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BOOK 3134

Book "B."

(Resurvey Standard Lines)

# FIELD NOTES

OF THE RESURVEY OF THE

FIFTH GUIDE MERIDIAN WEST, THRU. TOWNSHIPS 22, 23 and 24 NORTH,

BETWEEN RANGES 18 AND 19 WEST, AND

PARALLEL OF THE FIFTH STANDARD NORTH,

THROUGH PART OF RANGE 17 WEST, AND

THROUGH RANGES 20 AND 21 WEST,

Of the Gila and Salt River Base and Meridian,

In the State of Arizona.

## EXECUTED BY

Theo. O. Johnston and Guy H. Richardson, U.S. Surveyors,

and

Edward O. Lyman and Hugo Price, U.S. Transitmen,

*As Surveyors, U.S. Geological Survey, under instructions dated January 6, 1915,*

*issued by the United States Surveyor General to govern surveys included in*

*Group No. 44, which were approved by the Commissioner of the General Land*

*Office, January 26, 1915.*

Resurvey commenced Feb. 5, 1915.

Resurvey commenced March 10, 1916.

Executed under Assignment

Instructions dated Jan. 31, 1915 & Nov. 29, 1915.

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BOOK 3134 3134  
Book "B."  
(Resurvey Standard Lines)  
Group 44

See Special Index.

# INDEX DIAGRAM.

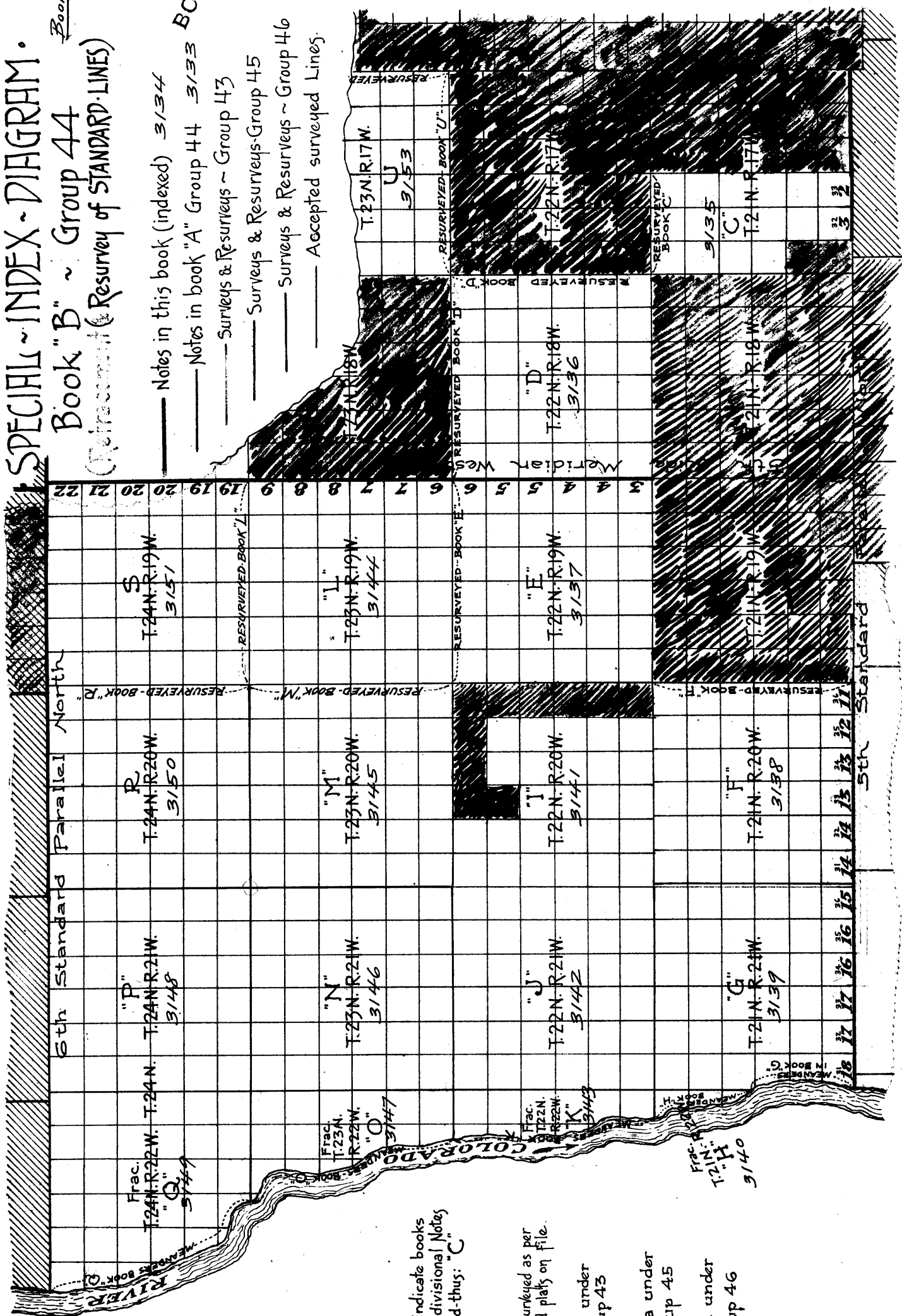
Township \_\_\_\_\_, Range \_\_\_\_\_

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
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**SPECIAL INDEX-DIAGRAM.**  
**Book "B" ~ Group 44**  
**Retracement (Resurvey of STANDARD LINES)**

Book 3134

- Notes in this book (indexed) 3134
- Notes in book "A" Group 44 3133 BOOK 3134
- Surveys & Resurveys ~ Group 43
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- Accepted surveyed Lines.



Red letters indicate books in which Subdivisional Notes are to be found: thus: "C"

- Area surveyed as per accepted platys on file.
- Area under Group 43
- Area under Group 45
- Area under Group 46

Chains.

Resurveys described in the following field notes commenced Feb. 3, 1915, by Theo. O. Johnston, U. S. Surveyor, and Edward O. Lyman, U. S. Transitman, work being discontinued by them on Mar. 16, 1915, and resumed on Jan. 3, 1916, by Guy H. Richardson, U.S. Surveyor, and Hugo Price, U. S. Transitman.

A description of the instrument used, with record of approval by the assistant supervisor of surveys and field tests, appears in Book "A."

Except where otherwise stated, the magnetic declination is 15° 15' E.

The initials "T.O. J.," "E.O.L.," "G.H.R.," and "H.P." are inserted in the following notes at the beginning and ending of those portions describing the surveys executed by Theo. O. Johnston, Edward O. Lyman, Guy H. Richardson and Hugo Price, respectively.

T.O.J.  
E.O.L.  
G.H.R.  
H.P.

T. O. J.  
Feb. 3, 1915.

At my camp, near the SW. cor. of sec. 35, T. 21 N., R. 17 W. in latitude 35° 09½' N., and longitude 114° 04¼' W., at 10h. 32.lm., p.m., l.m.t., I observe Polaris at western elongation, in accordance with instructions in the Manual, and mark a point in the line thus determined by a tack driven in a wooden stake firmly set in the ground, 5 chs. N. of my station.

Feb. 3, 1915.

Feb. 4, 1915.

At 8h. 00m., a.m., l.m.t., I lay off the azimuth of Polaris 1° 23.5' to the east, and mark the meridian thus determined by cutting a small groove in a stone firmly set in the ground east of the point established last night.

Feb. 4, 1915.

T.O.J.

T.O.J., E. O. L., G.H.R., and H.P.

Resurvey of the 5th. Standard Parallel North, on the S. bdy. of secs. 33 and 32, T. 21 N., R. 17 W., and of that portion of the 5th. Guide Meridian West, resurveyed by Theo. O. Johnston and Edward O. Lyman, were executed by means of carefully projected transit lines deflected from the meridian determined as above described. All other lines of which the field notes appear herein were originated from meridians determined in connection with the survey or resurvey of said lines, a record of which appears herein.

