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-1847-

Book "J"

BOOK 1847

# FIELD NOTES

OF THE SURVEY OF THE

Subdivision lines of  
T. 23 S. R. 17 E

-1847-

1847

Of the *Gila & Salt River* Meridian,

AS SURVEYED BY

*Philip Contzen*

United States Deputy Surveyor,

Under his Contract No. *115*, dated *March 15<sup>th</sup>*, 18*90*4

Survey commenced *October 11<sup>th</sup>*, 18*90*4

Survey completed *October 18<sup>th</sup>*, 18*90*4

NAMES AND DUTIES OF ASSISTANTS.

John M. Trayer, chairman

H. W. Huggins, chairman

Juquin Bonillas, round man

Manuel Salazar, round man

Chas. M. Pague, ax man

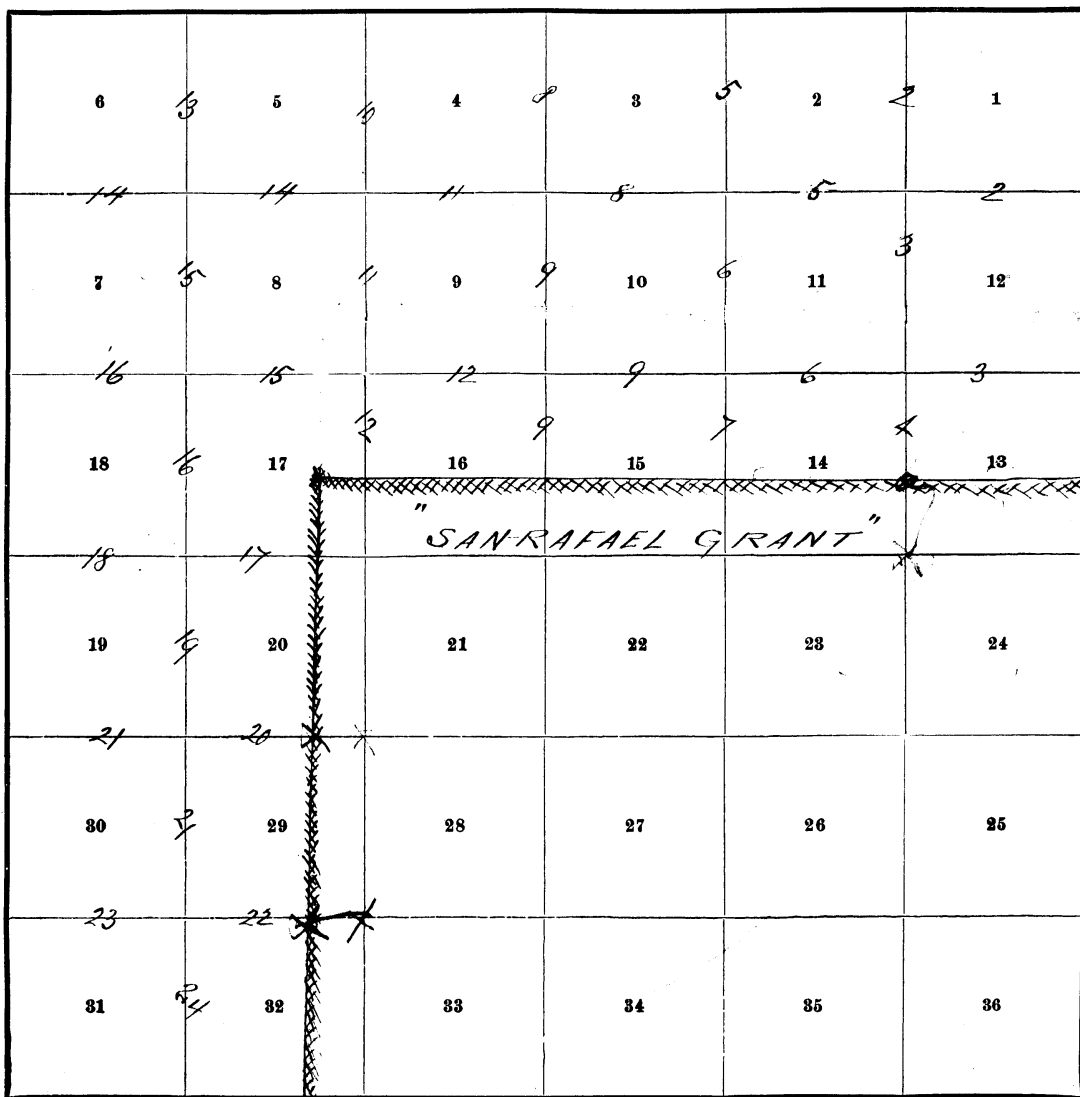
Tom Jones, ax man

Arthur Pague, flagman

BOOK 1847

INDEX DIAGRAM.

Township 23 N., Range 17 E.



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(C)

WE, John M. Trayer and H. W. Huggins  
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over 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 T. 23 S. R. 17 E

John M. Trayer, Chainman.  
H. W. Huggins, Chainman.

Subscribed and sworn to before me this 14<sup>th</sup>  
day of September, 18904

H. G. Power  
NOTARY PUBLIC,  
PIMA COUNTY, ARIZONA  
MY COMMISSION EXPIRES



WE, Juaguin Bonillas and Manuel Salazar  
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 T. 23 S. R. 17 E

Juaguin Bonillas, Moundman.  
Manuel Salazar, Moundman.

Subscribed and sworn to before me this 14<sup>th</sup>  
day of September, 18904

H. G. Power  
NOTARY PUBLIC,  
PIMA COUNTY, ARIZONA  
MY COMMISSION EXPIRES

April 27<sup>th</sup> 1908



WE, Chas. M. Pogue and Tom Jones  
do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of the subdivision lines of T. 23 S. R. 17 E

Chas. M. Pogue, Axman.  
Tom Jones, Axman.

Subscribed and sworn to before me this 14<sup>th</sup>  
day of September, 18904

H. G. Power  
NOTARY PUBLIC,  
PIMA COUNTY, ARIZONA  
MY COMMISSION EXPIRES

April 27<sup>th</sup> 1908



I, Arthur Pogue, 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 T. 23 S. R. 17 E

Arthur Pogue, Flagman.

Subscribed and sworn to before me this 14<sup>th</sup>  
day of September, 18904

H. G. Power  
NOTARY PUBLIC,  
PIMA COUNTY, ARIZONA  
MY COMMISSION EXPIRES

April 27<sup>th</sup> 1908



(10)

Chains

Survey commenced October 11, 1904, and executed with the Young and Long light mountain transit, No. 5507, with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined, tested on the true meridian at Phoenix, found correct, and was approved by the surveyor general for Arizona, June 10, 1904.

I examined 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 proceeded as follows:

At the cor. of secs. 1, 2, 35 and 36, on the N. bay. of the Sp., as heretofore described, latitude  $31^{\circ} 28'$  N. in ~~the~~ <sup>the</sup> ~~lat. arc~~ <sup>lat. arc</sup>  $110^{\circ} 35'$  N.; I set off  ~~$7^{\circ} 7'$~~   <sup>$7^{\circ} 28'$</sup>  on the ~~lat. arc~~ <sup>lat. arc</sup>;  $7^{\circ} 7'$  S. on the decl. arc; and, at  $3^{\frac{1}{2}}$  p.m. l.m.t., determined with the solar meridian and mark a point through, on a stone firmly set in the ground ~~in~~ <sup>in</sup> of the cor.

At  $6^{\frac{1}{2}}$  p.m. l.m.t., by my watch, which is correct, I observed Polaris at eastern elongation, in accordance with Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground, 5 chs. N. of my station.

October 11, 1904

October 12 At  $7^{\frac{1}{2}}$  p.m. l.m.t., I lay off the azimuth of Polaris,  $1^{\circ} 25'$  to the west, and mark the meridian thus determined, by cutting a small groove in the stone set October 11, on which the meridian falls 0.4 ins. east of the mark determined by the solar.

At  $8^{\frac{1}{2}}$  a.m. l.m.t., I set off  $31^{\circ} 28'$  on the lat. arc;  ~~$7^{\circ} 7'$~~   <sup>$7^{\circ} 28'$</sup>  on the decl. arc; and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of my station; this mark falls 0.4 ins. west of the meridian established by the Polaris observation.

The solar apparatus, by p.m. and a.m. observations, defines positions for meridians, respectively about  $0^{\circ} 25'$  east and west of the meridian established

6 chains

by the Solaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.  
The magnetic bearing of the true meridian at 8<sup>h</sup> 20<sup>m</sup> a.m. is N. 12° 31' W.; the angle thus determined gives the mag. decl. 12° 31' E

Shiner & run  
S. 0° 01' E, bet. secs. 1 and 2.

Over mountainous land, ascending.

- 3.50 Ridge, bears N. E. and S. W.; descend.
  - 8.50 Summit, bears E. and W.; ascend.
  - 13.50 Ridge, bears E. and W.; descend.
  - 18.50 Summit, bears E. and W.; ascend.
  - 20.00 Summit, bears E. and W.; descend.
  - 22.95 Round, bears N. E. and S. W.; ascend.
  - 28.00 W. slope of ridge; descend
  - 34.00 Small gulch, course N. W.; ascend.
  - 40.00 Set a granite stone, 18 x 10 x 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. high, 1  $\frac{1}{2}$  ft. base, W. of cor.
  - 70.00 Top of ridge, bears E. and W.; descend.
  - 80.00 Set a sandstone, 18 x 12 x 10 ins., 12 ins. in the ground, for cor. of secs. 1, 2, 11 and 12, marked with 1 notch on E. and 5 notches on S. ridge; and raise a mound of stone, 2 ft. base, 12 ft. high, W. of cor. 1
- Land, mountainous.  
Soil, gravelly loam, and stony; 2nd, 3rd and 4th rates.  
No timber.  
Mountainous land, 80.00 chs.

