

Book "B"

Standard Lines

BOOK 2767

FIELD NOTES

OF THE ~~SURVEY~~ RETRACEMENT & RESURVEY OF THE

First Standard Parallel North, North of Frac. T. 4 $\frac{1}{2}$ N., R. 32 E.

RESURVEY OF THE

First Standard Parallel South, thru parts of Rs. 28 & 29 E.

RESURVEY OF THE

Fifth Guide Meridian East, thru Ts. 2 & 3 S., bet. Rs. 29 & 30 E.

RESURVEY OF THE

Gila & Salt River Base Line thru R. 28 E.

and RETRACEMENT and RESURVEY OF THE

Third Standard Parallel South thru E $\frac{1}{2}$ of R. 29 E., & thru R. 30 E.

Of the Gila and Salt River Base & Meridian ~~Meridian~~,

In the State of ARIZONA

EXECUTED BY

WILLIAM B. KIMMEL

In the capacity of U. S. Surveyor, under instructions dated August 25, 1910, August 9, 1912, February 18, 1913 and December 30, 1913 issued by the United States Surveyor General to govern surveys included in

Group No. 26, which were approved by the Commissioner of the General Land Office, dated September 9, 1910, Aug. 19, 1912, Feb. 28, 1913 and ~~Office~~, January 9, 1914, pursuant to authority contained in the Act of

Congress dated June 23, 1913 and August 1, 1914.

Re Survey commenced September 27, 1913

Re Survey completed September 26, 1914

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
30	29	28	27	26	25
31	32	33	34	35	36

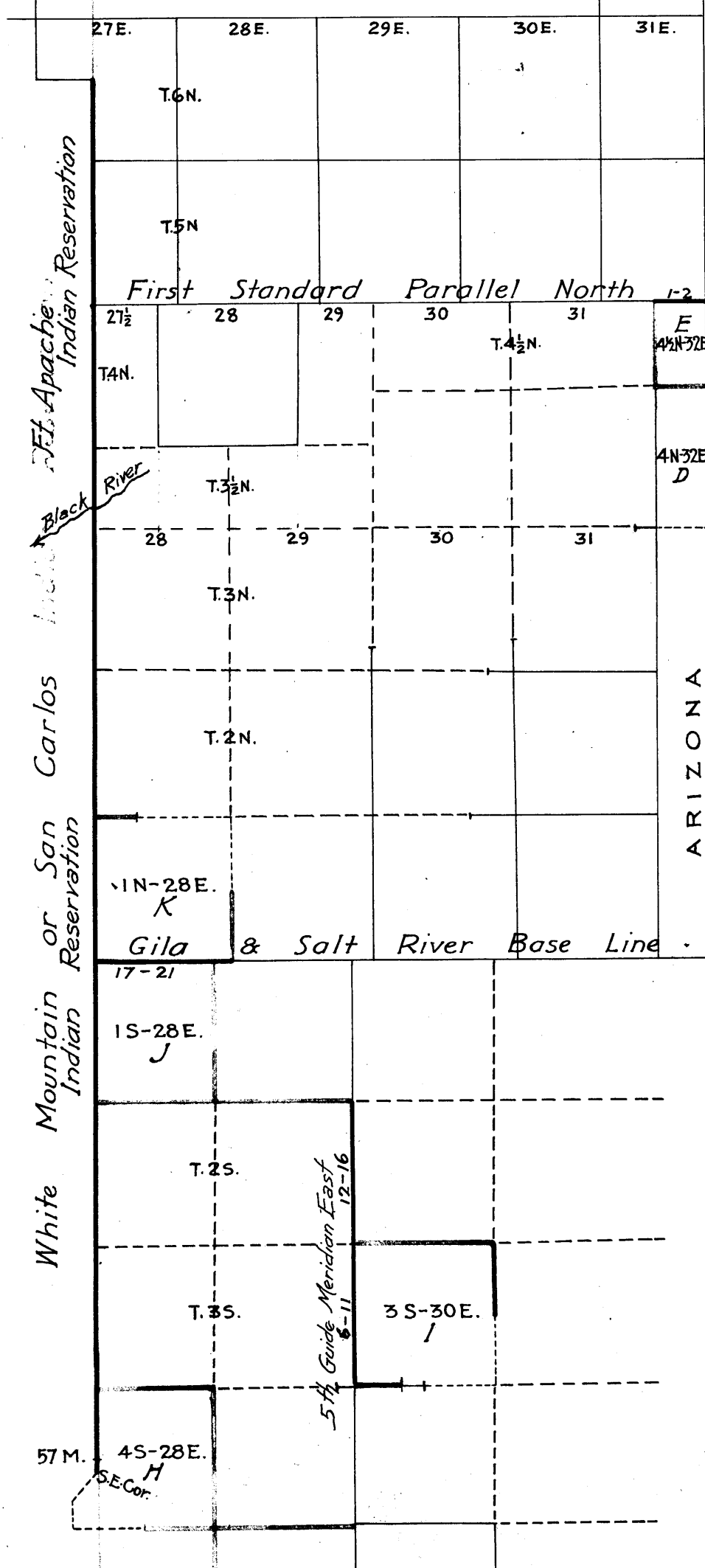
INDEX DIAGRAM

Book "B"

