

# FIELD NOTES

OF THE SURVEY OF THE

Subdivision Lines

of

FRACTIONAL TOWNSHIP 16<sup>1</sup>/<sub>2</sub> NORTH, RANGE 12 WEST.

Of the Gila and Salt River Base and Meridian,

In the State of Arizona.

EXECUTED BY

Otis Ross, U. S. Surveyor,

and

A. Parker Warner, U. S. Transitman,

~~In the capacity of U. S. Surveyor~~, under instructions dated February 20, 1915,  
issued by the United States Surveyor General to govern surveys included in  
Group No. 49, which were approved by the Commissioner of the General Land  
Office, March 1, 1915.

Survey commenced February 17, 1916.

Survey completed February 26, 1916.

Executed under Assignment  
Instructions dated November 29, 1915.

3040

3040

Book "G"

Group 49 - - - Arizona.

BOOK 3040

INDEX DIAGRAM.

FRACL. Township 16 $\frac{1}{2}$  North, Range 12 West.

	with Standard Parallel North										
	19	15	20	11	21	8	22	5	23	3	24
	14		14		11		8		5		2
3rd Guide Mer. W.	30	13	29	10	28	7	27	4	26	2	25
	13		12		9		7		4		1
	31	12	32	9	33	6	34	3	35	1	36

- Surveyed under this Group. Notes in this book.
- Surveyed under this Group. Notes in Book "D".
- Surveyed under this Group. Notes in Book "E".
- Surveyed under this Group. Notes in Book "F".
- Surveyed under current Group 50.
- Surveyed under current Group 46.
- Accepted surveys.
- Surveyed under Group 41.

Chains

Survey executed jointly by Otis Ross, U. S. Surveyor, and A. Parker Warner, U. S. Transitman. on dates shown on page 17. hereof.

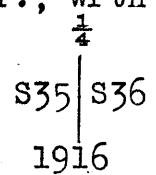
The instruments used are described, with record of approval by the assistant supervisor of surveys, and field tests, in Book A.

The adjustments of the instruments were checked and maintained throughout the survey by frequent comparison of their indications with a meridian determined by observation on Polaris at elongation.

The magnetic declination in the township is 17° E.

From the cor. of secs. 1, 2, 35 and 36, on S. bdy. of Tp. described in Book D,

4.95 N.0°01'W., bet. secs. 35 and 36,  
 29.90 over mountainous land, through scattering undergrowth.  
 40.00 Low spur, sloping W.; 45 ft. above sec. cor.  
 Wash, course SW.; 60 ft. below spur.; asc. SE. slope.  
 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for 1/4 sec. cor., with brass cap, marked



71.00 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 W. of cor.  
 80.00 Top of spur, 340 ft. above wash, sloping S. 60°W.;  
 desc. 340 ft., on NW. slope, to  
 Set a limestone rock, 20x12x4 ins., 15 ins. in the ground,  
 for cor. of secs. 25, 26, 35 and 36, marked with 1 notch  
 on each of E. and S. edges; and raise a mound of stone,  
 2 ft. base, 1 1/2 ft. high, W. of cor.  
 Impracticable on account of expense, inconvenience and  
 loss of time, to set iron post.

Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, palo-verde, greasewood, ocotillo, catclaw  
 and cactus. Poor grass.

40.00 East, on a random line, bet. secs. 25 and 36.  
 79.70 Set temp. 1/4 sec. cor.  
 Intersect E. bdy. of Tp., 9 lks. N. of the cor. of secs.  
 25, 30, 31 and 36, described in Book F.

2.95 Thence N. 89°56'W., on a true line, bet. secs. 25 and 36,  
 over mountainous land, through dense undergrowth.  
 Desc. 35 ft., on NW. slope, to  
 13.85 Wash, 30 lks. wide, course NE.; asc. 190 ft., on SE. slope,  
 to  
 14.50 Spur, sloping NE.; desc. 20 ft., on NW. slope, to  
 Head of draw, course NE.; asc. 185 ft., on broken SE.  
 slope, to  
 25.65 Spur, sloping NE.; desc. 40 ft., to  
 29.10 Head of draw, course NE.; asc. NE. slope.  
 39.85 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for 1/4 sec. cor., with brass cap, marked

