

2705

65

Book "L."  
Subdivisions.

BOOK 2705

# FIELD NOTES

OF THE SURVEY OF THE

Subdivision lines of

Township 5 South, Range 13 West,

Of the Gila and Salt River Base and Meridian,

In the State of Arizona.

EXECUTED BY

W. H. Thorn, U.S. Surveyor,

and

W. K. Kierulff, U.S. Transitman,

~~In the capacity of U. S. Surveyor~~, under instructions dated February 26, 1913,  
issued by the United States Surveyor General to govern surveys included in  
Group No. 28, which were approved by the Commissioner of the General Land  
Office, March 12, 1913, pursuant to authority contained in the Act of  
Congress dated June 23, 1913.

Survey commenced September 29, 1913.

Survey completed October 18, 1913.

BOOK 2705

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FIRST STANDARD PARALLEL SOUTH

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Subdivision of Township 5 South, Range 13 West.

18

Chains.

Note: Initials "W.H.T." and "W.K.K.," throughout the following notes indicate surveys by W.H.Thorn, U.S.Surveyor, and W.K.Kierulff, U.S.Transitman, respectively.

W.K.K.

Survey commenced Sept.29, 1913, and executed with a Young and Son's light mountain transit No.8485, with Smith 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 decl. arcs.

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

At a point near camp, near north bdy. of sec.29, in T.4 S., R.13 W., Sept.27, 1913, at 7h. 9m. a.m., l.m.t., I observe Polaris at eastern elongation in accordance with the Manual of Instructions, and mark a point in the line thus determined by a tack in a wooden peg driven in the ground 5 chs. north of my station.

Sept.28, 1913: At 7h.00m. p.m., l.m.t., I lay off the azimuth of Polaris, 1°22½' to the west, and mark the meridian thus determined by a tack in a wooden peg set in the ground 5 chs. north of my station.

At 8h. 0m. a.m., l.m.t., I set off 33°03½' N. on lat.arc; 1°55' S. on decl.arc, and determine a meridian with the solar, I mark the meridian thus determined by a tack in a wooden peg already set 5 chs.north of my station.

At 4h. 00m. p.m., l.m.t., I set off 33° 03½' N. on lat. arc; 2°03' S. on the decl.arc, and determine a meridian with the solar. I mark the meridian thus determined by a tack in the wooden peg already set 5 chs. north of my station. The meridians thus determined by the solar apparatus fall respectively 20" east and west of the meridian determined by observations on Polaris; therefore, I conclude that the adjustments of the transit are satisfactory.

September 28, 1913.

Sept.29, 1913:

I commence at the cor. of secs. 5,6,31 and 32, on the north bdy of T.5 S., R.13 W., established by me as described in Book "A."

At 8h.0m. a.m., l.m.t., I set off 33° 01½' N. on lat.arc; 2°19' S. on decl.arc, and determine a meridian with the solar.

Thence I run,

S.0°01' W., on a true line, bet. secs.5 and 6.

Over rough, mountainous land, covered with malpais boulders.

36.00  
40.00

Ascend slope to NE., rough and rocky.

Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in a mound of stone, 3 ft. base, 2½ ft. high, for ¼ sec. cor. of secs.5 and 6, with brass cap, marked,

¼ S 6 on W-half;  
S 5 on E-half; and

1913 on S-half; pits impracticable.

Raise a mound of stone 4 ft. base, 3 ft. high, west of cor.

55.00  
80.00

Top of small spur, brs. E and W.; descend.

Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in a mound of stone 3 ft. base, 2½ ft. high, for cor. of secs.5,6,7 and 8, with brass cap, marked,

T 5 S S 6 in NW.,

## 2. Subdivision of Township 5 South, Range 13 West.

Chains.

- R 13 W S 5 in NE.,  
S 8 in SE., and  
S 7 in SW. quadrants;  
1913 on S-half; from which,  
A palo verde, 8 ins. in diam., brs.NE., 191  
lks.dist., marked T 5 S R 13 W S 5 B T.  
No other trees within limits. Raise a mound of stone, 4  
ft.base, 3 ft.high, west of corner. Pits impractica-  
ble.  
Land, first half, rolling. Last half, mountainous and  
rough, covered with malpais boulders.  
No timber or undergrowth.  
Sept.29: At this corner I set off 2°23' S.on the decl.  
arc; and at 11h.50m. l.m.t., I observe the sun on the  
meridian; the resulting latitude is 33° 01'N.
- 
- 40.00 West, on a random line, bet. secs.6 and 7.  
Set temp.  $\frac{1}{4}$  sec.cor.  
79.81 Intersect the west bdy. of the Tp., 12 lks.N.of the cor.  
of secs.1,6,7 and 12, established by me, as described  
in Book "A."  
Thence I run,  
6.81 N.89° 55'E., on a true line, bet. secs.6 and 7.  
16.81 Dry wash, 50 lks.wide, 5 ft. banks, course north.  
36.81 Draw, course NW.  
39.905 Top of spur ridge, brs.N.and S.  
Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in  
a mound of stone 3 ft.base, 2 $\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec.cor.  
of secs.6 and 7, with brass cap, marked,  
 $\frac{1}{4}$  S 6 on N.half; and  
S 7,1913 on S-half; pits impracticable.  
Raise a mound of stone 3 ft.base, 3 ft.high, north of  
corner.  
44.00 Bottom of canyon, 3 chs.wide, 150 ft. deep, course N.  
Ascend.  
53.00 Top of mountain, 250 ft. ascent.  
Descend steep rocky east slope.  
79.81 Cor.of secs.5,6,7 and 8.  
Land, mountainous, covered with malpais boulders.  
No soil.  
No timber or undergrowth.  
Sept. 29, 1913.
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- Sept. 30, 1913:  
At 9h.0m., a.m., l.m.t., I set off 33° 01' N.on lat.arc;  
2°43' S. on decl.arc, and determine a meridian with  
the solar at the cor.of secs.5,6,7 and 8.  
Thence I run,  
S.0°01'W., on a true line, bet. secs.7 and 8.  
Over rough and broken land.  
Ascend steep rocky NE. slope, over boulders.  
5.25 Top of slope, brs.E.and W.  
Descend steep SE. slope, over boulders.  
32.00 Bottom of descent; a draw, course SE.; ascend.  
40.00 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in  
a mound of stone 3 ft. base, 2 $\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec.  
cor. of secs. 7 and 8, with brass cap, marked,  
 $\frac{1}{4}$  S 7 on W.half;  
S 8 on E.half; and  
1913 on S.half; pits impracticable.  
Raise a mound of stone 4 ft.base, 3 ft.high, W.of cor.  
Descend.  
47.30 Bottom of canyon, course west, 2 chs.wide, 50 ft. deep;  
ascend.

Subdivision of Township 5 South, Range 13 West. 3.

Chains.

50.27 Top of ascent; descend.  
 54.00 Foot of descent, in valley, brs.E.and W.  
 62.00 Dry wash, 150 lks.wide, 10 ft. banks, course east.  
 75.00 Begin to ascend rocky steep mountain, over malpais boulders.  
 80.00 Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in a mound of stone, 3 ft. base, 2½ ft. high, for cor.of secs.7,8,17 and 18, with brass cap, marked,  
     T 5 S S 7 in NW.,  
     R 13 W S 8 in NE.,  
     S 17 in SE., and  
     S 18 in SW. quadrants;  
     1913 on S-half; from which,  
     A palo verde, 6 ins. in diam., brs.N.52½°W.,136 lks.dist., marked T 5 S R 13 W S 7 B T.  
 No other trees within limits. Pits impracticable.  
 Raise a mound of stone 4 ft.base, 3 ft.high, west of cor.  
 Sept. 30: At this cor.I set off 2°46' S.on decl.arc;  
 and at 1h.50m.l.m.t., I observe the sun on the meridian; the resulting latitude is 33° 00'N.  
 Land, mountainous, rough and broken, covered with malpais boulders.  
 No timber.  
 No undergrowth.

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 West, on a random line, bet. secs.7 and 18.  
 40.00 Set temp.¼ sec.cor.  
 80.19 Intersect cor.of secs.7,12,13 and 18, on the west bdy. of the township established by me, as described in Book "A."  
 Thence I run,  
 East, on a true line, bet. secs.7 and 18.  
 Along steep rocky north slope of mountain.  
 40.095 Set an iron post 3 ft.long, 1 in. in diam., 26 ins.in a mound of stone 3 ft.base, 2½ ft. high, for ¼ sec.cor. of secs.7 and 18, with brass cap, marked,  
     ¼ S 7 on N.half; and  
     S 18, 1913 on S.half; pits impracticable.  
 Build a mound of stone 4 ft.base, 3 ft.high, north of cor.  
 Line runs over rough north slope, over granite mountain.  
 80.19 Cor.of secs.7,8,17 and 18.  
 Land, mountainous. covered with granite boulders, very rough and broken.  
 Soil, 4th rate, decomposed granite.  
 No timber.  
 No undergrowth.

Sept.30, 1913.  
W. K. K.

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 W. H.T.  
 Survey commenced Oct.11, 1913, and executed with a Young and Son's light mountain transit No.8592, with Smith solar attachment. The horizontal limb is provided with two double verniers, placed opposite to each other, and reading to single minutes of arc, which is also the least count of the lat. and decl.arcs.  
 I examine the adjustments of the transit, and correct the level and collimation errors; also see that the solar telescope revolves in a vertical plane and the parallelism of the two telescopes test the lat.and decl.arcs.  
 At 9h.0m. a.m.,l.m.t., I set off 33°00'N.on lat.arc; and 6°57'S. on the decl.arc; and determine a meridian with the solar at the cor.of secs. 7,8,17 and 18.  
 Thence I run,  
 S.0°01'W., on a true line, bet. secs.17 and 18.

11. Subdivision of Township 5 South, Range 13 West.

Chains.

- Ascend NE. slope of mountain.
- 15.00 Top of spur, brs.E. and W. Descend over large boulders.
- 20.00 Ascend through canyon, course NE.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in a mound of stone 3 ft. base, 2½ ft. high, for ¼ sec. cor., with brass cap, marked,  
     ¼ S 18 on W. half;  
     S 17 on E. half; and  
     1913 on S. half; pits impracticable.
- Raise a mound of stone 5 ft. base, 4 ft. high, west of corner.
- 44.46 Top of ridge, brs.E. and W.
- Descend steep rocky south slope.
- 65.00 Foot of descent; ascend NE. slope.
- 79.50 Descend south slope.
- 80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in a mound of stone 3 ft. base, 2½ ft. high, for cor. of secs. 17, 18, 19 and 20, with brass cap, marked,  
     T 5 S S 18 in NW.,  
     R 13 W S 17 in NE.,  
     S 20 in SE., and  
     S 19 in SW. quadrants;  
     1913 on S. half; pits impracticable.
- Raise a mound of stone, 3 ft. base, 3 ft. high, west of corner.
- Land, mountainous; surface covered with large volcanic boulders.
- No soil. No timber. No undergrowth.
- Difficult to survey.
- 
- West, on a random line, bet. secs. 18 and 19.
- 40.00 Set temp. ¼ sec. cor.
- 80.04 Intersect the west bdy of the Tp., 9 links north of the cor. of secs. 13, 18, 19 and 24, established by W.K. Kierulff, U.S. Transitman, as described in Book "A."
- Thence 1 run,  
 N. 89° 56' E., on a true line, bet. secs. 18 and 19.
- Over rough and broken surface, volcanic boulders.
- 14.00 Old road brs. NW. and SE.
- 35.00 A ravine, 100 lks. wide, 50 ft. deep, course south.
- 39.00 Wash, 50 lks. wide, 10 ft. banks, course SW.
- 40.02 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., with brass cap, marked,  
     ¼ S 18 in N. half; and  
     S 19, 1913 on S. half;
- dig pits 18x18x12 ins., E. and W. of post, 3 ft. dist., and raise a mound of earth and stone, 3½ ft. base, 1½ ft. high, north of cor.
- Ascend SW. slope of mountain.
- 65.00 Top of spur: brs. N. and S. Descend.
- 67.00 Ravine, 20 lks. wide, 5 ft. deep, course south.
- Descend SW. slope of mountain.
- 76.20 Change to steep south slope.
- 80.04 Cor. of secs. 17, 18, 19 and 20.
- Land, rough and broken, surface covered with volcanic boulders.
- No soil. No timber.
- No undergrowth.

October 11, 1913.  
 W.H.T.