GROUP 26

BOOK 2767

- Notes in this Book (indexed)
- " " Book "A"
- " " Book "C"
- " " other Books. this Group
- Previous Surveys
- Unsurveyed
- E* Red letters indicate Subdivisional Books



ARIZONA
NEW MEXICO

(over)

BOOK 2767

5S-28E.
F

5S-29E.
G

First

Standard

Parallel

South

8S-28E.
M

8S-32E.
L

ARIZONA
NEW MEXICO

12S-32E.
S

13S-27E.
N

0
14S-28E.

Camp Bowie
Mil. Res.
(Abandoned)

15S-29E.
P

15S-30E.
Q

26-28

29-33

Third

Standard

Parallel

South

17S-32E.
R

Retracements & Resurveys 1st. Stand. Par. N. N. of frac. T. 4 N. R. 32 E 1.

Chains,

Retracements and resurveys of standard lines which are described in this book were commenced Sept. 27, 1913, and from that date to Sept. 11, 1914, were executed with a Young and Sons' Light Mountain Transit No. 8541, after which date a Young and Sons' Light Mountain Transit No. 8588 was used. For description and certificate of approval for both of these instruments, see Book "A." page 1.

Knowing from recent and repeated tests with Instrument No. 8541, on a meridian established by observation on Polaris at elongation, that it is in correct adjustment, I proceed to the retracement of that portion of the 1st Standard Parallel N. south of frac. T. 5 N., R. 31 E. from the Arizona-New Mexico bdy. west to the standard $\frac{1}{4}$ sec. cor. on south bdy. of sec. 33 of said Tp., this portion of the parallel being the north bdy. of frac. T. 4 $\frac{1}{2}$ N., R. 32 E.

Oct. 3, 1913. At 9h. 58m. a.m., l.m.t., I set off $33^{\circ}46\frac{1}{2}'$ N. on the lat. arc; $3^{\circ}54\frac{1}{2}'$ S. on the decl. arc; and determine a meridian with the solar at the closing corner to frac. Ts. 4 and 5 N., R. 31 E. on the Arizona-New Mexico bdy., which is an oak post, 4 ins. square, set in mound of stone, marked,

S C on E.,
T 4 N R 31 E in SW., and
T 5 N R 31 E on NW. face, and witnessed

by two bearing trees.

Thence I run, West, on random line, on south bdy. of frac. sec. 35, frac. T. 5 N., R. 31 E.

2.34 Intersect point for original standard $\frac{1}{4}$ sec. cor., which I locate, S. 75° W., 19 lks. dist. from the original bearing tree which I find in good state of preservation. All signs of the original corner post, pits and mound have disappeared.

Continue measurement and random line west
41.74 Fall 47 lks. south of the original standard cor. of secs, 34 and 35, frac. T. 5 N., R. 31 E., which is a lava stone, 12x18x18 ins. set in a mound of stone, marked and witnessed as described by the Surveyor General. The true course and distance of the west $\frac{1}{2}$ mile of S. bdy. of frac. sec. 35 is therefore, N. $89^{\circ}19'$ W., 39.40 chs.

I now return to the closing cor. on Arizona-New Mexico bdy., and resurvey the First Standard Parallel North along south bdy. of frac, sec. 35, frac. T. 5 N., R. 31 E. Over level land, through scattering timber and undergrowth. West on true line to

2.34 The point for original standard $\frac{1}{4}$ sec. cor., where I now reestablish said cor. as follows: Set a basalt stone 14x10x6 ins., 10 ins. in the ground, marked S C $\frac{1}{4}$ on N. face, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, north of cor. Pits impracticable.

Thence I run, N. $89^{\circ}19'$ W., on true line, on west half mile. Over rolling land, through scattering timber and undergrowth.

.06 Draw, course SE. Ascend slight SE. slope of ridge.
1.37 Closing cor. to frac. secs. 16 and 17, frac. T. 4 $\frac{1}{2}$ N., R. 32 E., established by me, as described in Book "E."

9.66 Ridge, brs. N. and S. Descend SW. slope to gulch.

19.66 Draw, course SW.; continue descent.

29.66 Gulch, course S., draining into Pace Creek, 20 lks. S. of this point.

31.51 Pace Creek, 40 lks. wide, course SE. Ascend NE. slope to
39.40 The original standard cor. of secs. 34 and 35, hereinbefore described.