Chains

		S 25 $\frac{1}{4}$ ----- S 36 1916	
41.95		and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.	
49.60		Spur, sloping NW.; 240 ft. above draw. Desc. 150 ft., on NW. slope, to Saddle in ridge which bears NE. and SW. Asc. 75 ft., to	
52.50		Spur, sloping N.; desc. 120 ft., on NW. slope, to	
64.10		Head of draw, course NW.; asc. 150 ft., on NE. slope, to	
71.80		Spur, sloping N.; desc. 200 ft., on NW. slope, to	
79.70		The cor. of secs. 25, 26, 35 and 36.	
		Land, mountainous and broken. Soil, rocky; 4th rate. No timber. Undergrowth, palo-verde, greasewood, scrub oak, Spanish dagger, catclaw and cactus. Poor grass.	
		-----	
16.50		N.0°01'W., bet. secs. 25 and 26, over mountainous land, through scattering undergrowth. Desc. 500 ft., on NW. slope, to Gulch, course N.30°W.	
20.10		Spur, sloping NW.; desc. 250 ft., on N. slope, to	
36.05		Bohner Creek, containing clear water, 2 lks. wide, 3 ins. deep, course SW.; asc.	
40.00		Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap, marked $\frac{1}{4}$	
		S26   S25   1916	
76.00		and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.	
80.00		Ridge, 800 ft. above creek, bears E. and W. Set a granite stone, 24x14x8 ins., 18 ins. in the ground, for cor. of secs. 25 & 26 & <del>fracl. sec. 23</del> & 24, marked with 1 notch on E. and 2 notches on S. edge; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Impracticable, on account of expense, inconvenience, and loss of time, to set iron post.	
		Land, mountainous. Soil, rocky; 4th rate. No timber. Undergrowth, palo-verde, ocotillo, greasewood, catclaw, scrub oak, and cactus. Poor grass.	
		-----	
40.00		East, on a random line, bet. sec. 25 and fracl. sec. 24. Set temp. $\frac{1}{4}$ sec. cor.	
80.00		Intersect E. bdy. of Tp. 2 lks. S. of the cor. of secs. 25 and 30 and fracl. secs. 19 and 24, described in Book "F".	
6.90		Thence S.89°59'W., on a true line, bet. sec. 25 & fracl. sec. 24, over mountainous land, through scattering undergrowth. Asc. 75 ft., on E. slope, to	
40.00		Top of spur, sloping S.; desc. 580 ft., on W. slope, to In wash, course SW., at bottom of gulch, Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap, marked S 24 $\frac{1}{4}$ ----- S 25 1916	

Chains

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 N. of cor.  
 Asc. E. slope, 20 ft., to  
 42.40 Low spur, sloping S.; desc. 55 ft., to  
 45.85 Gulch, course S.; asc. 625 ft., on E. slope, to  
 76.55 Ridge bears N. and S.; desc. 85 ft., over N. slope, to  
 80.00 The cor. of secs. 25 and 26 and fract. secs. 23 and 24.

Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, palo-verde, ocotillo, greasewood, catclaw  
 scrub oak and cactus. Poor grass.

N.0°01'W., bet. fract. secs. 23 and 24.  
 over mountainous land, through scattering undergrowth.  
 Desc. 280 ft., on NW. slope, to  
 17.75 Head of gulch, course W.; asc. 85 ft., on S. slope, to  
 25.85 Top of spur, sloping W.; desc. 145 ft., to  
 33.95 Head of gulch, course W.; asc. S. slope.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for 1/4 sec. cor., with brass cap, marked

1/4  
 S23 S24

1916

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 W. of cor.  
 44.70 Top of spur, 210 ft. above gulch, sloping SW.  
 Desc. 40 ft., to  
 49.65 Wash, course SW.; asc. 110 ft., to  
 62.88 Intersect 4th St. Par. N. 82 lks. W. of the standard cor.  
 of secs. 31 and 32, which is an iron post, 3 ins. diam.,  
 with brass cap, properly marked, set and witnessed,  
 established under current Group No. 50.

At point of intersection  
 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the  
 ground, for closing cor. of fract. secs. 23 and 24, with  
 brass cap, marked

T17N R11W  
 S31  
 S23 S24

C C

T16 1/2 N R12W  
 1916

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 S. of cor.

Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, palo-verde, ocotillo, greasewood, catclaw  
 scrub oak, and cactus. Poor grass.

From the cor. of secs. 2, 3, 34 and 35, on the S. bdy. of  
 Tp., described in Book D,

N.0°01'W., bet. secs. 34 and 35,  
 over rolling mountainous land, through scattering under-  
 growth. Asc. 35 ft., to  
 1.00 Top of spur, sloping W.  
 10.00 Desc. 200 ft., along W. slope of spur running N., to  
 19.55 Head of gulch, course W.; asc. 175 ft., on S. slope, to

Subdivision of fract. T<sub>1</sub> 16<sup>1</sup>/<sub>2</sub> N., R. 12 W.

Chains

- 27.70 Top of spur sloping W.; desc. N. slope.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked
- $\frac{1}{4}$   
 S34 | S35  
 1916
- and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.
- 49.90 Small gulch, 220 ft. below spur, course W.; asc. 30 ft., to  
 52.85 Spur, sloping W.; desc. 100 ft., on NW. slope, to  
 54.00 Desc. 250 ft., on NW. slope, to  
 78.35 Bohner Canyon, containing small stream of clear water, 1 ft. wide, 4 ins. deep, course SW.
- 80.00 Set a granite stone, 14x12x8 ins., 9 ins. in the ground, for cor. of secs. 26, 27, 34 and 35, marked with 2 notches on E. and 1 notch on south edge; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.  
 Impracticable, on account of expense, inconvenience, and loss of time, to set iron post.
- Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, palo-verde, ocotillo, greasewood, catclaw and cactus. Poor grass.
- 
- 40.00 East, on a random line, bet. secs. 26 and 35.  
 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.16 Intersect N. and S. line 5 lks. S. of the cor. of secs. 25, 26, 35 and 36.
- Thence S.89°58'W., on a true line, bet. secs. 26 and 35, over mountainous land, through dense undergrowth.  
 Desc. 250 ft., on NW. slope, to  
 14.50 Head of gulch, course N.; asc. 180 ft., on NE. slope, to  
 23.00 Spur, sloping N.; desc. 100 ft., on NW. slope, to  
 38.90 Spur, sloping NW.; desc. SW. slope.  
 40.08 Set an iron post, 3 ft. long, 1 in. diam., 16 ins. in the ground and 12 ins. in a mound of stone, for  $\frac{1}{4}$  sec. cor., with brass cap, marked
- S 26  
 $\frac{1}{4}$  -----  
 S 35  
 1916
- and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor. Impracticable to set post farther in ground.
- 49.35 Head of draw, 355 ft. below spur, course NW.; desc. 35 ft., on NW. slope, to  
 55.00 Spur, sloping NW.; desc. 375 ft., on NW. slope, to  
 73.45 Wash, 15 lks. wide, course NW.; desc. 45 ft., on NW. slope, to  
 79.54 Bohner Canyon, containing stream 3 lks. wide, 1 ft. deep, course SW.; asc. SE. slope.  
 80.16 The cor. of secs. 26, 27, 34 and 35.
- Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, oak brush, greasewood, catclaw, ocotillo, cactus and palo-verde. Poor grass.
- 
- N.0°01'W., bet. secs. 26 and 27,  
 over mountainous land, through scattering undergrowth.  
 Asc. steep SE. slope.