S. 89° 58' E, on a random line bet. secs. 1 and 12.

- 40.00 Set temp.  $\frac{1}{4}$  sec. cor.
  - 80.00 Intersect E. bay. of Sp. 5 lbs S. of cor. of secs. 1, 6, 7 and 12, which is a stone, marked and intersected as described by the surveyor general.
- Shiner & run  
N. on a true line bet. secs. 1 and 12.  
Over gently rolling land, through scattering oak timber.
  - 41.00 Set a granite stone, 20 x 7 x 7 ins., 15 ins. in the ground, for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  on N. face; from which an oak, 6 ins. diam., bears N. 77  $\frac{1}{2}$ ° E. 322 lbs. dist., marked

Chains  $\frac{1}{4}$  S 1 B S; no other trees, and raise a mound of stone, 2 ft. base,  $\frac{1}{2}$  ft. high, N. of cor. have scattering oak, brass N. E. and S. W.

58.50 Dry wash, 30 lbs. wide, course S.

80.00 Set ev. of sres. 1, 2, 11 and 12.

Land, rolling and level.

Soil, gravelly loam and stony; 2nd, 3rd and 4th corr. Timber, scattering oak.

S. 0° 01' E, bet. sres. 11 and 12.

Over rolling land.

38.00 Dry wash, 250 lbs. wide, course, W.

40.00 Set a sandstone, 18 x 12 x 11 ins, 12 ins. in the ground, for  $\frac{1}{4}$  sec. ev. marked  $\frac{1}{4}$  on W. face; from which

An oak, 26 ins. diam., bears N. 66° E, 257 lbs. dist., marked  $\frac{1}{4}$  S 1 B S; no other trees within limit, and raise a mound of stone, 2 ft. base,  $\frac{1}{2}$  ft. high, N. of cor. From this ev. later bears about 12 lbs. N.; old well bears 160 lbs E.

77.00 Wind fence bears N. N. W. and S. S. E.

80.00 Set a sandstone, 18 x 10 x 8 ins, 12 ins. in the ground, for ev. of sres. 10, 12, 13 and 14, marked with 1 notch on E. and 4 notches on S. edge; from which

An oak, 14 ins. diam., bears N. 14° E, 152 lbs. dist., marked S 23 S 16 17 E S 12° B S.

An oak, 6 ins diam. bears N. 11  $\frac{1}{4}$  W. 147 lbs. dist., marked S 23 S 16 17 E S 11 B S; no other trees within limit, and raise a mound of stone, 2 ft. base,  $\frac{1}{2}$  ft. high, N. of cor.

Land, rolling.

Soil, gravelly loam; 2nd and 3rd corr.

Timber, scattering oak.

October 12: At this ev. I set off 7° 27' S on the decl. ure; and at 12 h 2 m l. m. t., observed the sun on the meridian. The resulting lat. is 31° 26' 7" or within of the proposed lat.

E. on a random line bet. sres. 12 and 13.

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

80.00 Intersect E. body of Sp. at ev. of sres. 7, 12, 13 and 18, which is a stone, marked and witnessed as described by the surveyor general.

6 brass

Plumer & run!  
N. on a town line bet. sres. 12 and 13.  
Over rolling land.

11.10 Draw, 1 ch. wide, course S. W.

40.03 Set a sandstone, 18x11x6 ins., 12 ins. in the ground, for  
1/4 sres. ev. marked 1/4 on N. face; dig pits, 18x18x12 ins. E.  
& W. of stone, 3 ft. dist. and raise a mound of earth,  
3 1/2 ft. base, 1 1/2 ft. high, N. of ev.

51.64 Wire fence, bars N. W. and S. E.

59.71 Old road, bars N. W. and S. W.

79.39 Wire fence, bars N. W. and S. E.

80.06 The ev. of sres. 11, 12, 13 and 14.

Land, rolling and level.  
Soil, gravelly loam; 2nd and 3rd rates.  
No timber.

S. 0° 01' E. bet. sres. 13 and 14.

Over rolling land.

18.48 Wire fence, bars N. W. and S. E.

22.71 Enter scattering oak timber bars N. E. and S. W.

30.20 Grass scattering oak, bars N. W. and S. W.

40.00 Set a sandstone, 18x12x8 ins., 12 ins. in the ground, for 1/4  
sres. ev. marked 1/4 on N. face and raise a mound of stone,  
2 ft. base, 1 1/2 ft. high, W. of ev.

53.94 Wire fence, bars E and W.

54.07 Low, bars E and W.

54.20 Wire fence, bars E and W.

Enter at N. edy. of the San Rafael de la Guajal land  
grant at a point from which the 1/2 mile ev. of the grant  
edy. bars E. <sup>67</sup> ~~73~~ lbs. dist.

Set a sandstone, 18x11x8 ins., 12 ins. in the ground, for  
closing ev. of sres. 13 and 14, marked C C on N.; 13 on E,  
14 on W, S R 10 L 3 on S, with ground on E. and ground  
on W. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
N. of ev.

Land, rolling.

Soil, gravelly loam; 2nd and 3rd rates.

Timber, scattering oak.

October, 12, 1904.

October 13: At 7<sup>h</sup> 45<sup>m</sup> a.m., l.m. to set off 31028<sup>W</sup> on the



6 bars

lat. are. ~~7° 42' S~~ <sup>7° 44' S</sup> on the arel. are; and determine a meridian  
right the solar at the ev. of sres. 2, 3, 34 and 35 on the N.  
day. of the Sp. as heretofore described.

Plumer Down

S. 11° 01' E., bet sres. 2 and 3.

Over mountainous land, descending.

3.20 Dry wash, 30 lbs. wide, course S. E. ascend.

8.00 Bridge, bars E. and W.; descend.

17.75 Gulch, 20 lbs wide, course, S. E.; ascend.

22.00 Bridge, bars S. E. and W.; descend.

22.70 Dry wash, 25 lbs. wide, course S. E. ascend.

30.00 Bridge, bars S. E. and W.; descend.

39.00 Gulch, 15 lbs. wide, course S. E.; ascend.

40.00 Set a malpaw stone, 18x12x10 ins., 12 ins. in the ground, for  $\frac{1}{4}$   
sre. ev. marked  $\frac{1}{4}$  on W. face; and raise a mound of stone,  
2 ft. base, 1 1/2 ft. high, W. of ev.

47.30 Bridge, bars N. W. and S. E; descend.

60.00 Dry wash, 50 lbs. wide, course S. E.; then over level land.

80.00 Set a sandstone, 20x7x6 ins., 15 ins. in the ground, for ev.  
of sres. 2, 3, 10 and 11, marked with 1 notch on E. and 5 notches  
on S. side; dig pits, 18x18x12 ins., in each sre. 5 1/2 ft. dist,  
and raise a mound of earth, 4 ft. base, 2 ft. high, W. of ev.  
Land, mountainous and level.

Soil, gravelly loam; 2nd and 3rd rate.

No timber.

Mountainous land, 60.00 chs.

S. 89° 58' E., on a random line bet. sres. 2 and 11.

40.00 Set temp.  $\frac{1}{4}$  sre. ev.

80.04 Intersect N. and S. line at ev. of sres. 1, 2, 11 and 12.

Plumer Down

N. 89° 58' W. on a true line bet. sres. 2 and 11.

Over gently rolling land.

19.50 Mezeal patch, bars 2 chs. S.

25.00 Corral, bars 5 chs. S.

28.00 House, bars 8 chs. S.

29.50 Old road, bars N. E. and S. W.

32.75 Dry wash, 50 lbs. wide, course S. W.

39.00 Set a granite stone, 18x10x8 ins., 12 ins. in the ground, for  
sitings ev. to  $\frac{1}{4}$  sre. ev. marked W.  $\frac{1}{4}$  on N. face; and raise  
a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of ev.

40.00 Falls on bank Santa Cruz river.  
 40.50 Santa Cruz river, 50 lbs. wide, course S. W.  
 40.95 Road, bears S. E. and N. W.  
 45.00 Road, bears N. E. and S. W.  
 46.00 Well, bears 7 chs. S.  
 49.40 Spring of Santa Cruz river, 40 lbs. wide, course S.; thence over  
 level land  
 80.04 Sh. ev. of sres. 2, 3, 10 and 11.  
 Land, level and gently rolling.  
 Soil, rich and gravelly loam; 1st, 2nd and 3rd rats.  
 No timber.