Land, level and rolling.
Soil, rocky, 4th rate.
Timber, pine, cedar and fir.
Undergrowth, scrub oak.

② Retracement & resurvey 1st. Stand. Par. N., N. of frac. T. 4 $\frac{1}{2}$ N., R. 32 E.

Chains,

- From the original standard cor. of secs. 34 and 35, I run, West, on random line on south bdy. of sec. 34, frac. T. 5 N., R. 31 E.
- 40.03 Fall 14 lks. S. of the original standard $\frac{1}{4}$ sec. cor., which is a stone 8x10x12 ins., projecting from a mound of stone marked and witnessed as described by the Surveyor General.
- The true course and dist. of E. $\frac{1}{2}$ mile south of sec. 34, is therefore N. 89° 48' W., 40.03 chs.
- Returning to the original standard cor. of secs. 34 and 35, I retrace this $\frac{1}{2}$ mile for topography, as follows: N. 89° 48' W. on a true line, along the east half of south bdy. of sec. 34.
- Through scattering timber and undergrowth. Ascend slight east slope to
- 8.00 Ridge, brs. NW. and SE. Descend SW. slope, to
- 10.00 Draw, course SW. Ascend slight SE. slope, to
- 14.00 Spur ridge, brs. SW. Descend W. slope, to
- 15.00 Draw, course S. Ascend SE. slope, 65 ft. to
- 20.90 Rocky spur, brs. SW. Descend NW. slope, 170 ft. to
- 30.50 Gulch, course SW. Thence along south slope.
- 32.50 Gulch, course SE. Ascend NE. slope, 35 ft. to
- 40.03 The original Stand. $\frac{1}{4}$ sec. cor. hereinbefore described.
- Oct. 3, 1913.
-
- Sept. 27, 1913: At 8h. 5m., a.m., l.m.t., I set off 33° 46 $\frac{1}{2}$ ' N. on the lat. arc; 1° 31 $\frac{1}{2}$ ' S. on the decl. arc; and determine a meridian with the solar at the original standard cor. $\frac{1}{4}$ sec. cor. of sec. 34, hereinbefore described.
- Thence I run,
- 39.89 West, on random line on west half mile of south bdy. sec. 34. Fall 36 lks. N. of the original standard cor. of secs. 33 and 34, frac. T. 5 N., R. 31 E., which is a stone, 10x4x6 ins. protruding from a mound of stone, marked and witnessed as described by the Surveyor General. The true course and dist. of this half mile is therefore S. 89° 29' W., 39.89 chs.
- I return to the original standard $\frac{1}{4}$ sec. cor., and retrace this half mile for topography as follows: S. 89° 29' W., on a true line, along the west half of south bdy. of sec. 34.
- Through scattering timber and undergrowth. Ascend SE. slope, 70 ft. to spur,
- 2.32 Closing cor. to frac. secs. 17 and 18 of frac. T. 4 $\frac{1}{2}$ N., R. 32 E., established by me, as described in Book "E."
- 11.15 Rocky spur, brs. SW. Descend slight SW. slope, 70 ft. to
- 17.70 Canyon, 2 chs. wide, course SE.
- 18.30 Jackson Creek in Canyon, course SE. Ascend NE. slope, 145 ft. to ridge.
- 25.80 Rocky ledge brs. NW. and SE. Continue ascent.
- 26.30 Ridge, brs. N. and S. Descend to
- 27.00 Thence over level land.
- 35.55 Trail, brs. NW. and SE. Thence along slight south slope.
- 39.89 The original standard cor. of secs. 33 and 34, hereinbefore described.
- Land, rolling, hilly and mountainous.
Soil, rocky, 4th rate.
Timber, pine, fir and oak.
Undergrowth, scattering scrub oak.
Mountainous land, 12 chs.
-
- From the original standard cor. of secs. 33 and 34, I run, West, on random line, on south bdy. of sec. 33, frac. T. 5 N., R. 31 E.
- 39.97 Fall 148 lks. N. of the original standard $\frac{1}{4}$ sec. cor.,

39.97

Retracement & Resurvey 1st. Stand. Par. N. N. of frac. T. 4 $\frac{1}{2}$ N. R. 32 E. (3)

Chains.

which is a granite stone, set in a mound of stone, marked and witnessed as described by the Surveyor General. The true course and dist. of east half mile of S. bdy. of sec. 33 is therefore S. 87° 53' W., 40.00 chs.

I return to the original standard cor. of secs. 33 and 34, and retrace this half mile for topography as follows: S. 87° 53' W., on a true line, along the east half of S. bdy. of sec. 33.

Along south slope, through scattering timber and undergrowth.