Subdivision of Section of T. 16 1/2 N., R. 12 W.

Chains		
40.00	Set an iron post, 3 ft. long, 1 in. diam., in a mound of stone, for 1/4 sec. cor., with brass cap, marked	
	<div style="text-align: center;"> <math>\frac{1}{4}</math>            S27   S26            1916         </div> <p>and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Impracticable to set post in the ground.</p>	
41.80	Top of ascent, 1250 ft. above sec. cor., on edge of mesa bearing E. and W.; thence over rolling top of mesa.	
59.80	Along W. slope.	
69.70	Head of small draw, course W.; asc. SW. slope.	
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 6 ins. in the ground and 24 ins. in a mound of stone, for cor. of secs. 26 and 27 and fracl. secs. 22 and 23, with brass cap marked	
	<div style="text-align: center;">           T16 1/2 N   R12 W            S22   S23            S27   S26            1916         </div> <p>and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Impracticable to set post farther in ground.</p> <p>Land, mountainous, and rolling.          Soil, rocky; 4th rate.          No timber.          Undergrowth, palo-verde, greasewood, and cactus.          Poor grass.</p>	
-----		
40.00	East, on a random line, bet. sec. 26 and fracl. sec. 23. Set temp. 1/4 sec. cor.	
80.00	Intersect N. and S. line 10 lks. S. of the cor. of secs. 25 and 26 and fracl. secs. 23 and 24.	
	Thence S. 89° 56' W., on a true line, bet. sec. 26 & fracl. sec. 23. over mountainous land, through scattering undergrowth. Desc. 195 ft., on NW. slope, to	
19.45	Head of wash, course N.; asc. N. slope.	
40.00	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., with brass cap, marked	
	<div style="text-align: center;"> <math>\frac{1}{4}</math>            S 23            S 26            1916         </div> <p>and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.</p>	
57.60	Asc. rocky NE. slope. Edge of high mesa, 585 ft. above wash, bears NW. and SE.	
	Asc. over rolling land.	
59.10	Top of ascent bears N. and S.; desc. 245 ft., over rolling NW. slope, to	
72.50	Head of wash, course N.; asc. 75 ft., on E. slope, to	
80.00	The cor. of secs. 26 and 27 and fracl. secs. 22 and 23.	
	<p>Land, mountainous and rolling.          Soil, rocky; 4th rate.          No timber.          Undergrowth, palo-verde, greasewood, ocotillo, catclaw and cactus.          Poor grass.</p>	
-----		
	N. 0° 01' W., on a true line, bet. fracl. secs. 22 and 23, over mountainous land, through scattering undergrowth. Desc. 750 ft., on N. slope, to	
38.10	Small draw, course NW.	
40.00	Set an iron post, 3 ft. long, 1 in; diam., 26 ins. in the	

Chains

ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked
$$\begin{array}{c} \frac{1}{4} \\ | \\ \text{S22} | \text{S23} \\ | \\ 1916 \end{array}$$
and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high,  
W. of cor.

Asc. 25 ft., to

43.70 Top of low spur, sloping NW.; desc. 220 ft., to  
56.30 Bull Canyon, containing stream of clear water, 2 lks. wide,  
2 ins. deep, course SW.; asc. 130 ft., on SE. slope, to  
63.00 Intersect 4th St. Par. N. 83 lks. W. of the standard cor. of  
Tps. 17 N., Rs. 11 and 12 W., which is an iron post, 3  
ins. diam., with brass cap, properly marked, set and wit-  
nessed; established under current Group No. 50.

At point of intersection

Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the  
ground, for closing cor. of fracl. secs. 22 and 23, with  
brass cap, marked
$$\begin{array}{c} \text{T17N R12W} \\ \text{S36} \\ \hline \text{R12W | R11W} \\ \text{S22 | S23} \\ | \\ \text{C C} \\ 1916 \end{array}$$
and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high,  
S. of cor.

Land, mountainous.

Soil, rocky; 4th rate.

No timber.

Undergrowth, palo-verde, greasewood, catclaw, ocotillo,  
and cactus. Poor grass.From the cor. of secs. 3, 4, 33 and 34, on S. bdy. of Tp.,  
described in Book D,N.0°02'W., bet. secs. 33 and 34,  
over mountainous land, through scattering undergrowth.  
Asc. 250 ft., on S. slope, to

10.85 Top of spur, sloping S.70°W.; desc. 290 ft., to  
22.55 Gulch, course W.; asc. 175 ft., on S. slope, to  
40.00 Set an iron post, 3 ft. long, 1 in. diam., 16 ins. in the  
ground and 14 ins. in a mound of stone, for  $\frac{1}{4}$  sec. cor.,  
with brass cap, marked

$$\begin{array}{c} \frac{1}{4} \\ | \\ \text{S33} | \text{S34} \\ | \\ 1916 \end{array}$$
and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high,  
W. of cor. Impracticable to set post farther in ground.

