Wat.41.1014

BOOK "G"

BOOK 2657

# FIELD NOTES

RE OF THE SURVEY OF THE

Four	th Standard Parallel S	South, through	Rg. 27 E.	
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ı the Sta	te of Arizona.			
	. EXI	ECUTED BY		<b>.</b>
	Jo	hn F. Hesse		
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the cap	acity of U.S. Surveyor, u	inder instruction	is dated \ 27.24. DZ/	nd, 1912
sued by	the United States Surv	veyor General to	o govern surveys in	cluded t
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roup No.		proved by the Con	mmissioner of the Gen	eral Lan
fice,	frne 20 th , 1912	<b>E</b> , pursuant to a	uthority contained in	the Act
mgress d	lated August 23rd,	1912		
	ReSurvey commenced	March 12	, 191.3	
•	Re Survey completed	March 14	, 191 3	

BOOK 2657

# INDEX DIAGRAM.

Townsh	nip 20	South	, Range	27 East	
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Chains

Survey commenced March 12, 1913, and executed with a.W. and L. E. Gurley transit, not numbered, with solar attachment. The horizontal limb is provided with one double vernier, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was approved by the supervising surveyor

August 28, 1912.

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

At the cor. of Tps. 21 and 22 S., Rgs. 26 and 27 E. which is an iron postwin marked and witnessed as described by the surveyor general; latitude 31° 33 21" N., longitude 109° 40' 00" W.; I set off 31° 133 1 N. on the lat. arc; 3° 13' S. on the decl. arc; and, at 4h. 30m. p.m. 1.m.t., determine with the solar a meridian and mark a point thereof, on a stone firmly set in the ground, 5. chs. N. of the cor.

At 8h. 5m. p.m. by my watch which has correct l.m.t., I observe Polaris at western elongation, in accordance with Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground, 5 chs. N. of my station.

March 12, 1913.

March 13 1913 At 7h. 00m. a.m., l.m.t., I lay off the Azimuth of Polaris, l° 21' to the east, and mark the meridian thus determined, by cutting a small groove in the stone set March 12, on which the meridian falls 0.3 ins. E. of the mark determined by the solar.

At 7h. 30m. a.m., l.m.t., I set off 31° 33½ N. on the lat. arc; 2° 58' S. on the decl. arc; and mark a point in

At 7h. 30m. a.m., l.m.t., I set off  $31^{\circ}$ ,  $33^{\circ}$  N. on the lat. arc; 2°, 58' S. on the decl. arc; and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of my station; this mark falls 0.3 ins. east of the meridian established by the Polaris observation.

The solar apparatus, by p.m. and a.m. observations, defines positions for meridians, respectively about 16" west and east of the meridian established by the Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 7h. 45m. a.m., is N. 13° 30' W.; the angle thus determined gives the mag. decl. 13° 30' E.

I commence at the standard cor. of Tps. 20 S. Rgs. 26 and 27 E. which is an iron post Tirm y set, marked and witnessed as described by the surveyor general.

Thence I run

East, on S. bdy. of sec. 31, on random line, Making careful search at 40.00 and 80.00 chs. for the old standard  $\frac{1}{4}$  sec. and Sec. cors. but without success until at

groves on E. and 2 groves on W. faces see: 161.40cms. I return to the standard cor. of Tps. 20 S. Rgs. 26 and 27 E., and figuring the proper positions for the closing cors. and standard \( \frac{1}{4} \) sec. and sec. cors. by proportional measurements

I run on true line,
S. 89 18' E., on S. bdy. of sec. 31
Over rolling land, through dense brush.
Difference between measurements of 28.93 chs. by two sets of chainmen, is 2 lks.; position of middle point
By 1st. set 28.92 chs.

By 2nd. set 28.94 chs.; the mean of which is

161.39

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Resurvey of Fourth Standard Parallel South through Rg. 27 E.
 28.93 Set an iron post 3 ft. long, 2 ins. diam. 24 ins. in the ground for Closing cor. of secs. 5 and 6 marked on brass
                 CC S. of center;
                 T 20SR27E $36 $31 in N. and
                 1913 in S. half;
           S6 in S. W. quadrant; dig pits., 24 x 18 x 12 ins. crosswise on each line, E. and W. 3 ft. and S. of post 7 ft. dist., and raise a mound of earth 4 ft. base 2 ft. high, S. of cor.
                 S5 in S. E. and
            Difference between measurements of 40.35 chs. by two sets
           of chainmen is 2 lks., position of middle point

By 1st. set 40.34 chs.