T.O.J.  
E.O.L.  
G.H.R.  
H.P.

## 2. Independent Resurvey of 5th Std. Par. N. in R. 17 W. S. of secs. 32 &amp; 33

Chains	Feb. 8, 1915. From the old standard cor. of secs. 33 and 34, which is a malpais stone, 12x8x6 ins., above ground, marked and witnessed as described by the surveyor general, S. 89° 30' W., on a true line, on S. bdy. of sec. 33. Ascend gradually, over rough, broken east slope.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished standard $\frac{1}{4}$ sec. cor., with brass cap, marked SC $\frac{1}{4}$ S 33 in N. half; and 1915 in S rim; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. From this cor., the old standard $\frac{1}{4}$ sec. cor., which is a malpais stone 14x10x8 ins. above ground, marked and witnessed as described by the surveyor general, brs. N. 6° 28' W., 27 lks. dist.
45.00	Ascend over rough, broken ground.
59.20	Top of ridge, 195 ft. high, brs. N. and S.; descend SW. slope.
74.00	Foot of descent of 234 ft., brs. NW. and SE. Descend gradually.
80.00	Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for reestablished standard cor. of secs. 32 and 33, with brass cap, marked SC in N. half; T 21 N S 32 in NW., and R 17 W S 33 in NE. quadrant; and 1915 in S. rim; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. From this cor., the old standard cor. of secs. 32 and 33, which is a malpais stone 18x12x6 ins., above ground, marked and witnessed as described by the surveyor general, brs. N. 79° 48' W., 51 lks. dist. Land, rolling, and mountainous. Soil, sandy and rocky, 4th rate. Timber, none. Undergrowth, yucca and cactus. Mountainous land, 30.00 chs.
40.00	S. 89° 30' W., on a true line, on the S. bdy. of sec. 32. Over broken, rolling ground, through scattering brush. Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished standard $\frac{1}{4}$ sec. cor., with brass cap, marked SC $\frac{1}{4}$ S 32 in N. half; and 1915 in S. rim; dig pits 18x18x12 ins. E. and W. of cor., 3 ft. dist., and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. From this cor., the old standard $\frac{1}{4}$ sec. cor., which is a malpais stone, 12x6x6 ins. above ground, marked and witnessed as described by the surveyor general, brs. S. 5° 08' W., 45 lks. dist.
81.76	The old standard cor. of secs. 31 and 32, which is a malpais stone, 12x10x4 ins., above ground, marked and witnessed as described by the surveyor general. Land, rolling. Soil, sandy and rocky, 4th rate. Timber, none. Undergrowth, yucca, catclaw. sage and cactus. Feb. 8, 1915. T.O.J.

Independent  
Resurvey of Fifth Guide Meridian West thru Tp. 22 North. 3.

Chains.

T.O.J.  
Feb. 18, 1915.  
From the cor. of Ts. 21 and 22 N., Rs. 18 and 19 W., I run, North, on a blank line, on the 5th Guide Meridian West, making careful search at intervals of 40.00 chs. for the old cors., and setting temp. points. I find no trace of cors. throughout the township, and at 484.36 chs. fall 7 lks. E. of the old cor. of Ts. 22 and 23 N., Rs. 18 and 19 W. As the townships east and west of the line have not been subdivided, I proceed to re-survey the Guide Meridian, as follows:

From the old cor. of Ts. 21 and 22 N., Rs. 18 and 19 W., which is a malpais stone, 10x10x5 ins. above ground, marked and witnessed as described by the surveyor general, I run,  
North; bet. secs. 31 and 36.

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

- $\frac{1}{4}$  in N. half;
- S 31 in E. half;
- S 36 in W. half; and
- 1915 in S. rim;

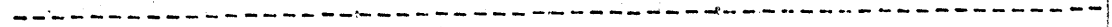
80.00 dig pits 18x18x12 ins., N. and S. of cor., 3 ft. dist., and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for reestablished cor. of secs. 25, 30, 31 and 36, with brass cap, marked

- T 22 N in N. half;
- R 19 W S 25 in NW.,
- R 18 W S 30 in NE.,
- S 31 in SE., and
- S 36 in SW. quadrant; and
- 1915 in S. rim;

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, W. of cor.

Land, rolling.  
Soil, sandy, 4th rate.  
No timber.  
Undergrowth, cactus, catclaw, greasewood and yucca.



40.00 North, bet. secs. 25 and 30.  
Over rolling land, through scattering undergrowth.  
Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished  $\frac{1}{4}$  sec. cor., with brass cap, marked

- $\frac{1}{4}$  in N. half;
- S 25 in W. half;
- S 30 in E. half; and
- 1915 in S. rim;

80.00 dig pits 18x18x12 ins., N. and S. of cor. 3 ft. dist., and raise a mound of earth,  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high W. of cor.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished cor. of secs. 19, 24, 25 and 30, with brass cap, marked

- T 22 N in N. half;
- R 19 W S 24 in NW.
- R 18 W S 19 in NE.,
- S 30 in SE., and
- S 25 in SW. quadrant; and
- 1915 in S. rim;

## Resurvey of Fifth Guide Mer. West, thru. Township 22 N.

Chains

and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
W. of cor.  
Land, rolling.  
Soil, sandy, 4th rate.  
No timber.  
Undergrowth, cactus, catclaw, yucca and greasewood.

North, bet. secs. 19 and 24.

Over rolling land, through scattering undergrowth.

1.20  
40.00

Center of wash, 30 lks. wide, course SW.

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

$\frac{1}{4}$  in N. half;  
S 24 in W. half;  
S 19 in E. half; and  
1915 in S. rim;

dig pits  $18 \times 18 \times 12$  ins., N. and S. of cor., 3 ft. dist.,  
and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high,  
west of cor.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins.  
in the ground, for reestablished cor. of secs. 13, 18,  
19 and 24, with brass cap, marked

T 22 N in N. half;  
R 19 W S 13 in NW.,  
R 18 W S 18 in NE.,  
S 19 in SE., and  
S 24 in SW. quadrants; and  
1915 in S. rim;

dig pits  $18 \times 18 \times 12$  ins., in each sec.  $5\frac{1}{2}$  ft. dist.,  
and raise a mound of earth 4 ft. base, 2 ft. high,  
W. of cor.

Land, rolling.

Soil, sandy, 4th rate.

No timber.

Undergrowth, cactus, catclaw, and greasewood.

Resurvey of Fifth Guide Meridian West, through Township 22 N. 5.

Chains.

North, bet. secs. 13 and 18.  
 Over rolling land, through scattering undergrowth.  
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for reestablished  $\frac{1}{4}$  sec. cor., with brass cap, marked,  
      $\frac{1}{4}$  in N. half;  
     S 13 in W. half;  
     S 18 in E. half, and  
     1915 in S. rim;  
 dig pits, 18x18x12 ins., N. and S. of cor., 3 ft. dist., and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.  
 64.20 Road from Cerbat to Frisco brs. NW. and SE.  
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished cor. of secs. 7, 12, 13 and 18 with brass cap, marked,  
     T 22 N in N. half;  
     R 19 W S 12 in NW.,  
     R 18 W S 7 in NE.,  
     S 18 in SE., and  
     S 13 in SW. quadrant; and  
     1915 in S. rim;  
 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, W. of cor.  
 Land, rolling.  
 Soil, sandy, 4th rate.  
 No timber.  
 Undergrowth, cactus, catclaw and greasewood.

