

Accepted. Dept. Letter E. Sep. 21/1910

Book K.

2190

BOOK 2190

FIELD NOTES

OF THE SURVEY OF THE

2190

South Boundary

2190

and

Retracement of the North, East and West

Boundaries of

Tp. 22 N. R. 9 E.

2190

Of the Gila and Salt River Base and Meridian,

Arizona

AS SURVEYED BY

Philip Contzen, United States Deputy Surveyor,

Under his Contract No. 144, dated April 11, 1907.

Survey commenced November 20th, 1909.

Survey completed ~~December 23d,~~ *November 28th*, 1909.

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2190

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Jr

BOOK 2190

NAMES AND DUTIES OF ASSISTANTS.

See Book L. - Duties of Jp. vs D. 1998

BOOK 2190

INDEX DIAGRAM.

Township 20 D, Range 9 E

9	6	5	4	3	2	1	1
9	7	8	9	10	11	12	2
10	18	17	16	15	14	13	3
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	15	15	14	14	13	13	

Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

See Book L - Sub. by Jp 222 - reg 9 E.

WE, _____ and _____

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 _____

_____, Chainman.

_____, Chainman.

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



WE, _____ and _____

do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of _____

_____, Moundman.

_____, Moundman.

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



WE, _____ and _____

do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of _____

_____, Axman.

_____, Axman.

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



I, _____, 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 _____

_____, Flagman.

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



East Boundary of Tps. 22 South, R. 9 East

chains

Survey commenced Nov. 20, 1909, and executed with a Youngs & Sons transit, with Smith's solar attachment, No. 7934. 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 latitude and declination arcs. The instrument was examined, tested on the true meridian at Phoenix, found correct, and was approved by the surveyor general for Arizona, Nov. 1, 1909. I examine the adjustments of the transit, and correct the level and collimation errors; then, to test the solar apparatus, by comparing its indications, resulting from solar observations made during a.m. and p.m. hours, with a meridian determined by observations on Polaris, I proceed as follows:-

At the cor. of Tps. 21 and 22 S., Rs. 9 and 10 East, in latitude 31° 33' N., longitude 111° 22½' W., I set off 31° 33' N., on the lat. arc; 19° 41' S. on the decl. arc, and at 3 h 30 m, p.m., l.m.t., determine with the solar a meridian, and mark a point thereof on a stone firmly set in the ground, 5 chs. N. of cor. At 3h. 31½m^{p.m.} l.m.t., by my watch, which is correct, 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.

November 21, 1909, At 7h 45 m.^{a.m.} l.m.t., I lay off the azimuth of Polaris 1° 23' to the west, and mark the meridian thus determined, by cutting a small groove in the stone set last night, on which the meridian coincides with the meridian determined by the solar. At 8h.0m^{a.m.} I set off 31° 33' N. on the lat. arc; 19° 51' S. on the decl. arc, and mark a point in the meridian determined with the solar, by the cross on the stone already set 5 chs. N. of my station, this mark falls 0.5" E. of the meridian, established by Polaris observation. The solar apparatus, by p.m. and a.m. observations, defines positions for meridians, respectively about 00" W. and 26" E. of the meridian established by Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory. The magnetic bearing of the true meridian at 8h 30m a.m., is N. 14° 30' W., the angle thus determined gives the mag. decl. 14° 30' E.

From the Tp. cor. already described, owing to irregularities etc., in the courses and distances of W. bdy. I resurvey same by running S. 0° 42' W., bet. secs. 1 and 6.

- Ascending.
- 6.00 Gulch, 10 lks. wide, course NE.
- 12.00 Gulch, 10 lks. wide, course NE.
- 15.50 Gulch, 20 lks. wide, course NE., ascend steep bluffs 500 ft. high.
- 25.00 Shaft, brs. 8.00 chs. W.
- 28.50 Top of ascent, brs. NE. and SW., descend.
- 32.00 Gulch, 10 lks. wide, course SW., ascend.
- 35.00 Top of ridge, extends E. and W,

chains	
36.46	Remains of old 1/4 sec. cor. a sandstone, 6 X 4 X 6 ins. firmly set in the ground, I rebuild this cor. by marking 1/4 on W. face, and raise a mound of stone 3 ft. base, 1 1/2 ft. high, E. of cor. Pits impracticable. Thence I run S. 0° 42' W., from 1/4 sec. cor.
1.15	Gulch, 10 lks. wide, course NE., ascend.
2.75	Top of ascent, extends E. and W., descend.
4.75	Gulch, 5 lks. wide, course NE., ascend.
5.00	Gulch, 10 lks. wide, course NE., ascend.
15.00	Top of ascent, extends E. and W.
16.00	Descend.
28.00	Gulch, 10 lks. wide, course SW.
29.70	Gulch, 10 lks. wide course SE., ascend.
39.35	Set a limestone, 18 X 10 X 8 ins., 12 ins. in the ground, for cor. of secs. 6 & 7, only marked with 1 notch on the N., and 5 notches on the S. edges, and raise a mound of stone, 4 ft. base, 2 ft. high, E. of cor. from which An oak, 6 ins. diam., brs. S. 51 1/4° E., 100 lks. dist., marked T 22 S R 10 E S 7 B T No other trees available. Land, mountainous. Soil, gravelly; 3rd and 4th rate. Timber, oak. Mountainous land, exceptionally difficult to survey, 75.81 chs.

2.90	South, on west bdy. of sec. 7 descending.
5.30	Gulch, 10 lks. wide, course E.
14.50	Wash, 20 lks. wide, course NE., ascend.
32.00	Gulch, 10 lks. wide, course NE., ascend. Top of high ridge, 1000 feet., extends NE. and SW., descend.
42.18	The 1/4 sec. cor., which is a limestone, 18 X 6 X 6 ins. with mound of stone scattered, I rebuild cor. by marking 1/4 on W. face, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, E. of cor. Pits impracticable Thence, from 1/4 sec. cor. I run S. 2° 50' E.
6.50	Gulch, 20 lks. wide, course S.E., ascend.
9.50	Top of ascent, extends E. and W., descend.
11.00	Gulch, 10 lks. wide, course SE.
12.00	Gulch, 10 lks. wide, course NE.
13.00	Boulder on line.
20.50	Wash, 10 lks. wide, course SE.
24.90	Wash, 10 lks. wide, course E.
36/40	Wash, 10 lks. wide, course SE., ascend.
38.05	Wash, 40 lks. wide, course SE.
40.13	The cor. of secs. 7, 12, 13 & 16 which I find in a delapidated condition, with markings obliterated. I reset the sandstone, 24 X 8 X 6 ins., 18 ins. in the ground, for secs. 7 & 12, marked with 2 notches on N., and 4 notches on S. edges, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high. E. of cor. Pits impracticable. An oak, 18 ins. diam., brs. N. 10° E., 1.44 chs. dist., marked T 22 S R 10 E S 7 B T, Amesquite, 15 ins. diam., brs. S. 41 1/4° W., 2.31 chs. dist. marked T 22 S R 9 E S 12 B T. Land, mountainous. Soil, 4th rate. Timber, dense oak; undergrowth, mesquite, Mountainous land, exceptionally difficult to survey, 82.31 chs.

Resurvey of the East Boundary Tp. 22 S., R. 9 E.

chains Old 1/4 sec. cor. brs. S. 0° 15' E., therefore I run S. 0° 15' E., through dense oak and mesquite undergrowth. Wash, 10 lks. wide, course SE., ascend.

9/10 Gulch, 10 lks. wide, course SE.

14.80 Top of rocky hill.

20.00 Gulch, 10 lks. wide, course SE., ascend.

24.90 Wash, 25 lks. wide, course SE.

27.60 Wash, 30 lks. wide, course SE., ascend.

31.20 Old 1/4 sec. cor. in delapidated condition, which I rebuild by setting a sandstone, 18 X 10 X 6 ins., 12 ins. in the ground, for 1/4 sec. cor. marked 1/4 on W. face, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, E. of cor. Pits impracticable.

