

*Conf. Hesse 1/07*  
*Co. V. 167*  
*(1)*

*Book "F"*

**2058**

BOOK 2058

# FIELD NOTES

RE  
OF THE SURVEY OF THE

Subdivision lines of Tp. 22 S. Rg. 16 E.

**2058**

**2058**

**2058**

Of the Gila and Salt River Meridian,  
Territory of Arizona.

AS SURVEYED BY

John F. Hesse, United States Deputy Surveyor

Under his Contract No. 142, dated November 10, 1906

Survey commenced July 13, 1907

Survey completed July 25, 1907

**2058**

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1A

BOOK 2058

NAMES AND DUTIES OF ASSISTANTS.

A. N. Oliver Chairman

T. E. Manning Chairman

Joaquin Quiroga Axman

R. M. Smith Flagman

BOOK 2058

Book No. 2058

INDEX DIAGRAM.

Township 22 S, Range 16 E

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PRELIMINARY OATHS OF ASSISTANTS.

WE, A. N. Oliver and T. E. Manning do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain upon even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of the subdivision lines of Tp. 22 S. Rg. 16 E.

A. N. Oliver, Chainman.  
T. E. Manning, Chainman.

Subscribed and sworn to before me this 8th day of July, 1907



John P. Hesse  
U.S. Deputy Surveyor

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

\_\_\_\_\_, Moundman.  
\_\_\_\_\_, Moundman.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 190 \_\_\_\_\_



WE, I. Jouquin Quiroga 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 me, to the best of my skill and ability, in the survey of the subdivision lines of Tp. 22 S. Rg. 16 E.

Jouquin Quiroga, Axman.  
\_\_\_\_\_, Axman.

Subscribed and sworn to before me this 8th day of July, 1907



John P. Hesse  
U.S. Deputy Surveyor

I, R. M. Smith, 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 Tp. 22 S. Rg. 16 E.

R. M. Smith, Flagman.

Subscribed and sworn to before me this 8th day of July, 1907



John P. Hesse  
U.S. Deputy Surveyor

No notary available without loss of time and great expense.

Subdivision of Tp. 22 S. Rg. 16 E.

Chains.

Survey commenced July 13, 1907, and executed with a Young and Sons light mountain transit, No. 7532, with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

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

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

At the south end of the meridian established by me July 9, and which was permanently established I set off 31° 33' N. on the lat. arc; 21° 58' N. on the dec'l. arc; and, at 7h. 00m. a.m., l.m.t., mark a point in the meridian determined with the solar, by a cross on the stone set 5 chs. N. of my station; this mark coincides with the meridian established by the Polaris observation.

At 3h. 00m. p.m., l.m.t., I set off 31° 33' N. on the lat. arc; 21° 55' N. on the dec'l. arc; and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of my station; this mark coincides with the meridian established by the Polaris observation.

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

The magnetic bearing of the true meridian at 7h. 15m. a.m., is N. 13° 21' W.; the angle thus determined gives the mean mag. dec'l. 13° 21' E.

July 13, 1907.

July 14; At 7h. 00m. a.m., l.m.t., I set off 31° 32' N. on the lat. arc; 21° 49 1/2' N. on the dec'l. arc; and determine a meridian with the solar at the cor. of secs. 1, 6, 7 and 12 on the west boundary of the township.

Thence I run

East on sectional correction line bet. secs. 6 and 7.

- 0.05 Over level land.
- 0.05 Cross fence bears N. W. and S. E.
- 0.65 Cross fence bears N. and S.
- 2.00 Cross road bears N. and S.
- 4.27 Cross drain 10 lks. wide course S.
- 5.38 Right bank of Sonoita Creek, dry, course S. W.
- 6.72 Left bank of Sonoita Creek.
- 15.50 Cross fence bears N. and S.
- 17.50 Cross fence bears N. W. and S. E.
- 18.30 Cross levee, bears S. W. and N. E.
- 20.00 Left bank of Sonoita Creek, dry, course N. W.
- 20.65 Cross fence bears N. and S.
- 21.75 Right bank of Sonoita Creek.
- 22.88 Cross fence bears N. W. and S. E.
- 27.71 A point from which
  - S. W. cor. G. Piper's house bears N. 40 1/2° W. 3.42 chs.
  - Adobe house N. 72° E.
  - A. E. Crepin's house N. 79° E.
  - Cross on Catholic Church bears S. 42 1/2° W.
  - Smokestack on smelter bears S. 22° E.
- 33.27 Cross fence bears N. W. and S. E.
- 33.67 Cross road bears N. W. and S. E.
- 33.99 Cross fence bears N. W. and S. E.
- 34.44 Cross road bears N. E. and S. W.
- 37.55 Set a malpais stone 16 x 16 x 6 ins. 11 ins. in the ground for 1/4 sec. cor. marked 1/406 on N. face; from which
  - A mesquite 4 ins. diam., bears N. 83 3/4° E. 326 lks. dist., marked 06 1/4 S6BT.
  - A mesquite 8 ins. diam., bears S. 21 3/4° E. 56

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- 10.00 From true point for cor. MI take the following bearings.  
 20.72 Adobe house bears N. 21 1/2° W.  
 45.77 Adobe Crepans house bears N. 35° E.  
 Cross on Catholic Church bears S. 65 1/4° W.  
 Smokestack on Smelter bears S. 14 1/4° W.  
 42.97 Cross fence bears N. E. and S. W.  
 43.73 Cross road bears N. E. and S. W.  
 45.77 Cross fence bears N. E. and S. W.  
 46.03 Cross telegraph line bears N. E. and S. W.  
 47.17 Cross Southern Pacific Railroad track, bears N. E. and S. W.  
 47.75 Cross fence bears N. E. and S. W.  
 48.20 Cross levee bears N. E. and S. W.  
 56.65 Right bank of Sonoita Creek, dry, course S. W.  
 58.57 Left bank of Sonoita Creek.  
 66.00 Right bank of Harshaw wash, dry, 60 lks. wide, course S. 85° W. and along in same.  
 77.55 Point for cor. of secs. 5, 6, 7, and 8 falls in bed of wash.  
 Land, level.  
 Soil, loamy, 1st. rate.  
 No timber.  
 July 14; At this cor. I set off 21° 47' N. on the dec'l. arc; and observe the sun on the meridian at noon, the resulting lat. is 31° 32' N.
- 
- East on sectional correction line bet. secs. 5 and 8  
 From true point for cor.  
 Along in wash.  
 9.25 Leave wash at point of confluence with Red Rock wash  
 Harshaw wash bears S. 85° E. and Red Rock N. E.  
 19.00 Set a limestone 18 x 10 x 10 ins. 12 ins. in the ground  
 for witness cor. of secs. 5, 6, 7, and 8, marked W06  
 on N. E. with 5 notches on S. and E. edges; dig pits  
 18 x 18 x 12 ins. in each sec. 5 1/2 ft. dist., and  
 raise a mound of earth 4 ft. base, 2 ft. high, W. of cor.  
 33.35 Cross fence bears N. W. and S. E.  
 35.66 Left bank of Red Rock wash, dry, course N. W.  
 38.58 Right bank of Red Rock wash.  
 40.00 Set a granite stone 20 x 10 x 6 ins. 15 ins. in the  
 ground for 1/4 sec. cor., marked 1/406 on N. face; from which  
 A mesquite 10 ins. diam., bears N. 20 1/4° E. 76  
 dist., marked 06 1/4 S5BT.  
 A mesquite 10 ins. diam., bears S. 82° E. 244  
 lks. dist., marked 06 1/4 S8BT.  
 42.00 Ascend S. W. slope.  
 43.37 Cross fence bears S W. and N. E.  
 47.00 Over mesa through scattering mesquite.  
 61.74 Cross fence bears N. and S.  
 69.20 Cross drain in ravine course S.  
 74.20 Cross drain in ravine course S.  
 80.00 Set a granite stone 18 x 10 x 8 ins. 12 ins. in the ground  
 for cor. of secs. 4, 5, 8 and 9, marked 06 on N. E. face,  
 with 5 notches on S. and 4 notches on E. edges; and  
 raise a mound of stone 2 ft. base, 1 1/2 ft. high W. of  
 cor. Pits impracticable.  
 This cor. is identical with the old cor. which I destroy.  
 Land, level, and hilly.  
 Soil, loamy and stony; 1st. and 3rd. rate.  
 No timber.  
 Undergrowth, mesquite.

