the

T22 R

Meridian,

In the State of

Arizona

EXECUTED BY

John S. Hesse

Med

Alfred A. Oliver

In the capacity of U. S. ^{Surveyor} ~~Surveyor~~, under instructions dated August 21, 1910, 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, September 9, 1910, pursuant to authority contained in the Act of Congress dated March 4, 1911.

Survey commenced October 15, 1911.

Survey completed October 20, 1911.

INDEX DIAGRAM.

Township _____, *Range* _____

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Book No. 2338

INDEX DIAGRAM.

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BOOK 2338

PRELIMINARY OATHS OF ASSISTANTS.

WE, A. E. Lyon, J. H. Bates R. and L. Bates and H. P. Harvey
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 P. 22 S. R. 21 E.

A. E. Lyon Chainman.
R. L. Bates Chainman.
J. H. Bates Chainman.
H. P. Harvey Chainman.

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



John P. Hesse
U. S. Precursor

WE, J. R. Gardner and C. Wolfe
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 P. 22 S. R. 21 E.

J. R. Gardner Moundman.
C. Wolfe Moundman.

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



John P. Hesse
U. S. Precursor

WE, J. E. Barnes and
do solemnly swear that I will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given me, to the best of my skill and ability, in the survey of the subdivision lines of P. 22 S. R. 21 E.

J. E. Barnes Axman.
..... Axman.

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



John P. Hesse
U. S. Precursor

WE, W. L. Ray and A. W. Hendrix, 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 subdivision lines of P. 22 S. R. 21 E.

W. L. Ray Flagman.
A. W. Hendrix Flagman.

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



John P. Hesse
U. S. Precursor

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Survey commenced October 15, 1911, and executed with an A.Lietz Company light mountain transit No.5631, 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 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 cor. of secs. 10, 11, 14 and 15, T.22 S., R.21 E.; latitude, 31°31'N.; longitude, 110°12'20"W., I set off 31°31'N. on the lat.arc; 8°20' S. on the decl.arc; and at 5h.00m., p.m., l.m.t., determine a meridian with the solar, and mark a point thereof on a stone firmly set in the ground, 5 chs. N. of my station. October 15, 1911.

October 16: At 5h.51m. a.m., by my watch, which has correct l.m.t., I observe Polaris at western 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.

At 6h.30m. a.m., l.m.t., I lay off the azimuth of Polaris 1°22' to the east, and mark the meridian thus determined, by cutting a small groove in the stone set October 15, on which the meridian coincides with the mark determined with the solar.

At 7h.00m. a.m., l.m.t., I set off 31°31'N. on the lat.arc; 8°34'S. on the decl.arc, and mark a point in the meridian 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°15'W.; the angle thus determined gives the magnetic declination 13°15'E.

I commence at the corner of secs. 1, 2, 35 and 36 on the S. boundary of T.22 S., R.21 E. which is a redwood post, marked and witnessed as described by the Sur. Genl.

Thence I run, N.0°01'W., bet. secs.35 and 36.

Over rolling land, through scattering brush.

36.60 Cross wash, 8 lks.wide, course NE.

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 35 in W. and S 36 in E.half; dig pits 18x18x12 ins.N. and S.of cor. 3 ft. dist., and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high,W.of cor.

47.30 Cross wash, 40 lks.wide, course E.

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

T 22 S R 21 E in N.half;

S 26 in NW.,

S 25 in NE.,

S 36 in SE., and

S 35 in SW. quadrant; dig pits 18x18x12 ins. in each sec.5 $\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft.base, 2 ft. high,W.of cor.

Land, rolling.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber. Undergrowth, mesquite.

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40.00 East, on a random line, bet. secs.25 and 36.
Set temp. $\frac{1}{4}$ sec.cor.
79.97 Intersect E.bdy.of Tp.14 lks.S.of cor.of secs.25,30,31
and 36.
Thence I run,
S.89°54'W. on a true line, bet. secs.25 and 36.
31.75 Cross wash, 40 lks.wide, course NE.
39.985 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
25 in N. and S 36 in S.half; dig pits 18x18x12 ins.
E.and W.of cor. 3 ft. dist., and raise a mound of
earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,N.of cor.
79.97 The cor.of secs.25,26,35 and 36.
Land, rolling.
Soil, sandy loam, over 2 ft. deep; dry, medium texture;
1st rate.
No timber.
Undergrowth, mesquite.

33.30 N.0°01' W., bet. secs.25 and 26.
Over rolling land, through dense mesquite.
40.00 Cross wash, 80 lks.wide, course E.
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, $\frac{1}{4}$ S26
in W. and S 25 in E.half; dig pits 18x18x12 ins.N.and
S.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$
ft.base, $1\frac{1}{2}$ ft. high,W.of cor.
42.00 Cross wash, 10 lks.wide, course E.
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 22 S R 21 E in N.half;
S 23 in NW.,
S 24 in NE.,
S 25 in SE., and
S 26 in SW. quadrant; dig pits 18x18x12 ins.in each
sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft.
base, 2ft. high,W.of cor.
Land,rolling.
Soil, sandy loam, over 2 ft. deep; dry, medium texture;
1st rate.
No timber.
Undergrowth, mesquite.
October 16: At this cor. I set off 8°40 $\frac{1}{2}$ 'S. on the decl.
arc; and observe the sun on the meridian at noon; the
resulting lat. is 31°29 $\frac{1}{2}$ 'N.

40.00 N.89°54'E. on a random line, bet. secs.24 and 25.
Set temp. $\frac{1}{4}$ sec.cor.
80.06 Intersect E.bdy.of Tp., 9 lks.S.of cor.of secs.19,24,25
and 30.
Thence I run,
S.89°50'W., on a true line, bet. secs.24 and 25.
Over rolling land, through dense brush.
4.85 Fence brs. NW.and SE.
15.06 Cross wash, 25 lks.wide, course NE.
17.16 Fence brs. NW.and SE.
24.06 Cross wash, 60 lks.wide, course NE.
40.03 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 24
in N. and S 25 in S.half; dig pits, 18x18x12 ins.E.
and W.of cor. 3 ft. dist., and raise a mound of earth
 $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,N.of cor.
80.06 The cor.of secs 23,24,25 and 26.
Land, rolling.
Soil, sandy loam, over 2 ft. deep; dry, medium texture;
1st rate.
No timber. Undergrowth, mesquite and catclaw.

Chains.

3.70 N.0°01'W., bet. secs.23 and 24.
 Over rolling land, through dense brush.
 40.00 Cross wash, 8 lks.wide, course E.
 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 W. and S.24 in E.half; dig pits 18x18x12 ins.N.
 and S.of cor. 3 ft. dist.,and raise a mound of earth
 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high,W.of cor.
 49.50 Fence brs. E.and W.
 80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in
 the ground for cor.of secs. 13,14,23 and 24, marked on
 brass cap,
 T 22 S R 21 E in N.half;
 S 14 in NW.,
 S 13 in NE.,
 S 24 in SE., and
 S 23 in SW. quadrant; dig pits 18x18x12 ins. in
 each sec. 5 $\frac{1}{2}$ ft. dist., and raise a mound of earth 4
 ft.base, 2 ft. high,W.of cor.
 Land, rolling.
 Soil, sandy loam, over 2 ft. deep; dry, medium texture;
 1st rate.
 No timber.
 Undergrowth, mesquite and catclaw.

October 16, 1911.

John P. Hesse
 U. S. Transitman.