By 2nd. set 40.36 chs.; the mean of which is
Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for \frac{1}{\sqrt{1}} sec. cor., marked on brass cap \frac{1}{4}S31 in N. and 1913 in S. half; dig pits 18.x 18 x 12 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. Cross road bears N. and S.
51.35
            Difference between measurements of 80.70 chs. by two sets
            of chainmen is 4 lks. position of middle point
                       By.1st. set 80.63 chs.
            By 2nd. set 80.72 chs.; the mean of which is Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of secs. 31 and 32, marked on
80.70
            brass cap
                  T20SR27E in N. and
                  1913 in S. half;
S31 in N. W. and
S32 in N. E. quadrant; dig pits 24 x 18 x 12 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, rolling,
            Soil, sandy loam, dry, coarse texture; 1st. rate.
            No timber.
            Undergrowth, greasewood, catclaw, mesquite and blackbrush
            S. 89 18' E. A on S. bdy. of sec. 32, Over rolling land, through dense brush.
            Cross read bears N. W. and S. E.
14.50
            Difference between measurements of 28.97 chs. by two sets
            of chainmen is.4 lks. position of middle point
                       By 1st. set 28,95 chs.
            By 2nd. set 28.99 chs.; the mean of which is Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for closing.cor. of secs. 4 and 5 marked on brass
28.97
                .CC S. of center;
                 T20SR27E S31 S32 in N. and
                 1913 in S. half;
                 S4 in S. E. and
S5 in S. W. quadrant; dig pits 24 x 18 x 12 ins.
            crosswise on each line, E: and W. 3 ft., and S. of post
            7 ft. dist., and raise a mound of earth 4 ft. base 2 ft.
            high, S. of cor.
            Difference between measurements of 40.355 chs. by two sets of chainmen is 2 lks.; position of middle point By lst. set 40.35 chs.
By 2nd. set 40.3 chs.; the mean of which is

40.355

Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the
ground for standard \(\frac{1}{4}\) sec. cor., marked on brass cap \(\frac{1}{4}\)S

32 in N. and 1913 in S. half; dig pits 18 x 18 x 12 ins.

E. and W. of post 3 ft. dist., and raise a mound of earth
\(\frac{1}{2}\) ft. base 1\(\frac{1}{2}\) ft. high, N. of cor.
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Difference between measurements of 80.79 chs. by two sets

of chainmen is 2 lks.; position of middle point By 1st. set 80:69 chs.

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Resurvey of: Fourth Standard Parallel South through Rg. 27 E.
By 2nd. set 80.71 chs.; the mean of which is 80.70 The standard cor. of secs. 32 and 33, previously described. I destroy all traces of this cor. and reestablish it in
            the same place as follows:
Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the
ground for standard cor. of secs. 32 and 33, marked on
                  T20SR27E in N. and
                  1913 in S. half;
S32 in N. W. and
                  S33 in N. E. quadrant; dig pits 24 x 18 x 12 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, rolling,
Soil, Sandy loam, medium texture, dry; lst. bate.
            No timber.
  Undergrowth, greasewood, catclaw and blackbrush.

NOTE: March 12: At this cor. I set off 2° 55' S. on the decl. arc arc; and observe the sun on the meridian at noon; the resulting lat. is 31° 38½' N.
East, on S. bdy. of sec. 33, on random line, Fall 13 lks. N. of closing cor. of secs. 3 and 4, a desert
            willow stake with marks illegible and traces of pits.
40.00 Make careful search but am unable to find any trace of
the standard is sec. cor.

80.56 Fall 35 lks. N. of the standard cor. of secs. 33 and 34
           which is a limestone, marked and witnessed as described by the surveyor general. True course and distance of S. bdy. of sec. 33 is therefore S. 39. 45 E., 30.56 chs.