43.00 Point of spur, sloping W.; desc. 185 ft., on N. slope, to  
54.65 Wash, course NW.; asc. 45 ft., to  
59.60 Spur, sloping W.

64.60 Wash, course S.20°W.; asc. 295 ft., on SE. slope, to  
80.00 Set an iron post, 3 ft. long, 2 ins. diam., in a mound  
of stone, for cor. of secs. 27, 28, 33 and 34, with brass  
cap, marked

$$\begin{array}{c} \text{T16}\frac{1}{2}\text{N | R12W} \\ \text{S28 | S27} \\ \hline \text{S33 | S34} \end{array}$$

1916

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



Chains

Impracticable to set post in the ground.

Land, mountainous and broken.

Soil, rocky; 4th rate.

No timber.

Undergrowth, scattering greasewood, palo-verde, ocotillo, catclaw and cactus. Poor grass.

40.00 East, on a random line, bet. secs. 27 and 34.  
Set temp. 1/4 sec. cor.  
80.26 Intersect N. and S. line 2 lks. N. of the cor. of secs. 26, 27, 34 and 35.

Thence N.89°59'W., on a true line, bet. secs. 27 and 34, over mountainous land, through dense undergrowth.  
Asc. 215 ft., to  
15.90 Spur, sloping SW.; desc. 40 ft., on NW. slope, to  
18.80 Head of wash, 50 lks. wide, course SW.; asc. 130 ft., on SE. slope, to  
22.00 Spur, sloping SW.; desc. 25 ft., on SW. slope, to  
24.00 Head of draw, course SE.; asc. 100 ft., on E. slope, to  
31.25 Spur, sloping S.; desc. 35 ft., on SW. slope, to  
39.35 Wash, near head, 10 lks. wide, course S.  
40.13 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., with brass cap, marked

S 27  
1/4 -----  
S 34  
1916

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

41.35 Ridge, in saddle, bears SW. and NE.  
49.90 Head of draw, course SW.  
53.70 Spur, sloping SW.  
56.20 Gulch, 20 lks. wide, on bottom, course SW.; asc. 90 ft., on SE. slope, to  
64.85 Spur, sloping S.; desc. 80 ft., on SW. slope, to  
77.75 Gulch, 2 chs. wide, course S.; asc. 60 ft., to  
80.26 The cor. of secs. 27, 28, 33 and 34.

Land, mountainous.

Soil, rocky; 4th rate.

No timber.

Undergrowth, palo-verde, ocotillo, greasewood, catclaw and cactus. Poor grass.

15.25 N.0°02'W., bet. secs. 27 and 28, over mountainous land, through scattering undergrowth.  
Asc. 410 ft., on SE. slope, to  
40.00 Spur, sloping W.; desc. N. slope.  
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., with brass cap, marked

1/4  
S28 | S27  
1916

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

42.20 Gulch, 500 ft. below spur, course W.; asc. 135 ft., on S. slope, to  
52.60 Spur, sloping S.60°W.; desc. 210 ft., on N. slope, to  
74.30 Wash, course SW.  
80.00 Set an iron post, 3 ft. long, 2 ins. diam., 12 ins. in the ground and 18 ins. in a mound of stone, for cor. of secs. 27, and 28 and fractional secs. 21 and 22, with brass cap, marked

Chains

T16 $\frac{1}{2}$ N	R12W
S21	S22
S28	S27

1916

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

Land, mountainous.

Soil, rocky; 4th rate.

No timber.

Undergrowth, palo-verde, ocotillo, greasewood, catclaw  
and cactus. Poor grass.

40.00

East, on a random line, bet. sec. 27 and fracl. sec. 22.  
Set temp.  $\frac{1}{4}$  sec. cor.

80.06

Intersect N. and S. line 19 lks. S. of the cor. of secs.  
26, and 27, and fracl. secs. 22 and 23.

Thence S. 89° 52' W., on a true line, bet. sec. 27 & fracl. sec. 22,  
over broken mountainous land, through scattering under-  
growth.

2.00

Edge of high mesa bears NE. and SW.; desc. over abrupt  
NW. slope.

40.03

Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

S 22

 $\frac{1}{4}$  -----

S 27

1916

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

Desc., on W. slope.

69.60

Enter wash, 1050 ft. below mesa, course W.

74.60

Leave wash, course SW.

80.06

The cor. of secs. 27, and 28 and fracl. secs. 21 and 22.

Land, mountainous.

Soil, rocky; 4th rate.

No timber.

Undergrowth, greasewood, palo-verde, ocotillo, catclaw  
and cactus. Poor grass.

N. 0° 02' W., on a true line, bet. fracl. secs. 21, and 22,  
over mountainous land, through scattering undergrowth.

5.00

Ridge bears E. and W.; desc. 30 ft., to

10.00

Head of wash, course W.; asc. 135 ft., on S. slope, to

22.75

Top of spur, sloping SW.; desc. 295 ft., on NW. slope, to

40.00

Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

 $\frac{1}{4}$ 

S21 | S22

1916

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

41.80

Bull Canyon, containing stream of clear water, 2 lks. wide,  
2 ins. deep, course SW.; asc. 210 ft., to

54.55

Point of spur, sloping W.; desc. 75 ft., to

63.08

Intersect 4th St. Par. N. 85 lks. W. of the standard cor.  
of secs. 35 and 36, which is an iron post, 3 ins. diam.,  
with brass cap, properly marked, set and witnessed;  
established under current Group No. 50.