North, bet. secs. 7 and 12.  
 Over rolling land, through scattering undergrowth.  
 19.50 Road from Mineral to Frisco bears N.  $22\frac{1}{2}^{\circ}$  E., and S.  $22\frac{1}{2}^{\circ}$  W.  
 33.20 Road to Mineral bears E and W.  
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for reestablished  $\frac{1}{4}$  sec. cor., with brass cap, marked  
      $\frac{1}{4}$  in N. half;  
     S 12 in W. half;  
     S 7 in E. half; and  
     1915 in S. rim;  
 dig pits 18x18x12 ins., N. and S. of cor., 3 ft. dist., and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.  
 41.10 Center of wash, 50 lks. wide, 6 ft. deep, course SW.  
 79.25 Road to Mineral bears NE. and SW.  
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished cor. of secs. 1, 6, 7 and 12, with brass cap, marked  
     T 22 N in N. half;  
     R 19 W S 1 in NW.,  
     R 18 W S 6 in NE.,  
     S 7 in SE., and  
     S 12 in SW. quadrant; and  
     1915 in S. rim;  
 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, W. of cor.  
 Land, rolling.  
 Soil, sandy and gravelly, 4th rate.  
 No timber.  
 Undergrowth, sage, cactus, catclaw and greasewood.



## 6. Resurvey of Fifth Guide Meridian West, thru Township 22 N.

Chains.

- North, bet. secs. 1 and 6.  
Over rolling land, through scattering undergrowth.
- 40.00 Set an iron post, 3 ft long, 1 in. in diam., 26 ins. in the ground for reestablished  $\frac{1}{4}$  sec. cor., with brass cap, marked
- $\frac{1}{4}$  in N. half;  
S 1 in W. half;  
S 6 in E. half; and  
1915 in S. rim;
- dig pits 18x18x12 ins., N. and S. of cor., 3 ft. dist., and raise a mound of earth,  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.
- 68.00 Center of wash, 1.00 chain wide, course west.
- 84.36 The cor. of Ts. 22 and 23 N., Rs. 18 and 19 W., later re-established by E.O.L., as described in Book "D."  
Land, rolling.  
Soil, sandy and gravelly, 4th rate.  
No timber.  
Undergrowth, sage, cactus, catclaw and greasewood.  
Feb. 18, 1915.  
T.O. J.

## Retracement of Fifth Guide Mer. West, thru. part of T. 23 N.

- E.O.L.  
Feb. 26, 1915.  
From the reestablished cor. of Ts. 22 and 23 N., Rs. 18 and 19 W. described in Book "D," I run,  
North, on a random line, bet. secs. 31 and 36, 25 and 30, and 20 chs. bet. secs. 19 and 24, making diligent search at intervals of 40 chs. for old cors. and setting temp. cors.  
Edward O. Lyman,  
U. S. Transitman.
- T.O. J., Feb. 26, 1915.  
I continue this line north, bet. N. half of secs. 19 and 24, and bet. secs. 13 and 18, making diligent search for old cors. at intervals of 40 chs., and setting temp. cors.  
At 322.72 chs. (counting from the Tp. cor.) fall 2.95 chs. E. of the old cor. of secs. 7, 12, 13 and 18, which is a post, partially destroyed by decay, marked and witnessed as described by the Surveyor General.  
Therefore, the true course and distance for each of these miles is N.  $0^{\circ}31'W.$ , 80.68 chs.  
Feb. 26, 1915.  
T.O. J.

## Resurvey of 5th. Guide Mer. West, through Township 23 N.

- T.O. J.  
March 8, 1915.  
I proceed to resurvey this line, reestablishing the old cors. in their original positions, and knowing that closing cors. pertaining to the area west of line will be necessary, restoring the missing cors. at distances proportional to those given in the original record, as cors. of two secs. and cors. common to 2 quarters of one sec., as follows:
- N.  $0^{\circ}31'W.$ , on W. bdy. of sec. 31.  
Over rolling land, through scattering undergrowth.
- 40.34 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished  $\frac{1}{4}$  sec. cor. to sec. 31, with brass cap, marked

Resurvey of 5th. Guide Meridian West, through Township 23 N. 7.

Chains.

$\frac{1}{4}$  S 31 in E. half; and  
 1915 in S. rim;  
 and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, E.  
 of cor.  
 73.90 Wash, 20 lks. wide, course SW.  
 80.68 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in  
 the ground, for reestablished cor. of secs. 30 and 31,  
 with brass cap, marked  
     T 23 N S 30 in NE., and  
     S 31 R 18 W in SE. quadrant; and  
     1915 in S. rim;  
 dig pits, 24x24x12 ins. NE. & SE. of post, 6 ft. dist., and  
 raise a mound of earth, 4 ft. base, 2 ft. high, E. of cor.  
 Land, rolling.  
 Soil, gravelly and sandy, 4th rate.  
 No timber.  
 Undergrowth, cactus, catclaw and greasewood.

N. 0° 31' W., on W. bdy. of sec. 30.  
 Over rolling land, through scattering undergrowth.  
 7.70 Wash, 10 lks. wide, course SW.  
 40.34 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in  
 the ground, for reestablished  $\frac{1}{4}$  sec. cor., to sec. 30,  
 with brass cap, marked,  
      $\frac{1}{4}$  S 30 in E. half; and  
     1915 in S. rim;  
 dig pits 18x18x12 ins., N. and S. of cor. 3 ft. dist., and  
 raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, E. of cor.  
 52.90 Wash, 10 lks. wide, course W.  
 66.60 Wash, 20 lks. wide, course SW.  
 80.68 Set an iron post 3 ft. long, 3 ins. diam., 24 ins. in the  
 ground for reestablished cor. of secs. 19 and 30, with  
 brass cap, marked  
     T 23 N S 19 in NE.,  
     S 30 R 18 W in SE., and  
     1915 in S. rim;  
 dig pits, 24x24x12 ins. NE. & SE. of post 6 ft. dist., and  
 raise a mound of earth 4 ft. base, 2 ft. high, E. of cor.  
 Land, rolling.  
 Soil, sandy and gravelly, 4th rate.  
 No timber.  
 Undergrowth, cactus and greasewood.

N. 0° 31' W., on W. bdy. of sec. 19.  
 Over rolling land.  
 11.90 Wash, 20 lks. wide, course SW.  
 20.50 Wash, 10 lks. wide, course SW.  
 40.34 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in  
 the ground for reestablished  $\frac{1}{4}$  sec. cor., to sec. 19,  
 with brass cap, marked  
      $\frac{1}{4}$  S 19 in E. half; and  
     1915 in S. rim;  
 dig pits 18x18x12 ins., N. and S. of cor., 3 ft. dist.,  
 and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high,  
 E. of cor.  
 42.10 Road brs. NE. and SW.  
 55.00 Wash, 15 lks. wide, course SW.  
 80.68 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in  
 the ground, for reestablished cor. of secs. 18 and 19,  
 with brass cap, marked  
     T 23 N S 18 in NE.,  
     R 18 W S 19 in SE., and  
     1915 in S. rim;  
 dig pits 24x24x12 ins. NE. & SE. of post, 6 ft. dist., and  
 raise a mound of earth 4 ft. base, 2 ft. high, E. of  
 cor.

8. Resurvey of Fifth Guide Meridian West, thru T. 23 N.

Chains

Land, rolling.  
Soil, sandy and gravelly, 4th rate.  
No timber.

40.34 N.0° 31' W., on W.bdy. of sec.18.  
Over rolling land.  
Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the ground for reestablished  $\frac{1}{4}$  sec.cor. to sec.18, with brass cap, marked  
 $\frac{1}{4}$  S 18 in E-half; and  
1915 in S.rim;  
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, E. of cor.