S. 0° 01' E. bet. sres. 10 and 11.  
 Over level land.

11.30 Road, bears N. E. and S. W.  
 15.00 Old road, bears N. W. and S. E.; ascend.  
 20.00 Dip, bears E. and W.; thence over smooth ground, sloping E.  
 27.00 Road, bears N. E. and S. W.  
 40.00 Set a sandstone, 18 x 8 x 6 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. ev.  
 marked  $\frac{1}{4}$  on N. face; dig pits, 18 x 18 x 12 ins., N. and S. of stone,  
 3 ft. dist., and raise a mound of earth, 3  $\frac{1}{2}$  ft. base, 1  $\frac{1}{2}$  ft. high,  
 N. of ev.  
 45.20 Road, bears N. W. and S. E.  
 64.50 Draw, 1 ch. wide, course E. ascend.  
 71.00 Swell, bears E. and W.; descend.  
 79.00 Draw, 1 ch. wide, course E.; ascend.  
 81.00 Set a sandstone, 20 x 6 x 6 ins., 15 ins. in the ground, for ev. of  
 sres. 10, 11, 14 and 15, marked with 2 notches on E. and 4 notches on  
 S. edge; and raise a mound of stone, 2 ft. base, 1  $\frac{1}{2}$  ft. high, N.  
 of ev.  
 Land, rolling and level.  
 Soil, gravelly loam; 2nd and 3rd rats.  
 No timber.

October 13. At this ev. I set off  $7^{\circ} 49'$   ~~$7^{\circ} 50'$~~  S on the circ. arc  
 and at 12<sup>h</sup> 0<sup>m</sup> l. m. t., observed the sun on the meridian; the  
 resulting lat. is  $31^{\circ} 26' N$

S. 89° 58' E., in a random line bet. sres. 11 and 14.

40.00 Set trap.  $\frac{1}{4}$  sec. ev.  
 81.04 Intersect N. and S. line 5 chs. S. of ev. of sres. 11, 12, 13 and 14.  
 Showed S road  
 W. on a true line bet. sres. 11 and 14.

6 chains

Over rolling land, descending.

5.00 Enter Santa Cruz between bars N. and S.

38.40 Dry wash, 30 chs. wide, course S. E.

39.20 Set a sandstone, 18x10x8 ins., 12 ins. in the ground, for witness ev. to  $\frac{1}{4}$  sec. ev. marked N 6  $\frac{1}{4}$  in N. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of ev.

40.02 Point for  $\frac{1}{4}$  sec. ev. falls in bed of Santa Cruz river, 60 chs. wide, course S.

47.50 S. W. Parkers house, bars 160 chs. N.; barn, bars 190 chs. S.; barn, bars 330 chs. S.

48.27 Wire fence, bars N. and S.

48.52 Road, bars N. and S.; level bottom and ascend.

80.04 Skv ev. of sres. 10, 11, 14 and 15.  
Land, level and rolling.  
Soil, rich, and gravelly loam; 1st, 2nd and 3rd rates.  
No timber

S. 0° 01' E., bet. sres. 14 and 15.

Over mountainous land, ascending.

9.00 Top of N. slope of ridge, 100 ft. above sec. ev.; descend.

25.85 Dry wash, 200 ft. below top of slope, 30 chs. wide, course S. E.; thence over rolling land.

40.00 Set a sandstone, 18x10x8 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. ev. marked  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of ev.

54.12 Wire fence, bars E. and W.

Enter at N. bay of the San Rafael de la Zujal land grant at a point from which the 20 1/2 mile ev. of the grant bay. bars E., 8.70 chs. dist.

Set a sandstone, 18x10x6 ins., 12 ins. in the ground, for closing ev. of sres. 14 and 15, marked E 6 on N., 14 on E., 15 on W., S 10 to E 3 on S., with 2 grasses on E and 4 grasses on W. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of ev.

Land, rolling and mountainous.  
Soil, gravelly loam and stony; 2nd, 3rd and 4th rates.  
No timber.  
Mountainous land, 25.85 chs.

October 13, 1914.

October 14: At 7<sup>h</sup> 40<sup>m</sup> a. m., l. m. t., I set off 31° 28' N on the

Chains lat. and ~~8° 6' S.~~ on the dial. arc, and determine a meridian with the solar at the ev. of sres. 3, 4, 9 and 10 on the N. edge of the Sp., as heretofore described.

Shaner 3 run

S. 0° 0' E., bet. sres. 3 and 4.

Over mountainous land, descending along E. slope of ridge.

15.00 Dry wash, 10 lbs. wide, course S. E.; ascend.

30.00 Top of W. slope of ridge; descend.

39.00 Dry wash, 40 lbs. wide, course S. E. ascend.

41.00 Set a sandstone, 28 x 12 x 10 ins., 2 1/2 ins. in the ground, for 1/4 sec. ev. marked 1/4 on N. face, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of ev.

42.00 Old road, bears N. W. and S. E.

47.00 Top of E. slope of ridge; descend.

60.50 Road, bears E. and W.

69.50 Gulch, 40 lbs. wide, course S. E.; thence over rolling land.

80.00 Set a sandstone, 18 x 12 x 10 ins., 12 ins. in the ground, for ev. of sres. 3, 4, 9 and 10, marked with 3 notches on E. and 5 notches on S. edge; dig pits, 18 x 18 x 12 ins., in each sres., 5 1/2 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of ev.

Land, mountainous and rolling.

Soil, gravelly loam; 2nd and 3rd rate.

No timber.

Mountainous land, 69.50 chs.

S. 89° 58' E., on a random line bet. sres. 3 and 10.

40.00 Set temp. 1/4 sec. ev.

80.00 Enter set N. and S. line at ev. of sres. 2, 3, 10 and 11.

Shaner 6 run

N. 89° 58' W., on a true line bet. sres. 3 and 10.

Over rolling land.

20.00 Dry wash, 20 lbs. wide, course S. E.

40.00 Set a sandstone, 18 x 10 x 6 ins., 12 ins. in the ground, for 1/4 sec. ev. marked 1/4 on N. face, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of ev.

80.00 1/4 sec. ev. of sres. 3, 4, 9 and 10.

Land, rolling.

Soil, gravelly loam; 2nd and 3rd rate.

No timber.

October 14. At this ev. I set off ~~8° 6' S.~~ on the dial. arc, and at 12<sup>h</sup> 4<sup>m</sup> l. m. t., observed the sun on the meridian; the

Chains

resulting lat. is  $31^{\circ}27' W.$

S.  $0^{\circ}02' E.$ , bet. sres. 9 and 10.

Over rolling land.

40.00 Set a granite stone,  $18 \times 10 \times 8$  ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. ev. marked  $\frac{1}{4}$  on W. face, dig pits,  $18 \times 18 \times 12$  ins., N. and S. of stone, 3 ft. dist., and raise a mound of earth,  $3\frac{1}{2}$  ft. base,  $\frac{1}{2}$  ft. high, N. of ev.

52.50 Road, bars N. E. and S. W.

80.00 Set a sandstone,  $20 \times 10 \times 8$  ins., 15 ins. in the ground, for ev. of sres. 9, 10, 15 and 16, marked with 3 notches on E. and 4 notches on S. edge, and raise a mound of stone, 2 ft. base,  $\frac{1}{2}$  ft. high, N. of ev.

Land, rolling and level.

Soil, gravelly loam, and stony; 2nd, 3rd and 4th rates. No timber.

S.  $89^{\circ}58' E.$ , on a random line bet. sres. 10 and 15.

40.00 Set trap.  $\frac{1}{4}$  sec. ev.

80.00 Intersect N. and S. line 7 lbs N. of ev. of sres. 10, 11, 14 and 15.

Shores Run

N.  $89^{\circ}55' W.$ , on a true line bet. sres. 10 and 15.

Over mountainous land, ascending.

23.50 Bridge, bars N. and S.; descend.

25.00 Gulch, 10 lbs. wide, course S. E.; ascend.

30.00 Bridge, bars N. and S.; descend.

40.01 Set a granite stone,  $18 \times 8 \times 6$  ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. ev. marked  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base,  $\frac{1}{2}$  ft. high, N. of ev.

41.50 Churn, bars N. and S.; ascend.

56.60 Bridge, bars N. E. and S. W.; descend.

74.50 Draw, 20 lbs. wide, course N. W.; ascend.

80.02 3rd ev. of sres. 9, 10, 15 and 16.

Land, mountainous

Soil, gravelly loam and stony; 2nd, 3rd and 4th rates. No timber.

Mountainous land, 80.02 elev.

S.  $0^{\circ}02' E.$ , bet. sres. 15 and 16.

Over mountainous land, ascending.

5.00 Bridge, bars E. and W.; descend.

Chains  
6.20 Gulch, 10 lns. wide, course E.; ascend.  
16.00 Ridge, 100 ft. above gulch, bars E. and N.; descend.  
40.00 Set a sandstone, 18x12x6 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. ev. marked  $\frac{1}{4}$  on W. face; and <sup>raise</sup> a mound of stone, 2 ft. base,  $\frac{1}{2}$  ft. high, N. of ev.  
54.23 Wire fence, bars E. and N.  
Intersect. N. bdy. of the San Rafael de la Zuniya land grant at a point from which the 19 $\frac{1}{2}$  mile ev. of the grant bdy. bears E. 8.77 chs. dist.  
Set a granite stone, 18x8x8 ins., 12 ins. in the ground, for closing ev. of sres. 15 and 16, marked C C on N.; 15 on E., 16 on W.; and S B B E on S. face, dig pits, 24x18x12 ins., crosswise on each line, E. and W., 3 ft. and N. of stone, 7 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of ev.  
Land, mountainous.  
Soil, gravelly loam and stony; 2nd, 3rd and 4th rate.  
No timber.  
Mountainous land, 54.23 chs.