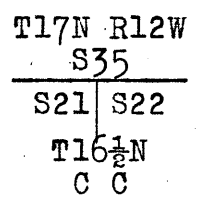
At point of intersection

Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the

Subdivision of fractional T. 16 $\frac{1}{2}$  N., R. 12 W.

Chains

ground, for closing cor. of fract. secs. 21, and 22, with brass cap, marked



1916

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

Land, mountainous.

Soil, rocky; 4th rate.

No timber.

Undergrowth, palo-verde, ocotillo, greasewood, catclaw and cactus. Poor grass.

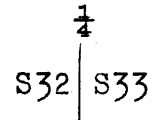
From the cor. of secs. 4, 5, 32 and 33, on S. bdy. of Tp., described in Book D,

N.0°02'W., bet. secs. 32 and 33, over mountainous land, through dense undergrowth.

Asc. 290 ft., on SE. slope, to

29.60  
40.00

Top of ridge bears NE. and SW.; desc. NW. slope. Set an iron post, 3 ft. long, 1 in. diam., 20 ins. in the ground and 8 ins. in a mound of stone, for  $\frac{1}{4}$  sec. cor., with brass cap, marked



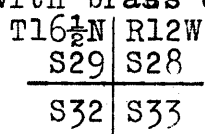
1916

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

Desc. gradually, along NW. slope.

76.35  
80.00

Wash, 2 lks. wide, course SW.; asc. SE. slope. Set an iron post, 3 ft. long, 2 ins. diam., 18 ins. in the ground and 12 ins. in a mound of stone, for cor. of secs. 28, 29, 32 and 33, with brass cap, marked



1916

and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor. Impracticable to set post farther in ground.

Land, mountainous and broken.

Soil, rocky; 4th rate.

No timber.

Undergrowth, palo-verde, greasewood, ocotillo, catclaw and cactus. Poor grass.

40.00  
80.00

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

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

Intersect N. and S. line at the cor. of secs. 27, 28, 33 and 34.

Thence West, on a true line, bet. secs. 28 and 33, over mountainous land, through dense undergrowth.

Asc. 35 ft., on SE. slope, to

3.55  
4.95  
9.95

Spur, sloping S.

Draw, course S.; asc. SE. slope.

Ridge, bearing NW. and SE.; in saddle.; desc. 140 ft., on broken SW. slope, to

## Chains

19.65 Head of draw, course SW.; desc. 75 ft., to  
 34.60 Head of draw, course SW.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked  
 S 28  
 $\frac{1}{4}$  -----  
 S 33  
 1916  
 and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
 N. of cor. Desc. 300 ft., to  
 57.35 Gulch, 35 lks. wide, course SW.; asc. 125 ft., on SE. slope,  
 to  
 67.50 Ridge bears NE. and SW.; desc. 70 ft., on NW. slope, to  
 74.30 Wash, 20 lks. wide, course SW.; asc. 50 ft., on SE. slope,  
 to  
 80.00 The cor. of secs. 28, 29, 32 and 33.

Land, mountainous and broken.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, palo-verde, greasewood, ocotillo, scrub  
 oak, catclaw and cactus. Poor grass.

N.0°02'W., bet. secs. 28 and 29,  
 over mountainous land, through dense undergrowth.  
 Asc. 60 ft., on SE. slope, to  
 4.90 Spur, sloping SW.  
 9.90 Spur, sloping W.; desc. 85 ft., on NW. slope, to  
 18.80 Wash, near head, course W.; asc. 125 ft., on SW. slope, to  
 32.50 Ridge bears SW. and NE.; desc. 90 ft., on NW. slope, to  
 37.50 Head of wash, course NW.; asc. 25 ft., to  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 20 ins. in the  
 ground and 10 ins. in a mound of stone, for  $\frac{1}{4}$  sec. cor.,  
 with brass cap, marked  
 $\frac{1}{4}$   
 S29 | S28  
 1916  
 and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
 W. of cor. Impracticable to set post farther in ground.  
 59.00 Spur, sloping NW.; desc. 140 ft., on N. slope, to  
 59.50 Bull Canyon, 2.50 chs. wide on bottom, course W.  
 Stone cabin bears W., 5 chs. dist.  
 Corral, 3 chs. long on E. and W. sides and 1 ch. wide,  
 bears W., 2 chs. dist.  
 Asc. 470 ft., on broken SE. slope, to  
 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 12 ins. in the  
 ground and 14 ins. in a mound of stone, for cor. of secs.  
 28 and 29 and fracl. secs. 20 and 21, with brass cap,  
 marked T16 $\frac{1}{2}$ N | R12W  
 S20 | S21  
 -----  
 S29 | S28  
 1916  
 and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
 W. of cor. Impracticable to set post farther in ground.

Land, mountainous and broken.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, palo-verde, ocotillo, greasewood, scrub oak  
 catclaw and cactus.  
 Poor grass.

Subdivision of fract. T. 16 1/2 N., R. 12 W.

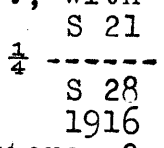
Chains

40.00  
80.00

East, on a random line, bet. sec. 28 & fract. sec. 21.  
Set temp. 1/4 sec. cor.  
Intersect N. and S. line 5 lks. N. of the cor. of secs.  
27 and 28 and fract. secs. 21 and 22.