Survey commenced October 16, 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 min-
 utes 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 Supervis-
 ing Surveyor.
 I examine the adjustments of the compass, and find them
 correct; then, to test the solar apparatus, by compar-
 ing its indications, resulting from solar observations
 made during a.m. and p.m. hours, with a meridian deter-
 mined by observations on Polaris, I proceed as follows:
 At camp, near the cor.of secs.10,11,14 and 15, T.22 S.,R.
 21 E.; latitude, 31°31'N., longitude,110°12'20"W., I
 set off 31°31'N. on the lat.arc; 8°20'S.on the decl.
 arc, and at 5h.00m.p.m.,l.m.t., determine with the so-
 lar a meridian, and mark a point thereof, on a stone
 firmly set in the ground, 5 chs. N.of my station.
 October 16, 1911,

October 17: At 5h.47m.a.m., by my watch, which has cor-
 rect l.m.t., I observe Polaris at western 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.

At 6h.30m.a.m., l.m.t., I lay off the azimuth of Polaris,
 1°22' to the east, and mark the meridian thus deter-
 mined, by cutting a small groove in the stone set Octo-
 ber 16, on which the meridian coincides with the mark
 determined with the solar.

At 7h.00m.,a.m.,l.m.t., I set off 31°31'N. on the lat.arc,
 8°55 $\frac{1}{2}$ 'S. on the decl.arc, and mark a point in the mer-
 idian 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 de-
 fines positions for meridian which coincide with

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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°15'W., the angle thus determined gives the mag. decl. 13°15'E.

I commence at the cor. of secs. 13, 14, 23 and 24, Tp. 22, S., Rg. 21 E.

Thence I run, N.89°50'E., 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, S.89°51'W. on a true line, bet. secs. 13 and 24. Over level land, through dense brush.

21.40 Fence brs. N. and S.

22.50 Road, brs. NW. and SE.

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; dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.

80.20 The cor. of secs. 13, 14, 23 and 24.

Land, level.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, mesquite and catclaw.

N.0°01'W., bet. secs. 13 and 14.

Over level land, through dense brush.

3.50 Fence brs. E. and W.

3.60 Cross road, brs. E. and W.

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 14 in W. and S 13 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.

50.00 Land changes to rolling.

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 22 S R 21 E in N. half;

S 11 in NW.,

S 12 in NE.,

S 13 in SE., and

S 14 in SW. quadrant; dig pits 18x18x12 ins. in each sec. 5 $\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.

Land, level and rolling.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, mesquite and catclaw.

Alfred N. Plummer
U. S. Transitman.

N.89°51'E. on a random line, bet. secs. 12 and 13.

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

80.08 Intersect E. bdy. of Tp., 3 lks. N. of cor. of secs. 7, 12, 13, and 18.

Thence I run,

S.89°52'W., on a true line, bet. secs. 12 and 13.

Over rolling land, through dense brush.

40.04 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; dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of

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earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
 52.08 Cross wash, 80 lks. wide, course NE.; soil changes to 1st rate.
 58.08 Enter cane field.
 61.98 Leave cane field.
 72.58 Cross road, bears NE. and SW.
 74.83 Fence brs. NW. and SE.
 80.08 The cor. of secs. 11, 12, 13 and 14.
 Land, rolling.
 Soil, calcareous, 2nd rate, except 28.00 chs., which is a sandy loam, over 2 ft. deep; dry, medium texture and 1st rate.
 No timber. Undergrowth, mesquite and catclaw.

October 17, 1911.

John P. Hesse
 U. S. Transitman.

October 17:

N. $0^{\circ}01'W.$, bet. secs. 11 and 12.

Over rolling land, through dense brush.

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 11 in W. and S 12 in E. half; dig pits 18x18x12 ins N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 1, 2, 11 and 12, marked on brass cap,

T 22 S R 21 E in N. half;

S 2 in NW.,

S 1 in NE.,

S 12 in SE., and

S 11 in SW. quadrant; dig pits 18x18x12 ins. in

each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.

Land, rolling.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, mesquite, catclaw and greasewood.

October 17: At this cor. I set off $9^{\circ}02\frac{1}{2}'S.$ on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is $31^{\circ}32'N.$

East, bet. secs. 1 and 12.

Over rolling land, through dense brush.

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 1 in N. and S 12 in S. half; dig pits 18x18x12 ins E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

64.14 Intersect W. bdy. of San Rafael del Valle Private Land Grant, 19.96 chs. S. $13^{\circ}31\frac{1}{2}'E.$ of $22\frac{1}{2}$ mile cor. on Grant line, which is a granite stone, marked and witnessed as described by the Surveyor General.

Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground for closing cor. of fracl. secs. 1 and 12, marked on brass cap,

C C, W. of center,

S R D V in NE., and

T 22 S R 21 E in SW. half;

S 1 in NW., and

S 12 in SW. sector; dig pits crosswise on each

line 30x24x12 ins., S. $13^{\circ}31\frac{1}{2}'E.$ 3 ft. and W. of

cor. 7 ft. dist., and raise a mound of earth 4 ft,

base, 2 ft. high, W. of cor.

Land, rolling.

Soil, sandy loam, mixed with gravel, 2nd rate.

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No timber.
Undergrowth, mesquite, catclaw and greasewood.

- 40.00 N.0°01'W., bet. secs. 1 and 2.
Over rolling land, through dense brush.
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 2 in W. and S 1 in E. half; dig pits 18x18x12 ins. N. and S. of cor., 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
- 80.19 Intersect N. bdy. of Tp. 68 $\frac{1}{2}$ lks. W. of cor. of secs. 1, 2, 35 and 36. A redwood post marked and witnessed as described by the Surveyor General, which now refers to secs. 35 and 36 only.
Set a granite stone 18x8x5 ins., 12 ins. in the ground for closing cor. of secs. 1 and 2, marked C C on S., with 1 groove on E. and 5 grooves on W. faces; dig pits 24x18x12 ins., crosswise on each line, E. and W. 3 ft. and S. of stone 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, S. of cor.
- Land, rolling.
Soil, calcareous, 2nd rate. No timber.
Undergrowth, greasewood, mesquite and catclaw.

October 17, 1911.

Alfred N. Oliver
U. S. Transitman.

- October 17: At 7h.00m.a.m., 1.m.t., I set off $31^{\circ}27\frac{1}{2}'N.$ on the lat. arc; $8^{\circ}55\frac{1}{2}'S.$ on the decl. arc, and determine a meridian with the solar at the cor. of secs. 2, 3, 34 and 35 on the S. bdy. of Tp. 22 S., Rg. 21 E.; a redwood post marked and witnessed as described by the Surveyor General.
- Thence I run,
N.0° 01'W., bet. secs. 34 and 35.
Over rolling land, through scattering brush.
- 7.25 Cross road, bears NW. and SE.
- 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 34 in W. and S 35 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
- 55.90 Cross wash, 50 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. 26, 27, 34 and 35, marked on brass cap,
T 22 S R 21 E in N. half;
S 27 in NW.,
S 26 in NE.,
S 35 in SE., and
S 34 in SW. quadrant; dig pits 18x18x12 ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.
- Land, rolling.
Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate.
No timber.
Undergrowth, mesquite.

- 40.00 East, on a random line, bet. secs. 26 and 35.
Set temp. $\frac{1}{4}$ sec. cor.
- 80.04 Intersect N. and S. line at cor. of secs. 25, 26, 35 and 36.
Thence I run,
West, on a true line, bet. secs. 26 and 35.
Over rolling land, through dense brush.
- 26.04 Cross wash, 30 lks. wide, course NE.

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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 26 in N. and S 35 in S. half; dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
80.04	The cor. of secs. 26, 27, 34 and 35. Land, rolling. Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate. No timber. Undergrowth, mesquite.