40.37 An oak, 10 ins. diam., brs. S. 35 1/2° E., 85 lks. dist., marked 1/4 S 18 B T.

Old cor. of secs. 13, 18, 19 and 24 brs. S. 0° 15' E., Therefore I run S. 0° 15' E., from 1/4 sec. cor.

2.10 Gulch, 10 lks. wide, course NW., ascend.

5.25 Top of ascent, extends W. & E., descend.

11.00 Foot of descent; ascend.

12.50 Top of ascent, extends E. & W., descend.

14.85 Gulch, 10 lks. wide, course NW., ascend.

17.25 Top of ascent, extends E. & W., descend.

19.20 Gulch, 10 lks. wide, course NE., ascend.

21.00 Top of ascent, extends E. & W.

22.50 Wash, 10 lks. wide, course NE., ascend.

34.50 Top of ascent, extends E. and W., descend.

36.60 Gulch, 10 lks. wide, course SE., ascend.

38.85 Gulch, 10 lks. wide, course NE.

41.40 The cor. of secs. 13, 18, 19 and 24, in delapidated condition, which I rebuild by setting a sandstone, 18 X 6 X 6 ins., 12 ins. in the ground, marked with 3 notches on N. and S. edges, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, E. of cor., from which

An oak, 10 ins. diam., brs. S. 58 1/2° E., 82 lks. dist., marked T 22 S R 10 E S 19 B T

An oak, 8 ins. diam., brs. N. 60 1/2° E., 132 lks. dist., marked T 22 S R 10 E S 18 B T.

No other trees available.

Land, mountainous.

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

Timber, oak; undergrowth, mesquite.

Mountainous land, exceptionally difficult to survey, 81.77 chs. Nov. 21, 1909

Nov. 22, 1909. At 8h 15' a.m., l.m.t., I set off 20° 31' S., on the decl. arc, and 31° 30' N., on the lat. arc., and determine a true meridian with the solar at the cor. of secs. 13, 18, 19 and 24.

Thence I run, on W. bdy of sec. 19 S. 0° 10' E., to old 1/4 sec. cor. Ascending over mountainous land.

4.00 Top of ascent, extends E. and W.

8.50 Gulch, 10 lks. wide, course E. ascend.

15.00 Top of ascent, extends E. and W., descend.

19.00 Gulch, 5 lks. wide, course SE., ascend.

24.00 Top of ascent; extends E. and W., descend.

25.55 Gulch, 20 lks. wide, course SW., ascend.

27.00 Top of ascent, extends E. and W., descend.

29.70 Wash, 60 lks. wide, course SE.

32.25 Wash, 10 lks. wide, course SE., ascend.

41.24 Find old 1/4 sec. cor., which is in delapidated condition; I rebuild same by setting a sandstone, 15 X 15 X 8 ins., 10 ins. in the ground, marked 1/4 S on W., and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, E. of cor.

An oak, 8 ins. diam., brs. N. 50° E., 34 lks. dist., marked 1/4 S T 22 S R 10 E S 19 B T.

No other trees available.

Resurvey of the East Boundary of Tp. 22 S., R. 9 E.

chains

5.00
37.60
40.73

From this point the cor. of secs. 19, 24, 25 and 30
brs. S. 0° 10' E., therefore I run
S. 0° 10' E., from the $\frac{1}{4}$ sec. cor.
Top of ascent, extends E. and W., descend.
Gulch, 10 lks. wide, course SE., ascend.
The cor. of secs. 19, 24, 25 and 30, which is a
porphyry stone, 18 X 8 X 6 ins., with markings
obliterated. I rebuild this corner by resetting stone
12 ins. in the ground, marked with 4 notches on the N.,
and 2 notches on the S. edges, and build a mound of
stone, 2 ft. base, 1½ ft. high, W. of cor.
An oak, 12 ins. diam., brs. S. 49½° E., 160 lks.
dist., marked T 22 S R 10 E S 30 B T.
An oak, 10 ins. diam., brs. N. 89½° E., 200 lks. dist.,
marked T 22 S R 10 E S 19 B T.
A mesquite, 8 ins. diam., brs. S. 24½° W., 148 lks.
dist., marked T 22 S R 9 E S 25 B T.
An oak, 8 ins. diam., brs. N. 23½° W., 89 lks. dist.,
marked T 22 S R 9 E S 24 B T.
Land, mountainous.
Soil, gravelly; 3rd and 2nd rate.
Timber, oak and mesquite; undergrowth, mesquite.
Mountainous land, exceptionally difficult to survey,
81.97 chs.

4.90
14.00
15.00
17.00
19.70
28.00
32.00
35.00
41.15

From the cor. of secs. 19, 24, 25 and 30, the $\frac{1}{4}$ sec. cor.
brs. S. 0° 43' E., therefore I run,
S. 1° 43' E., bet. secs. 25 and 30.
Over mountainous land, descending.
Gulch, 10 lks. wide, course SW., ascend.
Top of ascent, extends E. and W., descend.
Foot of descent; ascend.
Top of ascent; extends E. and W., descend.
Gulch, 30 lks. wide, course SE., ascend.
Top of ascent, extends E. and W., descend.
Foot of descent; ascend.
Top of ridge, extends NW. and SE.
Point for $\frac{1}{4}$ sec. cor., falls on porphyry stone in place
marked with an x for exact $\frac{1}{4}$ sec. cor. point, with $\frac{1}{4}$ W.
of x; stone is 18 X 12 X 5 ins.; I rebuild the cor.
by building a mound of stone, 2 ft. base, 1½ ft. high,
W. of stone.

3.50
8.50
18.30
24.50
27.40
31.75
34.95
39.00

From this $\frac{1}{4}$ sec. cor. point the cor. of secs. 25, 30, 31
and 36 brs. S. 0° 43' E., therefore I run,
S. 1° 43' E., from the $\frac{1}{4}$ sec. cor. point.
Gulch, 60 lks. wide, course SE., ascend.
East slope of ridge.
Gulch, 10 lks. wide, course NE., ascend.
Top of ridge, extends E. and W., descend.
Gulch, 10 lks. wide, course SE., ascend.
Top of ridge, extends NW. and SE.
Gulch, 10 lks. wide, course SE., ascend.
The cor. of secs. 25, 30, 31 and 36, which is in delapidated
condition. I rebuild same by setting a porphyry stone,
18, x 10 x 6 ins., 12 ins. in the ground, marked with
1 groove on S. and 4 grooves on N. edge, and raise
a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
pits impracticable.
Land, mountainous.
Soil, gravelly, 3rd rate.
Timber, oak.
Mountainous land, exceptionally difficult to survey,
80.15 chs.
At 11 h. 46 m. a.m., l.m.t., I set off 20° 7' S. on the
decl. arc, and observe the sun on the meridian; the
resulting lat. is 31° 29' N.

Resurvey of the East Boundary of Tp. 22 S., R. 9 E.

chains	From the cor. of secs. 25, 30, 31 and 36, the $\frac{1}{4}$ sec. cor. brs, S. 0° 58' E., therefore I run, S. 0° 58' E., bet. secs. 31 and 36, over mountainous land.
7.50	Draw, course SW. ascend.
17.00	High ridge, extends N. and S. along on same.
30.00	Spur, extends SW. descend.
39.80	The old $\frac{1}{4}$ sec. cor., which is a granite stone, 6 X 6 X 4 ins. above ground, and mound of stone on W., From this $\frac{1}{4}$ sec. cor. point, the cor. of Tps. 22 and 23 S., Rs. 9 and 10 E., brs. S. 0° 58' E., therefore I run, S. 0° 58' E., bet. secs. 31 and 36. ascend.
2.50	Spur, extends SW.
5.00	Spur, extends SW. descend.
40.09	The cor. of Tps. 22 and 23 S., Rs. 9 and 10 E., which is as described by the Surveyor General. Land, mountainous. Soil, 2nd and 3rd rate. Timber, oak. Mountainous land, exceptionally difficult to survey, 79.89 chs.