18.65  
34.30  
40.00

Thence N. 89° 58' W., on a true line, bet. sec. 28 & fract. sec. 21.  
over mountainous land, through scattering undergrowth.  
Asc. 60 ft., on SE. slope, to  
Ridge bears NE. and SW.; desc. 270 ft., on NW. slope, to  
Small gulch, course N. 30° W.; asc. NE. slope.  
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
ground, for 1/4 sec. cor., with brass cap, marked



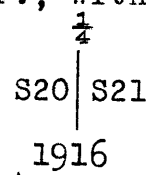
50.00  
69.35  
80.00

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
N. of cor.  
Point of spur, 95 ft. above gulch, sloping N.; desc. 300  
ft., on NW. slope, to  
Bull Canyon, containing clear stream, 12 ins. wide, 1 in.  
deep, course SW.; asc. 365 ft., on rocky SE. slope, to  
The cor. of secs. 28 and 29 and fract. secs. 20 and 21.

Land, mountainous.  
Soil, rocky and gravelly; 4th rate.  
No timber.  
Undergrowth, palo-verde, greasewood, ocotillo, catclaw  
and cactus. Poor grass.

5.00  
11.95  
22.75  
24.80  
32.45  
34.75  
40.00

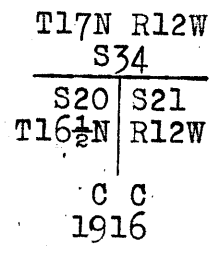
N. 0° 02' W., on a true line, bet. fract. secs. 20 and 21,  
over mountainous land, through dense undergrowth.  
Desc. 35 ft., on NE. slope, to  
Ridge bears NE. and SW.; desc. 70 ft., on NW. slope, to  
Head of draw, course SW.; asc. 110 ft., on broken SW.  
slope, to  
Spur, sloping SW.; desc. 30 ft., on NW. slope, to  
Head of draw, course SW.; asc. 40 ft., on SE. slope, to  
Spur, sloping SW.; desc. 15 ft., on N. slope, to  
Head of draw, course W.;  
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
ground, for 1/4 sec. cor., with brass cap, marked



44.60  
49.22  
51.20  
62.92

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
W. of cor.  
Desc. 110 ft., to  
Gulch, 35 lks. wide on bottom, course SW.; asc. 130 ft.,  
on NE. slope, to  
Spur, sloping E.; desc. 25 ft., to  
Draw, near head, course SE.; asc. 110 ft., on S. slope, to  
Intersect 4th St. Par. N. 84 lks. W. of the standard cor.  
of secs. 34 and 35, which is an iron post, 3 ins. diam.,  
with brass cap, properly marked, set and witnessed;  
established under current Group No. 50.

At point of intersection  
Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the  
ground, for closing cor. of fract. secs. 20 and 21, with  
brass cap, marked



Chains

and raise a mound of stone, 2 ft. base, 1<sup>1</sup>/<sub>2</sub> ft. high, S. of cor.

Land, mountainous and broken.

Soil, rocky; 4th rate.

No timber.

Undergrowth, palo-verde, oak brush, greasewood, ocotillo, catclaw and cactus. Poor grass.

From the cor. of secs. 5, 6, 31 and 32, on S. bdy. of Tp., described in Book D,

N.0°03'W., bet. secs. 31 and 32,

over rolling and broken hills, through scattering undergrowth.

25.00

Point of low spur, sloping W.

26.65

Wash, course W.; asc. 95 ft., on S. slope, to

31.90

Spur, sloping SW.; thence along W. slope.

40.00

Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for <sup>1</sup>/<sub>4</sub> sec. cor., with brass cap, marked

S31 S32

1916

and raise a mound of stone, 2 ft. base, 1<sup>1</sup>/<sub>2</sub> ft. high, W. of cor.

56.00

Asc. gradually, 60 ft., on W. and SW. slope, to

64.85

Top of spur, sloping SW.; desc. 70 ft., to

67.75

Wash, course W.; asc. 45 ft., to

69.70

Spur, sloping W.; desc. 20 ft., to

74.60

Small draw, course W.; asc. 80 ft., to

80.00

Top of spur, sloping W.; desc. 170 ft., to

Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for cor. of secs. 29, 30, 31 and 32, with brass cap, marked

T16<sup>1</sup>/<sub>2</sub>N | R12W

S30 | S29

S31 | S32

1916

and raise a mound of stone, 2 ft. base, 1<sup>1</sup>/<sub>2</sub> ft. high, W. of cor.

Land, rolling and broken hills.

Soil, rocky; 4th rate.

No timber.

Undergrowth, palo-verde, ocotillo, greasewood, catclaw and cactus. Poor grass.

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

40.00

Set temp. <sup>1</sup>/<sub>4</sub> sec. cor.

80.02

Intersect N. and S. line 9 lks. S. of the cor. of secs. 28, 29, 32 and 33.

Thence S.89°56'W., on a true line, bet. secs. 29 and 32, over mountainous land, through dense undergrowth.

Desc. 30 ft., on SE. slope, to

5.00

Spur, sloping SW.; desc. 110 ft., on NW. slope, to

14.85

Wash, 20 lks. wide, course SW.; asc. 75 ft., on broken SE. slope, to

28.95

Ridge, sloping SW.; desc. 110 ft., on NW. slope, to

38.60

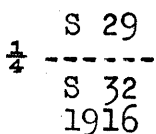
Wash, 40 lks. wide, course SW.;

40.01

Set an iron post, 3 ft. long, 1 in. diam., 26 ins in the ground, for <sup>1</sup>/<sub>4</sub> sec. cor., with brass cap, marked

Subdivision of Section T. 16 1/2 N., R. 12 W.