October 14, 1904.

October 15: at 4:40 a.m. l.m.t., I set off 31°28' N on the lat. and ~~8°27' S~~ <sup>8°29' S</sup> on the decl. arc; and determined a meridian, with the solar at the ev. of sres. 4, 5, 32 and 33, on the N. bdy. of the Sp., as heretofore described.

Staves I run  
S. 0°02' E. bet. sres. 4 and 5.  
Per rolling land.

6.30 Dry wash, 25 lns. wide, course N. W.  
25.00 House, bars 8 chs. E.  
27.30 Dry wash, 40 lns. wide, course E.; old shack bars 4 chs. E.  
31.60 Dry wash, 25 lns. wide, course E.; ascend.  
33.70 Wire fence, bars N. W. and S. E.  
40.00 Set a malpais stone, 18x8x6 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. ev. marked  $\frac{1}{4}$  on W. face; and raise a mound of stone, 2 ft. base,  $\frac{1}{2}$  ft. high, N. of ev.  
49.00 Ridge, bars E. and W.; descend.  
59.10 Wire fence, bars N. W. and S. E.  
65.00 Road, bars N. W. and S. E.  
66.50 Dry wash, 25 lns. wide, course W.; ascend.  
69.30 Road, bars N. W. and S. E.  
80.00 Set a granite stone, 18x10x8 ins., 12 ins. in the ground, for

6 chain

cor of sres. 4, 5, 8 and 9, marked with 4 notches on E. and 5 notches on S. edge, and raised a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

Land, mountainous and rolling.

Soil, gravelly loam and stony; 2nd, 3rd and 4th rates. No timber.

Mountainous land, 45.40 chs!

S. 89° 58' E, on a random line bet. sres. 4 and 9.

40.00 Set temp. 1/4 sec. cor.

80.00 Intersect N. and S. line at cor. of sres. 3, 4, 9 and 10  
Shiner & mine

N. 89° 55' W, on a true line bet. sres. 4 and 9.

Over mountainous land, ascending.

7.50 Bridge, bars N. E. and S. W.; descend.

9.60 Road, bars N. ~~W.~~ and S. ~~E.~~

40.00 Set a mark in stone, 18 x 10 x 8 ins., 12 ins. in the ground, for 1/4 sec. cor. marked 1/4 in N. face, ring pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist and raised a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor. From this cor. several bars N. 20° W. 7 chs. dist; hence bars N. 39° W, 13 chs. dist; hence bars N. 34 1/4° W, about 2 mile dist.

46.00 Draw, 35 chs. wide, course N. E.; ascend.

80.00 In cor. of sres. 4, 5, 8 and 9.

Land, mountainous.

Soil, gravelly loam and stony; 2nd, 3rd and 4th rates. No timber.

Mountainous land, 30.00 chs!

S. 0° 02' E, bet. sres. 8 and 9.

Over mountainous land, ascending

26.00 Bridge, bars N. E. and S. W.; descend.

27.50 Draw, 1 ch. wide, course S. W.; trace over rolling land, through scattering oak timber.

40.00 Set a granite stone, 18 x 10 x 8 ins., 12 ins. in the ground, for 1/4 sec. cor. marked 1/4 in W. face, from which

An oak, 20 ins. diam, bars S. 57° E, 213 chs. dist. marked 1/4 S 9 B S.

An oak, 18 ins. diam, bars S 3 1/4° W, 410 chs. dist, marked 1/4 S 8 B S.

80.00 Set a sandstone, 20 x 12 x 8 ins., 15 ins. in the ground, for

6 chains  
 N  
 cor. of sres. 8, 9, 16 and 17, marked with 1/4 notchers on E. and S. edges, dry pits, 13x15x12 ins. in each sres. 5 1/2 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of cor.  
 Land, rolling and mountainous.  
 Soil, gravelly loam, 2nd rate.  
 Timber, scattering oak.  
 Mountainous land, 24.50 chs.  
 October 15: At this cor. S set off 8° 34' on the decl. arc and at 12<sup>h</sup> 5<sup>m</sup> d. m. t., observe the sun on the meridian. The resulting lat. is 31° 26' N. or within 1' of the proper lat.

S. 89° 58' E, on a random line bet. sres. 9 and 16.  
 40.00 Set trap 1/4 sres. cor.  
 80.00 Interpret N. and S. line in chs. N. of cor. of sres. 9, 10, 15 and 16.  
 Shaded S. run  
 N. 89° 54' W, on a true line bet. sres. 9 and 16.  
 Over mountainous land, ascending along N. slope of ridge, through scattering oak timber.  
 5.85 Road bars N. and S. N.  
 20.00 Side of slope, 100 ft. above sres. cor. observed.  
 28.00 Foot, 140 ft. below top of slope, bars N. and S. W. observed.  
 30.00 Ridge, bars N. and S. W. observed.  
 38.00 Foot bars N. and S. N.; ascend.  
 40.03 Set a porphyry stone, 13x8x5 ins. 12 ins. in the ground, for 1/4 sres. cor. marked 1/4 on N. face, from which  
 N. oak 20 ins. diam., bars S. 7 1/2° W, 153 chs. dist., marked 1/4 S 16 B S.; no other tree within limit, and raised a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.  
 32.00 Ridge, bars N. and S. W. observed.  
 59.00 Road, bars N. and S. W.  
 66.10 Dry wash 100 ft. below ridge, 25 chs. wide, course S. W.; ascend  
 80.06 The cor. of sres. 8, 9, 16 and 17.  
 Land, mountainous.  
 Soil, gravelly loam and stony; 2nd, 3rd and 4th rate.  
 Timber, scattering oak.  
 Mountainous land, 80.06 chs.

S. 0° 02' E. bet. sres. 16 and 17.  
 Over mountainous land, ascending through scattering oak timber.  
 6.00 Ridge, bars N. and S. W.; observed.



9.60 Dry wash, 40 chs. wide, course S. W.; ascend.  
 15.35 Road, bars N. W. and S. W.  
 25.50 Road, bars E. and W. bars scattering oak, bars E. and W.  
 27.10 Bridge, bars N. E. and S. W.; descend.  
 31.10 Foot, bars E. and W. ascend.  
 35.00 Bridge, bars E. and W.; descend.  
 39.70 Old road, bars N. W. and S. E.  
 40.00 Set a granite stone, 18x12x10 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  on W. face, and raise a mound of stone, 2 ft. base, 12 ft. high, N. of cor.  
 54.35 Wire fence, bars E. and W.  
 Intersect N. edy. of the San Rafael de la Zanja land grant at a point from which the 13  $\frac{1}{2}$  mile cor. of the grant edy. bars E. S. 74 chs. dist.  
 Set a sandstone, 18x10x6 ins., 12 ins. in the ground, for closing cor. of secs. 16 and 17, marked C C on N.; 16 on E.; 17 on W. and S. to D L 3 on S. face, and raise a mound of stone, 2 ft. base, 12 ft. high, N. of cor.  
 Land, mountainous.  
 Soil, gravelly loam and stony; 2nd, 3rd and 4th water.  
 Timber, scattering oak.  
 Mountainous land, 54.35 chs.

October 15, 1904.

October 16: At 4<sup>00</sup> a. m., l. m. t., I set off  $31^{\circ}28'N$  on the lat. and  $8^{\circ}51'E$  in the obs. arc, and determine a meridian with the solar at the cor. of secs. 5, 6, 31 and 32, on the N. edy. of the sp. as heretofore described.  
 Shows I run  
 S. 0°03' E. bet. secs. 5 and 6.  
 Over mountainous land, ascending.  
 30.00 Bridge, 200 ft. above sec. cor., bars E. and W.; descend.  
 37.00 Draw, 1 ch. wide, course S. E.; ascend.  
 40.00 Set a sandstone, 18x5x6 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  on W. face, and raise a mound of stone, 2 ft. base, 12 ft. high, N. of cor. Sets impracticable.  
 52.00 Bridge, bars E. and W.; 100 ft. above draw; descend.  
 72.00 Draw, 1 ch. wide, course E.; ascend.  
 74.30 Road, bars E. and W.  
 80.00 Set a granite stone, 18x12x4 ins., 12 ins. in the ground, for cor. of secs. 5, 6, 7 and 8, marked with 5 notches on E. and S.

Chains  
1

edges, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
N. of cor. It's impracticable.  
Land; mountainous.  
Soil, gravelly loam and stony; 2nd, 3rd and 4th rates.  
No timber.  
Mountainous land, 80.00 chs.

S. 89° 58' E, on a random line bet. secs. 5 and 8.

40.00 Set temp. 1/4 sec. cor.  
80.00 Intersect N. and S. line at cor. of secs. 4, 5, 8 and 9.

Shower & run  
N. on a true line bet. secs. 5 and 8.

Over mountainous land, descending.

8.00 Draw, 1 ch. wide, course N.; ascend.

33.50 Bridge, 300 ft. above draw, bars N. and S.; ascend.

40.00 Set a quartz stone, 18 x 8 x 6 ins., 1 1/2 ins. in the ground, for 1/4  
sec. cor. marked 1/4 on N. face, and raise a mound of stone, 2 ft.  
base, 1 1/2 ft. high, N. of cor.

63.00 Draw, 1 ch. wide, course N.E.; ascend.

80.00 E. cor. of secs. 5, 6, 7 and 8.

Land, mountainous.