2.43 Descend SW. slope, 170 ft. to canyon.
 3.30 Alpine road, brs. NE and SW.
 13.50 Canyon, course SW. Ascend.
 15.50 Spur ridge, brs. SW.; descend.
 17.50 Canyon, course SW. Ascend SE. slope, 80 ft. to
 23.00 Along south slope.
 26.50 Ascend SE. slope, to
 30.50 Spur ridge, brs. S. Descend SW. slope, 30 ft. to
 32.00 Canyon, course S. Ascend SE. slope, 70 ft. to
 36.50 Spur ridge, brs. S. Descend SW slope, 20 ft. to
 40.00 The original standard ~~1/4~~ sec. cor. of sec. 33, hereinbefore described.

Land, rolling and hilly and mountainous.

Soil, rocky, 4th rate.

Timber, pine and oak.

Undergrowth, scrub oak.

Mountainous land 16 chs.

Note: The sky was overcast at noon, making an observation for latitude impossible.

Sept. 27, 1913.

Resurvey First Stand. Par. South, thro. parts of Rs. 28 and 29 E.

Resurvey commenced Nov. 17, 1913, and executed with Young and Sons' Light Mountain Transit, No. 8541.

Knowing from recent and repeated tests of this instrument on a meridian established by observations on Polaris at elongation that it is in correct adjustment, I proceeded to the retracement of enough of the First Standard Parallel South to permit me to reestablish the Standard corner of Ts. 5 S., Rs. 28 and 29 E., of which I am unable to find any trace.

At 2h. 3m., p.m. l.m.t., I set off 32° 56 $\frac{1}{2}$ ' N. on the lat. arc; 18° 59 $\frac{1}{2}$ ' S. on the decl. arc; and determine a meridian with the solar at the original standard $\frac{1}{4}$ sec. cor. of sec. 36, T. 5 S., R. 28 E., which is a stone in place, 24x12x12 ins. above ground, marked and witnessed as described by the Surveyor General.

Thence I run,

East, on a random line, along the east half of south bdy. of sec. 36, T. 5 S., R. 28 E.

40.00 Find no trace of original standard Tp. cor.; continue measurement and random line E. on west $\frac{1}{2}$ S. bdy. of sec. 31, T. 5 S., R. 29 E.

79.78 Fall 19 lks. N. of the original standard $\frac{1}{4}$ sec. cor. ^{of sec. 31}, which is a stone in place, 18x18x12 ins. above ground, marked and witnessed as described by the Surveyor General. The true course and dist. of each of these $\frac{1}{2}$ miles is therefore N. 89° 52' W., 39.89 chs.

I now resurvey this portion of the 1st. Standard Parallel South, as follows: From the original standard $\frac{1}{4}$ sec. cor. on south bdy. of sec. 31, I run,

N. 89° 52' W., on a true line, along the west half of south bdy. of sec. 31, T. 5 S., R. 29 E.

Descend SW. slope, 150 ft., through scattering undergrowth.

6.09 Bluff, brs. NW and SE. From this point, line passes over a rocky broken V-shaped canyon, course NW. 200 ft. deep,

4. Resurvey of 1st. Stand. Par. S., thro. parts of Rs. 28 and 29 E. Chains.

over which I cannot chain; therefore, set instrument at this point, and take stadia measurement to rod on line on west side of canyon. Rod reading (mean of three) 10.745 ft. Ratio, 1 ft. = 2. chs. Focal constant, 1.025 ft. Angle of depression = 17° 28'. The dist. on line to rod is therefore, $10.745 \times 2 \times .9099$ plus .016 = 19.57 chs., which added to 6.09 chs. =

25.66 Stadia rod point. Descend NW. slope, 250 ft. to
 39.89 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for reestablished standard cor. of T. 5 S., Rs. 28 and 29 E. marked on brass cap,
 1913 on S. rim,
 T 5 S in N. half;
 R 28 E S 36 in NW., and
 R 29 E S 31 in NE. quadrant;
 and raise a mound of stone 2 ft. base, 1½ ft. high, N. of cor. Pits impracticable.

From above described township cor., I run, N. 89° 52' W. on a true line.
 Resurveying the east half of south bdy. of sec. 36, T. 5 S., R. 28 E. Descend NW. slope, 150 ft. to Gila River.

.38 Wash, course N. Continue to descend NW. slope.
 1.83 From instrument on line at this point, I take stadia measurement to rod on line on right side of the Gila River. Rod reading 6.125 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Vertical angle, plus 2° 30'. The dist. on line to rod is therefore, $6.125 \times 2 \times .9981$ plus .016 = 12.25 chs., which added to 1.83 chs. = 14.08 chs. rod point. Continue chaining from instrument point.