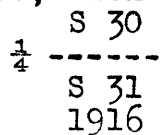
Chains



and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 N. of cor.  
 50.00 Ridge bears NE. and SW.; desc. 320 ft., on NW. slope, to  
 80.02 The cor. of secs. 29, 30, 31 and 32.

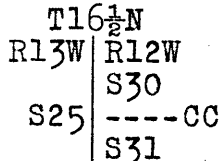
Land, mountainous and broken.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, palo-verde, oak brush, greasewood, ocotillo,  
 catclaw and cactus. Poor grass.

West, on a true line, bet. secs. 30 and 31,  
 over mountainous land, through scattering undergrowth.  
 Desc. 60 ft., to  
 4.90 Bull Canyon, course SW.; thence down canyon.  
 12.30 Leave canyon, and asc. 260 ft., on SE. slope, to  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for 1/4 sec. cor., with brass cap, marked



and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 N. of cor.  
 41.00 Spur, sloping SW.; desc. 115 ft., on NW. slope, to  
 59.90 Enter wash, course SW.  
 64.90 Leave wash.  
 66.60 Point of spur, sloping S.  
 73.85 Same wash, course N. 60° W.  
 78.00 Intersect W. bdy. of Tp., (3rd G. M. W.), 5.45 chs. N. of  
 the cor. of secs. 25, 30, 31 and 36, which is an iron  
 post, 3 ins. diam., with brass cap, marked, set and wit-  
 nessed as described by the surveyor general.  
 I change this cor. to a cor of secs. 25 and 36, and the  
 1/4 sec. cors. bet. secs. 31 and 36, and bet. secs. 25 and  
 30, to 1/4 sec. cors. of secs. 36 and 25 respectively,  
 by obliterating the marks relating to the areas E. of the  
 range line.

At point of intersection  
 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the  
 ground, for closing cor. of secs. 30 and 31, with brass  
 cap, marked



1916  
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 E. of cor.

Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, palo-verde, greasewood, ocotillo, catclaw  
 and cactus. Poor grass.

From cor. of secs. 29, 30, 31 and 32,  
 N. 0° 03' W., bet. secs. 29 and 30,  
 over mountainous land, through scattering undergrowth.  
 Desc. 40 ft., to  
 5.00 Bull Canyon, course SW.

Chains

10.00 Leave canyon, and asc. 360 ft., on SE. slope, to  
 36.45 Spur, sloping SW.; thence along W. slope.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

$$\begin{array}{c} \frac{1}{4} \\ | \\ S30 | S29 \end{array}$$

1916

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

Asc. 30 ft., to

42.95 Point of spur, sloping W.; desc. 60 ft., to  
 49.90 Small draw, course SW.; asc. 125 ft., to  
 69.75 Top of spur, sloping SW.; desc. 100 ft., to  
 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the  
 ground, for cor. of secs. 29, and 30 and fracl. secs. 19  
 and, 20, with brass cap, marked

$$\begin{array}{c} T16\frac{1}{2}N | R12W \\ \hline S19 | S20 \\ \hline S30 | S29 \end{array}$$

1916

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

Land, mountainous.

Soil, rocky; 4th rate.

No timber.

Undergrowth, palo-verde, greasewood, ocotillo, catclaw,  
 and cactus. Poor grass.

40.00 East, on a random line, bet. sec. 29 and fracl. sec. 20.  
 Set temp.  $\frac{1}{4}$  sec. cor.

80.00 Intersect N. and S. line 3 lks. S. of the cor. of secs.  
 28, 29, and fracl. secs. 20 and 21.

Thence S.89°59'W., on a true line, bet. sec. 29 & fracl. sec. 20,  
 over mountainous land, through scattering undergrowth.

Desc. 280 ft., on NW. slope, to

20.00 Wash, course SW.

35.00 Asc. SE. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

S 20

 $\frac{1}{4}$  -----

S 29

1916

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

44.75 Summit of ascent, 135 ft. above 35 ch. pt.

60.25 Top of spur, sloping SW.; desc. 180 ft., over rolling  
 and broken land, to

80.00 The cor. of secs. 29, and 30, and fracl. secs. 19 and 20.

Land, mountainous, and rolling.

Soil, rocky; 4th rate.

No timber.

Undergrowth, palo-verde, greasewood, catclaw and cactus.  
 Poor grass.

West, on a true line, bet. sec. 30 and fracl. sec. 19,  
 over mountainous land, through dense undergrowth.

Desc. 60 ft., on NW. slope, to

9.90 Wash, 150 lks. wide, course SW.

14.90 Same wash, 100 lks. wide, course NW.; asc. 70 ft., on  
 broken NE. slope, to



Subdivision of fract. T. 16½ N., R. 12 W.

Chains

31.50 Spur, sloping NW.; desc. NW. slope.  
40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked  
S 19  
 $\frac{1}{4}$  -----  
S 30  
1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.