58.20 Wash, 30 lks.wide, course S.67 $\frac{1}{2}$ ° W.

58.30 Road brs.N.22 $\frac{1}{2}$ °W. and S.22 $\frac{1}{2}$ °E.

80.68 The old cor.of secs.7,12,13 and 18,hereinbefore described, in place of which

Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in the ground, for reestablished cor.of secs.7 and 18, with brass cap marked

T 23 N S 7 in NE.,  
S 18 R 18 W in SE., and  
1915 in S.rim;

dig pits, 24x24x12 ins. NE.& SE.of post 6 ft.dist., and raise a mound of earth 4 ft.base, 2 ft.high, E.of cor.

Land, rolling.  
Soil, sandy and gravelly, 4th rate.  
No timber.

March 8, 1915.  
T.O.J.

G.H.R.

Jan. 3, 1916:

At 8h.30m. a.m., l.m.t., I set off 35° 23 $\frac{1}{2}$ ' on the lat.arc; 22° 52' S. on the decl.arc, and determine a meridian with the solar at the reestablished cor.of secs.7 and 18 above described.

Thence I run,

North, on a random line, bet.secs.7 and 12, and 1 and 6, making diligent search at intervals of 40 chs., for old cors., and setting temp.cors; and at 161.20 chs., fall 10 lks.E.of the old cor.of Ts.23 and 24 N..Rs.18 and 19 W., which is a cedar post, 1 inch square, firmly set, marked and witnessed as described by the Surveyor General,

Therefore, the true course and distance for each of these miles is N.0° 02' W., 80.60 chs.

I return to the reestablished cor. of secs.7 and 18; whence I run,

N.0° 02' W. on W.bdy.of sec.7.

40.30 Over gently rolling land, through scattering undergrowth.  
Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the ground, for reestablished  $\frac{1}{4}$  sec.cor., to sec.7, with brass cap, marked

$\frac{1}{4}$  S 7 in E.half, and  
1916 in S.rim;

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

47.60 Road brs.NW. and SE.

53.53 Telephone line bears NW. and SE.

80.60 Set an iron post 3 ft.long, 3 ins. in diam., 24 ins. in the ground, for reestablished cor.of secs.6 and 7, with brass cap, marked

T 23 N S 6 in NE., and  
R 18 W S 7 in SE. quadrant; and  
1916 in S.rim;

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

Land, rolling.

Resurvey of 5th. Guide Meridian West, thru Township 23 N. 9.

Chains.

Soil, rocky, 4th rate.  
No timber.  
Undergrowth, greasewood, catclaw and cactus.

8.10 N.0° 02' W., on west bdy. of sec. 6.  
40.30 Over rolling land, through scattering undergrowth.  
Road, bears N.80° W. and S.80° E.  
Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished  $\frac{1}{4}$  sec. cor. to sec. 6, with brass cap, marked  
 $\frac{1}{4}$  S 6 in E. half; and  
1916 in S. rim;  
and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, E. of cor.

59.40 Wash, 20 lks. wide, course SW.  
60.40 Road brs. N.10° W. and S.10° E.  
80.60 The old cor. of Ts. 23 and 24 N., Rs. 18 and 19 W., hereinbefore described, which I reestablish as follows:  
Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for reestablished cor. of Ts. 23 and 24 N., Rs. 18 and 19 W., with brass cap, marked  
T 24 N in N. half;  
T 23 N in S. half;  
R 19 W S 36 in NW.,  
R 18 W S 31 in NE.,  
S 6 in SE., and  
S 1 in SW. quadrant; and  
1916 in S rim;  
and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, S. of cor.

Land, rolling.  
Soil, rocky, 4th rate.  
No timber.  
Undergrowth, greasewood and cactus.

Jan. 3, 1916.  
Guy H. Richardson,  
U. S. Surveyor.

Independent Resurvey of Fifth Standard Parallel North, through Range 20 West. 11

Chains

T.O.J.

Resurvey commenced Mar. 9, 1915, and executed with a Young and Sons' light mountain transit No. 8493, with Smith solar attachment, and full vertical circle. 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 latitude and declination arcs and vertical circle.

All measurements were made with steel tapes and clinometers.

The instrument was approved, conditional upon a satisfactory field test, by the assistant supervisor of surveys, on Jan. 31, 1915.

I examine the adjustments of the instrument and correct the level and collimation errors; then, wishing to observe Polaris at western elongation, I proceed as follows;

At my camp near the N. bdy. of sec. 16, T. 21 N., R. 20 W., in latitude 35°13' N., longitude 114°25'30" W., at 8h 18m p. m., l. m. t., I observe Polaris at western elong., in accordance with instructions in the Manual, and mark a point in the line thus determined by a tack driven in a stake firmly set in the ground 5 chs. N. of my station.

Mar. 9, 1915.

Mar. 10, 1915.

At 7h 00m a. m., l. m. t., I lay off the azimuth of Polaris 1°23'.6 to the east, and mark the meridian thus determined by cutting a groove in a stone firmly set in the ground east of the point established last night.

The magnetic bearing of the true meridian is N.15°15'W.; the angle thus determined gives the magnetic decl. 15°15'E. Observation at 7h 10m a. m.

I transfer the meridian thus determined, by carefully measured angles, to the standard cor. of Tp. 21 N., Rs. 19 and 20 W., and proceed to resurvey the 5th. Standard Parallel by deflecting bearing from this transit line.

The <sup>old</sup> standard cor. of Tps. 21 N., Rs. 19 and 20 W. is a stone 18x12x10 ins, above ground, mkd. and witnessed as described by the surveyor general. At a station 4 lks. S. of this cor., I turn off from the meridian an angle of 89°58'.2 to the west, and run N.89°58'W., on the secant, S. of sec. 36.

9.90  
11.20  
24.00  
29.65  
35.55

Desc. W. slope of butte 85 ft. to Foot of descent. Asc. E. slope of ridge. Road bears N. and S. Top of low spur projecting to S., 130 ft. above point noted at 9.90 chs. Desc. W. slope 57 ft. to Asc. E. slope of ridge 57 ft. to Top of main divide; Ute Mountains bears range; bears N. and S. Desc. W. slope 107 ft. to point for 1/4 sec. cor.

40.00

Difference between measurements of 40.00 chs., by two sets of chainmen, is 6 lks.; position of middle point By 1st. set, 40.03 chs. By 2nd. set, 39.97 chs.; the mean of which is N., 2 lks. from the secant, reestablish cor. as follows: Set an iron post, 3 ft. long, 1 in. in dia., in a mound of stone, for standard 1/4 sec. cor., with brass cap, marked

SC 1/4 S 36 in N. half, and 1915 in S. rim;

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Impracticable to dig pits or set cor. in the ground.

From cor. desc. 150 ft. to

Resurvey of  
Fifth Standard Parallel North, through Range 20 West.