4.91 Enter heavy undergrowth, brs. NE. and SW.
 6.41 Enter Gila River bottom, brs. NE. and SW.
 10.73 Road brs. NE. to Clifton, and SW. to Solomonsville.
 11.03 Left side of Gila River, very rapid, muddy water, 4 ft. deep, course SW. Discontinue chaining.
 14.08 Rod point on right side of Gila River, 100 ft. above river. Bluff brs. NE. and SW. Thence by chain measurement. Ascend SE. slope, 250 ft. to
 18.38 Spur ridge, brs. SW. Descend slight SW. slope.
 21.38 Cliff, 50 ft. high, brs. N. and S. Ascend SE. slope, 110 ft. to
 24.43 Rocky spur ridge, brs. SW. Descend SW. slope, 15 ft. to
 26.41 Draw, course S. Ascend SE. slope, 40 ft. to
 27.53 Rocky spur ridge, brs. S. Descend SW. slope, 240 ft. to
 * 34.51 Canyon, course SE. Ascend NE. slope, 170 ft. to ¼ sec. cor.
 37.11 Rocky spur ridge, brs. NE. Continue to ascend NE. slope.
 39.89 The original standard ¼ sec. cor. to sec. 36, T. 5 S., R. 28 E., hereinbefore described.

Land, rolling, hilly and mountainous.
 Soil, rocky, 4th rate, except along left bank of the Gila River, which is 2nd rate.
 No timber.
 Undergrowth, dense and scattering mesquite and catclaw.
 Nov. 17, 1913.

Resurvey of First Standard Parallel S., thro. part of R. 29 E.

After a preliminary examination of the 1st Stand. Parallel S., S. of sec. 35, T. 5 S., R. 29 E., I find that it is out of limits of error in dist., and as there are no accepted subdivision lines thence to this portion of the Parallel I make an independent resurvey as follows:
 From the true point for standard cor. of secs. 34 and 35, which is in a wash 30 lks. wide, course N., 100 lks. east of the original witness cor. to said cor., which is a malpais stone 12x10x8 ins. above ground, marked and witnessed as described by the Surveyor General, I run,

Resurvey of First Stand, Par. S. thro. part of Range 29 East. 5.

Chains.

- East, on true line, on south bdy. of sec. 35.
Through scattering undergrowth, over stony ground. Ascend
NW. slope, 140 ft. to
- 7.80 Top of spur, brs. N. Continue over rolling land.
16.00 Top of spur, brs. N.; descend NE. slope, 90 ft. to
23.00 Wash, 20 lks. wide, course NE. Ascend NW. slope, 90 ft. to
30.00 Top of ridge, brs. NE. and SW. Descend E. slope, 140 ft. to
39.00 Gulch, course N. Ascend W. slope, 100 ft. to top of ridge.
39.45 Fall 4 lks. N. of the original standard $\frac{1}{4}$ sec. cor., which
is a stone 10x6x10 ins. above ground, marked $\frac{1}{4}$ S C on
N. face, with a mound of stone N. of cor. I destroy this
old cor., and continue measurement on true line east.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 4 ins. in the
ground, supported by a mound of stone, for reestablished
standard $\frac{1}{4}$ sec. cor., marked on brass cap,
1913 on S. rim,
 $\frac{1}{4}$ S 35 in N. half;
and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N.
of cor. Pits impracticable.
- 45.00 Top of ridge, brs. N. and S. Descend NE. slope 120 ft. to
53.00 Draw, course N. Continue over rolling land.
60.75 Draw, course NW. Ascend SW. slope, 110 ft. to
70.50 Top of ridge, brs. NW. and SE. Continue along rolling N.
slope.
- 78.97 Fall 9 lks. N. of original standard cor. of secs. 35 and 36,
which is a stone 6x15x10 ins. above ground, marked
S C on N., 5 notches on west, and 1 groove on E. face;
with a mound of stone north of cor. I destroy this
old cor., and continue measurement on true line east.
- 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in
the ground, for reestablished standard cor. of secs.
35 and 36, marked on brass cap,
1913 on S. rim,
T 5 S R 29 E in N. half;
S 35 in NW., and
S 36 in NE. quadrant;
and raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of
corner. Pits impracticable.
- Land, rolling and hilly.
Soil, 4th rate, rocky, dry.
Undergrowth, cacti, mesquite and catclaw.
A little grass.

Jan. 17, 1914.