July 14, 1907.

July 15; At 7h. 00m. a.m., l.m.t., I set off 31° 32' N.  
 on the lat. arc; 21° 41' N. on the dec'l. arc; and  
 determine a meridian with the solar at the cor. of secs.  
 4, 5, 8, and 9.  
 Thence I run

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Chains.

East on a sectional correction line bet. secs. 4 and 9.  
 Over mesa.  
 1.00 Descend.  
 3.30 Cross wash 15 lks. wide course S.  
 7.00 Cross wash 6 lks. wide course S. W. and ascend.  
 10.00 Over mesa.  
 12.88 E. P Cook's house bears S. 52 1/2° E.  
 19.20 Cross wash 5 lks. wide course S.  
 26.63 E. P. Cook's house bears S. 26° E.  
 W. C. Fortune's house bears N. 36° E. 12.60 chs. dist.  
 27.00 Descend N. E. slope into valley.  
 33.00 Enter valley and over level land through dense sacaton  
 and mesquite brush.  
 35.00 Right bank of Red Rock wash, dry, course S.  
 36.50 Left bank of Red Rock wash.  
 40.00 Set a granite stone 18 x 6 x 6 ins. 12 ins. in the ground  
 for 1/4 sec. cor. marked 1/4 06 on N. face; from which  
 A mesquite 4 ins. diam., bears S. 58° W. 191  
 lks. dist., marked 06 1/4 S9BT.  
 A mesquite 4 ins. diam., bears N. 35° W. 83  
 lks. dist., marked 06 1/4 S4BT.  
 From this cor., the old cor., which I destroy bears N.  
 24° W. 74 lks. dist.  
 44.86 Cross fence bears N. W. and S. E.  
 45.50 Cross wash 12 lks. wide course S. W.  
 46.00 Leave brush, ascend steep N. W. slope through oak timber.  
 55.00 Along N. slope.  
 57.00 Descend steep N. E. slope.  
 62.20 Cross wash 15 lks. wide course N. W. and ascend steep  
 W. slope.  
 70.00 Leave timber.  
 80.00 Set a granite stone 18 x 6 x 6 ins. 12 ins. in the ground  
 for cor. of secs. 3, 4, 9 and 10, marked 06 on N. E. face  
 with 5 notches on S. and 3 notches on E. edges; and  
 raise a mound of stone 2 ft. base, 1 1/2 ft. high W. of  
 cor. Pits impracticable.  
 Land, level and mountainous.  
 Soil, loamy, stony and rocky; 1st., 3rd, and 4th. rate.  
 Timber, oak.  
 Undergrowth, mesquite and sacaton.  
 Mountainous land and land covered with dense undergrowth  
 80.00 chs.  
 At this cor. I set off 21° 38' N. on the dec'l. arc; and  
 observe the sun on the meridian at noon July 15, the  
 resulting lat. is 31° 32' N.

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East on a sectional correction line bet. secs. 3 and 10  
 Ascending steep W. slope.  
 8.00 Ridge bears N. W. and S. and descend through oak timber.  
 38.80 Cross wash 20 lks. wide course N. E. and ascend.  
 40.00 Set a granite stone 18 x 12 x 6 ins. 12 ins. in the ground  
 for 1/4 sec. cor., marked 1/4 06 on N. face; from which  
 An oak 10 ins. diam., bears S. 16° W. 28 lks.  
 dist., marked 06 1/4 S10BT.  
 An oak 18 ins. diam., bears N. 50° W. 79 lks.  
 dist., marked 06 1/4 S3BT.  
 50.00 Along steep S. slope, leave timber.  
 70.00 Descend Steep S. E. slope.  
 80.00 Set a granite stone 18 x 8 x 6 ins. 12 ins. in the ground  
 for cor. of secs. 2, 3, 10 and 11, marked 06 on N. E.  
 face, with 5 notches on S. and 2 notches on E. edges,  
 from which  
 An oak 8 ins. diam., bears N. 60° W. 150 lks.  
 dist., marked 06T22SR16ES3BT.  
 No other trees available. Raise a mound of stone 2 ft.  
 base 1 1/2 ft. high, W. of cor. Pits impracticable.  
 Land, mountainous.  
 Soil, stony; 3rd. rate  
 Timber, oak.  
 Mountainous land, 80.00 chs.

Chains.