I return to the Standard cor. of secs. 32 and 33

Thence I run

S. 89 45' E., 50 5. bdy. of sec. 33

Over. rolling land, through dense brush.

Difference between measurements of 28.99 chs. by two sets
            of chainmen is 0 lks.; position of middle point
                                 By 1st. set 28.99 chs.
By 2nd. set. 28.99 chs.; the mean of which is 28.99 Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for closing cor. of secs. 3 and 4 marked on brass
            cap
                  CCS. of center;
                  T20SR27E S32 S33 in N. and
                 1913 in S. half;
                 S3 in S. E. and
S4 in S. W. quadrant; dig pits 24 x 18 x 12 ins.
            crosswise on each line, E. and W. 3 ft. and S. of post
            7 ft. dist., and raise a mound of earth 4 ft. base 2 ft.
           high S. of cor. Destroy all trace of old closing cor.
           Difference between measurements of 40.28 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st. set 40.27.chs.
                                 By 2nd. set 40.29 chs.; the mean of which is
set on iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard a sec. cor., marked on brass cap 48 33 in N. and 1913 in S. half; dig pits 18 x 18 x 12 ins. E. and W. of post 3 ft. dist., and raise a mound of earth 3 ft. base 1 ft. high, N. of cor.
           Difference between measurements of 80.56 chs. by two sets
of chainmen is 2 lks.; position of middle point

By lst. set 80.55 chs.

By 2nd. set 80.57 chs.; the mean of which is

The standard cor. of secs. 33 and 34, previously described
I destroy all traces of this cor. and re-establish it in
           the same place as follows:
Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of secs. 33 and 34, marked on
          brass cap
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T20SR27E in N. and 1913 in S. half;

## Resurvey of. Fourth Standard Parallel South through Rg. 27 E.

\$33 in N. W. and S34 in N. E. quadrant; and raise a mound of stone. 2 ft. base  $1\frac{1}{2}$  ft. high, N. of cor. Pits impracticable. Land, rolling. Soil, sandy loam, dry, medium texture; 1st. rate. No timber. Undergrowth, greasewood, mesquite and chaparral. East, on S. bdy. of sec. 34, on random line
I make careful search but am unable to find any trace of 28.89 the closing cor. of sess. 2 and 3,T.215 R.27.E.

I make careful search but am unable to find any trace of 40.00 the standard dec. cor. Fall 14 lks. N. of the standard cor. of secs. 34 and 35 80.30 which is a limestone, firmly set, marked and witnessed as described by the surveyor general frue course and dist. of 5. bdu. of sec. 34

I return to the standard cor. of secs. 33 and 34. Thence I run.

S. 89 54' Eon on She She bdy. of secs. 34.

Over rolling land, through dense brush. Difference between measurements of 29.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st. set 29.02 chs. By 2nd. set 28.98 chs.; the mean of which is Set an iron post 3 ft. long, 2 ins. diam., 24 ins. in the ground for closing cor. of secs. 2 and 3 marked on brass 29.00 cap CC S. of center; T20SR27E S33 S34 in N. and 1913 in S. half; S2 in S. E. and S3 in S. W. quadrant; dig pits 24 x 18 x 12 ins. crosswise on each line, E. and W. 3 ft. and S. of post 7 ft. dist., and raise a mound of earth & ft. base 2 ft. high, S. of cor. Difference between measurements of 40.15 chs. by two sets of chainmen is 2.1ks.; position of middle point By.1st. set 40.16 chs.

By 2nd. set.40.14 chs.; the mean of which is

Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the

ground for 2 sec. cor., marked on brass cap 4534 in N. 40.15 and 1913 in S. half; dig pits 18 x 18 x 12 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. 54.00 Ascend. 56.30 Top of low ridge bears N. and S. 58.50 Over rolling land. Difference between measurements of 80.30 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st. set 80.29 chs.. By 2nd. set 80.31.chs.; the mean of which is 80.30 The standard cor. of secs. 34 and 35, previously described I destroy all traces of this cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of secs. 34 and 35, marked on brass cap T20SR27E.in N. and 1913 in S. half; S34 in N. W. and \$35 in N. E. quadrant; and raise a mound of stone 2 ft. base  $1\frac{1}{2}$  ft. high, N. of cor. Pits impracticable. . Its impracticable. Its impracticable. Its impracticable. No timber. Undergrowth, greasewood, catclaw and chaparral.