## Subdivision of Township 5 South, Range 13 West. 5.

Chains.	
	<p>W.K.K.            October 13.1913.            At 8h.0m. a.m., l.m.t., I set off <math>32^{\circ} 59'</math> N. on the lat. arc; <math>7^{\circ} 40\frac{1}{2}'</math> S. on decl. arc; and determine a meridian with the solar at the cor. of secs. 17, 18, 19 and 20.            Thence I run,  <math>S. 0^{\circ} 01' W.</math>, on a true line, bet. secs. 19 and 20.            Descend steep rough rocky south slope, over boulders.</p>
12.00	Foot of descent; thence over slightly rolling land; enter scattering timber.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. of secs. 19 and 20, with brass cap, marked, $\frac{1}{4}$ S 19 on W. half; S 20, on E. half; and 1913 on S. half; from which, An ironwood, 15 ins. in diam., brs. N. $60\frac{1}{4}^{\circ} W.$ , 140 lks. dist., marked $\frac{1}{4}$ S 19 B T. A palo verde, 10 ins. in diam., brs. N. $85\frac{1}{4}^{\circ} E.$ , 127 lks. dist., marked $\frac{1}{4}$ S 20 B T.
66.40	Shallow wash, 150 lks. wide, course SE.
80.00	Set an iron post, 3 ft. long, 2 ins. in diam. 24 ins. in the ground, for cor. of secs. 19, 20, 29 and 30, with brass cap, marked, T 5 S S 19 in NW., R 13 W S 20 in NE., S 29 in SE., and S 30 in SW. quadrants; 1913 on S. half; from which, A palo verde. 8 ins. in diam., brs. S. $69\frac{3}{4}^{\circ} E.$ , 87 lks. dist., marked T 5 S R 13 W S 29 B T. A palo verde. 6 ins. in diam., brs. S. $11\frac{1}{4}^{\circ} W.$ , 170 lks. dist., marked T 5 S R 13 W S 30 B T.
	<p>No other trees within limits.            Dig pits 18x18x12 ins., in each sec. <math>5\frac{1}{2}</math> ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, west of corner.            Land, first 12.00 chs. mountainous and rough, covered with granite boulders.            Last 68.00 chs. nearly level, covered with malpais rock, worthless. Scattering timber.            Oct. 13: At this cor. I set off <math>7^{\circ} 45'</math> S. on decl. arc; and at 11h.46m. l.m.t., I observe the sun on the meridian; the resulting lat. is <math>32^{\circ} 58' N.</math></p>
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40.00	West, on a random line, bet. secs. 19 and 30. Set temp. $\frac{1}{4}$ sec. cor.
80.00	Intersect the west bdy. of the Tp., 6 lks. north of the cor. of secs. 19, 24, 25, and 30, established by me, as described in Book "A." Thence I run, N. $89^{\circ} 57' E.$ , on a true line, bet. secs. 19 and 30. Ascend over gradual SW. slope.
6.60	Descend over gradual SE. slope.
20.00	Enter level land, brs. N. and S.
40.00	Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., of secs. 19 and 30, with brass cap, marked, $\frac{1}{4}$ S 19 on N. half; and S 30, 1913 on S. half; dig pits 18x18x12 ins., E. and W. of post, $\frac{3}{4}$ ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
66.90	Wash, 20 lks. wide, 2 ft. banks, course SE.
67.80	Foot of slope, brs. N. and S.; thence over SW. slope.
71.70	Top of hill, brs. NW. and SE.

## 6. Subdivision of Township 5 South, Range 13 West.

Chains.

Descend over steep east slope, broken covered with boulders.  
 78.70 Enter level land, and scattering timber.  
 80.00 Cor. of secs. 19, 20, 29 and 30.  
 Land, mountainous and broken, 60.00 chs.  
 Land, level, 4th rate, 20.00 chs.  
 No timber, except near the east end of mile.  
 Oct. 13, 1913.

October 14, 1913:  
 At 9h. 0m. a.m., l.m.t., I set off  $32^{\circ}58'N.$  on lat. arc;  $8^{\circ}04'S.$  on decl. arc; and determine a meridian with the solar at the cor. of secs. 19, 20, 29 and 30. Thence I run,  $S.0^{\circ}01'W.$ , on a true line, bet. secs. 29 and 30.  
 40.00 Over level land, through scattering palo verde timber.  
 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor. of secs. 29 and 30, with brass cap, marked,  
 $\frac{1}{4}$  S 30 on W. half;  
 S 29 on E. half, and  
 1913 on S. half; from which,  
 A palo verde, 6 ins. in diam., brs.  $S.30\frac{1}{4}^{\circ}W.$ ,  
 39 lks. dist., marked  $\frac{1}{4}$  S 30 B T.  
 A palo verde, 6 ins. in diam., brs.  $S.53\frac{1}{4}^{\circ}E.$ , 107  
 lks. dist., marked  $\frac{1}{4}$  S 29 B T.  
 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 29, 30, 31 and 32. with brass cap, marked,  
 T 5 S S 30 in NW.,  
 R 13 W S 29 in NE.,  
 S 32 in SE., and  
 S 31 in SW. quadrants;  
 1913 on S. half;  
 from which,  
 A palo verde, 6 ins. in diam., brs.  $N.4\frac{1}{2}^{\circ}E.$ , 98  
 lks. dist., marked T 5 S R 13 W S 29 B T.  
 A palo verde, 8 ins. in diam., brs.  $N.53\frac{1}{4}^{\circ}W.$ ,  
 326 lks. dist., marked T 5 S R 13 W S 30 B T.  
 No other trees within limits; dig pits 18x18x12 ins., in each sec. 5 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, west of corner.  
 Land, level.  
 Soil, sandy, covered with malpais gravel.  
 Timber, scattering palo verde.  
 Undergrowth, scattering greasewood brush.  
 Scattering giant cactus.  
 Oct. 14: At this cor. I set off  $8^{\circ}08'S.$  on decl. arc; and at 1h. 46m. l.m.t., I observe the sun on the meridian; the resulting latitude is  $32^{\circ}57\frac{1}{2}'N.$

40.00 West, on a random line, bet. secs. 30 and 31.  
 80.10 Set temp.  $\frac{1}{4}$  sec. cor.  
 Intersect the west bdy. of the Tp., 2 lks. N. of cor. of secs. 25, 30, 31 and 36, established by me, as described in Book "A."  
 Thence I run,  
 $N.89^{\circ}59'E.$ , on a true line, bet. secs. 30 and 31.  
 Over level land, through scattering timber.  
 11.90 Yuma and Phoenix road, brs. NW. and SE.  
 40.05 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor. of secs. 30 and 31, with brass cap, marked,  
 $\frac{1}{4}$  S 30 on N. half, and



## Subdivision of Township 5 South, Range 13 West. 7.

Chains.

S. 31, 1913 on S. half; from which,  
 A palo verde, 8 ins. in diam., brs. S. 6° 06' W.,  
 136 lks. dist., marked  $\frac{1}{4}$  S 31 B T.  
 A palo verde, 6 ins. in diam., brs. N. 29 $\frac{1}{2}$ ° W.,  
 154 lks. dist., marked  $\frac{1}{4}$  S 30 B T.

80.10 Cor. of secs. 29, 30, 31 and 32.  
 Land, level.  
 Soil, sandy, covered with malpais gravel.  
 Timber, scattering palo verde.  
 Scattering greasewood brush.

October 14, 1913.

October 15, 1913:  
 S. 0° 01' W., on a random line, bet. secs. 31 and 32.  
 Over level land.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 81.43 Intersect the south bdy. of the Tp. (First Standard Parallel South), 12 lks. S. 89° 51' W. of the old standard cor. of secs. 31 and 32, reestablished by me, as described in Book "D."

Thence I run,  
 N. 0° 04' W., on a true line, bet. secs. 31 and 32.  
 Over level land.

9.03 Yuma and Phoenix road, brs. NW. and SE.  
 41.43 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor. of secs. 31 and 32, with brass cap, marked,  
 $\frac{1}{4}$  S 31 on W. half;  
 S 32 on E. half; and  
 1913 on S. half; from which,  
 A palo verde, 8 ins. in diam., brs. N. 16 $\frac{1}{2}$ ° W., 81 lks. dist., marked  $\frac{1}{4}$  S 31 B T.  
 A palo verde, 10 ins. in diam., brs. S. 8° 0' E., 94 lks. dist., marked  $\frac{1}{4}$  S 32 B T.

81.43 Cor. of secs. 29, 30, 31 and 32.  
 Land, level.  
 Soil, sandy, covered with malpais gravel.  
 Timber, scattering palo verde.  
 Undergrowth, scattering greasewood brush.

Oct. 15, 1913.

October 1, 1913.  
 From the cor. of secs. 4, 5, 32 and 33 on the north bdy. of the Tp., established by me, as described in Book "A," I run  
 S. 0° 01' W., on a true line, bet. secs. 4 and 5.  
 Over rocky rolling land.

7.00 Dim wagon road brs. NE. and SW.  
 13.00 Dry wash, 75 lks. wide, 8 ft. banks, course NE.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor. of secs. 4 and 5, with brass cap, marked,  
 $\frac{1}{4}$  S 5 on W. half;  
 S 4 on E. half; and  
 1913 on S. half; from which,  
 A palo verde, 8 ins. in diam., brs. N. 41 $\frac{1}{2}$ ° E., 210 lks. dist., marked  $\frac{1}{4}$  S 4 B T.  
 A palo verde, 10 ins. in diam., brs. S. 60 $\frac{1}{2}$ ° W., 271 lks. dist., marked  $\frac{1}{4}$  S 5 B T.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 4, 5, 8 and 9, with brass cap, marked,  
 T 5 S S 5 in NW.,  
 R 13 W S 4 in NE.,  
 S 9 in SE.,

## 8. Subdivision of Township 5 South, Range 13 West.

Chains,

- S 8 in SW. quadrants;  
1913 on S. half; from which,  
A palo verde, 6 ins. in diam., brs. S.  $21\frac{1}{2}^{\circ}$  W.,  
143 lks. dist., marked T 5 S R 13 W S 8 B T.  
A palo verde, 10 ins. in diam., brs. N.  $53\frac{1}{2}^{\circ}$  E., 180  
lks. dist., marked T 5 S R 13 W S 4 B T.  
No other trees within limits. Pits impracticable.  
Raise a mound of stone, 3 ft. base, 3 ft. high, west of cor.  
Land, rocky and rolling, covered with rocks.  
Soil, 4th rate, malpais.  
Oct. 1: At this corner, I set off  $3^{\circ}9\frac{1}{2}'$  S. on declarc;  
and at 11h. 50m. l.m.t., I observe the sun on the meridian;  
the resulting latitude is  $33^{\circ}01'N$ .
- 
- 40.00 West, on a random line, bet. secs. 5 and 8.  
Set temp.  $\frac{1}{4}$  sec. corner.  
Oct. 1: At 2h. 0m. p.m., l.m.t., I set off  $33^{\circ}01'N$  on lat.  
arc;  $3^{\circ}11\frac{1}{2}'$  S. on decl. arc, and determine a meridian  
with the solar at the temp.  $\frac{1}{4}$  sec. cor., bet. secs. 5 and  
8.  
Thence I continue random line west.
- 80.10 Intersect N. and S. line, 2 lks. north of cor. of secs. 5, 6,  
7 and 8.  
Thence I run,  
N.  $89^{\circ}59'E$ , on a true line, bet. secs. 5 and 8.  
Over rolling, rocky land; descend east slope.
- 12.00 Saddle divide.  
Ascend west slope.
- 17.00 Top of hill, steep and rocky; descend.
- 25.00 Bottom of steep rocky hill; thence over rolling land,  
covered with malpais rocks.
- 35.00 Dry wash, 50 lks. wide, 10 ft. banks, course NE.
- 40.05 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in  
a mound of stone 3 ft. base,  $2\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec.  
cor. secs. 5 and 8, with brass cap, marked,  
 $\frac{1}{4}$  S 5 on N. half; and  
S 8, 1913 on S. half; from which,  
A palo verde, 12 ins. in diam., brs. S.  $62\frac{1}{2}^{\circ}$  W.,  
30 lks. dist., marked  $\frac{1}{4}$  S 8 B T.  
A palo verde, 10 ins. in diam., brs. N.  $43^{\circ}$  E.,  
140 lks. dist., marked  $\frac{1}{4}$  S 5 B T.
- 46.00 Dry wash, 75 lks. wide, 8 ft. banks, course NE.
- 80.10 Cor. of secs. 4, 5, 8 and 9.  
Land, 25.00 chs. of hills, steep and rocky.  
Land, 55.10 chs. of rolling, rocky land.  
Soil, 4th rate.  
Scattering palo verde, scattering greasewood brush.  
October 1, 1913.
- 
- October 2, 1913:  
At 9h. 0m. a.m., l.m.t., I set off  $33^{\circ}01'N$  on lat. arc;  
 $3^{\circ}30'$  S. on decl. arc, and determine a meridian with  
the solar at the cor. of secs. 4, 5, 8 and 9.  
Thence I run,  
S.  $0^{\circ}01'W$ , on a true line, bet. secs. 8 and 9.  
Ascend rocky NE. slope.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
a mound of stone, 3 ft. base,  $2\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec.  
cor. of secs. 8 and 9, with brass cap, marked,  
 $\frac{1}{4}$  S 8 on W. half;  
S 9 on E. half; and  
1913 on S. half;  
build a mound of stone 4 ft. base, 3 ft. high, west of  
corner.