## Chains

- 41.80 Bottom of canyon, course SW. Asc. 150 ft. to  
46.15 Top of ridge; bears N. and S. Desc. W. slope 150 ft. to  
59.50 Bottom of gulch, course S. Asc. E. slope of low ridge,  
75 ft. to  
62.20 Top of dike 20 ft. high; projects SE; desc. W. slope  
150 ft. to  
79.94 Short gulch, course S.  
Difference of measurements of 80.00 chs., by two sets of  
chainmen, is 2 lks. ; position of middle point  
By 1st. set, 80.01 chs.  
By 2nd. set, 79.99 chs.; the mean of which is  
80.00 Set an iron post, 3 ft. long, 3 ins. in dia., in a mound  
of stone, for reestablished standard cor. of secs. 35 and  
36 with brass cap, marked  
SC in N. half,  
T 21 N S 35 in NW., and  
R 20 W S 36 in NE. quadrant; and  
1915 in S. rim;  
and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
N. of cor. Impracticable to dig pits or set cor. in ground.  
Land, mountainous.  
Soil, rocky; 4th. rate.  
No timber.
- 
- N.  $89^{\circ}59'$  W. on the secant, through sec. 35.  
2.80 Bottom of gulch; course S.  $15^{\circ}$  E. Trail from Frisco to  
Secret Pass in gulch. Asc. E. slope of ridge, over  
slide rock.  
16.20 Summit of ascent, 190 ft. above the sec. cor. Thence  
descend gradually along broken N. slope 200 ft. to  
38.50 Bottom of canyon, course S.  $22\frac{1}{2}^{\circ}$  E. Asc. E. slope 40 ft.  
to  $\frac{1}{4}$  sec. cor. Reestablished cor. as follows:  
Difference between measurements of 40.00 chs. by two  
sets of chainmen, is 2 lks.; position of middle point  
By first set, 40.01 chs.  
By second set, 39.99 chs.; the mean of which is  
40.00 S. 1 lk. from the secant, Reestablished cor. as follows:  
Set an iron post, 3 ft. long, 1 in. in dia., in a mound  
of stone, for standard  $\frac{1}{4}$  sec. cor., with brass cap,  
marked  
SC  $\frac{1}{4}$  S. 35 in N. half, and  
1915 in S. rim;  
and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
N. of cor. Impracticable to dig pits or set cor. in  
the ground.  
41.35 Top of cliff, 100 ft. high, bears N. and S.; thence asc.  
along NE. slope over broken cliffs.  
67.18 Top of cliff 150 ft. high, bears N. and S.  
69.28 Top of cliff 200 ft. high, bears N. and S.; 730 ft. above  
the standard  $\frac{1}{4}$  sec. cor. Thence along S. slope.  
Difference between measurements of 80.00 chs. by two sets  
of chainmen, is 2 lks.; position of middle point  
By 1st. set, 80.01 chs.  
By 2nd. set, 79.99 chs.; the mean of which is  
80.00 Point 100 ft. below cliff.  
S. 2 lks. from the secant, reestablish cor. as follows:  
Set an iron post, 3 ft. long, 3 in. in dia., in a mound  
of stone, for standard cor. of secs. 34 and 35, with  
brass cap, marked  
SC in N. half,  
T 21 N S 34 in NW. and  
R 20 W S 35 in NE. quadrant; and  
1915 in S. rim;  
and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
N. of cor.. Impracticable to set cor. in the ground,  
or to dig pits.  
Land, mountainous.  
Soil, rocky; 4th. rate.  
No timber.

March 10 and 11, 1915.

Resurvey of Fifth Standard Parallel North, through Range 20 West, 13

Chains	
	<p>Mar. 12, 1915.  N.89°59'W., on the secant, through sec. 34.  Asc. E. slope of mountain 175 ft. to</p>
4.71	<p>Ft. of cliff, 200 ft. high, on summit of mountain. To pass same, I offset N., 1.37 chs. Thence continue parallel to secant 33 lks. to</p>
5.04	<p>Set a point for triangulation across a deep canyon, with precipitous sides, impossible to chain over; general course S.20°W., and place a flag on offset line on the W. side of canyon; then measure a base N10°1' E, 11.40 chs., to a point from which flag bears S.69°48' W.; which gives for the distance, tan. 69°47' X base, or 2.71548 X 11.40 chs., = 30.96 chs.</p>
36.00	<p>Offset S. 1.37 chs. to line.  Desc. 160 ft. over broken cliffs, on N. and S. ridge.</p>
40.00	<p>Point for 1/4 sec. cor. falls on cliff. Therefore at</p>
38.50	<p>Measurement by both sets of chainmen being identical, S. 3 lks. from the secant, reestablish cor. as follows:  Set an iron post, 3 ft. long, 1 in. in dia., in a mound of stone, for witness cor. to standard 1/4 sec. cor., with brass cap, marked WC in W. half,  SC 1/4 S 34 in N. half, and  1915 in S. rim;  and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Impracticable to set cor. in the ground or dig pits.</p>
	Mar. 12, 1915.
	<p>Mar. 13, 1915.  From standard 1/4 sec. cor., desc. 700 ft. to</p>
61.27	<p>Gulch, course S. Asc. E. slope 125 ft. to</p>
68.00	<p>Summit of ascent, on N. slope of butte. Desc. NW. slope 200 ft. to point for sec. cor.  Difference between measurements of 80.00 chs., by two sets of chainmen, is 2 lks.; position of middle point  By 1st. set, 80.01 chs.  By 2nd. set, 79.99 chs.; the mean of which is</p>
80.00	<p>S. 3 lks. from the secant, reestablish cor. as follows:  Set an iron post, 3 ft. long, 3 ins. in dia., in a mound of stone, for standard cor. of secs. 33 and 34, with brass cap, marked  SC in N. half,  T 21 N S 33 in NW., and  R 20 W S 34 in NE. quadrant; and  1915 in S. rim;  and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Impracticable to dig pits or set cor. in the ground.  Land, mountainous.  Soil, rocky; 4th. rate.  No timber.</p>
-----	
	<p>West, on the secant, through sec. 33.  Desc. broken W. slope 320 ft. to</p>
18.65	<p>Bottom of canyon, course SW. Asc. 110 ft. to</p>
19.60	<p>Thence along S. slope.  Difference between measurements of 40.00 chs. by two sets of chainmen, is 2 lks.; position of middle point  By 1st. set, 40.01 chs.  By 2nd. set, 39.99 chs.; the mean of which is</p>
40.00	<p>S. 3 lks. from the secant, reestablish cor. as follows:  Set an iron post, 3 ft. long, 1 in. in dia., in a mound of stone, for standard 1/4 sec. cor., with brass cap, marked  SC 1/2 S 33 in N. half, and  1915 in S. rim;  and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Impracticable to set cor. in the ground, or to dig pits.</p>
64.75	<p>Bottom of ravine, 20 ft. deep, 2.00 chs. wide, course S.67 1/2° W.</p>

## 14. Resurvey of Fifth Standard Parallel North, through Range 20 West.

## Chains

72.50 Bottom of same ravine, course NW.  
 79.60 Bottom of same ravine, course SW.  
 Difference between measurements of 80.00 chs. by two sets of chainmen, is 1 lk.; position of middle point  
 By first set, 80.005 chs.  
 By second set, 79.995 chs.; the mean of which is  
 80.00 S. 2 lks. from the secant, reestablish cor. as follows:  
 Set an iron post, 3 ft. long, 3 ins. in dia., in a mound of stone, for standard cor. of secs. 32 and 33, with brass cap, marked  
 SC in N. half,  
 T 21 N S 32 in NW., and  
 R 20 W S 33 in SE quadrant; and  
 1915 in S. rim;  
 and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. Impracticable to set cor. in the ground or dig pits.  
 Land, mountainous.  
 Soil, rocky and gravelly; 4th. rate.  
 No timber.

Mar. 13, 1915.

Mar. 15, 1915.

S. 89°59' W., on the secant, through sec. 32.

Over mountainous land.

1.40 Bottom of ravine, 60 ft. deep, 5.00 chs. wide, course NW.  
 8.62 Bottom of same ravine, course SW.  
 17.30 Wash in bottom of wide ravine, 75 lks. wide, course S. 22½° W.  
 19.90 Asc. SE. slope of ridge.  
 33.75 Top of spur. projects S. Desc. W. slope.  
 Difference in measurements of 40.00 chs. by two sets of chainmen, is 1 lk. Position of middle point  
 By 1st. set, 40.005 chs.  
 By 2nd. set, 39.995 chs.; the mean of which is  
 40.00 S. 1 lk. from the secant, reestablish cor. as follows:  
 Set an iron post, 3 ft. long, 1 in. in dia., in a mound of stone, for standard ¼ section corner, with brass cap, marked  
 SC ¼ S 32 in N. half, and  
 1915 in S. rim;  
 and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. Impracticable to set cor. in the ground or dig pits.  
 44.85 Bottom of canyon, course SW.  
 54.85 Line runs down canyon.  
 Difference between measurements of 80.00 chs. by two sets of chainmen, is 12 lks.; position of middle point  
 By 1st. set, 80.06 chs.  
 By 2nd. set, 79.94 chs.; the mean of which is  
 80.00 Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for standard cor. of secs. 31 and 32, with brass cap, marked  
 SC in N. half,  
 T 21 N S 31 in NW., and  
 R 20 W S 32 in NE. quadrant; and  
 1915 in S. rim;  
 and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.  
 Land, mountainous.  
 Soil, rocky; 4th. rate.  
 No timber.