March 13, 1913.

## BOOK 2657

	Resurved	y of Fourth Standard Parallel South through Rg. 27 E.	
=	Chains/		=
	, i	March $14^{1913}_{1}$ At 7h. 30m. a.m., 1.m.t., I set off $31^{\circ}$ $38\frac{1}{5}$ N.	
		on the lat. arc; $2^{\circ}\sqrt{34\frac{1}{8}}$ S. on the decl. arc; and	
		determine a meridian with the solar at the standard cor.	
		of secs. 34 and 35, just estab. & described by me.	
		Thence I run	
		East, on S. bdy. of sec. 35, on random line, Fall 96 lks. N. of the closing cor. of secs. 1 and 2, Tp.	
	31.82	Fall 96 lks. N. of the closing cor. of secs. 1 and 2, Tp.	
	,	21 S. Rg. 27 E., which is a stone firmly set, marked and	
	·	witnessed as described by the surveyor general .	
	40.03	Fall 71 lks. N. of the standard 1 sec. cor., which is a	
		stone firmly set, marked and witnessed as described by	
		the surveyor general. True course & distrof this 1/2 mile is therefore S.88.59 E.40.04 chs	ŀ
		Thence from standard $\frac{1}{4}$ sec. cor. I run	
		East, on random line, on 5. bdy. of sec. 35, on E/2 mile. Fall 26 lks. N. of the standard cor. of secs. 35 and 36	
	40.15	Fall 26 lks. N. of the standard cor. of secs. 35 and 36	
		which is a stone, firmly set, marked and witnessed as	
	•	which is a stone, firmly set, marked and witnessed as described by the surveyor general. True course & dist. of this 1/2 mile is therefore 5.89 32 E.40.15 chs.	F
	1	was applicated and the second and th	
		m na in a hair in an an an an an line	
	30.21	East, on S. bdy. of sec. 36, on random line,	ĺ
	30.21	Fall 15 lks. N. of closing cor. of Tps. 21 S. Rgs. 27 and	ĺ
		28 E., which is a stone firmly set, marked and witnessed	ĺ
	40 10	as described by the surveyor general.	l
	40.12	Fall 20 lks. N. of the standard 1. sec. cor., which is a	l
		stone marked and witnessed as described by the surveyor general, firmly set in the ground. True course & dist. of this z mile general, firmly set in the ground. Is therefore 5.89.43 E, 40.12 chs.	-
		Thence from standard $\frac{1}{4}$ sec. cor. I run	
		Fast on random line on S bdu of sec 36 on E /2 mile	ĺ
	40.14	East, on random line, on S. bdy. of sec. 36, on E. /2 mile, Fall 23 lks. N. of the standard cor. of Tps. 20 S. Rgs.	ĺ
	10.11	27 and 28 E., which is a stone, firmly set, marked and	l
			į
	•	witnessed as described by the surveyor general. True course & dist. of this ½ mile is therefore S. 89.40 E.,40.14 chs.	ĺ
			ĺ
		I return to the standard cor. of secs. 34 and 35,	
			ĺ
		Thence I run S. 88, 59, E. True Live bdy. of sec. 35,	ı
			١.
1	30.85	Cross road bears NE and S.W.	
-	30.85 30.83	Cross road bears NE and S.W. Point where Ollater each is C.C. of secate 2, 7.215 R.27E. as described in Book "I".	
	30.85 30.83 39.20	Over rolling land, through dense brush. dense brush.  Cross road bears NE and S.W. Point where chaterests lish C.C. of secate 2.T21SLR27E as described in Book "I".  Difference between measurements of 40.04 chs. by two sets	
	30.85 30.83 39.20	of chainmen is 2 lks.; position of middle point	
	30.85 30.83 39.20	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.	
	39.20	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.  By 2nd. set 40.05 chs.: the mean of which is	
	30.85 30.83 39.20	By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is  The standard 1 sec. cor., previously described, I destroy	
	39.20	By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is  The standard sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the	
	39.20	By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is  The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows:	
	39.20	By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 1 in. diam 26 ins. in the	
	39.20	By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard 1 sec. cor., marked on brass cap 1/48	
	39.20	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is  The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard 1 sec. cor., marked on brass cap 1/48  35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base 1 ft. high. N. of cor. Pits imprecticable	
	39.20	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is  The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard 1 sec. cor., marked on brass cap 1/48  35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base 1 ft. high. N. of cor. Pits imprecticable	
	39.20	of chainmen is 2 lks.; position of middle point  By 1st. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is  The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard 1 sec. cor., marked on brass cap 1/4S  35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base 1 ft. high, N. of cor. Pits impracticable.  Thence from standard 1 sec. cor. I run	
	39.20	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is  The standard \( \frac{1}{4} \) sec. cor., previously described, I destroy  all traces of the old cor. and re-establish it in the  same place as follows:  Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the  ground for standard \( \frac{1}{4} \) sec. cor., marked on brass cap \( \frac{1}{4} \)  35 in N. and 1913 in S. half; and raise a mound of stone  2 ft. base 1\( \frac{1}{2} \) ft. high, N. of cor. Pits impracticable.  Thence from standard \( \frac{1}{4} \) sec. cor. I run  S. 89° 38' E. on true line on S. bdy of sec. 25 on E. //2 mile,	