Nov. 22, 1909.

Philip Conzen
U. S. Deputy Surveyor.

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Resurvey of North Bdy. of Tp. 22 S., Rg. 9 East.

chains.

November 23; At 8h.00m., a.m., l.m.t., I set off $20^{\circ}15\frac{1}{2}'$ S. on the decl. arc; $31^{\circ}33'N.$ on the lat. arc and determine a meridian with the solar at the cor. of Tps. 21 and 22 S., Rgs. 9 and 10 E.

Old $\frac{1}{4}$ sec. cor. bears S $89^{\circ}45'W.$

Therefore I run

S $89^{\circ}45'W.$ bet secs. 1 and 36.

Ascending over loose rocks thru dense underbrush.

1.21
9.10
16.60
22.70
32.60
43.20
47.00

Wash, 10 lks. wide, course N. Over loose rocks.

Wash, 10 lks. wide, course N. Asc. over loose rocks.

Wash, 10 lks. wide, course N. Asc. over loose rocks.

Top of high ridge, bears N. and S. Desc. steeply

Wash, 10 lks. wide, course SW. Desc. over loose rocks.

Wash, 50 lks. wide, course N. Asc. over loose rocks.

Old $\frac{1}{4}$ sec. cor. nearly obliterated so I set a granite stone, $20 \times 18 \times 10$ ins., 15 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; from which a

A mesquite 10 ins. diam., bears N 83 E. 84 lks. dist.; marked $\frac{1}{4}$ S 36 BT.

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

Old sec. cor bears West.

Therefore I run

West bet. secs. 1 and 36.

48.50
74.80
80.30
87.26

Wash, 20 lks. wide, course N. Asc. over loose rocks.

Top of mountain. Desc. steeply.

Alamito Canyon, co. N. stone corral N. 20 chs, ascend.

Old sec. cor. which is nearly obliterated so I set a porphyry stone $18 \times 10 \times 8$ ins., 12 ins. in the ground, for cor. of secs. 35 and 36, marked with 1 notch on E. and 5 notches on W. edge; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

Land, mountainous.

Soil, rocky; 4th rate.

Timber, Ocatilla.

Underbrush, tesoot.

Mountainous land covered with loose rocks and dense underbrush, exceptionally difficult to survey, 87.26 chs.

old $\frac{1}{4}$ sec. cor bears N $88^{\circ}W.$

Therefore I run

N $88^{\circ}W.$ bet. secs. 2 and 35.

Descending over loose rocks.

10.00
22.00
40.10

Foot of descent and Asc.

Top of spur, bears SW. Desc.

Old $\frac{1}{4}$ sec. cor. which is nearly obliterated so I set a granite stone, $18 \times 10 \times 8$ ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

old sec. cor. bears West.

Therefore I run

West along S. bdy. of sec. 35.

47.65
50.15
59.32
69.25
77.00
80.15

Stone, wall, bears NW. and SE.

Wash, 150 lks. wide, course NW.

Stone wall, bears NW. and SE. Old ruins bears N. 3 chs.

Wash, 80 lks. wide, course NW.

Road, bears NW. and SE.

Old sec. cor., which is nearly obliterated so I set a set a granite stone, $18 \times 8 \times 8$ ins., 12 ins. in the ground, for cor. of secs. 34 and 35, marked with 2 notches on E. and 4 notches on W. edge; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

Land, mountainous.

Soil, rocky; 3rd rate.

No timber. or underbrush.

Mountainous land, 80.15 chs.

At this cor I set off $20^{\circ}18\frac{1}{2}'S.$ on the decl. arc and observe the sun on the meridian at noon. the resulting lat. is $31^{\circ}33'N.$

Resurvey of N.Bdy.of Tp.22 S.,Rg.9 East.

chains.

old $\frac{1}{4}$ sec.cor bears S 89° 40' W.
 Therefore I run
 S 89° 40' W. along S. bdy.of sec.34.
 Over mountainous land covered with loose rocks.
 6.00 Ramon Quijadas house bears N. 6chs.
 37.50 Wash,10 lks.wide,course NE. Asc.over loose rocks.
 40.00 Old $\frac{1}{4}$ sec.cor.which is nearly obliterated,so I set a
 granite stone,18X10X8ins.,12ins.in the ground,for $\frac{1}{4}$ sec.
 cor.^{of sec. 34}marked $\frac{1}{4}$ on N.face; and raise a mound of stone,2ft.
 base, $1\frac{1}{2}$ ft.high,N. of cor. Pits impracticable.
 Old sec.cor.bears S 89° 40' W.
 Therefore I run
 S 89° 40' W. along S. bdy.of sec.34.
 76.00 Top of N. Slope of ridge Desc.over loose rocks.
 80.64 Old sec.cor.which is nearly obliterated so I set a
 granite stone,18X6X6ins.,12ins.in the ground,for cor.
 of secs.33 and 34,marked with 3 notches on E.and W.edges
 and raise a mound of stone,2ft.base, $1\frac{1}{2}$ ft.high,N. of co
 cor. Pits impracticable.
 Land,mountainous.
 Soil,rocky;
 No timber.
 Underbrush,tesota.
 Mountainous land covered with loose rocks 80.64 chs.
 November 23; 1909.

November 24; At 8h.00m.,a.m.,l.m.t.,I set off 20° 28'
 S. on the decl.arc; 31° 33' N. on the lat.arc and deter-
 mine a meridian with the solar at the cor. of secs.33
 and 34.
 Old $\frac{1}{4}$ sec.cor.bears S 89° 20' W.
 Therefore I run
 S 89° 20' W. along S. bdy.of sec.33.
 Over mountainous land covered with loose rocks.
 1.00 Wash,100 lks.wide,course N. Asc.over loose rocks.
 16.50 Top of ridge,bears N.and S. Desc.over loose rocks.
 33.60 Wash,20 lks.wide,course N. Asc.over loose rocks.
 36.30 Top of ridge,bears NW.and SE. Desc.over loose rocks.
 40.00 Wash,40 lks.wide,course NW. Asc.over loose rocks.
 40.50 Old $\frac{1}{4}$ sec.cor.^{of sec. 33} which is nearly obliterated so I set a
 sandstone,18X10X8ins.,12ins.in the ground,for $\frac{1}{4}$ sec.cor.
 marked $\frac{1}{4}$ on N.face; and raise a mound of stone,2ft.base,
 $1\frac{1}{2}$ ft.high,N. of cor. Pits impracticable.
 Old sec.cor.bears S 89° 50' W.
 Therefore I run
 S 89° 50' W. along S. bdy.of sec.33.
 43.60 Top of ridge,bears NW.and SE. Desc.over loose rocks.
 62.50 Wash,25 lks.wide,course NW. Asc.over loose rocks.
 80.98 The old sec.cor.,which is nearly obliterated,so I set a
 porphyry stone,18X8X8ins.,12ins.in the ground,for cor.
 secs.32 and 33,marked with 4 notches on E.and 2 notches
 on W. edge; from which
 A mesquite 8ins.diam.,bears N 5 45' W. 195 lks.dist.;
 marked T 21 S R 9 E S 32 BT
 A mesquite 8ins.diam.,bears N 80 $\frac{1}{4}$ E. 95 lks.dist.;
 marked T 21 N R 9 E S 33 BT
 Land,mountainous.
 Soil,rocky; 3th rate.
 timber,mesquite.
 Underbrush,mesquite and tesota.
 Mountainous land covered with loose rocks and dense
 underbrush,exceptionally difficult to survey,80.98 chs.