40.00	N. 0° 01' W., bet. secs. 26 and 27. Over rolling land, through dense brush. 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 W., and S 26 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
80.00	Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for cor. of secs. 22, 23, 26 and 27, marked on brass cap, T 22 S R 21 E in N. half; S 22 in NW., S 23 in NE., S 26 in SE., and S 27 in SW. quadrant; dig pits 18x18x12 ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor. Land, rolling. Soil, sandy loam, over 2 ft. deep; dry, medium texture, 1st rate. No timber. Undergrowth, mesquite and catclaw.

40.00	East, on a random line, bet. secs. 23 and 26. Set temp. $\frac{1}{4}$ sec. cor.
79.90	Intersect N. and S. line, 5 lks. S. of cor. of secs. 23, 24, 25 and 26. Thence I run, S. 89° 58' W., on a true line, bet. secs. 23 and 26. Over rolling land, through dense brush.
12.50	Cross wash, 15 lks. wide, course NE.
39.95	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; dig pits 18x18x12 ins., E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
79.90	The cor. of secs. 22, 23, 26 and 27. Land, rolling. Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate. No timber. Undergrowth, mesquite and catclaw.

28.00	N. 0° 01' W., bet. secs. 22 and 23. Over rolling land, through dense brush. Cross wash, 10 lks. wide, course NE.
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 22 in W. and S 23 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
75.00	Cross wash, 30 lks. wide, course E.
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 22 S R 21 E in N. half; S 15 in NW., S 14 in NE.,

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S 23 in SE., and
S 22 in SW. quadrant; dig pits 18x18x12 ins. in
each sec. 5½ ft. dist., and raise a mound of earth 4
ft. base, 2 ft. high, W. of cor.

Land, rolling.

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

No timber. Undergrowth, mesquite and catclaw.

October 17: At this corner I set off 9°02½'S. on the
decl. arc; and observe the sun on the meridian at noon;
the resulting lat. is 31°30'N.

N. 89° 58' E., on a random line, bet. secs. 14 and 23.

40.00 Set temp. ¼ sec. cor.

79.97 Intersect N. and S. line, 7 lks. N. of cor. of secs. 13, 14, 23
and 24.

Thence I run,

N. 89° 59' W., on a true line, bet. secs. 14 and 23.

Over rolling land, through dense brush.

37.19 Fence, bears N. and S.

39.98½ Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
the ground for ¼ sec. cor., marked on brass cap, ¼ S
14 in N. and S 23 in S. half; from which,

A mesquite 7 ins. diam., bears N. 35° 22' E., 90 lks.
dist., marked ¼ S 14 B. T.

A mesquite, 8 ins. diam., bears S 48° 33' E., 234 lks.
dist., marked ¼ S 23 B. T.

59.97 Cross wash, 30 lks. wide, course NE.

79.97 The cor. of secs. 14, 15, 22 and 23.

Land, rolling.

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

No timber.

Undergrowth, mesquite and catclaw.

N. 0° 01' W., bet. secs. 14 and 15.

Over rolling land, through dense brush.

12.90 Cross road, bears NW. and SE.

25.65 Cross wash, 40 lks. wide, course NE.

34.20 Cross road, bears NE. and SW.

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, ¼
S 15 in W. and S 14 in E. half; dig pits 18x18x12 ins.
N. and S. of cor. 3 ft. dist., and raise a mound of
earth 3½ ft. base, 1½ ft. high, W. of cor.

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 22 S R 21 E in N. half;

S 10 in NW.,

S 11 in NE.,

S 14 in SE., and

S 15 in SW. quadrant; dig pits 18x18x12 ins. in
each sec. 5½ ft. dist., and raise a mound of earth
4 ft. base, 2 ft. high, W. of cor.

Land, rolling.

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

No timber.

Undergrowth, mesquite and catclaw.

S. 89° 59' E. on a random line, bet. secs. 11 and 14.

40.00 Set temp. ¼ sec. cor.

79.84 Intersect N. and S. line 8 lks. N. of cor. of secs. 11, 12, 13,
and 14.

Thence I run,

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N.89°56' W.on a true line, bet. secs.11 and 14.
Over rolling land, through dense brush.
39.92 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 11
in N. and S 14 in S.half; raise a mound of stone 2 ft.
base, $1\frac{1}{2}$ ft. high, N.of cor. Pits impracticable.
59.84 Cross wash, 40 lks.wide, course NE.
79.84 The cor.of secs.10,11,14 and 15.
Land, rolling.
Soil, sandy loam, mixed with gravel and rocks, 2nd rate.
No timber.
Undergrowth, mesquite, greasewood and catclaw.
October 17, 1911.
John P. Hesse
U. S. Transitman.

October 18: At 7h.00⁰m., a.m., 1 m.t., I set off 31°31' N.on
the lat.arc; 9°17 $\frac{1}{2}$ ' S. on the decl.arc, and determine a
meridian with the solar at the cor.of secs.10,11,14 and
15.
Thence I run,
N.0°01' W., bet. secs.10 and 11.
Over rolling land, through dense brush.
10.20 Cross wash, 15 lks.wide, course E.
35.00 Telephone line, bears NE.and 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, $\frac{1}{4}$ S
10 in W. and S 11 in E.half; dig pits 18x18x12 ins.
N.and S.of cor. 3 ft. dist., and raise a mound of earth
3 $\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,W.of cor.
80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the
ground for cor.of secs.2,3,10 and 11, marked on brass
cap,
T 22 S R 21 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, rolling. Soil, covered with loose rocks,4th rate.
No timber.
Undergrowth, mesquite, catclaw and greasewood.

S. 89°56' E., on a random line, bet. secs.2 and 11.
40.00 Set temp. $\frac{1}{4}$ sec.cor.
80.04 Intersect N.and S. line, 7 lks.N.of cor.of secs.1,2,11
and 12.
Thence I run,
N.89°53' W., on a true line, bet. secs.2 and 11.
Over rolling land, through dense brush.
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 2
in N. and S 11 in S.half; dig pits 18x18x12 ins.E.and
W.of cor. 3 ft. dist., and raise a mound of earth 3 $\frac{1}{2}$ ft.
base, $1\frac{1}{2}$ ft. high,N.of cor.
43.04 Telephone line, bears NE.and SW.
80.04 The cor.of secs. 2,3,10 and 11.
Land, rolling.
Soil, covered with loose rocks, 4th rate.
No timber.
Undergrowth, mesquite, catclaw and greasewood.

N.0°01' W., bet. secs.2 and 3.
Over level land, through dense brush.
40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in

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80.20 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; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
Intersect N. bdy. of Tp. 76 lks., S. $89^{\circ}59'$ W. of cor. of secs. 2, 3, 34 and 35, a sandstone, marked and witnessed as described by the Surveyor General, which now refers to secs. 34 and 35 only.
Set a granite stone 18x8x6 ins., 12 ins. in the ground, for closing cor. of secs. 2 and 3, marked C C on S., with 2 grooves on E. and 4 grooves on W. faces; dig pits 24x18x12 ins. crosswise on each line, E. and W. 3 ft. and S. of stone 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, S. of cor.
Land, level.
Soil, sandy loam, mixed with gravel, 2nd rate.
No timber.
Undergrowth, mesquite, catclaw and greasewood.
October 18: At this cor. I set off $9^{\circ}24\frac{1}{2}'$ S. on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is $31^{\circ}33'$ N.

October 18, 1911.

Alfred N. Oliver
U. S. Transitman.