	2.40	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard 1 sec. cor., marked on brass cap 1/2 35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base 1 ft. high, N. of cor. Pits impracticable.  Thence from standard 2 sec. cor. I run S. 89° 38' E. on true line on S. bdy of sec. 35 on E. /2 mile, Cross wash 10 lks. wide course S. W.	
	2.40 20.00	By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard 1 sec. cor., marked on brass cap 1/4S 35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base 1 ft. high, N. of cor. Pits impracticable.  Thence from standard 2 sec. cor. I run S. 89° 38' E. on true line on S. bdy of sec. 35 on E. //2 mile, Cross wash 8 lks. wide course S. W. Cross wash 8 lks. wide course S. W.	
	2.40	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard 1 sec. cor., marked on brass cap 1/2 35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base 1 ft. high, N. of cor. Pits impracticable.  Thence from standard 2 sec. cor. I run S. 89° 38' E. on true line on S. bdy of sec. 35 on E. /2 mile, Cross wash 10 lks. wide course S. W.	
	2.40 20.00	By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is The standard sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, l in. diam., 26 ins. in the ground for standard sec. cor., marked on brass cap so in N. and 1913 in S. half; and raise a mound of stone 2 ft. base left. high, N. of cor. Pits impracticable.  Thence from standard sec. cor. I run S. 89° 38' E. on true line on S. bdy of sec. 35 on E. //2 mile, Cross wash 10 lks. wide course S. W. Difference between measurements of 40.15 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st. set 40.13 chs.	
	2.40 20.00	of chainmen is 2 lks.; position of middle point  By 1st. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is The standard sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard sec. cor., marked on brass cap so in N. and 1913 in S. half; and raise a mound of stone 2 ft. base left. high, N. of cor. Pits impracticable.  Thence from standard sec. cor. I run S. 89° 38' E. on frue line on S. bdy. of sec. 35 on E. //2 mile, Cross wash 10 lks. wide course S. W.  Difference between measurements of 40.15 chs. by two sets of chainmen is 4 lks.; position of middle point  By 1st. set 40.13 chs.  By 2nd. set 40.17 chs.: the mean of which is	
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	2.40 20.00	By 1st. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard 1 sec. cor., marked on brass cap 1/45 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base 1/2 ft. high, N. of cor. Pits impracticable.  Thence from standard 1 sec. cor. I run S. 89° 38' E. on true line on S. bdy of sec. 35 on E. //2 mile, Cross wash 10 lks. wide course S. W.  Cross wash 8 lks. wide course S. W.  Difference between measurements of 40.15 chs. by two sets of chainmen is 4 lks.; position of middle point  By 1st. set 40.13 chs.  By 2nd. set 40.17 chs.; the mean of which is The standard cor. of secs. 35 and 36, previously described I destroy all traces of the old cor. and re-establish it	
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	2.40 20.00	By 1st. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is The standard \( \frac{1}{2} \) sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, l in. diam., 26 ins. in the ground for standard \( \frac{1}{4} \) sec. cor., marked on brass cap \( \frac{1}{4} \)S  35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base \( \frac{1}{2} \) ft. high, N. of cor. Pits impracticable.  Thence from standard \( \frac{1}{4} \) sec. cor. I run  S. 89° 38' E., on frue line on S. bdy. of sec. 25 on E. \( \frac{1}{2} \) mile,  Cross wash 10 lks. \( \frac{1}{2} \) ide course S. \( \frac{1}{2} \)  Difference between measurements of 40.15 chs. by two sets of chainmen is 4 lks.; position of middle point  By 1st. set 40.13 chs.  By 2nd. set 40.17 chs.; the mean of which is The standard cor. of secs. 35 and 36, previously described I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of secs. 35 and 36, marked on brass cap  T20SR27E in N. and 1913 in S. half;	
	2.40 20.00	By 1st. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is The standard 1 sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard 1 sec. cor., marked on brass cap 1/4S 35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base 1/2 ft. high, N. of cor. Pits impracticable.  Thence from standard 1 sec. cor. I run S. 89° 38' E., on true line on S. bdy. of sec. 25 on E. //2 mile, Cross wash 10 lks. Wide course S. W.  Cross wash 8 lks. Wide course S. W.  Difference between measurements of 40.15 chs. by two sets of chainmen is 4 lks.; position of middle point  By 1st. set 40.13 chs.  By 2nd. set 40.17 chs.; the mean of which is The standard cor. of secs. 35 and 36, previously described I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of secs. 35 and 36, marked on brass cap  T20SR27E in N. and 1913 in S. half; S35 in N. W. and	