Old $\frac{1}{4}$ sec.cor.bears S 89° 40' W.
 Therefore I run
 S 89° 40' W. along S. bdy.of sec.32.
 Over mountainous land covered with loose rocks thru
 dense underbrush.
 9.46 Wash,20 lks.wide,course NW. Asc.over loose rocks.

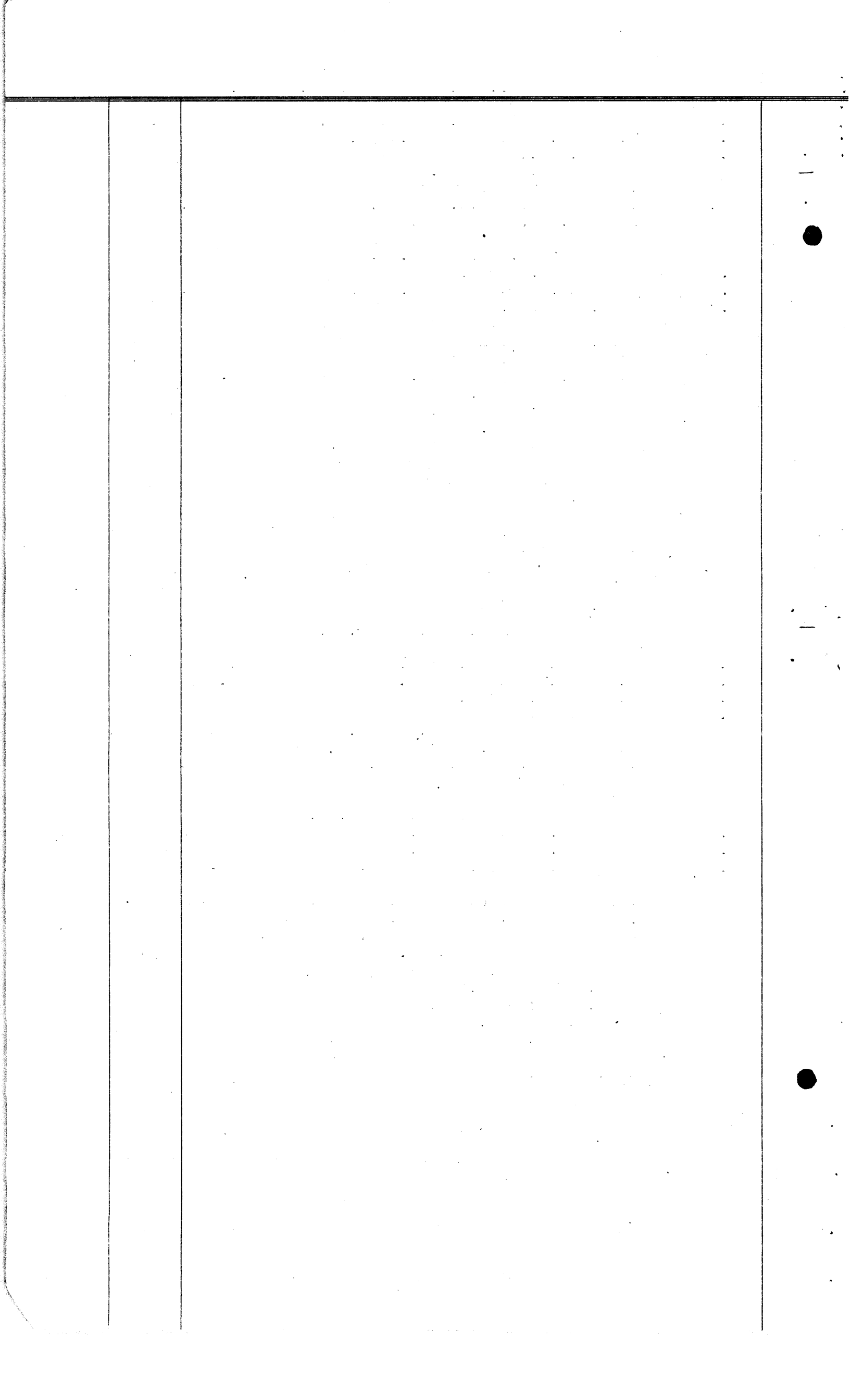
of Sec. 33.

Resurvey of N. Bdy. of Tp. 22 S., Rg. 9 East.

chains.

- 22.86 Top of ridge, bears NW. and SE. Desc. over loose rocks.
 - 34.46 Wash, 40 lks. wide, course NW. Asc. over loose rocks.
 - 40.36 Old $\frac{1}{4}$ sec. cor., which is nearly obliterated so I set a granite stone, 18X8X6 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
Old sec. cor. bears West.
Therefore I run
West along S. bdy. of sec. 32.
 - 50.35 Road, bears NW. and SE.
 - 74.35 Wash, 20 lks. wide, course NW. Asc. over loose rocks.
 - 80.20 Old cor. of secs. 31 and 32 which is nearly obliterated so I set a granite stone, 18X8X8 ins., 12 ins. in the ground, for cor. of secs. 31 and 32, marked with 5 notches on E. and 1 notch on W. edge; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
Land, mountainous.
Soil, rocky; 3rd rate.
Timber, mesquite.
Underbrush, mesquite and tesota.
Mountainous land covered with loose rocks and dense underbrush, and exceptionally difficult to survey,
80.20 chs.
At this cor. I set off 20°32'S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 31°33'N.
-
- Old $\frac{1}{4}$ sec. cor. bears
Therefore I run
West along S. bdy. of sec. 31.
Ascending over loose rocks thru dense underbrush.
 - 13.20 Top of spur, bears NW. Desc. over loose rocks.
 - 25.90 Wash, 10 lks. wide, course NW. Over loose rocks.
 - 27.00 Road, bears NE. and SW.
 - 40.05 Old $\frac{1}{4}$ sec. cor. which is nearly obliterated so I set a granite stone, 18X10X8 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
Old Tp. cor. bears West
Therefore I run
West along S. bdy. of sec. 31.
 - 45.40 Wash 10 lks. wide, course N.
 - 52.30 Wash, 10 lks. wide, course N.
 - 80.09 The old cor. of Tps. 21 and 22 S., Rgs. 8 and 9 E., which is nearly obliterated so I set a granite stone, 20X8X8 ins., 15 ins. in the ground, for cor. of Tps. 21 and 22 S., Rs 8 and 9 E., marked 21 S on NE., 9 E. on SE., 22 S on SW and 8 E. on NW. face, with 6 notches on N. S, E, and W. edges; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, S. of cor. Pits impracticable.
Land, mountainous.
Soil, rocky; 3rd rate.
Timber, mesquite.
Underbrush, mesquite and tesota.
Mountainous land or land covered with dense underbrush, 80.09 chs.

November 24, 1909.



Resurvey of W. Bdy. of Td. 22 S., Rg. 9 East.

chains.

November 25; At 8h.00m., a.m., l.m.t., I set off $21^{\circ} 33'$ N. on the lat. arc; $20^{\circ} 39\frac{1}{2}'$ S. on the decl. arc and determine a meridian with the solar at the cor. of Tp. 21 and 22 S., Rgs. 8 and 9 E.,

From here old $\frac{1}{4}$ sec. cor., bears S $1^{\circ} 26' W.$

Therefore I run

S $1^{\circ} 26' W.$ on true line bet. secs. 1 and 6.

Over mountainous land thru dense underbrush.