Soil, gravelly loam and stony; 2nd, 3rd and 4th rates.  
No timber.

Mountainous land, 80.00 chs.

N. 89° 58' W, on a random line bet. secs. 6 and 7.

40.00 Set temp. 1/4 sec. cor.

79.10 Intersect N. line of S. at cor. of secs. 6, 7 and 12, as hereafter  
described.

Shower & run

S. 89° 58' E, on a true line bet. secs. 6 and 7.

Over mountainous land, descending through oak timber.

6.60 Dry wash, 10 chs. wide, course N.E.; ascend.

16.00 Road, bars N.W. and S.E.

34.60 Gravel road, bars N.E. and S.W.

36.00 Dike, bars N.E. and S.W.; from oak timber, thence over  
level land.

39.10 Set a quartz stone, 18 x 8 x 6 ins., 1 1/2 ins. in the ground, for 1/4  
sec. cor. marked 1/4 on N. face, from which  
An oak, 6 ins. diam., bears N. 4 1/2° W, a 41 chs. dist., marked  
1/4 S 6 1/2° S; no other trees within limit, and raise a mound

6 chains  
 39.20 of stump, 2 ft. base, 1 1/2 ft. high, N. of cor.  
 Road, bars NW and S. W.  
 39.70 Road, bars N. E. and S. W.  
 60.00 Begin ascent.  
 79.10 The cor. of sres. 5, 6, 7 and 8.  
 Land, mountainous and level.  
 Soil, gravelly loam and stony; 2nd, 3rd and 4th rate.  
 Timber, oak.  
 Mountainous land, 56.00 chs.  
 October 16. At this cor. I set off <sup>8° 56' S</sup> ~~8° 57' S~~ on the decl. arc  
 and at 12<sup>h</sup> 5<sup>m</sup> l. m. t., observed the sun on the meridian,  
 the resulting lat. is 31° 27' N.

8.003 ~~NE~~ bet. sres. 7 and 8.  
 Over mountainous land, descending.  
 7.25 Ditch, bars S. E. and N. W.; ascend.  
 7.70 Cor. of wire enclosure.  
 8.00 Dry wash, 30 chs. wide, course NW.  
 10.00 Crossroad, bars 1 ch. W.  
 14.92 River fence, bars NW and S. W.  
 26.00 Bridge, 200 ft. above sec. cor., bars NW and S. W.; descend.  
 35.50 Draw, 1 ch. wide, course NW; ascend.  
 40.00 Set a quartz stone, 20 x 8 x 4 ins., 15 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, W. of cor.  
 42.00 Bridge, bars E. and W.; descend.  
 53.30 Old road, bars N. W. and S. E.  
 60.50 Enter draw, course NW.  
 76.00 Leave draw; ascend.  
 80.00 Set a sandstone, 18 x 8 x 8 ins., 12 ins. in the ground, for cor. of  
 1/4 sres. 7, 18, 17 and 18, marked with 5 notches on E. and 4  
 notches on S. side; and raise a mound of stone, 2 ft. base, 1 1/2  
 ft. high, W. of cor.  
 Land, mountainous and level.  
 Soil, gravelly and stony; 3rd and 4th rate.  
 No timber.  
 Mountainous land, 64.50 chs.

E. on a random line bet. sres. 8 and 17.  
 40.00 Set temp. 1/4 sec. cor.  
 80.06 Intersect N. and S. line at cor. of sres. 8, 9, 16 and 17.

6 hrs. Shiner Run  
 N. on a true line bet. secs. 8 and 17.  
 Over mountainous land, ascending.  
 40.05 Set a sandstone, 18 x 8 x 8 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  on N. face; and raised a mound of stone, 2 ft. base,  $1\frac{1}{2}$  high, N. of cor.  
 51.10 Road, bears N. W. and S. E.  
 59.00 Ridge, 300 ft. above sec. cor., bears N. W. and S. W.; descend.  
 64.50 Gulch, 60 lbs. wide, course N. W.; ascend.  
 70.40 Ridge, 100 ft. above gulch, bears N. W. and S. W.; descend.  
 80.06 In cor. of secs. 7, 8, 17 and 18.  
 Land, mountainous.  
 Soil, gravelly loam, and stony; 2nd, 3rd and 4th rates.  
 Not timbered.  
 Mountainous land, 80.06 chs.

N. 89° 53' W., on a random line bet. secs. 7 and 18.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 79.15 Enter at N. bay. of Sp 3 chs. E. of cor. of secs. 7, 12, 13 and 18, as hereafter described  
 Shiner Run  
 S. 89° 57' E., on a true line bet. secs. 7 and 18.  
 Over mountainous land, descending.  
 35.00 Enter draw, course N. W.  
 39.15 Set a granite stone, 18 x 12 x 10 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  on N. face, and raised a mound of stone, 2 ft. base, 12 ft. high, N. of cor.  
 57.00 Enter draw.  
 61.50 Draw, 150 lbs. wide, course N. W.  
 73.50 Draw, 1 ch. wide, course N. W.  
 79.15 In cor. of secs. 7, 8, 17 and 18.  
 Land, mountainous, level and rolling.  
 Soil, gravelly loam and stony; 2nd, 3rd and 4th rates.  
 Timber, scattering oak.  
 Mountainous land, 35.00 chs.

October 16, 1904.

9-12

9-12 October 17: At 7<sup>h</sup> 35<sup>m</sup> a.m., l.m.t., I set off 31° 26' 11" on the lat. arc; ~~9-12~~ on the circ. arc, and determined a meridian with the solar at the cor. of secs. 7, 8, 17 and 18.  
 Shiner Run  
 S. 0° 03' E., bet. secs. 17 and 18.

Chains  
 18.00 Over mountainous land, ascending.  
 20.80 Bridge, bars N.W. and S.W.; ascend.  
 32.75 Draw, 250 lbs. wide, course N.W.; ascend.  
 36.00 Bridge, bars N.W. and S.W.; ascend.  
 40.00 Set a sandstone, 18 x 12 x 8 ins., 12 ins. in the ground, for  
 1/4 sec. cor. marked 1/4 on N. face; and raise a mound of  
 stone, 2 ft. base, 1 1/2 ft. high, N. of cor.  
 44.00 Enter draw, course N.W.  
 54.76 Dry wash, 40 lbs. wide, course N.W.  
 60.00 Enter draw and ascend through heavy oak timber.  
 67.00 Bridge, 140 ft. above draw, bars N.W. and S.W.; ascend.  
 69.73 Bend, bars N.W. and S.W.  
 76.15 Dry wash, 10 lbs. wide, course N.W.; ascend.  
 81.00 Set a sandstone, 18 x 10 x 10 ins., 12 ins. in the ground, for cor.  
 of secs. 17, 18, 19 and 20, marked with 5 notches on E. and 3  
 notches on S. side; from which  
 An oak, 6 ins. diam., bars N. 35° E., 23 lbs. dist., marked  
 S 23 S 16 17 E S 17 B S.  
 An oak, 6 ins. diam., bars S. 79 1/4° E., 196 lbs. dist., marked  
 S 23 S 16 17 E S 20 B S.  
 An oak, 5 ins. diam., bars S. 48 1/2° N., 188 lbs. dist., marked  
 S 23 S 16 17 E S 19 B S.  
 An oak, 6 ins. diam., bars N. 34° W., 54 lbs. dist., marked  
 S 23 S 16 17 E S 18 B S.  
 Land, mountainous and level.  
 Soil, gravelly loam and stony; 2nd, 3rd and 4th rows.  
 Similar oak.  
 Mountainous or heavily timbered land, 64.00 lbs.

E. on a true line bet. secs. 17 and 20.  
 Over mountainous land, ascending through heavy oak timber.  
 82.00 Enter draw, course N.W.  
 40.00 Set a sandstone, 18 x 10 x 8 ins., 12 ins. in the ground, for  
 1/4 sec. cor. marked 1/4 on N. face; from which  
 An oak, 24 ins. diam., bars S. 27 1/4° N., 61 lbs. dist., marked  
 1/4 S 20 B S.  
 An oak, 24 ins. diam., bars N. 27 1/4° N., 24 lbs. dist., marked  
 1/4 S 17 B S.; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 N. of cor.  
 41.50 Dry wash, 10 lbs. wide, course N. E.

Chains  
 42.00 Draw drain and ascend.  
 47.00 Spur, 100 ft. a low drain, extending NW.; descend.  
 51.70 Draw, 1 ch. wide, course N.E.; ascend.  
 61.80 Spur, extending NW.; descend.  
 71.50 Wire fence, bars N. and S.  
 Enter W. bdy. of the San Rafael de la Ganga land grant at a point from which the 13 mile cor. of the grant bdy. bars N. 2.70 chs. dist.  
 Set a sandstone, 18x8x8 ins., 12 ins. in the ground, for closing cor. of sres. 17 and 20, marked 66 on N., 17 on N., 28 on S., and S 16 10 E 3 on E. face, from which  
 An oak, 20 ins. diam., bears S. 3° W., 161 chs. dist., marked S 23 S 16 17 E S 20 B S.  
 An oak, 10 ins. diam., bears N. 57 1/2° W., 420 chs. dist., marked S 23 S 16 17 E S 17 B S.  
 Land, mountainous and level.  
 Soil, gravelly loam and stony; 2nd, 3rd and 4th rate.  
 Timber, oak.  
 Mountainous or hairy timbered land, 71.50 chs.