S. 89°59' W., on the secant, S. of sec. 31.

Over rolling mountainous land, through scattering undergrowth.

7.50 Draw, 5.00 chs. wide, 30 ft. deep, course NW.



Resurvey of Fifth Standard Parallel North, through Range 20 West. 15

Chains

29.85 Ravine, 25 ft. deep, 7.00 chs. wide, course NW.  
Difference between measurements by two sets of chainmen,  
of 40.00 chs. is 2 lks.; position of middle point  
By 1st. set, 40.01 chs.

40.00 By 2nd. set, 39.99 chs.; the mean of which is  
N. 2 lks. from the secant, Reestablish cor.as follows:  
Set an iron post, 3 ft. long, 1 in. in dia., in a mound  
of stone, for standard  $\frac{1}{4}$  sec. cor., with brass cap,  
marked

SC  $\frac{1}{4}$  S 31 in N. half, and  
1915 in S. rim;

and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
N. of cor. Impracticable to set cor. in the ground or  
dig pits.

Difference between measurements of 80.00 chs. by two sets  
of chainmen, is 1 lk.; position of middle point

By 1st. set, 80.005 chs.

80.00 By 2nd. set, 79.995 chs.; the mean of which is  
N. 4 lks. from the secant, Reestablish cor.as follows:  
Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins. in  
the ground, for standard cor. of Tps. 21 N., Rs. 20 and  
21 W., with brass cap, marked

SC T 21 N in N. half,  
R 21 W S 36 in NW. and  
R 20 W S 31 in NE. quadrant; and  
1915 in S. rim;

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

Land, rolling mountainous.

Soil, rocky; 4th. rate.

No timber.

Undergrowth, greasewood.

No trace of old corners found through this range. T.O.J. Mar. 15, 1915.

Resurvey of  
Fifth Standard Parallel North, through Range 21 West.

T.O. J.  
Mar. 15, 1915.

At the last point determined on the secant, which is 6 miles  
from the starting point and 4 lks. south of std. cor. of  
Tps. 21 N., Rs. 20 and 21 W., I deflect an angle of  
31.6 to the N. and run

N. 89°58' W., on the secant, S. of sec. 36.

Over rolling mountainous land, with general W. slope,  
through scattering greasewood brush.

Difference between measurements of 40.00 chs. by two sets  
of chainmen, is 3 lks.; position of middle point

By 1st. set, 40.015 chs.

40.00 By 2nd. set, 39.985 chs.; the mean of which is  
N. 2 lks. from the secant, reestablish cor.as follows:  
Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in  
the ground, for standard  $\frac{1}{4}$  sec. cor., with brass cap,  
marked

SC  $\frac{1}{4}$  S 36 in N. half, and  
1915 in S. rim;

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

49.90 Draw, 15.00 chs. wide, course SW.

70.00 Asc. E. slope of ridge.

Difference between measurements of 80.00 chs. by two sets  
of chainmen, is 1 lk.; position of middle point

By first set, 80.005 chs.

80.00 By second set, 79.995 chs.; the mean of which is  
Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins. in  
the ground, for reestablished std. cor. of secs. 35 and 36, with  
brass cap, marked

SC in N. half,  
T 21 n S 35 in NW. and  
R 21 W S 36 in NE. quadrant; and  
1915 in S. rim;

## 16.6 Resurvey of Fifth Standard Parallel North, through Range 21 West.

## Chains

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

Land, rolling mountainous.

Soil, gravelly and rocky; 4th rate.

No timber.

Undergrowth, greasewood.

N.  $89^{\circ}59'W.$ , on the secant, through sec. 35.

Over rolling mountainous land, through scattering undergrowth. Desc. broken SW. slope.

19.40 Wash, 100 lks. wide, 6 ft. deep, course S.  $67\frac{1}{2}^{\circ}W.$

23.20 Same wash, course West.

30.00 Leave wash, course SW. Difference bet. measurements of 40 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 40.01 chs.

40.00 By 2nd. set, 39.99 chs.; the mean of which is S. 1 lk. from the secant, reestablish cor. as follows: Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., with brass cap, marked

SC  $\frac{1}{4}$  S 35 in N. half; and

1915 in S. rim;

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

Difference between measurements of 80.00 chs. by two sets of chainmen, is 1 link; position of middle point

By 1st. set, 80.005 chs.

80.00 By 2nd. set, 79.995 chs.; the mean of which is S. 2 lks. from the secant, reestablish cor. as follows: Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for standard cor. of secs. 34 and 35, with brass cap, marked

SC in N. half,

T 21 N S 34 in NW., and

R 21 W. S 35 in NE. quadrant; and

1915 in S. rim;

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

Land, rolling mountainous.

Soil, gravelly and rocky; 4th. rate.

No timber.

Undergrowth, greasewood.

Mar. 15, 1915.

Mar. 16, 1915.

N.  $89^{\circ}59'W.$ , on the secant, through sec. 34.

Over rolling mountainous land, through scattering undergrowth. Desc. gradually along broken S. slope, on N. side of wash about 5.00 chs. wide, course W.

Difference between measurements of 40.00 chs., by two sets of chainmen, is 8 lks.; position of middle point

By 1st. set, 40.04 chs.

40.00 By 2nd. set, 39.96 chs.; the mean of which is S. 3 lks. from the secant, reestablish cor. as follows:

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

SC  $\frac{1}{4}$  S 34 in N. half, and

1915 in S. rim;

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

43.00 N. edge of wash, 7.00 chs. wide, course W. Line runs down same.

55.00 Point on N. bank of same.

65.00 Enter same wash. Line runs down same.

Resurvey of Fifth Standard Parallel North, through Range 21 West.

Chains

80.00 Difference between measurements of 80.00 chs. by two sets of chainmen, is 2 lks.; position of middle point  
 By 1st. set, 80.01 chs.  
 By 2nd. set, 79.99 chs.; the mean of which is  
 S. 3 lks. from the secant, reestablish cor. as follows:  
 Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for standard cor. of secs. 33 and 34, with brass cap, marked  
 SC in N. half,  
 T 21 N S 33 in NW., and  
 R 21 W S 34 in NE. quadrant; and  
 1915 in S. rim;  
 and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.  
 Land, rolling mountainous.  
 Soil, gravelly and rocky; 4th. rate.  
 No timber.  
 Undergrowth, greasewood.

38.00 West, on the secant, through sec. 33.  
 Line runs down wash about 10.00 chs. wide, course W.  
 Leave wash. Asc. gradually on SE. slope, over rolling mountainous land.

40.00 Measurements by two sets of chainmen being identical;  
 S. 3 lks. from the secant, reestablish cor. as follows:  
 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for standard ¼ sec. cor., with brass cap, marked  
 SC ¼ S 33 in N. half, and  
 1915 in S. rim;  
 and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.

80.00 From cor. desc. gradually on broken W. slope.  
 Difference between measurements of 80.00 chs., by two sets of chainmen, is 1 lk.; position of middle point  
 By 1st. set 80.005 chs.  
 By 2nd. set 79.995 chs.; the mean of which is  
 S. 2 lks. from the secant, reestablish cor. as follows:  
 Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for standard cor. of secs. 32 and 33, with brass cap, marked  
 SC in N. half,  
 T 21 N S 32 in NW., and  
 R 21 W S 33 in NE. quadrant; and  
 1915 in S. rim;  
 and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.  
 Land, rolling mountainous.  
 Soil, gravelly and rocky; 4th. rate.  
 No timber.  
 Undergrowth, scattering greasewood and sage.