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July 16; At 7h. 00m. a.m., l.m.t., I set off  $31^{\circ} 32' N.$  on the lat. arc;  $21^{\circ} 31 \frac{1}{2}' N.$  on the dec'l. arc; and determine a meridian with the solar at the true point for cor. of secs. 5, 6, 7, and 8. true

Thence I run  
 North on a random line bet. secs. 5 and 6.  
 40.00 Set temp  $\frac{1}{4}$  sec. cor.  
 79.13 Intersect N. bdy. of Tp. 7 lks. E. of the cor. of secs. 5, 6, 31 and 32.  
 Thence I run  
 S.  $0^{\circ} 03' E.$  on a true line bet. secs. 5 and 6.  
 Descending along steep S. E. slope.  
 9.00 Cross wash 10 lks. wide course S. W. and ascend N. W. slope  
 13.25 Ridge bears N. E. and S. W. and descend  
 19.35 Cross wash 6 lks. wide course S. W. and ascend.  
 23.50 Ridge bears N. E. and S. W. and descend.  
 31.30 Cross wash 6 lks. wide course S. W. and ascend.  
 33.80 Point ridge bears N. E. and S. W. and descend.  
 38.94 Cross fence bears E. and W. and over level land.  
 39.13 Set a blue sand stone  $24 \times 14 \times 14$  ins. 18 ins. in the ground for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4} 06$  on W. face, from which  
     A mesquite 8 ins. diam., bears N.  $45^{\circ} W.$  231 lks. dist., marked  $06 \frac{1}{4} S6BT.$   
     A mesquite 4 ins. diam., bears S.  $20^{\circ} E.$  445 lks. dist., marked  $06 \frac{1}{4} S5BT.$   
 40.90 Cross wash 10 lks. wide course S. E.  
 45.50 Along on side of hill.  
 53.00 Over level land.  
 56.41 Cross fence bears N. E. and S. W.  
 57.75 Cross road bears N. E. and S. W.  
 58.32 Cross fence bears N. E. and S. W.  
 58.80 Cross telegraph line bears N. E. and S. W.  
 59.30 Cross Southern Pacific Railroad track bears N. E. and S. W.  
 60.22 Cross fence bears N. E. and S. W.  
 62.10 Irrigating ditch 8 lks. wide course S. W.  
 63.00 Right bank of Sonoita Creek dry, course S. W.  
 64.65 Left bank of Sonoita Creek  
 79.13 The point for cor. of secs. 5, 6, 7 and 8.  
 Land, mountainous and level.  
 Soil, loamy and stony; 1st. and 3rd. rate.  
 No timber.  
 July 16: At this cor. I set off  $21^{\circ} 28 \frac{1}{2}' N.$  on the dec'l. arc; and observe the sun on the meridian at noon, the resulting lat. is  $31^{\circ} 32' N.$

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From the cor. of secs. 4, 5, 8, and 9 I now run  
 North on a random line bet. secs. 4 and 5.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 79.49 Intersect N. bdy. of Tp. 45 lks. E. of the cor. of secs. 4, 5, 32 and 33.  
 Thence I run  
 S.  $0^{\circ} 19' E.$  on a true line bet. secs. 4 and 5.  
 Descend.  
 0.50 Cross wash 5 lks. wide course S. W. and ascend.  
 9.40 Ridge bears N. E. and S. W. and descend.  
 25.00 Cross wash 10 lks. wide course S. W. and over flat.  
 29.00 Cross wash 6 lks. wide course W. and ascend.  
 39.49 Set a granite stone  $18 \times 10 \times 6$  ins. 12 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4} 06$  on W. face; and raise a mound of stone 2 ft. base  $1 \frac{1}{2}$  ft. high W. of cor.  
 Pits impracticable.  
 39.89 Cross fence bears E. and W.  
 44.20 Ridge bears N. E. and S. W. and descend S. E. slope.  
 55.50 Cross drain 5 lks. wide course E. and descend along E. slope.  
 64.50 Cross drain 5 lks. wide course E.  
 71.50 Cross drain 5 lks. wide course E.  
 73.50 Cross drain 5 lks. wide course E.  
 77.50 Over mesa.  
 79.49 The cor. of secs. 4, 5, 8, and 9.  
 Land mountainous and level.



Subdivision of Tp. 22 S. Rg. 16 E.

Chains.

Soil, stony; 3rd; rate.  
No timber.  
Mountainous land 73.49 chs.

July 16, 1907.

July 17; At 7h. 00m. a.m., l.m.t., I set off 31° 32' N. on the lat. arc; 21° 21 1/2' N. on the dec'l. arc; and determine a meridian with the solar at the cor. of secs. 3, 4, 9 and 10.

Thence I run

North on a random line bet. secs. 3 and 4.

40.00

Set temp. 1/4 sec. cor.

30.12

Intersect N. bdy. of Tp. 55 lks. E. of the cor. of secs. 3, 4, 33 and 34; I return to the cor. of secs. 3, 4, 9 and 10

Thence I run

North on a true line bet. secs 3 and 4.

Ascend along steep S. W. slope.

12.00

Ridge bears N. W. and S. E. and descend steep N. E. slope through scattering oak timber.

27.00

Cross wash 6 lks. wide course N. W.

28.20

Cross wash 10 lks. wide course W.

35.50

Cross wash 10 lks wide course N. W.

40.00

Set a granite stone 18 x 14 x 6 ins. 12 ins. in the ground for 1/4 sec. cor., marked 1/4 06 on W. face, from which

An oak 4 ins. diam., bears S. 76 1/2° W. 109 lks. dist., marked 06 1/4 S4BT.

An oak 8 ins. diam., bears N. 40° E. 208 lks. dist., marked 06 1/4 S3BT.

45.00

Left bank of Red Rock Wash dry course W.

49.42

Right bank of Red Rock wash, and ascend.

80.12

Intersect N. bdy. of Tp. 55 lks. E. of cor. of secs. 33 and 34 and set a granite stone 18 x 10 x 6 ins. 12 ins. in the ground for closing cor. of secs. 3 and 4, marked CC 06 on S. face, with 3 grooves on E. and W. faces; from which

An oak 6 ins. diam., bears S. 19 1/2° E. 136 lks. dist., marked CC06T22SR16ES3BT.

An oak 6 ins. diam., bears S. 35 1/2° W. 197 lks. dist., marked CC06T22SR16ES4BT.

Land, mountainous.

Soil rocky; 4th. rate.

Timber, oak.

Mountainous land, 80.12 chs.

July 17; At this cor. I set off 21° 19' N. on the dec'l. arc; and observe the sun on the meridian at noon, the resulting lat. is 31° 33' N.

From the cor. of secs. 2, 3, 10 and 11 I now run North bet. secs. 2 and 3.

Ascend steep S. E. slope.

8.00

Top of mountain ridge bears E. and W. and descend steep N. slope, through scattering oak timber.

40.00

Set a granite stone 18 x 10 x 6 ins. 12 ins. in the ground for 1/4 sec. cor., marked 1/4 06 on W. face, and raise a mound of stone 2 ft. base, 1 1/2 ft. high W. of cor. pits impracticable.

40.10

Cross wash 6 lks. wide course N. E.

43.25

Cross wash 10 lks. wide course N. E.

51.50

Cross wash 10 lks. wide course N. E.

61.82

Left Bank of RedRock wash course W.

63.00

Right bank of Red Rock wash, and ascend.

68.40

Cross wash 100 lks. wide course S. W.