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Chains.

42.50 Top of ridge, brs.NW. and SE.; descend.  
 80.00 Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in a mound of stone 3 ft.base, 2½ ft. high, for cor.of secs.8,9,16 and 17, with brass cap, marked,  
     T 5 S S 8 in NW.,  
     R 13 W S 9 in NE.,  
     S 16 in SE.; and  
     S 17 in SW. quadrants;  
     1913 on S.half; pits impracticable.  
 Build a mound of stone 4 ft.base, 3 ft.high, west of cor.  
 Land, mountainous, covered with boulders.  
 Soil, 4th rate malpais.  
 No timber or undergrowth.  
 Oct. 2: At this corner, I set off 3°33'S. on decl.arc; & at 11h. 50m. l.m.t., I observe the sun on the meridian; the resulting lat.is 33° 00'N.

40.00 West, on a random line, bet. secs.8 and 17.  
 Set temp.¼ sec.cor.  
 79.86 Intersect N.and S. line, 4 lks.N.of cor.of secs.7,8,17 and 18.  
 Thence I run,  
 N.89° 58'E., on a true line, bet. secs.8 and 17.  
 39.93 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in a mound of stone, 3 ft.base, 2½ ft. high, for ¼ sec. cor.of secs.8 and 17, with brass cap, marked,  
     ¼ S 8 on N., and  
     S 17, 1913 on S.half, from which,  
     A palo verde. 10 ins. in diam., brs.S.51°W.,  
     165 lks.dist., marked ¼ S 17 B T.  
 No other trees within limits. Pits impracticable.  
 Raise a mound of stone 4 ft.base, 3 ft.high, N.of cor.  
 65.00 Wash, 75 lks.wide, 5 ft. banks, course S.60°E.  
 66.00 Old road to tanks, course NW. and SE.  
 79.86 Cor.of secs.8,9,16 and 17.  
 Land, nearly level.  
 Soil, malpais gravel, 4th rate, covered with malpais boulders.  
 Very few palo verde trees.

Oct. 2, 1913.  
W.K.K.

W.H.T.

October 13, 1913:  
 At 9h.0m. a.m., l.m.t., I set off 33°00'N. on lat.arc; and 7°42'S. on decl.arc; and determine a meridian with the solar at the cor.of secs.8,9,16 and 17.  
 Thence I run,  
 S.0°01'W., on a true line, bet. secs.16 and 17.  
 Over rough and broken surface, covered with large volcanic boulders.  
 13.00 Wash, 100 lks.wide, 5 ft.banks, course east.  
 33.00 Ascend N. slope of steep granite mountain.  
 40.00 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in a mound of stone, 3 ft. base, 2½ ft. high, for ¼ sec. cor. (could not set in ground) with brass cap, marked,  
     ¼ S 17 on W.half;  
     S 16 on E.half; and  
     1913 on S.half; pits impracticable.  
 Raise a mound of stone, 4 ft. base, 3 ft.high, west of cor.  
 53.85 Top of ridge, brs.E.and W.  
 Descend steep south slope.  
 73.00 A ravine, 20 lks.wide, 10 ft. deep, course S.10°E.  
 80.00 Set an iron post 3 ft.long, 2 ins. in diam., 12 ins. in

## 10. Subdivision of Township 5 South, Range 13 West.

Chains.

the ground, (could not set deeper for solid rock) for cor. of secs. 16, 17, 20 and 21, with brass cap, marked,

T 5 S S 17 in NW.,

R 13 W S 16 in NE.,

S 21 in SE., and

S 20 in SW. quadrants;

1913 on S-half; pits impracticable.

Raise a mound of stone 3 ft. base, 2 ft. high, around post.  
Raise a mound of stone 4 ft. base, 2½ ft. high, west of corner.

Land, mountainous, surface covered with loose boulders.  
No soil; no timber or undergrowth.

Oct. 13: At the cor. of secs. 16, 17, 20 and 21, I set off 7°45'S. on decl. arc, and at 11h.46m. l.m.t., I observe the sun on the meridian; the resulting lat. is 32° 59'N.

Thence I run,

West, on a random line, bet. secs. 17 and 20.

40.00 Set temp. ¼ sec. cor.

79.96 Intersect N. and S. line, 7 lks. south of cor. of secs. 17, 18, 19 and 20.

Thence I run,

S. 89°57'E., on a true line, bet. secs. 17 and 20.

Over broken SW. slope of mountain.

39.98 True point for ¼ sec. cor. falls on steep rock surface.

47.56 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in a mound of stone, 4 ft. base, 2 ft. high, for witness cor. to ¼ sec. cor., with brass cap, marked,

W C ¼ S 17 on N. half; and

S 20, 1913 on S. half; pits impracticable.

Raise a mound of stone, 2½ ft. base, 1½ ft. high, N. of cor.

53.47 Top of spur, brs. N. 30°W. and S. 30°E.

Descend steep east slope of mountain.

77.00 Foot of descent, brs. N. and S. 800 ft. below ¼ sec. cor.

Thence over gradual east slope to corner.

79.96 Cor. of secs. 16, 17, 20 and 21.

Land, mountainous, covered with volcanic rock boulders;  
No soil.

October 13, 1913.

October 14, 1913: At 9h.0m. a.m., l.m.t., I set off 32° 59'N. on lat. arc; and 8°04'S. on decl. arc, and determine a meridian with the solar at the cor. of secs. 16, 17, 20 and 21.

Thence I run,

S. 0°01'W., on a true line, bet. secs. 20 and 21.

Over rough and broken surface.

17.00 Ascend north slope of rocky hill.

24.66 Change to SW. slope, over large boulders.

37.36 Change to gently rolling land.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., with brass cap, marked,

¼ S 20 on W. half;

S 21 on E. half; and

1913 on S. half; pits impracticable.

raise a mound of stone 3 ft. base, 1½ ft. high, west of cor.

45.00 Enter level land, brs. E. and W.

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

T 5 S S 20 in NW.,

R 13 W S 21 in NE.;

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Chains.

S 28 in SE., and  
 S 29 in SW. quadrants;  
 1913 on S. half;  
 dig pits 18x18x12 ins. in each sec. 5 1/2 ft. dist.,  
 Raise a mound of earth and stone, 4 ft. base, 2 ft. high,  
 W. of cor.  
 Land, mountainous, covered with boulders, 45.00 chs.  
 Level, adobe soil, covered with loose malpais stone, 35.00  
 chs.  
 Scattering palo verde and ironwood timber.  
 Giant cactus on level land.

40.00 West, on a random line, bet. secs. 20 and 29.  
 80.00 Set temp. 1/4 sec. cor.  
 Intersect N. and S. line, 9 lks. north of cor. of secs. 19,  
 20, 29 and 30.  
 Thence I run,  
 N. 89° 56' E., on a true line, bet. secs. 20 and 29.  
 Over broken surface, covered with loose stone.  
 25.00 Wash, shallow, 150 lks. wide, course S. 10° E.  
 37.60 Wash, 20 lks. wide, 2 ft. banks, course S. 20° E.  
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in  
 the ground, for 1/4 sec. cor., with brass cap, marked,  
 1/4 S 20 on N. half, and  
 S 29, 1913 on S. half;  
 dig pits 18x18x12 ins., E. and W. of post, 3 ft. dist.,  
 and raise a mound of earth and stone, 3 1/2 ft. base, 1 1/2  
 ft. high, north of corner.  
 46.70 Ascend SW. slope.  
 51.55 Top of low rocky ridge, brs. NW. and SE.  
 65.00 Descend NE. slope.  
 68.00 Wash, 50 lks. wide, 2 ft. banks, course SE.  
 Thence over level land.  
 80.00 Cor. of secs. 20, 21, 28 and 29.  
 Land, broken and hilly, 68.00 chs., covered with loose  
 boulders, 12.00 chs.; of level adobe soil, covered with  
 loose stone, 6 to 12 ins. in diam.,  
 Scattering greasewood brush.  
 Palo verde and ironwood along washes.  
 Giant cactus and ocotilla.

Oct. 14: At the cor. of secs. 20, 21, 28 and 29, I set off  
 8° 08' S. on decl. arc, and at 11h. 46m. l.m.t., observe  
 the sun on the meridian; the resulting latitude is  
 32° 58' N.  
 Thence I run,  
 S. 0° 01' W., on a true line, bet. secs. 28 and 29.  
 Over level land, through scattering palo verde and iron-  
 wood.  
 8.50 Ascend over west slope of low hill.  
 15.00 Wash, 20 links wide, 2 ft. banks, course SE.  
 28.15 Enter level land, sandy soil.  
 36.85 Wagon road brs. S. 20° W. and N. 20° E.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
 the ground, for 1/4 sec. cor., with brass cap, marked,  
 1/4 S 29 on W. half;  
 S 28 on E. half; and  
 1913 on S. half;  
 dig pits 18x18x12 ins., N. and S. of post, 3 ft. dist.,  
 and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high,  
 west of corner.  
 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in  
 the ground, for cor. of secs. 28, 29, 32 and 33, with  
 brass cap, marked,  
 T 5 S S 29 in NW.,

## 12. Subdivision of Township 5 South, Range 13 West.

Chains.

R 13 W S 28 in NE.,  
S 33 in SE., and  
S 32 in SW. quadrants;  
1913 on S-half;

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

Land, level.

Soil, sandy, 2nd rate, 51.85 chs.

Stony land, 28.15 chs.

Scattering palo verde and ironwood.

Greasewood brush, 4 to 6 ft. on level land.

Ocotillo and giant cactus.

- West, on a random line, bet. secs. 29 and 32.  
40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
79.88 Intersect N. and S. line, at the cor. of secs. 29, 30, 31  
and 32.  
Thence I run,  
East, on a true line, bet. secs. 29 and 32.  
Over level land, through brush, 4 to 6 ft. high.  
5.00 Wash, 20 links wide, 2 ft. deep, course S.  $10^{\circ}$  E.  
39.94 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in  
the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked,  
 $\frac{1}{4}$  S 29 on N. half; and  
S 32, 1913 on S. half;  
dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.,  
and raise a mound of earth,  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high,  
N. of cor.  
79.88 Cor. of secs. 28, 29, 32 and 33.  
Land, level, sandy soil, 2nd rate.  
Scattering palo verde and ironwood.  
Greasewood brush, 4 to 6 ft. high.  
Giant cactus and ocotillo.

October 14, 1913.

- October 15, 1913:  
40.00 S.  $0^{\circ}01'$  W., on a random line, bet. secs. 32 and 33.  
Set temp.  $\frac{1}{4}$  sec. cor.  
81.17 Intersect the south bdy. of the Tp. (1st. Standard Parallel  
South) 44 lks. S.  $89^{\circ}45'$  W. of the standard cor. of secs.  
32 and 33, reestablished by W. K. Kierulff, U.S. Transit-  
man, as described in Book "D."  
Thence I run,  
N.  $0^{\circ}18'$  W., on a true line, bet. secs. 32 and 33.  
Over level land, through brush.  
41.17 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in  
the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked,  
 $\frac{1}{4}$  S 32 on W. half;  
S 33 on E. half; and  
1913 on S. half;  
dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.,  
and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high,  
W. of cor.  
81.17 Cor. of secs. 28, 29, 32 and 33.  
Land, level.  
Soil, sandy, 2nd rate.  
Greasewood brush.  
Scattering palo verde; scattering giant cactus and oco-  
tillo.

October 15, 1913.  
W. H. T.

Subdivision of Township 5 South, Range 13 West. 13.

Chains.

W.K.K.

October 3, 1913:

At the cor. of secs. 3, 4, 33 and 34 on the north bdy. of the Tp., established by me, as described in Book "A," I set off 33°01½' N. on lat. arc; and 3°53' S. on decl. arc; and at 9h.0m. a.m., l.m.t., determine a meridian with the solar.

Thence I run,

S. 0°02' W., on a true line, bet. secs. 3 and 4.

Over rocky rolling land.

38.00

Dry wash, 100 lks. wide, 8 ft. banks, course NW.

40.00

Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor. of secs. 3 and 4, with brass cap, marked,

¼ S 4 on W. half;

S 3 on E. half; and

1913 on S. half; from which,

A palo verde, 8 ins. in diam., brs. S. 73°5' W., 268 lks. dist., marked ¼ S 4 B T.

A palo verde, 12 ins. in diam., brs. N. 62°45' E., 172 lks. dist., marked ¼ S 3 B T.