	2.40 20.00	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is  The standard sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard sec. cor., marked on brass cap \$\frac{1}{4}\$S  35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base \$\frac{1}{2}\$ ft. high, N. of cor. Pits impracticable.  Thence from standard sec. cor. I run  S. 89° 38' E., on five line on S. bdy. of sec. \$\frac{1}{2}\$ on E. \$\frac{1}{2}\$ mile,  Cross wash 10 lks. wide course S. W.  Difference between measurements of 40.15 chs. by two sets of chainmen is 4 lks.; position of middle point  By lst. set 40.13 chs.  By 2nd. set 40.17 chs.; the mean of which is  The standard cor. of secs. 35 and 36, previously described I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of secs. 35 and 36, marked on brass cap  T20SR27E in N. and 1913 in S. half; S35 in N. W. and S36 in N. W. and S36 in N. E. quadrant; and raise a mound of stone 2	
	2.40 20.00	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.; the mean of which is  The standard sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard sec. cor., marked on brass cap so in N. and 1913 in S. half; and raise a mound of stone 2 ft. base left. high, N. of cor. Pits impracticable.  Thence from standard sec. cor. I run S. 89° 38' E. on frue line on S. bdy. of sec. 35 on E. //2 mile, Cross wash 10 lks. wide course S. W. Cross wash 8 lks. wide course S. W. Difference between measurements of 40.15 chs. by two sets of chainmen is 4 lks.; position of middle point  By lst. set 40.13 chs.  By 2nd. set 40.17 chs.; the mean of which is The standard cor. of secs. 35 and 36, previously described I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of secs. 35 and 36, marked on brass cap  T20SR27E in N. and 1913 in S. half; S35 in N. W. and S36 in N. E. quadrant; and raise a mound of stone 2 ft base left. high, N. of cor. Pits impracticable.	
	2.40 20.00	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is  The standard & sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard & sec. cor., marked on brass cap & 35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base & ft. high, N. of cor. Pits impracticable.  Thence from standard & sec. cor. I run  S. 89° 38' E., on frue line on S. bdy. of sec. 25 on E. ½ mile, Cross wash 10 lks. wide course S. W.  Cross wash 8 lks. wide course S. W.  Difference between measurements of 40.15 chs. by two sets of chainmen is 4 lks.; position of middle point  By lst. set 40.13 chs.  By 2nd. set 40.17 chs.; the mean of which is  The standard cor. of secs. 35 and 36, previously described I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of secs. 35 and 36, marked on brass cap  T20SR27E in N. and 1913 in S. half; S35 in N. W. and S36 in N. E. quadrant; and raise a mound of stone 2 ft base 1 ft. high, N. of cor. Pits impracticable.  Land, rolling.	
	2.40 20.00	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.; the mean of which is  The standard sec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard sec. cor., marked on brass cap so in N. and 1913 in S. half; and raise a mound of stone 2 ft. base left. high, N. of cor. Pits impracticable.  Thence from standard sec. cor. I run S. 89° 38' E. on frue line on S. bdy. of sec. 35 on E. //2 mile, Cross wash 10 lks. wide course S. W. Cross wash 8 lks. wide course S. W. Difference between measurements of 40.15 chs. by two sets of chainmen is 4 lks.; position of middle point  By lst. set 40.13 chs.  By 2nd. set 40.17 chs.; the mean of which is The standard cor. of secs. 35 and 36, previously described I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of secs. 35 and 36, marked on brass cap  T20SR27E in N. and 1913 in S. half; S35 in N. W. and S36 in N. E. quadrant; and raise a mound of stone 2 ft base left. high, N. of cor. Pits impracticable.	
	2.40 20.00	of chainmen is 2 lks.; position of middle point  By lst. set 40.03 chs.  By 2nd. set 40.05 chs.; the mean of which is  The standard lsec. cor., previously described, I destroy all traces of the old cor. and re-establish it in the same place as follows:  Set an iron post 3 ft. long, l in. diam., 26 ins. in the ground for standard lsec. cor., marked on brass cap ls 35 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base ls ft. high, N. of cor. Pits impracticable.  Thence from standard sec. cor. I run S. 89° 38' E. on true line on S. bdy. of sec. 25 on E./z mile, Cross wash 10 lks. wide course S. W.  Cross wash 18 lks. wide course S. W.  Difference between measurements of 40.15 chs. by two sets of chainmen is 4 lks.; position of middle point  By lst. set 40.13 chs.  By 2nd. set 40.17 chs.; the mean of which is The standard cor. of secs. 35 and 36, previously described I destroy all traces of the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of secs. 35 and 36, marked on brass cap  T20SR27E in N. and 1913 in S. half; S35 in N. W. and S36 in N. E. quadrant; and raise a mound of stone 2 ft base ls ft. high, N. of cor. Pits impracticable. Land, rolling. Soil, rocky; 4th. rate.	