October 18: At 7h. 00m., a.m., l.m.t., I set off $31^{\circ}27\frac{1}{2}'$ N. on the lat. arc; $9^{\circ}17\frac{1}{2}'$ S. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 3, 4, 33 and 34 on the S. bdy. of Tp., a redwood post, marked and witnessed as described by the Surveyor General.
Thence I run, N. $0^{\circ}02'$ W., bet. secs. 33 and 34.
Over rolling land, through scattering brush.
12.30 Cross wash, 20 lks. wide, course E.
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 33 in W. and S 34 in E. half; dig pits 18x18x12 ins., N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
This cor. falls in old trail, bears NW. and SE.
80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground for cor. of secs. 27, 28, 33 and 34, marked on brass cap,
T 22 S R 21 E in N. half;
S 28 in NW.,
S 27 in NE.,
S 34 in SE., and
S 33 in SW. quadrant; dig pits 18x18x12 ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.
Land, rolling.
Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate.
No timber.
Undergrowth, mesquite.

40.00 East, on a random line, bet. secs. 27 and 34.
Set temp. $\frac{1}{4}$ sec. cor.
80.02 Intersect N. and S. line, 9 lks. N. of cor. of secs. 26, 27, 34 and 35.
Thence I run, N. $89^{\circ}56'$ W., on a true line, bet. secs. 27 and 34.
Over rolling land, through dense brush.
40.01 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; dig pits 18x18x12 ins.

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80.02 E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
 The cor. of secs. 27, 28, 33 and 34.
 Land, rolling.
 Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate.
 No timber.
 Undergrowth, mesquite.

40.00 N. $0^{\circ}02'$ W., bet. secs. 27 and 28.
 Over rolling land, through dense brush.
 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 28 in W. and S 27 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

71.70 Cross wash, 15 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. 21, 22, 27 and 28, marked on brass cap,
 T 22 S R 21 E in N. half;
 S 21 in NW.,
 S 22 in NE.,
 S 27 in SE., and
 S 28 in SW. quadrant; dig pits 18x18x12 ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.
 Land, rolling.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite and catclaw.

40.00 S. $89^{\circ}56'$ E. on a random line, bet. secs. 22 and 27.
 Set temp. $\frac{1}{4}$ sec. cor.,
 79.98 Intersect N. and S. line 9 lks. S. of cor. of secs. 22, 23, 26 and 27.

Thence I run,
 West, on a true line, bet. secs. 22 and 27.
 Over rolling land, through dense brush.
 39.99 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 22 in N. and S 27 in S. half; dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

51.98 Cross wash, 15 lks. wide, course NE.
 79.98 The cor. of secs. 21, 22, 27 and 28.
 Land, rolling.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite and catclaw.
 October 18: At this cor. I set off $9^{\circ}24\frac{1}{2}'$ S. on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is $31^{\circ}29\frac{1}{2}'$ N.

23.00 N. $0^{\circ}02'$ W., bet. secs. 21 and 22.
 Over rolling land, through dense brush.
 39.15 Cross wash, 15 lks. wide, course NE.
 Telephone line, bears NW. and SE.
 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 21 in W. and S 22 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

72.40 Fence, bears E. and W.
 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 15, 16, 21 and 22, marked on brass cap,

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T 22 S R 21 E in N. half;
S 16 in NW.,
S 15 in NE.,
S 22 in SE., and
S 21 in SW. quadrant; dig pits 18x18x12 ins. in each
sec. 5½ ft. dist., and raise a mound of earth 4 ft.
base, 2 ft. high, W. of cor.
Land, rolling. Soil, sandy loam, mixed with gravel, 2nd rate.
No timber. Undergrowth, mesquite and catclaw.

East, on a random line, bet. secs. 15 and 22.
40.00 Set temp. ¼ sec. cor.
80.14 Intersect N. and S. line, 7 lks. S. of cor. of secs. 14, 15,
22 and 23.
Thence I run,
S. 89° 57' W., on a true line, bet. secs. 15 and 22.
Over rolling land, through dense brush.
40.07 Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the
ground for ¼ sec. cor., marked on brass cap, ¼ S 15 in
N. and S 22. in S. half; dig pits 18x18x12 ins. E. and
W. of cor. 3 ft. dist., and raise a mound of earth 3½
ft. base, 1½ ft. high, N. of cor.
52.81 C.T. Stoltz's tent house, bears N. 29° 24' E.
58.89 Fence bears NE. and SW.
58.92 Telephone line, bears NE. and SW.
60.34 C.T. Stoltz's tent house bears N. 48° 56' E.
70.64 Fence, bears N. and S.
80.14 The cor. of secs. 15, 16, 21, and 22.
Land, rolling.
Soil, sandy loam, mixed with gravel and rock, 2nd rate.
No timber.
Undergrowth, mesquite and catclaw.

N. 0° 02' W., bet. secs. 15 and 16.
Over rolling land, through dense brush.
2.00 Cross wash, 50 lks. wide, course NE.
3.25 Fence bears NE. and SW.
7.70 Cross wash, 50 lks. wide, course NE.
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, ¼ S
16 in W. and S 15 in E. half; dig pits 18x18x12 ins. N.
and S. of cor. 3 ft. dist., and raise a mound of earth
3½ ft. base, 1½ ft. high, W. of cor.
80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in
the ground for cor. of secs. 9, 10, 15 and 16, marked on
brass cap,
T 22 S, R 21 E in N. half;
S 9 in NW.,
S 10 in NE.,
S 15 in SE., and
S 16 in SW. quadrant; dig pits 18x18x12 ins. in
each sec. 5½ ft. dist., and raise a mound of earth 4
ft. base, 2 ft. high, W. of cor.
Land, rolling.
Soil, sandy loam, mixed with gravel and rock; 2nd rate.
No timber.
Undergrowth, mesquite, catclaw and greasewood.

October 18, 1911.

John P. Nessel
U. S. Transitman.

October 18; 1911:
N. 89° 57' E., on a random line, bet. secs. 10 and 15.
40.00 Set temp. ¼ sec. cor.
80.38 Intersect N. and S. line, 14 lks. S. of cor. of secs. 10, 11,
14 and 15.
Thence I run,
S. 89° 51' W. on a true line, bet. secs. 10 and 15.

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17.95 Over level land, through dense brush.
 Telephone line, brs. NE. and SW.
 40.19 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; dig pits 18x18x12 ins. E.and W.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ base, $1\frac{1}{2}$ ft. high, N.of cor.
 80.38 The cor.of secs. 9,10,15 and 16.
 Land, level.
 Soil, sandy loam, over 2 ft. deep; dry, medium texture; 1st rate.
 No timber. Undergrowth, mesquite and catclaw.

N.0°02'W., bet. secs.9 and 10.
 Over rolling land, through dense brush.
 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 9 in W. and S 10 in E.half; dig pits 18x18x12 ins.N.and S.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft.base, $1\frac{1}{2}$ ft. high, W.of cor.
 80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground for cor.of secs. 3,4,9 and 10, marked on brass cap,
 T 22 S R 21 E in N.half;
 S 4 in NW.,
 S 3 in NE.,
 S 10 in SE., and
 S 9 in SW. quadrant; dig pits 18x18x12 ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft.base, 2 ft. high,W.of cor.
 Land, rolling.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber. Undergrowth, mesquite and catclaw.

N,89°51'E., on a random line, bet. secs.3 and 10.
 40.00 Set temp. $\frac{1}{4}$ sec.cor.
 80.24 Intersect N.and S. line 12 lks.S.of cor. of secs.2,3,10 and 11.
 Thence I run,
 S.89°46'W., on a true line, bet. secs.3 and 10.
 Over level land, through dense brush.
 40.12 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; dig pits 18x18x12 ins. E.and W.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft.base, $1\frac{1}{2}$ ft. high,N.of cor.
 80.24 The cor.ofs secs. 3,4,9 and 10.
 Land, level.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite, catclaw and greasewood.