- 1.80 Wash, 10 lks. wide, course NW.
 3.00 Road, bears NW. and SE.
 17.30 Road, bears NW. and SE.
 29.50 Road, bears E. and W.
 35.00 Fermin Lopez Ranch bears E. 15 chs. dist.;
 36.50 Wash, 125 lks. wide, course NW.
 39.03 Old $\frac{1}{4}$ sec. cor., nearly obliterated. I set a granite stone, 18X10X8 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor. of sec. 1, marked $\frac{1}{4}$ on W. face; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 From here old sec. cor., bears S $1^{\circ} 15' E.$
 Therefore I run
 S $1^{\circ} 15' E.$ on true line bet. secs. 1 and 6.
 39.80 Stone wall, bears NW. and SE.
 43.00 Adolfo Mirandans Ranch bears E. 15 chs.
 54.50 Road, bears NW. and SE.
 70.00 Top of ridge, bears NE. and SW. Desc. steeply.
 78.00 Wash, 15 lks. wide, course W.
 79.03 Old cor. of secs. 1, 6, 7 and 12, nearly obliterated, which I destroy and in the same place set a granite stone, 18X8X6 ins., 12 ins. in the ground, for cor. of secs. 1 and 12 marked with 5 notches on S. and 1 notch on N. edge; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 Land, mountainous.
 Soil, rocky; 3rd rate.
 No timber.
 Underbrush, greasewood and mesquite.
 Mountainous land covered with loose rocks and dense underbrush, except onally difficult to survey, 79.03 chs.

Thence I run

South bet. secs. 7 and 12.

Over rolling land thru dense underbrush.

- 6.00 Road, bears SW. and NE.
 22.00 Wash, 10 lks. wide, course SW.
 25.75 Wash, 20 lks. wide, course SW.
 40.00 Set a granite stone, 16X8X6 ins., 9 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which
 A mesquite 5 ins. diam., bears W $58\frac{1}{2}'$ W. 123 lks. dist.;
 marked $\frac{1}{4}$ S 12 BT.
 and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 Thence I run South bet. secs. 7 and 12.
 57.00 Top of ridge, bears E. and W. desc. steeply.
 68.00 Gulch, 10 lks. wide, course SW.
 79.00 Set a sandstone, 18X8X8 ins., 12 ins. in the ground, for witness cor. to cor. of secs. 12 and 13, marked WC on NE. face; with 2 notches on N. and 4 notches on S. edge; from which
 A tesota 5 ins. diam., bears N $79\frac{1}{4}'$ W. 222 lks. dist.;
 marked T 22 S R 8 E S 12 BT
 and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 80.00 Old cor. falls in a wash, 150 lks. wide, course SW.
 Land, rolling
 Soil, rocky; 3rd rate.
 Timber mesquite and tesota.
 Underbrush, greasewood, tesota and mesquite.
 Rolling land covered with loose rock and dense underbrush, exceptionally difficult to survey, 80.00 chs.

Resurvey of W. Bdy. of Tp. 22 S., R. 9 East.

chains.

At this cor. I set off 20°44' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 31°31½' N.

From true point for cor old ¼ sec. cor. ^{of secs 12 & 13.} bears S 4°15' W. Therefore I run

S 4°15' W. on true line bet. secs. 13 and 18.

Over rolling land covered with loose rocks. thru dense underbrush.

- 0.90 Road, bears E. and W.
- 1.12 Fence, bears E. and W.
- 5.55 Fence bears E. and W.
- 6.50 Ascend steep slope. over loose rocks.
- 13.00 Top of ridge, bears E. and W. Desc. steeply.
- 18.00 Wash, 10 lks. wide, course W. Asc. steeply.
- 22.50 Top of ridge, bears E. and W. Desc. steeply.
- 40.38 Old ¼ sec. cor. nearly obliterated I set a porphyry 18X8X6 ins., 12 ins. in the ground, for ¼ sec. cor. ^{of sec. 13} marked ¼ on W. face; from which

A mesquite 6 ins. diam., bears N 54° W. 24 lks. dist.; marked ¼ S 13 BT

A mesquite 6 ins. diam., bears S 61½° W. 28 lks. dist.; marked ¼ S 13 BT

From here old sec. cor. bears S°5 40' E.

Therefore I run

S 5°40' E. bet. secs. 13 and 18.

- 42.70 Draw 2 chs wide, course SW. Asc. steeply.

- 54.00 Top of ridge, bears E. and W. Desc. steeply.

- 78.88 The old cor. of secs. 13, 18, 19 & 24, nearly obliterated, so I set a granite stone, 18X8X8 ins., 12 ins. in the ground, for cor. of secs. 13 and 24, marked with 3 notches on S. and N. edges; from which

A mesquite 18 ins. diam., bears S 53° 45' W. 184 lks. dist. marked T 22 S R 8 E S 24 BT

A mesquite 6 ins. diam., bears N 78½° W. 355 lks. dist.; marked T 22 S R 8 E S 13 BT

Land, mountainous.

Soil, rocky; 3rd rate.

Timber, mesquite.

Underbrush, mesquite and tesota.

Mountainous land covered with loose rocks and dense underbrush, exceptionally difficult to survey, 78.88 chs.

November 25, 1909.

November 26; At 8h. 00m., a.m., l.n.t., I set off 20°51½' S. on the decl. arc; 31°30½' N. on the lat. arc and determine a meridian with the solar at the cor. of secs. 13 and 24.

From here the old ¼ sec. cor. bears S 6°10' W.

Therefore I run

S 6°10' W. bet. secs. 19 and 24.

Over mountainous land covered with loose rocks thru dense underbrush.

- 3.90 Wash, 60 lks. wide, course W. Asc. steeply.
- 12.70 Top of ridge, bears E. and W. Desc. steeply.

- 17.00 Wash, 20 lks. wide, course W. Asc. steeply.

- 21.00 Top of ridge, bears E. and W. Desc. steeply.

- 25.50 Wash, 20 lks. wide, course W. Over loose rocks.

- 41.16 Old ¼ sec. cor. nearly obliterated so I set a quartzite stone, 18X6X5 ins., 12 ins. in the ground, for ¼ sec. cor. ^{of sec. 24} marked ¼ on W. face; and raise a mound of stone, 2ft. base, 1½ ft. high, W. of cor. Pits impracticable.

From here old sec. cor. bears S°6' E'

Therefore I run

S 6°00' E. bet. secs. 19 and 24.

- 57.55 Wash, 50 lks. wide, course SW. Asc. steeply.

- 68.00 Top of ridge, bears NE. and SW. desc. steeply.

- 81.02 Old cor. of secs. 19, 24, 25 & 30 nearly obliterated so I set a granite stone, 18X10X8 ins., 12 ins. in the ground, for

Resurvey of W.Bdy. of Tp. 22 S., Rg. 9 East.

chains

the cor. of secs. 24 and 25, marked with 4 notches on N. and 2 notches on S. edge; and raise a mound of stone, 2ft. base, 1½ ft. high, W. of cor. Pits impracticable.
 Land, mountainous.
 Soil, rocky; 3rd rate.
 Timber mesquite.
 Underbrush, mesquite and tesota.
 Mountainous land covered with loose rocks and dense underbrush, exceptionally difficult to survey, 81.02 chs.

From here old ¼ sec. cor bears S 0°15'E.
 Therefore I run
 S 0°25'E. bet. secs. 30 and 25.

Over mountainous land covered with loose rocks thru dense underbrush.

0.55 Wash 10 lks. wide, course SW. Asc. steeply.
 9.80 Top of ridge, bears NE. and SW. Desc. over loose rocks.
 19.40 Wash 20 lks. wide, course SW. Over loose rocks.
 27.85 Wash, 25 lks. wide, course SW. Over loose rocks.
 40.62 Old ¼ sec. cor., nearly obliterated, so I set a sandstone, 18X8X8 ins., 12 ins. in the ground, for ¼ sec. cor., marked ¼ on W. face; and raise a mound of stone, 2ft. base, 1½ ft. high, W. of cor. Pits impracticable.
 From here old sec. cor bears S 0°15'W.
 Therefore I run
 S 0°15'E. bet. secs. 25 and 30.
 41.80 Wash, 20 lks. wide, course SW. Asc. steeply.
 56.10 Top of ridge, bears NE. and SW. Desc. steeply.
 71.10 Wash, 20 lks. wide, course SW. Asc. steeply.
 73.60 House bears E. 24 chs. dist.;
 80.68 Old cor. of secs. 25, 30, 31 & 36 nearly obliterated so I set a granite stone, 18X8X8 ins., 12 ins. in the ground, for cor. of secs. 25 and 36, marked with 5 notches on N. and 1 notch on S. edge; and raise a mound of stone, 2ft. base, 1½ ft. high, W. of cor.
 Land, mountainous.
 Soil, rocky; 3rd rate.
 Timber, a few mesquite.
 Underbrush, greasewood, mesquite and tesota.
 Mountainous land covered with loose rocks and dense underbrush, exceptionally difficult to survey, 80.68 chs.
 At this cor I set off 20°55½'S. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is 31°29'N.