72.00

Dry wash, 150 lks. wide. 5 ft. banks, course NW.

80.00

Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 3, 4, 9 and 10, with brass cap, marked,

T 5 S S 4 in NW.,

R 13 W S 3 in NE.,

S 10 in SE., and

S 9 in SW. quadrants;

1913 on S. half; from which,

A palo verde, 14 ins. in diam., brs. S. 20½° W., 250 lks. dist., marked T 5 S R 13 W S 9 B T.

A palo verde, 14 ins. in diam., brs. S. 23½° E., 408 lks. dist., marked T 5 S R 13 W S 10 B T.

A palo verde, 12 ins. in diam., brs. N. 72°50' W., 437 lks. dist., marked T 5 S R 13 W S 4 B T.

No other tree within limits. Build a mound of stone 4 ft. base, 3 ft. high, west of cor. Pits impracticable.

Land, rocky and rolling.

Soil, volcanic ash, 4th rate, covered with malpais boulders.

Timber, scattering palo verde, ironwood and mesquite.

Undergrowth, scattering greasewood brush.

Oct. 3: At this cor. I set off 3°57' S. on decl. arc; and at 11h.49m. l.m.t., I observe the sun on the meridian; the resulting latitude is 33°01' N.

West, on a random line, bet. secs. 4 and 9.

40.00

Set temp. ¼ sec. cor.

79.98

Intersect N. and S. line, 3 lks. north of cor. of secs. 4, 5, 8 and 9.

Thence I run,

N. 89°59' E., on a true line, bet. secs. 4 and 9.

Over rocky, rolling land.

39.99

Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor. of secs. 4 and 9, with brass cap, marked,

¼ S 4 on N. half; and

S 9, 1913 on S. half; from which,

A palo verde, 10 ins. in diam., brs. N. 34½° W., 143 lks. dist., marked ¼ S 4 B T.

No other tree within limits. Pits impracticable.

Build a mound of stone, 4 ft. base, 3 ft. high, north of cor.

79.98

Cor. of secs. 3, 4, 9 and 10.

Land, rocky and rolling.

Soil, volcanic ash, 4th rate, covered with malpais boulders.

Timber, scattering palo verde, ironwood and mesquite.

## 14. Subdivision of Township 5 South, Range 13 West.

Chains.

Undergrowth, scattering greasewood brush.

October 3, 1913.

Oct. 4, 1913:

At 8h.0m. a.m., l.m.t., I set off  $33^{\circ}01'$  N. on lat. arc;  
 $4^{\circ}15'$  S. on decl. arc, and determine a meridian with  
 the solar at the cor. of secs. 3, 4, 9 and 10. Thence I run,  
 $S.0^{\circ}02'W.$ , on a true line, bet. secs. 9 and 10.

Ascend north slope.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in  
 a mound of stone, 3 ft. base,  $2\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec.  
 cor. of secs. 9 and 10, with brass cap, marked,  
 $\frac{1}{4}$  S 9 on W. half;  
 S 10 on E. half; and  
 1913 on S. half;  
 build a mound of stone, 4 ft. base, 3 ft. high, west of  
 cor.

59.01 Top of hill, brs. E. and W. Descend.

68.00 Bottom of canyon, 2 chs. wide, 50 ft. deep, course east.

Ascend north slope.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in  
 a mound of stone 3 ft. base,  $2\frac{1}{2}$  ft. high, for cor. of  
 secs. 9, 10, 15 and 16, with brass cap, marked,  
 T 5 S S 9 in NW.,  
 R 13 W S 10 in NE.,  
 S 15 in SE.,  
 S 16 in SW. quadrants;  
 1913 on S. half; pits impracticable.

Build a mound of stone 4 ft. base, 3 ft. high, W. of cor.

Land, mountainous, rough and rocky; malpais boulders.

Soil, volcanic ash, 4th rate, rocky and sandy.

Timber, scattering palo verde, ironwood and mesquite.

Scattering greasewood brush.

October 4, 1913.

October 6, 1913:

At the cor. of secs. 9, 10, 15 and 16, at 10h.0m. a.m., l.m.t.,  
 I set off  $33^{\circ}00'$  N. on lat. arc; and  $5^{\circ}03'$  S. on decl. arc;  
 and determine a meridian with the solar.

Thence I run,

West, on a random line, bet. secs. 9 and 16.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.79.92 Intersect N. and S. line, 10 lks. north of cor. of secs. 8, 9,  
16 and 17.

Thence I run,

 $N.89^{\circ}56'E.$ , on a true line, bet. secs. 9 and 16; descend-29.92 Bottom of slope, ravine, 300 lks. wide, 50 ft. deep,  
course south.

Ascend.

39.96 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in  
a mound of stone, 3 ft. base,  $2\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec.  
cor. of secs. 9 and 16, with brass cap, marked, $\frac{1}{4}$  S 9 on N. half; and

S 16, 1913 on S. half; pits impracticable.

Raise a mound of stone, 4 ft. base, 3 ft. high, north of cor.

55.00 Top of peak.

69.00 Saddle divide, descend.

79.92 Cor. of secs. 9, 10, 15 and 16.

Land, east half, mountainous, covered with boulders;  
west half, rolling, covered with boulders.

Soil, none.

No timber or undergrowth.

October 6, 1913.

W.K.K.



Chains

W.H.T.

October 15, 1913: At 9h.0m. a.m., l.m.t., I set off  
 $33^{\circ}00'$  N. on lat. arc; and  $8^{\circ}27'$  S. on decl. arc; and deter-  
 mine a meridian with the solar at the cor. of secs.  
 9, 10, 15 and 16.

Thence I run,

S.  $0^{\circ}02'$  W., on a true line, bet. secs. 15 and 16.

Ascend north slope, over large boulders.

9.50 Top of mountain ridge, brs. E. and W.

12.67 Descend over steep south slope of mountain, over large  
boulders.40.00 Set an iron post 3 ft. long, 1 in. in diam., 12 ins. in  
the ground (could not set deeper for solid rock), for  
 $\frac{1}{4}$  sec. cor., with brass cap, marked, $\frac{1}{4}$  S 16 on W. half;

S 15 on E. half; and

1913 on S. half; pits impracticable.

Raise a mound of stone, 3 ft. base, 2 ft. high, around post.

Raise a mound of stone, 4 ft. base, 2 ft. high, west of cor.

56.00 Ravine, 300 lks. wide, 50 ft. deep, course S.  $30^{\circ}$  W.

72.10 Foot of 800 ft. descent.

74.20 Wash, 40 lks. wide, 3 ft. banks, course S.  $20^{\circ}$  E.80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in  
the ground, for cor. of secs. 15, 16, 21 and 22, with  
brass cap, marked,

T 5 S S 16 in NW.,

R 13 W S 15 in NE.,

S 22 in SE., and

S 21 in SW. quadrants;

1913 on S. half; from which,

An ironwood, 6 ins. in diam., brs. N.  $19^{\circ}45'$  E.,

76 lks. dist., marked T 5 S R 13 W S 15 B T.

A palo verde, 7 ins. in diam., brs. S.  $8^{\circ}15'$  E.,

147 lks. dist., marked T 5 S R 13 W S 22 B T.

A palo verde, 6 ins. in diam., brs. S.  $80^{\circ}$  W., 145

lks. dist., marked T 5 S R 13 W S 21 B T.

A palo verde, 8 ins. in diam., brs. N.  $5^{\circ}$  W., 84

lks. dist., marked T 5 S R 13 W S 16 B T.

Land, mountainous, 72.00 chs., covered with large boulders.  
No soil.

Rolling, covered with loose stone, sandy soil, 8.00 chs.

Palo verde and ironwood along washes.

Giant cactus.

-----  
West, on a random line, bet. secs. 16 and 21.40.00 Set temp.  $\frac{1}{4}$  sec. cor.79.90 Intersect N. and S. line, 7 lks. south of cor. of secs. 16,  
17, 20 and 21.

Thence I run,

S.  $89^{\circ}57'$  E., on a true line, bet. secs. 16 and 21.

Over rough and broken surface.

5.70 A ravine, 20 lks. wide, 5 ft. deep, course S.  $10^{\circ}$  E.

Ascend over broken SW. slope of mountain.

31.77 Top of spur, brs. N. and S.

39.95 True point for  $\frac{1}{4}$  sec. cor. falls on steep bare rock.

44.48 Top of ridge, brs. N. and S., 600 ft. above sec. cor.

Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in a  
mound of stone, 4 ft. base, 2  $\frac{1}{2}$  ft. high, for witness cor.  
to  $\frac{1}{4}$  sec. cor., with brass cap, marked,W C  $\frac{1}{4}$  S 16 on N. half;

S 21, 1913 on S. half; pits impracticable.

Raise a mound of stone 4 ft. base, 2 ft. high, north of  
corner.Descend over steep east slope of mountain, over large  
boulders.

## 16. Subdivision of Township 5 South, Range 13 West.

Chains

- 67.30 Foot of mountain, brs.N.and S., 600 ft. descent.  
 69.00 A road brs.N.25°W. and S.25°E.  
 71.30 Enter level land, brs.N.and S.  
 79.60 Road brs.NW. and SE.  
 79.90 Cor.of secs.15,16,21 and 22.  
 Land, mountainous, over large boulders; no soil, 71.30  
 chs. land level. Sandy soil,3rd rate,8.60 chs.  
 -----
- S.0° 02' W., on a true line, bet. secs.21 and 22.  
 Over level land.  
 .40 Wagon road, brs.NW. and SE.  
 6.30 Wash, 20 lks.wide, 2 ft.deep, course S.50°E.  
 6.80 Ascend NE. slope of hill, over boulders.  
 8.40 A road brs.NW. and SE.  
 Thence along west slope of hill.  
 28.82 Top of hill, brs. east about 5.00 chains.  
 Change to SW. slope.  
 40.00 Set an iron post, 3 ft.long, 1 in. indiam., 12 ins. in  
 the ground, for  $\frac{1}{4}$  sec.cor. (could not set deeper for  
 solid rock) with brass cap, marked,  
 $\frac{1}{4}$  S 21 on W. half;  
 S 22 on E. half; and  
 1913 on S. half; pits impracticable.  
 Raise a mound of stone, 3 ft.base, 2 ft.high around post.  
 Raise a mound of stone, 4 ft.base, 2 ft.high, west of  
 cor.  
 44.00 A ravine, 20 links wide, 5 ft.deep, course S.60° W.  
 Thence along west slope of hill, over boulders.  
 80.00 Set an iron post 3 ft.long, 2 ins. in diam., 6 ins. in  
 the ground, (could not set deeper for solid rock),  
 for cor.of secs.21,22,27 and 28, with brass cap,  
 marked,  
 T 5 S S 21 in NW.,  
 R 13 W S 22 in NE.,  
 S 27 in SE., and  
 S 28 in SW. quadrants;  
 1913 on S. half; pits impracticable.  
 Raise a mound of stone, 4 ft.base, 2 ft.high, around post.  
 Raise a mound of stone 4 ft.base, 2 ft.high, west of  
 corner.  
 Land, rough and broken, covered with boulders, 73.00  
 chs.  
 No soil.  
 Level, sandy soil, 6.80 chs.  
 Giant cactus and cholla.  
 -----
- Oct.15: At the cor.of secs. 21,22,27 and 28, I set off  
 8°30'S.on decl.arc, and at 11h.46m. l.m.t., I observe  
 the sun on the meridian; the resulting lat.is 32°  
 58 $\frac{1}{2}$ 'N.  
 Thence I run,  
 West, on a random line, bet. secs.21 and 28.  
 40.00 Set temp.  $\frac{1}{4}$ .sec.cor.  
 79.99 Intersect N and S. line, 6 lks. north of cor.of secs.  
 20,21,28 and 29.  
 Thence I run,  
 N.89°57'E., on a true line, bet. secs.21 and 28.  
 Over level land, through greasewood brush.  
 24.00 Enter land, covered with malpais stone, brs.N.and S.  
 37.00 Enter sandy soil, brs.N.and S.  
 39.995 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in  
 the ground, for  $\frac{1}{4}$  sec.cor., with brass cap, marked,  
 $\frac{1}{4}$  S 21 on N. half; and  
 S 28, 1913 on S. half;

Subdivision of Township 5 South, Range 13 West, 17.