Jan. 19, 1914:

- East, on true line, on south bdy. of sec. 36.
Descend NE. slope, 160 ft. Through scattering under-
growth, over rocky land. Descend NE. slope, 160 ft. to
- 17.00 Gulch, course NE. Ascend NW. slope, 85 ft. to
25.00 Top of ridge, brs. NE. and SW. Descend SE. slope, 80 ft. to
33.60 Gulch, course NE. Ascend NW. slope, 50 ft. to top of
ridge.
- 38.93 Fall 12 lks. S. of the cor. set by Philip Contzen, Nov. 26,
1895 as the standard $\frac{1}{4}$ sec. cor. to sec. 36, T. 5 S., R. 29 E.
which is a stone in place 20x8x12 ins. above ground,
marked S C $\frac{1}{4}$ on N. face, with mound of stone north of
corner. I destroy this old cor., and continue measure-
ment on true line east.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 16 ins. in
the ground, supported by a mound of stone, for reestab.
std. $\frac{1}{4}$ sec. cor., marked on brass cap,
1913 on S. rim,
 $\frac{1}{4}$ S 36 in N. half;
and raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of
corner. Pits impracticable.
- 41.90 Trail, brs. NE. and SW.
43.00 Top of ridge, brs. NE. and SW. Descend E. slope, 25 ft.
46.13 Intersect west bdy. of T. 6 S., R. 30 E., where I set an

xstd.

6. Resurvey of First Stand. Par. S. through part of R. 29 E.

Chains

iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for reestablished standard closing cor. to Ts. 5 and 6 S., R. 29 E., marked on brass cap, 1913 on S. rim, C C W. of center, R 29 E in W. half; T 5 S S 36 in NW., and T 6 S S 1 in SW. quadrant; and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Pits impracticable. From this cor., the original closing cor. brs. N. 6° E., 14 lks. dist., which is a stone 12x12x10 ins. above ground, marked C C on W., with 6 grooves on W. and S. faces; and a mound of stone west of cor.

I destroy this old cor.

From reestablished standard closing cor. above described, I run,

North, on west bdy. of T. 6 S., R. 30 E. along rolling E. slope.

7.80 Intersect the original closing cor. of T. 6 S., Rs. 29 and 30 E., which is a stone 8x12x14 ins., protruding from a mound of stone, marked

C C on S. face, and

6 grooves on the S., E. and W. faces, with a mound of stone N. of cor. I destroy the marks on the west face, thereby making this cor. refer to T. 6 S., R. 30 E. only, being the NW. cor. of said Tp.

Jan. 19, 1914.

Jan. 24, 1914.

Thence I run, east on random line, continuing on S. bdy. of sec. 36, T. 5 S., R. 29 E.

Descend NE. slope, 135 ft. to

15.40 Gulch, course NE. Ascend NW. slope, 35 ft. to

21.90 Top of ridge, brs. NE. and SW.; descend rolling NE. slope 160 ft.

28.79 Fall 7 lks. S. of cor., which was set by Daniel Drummond, U.S. Deputy Surveyor, July 21, 1891, as standard ¼ sec. cor. to sec. 36, T. 5 S., R. 29 E., which is a stone 4x4x10 ins. above ground, marked ½ S C on N. face; with a mound of stone N. of cor. Continue measurement, and random line east.

68.88 Fall 11 lks. S. of a cedar post 5 ft. long, 4 ins. sq., marked with 6 notches on N., E. and W. faces,

RXXIX-XXXVI on W.,

TVSSC on N., and

in RXXXE XXXI on E. face;

set a mound of stone. This cor. was set by Theo. F. White, U.S. Deputy Surveyor, Feb. 1, 1882, for standard cor. to T. 5 S., Rs. 29 and 30 E.

True course and dist. of 1st. Standard Par. S. from the NW. cor. of T. 6 S., R. 30 E. to this cor. is therefore N. 89° 55' E., 68.88 chs.

Land, rolling and hilly.

Soil, 4th rate, rocky, dry.

Undergrowth, cacti, mesquite, catclaw and scrub cedar.

A little grass.

Jan. 24, 1914.

Resurvey of 5th. Guide Mer. E. Thro. T. 3 S., bet. Rs. 29 and 30 E.

Resurvey commenced Feb. 3, 1914, and executed with a Young and Sons' Light Mountain Transit No. 8541, described on page 1, of Book "A."

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

Chains.

solar observations made during a.m. and p.m. hours, with a meridian determined by observations on Polaris, I proceed as follows:

At our camp, in the SE $\frac{1}{4}$ of sec. 29, T. 3 S., R. 30 E.; latitude $33^{\circ} 08' N.$; longitude, $109^{\circ} 17' W.$, I set off $33^{\circ} 08' N.$ on the lat. arc; $16^{\circ} 38' S.$ on the decl. arc; and at 8h. 45m. a.m., l.m.t., determine with the solar a meridian, and mark a point thereon by setting a flag firmly in the ground, about 5 chs. north of my station.

At this station, I set off $16^{\circ} 34' S.$ on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is $33^{\circ} 08' N.$

At this station, I set off $33^{\circ} 08' N.$ on the lat. arc; $16^{\circ} 30' S.$ on the decl. arc; and at 4h. 15m. p.m., l.m.t., and determine with the solar a meridian, which agrees with the a.m. observation.

At 6h. 43m. p.m., by my watch, which is correct l.m.t., I observe Polaris in accordance with Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground, about 5 chs. north of my station.