80.20

Intersect N. bdy. of Tp. 1.40 chs. E. of the cor. of secs. 34 and 35, and set a granite stone 24 x 8 x 8 ins. 18 ins. in the ground for closing cor. of secs. 2 and 3, marked CC06 on S, with 2 grooves on E. and 4 grooves on W. faces; from which

An oak 14 ins. diam., bears S. 28° E. 109 lks. dist., marked CC06T22SR16ES2BT

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An oak 6 ins. diam., bears S. 19 3/4° W 166  
lks. dist., marked CC06T22SR16ES3BT.  
Land, mountainous.  
Soil, rocky, 4th. rate.  
Timber, oak.  
Mountainous land, 80.20 chs.

July 17, 1907.

July 18; At 7h. 00m. a.m., l.m.t., I set off 31° 32' N. on the lat. arc; 21° 11 1/2' N. on the dec'l. arc; and determine a meridian with the solar at the cor. of secs. 5, 6, 7 and 8.  
Thence I run  
S. 0° 03' E. bet. secs. 7 and 8, from true point for cor.  
0.20 Center of Harshaw wash 60 lks. wide course W.  
1.00 Set a granite stone 20 x 8 x 8 ins. 15 ins. in the ground for witness cor. of secs. 5, 6, 7, and 8, marked WC06 on N. E. face; with 5 grooves on S. and E. edges; dig pits 18 x 18 x 12 ins. in each sec. 5 1/2 ft. dist. and raise a mound of earth 4 ft. base, 2 ft. high W. of cor.  
Thence over level land.  
18.62 Cross fence bears E. and W.  
19.10 Cross road bears E. and W.  
19.50 Telephone line bears E. and W.  
19.56 Cross fence bears E. and W.  
23.00 Ascend.  
29.50 Over mesa.  
33.10 Cross drain 5 lks. wide course N. W.  
40.00 Set a malpais stone 18 x 8 x 6 ins. 12 ins. in the ground for 1/4 sec. cor. marked 1/4 06 on W. face; and raise a mound of stone 2 ft. base 1 1/2 ft. high, W. of cor. Pits impracticable.  
48.00 Cross wash 8 lks. wide course N. W.  
59.85 Cross wash in ravine 10 lks. wide course W.  
74.90 Cross wash 10 lks. wide course N. W.  
79.35 Cross fence bears E. and W.  
80.00 Set a granite stone 18 x 12 x 4 ins. 12 ins. in the ground for cor. of secs. 7, 8, 17 and 18, marked 06 on N. E. face, with 4 notches on S. and 5 notches on E. edges; and raise a mound of stone 2 ft. base, 1 1/2 ft. high W. of cor. Pits impracticable.  
From this cor. a granite stone marked with 4 grooves on S and 5 grooves on E. faces set firmly in the ground with a mound of stone W. of it bears S. 76° 15' E. 183 lks. dist.  
Land level and hilly.  
Soil, loamy and stony; 1st. and 2nd. rate.  
No timber.

West bet secs. 7 and 18.  
Over mesa.  
2.31 Cross fence bears S. 75° W. and N. 75° E.  
9.65 Cross wash 10 lks. wide course N. and ascend.  
13.50 Ridge bears N. and S. and descend.  
15.00 ascend along N. E. slope.  
16.88 Intersect E. bdy. of the San Jose de Sonoita P. L. G. 9.41 chs. S. 56° 25' W. of the S.E. corner of Grant survey, and set a granite stone 18 x 14 x 8 ins. 12 ins. in the ground for closing cor. of secs. 7 and 18, marked CC06 on E., SJDS on W., with 4 grooves on S. faces; from which  
An oak 6 ins. diam., bears N. 85 3/4° E. 95 lks. dist., marked CC06T22SR16ES7BT.  
An oak 8 ins. diam., bears S. 35 1/4° E. 45 lks. dist., marked CC06T22SR16ES18BT.  
The old closing cor. which I destroy bears S. 56° 25' W. 73 lks. dist.  
Land, level and hilly.  
Soil, stony; 2nd rate.  
No timber.

Subdivision of Tp. 22 S. Rg. 16 E.

Chains

At this cor. I set off  $21^{\circ} 08' 1/2''$  N. on the dec'l. arc; and observe the sun on the meridian at noon July 18, the resulting lat. is  $31^{\circ} 31' 1/2''$  N.

- From the cor. of secs. 4, 5, 8 and 9 I now run S.  $0^{\circ} 02'$  E. bet. secs. 8 and 9.  
Over mesa descending.
- 6.75 Cross wash 8 lks. wide course S. W.
  - 14.50 Enter valley and over level land through scattering mesquite.
  - 16.10 Right bank of Red Rock wash course W.
  - 17.00 Left bank of Red Rock wash.
  - 20.00 A point from which Mrs. W. C. Fortune's house bears S.  $59' 1/4''$  W.  
James Brash's house bears S.  $73' 1/4''$  W.
  - 21.55 Cross road bears N. E. and S. W.
  - 28.00 Cross wash 100 lks. wide course W.
  - 30.00 Ascend.
  - 32.50 Top ridge bears E. and W. and descend.  
From this point Mrs W. C. Fortune's house bears N.  $60^{\circ}$  W.  
James Brash's house bears S.  $88^{\circ}$  W.
  - 32.90 A point from which G. A. Fiedler's house bears S.  $42^{\circ}$  W.  
S. L. Parke's house bears S.  $65^{\circ}$  W.
  - 35.00 Bottom of ridge and over level land.
  - 35.97 Cross fence bears E. and W.
  - 38.00 Over little point.
  - 40.00 Set a granite stone 18 x 10 x 6 ins. 12 ins. in the ground for  $1/4$  sec. cor. marked  $1/4$  06 on W. face; from which
    - A mesquite 4 ins. diam., bears S.  $36^{\circ}$  W. 266 lks. dist., marked 06  $1/4$  S8BT.
    - A mesquite 4 ins. diam., bears S.  $60^{\circ}$  E. 66 lks. dist., marked 06  $1/4$  S9BT.
- From this cor. G. A. Fiedler's house bears S.  $65^{\circ}$  W.  
S. L. Parke's house bears S.  $75^{\circ}$  W.
- 45.20 Cross fence bears E. and W.
  - 45.27 Cross telephone line bears E. and W.
  - 45.40 Cross road bears E. and W.
  - 50.53 Cross ditch 5 lks. wide course W.
  - 53.60 Cross Harshaw wash 100 lks. wide course W.
  - 54.20 Cross fence bears E. and W.
  - 60.20 Leave valley and ascend.
  - 67.80 Cross wash 10 lks. wide course N. E.
  - 70.50 Cross wash 6 lks. wide course N. E.
  - 78.00 Cross wash 6 lks. wide course N. E.
  - 80.00 Set a malpais stone 20 x 16 x 10 ins. 15 ins. in the ground for cor. of secs. 8, 9, 16 and 17, marked 06 on N. E. face, with 4 notches on S. and E. edges; from which
    - An oak 10 ins. diam., bears N.  $34' 1/2''$  E. 62 lks. dist., marked 06T22SR16ES9BT.
    - An oak 6 ins. diam., bears S.  $4' 3/4''$  E. 234 lks. dist., marked 06T22SR16ES16BT
    - An oak 12 ins. diam., bears S.  $78' 1/2''$  W. 111 lks. dist., marked 06T22SR16ES17BT.
    - An oak 10 ins. diam., bears N.  $32^{\circ}$  W. 42 lks. dist., marked 06T22SR16ES8BT.
- Land, level and mountainous.  
Soil, loamy and stony; 1st. and 3rd. rate.  
No timber.  
Scattering mesquite.  
Mountainous land 24.80 chs.
- 
- 40.00 West on a random line bet. secs. 8 and 17  
Set temp.  $1/4$  sec. cor.
  - 80.12 Intersect N. and S. line 21 lks. N. of the cor. of secs. 7, 8, 17, and 18.  
Thence I run  
N.  $89^{\circ} 51'$  E. on a true line bet. secs. 8 and 17.  
Over mesa.