45.00 Same wash, 70 ft. below spur, course SW.; asc. SE. slope.

57.80 Spur, sloping S.; desc. 270 ft., on SW. slope, to

74.10 Same wash, course NW.; asc. NW. slope, 35 ft., to

77.75 Intersect W. bdy. of Tp., (3rd G. M. W.), 5.55 chs. N. of the cor. of secs. 25, and 30 and fract. secs. 19 & 24, which is an iron post, 3 ins. diam., with brass cap, marked, set and witnessed as described by the Surveyor-General. I change this cor. to cor. of sec. 25 and fract. sec. 24, and the  $\frac{1}{4}$  sec. cor. bet. fract. secs. 19 and 24, to  $\frac{1}{2}$  sec. cor. of fract. sec. 24, by obliterating the markings relating to the areas E. of range line.

At point of intersection

Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for closing cor. of sec. 30 and fract. sec. 19, with brass cap, marked

```

T16½N | T16½N
        | S19
        | -----CC
        | S30
R13W  | R12W
    
```

1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, E. of cor.

Land, mountainous.

Soil, rocky; 4th rate.

No timber.

Undergrowth, palo-verde, greasewood, ocotillo, catclaw oak brush and cactus. Poor grass.

---

From cor. of secs. 29, 30, and fract. secs. 19 and 20, N.0°03'W., on a true line, bet. fract. secs. 19 and 20, over rolling and broken land, through scattering undergrowth. Desc. 40 ft., to

8.95 Wash, course W.; asc. 140 ft., on S. slope, to  
20.80 Spur, sloping W.; desc. 75 ft., to  
27.00 Wash, course W.; asc. 80 ft., on S. slope, to  
32.10 Spur, sloping W.; desc. 130 ft., on N. slope, to  
39.35 Wash, course W.  
40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

```

        |
        |  $\frac{1}{4}$ 
        |
        | S19 | S20
        |
        | 1916
    
```

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Asc. 110 ft., on S. slope, to  
56.00 Top of spur, sloping SW.; desc. 60 ft., to  
63.15 Intersect 4th St. Par. N. 100 lks. W. of the standard cor. of secs. 33 and 34, which is an iron post, 3 ins. diam., with brass cap, properly marked, set and witnessed; established under current Group No. 50.

At point of intersection

Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for closing cor. of fract. secs. 19, and 20, with brass cap, marked

Chains

T17N R12W  
 S33  
 S19 | S20  
 C | C  
 T16 $\frac{1}{2}$ N R12W

1916  
 and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high,  
 S. of cor.

Land, rolling and mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, palo-verde, greasewood, catclaw and cactus.  
 Poor grass.

Boundaries of fract. T. 16 $\frac{1}{2}$  N., R. 12 W.

Latitudes, Departures, and Closing Errors.

Line designated	True Course	Dist. chs.	Latitudes		Departures	
			N. chs.	S. chs.	E. chs.	W. chs.
South Boundary	West	478.03				478.03
West Boundary, 3rd G. M. W.,	North	223.50	223.50			
North Boundary, 4th St. Par. N.,	East	477.72			477.72	
East Boundary	South	223.00		223.00		
Convergency					.23	
Totals			223.50	223.00	477.95	478.03
			223.00			477.95
Error in latitude			.50			
Error in departure						.08

GENERAL DESCRIPTION.

This township is very rough and mountainous in the eastern part, sloping towards the west, where the land is less rugged. The drainage is westerly, into Big Sandy River. Bohner and Bull Canyons are the principal water courses, and have water near their heads, which, in their lower courses sinks in the sandy washes.

The soil is rocky, and nowhere suited to agriculture. It supports a scant growth of grass, and abundance of palo-verde, greasewood, scrub oak, ocotillo, catclaw and cactus. The land is valuable chiefly for grazing purposes.

Several tungsten prospects in the eastern part of the township constitute the sum of observed mineral indications.

There are no settlers.

Book "G"

Group 49, Arizona.

Fracl. Township 16 $\frac{1}{2}$  North, Range 12 West.

BOOK 2040

DATE DIAGRAM.

4th. Standard Parallel North.

3rd Guide Mer. W.	19	20	21	22	23	24	2-18-16
	2-26-16	2-25-16	2-19-16	2-19-16	2-19-16	2-19-16	
	2-24-16	2-25-16	2-25-16	2-24-16	2-24-16	2-24-16	
31	32	33	34	35	36	2-18-16	
2-24-16	2-25-16	2-17-16	2-22-16	2-23-16	2-23-16		
2-24-16	2-25-16	2-17-16	2-22-16	2-23-16	2-23-16		
	2-7-16	2-7-16	2-7-16	2-7-16	2-7-16	2-5-16	

Lines dated in red were surveyed by Otis Ross, U. S. Surveyor.

Lines dated in blue were surveyed by A. Parker Warner, U. S. Transitman.

FOR LIST OF ASSISTANTS, SEE BOOK "A."

18.

For certificates of U. S. Surveyor and  
U. S. Transitman, see Book "A".

BOOK 2000

A P P R O V A L

Office of United States Surveyor-General,

Phoenix, Arizona. JUN 27 1918

The foregoing field notes of the survey of the  
Subdivisional Lines of

FRACTIONAL TOWNSHIP 16 $\frac{1}{2}$  NORTH, RANGE 12 WEST,

of the Gila and Salt River Base and Meridian, in  
the State of Arizona, executed by Otis Ross, U. S.  
Surveyor, and A. Parker Warner, U. S. Transitman,  
under special instructions dated February 20, 1915,  
for Group 49, Arizona, having been critically exam-  
ined, and the necessary corrections and explanations  
made, the said field notes and the surveys they de-  
scribe, are hereby approved.



U. S. Surveyor-General.