N.0°02' W., bet. secs. 3 and 4.
 Over rolling land, through dense brush.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for $\frac{1}{4}$ sec.for., marked on brass cap, $\frac{1}{4}$ S 4 in W. and S 3 in E.half; dig pits 18x18x12 ins. N.and S. of cor.3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft.base, $1\frac{1}{2}$ ft.high,W.of cor.
 80.34 Intersect N.bdy.of T21S R21E chs.S.89°57'W. of cor.of secs. 3,4,33 and 34; a sandstone marked and witnessed as described by the Surveyor General, which now refers to secs. 33 and 34 only.
 Set a granite stone 18x8x6 ins., 12 ins. in the ground for closing cor.of secs.3 and 4, marked C.C on S., with 3 grooves on E. and 3 grooves on W.faces; dig pits 24x18x12 ins.crosswise on each line,E.and W.3

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ft. and S. of stone 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, S. of cor.

Land, rolling.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, mesquite, catclaw and greasewood.

October 18, 1911.

October 19: At 7h. 00m. a.m., l.m.t., I set off $31^{\circ}27\frac{1}{2}'N.$ on the lat. arc; $9^{\circ}39\frac{1}{2}'S.$ on the decl. arc, and determine a meridian with the solar at the cor. of secs. 4, 5, 32 and 33 on the S. bdy of Tp. 22 S., R. 21 E., a granite stone marked and witnessed as described by the Surveyor General.

Thence I run,

$N.0^{\circ}02'W.$, bet. secs. 32 and 33.

Over rolling land, through dense brush.

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 32 in W. and S 33 in E. half; dig pits $18 \times 18 \times 12$ ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

44.35 Telephone line, bears NE. and SW.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 28, 29, 32 and 33, marked on brass cap.

T 22 S R 21 E in N. half;

S 29 in NW.,

S 28 in NE.,

S 33 in SE., and

S 32 in SW. quadrant; dig pits $18 \times 18 \times 12$ ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.

Land, rolling.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, mesquite and catclaw.

East, on a random line, bet. secs. 28 and 33.

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

80.12 Intersect N. and S. line 3 lks. S. of cor. of secs. 27, 28, 33 and 34.

Thence I run,

$S.89^{\circ}59'W.$, on a true line, bet. secs. 28 and 33.

Over level land, through dense brush.

40.06 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 28 in N. and S 33 in S. half; from which a mesquite, 6 ins. diam., bears N. $70\frac{1}{2}^{\circ}E.$, 16 lks. dist., marked $\frac{1}{4}$ S 28 B.T.

A mesquite 5 ins. diam., bears S, $22\frac{1}{2}^{\circ}E.$, 125 lks.

dist., marked $\frac{1}{4}$ S 33 B.T.

63.55 Telephone line, bears NE. and SW.

80.12 The cor. of secs. 28, 29, 32 and 33.

Land, level.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, mesquite and catclaw.

$N.0^{\circ}02'W.$, bet. secs. 28 and 29.

Over rolling land, through dense brush.

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 29 in W. and S 28 in E. half; dig pits $18 \times 18 \times 12$ ins., N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 20, 21, 28 and 29, marked

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on brass cap,
 T 22 S R 21 E in N.half,
 S 20 in NW.,
 S 21 in NE.,
 S 28 in SE., and S
 S 29 in SW. quadrant; dig pits 18x18x12 ins. in
 each sec. 5½ ft. dist., and raise a mound of earth 4 ft.
 base, 2 ft. high, W. of cor.

Land, rolling.
 Soil, sandy loam, mixed with gravel and rock; 3rd rate.
 No timber.
 Undergrowth, mesquite and catclaw.

40.00 N.89°59'E., on a random line, bet. secs.21 and 28.
 79.96 Set temp. ¼ sec.cor.
 Intersect N. and S. line, 11 lks. S. of cor. of secs. 21, 22,
 27 and 28.

Thence I run,
 S.89°54'W., on a true line, bet. secs. 21 and 28.
 Over level land, through dense brush.

20.40 Telephone line, bears NE. and SW.
 39.98 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground for ¼ sec.cor., marked on brass cap, ¼ S 21
 in N. and S 28 in S.half; dig pits 18x18x12 ins. E. and
 W. of cor. 3 ft. dist., and raise a mound of earth 3½
 ft. base, 1½ ft. high, N. of cor.

79.96 The cor. of secs. 20, 21, 28 and 29.
 Land, level.
 Soil, ground covered with loose rocks and worthless, 4th
 rate.
 No timber.
 Undergrowth, mesquite and catclaw.

40.00 N.0°02' W., bet. secs. 20 and 21.
 Over rolling land, through dense brush.
 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground for ¼ sec.cor., marked on brass cap, ¼ S 20
 in W. and S 21 in E.half; dig pits 18x18x12 ins. N. and
 S. of cor. 3 ft. dist., and raise a mound of earth 3½
 ft. base, 1½ ft. high, W. of cor.

80.00 Point for cor. falls in wash, 15 lks. wide, course E.
 80.50 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the
 ground for closing cor. of secs. 16, 17, 20 and 21, marked
 on brass cap,

W.C, S. of center,
 T 22 S, R 21 E in N.half;
 S 17 in NW.,
 S 16 in NE.,
 S 21 in SE., and
 S 20 in SW. quadrant; dig pits 18x18x12 ins. NW.,
 NE., SE., and SW. of cor. 5½ ft. dist., and raise a
 mound of earth 4 ft. base, 2 ft. high, W. of cor.

Land, rolling.
 Soil, ground covered with loose rock and worthless, 4th
 rate.
 No timber.
 Undergrowth, mesquite and catclaw.

October 19: At this cor. I set off 9°46½'S. on the decl.
 arc; and observe the sun on the meridian at noon; the
 resulting lat. is 31° 30½'N.

40.00 From the true point for the cor. of secs. 16, 17, 20 and 21,
 79.96 N.89°54'E. on a random line, bet. secs. 16 and 21.
 Set temp. ¼ sec.cor.
 Intersect N. and S. line, 7 lks. N. of cor. of secs. 15, 16,
 21 and 22.

Chains.

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Thence I run,
S.89°57'W. on a true line, bet. secs.16 and 21.
Over rolling land, through dense brush.
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
16 in N. and S 21 in S.half; dig pits 18x18x12 ins.
E.and W. of cor. 3 ft. dist., and raise a mound of
earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,N.of cor.
79.96 The true point for the cor.of secs. 16.17,20 and 21.
Land, rolling.
Soil, sandy loam, mixed with gravel, 2nd rate.
No timber.
Undergrowth, mesquite and catclaw.

From the true point for the cor.of secs. 16,17,20 and 21,
I run,

N.0°02'W, bet. secs. 16 and 17.
Over rolling land, through dense brush.

0.50 Witness cor.
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
17 in W. and S 16 in E. half; from which,
A mesquite 5 ins.diam., bears N.17 $\frac{1}{4}$ °E., 139 lks.
dist., marked $\frac{1}{4}$ S 17 B T.
No other tree available, so I dig pits 18x18x12 ins.
N.and S.of cor. 3 ft. dist., and raise a mound of
earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,W.of cor.
80.00 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the
ground for cor.of secs.8,9,16 and 17, marked on brass
cap,
T 22 S R21 E in N.half;
S 8 in NW.,
S 9 in NE.,
S 16 in SE., and
S 17 in SW. quadrant; dig pits 18x18x12 ins. in
each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4
ft.base, 2 ft. high,W.of cor.
Land, rolling.
Soil, covered with loose rocks and worthless,4th rate.
No timber.
Undergrowth, mesquite and catclaw.