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chains.  
 13.00 Cross wash in ravine 10 lks. wide course N.  
 15.33 Cross canal 30 lks. wide course N.  
 34.27 Cross fence bears N. and S.  
 35.90 Cross wash 10 lks. wide course N.  
 39.60 Cross drain 6 lks. wide course N.  
 40.06 Set a limestone 18 x 8 x 6 ins. 12 ins. in the ground  
 for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  06 on N. face; from which  
     A juniper 12 ins. diam., bears N. 45° E. 51  
     lks. dist., marked 06 $\frac{1}{4}$ S8BT.  
     An oak 5 ins. diam., bears S. 2 1/2° E. 98  
     lks. dist., marked 06 $\frac{1}{4}$ S17BT.  
 Thence through scattering timber.  
 42.50 Cross wash 8 lks. wide course N.W.  
 50.00 Cross wash 10 lks. wide course N.  
 80.12 The cor. of secs. 8, 9, 16 and 17.  
 Land, nearly level mesa.  
 Soil, stony; 3rd. rate.  
 Timber, oak.

July 18, 1908

July 19; At 7h. 00m. a.m., l.m.t., I set off 31° 32' N. on the lat. arc; 21° 01' N. on the dec'l. arc; and determine a meridian with the solar at the cor. of secs. 3, 4, 9 and 10.

Thence I run

S. 0° 02' E. bet. secs. 9 and 10  
 Descend along S. W. slope of mountain  
 8.30 Cross wash 10 lks. wide course W.  
 16.10 Cross wash 6 lks. wide course W.  
 17.45 Cross wash 6 lks. wide course W.  
 28.00 Cross wash 6 lks. wide course W.  
 29.30 Cross wash 6 lks. wide course W.  
 40.00 Set a granite stone 18 x 14 x 3 ins. 12 ins. in the  
 ground for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  06 on W. face; from  
 which  
     An oak 6 ins. diam., bears S. 45° W. 167  
     lks. dist., marked 06 $\frac{1}{4}$ S9BT.  
     A mesquite 6 ins. diam., bears N. 73° E. 179.  
     lks. dist., marked 06 $\frac{1}{4}$ S10BT.  
 41.60 Cross wash 8 lks. wide course W. and ascend.  
 44.00 Ridge bears E. and W. and descend.  
 47.70 Cross wash 6 lks. wide course W. and ascend.  
 50.00 Ridge bears E. and W. and descend.  
 52.45 Cross wash 6 lks. wide course W. and ascend.  
 57.85 Cross wash 6 lks. wide course W.  
 60.00 Ridge bears E. and W. and descend.  
 61.70 Cross wash 6 lks. wide course W. and ascend.  
 64.00 Cross ridge bears E. and W. and descend.  
 64.25 Cross road bears E. and W.  
 65.90 Cross wash 8 lks. wide course W. and ascend.  
 71.35 Ridge and old road bears S. W. and N. E. and desc.  
 77.50 Cross wash 8 lks. wide course S. W. and ascend through  
 dense mesquite brush.  
 78.80 Top spur and descend.  
 79.25 Cross wash 8 lks. wide course W. and ascend.  
 80.00 Set a porphyry stone 18 x 8 x 4 ins. 12 ins. in the  
 ground for cor. of secs. 9, 10, 15 and 16, marked 06 on  
 N. E. face, with 4 notches on S. and 3 notches on E.  
 edges; from which  
     An oak 14 ins. diam., bears N. 46° E. 94  
     lks. dist., marked 06T22SR16ES10BT.  
     An oak 12 ins. diam., bears S. 83 $\frac{1}{4}$ ° E. 59  
     lks. dist., marked 06T22SR16ES15BT.  
     An oak 10 ins. diam., bears S. 0° 15' W. 396  
     lks. dist., marked 06T22SR16ES16BT.  
     A mesquite 4 ins diam., bears N. 68° W. 105  
     lks. dist., marked 06T22SR16ES9BT.  
 Land, mountainous.  
 Soil, stony; 3rd. rate.  
 No timber.  
 Mountainous land, 80.00 chs.

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Chains.

July 19: At this cor. I set off 20° 58' N. on the dec'l. arc; and observe the sun on the meridian at noon, the resulting lat. is 31° 31 1/2' N. ✓

- 40.00 West on a random line bet. secs. 9 and 16.
- 79.90 Set temp. 1/4 sec. cor.
- Intersect N. and S. line 3 lks. S. of the cor. of secs. 8, 9, 16 and 17,
- Thence I run
- S. 89° 59' E. on a true line bet. secs. 9 and 16.
- Along N. E. slope of mountain.
- 3.75 Cross wash 10 lks. wide course N. E.
- 9.00 Cross wash 10 lks. wide course N. E.
- 11.20 Cross wash 10 lks. wide course N.
- 13.00 A shaft bears N. 30 lks. dist.
- 14.50 Cross wash 12 lks. wide course N. W.
- 27.80 Cross wash 10 lks. wide course N.
- 29.00 Cross wash 8 lks. wide course N.
- 32.00 Hoist frame bears S. 37 1/2° E. 7.00 chs.
- Tent bears S. 48° E. 3.50 chs.
- 38.30 Cross wash 6 lks. wide course N.
- 39.40 Cross drain 5 lks. wide course N.
- 39.95 Set a blue porphyry stone 18 x 8 x 6 ins. 12 ins. in the ground for 1/4 sec. cor., marked 1/4 06 on N. face; from which
  - An oak 10 ins. diam., bears S. 40° W. 30 lks. dist., marked 06 1/4 S16BT.
  - An oak 12 ins. diam., bears N. 65° E. 42 lks. dist., marked 06 1/4 S9BT.
- 42.00 Cross road bears N. and S.
- 43.25 Cross wash 15 lks. wide course N.
- 46.00 Cross wash 6 lks. wide course N.
- 48.00 Cross telephone line bears N. W. and S. E.
- 49.80 House bears N. 57 1/2° E.
- Shaft house bears N. 57 1/2° E.
- 55.75 Over level land.
- 56.10 Cross road bears N. and S.
- 58.50 Cross wash 10 lks. wide course N. E.
- 63.00 Cross Harshaw wash 50 lks. wide course N. W.
- 64.00 Cross wash 10 lks. wide course N. W.
- 64.20 Ascend.
- 70.00 Spur bears N. E. and S. W. and descend.
- 78.50 Cross wash 20. lks. wide course S. W., and ascend through dense mesquite and oak brush.
- 79.90 The cor. of secs. 9, 10, 15 and 16.
- Land, level and mountainous.
- Soil loamy and rocky; 1st. and 4th. rate.
- Timber, a few scattering oaks.
- Mountainous land 71.45 chs.