Chains

- dig pits 18x18x12 ins., E. and W. of post, 3 ft. dist., and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.
- 53.00 Leave sandy land; enter land, covered with loose stone.
- 61.58 Wash, 100 lks. wide, shallow, course south.
- 63.18 Wagon road, brs. N. and S.
- 71.70 Wash, 10 lks. wide, 5 ft. banks, course south. Ascend west slope, over boulders.
- 79.99 Cor. of secs. 21, 22, 27 and 28. Land, nearly level, 71.70 chs. of third rate. Soil, sandy and covered with loose small stone. Rough, 8.29 chs.; no soil. Scattering palo verde and ironwood on level; also grease-wood brush, 4 to 6 ft. high. Giant cactus and ocotillo.
- 
- S.  $0^{\circ}02'$  W., on a true line, bet. secs. 27 and 28. Over steep west slope, over boulders.
- 5.48 Change to steep east slope.
- 9.78 Raise a mound of stone 3 ft. base, 2 ft. high, on line. Descend steep south slope.
- 21.00 Wash, 40 lks. wide, 5 ft. deep, course S.  $40^{\circ}$  E. Foot of 300 ft. descent; thence over rolling land.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked,  $\frac{1}{4}$  S 28 on W. half; S 27 on E. half, and 1913 on S. half; dig pits 18x18x12 ins., N. and S. of post, 3 ft. dist., and raise a mound of earth,  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.
- 43.00 Wash, 40 lks. wide, 2 ft. banks, course S.  $20^{\circ}$  E.
- 55.00 Shallow wash, 20 lks. wide, course S.  $30^{\circ}$  E.
- 59.30 Old road brs. NW. and SE.
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 27, 28, 33 & 34, with brass cap marked; T 5 S S 28 in NW., R 13 W S 27 in NE., S 34 in SE. and S 33 in SW. quadrants, 1913 on S. half. Dig pits 18 X 18 X 12 ins. in each sec.  $5\frac{1}{2}$  ft. dist. and raise a mound of earth  $4\frac{1}{2}$  ft. base, 2 ft. high, W. of cor. of sec. 27. Land, mountainous and boulders, no soil, 21 chains. Rolling, sandy soil, covered with malpais gravel, 59 chains. Greasewood brush on level and rolling land.
- 
- West, on a random line, bet. secs. 28 and 33.
- 40.00 Set temp.  $\frac{1}{4}$  sec. cor.
- 80.00 Intersect N. and S. line, 1 link north of the cor. of secs. 28, 29, 32 and 33. Thence I run, East, on a true line, bet. secs. 28 and 33. Over level land, through greasewood brush and palo verde.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked,  $\frac{1}{4}$  S 28 on N. half; and S 33, 1913 on S. half; dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist., and raise a mound of earth,  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.
- 44.00 Wash, 10 lks. wide, shallow, course S.  $10^{\circ}$  E.
- 80.00 Cor. of secs. 27, 28, 33 and 34. Land, level, sandy soil, 2nd rate, greasewood brush. Scattering palo verde and ironwood. Scattering giant cactus, and ocotillo.

Oct. 15, 1913.

## 18. Subdivision of Township 5 South, Range 13 West.

Chains,

October 17, 1913:  
 S.0°02'W., on a true line, bet. secs.33 and 34.  
 Over level land, through scattering brush.

40.00 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec.cor., with brass cap, marked,  
 $\frac{1}{4}$  S 33 on W.half;  
 S 34 on E.half; and  
 1913 on S.half;  
 dig pits, 18x18x12 ins., N.and S.of post, 3 ft. dist., and raise a mound of earth,  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, west of corner.

81.02 Intersect the south boundary of the township (1st.Standard Parallel South,) 63 lks.S.89°54'W.of angle point established by W.K.Kierulff, U.S.Transitman, in the former position of standard cor.of secs.33 and 34, as described in Book "D."  
 At point of intersection, I set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for closing cor.of secs. 33 and 34, with brass cap, marked,  
 T 5 S S 33 in NW., and  
 R 13 W S 34 in NE. quadrants;  
 C C near center of north half; and  
 1913 on S.half;  
 dig pits 24x18x12 ins. crosswise on each line, E.and W.3ft. and 7 ft. dist., N.of corner.  
 Raise a mound of earth, 2 ft. high, north of cor.  
 Land, level, sandy soil, 2nd rate.  
 Greasewood brush, 5 to 6 ft. high.  
 Scattering palo verde.  
 Giant cactus and ocotillo.

October 17, 1913.

W.H.T.

W.K.K.  
 October 7, 1913:  
 At 8h.0m.a.m., l.m.t., I set off 33°01 $\frac{1}{2}$ 'N. on lat.arc;  
 5°24'S. on decl.arc, and determine a meridian with the solar at the cor.of secs. 2,3,34 and 35, on the N.bdy. of the Tp., established by me, as described in Book "A." Thence I run,  
 S.0°02'W., on a true line, bet. secs.2 and 3.  
 Ascend northwest slope; north end of spur, brs.N.and S.

19.00 North side of canyon, course west.  
 26.00 South side of canyon, course west.  
 27.00 Descend steep rough rocky SW. slope.  
 36.00 Foot of descent; draw, course W.  
 40.00 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in a mound of stone, 3 ft.base,  $2\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec.cor. of secs.2 and 3, with brass cap, marked,  
 $\frac{1}{4}$  S 3 on W.half;  
 S 2 on E.half; and  
 1913 on S.half; pits impracticable.  
 Build a mound of stone, 4 ft.base, 3 ft.high, W.of cor.

53.00 Ascend north slope.  
 57.00 Top of ascent; descend steep south slope.  
 65.00 Foot of descent, brs.E.and W.  
 80.00 Set an iron post, 3 ft.long, 2 ins. in diam., 24 ins. in a mound of stone, 3 ft.base,  $2\frac{1}{2}$  ft. high, for cor.of secs.2,3,10 and 11, with brass cap, marked,  
 T 5 S S 3 in NW.,  
 R 13 W S 2 in NE.,  
 S 11 in SE., and  
 S 10 in SW. quadrants;  
 1913 on S.half; pits impracticable.  
 Raise a mound of stone 4 ft.base, 3 ft. high, west of cor.  
 Land, mountainous rough and broken, malpais boulders.  
 Soil, 4th rate.

Subdivision of Township 5 South, Range 13 West, 19.

Chains.

West, on a random line, bet. secs. 3 and 10.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.08 Intersect N. and S. line, 7 lks. south of cor. of secs. 3, 4, 9 and 10.  
 Thence I run,  
 S.  $89^{\circ}57'E.$ , on a true line, bet. secs. 3 and 10,  
 38.00 Ravine, 150 lks. wide, 10 ft. deep, course NW.  
 40.04 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor. of secs. 3 and 10, with brass cap, marked,  
 $\frac{1}{4}$  S 3 on N. half;  
 S 10, 1913 on S. half; from which,  
 A palo verde, 10 ins. in diam., brs. N.  $66\frac{1}{2}^{\circ}W.$ , 153 lks. dist., marked  $\frac{1}{4}$  S 3 B T.  
 An ironwood, 18 ins. in diam., brs. S.  $20\frac{1}{4}^{\circ}W.$ , 209 lks. dist., marked  $\frac{1}{4}$  S 10 B T.  
 Ascend hill.  
 72.33 Top of hill, round and rocky.  
 Descend to corner, over east slope.  
 80.08 Cor. of secs. 2, 3, 10 and 11.  
 Oct. 7: At this corner I set off  $5^{\circ}28'S.$  on decl. arc; and at 11h. 48m. l.m.t., I observe the sun on the meridian; the resulting lat. is  $33^{\circ}01'N.$   
 Land,  $\frac{3}{4}$  mile of rough, broken mountainous land.  $\frac{1}{4}$  mile of rolling, rough and broken land, covered with malpais boulders.

S.  $0^{\circ}02'W.$ , on a true line, bet. secs. 10 and 11.  
 14.00 Wash, 50 lks. wide, 5 ft. banks, course west.  
 14.50 Ascend north slope.  
 20.00 Top of spur, brs. E. and W. Descend south slope.  
 25.00 Foot of slope.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in a mound of stone 3 ft. base,  $2\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec. cor. of secs. 10 and 11, with brass cap, marked,  
 $\frac{1}{4}$  S 10 on W. half;  
 S 11 on E. half; and  
 1913 on S. half; pits impracticable.  
 Raise a mound of stone 4 ft. base, 3 ft. high, west of cor.  
 46.00 Wash, dry, 50 links wide, 5 ft. banks, course NW.  
 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in a mound of stone, 3 ft. base,  $2\frac{1}{2}$  ft. high, for cor. of secs. 10, 11, 14 and 15, with brass cap, marked,  
 T 5 S S 10 in NW.,  
 R 13 W S 11 in NE.,  
 S 14 in SE., and  
 S 15 in SW. quadrants;  
 1913 on S. half; pits impracticable.  
 Raise a mound of stone 3 ft. base, 3 ft. high, west of cor.  
 Land, rough and mountainous, malpais boulders.  
 Line runs along east side of canyon.

West, on a random line, bet. secs. 10 and 15.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.08 Intersect N. and S. line, 5 links south of cor. of secs. 9, 10, 15 and 16.  
 Thence I run,  
 S.  $89^{\circ}58'E.$ , on a true line, bet. secs. 10 and 15.  
 Ascend steep west slope.  
 30.00 Top of ascent, brs. N. and S.  
 Descend NE. slope, into canyon.  
 38.00 Bottom of descent; enter canyon, course north.  
 40.04 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in a mound of stone, 3 ft. base,  $2\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec.

## 20. Subdivision of Township 5 South, Range 13 West.

Chains.

- cor. of secs. 10 and 15, with brass cap, marked,  
 $\frac{1}{4}$  S 10 on N. half; and  
 S 15 1913 on S. half; pits impracticable.  
 Build a mound of stone 4 ft. base, 3 ft. high, north of  
 corner.
- 43.00 Ascend out of canyon.  
 50.00 Top of ascent, 100 ft. above bottom of canyon.  
 50.20 Descend east slope.  
 75.00 Bottom of descent; thence along north slope.  
 80.08 Cor. of secs. 10, 11, 14 and 15.  
 Land, mountainous, broken, rough, covered with malpais  
 boulders.  
 Soil, none.
- Oct. 7, 1913.  
 W.K.K.
- 
- W.H.T.  
 October 16, 1913. At 9h. 0m. a.m., l.m.t., I set off  $33^{\circ}$   
 $00'$  N. on lat. arc, and  $8^{\circ}49'$  S. on decl. arc, and deter-  
 mine a meridian with the solar at the cor. of secs. 10,  
 11, 14 and 15.  
 Thence I run,  
 S.  $0^{\circ}02'$  W., on a true line, bet. secs. 14 and 15.  
 Over gradual north slope.
- 2.60 Rock ledge 100 ft. high, brs. E. and W.  
 Descend over steep south slope.
- 7.87 Change to east slope of mountain, over large volcanic  
 rock boulders.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
 a mound of stone, 4 ft. base,  $2\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec.  
 cor., with brass cap, marked,  
 $\frac{1}{4}$  S 15 on W. half;  
 S 14 on E. half; and  
 1913 on S. half; pits impracticable.  
 Raise a mound of stone 4 ft. base, 2 ft. high, west of cor.  
 Ascend NE. slope, from  $\frac{1}{4}$  sec. cor.
- 62.38 Spur of mountain, brs. E. and W.  
 Descend over SE. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 12 ins. in  
 the ground (could not set deeper for solid rock),  
 for cor. of secs. 14, 15, 22 and 23. with brass cap, marked,  
 T 5 S S 15 in NW.,  
 R 13 W S 14 in NE.,  
 S 23 in SE., and  
 S 22 in SW. quadrants;  
 1913 on S. half; pits impracticable.  
 Raise a mound of stone 4 ft. base, 2 ft. high, around post.  
 Raise a mound of stone 4 ft. base,  $2\frac{1}{2}$  ft. high, west of  
 corner.  
 Land, mountainous. Surface covered with loose volcanic  
 rocks boulders.  
 No soil.
- 
- West, on a random line, bet. secs. 15 and 22.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 79.96 Intersect N. and S. line, 5 lks. S. of cor. of secs. 15, 16,  
 21 and 22.  
 Thence I run,  
 S.  $89^{\circ}58'$  E., on a true line, bet. secs. 15 and 22.  
 Over level land, through palo verde and ironwood.
- 9.20 Wash, 40 lks. wide, 3 ft. banks, course S.  $40^{\circ}$  E.  
 19.10 Leave level land; ascend over gradual SW. slope, over  
 large volcanic boulders.
- 39.98 Set an iron post 3 ft. long, 1 in. in diam., 18 ins. in

Subdivision of Township 5 South, Range 13 West, 21.