Resurvey of Fourth Standard Parallel South through Rg. 27 E. S.  $89^{\circ}/43^{\circ}$  E., on S. bdy. of sec. 36 Over rolling land, through dense brush. Cross wash 8 lks. wide course S. W. .7.70 Cross wash 6 lks, wide course S. W. intersect old C.C. of The 21s, Re 27a 28 E. which I later restables described in Book "H"
Difference between measurements of 40.12 chs. by two sets of chainmen is 4 lks. position of middle point By 1st. set 40.10 chs. By 2nd. set 40.14 chs.; the mean of which is The standard  $\frac{1}{4}$  sec. cor., previously described, I destroy all traces of the old sec. cor., and re-establish it in 40.12 the same place as follows: Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground for standard  $\frac{1}{4}$  sec. cor., marked on brass cap  $\frac{1}{4}$ S 36 in N. and 1913 in S. half; and raise a mound of stone 2 ft. base 1½ ft. high, N. of cor. Pits impracticable.

Thence from standard ½ sec. cor. I run S. 89° 1/40° E., on true line on S. bdy of sec. 36, on E. 1/2 mile. Cross road bears N. E. and S. W. 0.80 3.20 Cross wash 20 lks. wide course S. W. ascend. Ridge bears N. W. and S. E. descend. Cross wash 18 lks. wide course N. W. ascend. 12.50 22.10 Difference between measurements of 40.14 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st. set 40.10 chs.