N.89°57'E. on a random line, bet. secs.9 and 16.

40.00 Set temp. $\frac{1}{4}$ sec.cor.
79.82 Intersect N.and S. line, 5 lks.N.of cor. of secs.9,10,15
and 16.

Thence I run,
S.89°59'W., on a true line, bet. secs.9 and 16.
Over rolling land, through dense brush.

39.91 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
9 in N. and S 16 in S.half; dig pits 18x18x12 ins.E.
and W.of cor. 3 ft. dist., and raise a mound of
earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,N.of cor.

79.82 The cor.of secs.8,9,16 and 17.
Land, rolling.
Soil, ground covered with loose rock and gravel,4th
rate.
No timber.
Undergrowth, mesquite and catclaw.

N.0°02' W., bet. secs. 8 and 9.
Over rolling land, through dense brush.

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
8 in W. and S 9 in E.half; dig pits 18x18x12 ins.

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80.00 N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 4, 5, 8 and 9, marked on brass cap;
 T 22 S R. 21 E in N. half;
 S 5 in NW.,
 S 4 in NE.,
 S 9 in SE., and
 S 8 in SW. quadrant; dig pits 18x18x12 ins., in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.
 Land, rolling.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite and catclaw.

October 19, 1911.

October 20: At 7h. 00m., a.m., l.m.t., I set off $31^{\circ}32'N$. on the lat. arc; $10^{\circ}01\frac{1}{2}'S$. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 4, 5, 8 and 9.
 Thence I run,
 N. $89^{\circ}59'E$, on a random line, bet. secs. 4 and 9.
 40.00 Set temp. $\frac{1}{4}$ sec. cor.
 79.80 Intersect N. and S. line at cor. of secs. 3, 4, 9 and 10.
 Thence I run,
 S. $89^{\circ}59'W$, on a true line, bet. secs. 4 and 9.
 Over level land, through dense brush.
 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. 4 in N. and S 9 in S. half; dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
 79.80 The cor. of secs. 4, 5, 8 and 9.
 Land, level.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite, catclaw and greasewood.

N. $0^{\circ}02'W$. on a random line, bet. secs. 4 and 5.
 40.00 Set temp. $\frac{1}{4}$ sec. cor.
 80.30 Intersect N. bdy. of Tp. 44 lks. W. of cor. of secs. 4, 5, 32 and 33, a sandstone marked and witnessed as described by the Surveyor General.
 Thence I run,
 S. $0^{\circ}17'W$. on a true line, bet. secs. 4 and 5.
 Over level land, through dense brush.
 40.30 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 5 in W. and S 4 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
 80.30 The cor. of secs. 4, 5, 8 and 9.
 Land, level.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite, catclaw and greasewood.

Alfred N. Lewis
 U. S. Transitman.

October 19: At 7h. 00m. a.m., l.m.t., I set off $31^{\circ}27\frac{1}{2}'N$. on the lat. arc; $9^{\circ}39\frac{1}{2}'S$. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 5, 6, 31 and 32 on S. bdy. of Tp. 22 S., R. 21 E., a granite stone

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Chains.

marked and witnessed as described by the Surveyor General.

Thence I run, N.0°3'W., bet. secs. 31 and 32.

Over rolling land, through scattering brush,

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 31 in W. and S 32 in E.half; from which,

A mesquite 6 ins. diam., bears S.81°12'E., 137 lks. dist., marked $\frac{1}{4}$ S 32 B T.

No other tree available; so I dig pits 18x18x12 ins. N.and S.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,W.of cor.

69.45 Cross wash, 12 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. 29,30,31 and 32, marked on brass cap,

T 22 S R 21 E in N.half,

S 30 in NW.,

S 29 in NE.,

S 32 in SE., and

S 31 in SW.quadrant; raise a mound of stone 2 ft.

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

Land, rolling.

Soil, sandy loam, mixed with gravel and rock, 2nd rate.

No timber.

Undergrowth, mesquite.

East, on a random line, bet. secs.29 and 32.

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

80.06 Intersect N and Sline, 7 lks. S.of cor.of secs.28,29, 32 and 33.

Thence I run,

S.89°57'W., on a true line, bet. secs.29 and 32.

Over rolling land, through scattering brush.

1.76 Cross wash,10 lks.wide,, course SE.

20.40 Cross wash, 12 lks.wide, course NE.

40.03 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, $\frac{1}{4}$ S29 in N. and S 32 in S.half; dig pits 18x18x12 ins. E.and W.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft.base, $1\frac{1}{2}$ ft. high,N.of cor.

80.06 The cor.of secs.29,30, 31 and 32.

Land, rolling.

Soil, sandy loam, mixed with gravel and rock, 2nd rate.

No timber.

Undergrowth, mesquite

West, on a random line, bet. secs.30 and 31.

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

78.91 Intersect W.bdy.of Tp., 12 lks.S.of cor. of secs.25,30, 31 and 36, a sandstone marked and witnessed as described by the Surveyor General.

Thence I run,

S.89°55'E. on a true line, bet. secs.30 and 31.

Over rolling land, through scattering brush.

38.91 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, $\frac{1}{4}$ S30 in N. and S 31 in S.half; dig pits 18x18x12 ins.E. and W.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,N.of cor.

78.91 The cor.of secs. 29,30,31 and 32.

Land, rolling.

Soil, sandy loam, mixed with gravel, 2nd rate.

No timber.

Undergrowth, mesquite.

N.0°03'W., bet. secs.29 and 30'

Over rolling land, through scattering brush.

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Chains.

12.35 Cross wash, 8 lks.wide, course E.
 30.30 Cross wash, 8 lks.wide, course E.
 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 30 in W. and S 29 in E.half; dig pits 18x18x12 ins .N.and S.of cor., 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft.base, $1\frac{1}{2}$ ft. high,W.of cor.
 80.00 Set an iron post 3 ft. long, 2 ins.diam., 24 ins. in the ground for cor.of secs.19,20,29 and 30, marked on brass cap,
 T 22 S R 21 E in N.half;
 S 19 in NW.,
 S 20 in NE.,
 S 29 in SE., and
 S 30 in SW. quadrant; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high,W.of cor. Pits impracticable.
 Land, rolling.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite.

40.00 N.89°57'E., on a random line, bet. secs.20 and 29.
 Set temp. $\frac{1}{4}$ sec.cor.
 80.08 Intersect N.and S. line, 5 lks.N.of cor.of secs.20,21,28 and 29.
 Thence I run,
 S.89°59'W. on a true line, bet. secs.20 and 29.
 Over rolling land, through scattering brush.
 28.08 Cross wash, 15 lks.wide, course NE.
 40.04 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 20 in N. and S 29 in S.half; dig pits 18x18x12 ins.E.and W.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N.of cor.
 51.08 Cross wash, 8 lks.wide, course NE.
 78.88 Cross road, bears NW.and SE.
 80.08 The cor.of secs.19,20,29 and 30.
 Land, rolling.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite.

40.00 N.89°55'W., on a random line, bet. secs.19 and 30.
 Set temp. $\frac{1}{4}$ sec.cor.
 78.82 Intersect W.bdy.of Tp., 12 lks.S.of cor.of secs.19,24,25 and 30, a granite stone, marked and witnessed as described by the Surveyor General.
 Thence I run,S.89°50'E., on a true line, bet. secs.19 and 30.
 Over rolling land, through scattering brush.
 38.82 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 19 in N. and S 30 in S.half; dig pits 18x18x12 ins.E.and W.of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,N.of cor.
 78.82 The cor.of secs.19,20,29 and 30.
 Land, rolling.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite.
 October 19: At this cor. I set off 9°46 $\frac{1}{2}$ 'S.on the decl. arc, and observe the sun on the meridian at noon; the resulting lat.is 31°29 $\frac{1}{2}$ 'N.