From here old ¼ sec. cor bears S 0°15'W.
 Therefore I run
 S 0°15'W. bet. secs. 31 and 36.

Descend thru dense underbrush over loose rocks.

0.85 Road, bears NW. and SE.
 40.08 Old ¼ sec. cor., nearly obliterated so I set a sandstone 18X8X6 ins., 12 ins. in the ground, for ¼ sec. cor., marked ¼ on W., from which
 A mesquite 4 ins. diam., bears S 22½ E. 147 lks. dist.; marked ¼ S 31 BT
 A mesquite 4 ins. diam., bears S 60 W. 61 lks. dist.; marked ¼ S 36 BT.

From here old Tp. cor bears S 0°15'E.
 Therefore I run
 S 0°15'E. bet. secs. 31 and 36.

43.70 Wash, 100 lks. wide, course SW. Asc. over loose rocks.
 60.00 Wash, 100 lks. wide, course W. Over loose rocks.
 71.50 Wash, 30 lks. wide, course W. Asc. over loose rocks.
 79.98 The old cor. of Tps. 22 and 23 S., Rgs. 8 and 9 E., which is nearly obliterated so I set a quartzite stone 24X10X10 ins., 18 ins. in the ground, for cor. of Tps. 22 and 23 S., Rgs. 8 and 9 E., marked 22 S on NE., 9 E on SE., 23 S on SW., and 8 E. on NW. face; with 6 notches on N.S.E. and W. edges; and raise a mound of stone, 2ft. base, 1½ ft. high, S. of cor. pits impracticable

Resurvey of W. Bdy. of Tp. 22 S Rg. 9 East.

chains.

Land, mountainous.
Soil, rocky; 3rd rate.
Timber, mesquite.
Underbrush, greasewood, mesquite and tesota.
Mountainous land covered with loose rocks and dense
underbrush, exceptionally difficult to survey, 79.98 chs.
November 26, 1909.

S. Bdy. of Tp. 22 S., Rg. 9 East.

chains.

November 27; At 8h.00m., a.m., l.m.t., I set off 21° 03' S on the decl. arc; 31° 28' N. on the lat. arc and determine a meridian with the solar at the cor. of Tps. 22 and 23 S., Rgs. 8 and 9 E.,

Thence I run

East on a random line along the S. bdy. of Tp. 22 S., R. 9 E., setting temp. $\frac{1}{4}$ sec. and sec. cors. at intervals of 40.00 chs.; at 492.08 chs. intersect the N. and S. line

2.44 chs. N. of the cor. of Tps. 22 and 23 S., Rgs. 9 and 10 E. The falling answers to a correction of '0° 17'

Thence I run

N 89° 43' W. on true line along S. bdy. Tp. 22 S. R 9 E.

Over mountainous land covered with loose rocks thru dense underbrush.

- 2.50 Drain, course SW. Asc. steeply
 - 6.00 Top of ridge, bears NE. and SW. Desc. steeply'
 - 15.00 Draw, 250 lks. wide, course SW. Asc. steeply.
 - 21.80 Top of ridge, bears NE. and SW. Desc. steeply.
 - 29.30 Draw, 100 lks. wide, course SE. Asc. steeply.
 - 40.00 Top of ridge, bears NW. and SE. Set a porphyry, 18X10X6 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. Desc. steeply.
 - 42.00 Head of gulch, 10 lks. wide, course SE. Asc. steeply.
 - 47.30 Top of rocky ridge, bears NW. and SE. Desc. steeply.
 - 57.85 Gulch, 10 lks. wide, course SE. Asc. steeply.
 - 58.40 Top of ridge, bears SE. and NW. Desc. steeply.
 - 66.80 Tinaja canyon, 50 lks. wide, course S. Asc. steeply.
 - 77.00 Head of gulch, bears SE. Asc. steeply.
 - 80.00 Point for sec. cor., falls on a porphyry boulder in place, 5X3X3 ft. above ground. Cut a cross (X) for cor. of secs. 1, 2, 35 and 36, with 5 notches on W. and 1 notch on E. side of cross. from which;
 - A mesquite 6 ins. diam., bears N 57 E. 106 lks. dist.; marked T 22 S R 9 E S 36 BT.
 - A mesquite 7 ins. diam., bears S 68 $\frac{1}{2}$ E. 97 lks. dist.; marked T 23 S R 9 E S 1 BT
 - A mesquite 4 ins. diam., bears S 20 $\frac{1}{2}$ W. 45 lks. dist.; marked T 23 S R 9 E S 2 BT
 - A mesquite 4 ins. diam., bears N 71 W 22 lks. dist.; marked T 22 S R 9 E S 35 BT
- Land, mountainous and rough.
Soil, rocky; 3rd and 4th rate.
Timber, scattering mesquite.
Underbrush, greasewood and cacti.
Mountainous land covered with loose rocks and dense underbrush, exceptionally difficult to survey, 80.00 chs.

Thence I run

N 89° 43' W. bet. secs. 35 and 2.

Over mountainous land covered with loose rocks and dense underbrush.

- 4.50 Top of ridge, bears N. and S. Desc. steeply.
- 35.30 Gulch, course S. Asc. steeply.
- 40.00 Set a sandstone, 18X10X6 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; from which
 - A mesquite 10 ins. diam., bears N 32 $\frac{1}{4}$ E. 110 lks. dist.; marked $\frac{1}{4}$ S 35 BT
 - A mesquite 7 ins. diam., bears S 47 E. 215 lks. dist.; marked $\frac{1}{4}$ S 2 BT
- 43.00 Top of ridge, bears N. and S. Desc. steeply.
- 58.00 Gulch, bears S. Asc. steeply.
- 70.00 Top of ridge, bears N. and S. Desc. 100 ft bluff.
- 72.00 foot of bluff. Desc. steeply.
- 79.00 Desc. over 200 ft. bluff.
- 80.00 Set a sandstone, 18X10X8 ins., 12 ins. in the ground, for cor. of secs. 34, 35 and 2 and 3., marked with 4 notches on W. and 2 notches on E. edge; from which
 - A cross (X) on a bluff 18X4X3 ft., bears N. 20 lks., dist marked BR S 35

BOOK 2190

South Bdy of Tp.22 S.,Rg.9 East.

chains.

and build a mound of stone,2ft.base,1 1/2 ft.high,W. of cor. Pits impracticable.

Land,mountainous.

Soil,stonny,4th rate.

Timber,mesquite.

Underbrush,greasewood and cacti.

Mountainous land covered with loose rocks and dense underbrush,and exceptionally difficult to survey,80.00 chs,

At this cor. I set off 21°06 1/2'S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat.is 31°28'N.

Thence I run

N 89°43'W. bet.secs.34 and 3.

Descend

Over mountainous land covered with loose rocks thru dense underbrush.

40.00

Set a sandstone,18X10X6ins.,12ins.in the ground,for 1/4 sec cor.,marked 1/4 on N.face; from which

A mesquite 8ins.diam.,bears S 3 E. 133 lks.dist.;

marked 1/4 S 3 BT

A mesquite 5ins.diam.,bears N 28 W. 162 lks.dist.;

marked 1/4 S 34 BT

43.00

Foot of descent Asc.steep slope.