July 19, 1907.

July 20: At 7h. 00m. a.m., 1.m.t., I set off 31° 32' N. on the lat. arc; 20° 50 1/2' N. on the dec'l. arc; and determine a meridian with the solar at the cor. of secs. 2, 3, 10 and 11,

- Thence I run
- S. 0° 01' E. bet. secs. 10 and 11.
- Descend steep S. slope of mountain.
- 40.00 Set a granite stone 18 x 10 x 6 ins. 12 ins. in the ground for 1/4 sec. cor., marked 1/4 06 on W. face; from which
  - A mesquite 4 ins. diam., bears N. 80° W. 119 lks. dist., marked 06 1/4 S10BT.
  - An oak 8 ins. diam., bears N. 45° E. 296 lks. dist., marked 06 1/4 S11BT.
- Thence through scattering oak timber.
- 43.70 Cross wash 6 lks. wide course E.
- 61.50 Cross wash 10 lks. wide course S. W.
- 64.40 Cross wash 30 lks. wide course S. W. and ascend steep N. slope.
- 80.00 Set a porphyry stone 20 x 10 x 6 ins. 15 ins. in the ground for

Chains.

ground for cor. of secs. 10, 11, 14 and 15, marked 06 on N. E. face, with 4 notches on S. and 2 notches on E. edges; from which

- An oak 8 ins. diam., bears N.  $31^{\circ}$  E. 114 lks. dist., marked 06T22SR16ES11BT.
- An oak 6 ins. diam., bears S.  $57^{\circ}$  E. 72 lks. dist., marked 06T22SR16ES14BT.
- An oak 6 ins. diam., bears S.  $2^{\circ}$  W. 44 lks. dist., marked 06T22SR16ES15BT.
- An oak 6 ins. diam., bears N.  $50^{\circ}$  W. 12 lks. dist., marked 06T22SR16ES10BT.

Land, mountainous.

Soil, stony; 3rd. rate.

Timber, oak.

July 20: At this cor. I set off  $20^{\circ} 47 \frac{1}{2}'$  N. on the dec'l. arc; and observe the sun on the meridian at noon the resulting lat. is  $31^{\circ} 31 \frac{1}{2}'$  N. ✓

- West on a random line bet. secs. 10 and 15.
- 40.00 Set temp.  $\frac{1}{4}$  sec. cor.
- 80.12 Intersect N. and S. line at the cor. of secs. 9, 10, 15 and 16.
- Thence I run
- East on a true line bet. secs. 10 and 15.
- Ascend.
- 3.50 Ridge bears N. and S. W. and descend.
- 8.55 Cross wash 10 lks. wide course N. and ascend steep W. slope of mountain.
- 29.00 Top mountain and desc. Sarano's house bears S.  $22^{\circ}$  E.
- 36.20 Cross wash 6 lks. wide course S. and along S. slope.
- 40.06 Set a porphyry stone 18 x 6 x 6 ins. 12 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  06 on N. face; from which
- An oak 4 ins. diam., bears N.  $8^{\circ}$  W. 46 lks. dist., marked 06 $\frac{1}{4}$ S10BT.
  - An oak 10 ins. diam., bears S.  $9^{\circ}$  W. 45 lks. dist., marked 06 $\frac{1}{4}$ S15BT.
- From this cor. the line runs over rocky bluffs descending into canyon impossible to chain therefore I offset 15.00 chs. N. thence E. 40.06 chs. thence S. 15.00 chs. to the cor. of secs. 10, 11, 14 and 15.
- 68.00 Cross wash 30 lks. wide course S. W. (estimated on line.)
- 80.12 The corner to secs. 10, 11, 14 and 15.
- Land, mountainous. Soil, rocky, 4th rate.
- Timber, oak.
- Mountainous land 80.12 chs.

July 20, 1907.

- July 21: At 7h. 00m. a.m., l.m.t., I set off  $31^{\circ} 31 \frac{1}{2}'$  N. on the lat. arc;  $20^{\circ} 39'$  N. on the dec'l. arc; and determine a meridian with the solar at the cor. of secs. 9, 10, 15 and 16.
- Thence I run
- S.  $0^{\circ} 02'$  E. bet. secs. 15 and 16.
- Ascend
- 5.45 Top ridge bears E. and W. and descend.
- House noted on line bet. secs. 9 and 16 bears N.  $40^{\circ}$  W.
- Shaft house bears N.  $31^{\circ}$  W.
- Sarano's house bears S.  $47^{\circ}$  E.
- Ruined adobe house bears S.  $18^{\circ}$  E.
- Shanty bears S.  $34^{\circ}$  E.
- 10.50 Over level land.
- 23.00 Cross Harshaw wash 75 lks. wide course N. W.
- 24.12 Cross road at junction bears N. W. and S. E. and S.S.E.
- 24.50 Telephone line, bears N. W. and S. E.
- 27.70 Cross road bears N. E. and S. W.
- 29.90 Cross road bears N. W. and S. E.
- 30.00 Ascend along N. E. slope through scattering mesquite.
- 37.00 Ridge bears N. W. and S. E. and descend along S. W. slope.
- 40.00 Set a tufa stone 20 x 12 x 8 ins. 15 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  06 on W. face; from which