N.0°03'W., bet. secs.19 and 20.

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Chains.

1.15 Over rolling land, through scattering brush.
 26.35 Cross road, brs. NW.
 40.00 Cross wash, 8 lks. wide, course NE.
 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 19 in W. and S 20 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
 78.85 Cross wash, 15 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. 17, 18, 19 and 20, marked on brass cap,
 T 22 S R 21 E in N. half;
 S 18 in NW.,
 S 17 in NE.,
 S 20 in SE., and
 S 19 in SW. quadrant; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 Land, rolling.
 Soil, sandy loam, mixed with gravel and rock, 2nd rate.
 No timber.
 Undergrowth, mesquite.

40.00 N. $89^{\circ}59'E$. on a random line, bet. secs. 17 and 20.
 Set temp. $\frac{1}{4}$ sec. cor.
 80.00 Intersect N. and S. line, 3 lks. N. of true point for cor. of secs. 16, 17, 20 and 21.
 Thence I run,
 West, on a true line, bet. secs. 17 and 20.
 Over rolling land, through dense brush.
 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 17 in N. and S 20 in S. half; from which,
 A mesquite 5 ins. diam., bears N. $25^{\circ}31'W$., 60 lks. dist., marked $\frac{1}{4}$ S 17 B T.
 A mesquite 6 ins. diam., bears S. $60^{\circ}44'E$., 140 lks. dist., marked $\frac{1}{4}$ S 20 B T.
 80.00 The cor. of secs. 17, 18, 19 and 20.
 Land, rolling.
 Soil, sandy loam, mixed with gravel and rock; 2nd rate.
 No timber.
 Undergrowth, mesquite and catclaw.

40.00 N. $89^{\circ}50'W$., on a random line, bet. secs. 18 and 19.
 Set temp. $\frac{1}{4}$ sec. cor.
 78.70 Intersect W. bdy. of Tp., 5 lks. S. of cor. of secs. 13, 18, 19 and 24, a redwood post marked and wit. as desc. by Sur. Gen.
 Thence I run,
 S. $89^{\circ}48'E$., on a true line, bet. secs. 18 and 19.
 Over rolling land, through scattering brush.
 38.70 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 18 in N., and S 19 in S. half; dig pits 18x18x12 ins., E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
 41.70 Cross wash, 30 lks. wide, course NE.
 78.70 The cor. of secs. 17, 18, 19 and 20.
 Land, rolling.
 Soil, sandy loam, mixed with gravel and rock, 2nd rate.
 No timber.
 Undergroeth, mesquite and catclaw.

October 19, 1911.

October 20: At 7h. 00m. a.m., l.m.t., I set off $31^{\circ}30\frac{1}{2}'N$. on the lat. arc; $10^{\circ}03\frac{1}{2}'S$. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 17, 18, 19 and 20.
 Thence I run,
 N. $0^{\circ}03'W$., bet. secs. 17 and 18.

Chains.

- 10.00 Over rolling land, through dense brush.
- 40.00 Cross wash, 30 lks. wide, course NE.
- 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 18 in W. and S 17 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground for cor. of secs. 7, 8, 17 and 18, marked on brass cap,
 T 22 S R 21 E in N. half;
 S 7 in NW.,
 S 8 in NE.,
 S 17 in SE., and
 S 18 in SW. quadrant; dig pits 18x18x12 ins. in each sec. $5\frac{1}{2}$ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.

Land, rolling.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite and catclaw.

- 40.00 East, on a random line, bet. secs. 8 and 17.
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 80.00 Intersect N. and S. line, 3 lks. S. of cor. of secs. 8, 9, 16 and 17.

Thence I run,
 S. 89° 59' W., on a true line, bet. secs. 8 and 17.

- 40.00 Over rolling land, through dense brush.
- 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 8 in N., and S 17 in S. half; dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
- 80.00 The cor. of secs. 7, 8, 17 and 18.

Land, rolling.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite and catclaw.

- 40.00 N. 89° 48' W. on a random line, bet. secs. 7 and 18.
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 78.56 Intersect W. bdy. of Tp., 7 lks. S. of cor. of secs. 7, 12, 13 and 18, a redwood post marked and witnessed as described by the Surveyor General.

Thence I run,
 S. 89° 45' E. on a true line, bet. secs. 7 and 18.

- 38.56 Over rolling land, through dense brush.
- 38.56 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 7 in N. and S 18 in S. half; dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
- 78.56 The cor. of secs. 7, 8, 17 and 18.

Land, rolling.
 Soil, sandy loam, mixed with gravel, 2nd rate.
 No timber.
 Undergrowth, mesquite and catclaw.

- 40.00 N. 0° 03' W., bet. secs. 7 and 8.
- 40.00 Over rolling land, through scattering brush.
- 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 7 in W. and S 8 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft.

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base, 1½ ft. high, W. of cor.
Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for cor. of secs. 5, 6, 7 and 8, marked on brass cap,
T 22 S R 21 E in N. half;
S 6 in NW.,
S 5 in NE.,
S 8 in SE., and
S 7 in SW. quadrant; dig pits 18x18x12 ins., in each sec. 5½ ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.
Land, rolling.
Soil, sandy loam, mixed with gravel, 2nd rate.
No timber.
Undergrowth, mesquite and catclaw.
October 20: At this cor., I set off 10°08'S. on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is 31°32'N.

N. 89°59'E. on a random line, bet. secs. 5 and 8.

40.00 Set temp. ¼ sec. cor.
80.12 Intersect N. and S. line 3 lks. N. of cor. of secs. 4, 5, 8 and 9.
Thence I run,
West, on a true line, bet. secs. 5 and 8.
Over rolling land, through scattering brush.
40.06 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for ¼ sec. cor., marked on brass cap, ¼ S 5 in N. and S 8 in S. half; dig pits 18x18x12 ins., E. and W. of cor. 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.
80.12 The cor. of secs. 5, 6, 7 and 8.
Land, rolling.
Soil, sandy loam, mixed with gravel, 2nd rate.
No timber.
Undergrowth, mesquite and catclaw.

N. 89°45'W., on a random line, bet. secs. 6 and 7.

40.00 Set temp. ¼ sec. cor.
78.41 Intersect W. bdy. of Tp., 5 lks. S. of cor. of secs. 1, 6, 7 and 12, a redwood post marked and witnessed as described by the Surveyor General.
Thence I run,
S. 89°43'E. on a true line, bet. secs. 6 and 7.
Over rolling land, through scattering brush.
38.41 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for ¼ sec. cor., marked on brass cap, ¼ S 6 in N. and S 7 in S. half; dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high N. of cor.
78.41 The cor. of secs. 5, 6, 7 and 8.
Land, rolling.
Soil, sandy loam, mixed with gravel, 2nd rate.
No timber.
Undergrowth, mesquite and catclaw.

N. 0°03'W., on a random line, bet. secs. 5 and 6.

40.00 Set temp. ¼ sec. cor.
80.41 Intersect N. bdy. of Tp., 53 lks. W. of cor. of secs. 5, 6, 31 and 32.
Thence I run,
S. 0°20'W. on a true line, bet. secs. 5 and 6.
Over rolling land, through scattering brush.
40.21 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for ¼ sec. cor., marked on brass cap, ¼ S 6 in W. and S 5 in E. half; dig pits 18x18x12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high W. of cor.

Chains.

80.41 The cor. of secs. 5, 6, 7 and 8.
Land, rolling.
Soil, sandy loam mixed with gravel, 2nd rate.
No timber.
Undergrowth, mesquite and catclaw.