46.00

Top of rocky ridge,bears N.and S. Desc.steeply.

53.00

Enter Alamo Draw course S. ascend steep.

64.00

Leave draw,course S. Asc.steeply.

76.00

Top of ridge,bears N.and S. Desc.steeply'

80.00

Set a malpais stone,18X8X6ins.,12ins.in the ground,for cor. of secs,33,34,3 and 4,marked with 3 notches on E. and W. edges; from which,

A mesquite 6ins.diam.,bears S 58 1/2 E. 45 lks.dist.;

marked T 23 S R 9 E S 3 BT

A mesquite 3ins,diam.,bears N 29 W. 90 lks.dist.;

marked T 22 S R 9 E S 33 BT

and raise a mound of stone,2ft.base,1 1/2 ft.high,W. of cor Pits impracticable.

Land,mountainous.

Soil,gravelly; 3rd rate.

Timber,a few mesquite.

Underbrush,mesquite and tesota.

Mountainous land covered with loose rocks and dense underbrush,exceptionally difficult to survey,80,00 chs.

November,27,1909.

November 28;At 8h.00m.,a.m.,l.m.t.,I set off 21°14 'S. on the decl.arc; 31°28'N. on thelat.arc and determine a meridian with the solar at the cor.of secs.3,4,33 and 34.

Thence I run

N 89°43'W. bet.secs.33 and 4.

Descend

Over mountainous land covered with loose rocks thru dense underbrush.

10.00

Wash,30 lks.wide,course S. Asc.

36.00

Ascent becomes very steep.

40.00

Set a granite stone,18X10X8ins.,12ins.in the ground,for 1/4 sec.cor.,marked 1/4 on N.face; and raise a mound of stone,2ft.base,1 1/2 ft.high,W. of cor. Pits impracticable.

42.00

Top of ridge,bears N.and S. Desc.steeply.

46.00

Foot of bluff. Over rolling land covered with loose rock.

74.00

Asc.steep slope.

79.00

Top of ridge,bears N.and S. Desc.steeply.

80.00

Set a granite stone,18X12X10ins.,12ins.in the ground,for cor. of secs.4,5,32 and 33,marked with 4 notches on E., and 2 notches on W. edge; and raise a mound of stone, 2ft.base,1 1/2 ft.high,W. of. cor. Pits impracticable.

South Bdy. of Tp. 22 S., Rg. 9 East.

chains.

Land, mountainous.
Soil, rocky; 3rd rate.
Timber, a few mesquite.
Underbrush, mesquite and tesota.
Mountainous land covered with loose rocks and dense underbrush, exceptionally difficult to survey, 80.00 chs.

Thence I run

N 89°43'W. bet. secs. 5 and 32.

Descending steep slope over loose rocks thru dense underbrush.

15.00 Foot of descent. over rolling land covered with loose rocks.

37.00 Wash, 20 lks. wide, course S. Over loose rocks. Asc.

40.00 Set a granite stone, 18X10X10 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; from which

A mesquite 6 ins. diam., bears N 10 E. 2.14 chs. dist.; marked $\frac{1}{4}$ S 32 BT

A mesquite 10 ins. diam., bears S 56 W. 5.60 chs. dist.; marked $\frac{1}{4}$ S 5 BT.

60.00 Top of ridge, bears N. and S. Desc. steeply.

74.00 Road, bears NW. and SE.

80.00 Set a granite stone, 18X10X10 ins., 12 ins. in the ground, for cor. of secs. 5, 6, 31 and 32, marked with 5 notches on E. and 1 notch on W. edge; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Land, mountainous and rolling

Soil, rocky; 3rd rate.

Timber, mesquite.

Underbrush, mesquite and tesota.

Mountainous and rolling land covered with loose rocks and dense underbrush, exceptionally difficult to survey, 80.00 chs.

At this cor. I set off 21°17 $\frac{1}{2}$ ' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 31°28' N.

Thence I run

N 89°43'W. bet. secs. 6 and 31.

Descending over loose rocks thru dense underbrush.

25.00 Wash, 30 lks. wide, course NW. Asc. steeply.

40.00 Set a granite stone, 18X8X8 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

50.00 Top of ridge, bears N. and S. Desc. steeply.

72.80 Wash, 40 lks. wide, course NW. Asc. steeply.

88.60 Top of ridge, bears NW. and SE. Desc. steeply.

92.08 The cor. of Tps. 22 and 23 S., Rgs. 8 and 9 E.,

Land, mountainous.

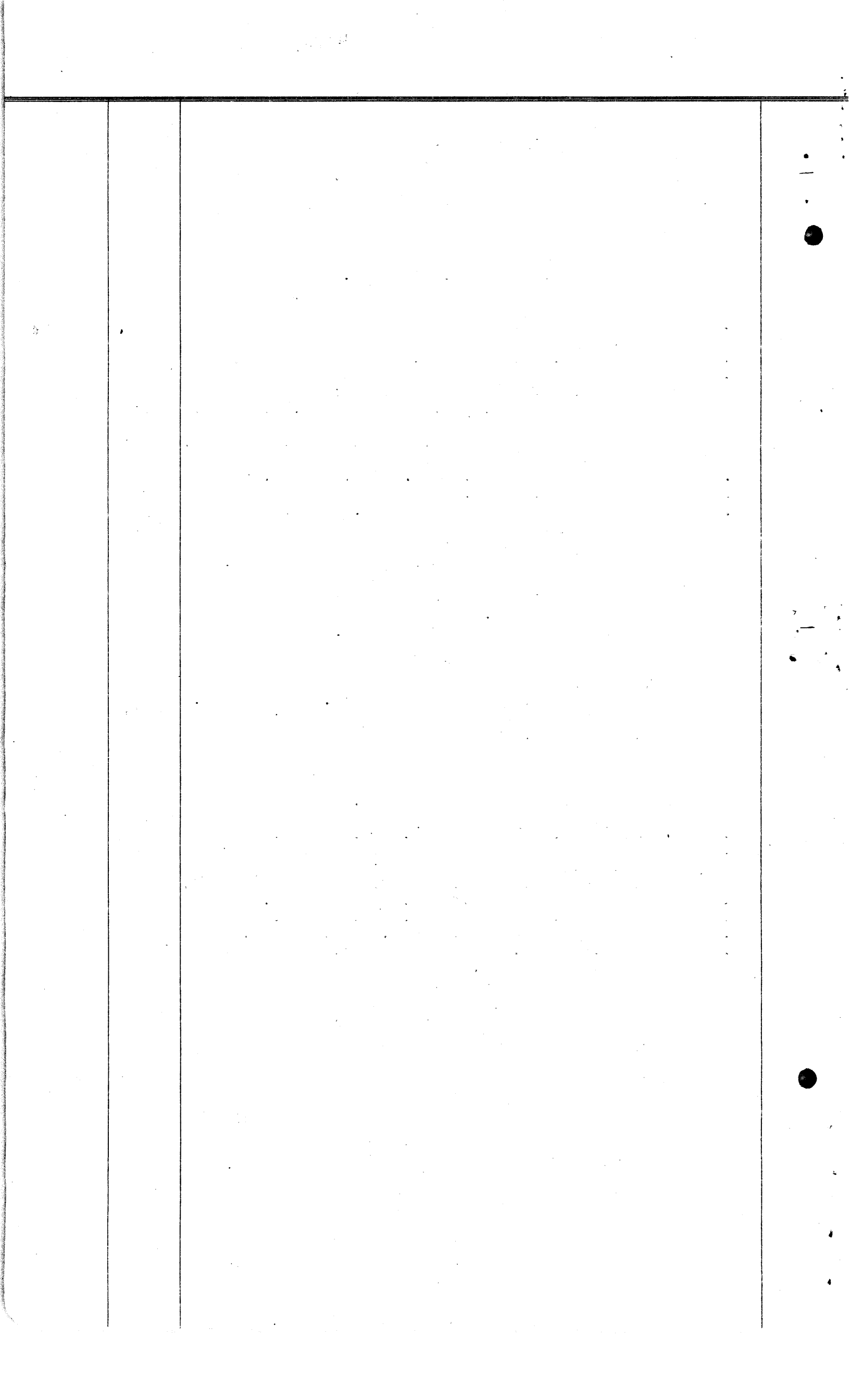
Soil, rocky; 3rd rate.