Chains.

the ground (could not set deeper for solid rock), for  $\frac{1}{4}$  sec.cor., with brass cap, marked,  
 $\frac{1}{4}$  S 15 on N.half; and  
 S 22, 1913 on S.half; pits impracticable.  
 Raise a mound of stone, 3 ft.base, 1 $\frac{1}{2}$  ft. high, around post.  
 Raise a mound of stone 3 ft.base, 2 ft.high, north of corner.  
 46.00 Change to south slope.  
 55.55 Head of ravine, 20 lks.wide, 10 ft. deep, course south,  
 60.00 Change to SE. slope.  
 79.00 Wash, 20 lks.wide, 5 ft.banks, course S.80°E.  
 79.96 Cor.of secs. 14,15,22 and 23.  
 Land, mountainous, covered with boulders. No soil,50.86 chains.  
 Sandy soil,19.10 chs.  
 Palo verde and ironwood on level land; giant cactus on mountains.

Oct.16: At the cor.of secs.14,15,22 and 23, I set off 8° 52'S. on decl.arc. and at 11h.46m.l.m.t., observe the sun on the meridian; the resulting lat.is 32° 59'N.  
 Thence I run,  
 S.0°02'W., on a true line, bet. secs.22 and 23.  
 Over gradual SE. slope, over large boulders.  
 .40 Wash, 20 lks.wide, 5 ft. banks, course S.80°E.  
 11.89 Wash, 30 lks.wide, 5 ft. banks, course S.70°E.  
 24.39 Ravine, 50 lks.wide, 10 ft. banks, course N.60°E.  
 40.00 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec.cor., with brass cap, marked,  
 $\frac{1}{4}$  S 22 on W.half;  
 S 23 on E.half; and  
 1913 on S.half; pits impracticable.  
 Raise a mound of stone, 3 ft.base, 2 $\frac{1}{2}$  ft. high, west of cor.  
 44.20 A drain 15 lks.wide, 2 ft. banks, course S.80° E.  
 80.00 Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs.22,23,26 and 27, with brass cap, marked,  
 T 5 S S 22 in NW.,  
 R 13 W S 23 in NE.,  
 S 26 in SE., and  
 S 27 in SW. quadrants;  
 1913 on S.half; from which,  
 A palo verde, 5 ins. in diam., brs.N.81°W.,  
 130 lks.dist., marked T 5 S R 13 W S 22 B T.  
 No other trees in limit. Pits impracticable.  
 Raise a mound of stone 4 ft.base, 2 ft. high, west of corner.  
 Land, gradual SE. slope, over volcanic rock boulders.  
 No soil.  
 Scattering palo verde and ironwood along washes.  
 Giant cactus and chollas.

West, on a random line, bet. secs.22 and 27.  
 40.00 Set temp. $\frac{1}{4}$  sec.cor.  
 79.98 Intersect N.and S. line, 5 links N.of cor.of secs. 21, 22,27 and 28.  
 Thence I run,  
 N.89°58'E., on a true line bet. secs. 22 and 27.  
 Ascend west slope.  
 1.00 Top of ridge, brs.N.and S.  
 Descend SE. slope.

## 22. Subdivision of Township 5 South, Range 13 West.

Chains.

15.00 Ravine, 20 links wide, 5 ft. banks, course south.  
Ascend.

20.40 Top of low ridge, brs. N. and S.  
Descend.

27.30 A ravine, 25 lks. wide, 8 ft. deep, course south.

33.50 Top of low ridge, brs. N. and S.

39.60 A ravine, 15 lks. wide, 8 ft. deep, course south.

39.99 Set an iron post 3 ft. long, 1 in. in diam., 6 ins. in  
the ground, (could not set deeper for solid rock), for  
 $\frac{1}{4}$  sec. cor., with brass cap, marked,  
 $\frac{1}{4}$  S 22 on N. half; and  
S 27, 1913 on S. half; pits impracticable.  
Raise a mound of stone 4 ft. base, 2 ft. high, around post.  
Raise a mound of stone 4 ft. base, 2 $\frac{1}{2}$  ft. high, N. of cor.

45.00 Top of low ridge, brs. N. and S.

55.80 Road brs. N. and S.

59.00 Wash, 40 lks. wide, 5 ft. banks, course south,

79.98 Cor. of secs. 22, 23, 26 and 27.  
Land, hilly, covered with loose volcanic stone, 12 to 24  
ins. in diam.; no soil.  
Ocotillo and scattering giant cactus.

October 16, 1913.

October 17, 1913: At 9h. 0m. a.m., l.m.t., I set off 32°  
58' N. on lat. arc; and 9° 11' S. on decl. arc, and deter-  
mine a meridian with the solar at the cor. of secs. 22,  
23, 26 and 27.

Thence I run,  
S 0° 02' W., on a true line, bet. secs. 26 and 27.  
Over gradual south slope, over volcanic rock boulders, 1  
to 2 ft. in diameter.

15.00 Road brs. NW. and SE.

40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked,  
 $\frac{1}{4}$  S 27 on W. half;  
S 26 on E. half; and  
1913 on S. half; pits impracticable.  
Raise a mound of stone 3 ft. base, 2 ft. high, west of cor.

61.27 A ravine, 10 lks. wide, 5 ft. deep, course S 80° E.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in  
the ground, for cor. of secs. 26, 27, 34 and 35, with  
brass cap, marked,  
T 5 S S 27 in NW.,  
R 13 W S 26 in NE.,  
S 35 in SE., and  
S 34 in SW. quadrants;  
1913 on S. half; from which,  
A palo verde, 5 ins. in diam., brs. N. 86° W., 49  
lks. dist., marked T 5 S R 13 W S 27 BT.  
A palo verde, 6 ins. in diam., bears S 28° E.,  
57 lks. dist., marked T 5 S R 13 W S 35 B T.  
No other trees in limits; pits impracticable.  
Raise a mound of stone 4 ft. base, 2 ft. high, west of cor.  
Land, gradual south slope, covered with loose malpais  
boulders.  
Poor soil, scattering greasewood brush.  
Scattering palo verde along washes.  
Giant cactus and ocotillo.

40.00 West, on a random line, bet. secs. 27 and 34.  
Set temp.  $\frac{1}{4}$  sec. cor.

80.00 Intersect the cor. of secs. 27, 28, 33 and 34.  
Thence I run,  
East, on a true line, bet. secs. 27 and 34.



Subdivision of Township 5 South, Range 13 West. 23.

Chains.

Over level land, through greasewood brush and scattering palo verde.

9.90 A shallow wash, 20 lks.wide, course S.20°E.

16.90 Wash, 30 lks.wide, 1 ft. banks, course south.

40.00 Set an iron post 3 ft.long, 1 in. indiam., 26 ins. in the ground, for  $\frac{1}{4}$  sec.cor., with brass cap, marked,  $\frac{1}{4}$  S 27 on N.half; and S 34, 1913 on S.half; from which,  
 A palo verde, 24 ins. in diam., brs.S.5°E., 167 lks.dist., marked  $\frac{1}{4}$  S 34 B T.  
 A palo verde, 18 ins. in diam., brs.N.65°E., 78 lks.dist., marked  $\frac{1}{4}$  S 27 B T.

53.50 A road brs. NW. and SE.

55.00 Wash, 40 lks.wide, 2 ft. banks, course south.

69.37 A shallow wash, 20 lks.wide, course S.30°E.

80.00 Cor.of secs.26,27, 34 and 35.  
 Land,level,sandy soil, 2nd rate.  
 Timber, palo verde and ironwood.  
 Greasewood brush, 4 to 8 ft. high.

S.0°02' W., on a true line, bet. secs.34 and 35.

Over level land, through greasewood brush.

10.50 A shallow wash, 20 links wide, course S.20°E.

40.00 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec.cor., with brass cap, marked,  $\frac{1}{4}$  S 34 on W.half; S 35 on E.half; and 1913 on S.half;  
 dig pits, 18x18x12 ins., N.and S.of post, 3 ft. dist., and raise a mound of earth  $3\frac{1}{2}$  ft. base, 1 $\frac{1}{2}$  ft. high,W. of cor.

80.76 Intersect the south bdy.of the Tp., (1st.Standard Parallel South) 85 lks.S.89° 45'W. of Angle Point established by W.K.Kierulff, in the former position of the standard cor. of secs. 34 and 35, as described in Book "D."  
 At point of intersection, I set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for closing cor.of secs. 34 and 35, with brass cap, marked, T 5 S S 34 in NW., and R 13 W S 35 in NE. quadrants; C C near center of Nohalf;and 1913 on S.half;  
 dig pits, 24x18x12 ins. crosswise on each line, E.and W.of cor. 3 ft. dist.,and N.of cor.7 ft. dist.,  
 Raise a mound of earth, 4 ft.base, 2 ft.high, north of cor.  
 Land,level.  
 Soil, sandy, 2nd rate.  
 Scattering palo verde.  
 Scattering greasewood brush.  
 Giant cactus and ocotillo.

Oct. 17, 1913.  
W.H.T.

W.K.K.  
 October 8, 1913:  
 At 9h.0m.a.m., 1.m.t., I set off 33°01 $\frac{1}{2}$ 'N.on lat.arc;5° 48 $\frac{1}{2}$ 'S.on decl.arc, and determine a meridian with the solar at the cor.of secs. 1,2,35 and 36, on the north bdy.of the Tp., established by me, as described in Book "A." Thence I run, S-0°03' W., on a true line, bet. secs.1 and 2.

## 24. Subdivision of Township 5 South, Range 13 West.

Chains.

- 13.50 Ascend NE. slope, over boulders.  
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in a mound of stone 3 ft. base, 2½ ft. high, for ¼ sec. cor. of secs. 1 and 2, with brass cap, marked, ¼ S 2 on W. half; S 1 on E. half; and 1913 on S. half; pits impracticable.  
 Raise a mound of stone, 4 ft. base, 3 ft. high, west of cor.  
 76.00 Top of ridge; descend over rocky rough SE. slope.  
 80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in a mound of stone, 3 ft. base, 2½ ft. high, for cor. of secs. 1, 2, 11 and 12, with brass cap, marked, T 5 S S 2 in NW., R 13 W S 1 in NE., S 12 in SE., and S 11 in SW. quadrants. 1913 on S. half; pits impracticable.  
 Raise a mound of stone 4 ft. base, 3 ft. high, west of cor. Land, mountainous, covered with boulders; rough, broken malpais.  
 Oct. 8: At this corner I set off 5°52' S. on decl. arc, and at 11h. 48m. l.m.t., I observe the sun on the meridian; the resulting lat. is 33° 01' N.
- 
- 40.00 West, on a random line, bet. secs. 2 and 11.  
 Set temp. ¼ sec. cor.  
 79.98 Intersect N. and S. line, 8 lks. north of cor. of secs. 2, 3, 10 and 11.  
 Thence I run, N. 89°57' E., on a true line, bet. secs. 2 and 11.  
 Ascend west slope.  
 2.98 Top of ascent; descend over east slope.  
 35.00 Foot of descent; ascend gradually over broken SW. slope.  
 39.99 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in a mound of stone, 3 ft. base, 2½ ft. high, for ¼ sec. cor. of secs. 2 and 11; with brass cap, marked, ¼ S 2 on N. half; and S 11, 1913 on S. half; pits impracticable.  
 Build a mound of stone, 3 ft. base, 3 ft. high, north of corner.  
 74.58 Ascend over steep rocky west slope.  
 77.58 Top of ascent; level top.  
 Descend steep rocky SE. slope.  
 79.98 Cor. of secs. 1, 2, 11 and 12.  
 Land, mountainous, rough and broken, covered with malpais boulders.  
 Soil, 4th rate, volcanic ash, covered with malpais.  
 Oct. 8, 1913.
- 
- Oct. 9, 1913:  
 At 8h. 0m. a.m., l.m.t., I set off 33° 01' N. on lat. arc; 6° 10' S. on decl. arc; and determine a meridian with the solar, at the cor. of secs. 1, 2, 11 and 12.  
 Thence I run,  
 East, on a random line, bet. secs. 1 and 12.  
 40.00 Set temp. ¼ sec. cor.  
 80.15 Intersect the east bdy. of the Tp., 5 lks. north of the cor. of secs. 1, 6, 7 and 12, reestablished by me this day, as described in Book "D."  
 Thence I run,  
 N. 89°58' W., on a true line, bet. secs. 1 and 12.  
 Over broken, mountainous north slope.  
 40.15 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in a mound of stone, 3 ft. base, 2½ ft. high, for ¼ sec. cor. of secs. 1 and 12, with brass cap, marked,

Subdivision of Township 5 South, Range 13 West, 25.

Chains.

$\frac{1}{4}$  S 1 on N. half; and  
 S 12, 1913 on S. half; pits impracticable.  
 Build a mound of stone, 3 ft. base, 3 ft. high, N. of cor.  
 62.00 Ascend steep SE. slope.  
 80.15 Top of ascent, cor. of secs. 1, 2, 11 and 12.  
 Land, mountainous and broken.  
 Soil, 4th rate.  
 Oct. 9, 1913.