40.00 S. 89°59'W., on the secant, through sec. 32.  
 Over rolling mountainous land, through scattering undergrowth; on broken W. slope.  
 Difference between measurements of 40.00 chs. by two sets of chainmen, is 1 lk.; position of middle point  
 By 1st. set, 40.005 chs.,  
 By 2nd. set, 39.995 chs.; the mean of which is  
 S. 1 lk. from the secant, reestablish cor. as follows:  
 Set an iron post, 3 ft. long, 1 in. in dia., 26 ins. in the ground, for standard ¼ sec. cor., with brass cap, marked  
 SC ¼ S 32 in N. half, and  
 1915 in S. rim;

## 18 Resurvey of Fifth Standard Parallel North, through Range 21 West.

Chains	
80.00	<p>and raise a mound of stone, 2 ft. base, <math>1\frac{1}{2}</math> ft. high, N. of cor.            Difference between measurements of 80.00 chs. by two sets of chainmen, is 1 lk.; position of middle point            By 1st. set, 80.005 chs.            By 2nd. set, 79.995 chs.; the mean of which is            Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for reestablished std. cor. of secs. 31 and 32, with brass cap, marked            SC in N. half,            T 21 N S 31 in NW., and            R 21 W. S 32 in NE. quadrant; and            1915 in S. rim;            and raise a mound of stone, 2 ft. base, <math>1\frac{1}{2}</math> ft. high, N. of cor.            Land, rolling mountainous.            Soil, gravelly and rocky; 4th. rate.            No timber.            Undergrowth, greasewood.</p>
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15.00 39.00 40.00	<p>S. <math>89^{\circ}59'</math> W., on the secant, S. of frac. sec. 31.            Over rolling mountainous land, through scattering undergrowth; on broken NW. slope.            Low ridge bears NW. and SE. Desc. gradually on SW. slope.            Wash, 20 lks. wide, course NW.            Difference between measurements of 40.00 chs. by two sets of chainmen is 3 lks.; position of middle point            By 1st. set, 40.015 chs.            By 2nd. set, 39.985 chs.; the mean of which is            Set 2 lks. from the secant, set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for reestablished Std. cor. with brass cap, marked            SC <math>\frac{1}{4}</math> S 31 in N. half, and            1915 in S. rim;            and raise a mound of stone, 2 ft. base, <math>1\frac{1}{2}</math> ft. high, N. of cor.</p>
65.00	Ft. of descent; enter river bottom.
65.50	Old government road to Fort Mohave bears N. and S.
74.20	<p>The old standard cor. of secs. 34 and 35, Tp. 21 N., R. 22 W., which is a stone, 10x10x6 ins., above ground, mkd. and witnessed as described by the surveyor general, bears S., 7.22 chs. dist. I destroy this cor.</p>
78.70	<p>Left bank of Colorado River; brs. N. <math>16^{\circ}</math> E. and S. <math>15^{\circ}</math> W.            Measurements by two sets of chainmen being identical, N. 4 lks. from the secant,            Set an iron post, 3 ft. long, 3 ins. in dia., 24 ins. in the ground, for meander cor. of fractional sec. 31, with brass cap, marked            SC in N. half,            MC in W. half, and            T 21 N R 21 W S 31 in NE. quadrant; and            1915 in S. rim;            dig pit, 36x36x12 ins., 8 ft. E. of cor., and raise a mound of earth, 4 ft. base, 2 ft. high, E. of cor., from which            A willow, 5 ins. in diam., bears N. <math>44^{\circ}</math> E., 4 lks. dist., marked T 21 N R 21 W S 31 MC BT.            Land, rolling mountainous and level.            Soil, gravelly and rocky; 4th. rate.            No timber.            Undergrowth, greasewood, willow, tule, and second growth cottonwood.            No trace of old cors., other than noted, found through this range.            Mar. 16, 1915.</p>
-----	T.O.J.

Resurvey of 5th St. Par. N., through Rs. 20 and 21 W. 19

Chains

GENERAL DESCRIPTION.

Through range 20 W., this line runs over rough mountainous land, and through R. 21 W. over rolling mountainous and rolling land.  
The land on both sides of the line is desert in character and unsuited for cultivation. There is no timber, and the undergrowth consists of scattering cactus, catclaw, greasewood, sage, scrub juniper, and, along the Colorado River, some willow and tule.

Independent

Resurvey of 5th Guide Meridian West, through T. 24 N.

H. P.  
Mar. 10, 1916.

At 9h 00m, a.m., l.m.t., I set off 35°25' on the lat arc, and 4°01½'S. on the decl. arc, and determine a meridian with the solar at the reestablished cor. of Ts. 23 and 24 N., Rs. 18 and 19 W., hereinbefore described.

Thence I run, as per instructions,  
North, bet. secs. 31 and 36,  
over rolling mountainous land, through scattering undergrowth.

- 27.00 Wash, 20 lks. wide, course SW.; asc. 85 ft. to
  - 35.00 Top of spur extends SW.; desc. 55 ft. to
  - 40.00 Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the ground, and 20 ins. in a mound of stone, for reestablished ¼ sec. cor., with brass cap, marked
    - ¼ in N.,
    - S 31 in E., and
    - S 36 in W. half; and
    - 1916 in S. rim;
 and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Impracticable to dig pits or set cor. farther in the ground.
  - 58.90 Wash, 100 lks. wide, course SW.
  - 73.70 Road bears E, and W.
  - 80.00 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground, for reestablished cor. of secs. 25, 30, 31 and 36, with brass cap, marked
    - T 24 N in N. half,
    - R 19 W S 25 in NW.,
    - R 18 W S 30 in NE.,
    - S 31 in SE., and
    - S 36 in SW. quadrant; and
    - 1916 in S. rim;
 and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
- Land, rolling mountainous.  
Soil, rocky; 4th rate.  
No timber.  
Undergrowth, greasewood, catclaw, cactus and juniper.

North, bet. secs. 25 and 30,  
over rolling mountainous land, through scattering undergrowth.

- .52 House bears S. 84½°E.; asc. broken SE. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 4 ins. in the