N. 89° 57' W., on a random line bet. sres. 18 and 19.  
 40.00 Set timber 1/4 s res. cor.  
 79.30 Intersect W. bdy. of Sp. at cor. of sres. 13, 18, 19 and 24, as before described.  
 Show 3 run  
 E. on a true line bet. sres. 18 and 19.  
 Over mountainous land, ascending through oak timber.  
 23.30 Bridge, bars N. and S. W.; descend through heavy oak timber.  
 28.30 Enter drain, course NW.  
 30.30 Dry wash, 30 chs. wide, course NW.  
 39.30 Set a granite stone, 18x12x10 ins., 12 ins. in the ground, for 1/4 s res. cor. marked 4 on N. face, from which  
 A walnut, 14 ins. diam., bears N. 15 1/4° E., 67 chs. dist., marked 1/4 S 18 13 S.  
 An oak, 8 ins. diam., bears S. 46 3/4° E., 278 chs. dist., marked 1/4 S 19 13 S; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.  
 39.90 Old well, bars 10 chs. N.  
 48.30 Draw drain, ascend.  
 59.20 Spur, extending NW.; descend.

62.80 Bond, bars N.W. and S.W.  
 64.70 Draw, 1 ch. wide, course N.W. ascend.  
 79.30 S hr. cor. of sres. 17, 18, 19 and 20  
 Ground, mountains and level.  
 Soil, gravelly loam and stony; 2nd, 3rd and 4th rats.  
 Timber, oak.  
 Mountains or heavily timbered land, 79.30 etc.  
 October 17: At this cor. I set off  $90^{\circ} 18'$  in the circ.  
 are; and at  $12^h 3^m$  m.t. observe the sun in the meridian; the resulting  
 lat is  $31^{\circ} 25' 27''$   
 ~~$31^{\circ} 26'$~~

S.  $0^{\circ} 03'$  E, bet. sres. 19 and 20.  
 Over mountainous land, ascending through heavy oak timber.  
 4.00 Bridge, bars N.W. and S.W.; ascend.  
 12.75 Gulch, 15 lbs. wide, course N.W.; ascend.  
 16.00 Bridge, bars N.W. and S.W.; ascend.  
 21.75 Gulch 10 lbs. wide course N.W. ascend.  
 22.50 Bridge, bars N.W. and S.W.; stones along E. slope of mountain  
 over spur extending N.W.  
 40.00 Set a sandstone,  $18 \times 8 \times 5$  ins.,  $1\frac{1}{2}$  ins. in the ground, for  $\frac{1}{4}$  sec.  
 cor. marked  $\frac{1}{4}$  on N. face; from which  
 An oak, 6 ins. diam., bars N.  $33^{\circ}$  E., 59 lbs. dist., marked  
 $\frac{1}{4}$  S 20 B S.  
 An oak, 12 ins. diam., bars N.  $15\frac{3}{4}$  W., 98 lbs. dist., marked  
 $\frac{1}{4}$  S 19 B S.; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft.  
 high, N. of cor.  
 46.40 Gulch, 80 lbs. wide, course E.  
 77.40 Gulch, 40 lbs. wide, course E.  
 80.00 Set a granite stone,  $18 \times 8 \times 6$  ins.,  $1\frac{1}{2}$  ins. in the ground, for cor.  
 of sres. 19, 20, 29 and 30, marked with 5 notches on E. and 2  
 notches on S. side; from which  
 An oak, 24 ins. diam., bars N.  $17^{\circ}$  E., 100 lbs. dist., marked  
 S 23 S R 17 E S 20 B S.  
 An oak, 10 ins. diam., bars S.  $68^{\circ}$  E., 155 lbs. dist., marked  
 S 23 S R 17 E S 29 B S.  
 An oak, 6 ins. diam., bars S.  $18\frac{1}{4}$  W., 52 lbs. dist., marked  
 S 23 S R 17 E S 30 B S.  
 An oak, 4 ins. diam., bars N.  $50^{\circ}$  W., 5 lbs. dist., marked  
 S 23 S R 17 E S 19 B S.; and raise a mound of stone, 2 ft. base  
 $1\frac{1}{2}$  ft. high, N. of cor.  
 Ground, mountainous.  
 Soil, gravelly and stony; 3rd and 4th rats.

BOOK 1847

6 chains

Timber, oak.  
Mountainous or heavily timbered land, 80.00 chs.

E. on a true line bet. sec. 20 and 29.  
Over mountainous land, descending through heavy oak  
timber.

- .50 Center draw, course E.
- 24.30 Dry wash, 40 chs. wide, course N.W.
- 26.00 Grass draw, course N.W.; ascend.
- 28.000 Supr. grass N.W. and S.W.; the over rolling land.
- 29.00 Gulch, 40 chs. wide, course N.W.
- 37.40 Gulch, 20 chs. wide, course N.W.
- 40.00 Set a quartz stone, 18 x 10 x 8 ins., 12 ins. in the ground, for  
1/4 sec. cor. marked 4 by N. face; from which  
An oak, 6 ins. diam., bears N. 37° E, 50 chs. dist., marked  
1/4 S 20 B S.  
An oak, 5 ins. diam., bears S. 41 1/2° N., 30 chs. dist., marked  
1/4 S 29 B S.
- 43.000 Gulch, 10 chs. wide, course N.W.
- 49.75 Gulch, 15 chs. wide, course N.W.
- 64.10 Gulch, 20 chs. wide, course N.W.
- 71.40 Intersect N. bay. of the San Rafael de la Guajira land  
grant at a point from the 17 mile cor. of the grant. bay  
bears N. 2.80 chs. dist.  
Set a granite stone, 18 x 10 x 8 ins., 12 ins. in the ground, for  
closing cor. of sec. 20 and 29, marked C C on N., 20 on N.,  
29 on S. and S R D L G on E. face; from which  
An oak, 30 ins. diam., bears S 64 1/2° N., 254 chs. dist., marked  
S 23 S R 17 E S 29 B S.  
An oak, 20 ins. diam., bears N. 5 1/2° N., 74 chs. dist., marked  
S 23 S R 17 E S 20 B S; and raised a mound of stone, 2 ft. base,  
1 1/2 ft. high, N. of cor.  
Wire fence, bears N. and S.  
Land, rolling.  
Soil, gravelly loam and stony; 2nd, 3rd and 4th rates.  
Timber, oak.  
Heavily timbered land, 71.40 chs.

October 17, 1904.

October 18: At 7<sup>h</sup> 30<sup>m</sup> a.m. l.m.t., Boat off <sup>31° 24' 19"</sup>~~31° 25' 17"~~ on the  
lat. arc; <sup>9° 05' 18"</sup>~~9° 03' 33"~~ on the elev. arc; and determine



Chains  
 meridian with the solar at the cor. of sres. 19, 20, 29 and 30.  
 Plumer 3 mm  
 W. in a random line bet. sres. 19 and 30.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 79.40 Enter at N. bay. of Dr. 7 lbs. N. of cor. of sres. 19, 24, 25 and 30, as heretofore described  
 Plumer 3 mm  
 N.  $89^{\circ}57'E$ , on a true line bet. sres. 19 and 30.  
 Over mountainous land, ascending through oak timber and dense brush.  
 39.40 Set a sandstone,  $18 \times 11 \times 6$  ins.,  $1\frac{1}{2}$  ins. in the ground, for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  on N. face, from which  
 An oak, 7 ins. diam., bears N.  $24^{\circ}E$ , 43 lbs. dist., marked  $\frac{1}{4}$  S  $19^{\circ}13S$ .  
 An oak, 8 ins. diam., bears S.  $46^{\circ}E$ , 30 lbs. dist., marked  $\frac{1}{4}$  S  $30^{\circ}13S$ ; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.  
 47.00 Bridge, 600 ft. above cor. of sres. 19, 24, 25 and 30, bears N. and S. W. ascend.  
 69.50 Draw, 2 chs. wide, course W. leave dense brush and ascend.  
 76.00 Bridge, bears N. and S. W.; ascend.  
 79.40 In cor. of sres. 19, 20, 29 and 30.  
 Land, mountainous.  
 Soil, gravelly and stony; 3rd and 4th rates.  
 Timber, oak; undergrowth, oak.  
 Mountainous or land covered with dense undergrowth, 79.40 chs.

S.  $0^{\circ}03'E$ , bet. sres. 29 and 30.  
 Over mountainous land, ascending through heavy oak timber.  
 6.00 Bridge, bears E. and W.; ascend.  
 12.00 Gulch, 20 lbs. wide, course E., ascend.  
 16.00 Bridge, bears E. and W.; ascend.  
 25.00 Gulch, 20 lbs. wide, course S. E.,  
 40.00 Set a sandstone,  $18 \times 8 \times 8$  ins.,  $1\frac{1}{2}$  ins. in the ground, for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  on W. face, from which  
 An oak 6 ins. diam., bears N.  $74\frac{3}{4}^{\circ}E$ , 88 lbs. dist., marked  $\frac{1}{4}$  S  $29^{\circ}13S$ .  
 An oak, 14 ins. diam., bears N.  $53\frac{3}{4}^{\circ}W$ , 102 lbs. dist., marked  $\frac{1}{4}$  S  $30^{\circ}13S$ ; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.  
 52.00 Enter draw, course S. E.