Oct. 11, 1913.  
 S.  $0^{\circ}03'$  W., on a true line, bet. secs. 11 and 12.  
 5.00 Ascend steep NE. slope.  
 12.00 Top of ascent.  
 Descend along west slope in saddle.  
 29.50 Descend steep rocky slope to NW.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
 a mound of stone, 3 ft. base,  $2\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec.  
 cor. of secs. 11, and 12, with brass cap, marked,  
 $\frac{1}{4}$  S 11 on W. half;  
 S 12 on E. half; and  
 1913 on S. half; pits impracticable.  
 Build a mound of stone, 3 ft. base, 3 ft. high, west of cor.  
 Note: At 10h. 0m. a.m., l.m.t., I set off  $33^{\circ} 0\frac{1}{2}'$  N. on  
 lat. arc;  $6^{\circ}58'$  S. on decl. arc; and determine a meri-  
 dian with the solar at the above described  $\frac{1}{4}$  sec. cor.  
 80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in  
 a mound of stone, 3 ft. base,  $2\frac{1}{2}$  ft. high, for cor.  
 of secs. 11, 12, 13 and 14, with brass cap, marked,  
 T 5 S S 11 in NW.,  
 R 13 W S 12 in NE.,  
 S 13 in SE., and  
 S 14 in SW. quadrants;  
 1913 on S. half; pits impracticable.  
 Raise a mound of stone, 3 ft. base, 3 ft. high, west of  
 cor.  
 Land, mountainous and rough; broken, covered with malpais  
 boulders.

West, on a random line, bet. secs. 11 and 14.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 Note: At this point, I set off  $7^{\circ}00'$  S. on decl. arc; and  
 at noon, I observe the sun on the meridian; the re-  
 sulting lat. is  $33^{\circ} 00'$  N.  
 80.04 Intersect N. and S. line, 9 links south of the cor. of secs.  
 10, 11, 14 and 15.  
 Thence I run,  
 S.  $89^{\circ}56'$  E., on a true line, bet. secs. 11 and 14.  
 Ascend gradual west slope.  
 10.00 Change to steep SW slope of mountain, over large boulders.  
 32.94 Top of cliffs, 100 ft. high.  
 40.02 True point for corner falls on steep cliff; could not  
 set corner.  
 40.24 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in  
 a mound of stone, 4 ft. base,  $2\frac{1}{2}$  ft. high, for witness  
 corner to  $\frac{1}{4}$  sec. cor. of secs. 11 and 14, with brass  
 cap, marked,  
 W C  $\frac{1}{4}$  S 11 on N. half; and  
 S 14, 1913 on S. half; pits impracticable.  
 Raise a mound of stone, 4 ft. base, 3 ft. high, north of  
 cor.  
 Descend steep rocky SE. slope, over malpais boulders.  
 61.00 Bottom of descent.  
 80.04 Cor. of secs. 11, 12, 13 and 14.  
 Land, mountainous, rough, broken and covered with mal-  
 paid boulders. Soil, none.

26. Subdivision of Township 5 South, Range 13 West.

Chains.

East, on a random line, bet. secs. 12 and 13.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.38 Intersect the east bdy. of the Tp., 28 lks. N.  $0^{\circ}28'$  W. of the cor. of secs. 7, 12, 13 and 18, recently reestablished by me, as described in Book "D."  
 Thence I run,  
 N.  $89^{\circ}48'$  W., on a true line, bet. secs. 12 and 13.  
 40.38 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in a mound of stone, 3 ft. base,  $2\frac{1}{2}$  ft. high, for  $\frac{1}{4}$  sec. cor., of secs. 12 and 13, with brass cap, marked,  
 $\frac{1}{4}$  S 12 on N. half; and  
 S 13, 1913 on S. half; pits impracticable.  
 Build a mound of stone 3 ft. base, 3 ft. high, N. of cor.  
 Ascend over SE. slope, boulders, rough and broken.  
 66.38 Top of ascent; descend over steep west slope, over boulders.  
 75.00 Foot of descent.  
 80.38 Cor. of secs. 11, 12, 13 and 14.  
 Land, mountainous and broken, covered with large malpais boulders.  
 Oct. 11, 1913.

October 17, 1913.

At 8h. Om. a.m., l.m.t., I set off  $33^{\circ}00'$  N. on lat. arc; and  $9^{\circ}9'$  S. on decl. arc, and determine a meridian with the solar at the cor. of secs. 11, 12, 13 and 14.  
 Thence I run,  
 S.  $0^{\circ}03'$  W., on a true line, bet. secs. 13 and 14.  
 17.00 Ravine, 150 lks. wide, 25 ft. deep, course S.  $10^{\circ}$  E.  
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor. of secs. 13 and 14, with brass cap, marked,  
 $\frac{1}{4}$  S 14 on W. half;  
 S 13 on E. half; and  
 1913 on S. half; from which,  
 An ironwood, 12 ins. in diam., brs. S.  $32\frac{1}{2}^{\circ}$  W., 124 lks. dist., marked  $\frac{1}{4}$  S 14 B T.  
 A palo verde, 8 ins. in diam., brs. S.  $80^{\circ}$  E., 192 lks. dist., marked  $\frac{1}{4}$  S 13 B T.  
 80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 13, 14, 23 and 24, with brass cap, marked,  
 T 5 S S 14 in NW.,  
 R 13 W S 13 in NE.,  
 S 24 in NE., and  
 S 23 in SW. quadrants;  
 1913 on S. half; from which,  
 A palo verde, 10 ins. in diam., brs. N.  $10\frac{1}{2}^{\circ}$  W., 63 lks. dist., marked T 5 S R 13 W S 14 B T.  
 A palo verde, 10 ins. in diam., brs. N.  $62\frac{1}{2}^{\circ}$  E., 122 lks. dist., marked T 5 S R 13 W S 13 B T.  
 No other trees within limits.  
 Dig pits 18x18x12 ins., in each sec.  $5\frac{1}{2}$  ft. dist., and build a mound of earth, 4 ft. base, 2 ft. high, west of corner.  
 Land, rolling, covered with malpais stone.  
 Soil, 4th rate.  
 Timber, very scattering palo verde and ironwood.  
 Undergrowth, scattering greasewood brush.

West, on a random line, bet. secs. 14 and 23.  
 40.00 Set temporary  $\frac{1}{4}$  sec. cor.  
 80.03 Intersect N. and S. line, 6 links north of cor. of secs. 14, 15, 22 and 23.

Subdivision of Township 5 South, Range 13 West. 27.

Chains.

Thence I run,  
 N.89°57' E., on a true line, bet. secs.14 and 23.  
 35.00 Ravine, 500 lks.wide, 30 ft. deep, course S.10°E.  
 40.015 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in a mound of stone 3 ft.base, 2½ ft. high, for ¼ sec.cor. of secs.14 and 23, with brass cap, marked, ¼ S 14 on N.half; and S 23, 1913 on S.half; from which,  
 A palo verde, 8 ins. in diam., brs.S.68½°E., 134 lks.dist., marked ¼ S 23 B T.  
 A palo verde, 10 ins. in diam., brs.N.8°W., 173 lks.dist., marked ¼ S 14 B T.  
 47.000 Wash, dry, 75 lks.wide, 5 ft.banks, course south. Descend over east slope.  
 70.00 Bottom of descent.  
 80.03 Corner of secs.13,14,23 and 24. Land,rolling, covered with malpais boulders. Timber, scattering palo verde and ironwood. Soil, volcanic ash, 4th rate.

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 East, on a random line, bet. secs.13 and 24.  
 40.00 Set temp.¼ sec.cor.  
 Oct.17: At this point, I set off 9°14'S.on decl.arc; and at 1h.45m. l.m.t., observe the sun on the meridian; the resulting lat.is 32° 59'N.  
 80.68 Intersect the east bdy.of the Tp., 19 lks.N.0°6'W.of the cor.of secs.13,18,19 and 24, reestablished yesterday by me, as described in Book "D."  
 Thence I run,  
 N.89°49'W., on a true line, bet. secs.13 and 24.  
 Over rolling land.  
 40.68 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the ground, for ¼ sec.cor.of secs. 13 and 24, with brass cap, marked, ¼ S 13 on N.half; and S 24, 1913 on S.half; from which,  
 A palo verde, 10 ins. in diam., brs.N.84°W., 108 lks.dist., marked ¼ S 13 B T.  
 A palo verde, 8 ins. in diam., brs. S.58½°W., 84 lks.dist., marked ¼ S 24 B T.  
 61.68 Dry wash, 75 lks.wide, 5 ft. banks, course S.70°E.  
 80.68 Cor.of secs.13,14,23 and 24. Land, rolling, covered with malpais boulders. Soil, 4th rate, volcanic ash. Timber, scattering palo verde and ironwood. Undergrowth, scattering greasewood brush.

-----  
 S.0° 03' W., on a true line, bet. secs.23 and 24.  
 Ascend slight north slope.  
 3.40 Top of slight north slope.  
 4.00 Dry wash, 75 lks.wide, 3 ft. banks, course east.  
 40.00 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the ground, for ¼ sec.cor.of secs. 23 and 24, with brass cap, marked, ¼ S 23 on W.half; S 24 on E.half; and 1913 on S.half; from which,  
 A palo verde, 10 ins. in diam., bears N.80½°E., 82 lks.dist., marked ¼ S 24 B T.  
 No other tree within limits. Pits impracticable.  
 Build a mound of stone, 3 ft.high, 3 ft.base, W.of corner.  
 80.00 Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs. 23,24,25 and 26, with brass cap, marked, T 5 S S 23 in NW.,

## 28. Subdivision of Township 5 South, Range 13 West.

Chains.

R 13 W S 24 in NE.,  
 S 25 in SE., and  
 S 26 in SW. quadrants;  
 1913 on S-half; from which,  
 A palo verde, 15 ins. in diam., brs.N.70°E., 166  
 lks.dist., marked T 5 S R 13 W S 24 B T.  
 A palo verde, 12 ins. in diam., brs.N.25½°W.,  
 208 lks.dist., marked T 5 S R 13 W S 23 B T.  
 No other trees within limits. Dig pits 18x18x12 ins.,  
 in each sec. 5½ ft. dist., and raise a mound of earth  
 4 ft.base, 2 ft.high, west of cor.  
 Land, rolling, covered with malpais stone.  
 Soil, 4th rate, volcanic ash.  
 Timber, scattering palo verde and ironwood.  
 Scattering greasewood brush.

October 17, 1913.

GENERAL DESCRIPTION.

The portion of this township surveyed by me is rough and mountainous, covered with large boulders, and very difficult to survey.  
 There is almost no soil, and consequently only a few scattering palo verdes are to be found.  
 There is very little vegetation of any kind, and no water is to be found within the township. There are no settlers.  
 Note: At every set up, a meridian was determined with the solar.

*H. A. Sissell*  
 U.S. Transitman.

Subdivision of Township 5 South, Range 13 West. 29.

Chains.

W.H.T.  
 October 18, 1913: At 9h.0m. a.m., l.m.t., I set off 32° 58' N. on the lat. arc; and 9° 33' S. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 23, 24, 25 and 26.  
 Thence I run,  
 West, on a random line, bet. secs. 23 and 26.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 79.95 Intersect N. and S. line, 10 lks. south of cor. of secs. 22, 23, 26 and 27.  
 Thence I run,  
 S. 89° 56' E., on a true line, bet. secs. 23 and 26.  
 Over rolling land, covered with volcanic rock.  
 1.40 Ravine, 15 lks. wide, 10 ft. deep, course S. 10° E.  
 39.975 Set an iron post 3 ft. long, 1 in. in diam., 18 ins. in the ground (could not set deeper for solid rock) for  $\frac{1}{4}$  sec. cor., with brass cap, marked,  
 $\frac{1}{4}$  S 23 on N. half; and  
 $\frac{1}{4}$  S 26, 1913 on S. half; pits impracticable.  
 Raise a mound of stone 3 ft. base, 1  $\frac{1}{2}$  ft. high, around post.  
 Raise a mound of stone 3 ft. base, 2 ft. high, N. of cor.  
 59.00 Top of low ridge, brs. N. and S.  
 70.00 Enter level land, brs. N. and S.  
 79.95 Corner of secs. 23, 24, 25 and 26.  
 Land, rolling, stony surface. No soil, 70.00 chs.  
 Land, level; sandy soil, 9.96 chs.  
 Scattering greasewood brush.  
 Giant cactus, cholla and ocotillo.