Feb. 3, 1914.

Feb. 4, 1914: At 6h. 30m. a.m., l.m.t., I lay off the azimuth of Polaris, $0^{\circ} 44'$ to the east, which is the azimuth corresponding to an hour angle of 2h. 8m., the point falling on the flag set by solar observations yesterday; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic decl. of the true meridian, at 6h. 30m. a.m., is $12^{\circ} 56' E.$

I test the stadia wire interval, by setting rod 401.6 lks. from my station; the rod reading is 2.000 ft., which is correct.

From the cor. of Ts. 3 and 4 S., Rs. 29 and 30 E., reestablished by me, as described in Book "I." I resurvey the 5th Guide Meridian East, north through Ts. 3 and 2 S., bet. Rs. 29 and 30 E. As there are no accepted subdivisions on either side of line through these Ts., I reestablish the cors. along line, at intervals of 40 chs.

Ascend south slope, over rocky land.

- .50 Spur ridge, slopes SE. Enter dense undergrowth, brs. NW. and SE. Ascend SE. slope.
- 9.00 Top of ascent, 140 ft. above Tp. cor. Descend NE. slope, 30 ft. to
- 14.50 Draw, course SE.; ascend SE. slope, 45 ft. to
- 17.00 Top of ascent; descend NE. slope, 70 ft. to
- 23.60 Gulch, course SE.; ascend SE. slope, 270 ft. to
- 34.25 Ridge, brs. E. and W. Continue along rolling east slope.
- 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., marked on brass cap,
 - 1913 on S. rim,
 - $\frac{1}{4}$ S 36 on W., and
 - S 31 on E. half;
 - raise a mound of stone 3 ft. base, $1\frac{1}{2}$ ft. high, west of cor. No old cor. found.
- 41.10 Trail, brs. NE. and SW.
- 43.25 Ridge, brs. NE. and SW. Descend N. slope, 265 ft. to
- 52.25 Bottom of canyon, course E. and W. Ascend SE. slope, 250 ft. to spur ridge.
- 58.45 Prospect hole about 30 ft. west.
- 66.50 Spur ridge, slopes E.; descend NE. slope, 200 ft.
- 71.85 Wagon road to Polaris mine, brs. E. and W.

8. Resurvey of 5th Guide Mer. E., through R. 3 S., bet. Rs. 29 & 30E.
Chains.

74.25 Bottom of canyon, course E. Ascend S. slope, 125 ft. to
 80.00 Spur ridge, slopes SE. Set an iron post 3 ft. long, 3 ins.
 in diam., on bedrock, supported by a mound of stone,
 for the reestablished cor. of secs. 25, 30, 31 and 36,
 marked on brass cap,
 1913 on S. rim,
 T 3 S in N. half;
 R 30 E S 30 in NE.,
 S 31 in SE.,
 S 36 in SW., and
 R 29 E S 25 in NW. quadrant;
 raise a mound of stone 2 ft. base, 1 1/2 ft. high, west of
 corner. Pits impracticable. No old cor. found.
 Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering cedar and pinon.
 Undergrowth, scrub oak, catclaw and mesquite.
 Feb. 4, 1914.

Feb. 5, 1914.

North, bet. secs. 25 and 30.
 Along steep rocky east slope, through dense undergrowth.
 7.35 Gulch, course SE. Ascend S. slope, 525 ft.
 14.90 Trail, brs. E. and W.
 20.00 Top of ridge, brs. NW. and SE.; descend NE. slope, 70 ft.
 to
 27.35 Gulch, course SE.; ascend SE. slope.
 36.15 Foot of cliffs, 100 ft. high, br. NE. and SW.
 37.00 Top of cliffs.
 38.53 Fall 17 lks. E. of a stone 48x12x7 ins. laying on the
 ground, marked 1/4; no mound of stone or B Ts. I de-
 stroy the marks on this stone.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for reestablished 1/4 sec. cor., marked on
 brass cap,
 1913 on S. rim,
 1/4 S 25 on W., and
 S 30 on E. half; from which,
 A pinon, 6 ins. in diam., brs. N. 63° E., 23 lks.
 dist., marked 1/4 S 30 B T.
 A pinon, 8 ins. in diam., brs. N. 23 1/2° W., 21 lks.
 dist., marked 1/4 S 25 B T.
 41.00 Top of ridge, brs. E. and W., 400 ft. above gulch; descend
 rocky, cliffy, broken N. slope, 990 ft. to creek.
 54.86 Trail, brs. NW. and SE.

Feb. 5, 1914.

Feb. 7, 1914.