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6 chains  
56.40

Dry wash, 30 lbs. wide, course S. E.

58.00 Draw drain and ascend.

63.50 Bridge, bars N. W. and S. E.; descend.

65.60 Dry wash, 10 lbs. wide, course S. E.; ascend.

76.00 Bridge, bars N. W. and S. E.; descend.

80.00 Set a sandstone, 18x8x7 ins., 12 ins. in the ground, for cor. of sec. 29, 30, 31 and 32, marked with 5 notches on E. and 1 notch on S. edge; from which

An oak, 6 ins. diam., bears N. 60 1/4° E., 136 lbs. dist., marked S 23 S R 17 E S 29 B S.

An oak, 6 ins. diam., bears S. 68 1/4° E., 154 lbs. dist., marked S 23 S R 17 E S 30 B S.

An oak, 6 ins. diam., bears S. 82° W., 138 lbs. dist., marked S 23 S R 17 E S 31 B S.

An oak, 6 ins. diam., bears N. 67 1/2° W., 97 lbs. dist., marked S 23 S R 17 E S 30 B S.; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

Ground, mountainous and level.

Soil, gravelly loam and stony; and, 3rd and 4th rates.

Timber, oak.

Mountainous or heavily timbered land, 80.00 chs.

E. on a true line bet. sec. 29 and 32.

On mountainous land, descending through heavy oak timber.

4.60 Gulch, 20 lbs. wide, course S. E.; ascend.

22.00 Bridge, bars N. W. and S. E.; descend.

40.00 Set a sandstone, 15x10x8 ins., 12 ins. in the ground, for 1/4 cor. marked 1/4 in N. face; from which

An oak, 12 ins. diam., bears N. 35° E., 52 lbs. dist., marked 1/4 S 29 B S.

An oak, 4 1/2 ins. diam., bears S. 11° E., 50 lbs. dist., marked 1/4 S 32 B S.; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

42.50 Draw, 2 chs. wide, course S. E.; ascend.

45.00 Stream, extending S. E.; descend.

46.70 Gulch, 10 lbs. wide, course S. E.; ascend.

51.00 Spar, extending S. E.; descend.

68.00 Enter draw, course S. E.

71.40 Enter set W. bay of the San Rafael or La Zanja land grant at a point from which the 16 mile cor. of the grant

17  
 S. 23 S 17 E S 32 13 S.  
 Srt a sandstone 18 x 12 x 8 ins., 12 ins. in the ground, for closing  
 cor. of sres. 29 and 32, marked 66 in N., 29 on N., 32 on  
 S. and S 16 17 E 3 on E. face, from which  
 An oak, 4 ins. diam., bears S. 40° N., 65 lbs. dist., marked  
 S 23 S 17 E S 32 13 S.  
 An oak, 12 ins. diam., bears N. 14° N., 130 lbs. dist., marked  
 S 23 S 17 E S 29 13 S. and raised a mound of stone, 2 ft.  
 high, 1 1/2 ft. high, W. of cor.  
 Near fence, bears N. and S.  
 Land, mountainous.  
 Soil, gravelly and stony; 3rd and 4th rate.  
 Timber, oak.  
 Mountainous or heavily timbered land, 71.40 lbs.  
 October 18. At this cor. I set off ~~90° 41' S~~ <sup>9° 39' S</sup> on the decl. and  
 and at 12<sup>h</sup> 6<sup>m</sup> l. m. t., observed the sun in the meridian,  
 the resulting lat. is 31° 24' N

S. 89° 57' W., on a random line bet. sres. 30 and 31.  
 40.00 Srt temp. 1/4 sec. cor.  
 79.47 Entered W. bay of Sp. 5 lbs. N. of cor. of sres. 25, 30, 31 and 36,  
 as heretofore described.  
 Shines S. and  
 N. 89° 55' E., on a true line bet. sres. 30 and 31.  
 Over mountainous land, ascending through heavy oak timber.  
 15 Gulch, 10 lbs. wide, course S. E. ascends.  
 8.50 Spur of spur, extending S. E.; ascends.  
 13.80 Gulch, 10 lbs. wide, course N. W.; ascends.  
 15.70 Spur, extending N. W.; ascends.  
 19.90 Gulch, 20 lbs. wide, course N. W.; ascends.  
 21.50 Spur, extending N. W.; ascends.  
 23.20 Gulch, 10 lbs. wide, course N. W.; ascends.  
 28.00 Ridge, bears N. W. and S. W.; ascends.  
 34.90 Enter draw, course S. E.  
 37.80 Draw draw; ascends.  
 38.50 Ridge, bears N. W. and S. E.; ascends.  
 39.47 Srt a sandstone, 18 x 12 x 8 ins., 12 ins. in the ground, for 1/4  
 sec. cor. marked 7 on N. face; from which  
 An oak, 8 ins. diam., bears S. 54° E., 26 lbs. dist., marked  
 1/4 S 31 13 S.  
 An oak, 12 ins. diam., bears N. 31° W., 102 lbs. dist., marked

Chains  
61  $\frac{1}{4}$  S 30° 13' E, and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of eye.

42.60 Gulch, 50 lbs. wide, course S. E.; ascend.

48.10 Spur, extending S. E.; descend.

51.20 Draw, 60 lbs. wide, course S.; ascend.

54.00 Spur, extending S.; descend.

57.80 Gulch, 20 lbs. wide, course S.; ascend.

60.50 Spur, extending S.; descend.

63.60 Gulch, 20 lbs. wide, course S. ascend.

79.47 Sh. cr. of sres. 29, 30, 31 and 32.  
Land, mountainous.  
Soil, gravelly and stony; 3rd and 4th rates.  
Timber, oak.  
Mountainous or heavily timbered land, 79.47 chs.

S. 0° 03' E, on a random line bet. sres. 31 and 32.

40.00 Set temp.  $\frac{1}{4}$  sres. cr.

80.00 Enteract S. body of Sp. at cr. of sres. 5, 6, 31 and 32, as marked, or described.

Shiner P. run

N. 0° 03' W, on a true line bet. sres. 31 and 32.

Over mountainous land, ascending through heavy oak timber.

3.00 Spur, extending S. W.; descend.

4.30 Gulch, 10 lbs. wide, course S. W.; ascend.

12.00 Bridge, bars E. and W.; descend.

20.00 Gulch, 20 lbs. wide, course E.; ascend.

25.50 Bridge, bars E. and W.; descend.

34.50 Gulch, 10 lbs. wide, course S. E.; ascend.

40.00 Set a purpley stone, 18x10x5 ins. 12 ins. in the ground, for  $\frac{1}{4}$  sres. cr. marked  $\frac{1}{4}$  on W. face, from which an oak, 8 ins. diam., bears S. 46 $^{\circ}$  E, 36 lbs. dist., marked  $\frac{1}{4}$  S 32° 13' S.

An oak, 10 ins. diam., bears N. 42 $^{\circ}$  W, 54 lbs. dist., marked  $\frac{1}{4}$  S 31° 13' S, and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of eye.

41.60 Spur, extending S. E.; descend.

45.00 Enter draw, course, S. E.

51.00 Dry wash, 40 lbs. wide, course S. E.

55.00 Draw draw; ascend.

63.00 Bridge, bars N. W. and S. E.; descend.

80.00 Sh. cr. of sres. 29, 30, 31 and 32.

8 chains

Land, mountainous and level.  
Soil, gravelly and stony; 3rd and 4th rate.  
Timber, oak.  
Mountainous or heavily timbered land, 80.00 chs.  
October 18, 1904.

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General Description.