Timber, mesquite

Underbrush, mesquite and tesota.

Mountainous land covered with loose rocks and dense underbrush, except onally difficult to survey, 92.08 chs.

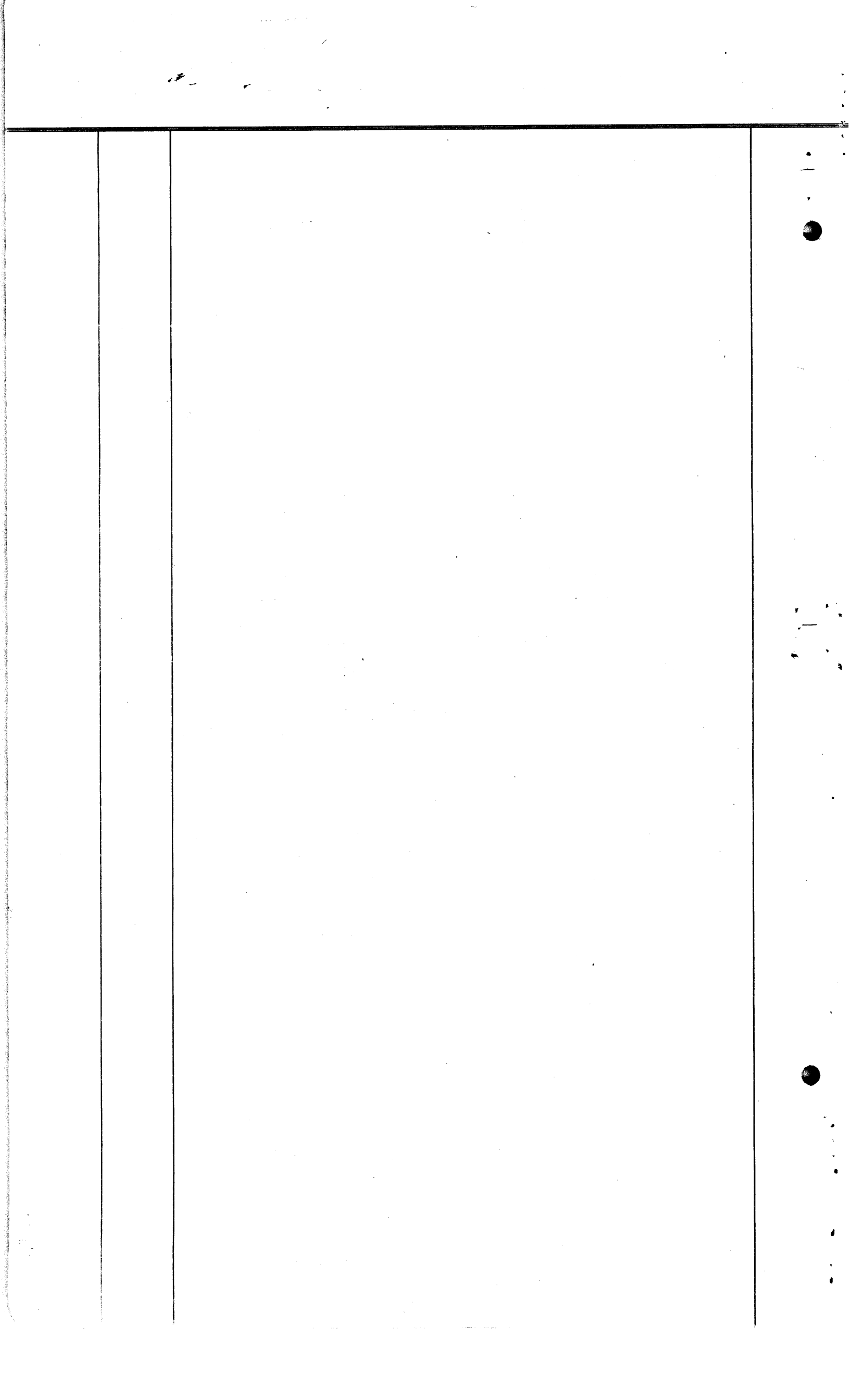
November 28, 1909



Boundaries of Township 22 S., R. 9 E.
 Latitudes, departures, and closing errors.

Line designated	Dist.	True bearing	Latitudes.		Departures.	
			N.	S.	E.	W.
N. Bdry.	47.00	S. 89° 45' W		.20		47.00
"	40.26	West				40.26
"	40.10	N. 88° W	1.40			40.08
"	40.05	West				40.05
"	40.00	S. 89° 40' W		.47		80.64
"	40.64					
"	40.50	S. 89° 20' W		.47		40.50
"	40.48	S. 89° 50' W		.11		40.48
"	40.36	S. 89° 40' W		.23		40.36
"	39.84	West				39.84
"	40.05	West				80.09
"	40.04					
W. Bdry.	39.03	S. 1° 26' W		39.01		.97
"	40.00	S. 1° 15' E		39.99	.87	
"	80.00	South		80.00		
"	40.38	S. 4° 15' W		40.27		2.99
"	38.50	S. 5° 40' E		38.31	3.80	
"	41.16	S. 6° 10' W		40.92		4.42
"	39.86	S. 6° 0' E		39.64	4.17	
"	40.06	S. 0° 15' E		40.06	.18	
"	40.08	S. 0° 15' W		40.08		.18
"	39.90	S. 0° 15' E		39.90	.17	
S. Bdry.	492.20	S. 89° 43' E		2.44	492.08	
E. Bdry.	79.89	N. 0° 58' W	79.88			1.35
"	80.15	N. 1° 43' W	80.15			2.40
"	81.97	N. 0° 10' W	81.97			.23
"	81.77	N. 0° 15' W	81.77			.35
"	40.13	N. 2° 50' W	40.08			1.98
"	42.18	North	42.18			
"	75.81	N. 0° 42' E	75.80		.93	
Convergency.....						.44
			483.23	482.72	502.49	504.61
			482.72			502.49
Errors in Lat.			0.51	Error in dep.		2.12

Philip Conzen
 U. S. Deputy Surveyor.



J

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

See Book L. - Oaths of Sp. 22 D. B. 9. E.

LIST OF NAMES.

A list of the names of the individuals employed by _____
_____, 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 _____

showing the respective capacities in which they acted:

- _____, *Chainman.*
- _____, *Chainman.*
- _____, *Moundman.*
- _____, *Moundman.*
- _____, *Axman.*
- _____, *Axman.*
- _____, *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted _____
_____, United States Deputy Surveyor, in surveying all
those parts or portions of the _____

_____ of the _____
_____ meridian, _____ of _____, 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 _____

- _____, *Chainman.*
- _____, *Chainman.*
- _____, *Moundman.*
- _____, *Moundman.*
- _____, *Axman.*
- _____, *Axman.*
- _____, *Flagman.*

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



17
J.W.
BOOK 2190

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

See Book L. Cont. of T. & R. G. 9 E.

I, _____, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from _____ United States Surveyor General for _____, bearing date of the _____ day of _____, 190 _____, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for _____, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of _____ of the _____ meridian, in the _____ of _____, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

United States Deputy Surveyor.

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



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

The foregoing field notes of the survey of Phoenix, Ariz. Aug. 22, 1907-1910 and retracement of the North East and West boundaries of T. & R. G. 9 E. of the Gila and Salt River Base and Meridian Arizona.

executed by Philip Cantzen, U.S. Deputy Surveyor under his contract No. 44, dated April 11, 1907, 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.