20

## Resurvey of 5th Guide Meridian West, through T. 24 N.

Chains	
80.00	<p>ground and 22 ins. in a mound of stone, for reestablished <math>\frac{1}{4}</math> sec. cor., with brass cap, marked</p> <p style="padding-left: 40px;">in N., S 25 in W., and S 30 in E. half; and 1916 in S. rim;</p> <p>and raise a mound of stone, 2 ft. base, <math>1\frac{1}{2}</math> ft. high, W. of cor. Impracticable to dig pits or set cor. farther in the ground.</p> <p>Set an iron post, 3 ft. long, 3 ins. diam., 6 ins. in the ground and 18 ins. in a mound of stone, for reestablished cor. of secs. 19, 24, 25 and 30, with brass cap, marked</p> <p style="padding-left: 40px;">T 24 N in N. half, R 19 W S 24 in NW., R 18 W S 19 in NE., S 30 in SE., and S 25 in SW. quadrant; and 1916 in S. rim;</p> <p>and raise a mound of stone, 2 ft. base, <math>1\frac{1}{2}</math> ft. high, W. of cor. Impracticable to dig pits or set cor. farther in the ground. Cor. is 600 ft. above cor. of secs. 25, 30, 31 and 36.</p> <p>Land, rolling mountainous. Soil, rocky; 4th rate. No timber. Undergrowth, cactus, scrub oak, juniper and catclaw.</p>
.70	<p>North, bet. secs. 19 and 24, over mountainous land, through scattering undergrowth.</p>
31.70	<p>Top of spur extends W.; desc. broken NW. slope, 260 ft. to Ravine, 7 lks. wide, on bottom, course NW.; asc. S. slope.</p>
40.00	<p>Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground and 14 ins. in a mound of stone, for reestablished <math>\frac{1}{4}</math> sec. cor., with brass cap, marked</p> <p style="padding-left: 40px;"><math>\frac{1}{4}</math> in N., S 19 in E., and S 24 in W. half; and 1916 in S. rim;</p> <p>and raise a mound of stone, 2 ft. base, <math>1\frac{1}{2}</math> ft. high, W. of cor.</p>
51.45	<p>Top of spur, 430 ft. above ravine, bears W.; desc. NE. slope 265 ft. to</p>
75.30	<p>Ravine, course NW.</p>
80.00	<p>Set an iron post, 3 ft. long, 3 ins. diam., 14 ins. in the ground and 10 ins. in a mound of stone, for reestablished cor. of secs. 13, 18, 19 and 24, with brass cap, marked</p> <p style="padding-left: 40px;">T 24 N in N. half, R 19 W S 13 in NW., R 18 W S 18 in NE., S 19 in SE., and S 24 in SW. quadrant; and 1916 in S. rim;</p> <p>and raise a mound of stone, 2 ft. base, <math>1\frac{1}{2}</math> ft. high, W. of cor. Impracticable to dig pits or set cor. farther in the ground.</p> <p>Land, mountainous. Soil, rocky; 4th rate. No timber. Undergrowth, scrub oak, juniper, catclaw, scrub pine and cactus.</p>
33.02	<p>North, bet. secs. 13 and 18, over mountainous land, through scattering undergrowth. Asc. over broken land.</p>
40.00	<p>Fence bears N. <math>60^{\circ}</math> E. and S. <math>60^{\circ}</math> W. Set an iron post, 3 ft. long, 1 in. diam., in a mound of</p>

Chains

stone, for reestablished  $\frac{1}{4}$  sec. cor., with brass cap, marked

$\frac{1}{4}$  in N.,  
S 13 in W., and  
S 18 in E. half; and  
1916 in S. rim;

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

41.40  
56.05  
78.90  
80.00

Top of spur extends NW.; desc. N. slope 240 ft. to Wash, 40 lks. wide, course W.; asc. 270 ft. on S. slope to Top of spur extends SW.; desc. N. slope 25 ft. to Set an iron post, 3 ft. long, 3 ins. diam., 8 ins. in the ground and 16 ins. in a mound of stone, for reestablished cor. of secs. 7, 12, 13 and 18, with brass cap, marked

T 24 N in N. half;  
R 19 W S 12 in NW.,  
R 18 W S 7 in NE.,  
S 18 in SE., and  
S 13 in SW. quadrant; and  
1916 in S. rim;

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

Land, mountainous.  
Soil, rocky; 4th rate.  
No timber.  
Undergrowth, scrub oak, juniper, scrub pine, catclaw and cactus.

North, bet. secs. 7 and 12, over mountainous land, through scattering undergrowth. Desc. 220 ft. on N. slope to

10.40  
34.50  
39.30  
40.00

Ravine, course W.; thence along broken W. slope. Asc. 70 ft. to Top of spur extends W.; desc. NW. slope.

Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground and 8 ins. in a mound of stone, for reestablished  $\frac{1}{4}$  sec. cor., with brass cap, marked

$\frac{1}{4}$  in N.,  
S 7 in E., and  
S 12 in W. half; and  
1916 in S. rim; and

raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Impracticable to dig pits or set cor. farther in the ground. Ft. of slope, 180 ft. below spur; enter rolling land.

55.00  
55.60  
58.80  
80.00

Fence bears E. and W. Road bears NE. and SW.

Set an iron post, 3 ft. long, 3 ins. diam., 16 ins. in the ground and 8 ins. in a mound of stone, for reestablished cor. of secs. 1, 6, 7 and 12, with brass cap, marked

T 24 N in N. half,  
R 19 W S 1 in NW.,  
R 18 W S 6 in NE.,  
S 7 in SE., and  
S 12 in SW. quadrant; and  
1916 in S. rim;

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

Land, mountainous for 55 chs. and rolling for balance. Soil, rocky; 4th rate. No timber. Undergrowth, scrub oak, juniper, catclaw, cactus and scrub pine.

Chains

North, bet. secs. 1 and 6,  
 over rolling land, through scattering undergrowth.

9.00 Wash, 2 chs. wide, course W.; enter roughly rolling hills.

30.00 Road bears NE. and SW.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 10 ins. in the  
 ground and 16 ins. in a mound of stone, for reestablished  
 1/4 sec. cor., with brass cap, marked  
 1/4 in N.,  
 S 1 in W., and  
 S 6 in E. half; and  
 1916 in S. rim;  
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 W. of cor. Impracticable to dig pits or set cor. farther  
 in the ground.

62.07 Intersect 6th ST. Par. N., 8.32 chs. E. of the standard cor.  
 of Ss. 25 N., Rs. 18 and 19 W., reestablished under current  
 Group No. 45; which is an iron post, 3 ins. diam., with  
 brass cap, properly marked, set and witnessed.

At pt. of intersection, reestablish closing cor. as follows:  
 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the  
 ground, for closing cor. of Ts. 24 N., Rs. 18 and 19 W.,  
 with brass cap, marked  
 T 25 N R 18 W S 31 in N. half,  
 T 24 N CC in S. half;  
 S 1 R 19 W in SW., and  
 S 6 R 18 W in SE. quadrant; and  
 1916 in S.rim;  
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 S. of cor.

No trace of old cors. found throughout this township.  
 Land, rolling.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, catclaw, scrub oak, juniper and cactus.

Mar. 10, 1916.  
 H. P.

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84  
BOOK 3134

23

FOR CERTIFICATES OF UNITED STATES SURVEYORS  
AND UNITED STATES TRANSITMEN  
See Book "A"

I, \_\_\_\_\_, U. S. Surveyor, do solemnly swear that, in pursuance  
of special instructions received from the U. S. Surveyor General for \_\_\_\_\_  
bearing date of the \_\_\_\_\_ day of \_\_\_\_\_, 191 \_\_\_\_\_, 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 \_\_\_\_\_  
\_\_\_\_\_ of the \_\_\_\_\_  
\_\_\_\_\_ Meridian, in the State of \_\_\_\_\_, which are represented in  
the foregoing field notes 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 accord-  
ance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor  
General for \_\_\_\_\_ and in the specific manner described in the field notes, and that  
the foregoing are the original field notes of such survey.

U. S. Surveyor.

Subscribed by said \_\_\_\_\_, and sworn to before me }  
this \_\_\_\_\_ day of \_\_\_\_\_, 191 \_\_\_\_\_



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona, March 9, 1918.

The foregoing field notes of the Resurvey of the  
Fifth Guide Meridian West, thru Townships 22, 23 and 24 North, between  
Ranges 18 and 19 West, and  
\_\_\_\_\_ of the Fifth Standard Parallel North,  
through part of Range 17 West, and \_\_\_\_\_ through Ranges 20 and  
21 West, of the Gila and Salt River Base and Meridian, in the State  
of Arizona, executed by Theo. O. Johnston and Guy H. Richardson, U.S.  
Surveyors, and Edward O. Lyman, and Hugo Price, U.S. Transitmen,  
under ~~his~~ special instructions dated January 6, 1915, for Group 44, ~~was~~, having been  
critically examined, and the necessary corrections and explanations made, the said field notes, and the  
resurveys they describe, are hereby approved.

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.~~

~~U. S. Surveyor General.~~