-----  
 East, on a true line, bet. secs. 24 and 25, over level land, through scattering brush.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked,  
 $\frac{1}{4}$  S 24 on N. half; and  
 $\frac{1}{4}$  S 25, 1913 on S. half;  
 dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist., and raise a mound of earth, 3  $\frac{1}{2}$  ft. base, 1  $\frac{1}{2}$  ft. high, N. of corner.  
 80.84 Intersect the east bdy. of the Tp., 59 lks. N. 0° 05' W. of the cor. of secs. 19, 24, 25 and 30, reestablished by W.K. Kierulff, U.S. Transitman, as described in Book "D." I change the markings on this cor. so as to make it refer to secs. 19 and 30, T 5 S R 12 W only, and fill the pits on the west, and move mound east of cor.  
 At point of intersection, I set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground for closing cor. of secs. 24 and 25, with brass cap, marked,  
 T 5 S S 24 in NW., and  
 R 13 W S 25 in SW. quadrants;  
 C C W. of center,  
 1913 on S. half;  
 dig pits, 24x18x12 ins. crosswise on each line, N. and S. 3 ft., and west of cor. 7 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.  
 Land, nearly level.  
 Soil, sandy, 2nd rate.  
 Scattering greasewood brush.

-----  
 S. 0° 03' W., on a true line, bet. secs. 25 and 26.  
 Over level land, through scattering greasewood brush.  
 30.00 Ascend a malpais ridge, NW. and SE.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked,  
 $\frac{1}{4}$  S 26 on W. half;

## 30. Subdivision of Township 5 South, Range 13 West.

Chains.

- S 25 on E. half; and  
1913 on S. half; pits impracticable.  
Raise a mound of stone, 4 ft. base, 2½ ft. high, west of cor.
- 48.30 Road brs. NW. and SE.  
Top of low ridge, brs. NW. and SE.  
Descend gradual SE. slope.
- 48.90 A shallow wash, 600 lks. wide, 2 ft. banks, course S. 80° E.
- 80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 25, 26, 35 and 36, with brass cap, marked,  
T 5 S S 26 in NW.,  
R 13 W S 25 in NE.,  
S 36 in SE., and  
S 35 in SW. quadrants;  
1913 on S. half;  
raise a mound of stone 4 ft. base, 2½ ft. high, west of cor. Pits impracticable,  
Land, hilly, covered with malpais rock, 50.00 chs.  
Level sandy soil, 30.00 chains, 2nd rate.  
Scattering palo verde and greasewood brush, on the level.
- 
- Oct. 18: At the cor. of secs. 25, 26, 35 and 36, I set off 9° 36' S. on decl. arc, and at 11h. 45m. l.m.t., observe the sun on the meridian; the resulting lat. is 32° 57½' N.
- Thence I run,  
West, on a random line, bet. secs. 26 and 35.
- 40.00 Set temp. ¼ sec. cor.
- 79.92 Intersect N. and S. line, 17 lks. north of cor. of secs. 26, 27, 34 and 35.  
Thence I run,  
S. 89° 53' E., on a true line, bet. secs. 26 and 35.  
Over rolling land, covered with malpais stone and scattering brush.
- 2.92 Wash, 40 lks. wide, 2 ft. banks, course south.
- 39.96 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., with brass cap, marked,  
¼ S 26 on N. half; and  
S 35, 1913 on S. half;  
raise a mound of stone 4 ft. base, 2½ ft. high, N. of cor. Pits impracticable.
- 49.00 Wash, 30 lks. wide, 3 ft. banks, course S. 40° E.
- 76.50 Wash, 10 lks. wide, 2 ft. banks, course S. 30° E.
- 79.92 Cor. of secs. 25, 26, 35 and 36.  
Land, hilly, covered with malpais rock; very little soil.  
Scattering palo verde and giant cactus.
- 
- East, on a true line, bet. secs. 25 and 36.  
Over rolling land, covered with malpais rock.
- 18.00 Enter level land, brs. NW. and south.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., with brass cap, marked,  
¼ S 25 on N. half; and  
S 36, 1913 on S. half;  
dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.
- 60.00 Wagon road brs. NW. and SE.
- 81.12 Intersect the east bdy. of the Tp., 75 lks. N. 0° 16' W. of the cor. of secs. 25, 30, 31 and 36, reestablished by W. K. Kierulff, U.S. Transitman, as described in Book "D." I change marking on brass cap, fill pits on the west, and move mound east of cor., so as to make this cor.



Subdivision of Township 5 South, Range 13 West. 31.

Chains.

refer to secs. 30 and 31, T 5 S R 12 W, only.  
 At point of intersection, I set an iron post, 3 ft. long,  
 2 ins. in diam., 24 ins. in the ground, for closing  
 cor. of secs. 25 and 36, with brass cap, marked,  
     T 5 S S 25 in NW., and  
     R 13 W S 36 in SW. quadrants;  
     C C W of center, and  
     1913 on S. half;  
 dig pits 24x18x12 ins., crosswise on each line, N. and  
 S. of post 3 ft., and W. of post 7 ft. dist., and raise  
 a mound of earth 4 ft. base, 2 ft. high, west of cor.  
 Land, level.  
 Soil, sandy, 2nd rate, 63.00 chains; scattering brush,  
 18.00 chains, covered with malpais stone; very little  
 soil.

5.00 S. 0° 03' W., on a true line, bet. secs. 35 and 36,  
 18.00 Over rolling land, covered with malpais stone.  
 40.00 Wash, 20 lks. wide, 2 ft. banks, course S. 30° E.  
 Enter level sandy soil, brs. E. and W.  
 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in  
 the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked,  
      $\frac{1}{4}$  S 35 on W. half;  
     S 36 on E. half; and  
     1913 on S. half;  
 dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.,  
 and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high,  
 west of cor.  
 80.85 Intersect the south bdy. of the Tp. (1st. Standard Parallel  
 South) 147 lks. S. 89° 40' W. of the Angle Point, re-  
 cently established by W. K. Kierulff, U. S. Transitman,  
 at the same point, formerly the position of the  
 standard cor. of secs. 35 and 36, and as described by  
 him in Book "D."  
 At point of intersection, I set iron post 3 ft. long, 2  
 ins. in diam., 24 ins. in the ground for closing  
 cor. of secs. 35 and 36, with brass cap, marked,  
     T 5 S S 35 in NW., and  
     R 13 W S 36 in NE. quadrants;  
     C C N of center, and  
     1913 on S. half;  
 dig pits 24x18x12 ins. crosswise on each line, E. and  
 W. 3 ft., and N. of post 7 ft. dist., and raise a  
 mound of earth 4 ft. base, 2 ft. high, N. of cor.  
 Land, level, sandy soil, 2nd rate, 62.85 chs.  
 Stony, 18.00 chs.  
 Scattering greasewood brush and palo verde.  
 Scattering giant cactus and ocotillo.  
 Oct. 18, 1913.

GENERAL DESCRIPTION.

The portion of this township surveyed by me is mountain-  
 ous in north and middle portion; the southern por-  
 tion is level and rolling, most of it covered with  
 loose volcanic boulders.  
 There is good sandy soil in secs. 35 and 36, and the south  
 half of sec. 25. Soil would produce crops with water.  
 There is scattering scrub palo verde and ironwood along  
 washes.  
 Scattering giant cactus, ocotillo, cholla and other  
 varieties of cactus. No settlers in the township.  
 There are some mining prospects in secs. 17, 18, 19 & 20,  
 but not being worked.

*W. H. Horn*  
 U. S. Surveyor.

CERTIFICATE OF ASSISTANTS. APPLIES TO SUBDIVISIONAL BOOKS F, G, H, I, J AND L

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,
Transitman
W. K. Kierulff, U. S. ~~Surveyor~~ during the periods and in the capacities
stated opposite our several signatures, in surveying all those parts or portions of the
Subdivision of T. 4 South Range 14 West.
Subdivision of Township 4 South Range 15 West.
Subdivision of Township 5 South Range 13 West.
Subdivision of Township 5 South Range 14 West.
Subdivision of Township 5 South Range 15 West.
Subdivision of Township 5 South Range 16 West.
of the Gila & Salt River Base & Meridian, in the State of Arizona,
and in Books F, G, H, I and J
which are represented in the foregoing field notes, as having been executed by him, and under his direc-
tion; and that said survey have been, in all respects, to the best of our knowledge and belief, well and
faithfully executed.

Table with columns: NAME, PERIOD OF SERVICE (BEGUN, ENDED), CAPACITY. Includes entries for W. J. Taverner, P. P. Hanson, Roy Hansen, and Julius Dion.

Subscribed and certified to before me on the dates of the final service as shown above.

Handwritten signature of W. K. Kierulff, U. S. ~~Surveyor~~ Transitman.

100  
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BOOK 2705

FINAL OATH OF UNITED STATES ~~SURVEYOR~~  
TRANSITMAN.  
APPLIES TO SUBDIVISIONAL BOOKS, F, G, H, I, J AND L

I, W. K. Kierulff, U. S. ~~Surveyor~~ Transitman, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for Arizona, for Group 28 bearing date of the 26th day of February, 1913, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the Subdivision, <sup>lines</sup> of Townships 4 South, Ranges 14 and 15 West. ~~Subdivision and~~ Townships 5 South, Ranges, 13, 14, 15, and 16 West.

of the Gila & Salt River Base and Meridian, in the State of Arizona, which are represented in the foregoing field notes, <sup>and those in Books F, G, H, I, and J</sup> as having been executed 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 U. S. Surveyor General for Arizona for Group 28 and in the specific manner described in the field notes, and that the foregoing <sup>and notes in Books F, G, H, I, and J</sup> are the original field notes of such surveys

*W. K. Kierulff*

U. S. ~~Surveyor~~ Transitman.

Subscribed by said W. K. Kierulff, and sworn to before me }  
this 7th day of March, 1917.



*Frank S. Ingalls*  
SURVEYOR-GENERAL OF ARIZONA

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

....., 1917

The foregoing field notes of the survey of .....

executed by .....  
under his special instructions dated ....., 1917, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

U. S. 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.

U. S. Surveyor General.

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**CERTIFICATE OF ASSISTANTS.**  
*APPLIES TO SUBDIVISIONAL BOOKS E, H, I, J, K AND L*

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,  
..... W. H. Thorn, ....., U. S. Surveyor, during the periods and in the capacities  
stated opposite our several signatures, in surveying all those parts or portions of <sup>the</sup> Subdivision *lines of*  
..... Township 4 South Range 13 West.  
..... Township 4 South Range 14 West.  
..... Township 4 South Range 15 West.  
..... Township 4 South Range 16 West.  
..... Township 5 South Range 13 West.  
..... Township 5 South Range 14 West.

of the Gila & Salt River Base & Meridian, in the State of Arizona,  
*and in Books E, H, I, J and K*  
which are represented in the foregoing field notes, as having been executed by him, and under his direc-  
tion; and that said surveys have been, in all respects, to the best of our knowledge and belief, well and  
faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
<i>Will D. Wilson</i>	July 3, 1913	Oct. 18, 1913	Chainman.
<i>Roy E. Owen</i>	July 3, 1913	July 15, 1913	Chainman.
<i>Sam Gray</i>	July 3, 1913	Oct. 18, 1913	Chainman.
<i>Edwin Wood</i>	July 3, 1913	Oct. 18, 1913	Flagman.
<i>Chris. Ludey</i>	Sept. 1, 1913	Oct. 18, 1913	Moundman.

Subscribed and certified to before me on the dates of the final service as shown above.  
*W. H. Thorn*  
.....  
U. S. Surveyor.

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35  
BOOK 2705

FINAL OATH OF UNITED STATES SURVEYOR.  
APPLIES TO SUBDIVISIONAL BOOKS E, H, I, J, K AND L.

I, W. H. Thorn, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for Arizona, for Group 28 bearing date of the 26 th. day of February, 1913, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of <sup>the</sup> Subdivision lines of Townships 4 South, Ranges 13, 14, 15, & 16 West.  
Townships 5 South, Ranges 13 and 14 West  
Township 5 South, Range 14 West. of the Gila & Salt River Base and Meridian, in the State of Arizona, which are represented in the foregoing field notes <sup>and those in Books E, H, I, J and K</sup> as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said surveys have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Arizona for Group 28 and in the specific manner described in the field notes, and that <sup>and notes in Books E, H, I, J and K</sup> the foregoing are the original field notes of such surveys

W. H. Thorn  
U. S. Surveyor.

Subscribed by said W. H. Thorn, and sworn to before me }  
this 7<sup>th</sup> day of March, 1914

Frank S. Ingalls  
SURVEYOR GENERAL OF ARIZONA



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,  
Phoenix Arizona, DECEMBER 1, 1914

The foregoing field notes of the survey of the  
Subdivision lines of  
Township No. 5 South Range No. 13 West of the  
Gila and Salt River Base and Meridian in the State of Arizona.

executed by W. H. Thorn, U.S. Surveyor and W. K. Kierulff U.S. Transitman under ~~his~~ special instructions dated February 26, 1913 for Group 28, 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  
U. S. Surveyor General.  
of Arizona.

~~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.~~