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October 20, 1911.

General Description.

This township is level and rolling, and the soil is generally a fine sandy loam, over two feet deep and with water would be very fertile. There is no water or timber in the township.

John P. Nessee
U. S. Transitman.

Chains. October 20: I begin at the closing cor. of Tps. 21 and 22 S., Rg. 21 E., on W. bdy. of the San Rafael Del Valle P.L.G., which is a sandstone marked and witnessed as described by the Surveyor General.
 Thence I run
 West bet. secs. 1 and 36.
 Over level land, through dense brush.

4.22 The $\frac{1}{4}$ sec. cor. bet. secs. 1 and 36, a sandstone, marked and witnessed as described by the Surveyor General.
 Thence west from $\frac{1}{4}$ sec. cor.

40.02 Fall $\frac{1}{2}$ lk. N. of cor. of secs. 1, 2, 35 and 36, a redwood post, marked and witnessed as described by the Surveyor General.
 The course of this $\frac{1}{2}$ mile is S. 89° 59' W. 40.02 chs.
 Land level.
 Soil, sandy loam mixed with coarse gravel and rock, 3rd rate.
 No timber.
 Undergrowth, mesquite, and catclaw.

West bet. secs. 2 and 35.
 Over slightly rolling land, through dense brush.

15.93 Telephone line, bears N.E. and S.W.

40.01 The $\frac{1}{4}$ sec. cor. bet. secs. 2 and 35, a redwood post, marked and witnessed as described by the Surveyor General.
 The course of this $\frac{1}{2}$ mile is west 40.01 chs.
 Thence west from $\frac{1}{4}$ sec. cor.

40.02 Fall $\frac{1}{2}$ lk. S. of cor. of secs. 2, 3, 34 and 35, a sandstone, marked and witnessed as described by the Surveyor General.
 The course of this $\frac{1}{2}$ mile is N. 89° 59' W. 40.02 chs.
 Land, slightly rolling.
 Soil, coarse gravel and rock, 3rd rate.
 No timber.
 Undergrowth, mesquite and catclaw.

West bet. secs. 3 and 34.
 Over level land through dense brush.

40.30 Fall $\frac{1}{2}$ lk. N. of the $\frac{1}{4}$ sec. cor. bet. secs. 3 and 34, a redwood post, marked and witnessed as described by the Surveyor General.
 The course of this $\frac{1}{2}$ mile is S. 89° 59' W.
 Thence west from $\frac{1}{4}$ sec. cor.

40.01 The cor. of secs. 3, 4, 33 and 34, a sandstone, marked and witnessed as described by the Surveyor General.
 The course of this $\frac{1}{2}$ mile is west, 40.01 chs.
 Land level.
 Soil, coarse gravel mixed with rock, 3rd rate.
 No timber.
 Undergrowth, mesquite and catclaw.

October 20: At this cor. I set off 10° 08' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 31° 33' N.

West bet. secs. 4 and 33.
 Over slightly rolling land, through dense brush.

40.48 Fall 4 lks. N. of $\frac{1}{4}$ sec. cor. bet. secs. 4 and 33, a redwood post, marked and witnessed as described by the Surveyor General.
 The course of this $\frac{1}{2}$ mile is S. 89° 57' W., 40.48 chs.
 Thence I run west from $\frac{1}{4}$ sec. cor.

40.02 Fall 4 lks. N. of cor. of Secs. 4, 5, 32 and 33, a sandstone, marked and witnessed as described by the Surveyor General.
 The course of this $\frac{1}{2}$ mile is S. 89° 57' W. 40.02 chs.
 Land, slightly rolling.
 Soil, sandy loam over 2 ft. deep; dry; medium texture; 1st rate.
 No timber. Undergrowth, mesquite, catclaw and greasewood

Chains West bet. secs. 5 and 32.

Over slightly rolling land, through scattering brush.
40.01 Fall 9 lks. S. of the $\frac{1}{4}$ sec. cor. bet. secs. 5 and 32, a redwood post, marked and witnessed as described by the Surveyor General.

The course of this $\frac{1}{2}$ mile is N. 89° 52' W., 40.01 chs.
Thence I run west from $\frac{1}{4}$ sec. cor.

40.04 Fall 6 lks. S. of cor. of secs. 5, 6, 31 and 32, a redwood post, marked and witnessed as described by the Surveyor General.

The course of this $\frac{1}{2}$ mile is N. 89° 55' W., 40.04 chs.
Land, slightly rolling.

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

No timber.

Undergrowth, mesquite and catclaw.

West bet. secs. 6 and 31.

Over slightly rolling land.

40.00 Fall 2 lks. N. of the $\frac{1}{4}$ sec. cor. bet. secs. 6 and 31, a redwood post, marked and witnessed as described by the Surveyor General.

The course of this $\frac{1}{2}$ mile is S. 89° 58' W.

Thence I run

West from $\frac{1}{4}$ sec. cor.

38.80 Fall 1 lk. N. of the cor. of Tps. 21 and 22 S., Rgs. 20 and 21 E., a sandstone, marked and witnessed as described by the Surveyor General.

The course of this $\frac{1}{2}$ mile is S. 89° 59' W.

Land slightly rolling.

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

No timber.

No undergrowth.

October 20, 1911.

Alfred N. Shaw

U. S. Transitman

FINAL OATHS OF ~~DEPUTY SURVEYOR~~ AND HIS ASSISTANTS.

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LIST OF NAMES.

BOOK 2338

A list of the names of the individuals employed by

John P. Hesse

Transitman
~~Deputy Surveyor~~, 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 subdivision lines of P225 R. 21 E.*

showing the respective capacities in which they acted:

A. C. Lyon *R. L. Bates*, Chainman.

J. H. Bates *H. R. Harvey*, Chainman.

J. L. Gardner *C. Wolfe*, Moundman.

Moundman.

E. Barnes, Axman.

Axman.

W. L. Ray *A. W. Hendrix*, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted

John P. Hesse

Transitman
~~Deputy Surveyor~~, United States ~~Deputy Surveyor~~, in surveying all

those parts or portions of the *subdivision lines of P225 R. 21 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

A. C. Lyon

R. L. Bates, Chainman.

Chainman.

J. H. Bates

H. R. Harvey, Chainman.

Chainman.

J. L. Gardner, Moundman.

Moundman.

C. Wolfe, Moundman.

Moundman.

E. Barnes, Axman.

Axman.

Axman.

W. L. Ray

A. W. Hendrix, Flagman.

Flagman.

Subscribed and sworn to before me this *20th*

day of *October*, 1911

John P. Hesse

U. S. Transitman




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BOOK 2338

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

Transitman
I, *John F. Heese and Alfred N. Oliver*, United States Deputy Surveyor, do solemnly swear that, in pursuance of ~~a contract~~ ^{instructions} received from *Frank D. Dryalls* United States Surveyor General for *Arizona*, bearing date of the *25th* day of *August*, 1910, we have well, faithfully, and truly, in ~~our~~ ^{our} own proper persons 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 Pp. 22 5 R. 21 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 ~~me~~ ^{us}, and under ~~my~~ ^{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. Heese
Alfred N. Oliver
United States Deputy Surveyor.
Transitman

Subscribed by said *John F. Heese*, and sworn to before me }
this *18* day of *July*, 1912 }
by *Alfred N. Oliver, Aug. 2, 1912* *Frank D. Dryalls*
 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 subdivisions R. 21 E. Gila and Salt River Meridian Arizona*

executed by *John F. Heese and Alfred N. Oliver*
under his ~~contract~~ ^{order} No. *5*, dated *August 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 D. Dryalls
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.