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- An oak 6 ins. diam., bears S. 22 1/2° W. 90 lks. dist., marked 06 1/2 S16BT.  
No other tree available. Raise a mound of stone 2 ft base 1 1/2 ft. high, W. of cor. Pits impracticable.  
Cross wash 6 lks. wide course N. W. and ascend.  
A point from which shanty bears N. 48° E.  
Ruined adobe house bears N. 32° E.  
Top and along steep W. slope.  
Set a tufa stone 18 x 10 x 8 ins. 12 ins. in the ground for cor. of secs. 15, 16, 21 and 22, marked 06 on N. E. face, with 3 notches on S. and E. edges; from which  
An oak 8 ins. diam., bears N. 71 1/2° E. 84 lks. dist., marked 06T22SR16ES15BT.  
An oak 8 ins. diam., bears N. 12° W. 118 lks. dist., marked 06T22SR16ES16BT.  
No other trees available. Raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.  
Land, level and mountainous.  
Soil, loamy and stony; 1st. and 3rd. rate.  
Timber, oak.  
July 21; At this cor. I set off 20° 36' N. on the dec'l. arc; and observe the sun on the meridian at noon, the resulting lat is 31° 30 1/2' N. ✓
- 
- S, 0° 02' E. bet. secs. 21 and 22  
Along W. slope of mountain.  
Cross saddle and along S. E. slope.  
Descend into canyon.  
Cross wash 10 lks. wide course E. and ascend.  
Along steep E. slope of Red Mt. through scattering oaks.  
Cross wash 10 lks. wide course E.  
Point for cor. falls on a granite rock in place 10 x 10 x 4 ft. above ground. I mark a cross (x) for exact point for 1/4 sec. cor., with 1/4 06 on W. of cross; from which  
An oak 8 ins. diam., bears S. 52° E. 49 lks. dist., marked 06 1/4 S22BT.  
A pinon 4 ins. diam., bears S. 7° W. 49 lks. dist., marked 06 1/4 S21BT.  
Cross wash 10 lks. wide course E.  
Cross wash 10 lks. wide course N. E.  
Cross wash 10 lks. wide course E.  
Set a granite stone 18 x 8 x 8 ins. 12 ins. in the ground for cor. of secs. 21, 22, 27 and 28, marked 06 on N. E. face, with 2 notches on S. and 3 notches on E. edges; from which  
An oak 4 ins. diam., bears N. 12 1/2° E. 67 lks. dist., marked 06T22SR16ES22BT.  
An oak 8 ins. diam., bears S. 60 3/4° E. 127 lks. dist., marked 06T22SR16ES27BT.  
An oak 12 ins. diam., bears S. 77 1/2° W. 184 lks. dist., marked 06T22SR16ES28BT.  
An oak 6 ins. diam., bears N. 15° W. 92 lks. dist., marked 06T22SR16ES21BT.  
Land, Mountainous.  
Soil, rocky; 4th. rate.  
Timber, oak.  
Mountainous land 80.00 chs.
- July 21, 1907
- 
- July 22: At 7h. 00m. a.m., l.m.t., I set off 31° 31 1/2' N. on the lat. arc; 20° 28' N. on the dec'l. arc; and determine a meridian with the solar at the cor. of secs. 10, 11, 14 and 15,  
Thence I run  
S. 0° 01' E. bet. secs. 14 and 15.  
Through scattering oak timber ascending.  
Top mountain and descend.  
Cross fence bears E. and W.  
Cross wash 10 lks. wide course S. W.

Chains.  
 16.50 Cross wash 10 lks. wide course S. W.  
 27.45 Cross wash 10 lks. wide course S. W. and ascend.  
 35.00 Ridge bears N.E.W. and S. W. and descend.  
 40.00 Set a granite stone 24 x 6 x 4 ins. 18 ins. in the ground for 1/4 sec. cor. marked 1/4 06 on W. face; from which  
     An oak 8 ins. diam., bears S. 30° E. 41 lks. dist., marked 06 1/4 S14BT.  
     A mesquite 8 ins. diam., bears S. 45° W. 123 lks. dist., marked 06 1/4 S15BT.  
 At this cor. I set off 20° 24 1/2' N. on the dec'l. arc; and observe the sun on the meridian at noon, the resulting lat. is 31° 31' N. ✓  
 41.70 Cross wash 10 lks. wide course S. W. and ascend along N. W. slope.  
 58.00 Cross ridge bears N. E. and S. W. and descend.  
 69.00 Cross wash 8 lks. wide course S. W.  
 69.75 Cross same wash course S. E.  
 76.80 Cross road bears E. and W.  
 77.35 Cross wash 75 lks. wide course W.  
 77.70 Cross fence bears E. and W. and over level cultivated land.  
 80.00 Set a granite stone 20 x 6 x 6 ins. 15 ins. in the ground for cor. of secs. 14, 15, 22 and 23, marked 06 on N. E. face; with 3 notches on S. and 2 notches on E. edges; from which  
     A mesquite 18 ins. diam., bears N. 2 1/4° E. 296 lks. dist., marked 06 T22SR16ES14BT.  
     An oak 18 ins. diam., bears S. 51 1/4° E. 337 lks. dist., marked 06 T22SR16ES23BT.  
     An oak 14 ins. diam., bears S. 8° W. 412 lks. dist., marked 06 T22SR16ES22BT.  
     A mesquite 8 ins. diam., bears N. 73° W. 373 lks. dist., marked 06 T22SR16ES15BT.  
 Land, level and mountainous.  
 Soil, rocky and loamy; 4th. and 1st. rate.  
 Timber oak.

July 22, 1907.

July 23; At 7h.00m. a.m., l.m.t., I set off 31° 30 1/2' N. on the lat. arc; 20° 16' N. on the dec'l. arc; and determine a meridian with the solar at the cor. of secs. 14, 15, 22 and 23,

Thence I run  
 West on a random line bet. secs. 15 and 22.  
 40.00 Set temp. 1/4 sec. cor.  
 80.16 Intersect N. and S. line 7 lks. N. of the cor. of secs. 15, 16, 21 and 22  
 Thence I run  
 N. 89° 57' E. on a true line bet. secs. 15 and 22.  
 Ascend through scattering oak timber.  
 5.00 Top mountain bears N. and S. and descend.  
 14.00 Cross Harshaw wash 50 lks. wide course N.  
 14.70 Cross telephone line bears N. and S.  
 15.00 Cross road bears N. and S.  
 15.50 Ascend  
 36.00 Along N. slope of mountain.  
 40.08 Set a granite stone 18 x 6 x 6 ins. 12 ins. in the ground for 1/4 sec. cor., marked 1/4 06 on N. face; from which  
     An oak 8 ins. diam., bears N. 40° W. 35 lks. dist., marked 06 1/4 S15BT.  
     An oak 8 ins. diam., bears S. 16° W. 44 lks. dist., marked 06 1/4 S22BT.  
 July 23; At this cor. I set off 20° 12 1/2' N. on the dec'l. arc; and observe the sun on the meridian at noon the resulting lat. is 31° 30 1/2' N. ✓  
 42.00 Cross wash 10 lks. wide course N.  
 42.70 Cross wash 10 lks. wide course N.  
 20.00 Descending along N. E. slope.  
 69.10 Cross wash 50 lks. wide course N. and over level land.  
 70.65 Cross road bears N. W. and S. E.  
 74.15 Cross road bears S W. and N. E.



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Chains.