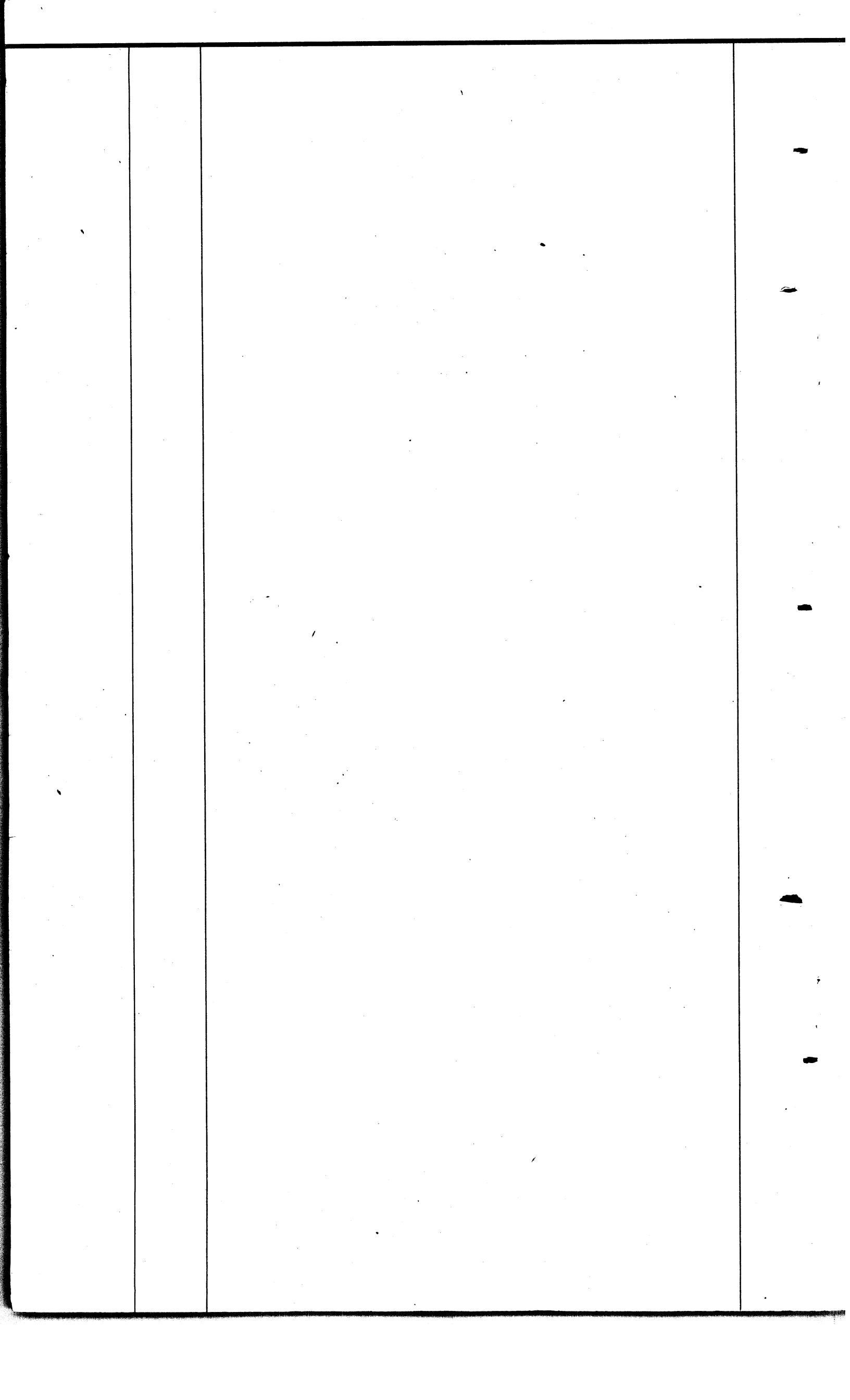
This township is rolling in the east and mountainous in the west. The soil of the eastern portion of the T. is gravelly loam, 2nd and 3rd rate. The soil of the western half of the T. is gravelly and stony, 3rd and 4th rate. The whole T. is covered with a good growth of grass. Oak timber abounds in the western tiers of secs. There are several settlers in the T. The greater part of this T. is included in the San Rafael or La Reina land grant, Martin is located in N.W. 1/4 of sec. 4. -

J. W. Parker is located in S.W. 1/4 of sec. 11.

Philip Coutzen

U.S. Deputy Surveyor.

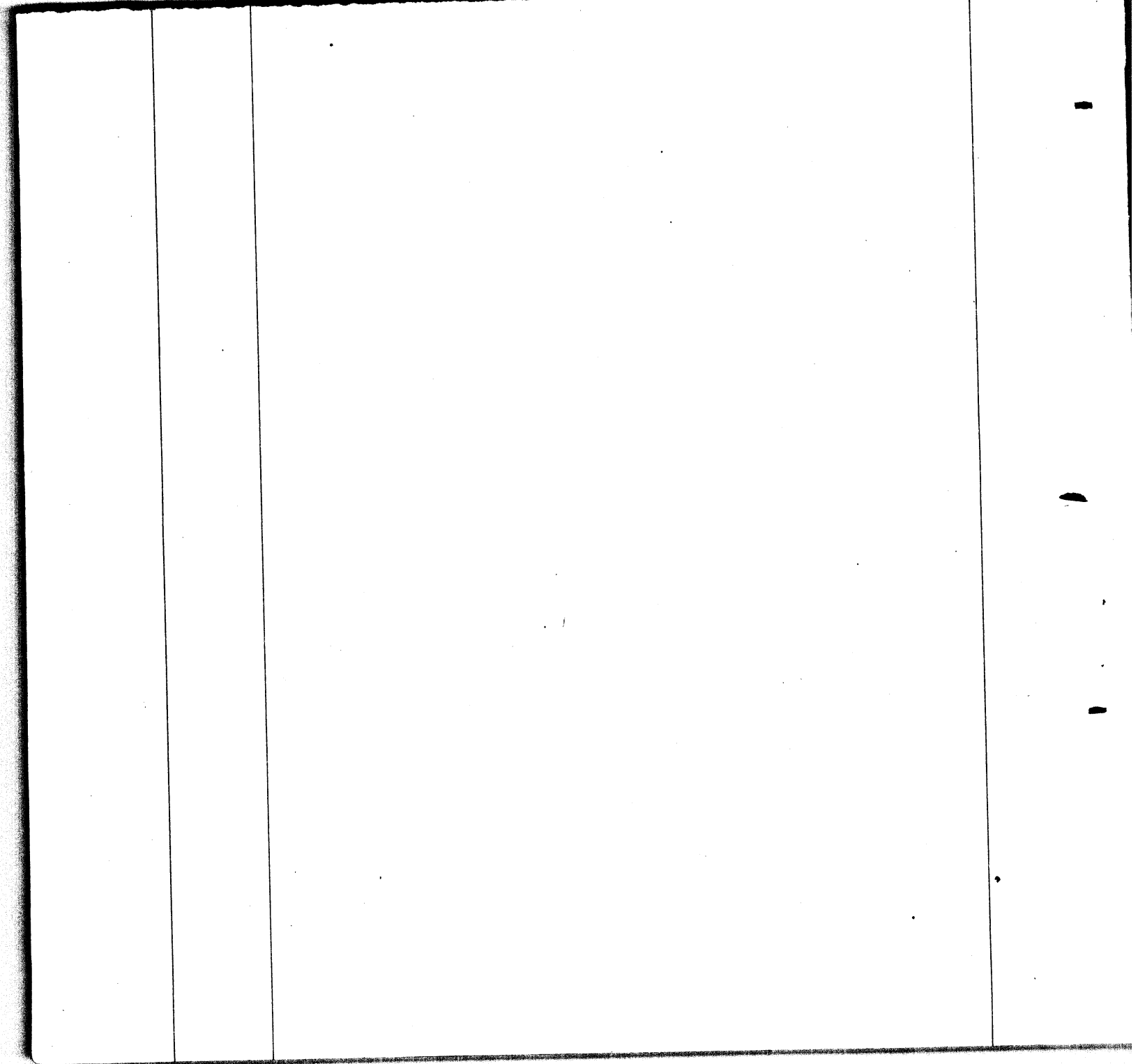
For authority red ink corrections see deputy's letter of Jan'y. 26, 1905.



Boundaries of T. 23 S. R. 17 E.  
 Latitudes, Departures and Closing Errors.

Line Designated	True Bearing	Distance	Latitudes		Departures.	
			N.	S.	E.	W.
North Boundary T. 23 S. R. 17 E.	S. 89° 58' E.	479.00		.28	479.00	
3 <sup>rd</sup> Guide Meridian East	South	214.19		214.19		
Portion of N. Boundary of San Rafael de la Zanja Land Grant	West	328.44				328.44
Portion of West Boundary of San Rafael de la Zanja Land Grant	South	265.87		265.87		
South Boundary T. 23 S. R. 17 E.	West	151.06				151.06
West Boundary T. 23 S. R. 17 E.	North	480.00	480.00			
Convergency					.44	
Totals			480.00	480.34	479.44	479.50
				480.00		479.44
Error in Latitude				0.34	Error in Departure	0.06

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LIST OF NAMES.

A list of the names of the individuals employed by Philip Contzen, 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 subdivisions of T. 23 S. R. 17 E showing the respective capacities in which they acted:

- John M. Trayer, Chainman.
- H. W. Huggins, Chainman.
- Juquin Bonillas, Moundman.
- Manuel Salazar, Moundman.
- Chas. M. Pogue, Axman.
- Tom Jones, Axman.
- Arthur Pogue, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Philip Contzen, United States Deputy Surveyor, in surveying all those parts or portions of the subdivisions of T. 23 S. R. 17 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.

- John M. Trayer, Chainman.
- H. W. Huggins, Chainman.
- Juquin Bonillas, Moundman.
- Manuel Salazar, Moundman.
- Chas. M. Pogue, Axman.
- Tom Jones, Axman.
- Arthur Pogue, Flagman.

Subscribed and sworn to before me this 17th day of December, 1894

H. S. Power, NOTARY PUBLIC, PIMA COUNTY, ARIZONA, MY COMMISSION EXPIRES April 27<sup>th</sup> 1908



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I, Philip Contzen United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank S. Ingalls United States Surveyor General for Arizona, bearing date of the 15<sup>th</sup> day of March, 1894, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for Arizona, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the Subdivision lines of T. 23 S. R. 17 E

of the Gila & Salt River meridian, in the Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

Philip Contzen  
United States Deputy Surveyor.

Subscribed by said Philip Contzen, and sworn to before me }  
this 17<sup>th</sup> day of December, 1894

Clinton D. Hoover,  
<sup>U.S.</sup>  
Clerk District Court,  
First District of Arizona.



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, A.T. March 31, 1905  
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The foregoing field notes of the survey of Subdivisional lines of T. 23 S. R. 17 E. of the Gila and Salt River Base and Meridian in the Territory of Arizona

executed by Philip Contzen, U.S. Deputy Surveyor under his contract No. 115, dated March 15, 1904, 189, 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.