By 2nd. set 40.18 chs.; the mean of which is The standard cor. of Tps. 20 S. Rgs. 27 and 28 E. which has been previously described. I destroy all traces of 40.14 the old cor. and re-establish it in the same place as follows: Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the ground for standard cor. of Tps. 20 S. Rgs. 27 and 28 E. marked on brass cap T20S in N. and 1913 in S. half; R27E S36 in N. W. and R28E S31 in N. E. quadrant; and raise a mound of stone 2 ft. base  $1\frac{1}{2}$  ft. hogh, N. of cor. Pits impractic-Land, rolling and mountainous. Soil, rocky; 4th. rate. No timber. Undergrowth, catclaw and blackbrush. NOTE: Clouds prevented an observation for latitude at noon.

March 14, 1913.

U. S. Surveyor.

### CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby c	ertify upon honor that	ve assisted, to the best of	of our skill and ability,	
John F. Hee	U. S. Surv	eyor, during the period	ds and in the capacities	
stated opposite our several signatu	res, in surveying all tho	se parts or portions of	the 4th.	
Standard Parallel South	through Rg. 27	<b>E</b>		
······································	· <b></b>			
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••••••••••••••••••••••••••••••••••••••		·		
And the second second			<del></del>	
of the Gila and Salt Ri	ver Base and Meridian, in t	he State of Arizo	ona.	
which are represented in the forego				
tion; and that said, survey has be				
faithfully executed.	•			
NAME.	PERIOD O	PERIOD OF SERVICE.		
	Begun.	Ended.	CAPACITY.	
J. E. Lang	Left 6, 1912	March 17,1913 April 3, 1913 April 3, 1913	Chainnan	
J. E. Lang J. G. Ayers	Dec. 28, 19/2	april 3, 1913	Chainman	
B.S. Jackson	Peb. 9, 1913	april 3, 1913	Chairman	
E. E. Keghry	W/11/13 1913	11:1 3 1913	Charren 81	
I & Thughes	Peb. 9, 1913	April 3, 1913	Plagman	
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Subscribed and certified to before me on the dates of the final service as shown above.

The I. Stesse
U. S. Surveyor.

**6—2764** 

## FINAL OATH OF UNITED STATES SURVEYOR.

I, John F. Hesse 312473655, V. S. Su	
of special instructions received from the U.S. Surveyor Gen	
bearing date of the 28 mb. day of May it.	
in my own proper person, and in strict conformity with s	
Instructions, and the laws of the United States surveyed al Fourth Standard Parallel South, throu	— · · · · · · · · · · · · · · · · · · ·
	<del></del>
	of the Gila and Salt
River Base and Meridian, in the State of Arizona	
the foregoing field notes as having been executed by me, a	
solemnly swear that all the corners of said survey have been	
ance with the Manual of Surveying Instructions, and the spec	
General forArizona and in the specific	· · · · · · · · · · · · · · · · · · ·
the foregoing are the original field notes of such survey.	
	John A. Hesse
	U. S. Surveyor.
Subscribed by said John F. Hesse, and swo	orn to before me)
this// th_ day of, 1914	<b>∠</b>
**************************************	Surveyor General of Arizons.
* SEAL	Surveyor General of Arizona
	-
APPROVA	
OFFICE OF THE UNITED	D STATES SURVEYOR GENERAL,
Pho	enix, Arizana, July 21, 1914
The foregoing field notes of the survey of the	
	· · · · · · · · · · · · · · · · · · ·
Fourth Standard Parallel South	thru Range 27 East
of the Gila and Salt River Base	and Meridian, Arizona.
***************************************	<del></del>
executed by 1 John F. Hesse	
under his special instructions dated May 22nd	
critically examined, and the necessary corrections and expla	anations made, the said field notes, and the
surveys they describe, are hereby approved.	Frank Songalls  W. S. Surveyor General, of Arizons
	U.S. Surveyor General of
I cortify that the foregoing transcript of the field notes of	
사람들은 사람들이 가장 아니는 사람들이 가장 하는 것이 되었다. 그런 그들은 사람들이 되었다면 하는 것이다.	rom the original notes on file in this office.
	Table of the state
6—8161	U. S. Surveyor General.