- 76.00 Cross wash 60 lks. wide course S. W.  
 77.00 Cross fence bears S. 70° W. and N. 70° E.  
 80.10 Cross fence bears N. 10° W. and S. 10° E.  
 80.16 The cor. of secs. 14, 15, 22 and 23.  
 Land, mountainous and level.  
 Soil, rocky, and loamy; 1st. and 4th. rate.  
 Timber oak.  
 Mountainous land, 69.10 chs.

July 23, 1907.

July 24: At 7h. 00m. a.m., l.m.t., I set off 31° 30 1/2' N. on the lat. arc; 20° 04' N. on the dec'l. arc; and determine a meridian with the solar at the cor. of secs. 14, 15, 22 and 23,

Thence I run

S. 0° 01' E. bet. secs. 22 and 23.

From this cor. J. S. Gatlin's house bears S. 55° W 8.50 chs. dist.

Over cultivated land.

- 0.16 Cross fence bears N. 10° W. and S. 10° E.  
 2.48 Cross ditch 2 lks. wide course W. and ascend steep N. slope through scattering oaks.  
 30.00 Top mountain ridge bears E. and W. and descend over rolling top of mountains.  
 40.00 Set a malpais stone 18 x 10 x 10 ins. 12 ins. in the ground for 1/4 sec. cor., marked 1/4 06 on W. face; from which

An oak 8 ins. diam., bears S. 73° W. 54 lks. dist., marked 06 1/4 S22BT.

An oak 12 ins. diam., bears N. 19° E. 179 lks. dist., marked 06 1/4 S23BT.

July 24: At this cor. I set off 20° 00 1/2' N. on the dec'l. arc; and observe the sun on the meridian at noon, the resulting lat. is 31° 30' N.

- 47.75 Cross wash 6 lks. wide course S. E.  
 61.80 Cross wash 6 lks. wide course S. W. and ascend along N. E. slope of mountain.  
 80.00 Set a granite stone 20 x 6 x 6 ins. 15 ins. in the ground for cor. of secs. 22, 23, 26 and 27, marked 06 on N. E. face, with 2 notches on S. and E. edges; from which  
 An oak 6 ins. diam., bears N. 13° E. 112 lks. dist., marked 06 T22SR16ES23BT.  
 An oak 10 ins. diam., bears S. 20° E. 330 lks. dist., marked 06 T22SR16ES26BT.  
 An oak 8 ins. diam., bears S. 40° W. 240 lks. dist., marked 06 T22SR16ES27BT.  
 An oak 10 ins. diam., bears N. 20° W. 195 lks. dist., marked 06 T22SR16ES22BT.  
 Land, mountainous and level.  
 Soil, rocky and loamy; 4th. and 1st. rate.  
 Timber, oak.  
 Mountainous land, 78.52 chs.

July 24, 1907.

July 25; At 7h. 00m. a.m., l.m.t., I set off 31° 29 1/2' N. on the lat. arc; 19° 51 1/2' N. on the dec'l. arc; and determine a meridian with the solar at the cor. of secs. 22, 23, 26 and 27,

Thence I run

S. 89° 57' W. on a random line bet. secs. 22 and 27.

40.00 Set temp. 1/4 sec. cor.

80.08 Intersect N. and S. line 2 lks. N. of the cor. of secs. 21, 22, 27 and 28.

Thence I run

N. 89° 56' E. on a true line bet. secs. 22 and 27.

Descending along S. E. slope through scattering oak timber

2.20 Cross wash 6 lks. wide course S.

8.00 Cross wash 6 lks. wide course S.

21.00 Cross wash 40 lks. wide course N. and ascend.

22.90 Cross road bears N. and S. and

Chains.

25.45  
33.20  
40.00

Cross telephone line bears N. and S.  
Cross wash 6 kks. wide course N.  
Set a granite stone 18 x 6 x 4 ins. 12 ins. in the ground  
for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  06 on N. face; from which

An oak 24 ins. diam., bears S. 45° W. 75 lks.  
dist., marked 06  $\frac{1}{4}$  S27BT.

An oak 24 ins. diam., bears N. 62° W. 102 lks.  
dist., marked 06  $\frac{1}{4}$  S22BT.

July 25; At this cor. I set off 19° 50 1/2' N. on the  
dec'l. arc; and observe the sun on the meridian at noon,  
the resulting lat. is 31° 29 1/2' N.

52.00  
74.50  
80.08

Cross wash 20 lks. wide course N. W.  
Top ridge bears N. and S and descend.  
The cor. of secs. 22, 23, 26 and 27.  
Land, mountainous.  
Soil stony; 3rd. rate.  
Timber, oak.  
Mountainous land, 80.08 chs.

July 25, 1907.

General Description.

This township is rough and mountainous and the soil  
rocky excepting in the Sonoita Valley which runs through  
secs. 5, 6, 7 and 8, where the land is level and the soil  
loamy and with water produces good crops. The mountain-  
land produces a good crop of nutritious grass and is  
valuable for grazing purposes. Copper has been discovered  
in the township and considerable mining is done in the  
unsurveyed portion which is mineral in character.  
Sonoita Creek is dry through the township. There is water  
in sec. 3 and sec. 15.

*John P. Hesse*  
U.S. Deputy Surveyor

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

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LIST OF NAMES.

A list of the names of the individuals employed by John F. Hesse

....., United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the <sup>re</sup> survey of the subdivision lines of Tp. 22 S. Rg. 16 E.

showing the respective capacities in which they acted:

A. N. Oliver....., *Chainman.*

T. E. Manning....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

Joaquin Quiroga....., *Axman.*

....., *Axman.*

R. M. Smith....., *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted John F. Hesse

....., United States Deputy Surveyor, <sup>re</sup> surveying all those parts or portions of the the subdivision lines of Tp. 22 S. Rg. 16 E.

..... of the Gila and Salt River meridian, Territory of Arizona

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

A. N. Oliver....., *Chainman.*

T. E. Manning....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

Joaquin Quiroga....., *Axman.*

....., *Axman.*

R. M. Smith....., *Flagman.*

Subscribed and sworn to before me this 25<sup>th</sup> day of July, 1907



John F. Hesse  
U. S. Deputy Surveyor

6-151  
No notary available without loss of time and great expense.

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FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, John F. Hesse, 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 10th. day of November, 1906, 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. 22 S. R. 16 E.

of the Gila and Salt River meridian, in the Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by me, 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.

John F. Hesse  
United States Deputy Surveyor.

Subscribed by said John F. Hesse, and sworn to before me }  
this 8th day of August, 1907.



Frank S. Ingalls  
U.S. Surveyor General  
for Arizona.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz. Dec. 16th, 1907  
The foregoing field notes of the survey of the subdivisional lines of T. 22 S. R. 16 E. of the Gila and Salt River Base and Meridian, in the territory of Arizona

executed by John F. Hesse U.S. deputy surveyor under his contract No. 142, dated November 10, 1906, 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.