62.25 Sycamore Creek, 5 lks. wide, clear water, rocky bottom,
 flows east; ascend S. slope.
 66.25 Trail, brs. NE. and SW.; ascend along east slope.
 75.40 Draw, course SE. Ascend SW. slope.
 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, marked on brass cap,
 1913 on S. rim,
 T 3 S in N. half;
 R 30 E S 19 in NE.,
 S 30 in SE.,
 S 25 in SW., and
 R 29 E S 24 in NW. quadrant; from which,
 An oak, 8 ins. in diam., brs. N. 24° E., 24 lks.
 dist., marked T 3 S R 30 E S 19 B T.
 A pinon, 7 ins. in diam., brs. S. 39° E., 58 lks.
 dist., marked T 3 S R 30 E S 30 B T.
 A pinon, 10 ins. in diam., brs. S. 25 1/2° W., 29
 lks. dist., marked T 3 S R 29 E S 25 B T.
 An oak, 7 ins. in diam., brs. N. 39° W., 48 lks.
 dist., marked T 3 S R 29 E S 24 B T.

Resurvey 5th Guide Mer. East through T. 3 S. bet. Rs. 29 and 30 E. 9.

Chains.

No old cor. found.
 Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, pinon, cottonwood, fir and cedar.
 Undergrowth, scrub oak, manzanita, cacti, mesquite and
 catclaw.

Feb. 7, 1914.

February 11, 1914: At 9h. 15m. a.m.l.m.t., I set off $33^{\circ} 09'$ N. on the lat. arc; $14^{\circ} 07'$ S on the decl. arc; and determine a true meridian with the solar at the re-established cor. of secs. 19, 24, 25 and 30.

Thence I run,
 North, bet. secs. 19 and 24.
 Ascend rocky SW. slope, through scattering timber and dense undergrowth.

1.00 Foot of cliff, brs. E. and W., 50 ft. high.
 1.30 Top of cliff; ascend SE. slope.
 11.72 Set flag at this point for triangulation over cliff.
 From a point on line on top, of cliff, I lay off a base line S. $40^{\circ} 14'$ W., 4.09 chs. by stadia, to a point from which the flag brs. S. $68^{\circ} 13'$ E. The dist. from flag to triangulation point on top of cliff is therefore $\frac{\text{sine } 71^{\circ} 33'}{\text{sine } 68^{\circ} 13'} \times 4.09 = 4.18$ chs., which added to 11.72 chs. =

15.90 Triangulation point on top of perpendicular cliff, 160 ft. high, brs. E. and W.; ascend S. slope.

18.00 Rocky spur ridge, slopes NE., 605 ft. above sec. cor. Beyond this point, chaining is impossible owing to broken cliffs sloping east; therefore, I take stadia measurement to rod on line north of cliffs. Rod reading, 1.290 ft. Ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Level. The distance to rod is therefore 2×1.290 plus $.016 = 2.60$ chs., which added to 18.00 chs. =

20.60 Rod point on rocky point; descend NE. slope.

24.00 Ridge, brs. NE. and SW.; descend NW. slope.

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., marked on brass cap,

1913 on S. rim,

$\frac{1}{4}$ S 24 on W., and

S 19 on E. half; from which,

A juniper, 5 ins. in diam., brs. S. 9° E., 74 lks. dist., marked $\frac{1}{4}$ S 19 B T.

An oak, 7 ins. in diam., brs. S. 54° W., 85 lks. dist., marked $\frac{1}{4}$ S 24 B T. No old cor. found.

48.00 Gulch, course NE., 365 ft. below 20.60 chain point; ascend SE. slope.

52.00 Ascend S. slope.

58.00 Ridge, brs. NE. and SW.; ascend SW. slope.

64.00 Ridge, brs. NW. and SE., 240 ft. above gulch; descend N. slope.

70.75 Head of a draw, course NE.; descend NE. slope.

79.00 Head of a draw, course E., 195 ft. below ridge; ascend SE. slope, 20 ft. to

80.00 Edge of bench, brs. NE. and SW. Set an iron post, 3 ft. long, 3 ins. in diam., 10 ins. in the ground, supported by a mound of stone, for reestablished cor. of secs. 13, 18, 19 and 24, marked on brass cap,

1913 on S. rim,

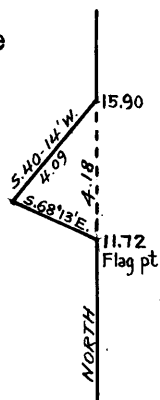
T 3 S in N. half;

R 30 E S 18 in NE.,

S 19 in SE.,

S 24 in SW.; and

R 29 E S 13 in NW. quadrant; from which,



10. Resurvey 5th Guide Mer. E. thro. T. 3 S. bet. Rs. 29 and 30 E.

Chains.

- A pinon, 8 ins. in diam., brs. N. $65\frac{1}{2}^{\circ}$ E., 139 lks. dist., marked T 3 S R 30 E S 18 B T.
 A juniper, 5 ins. in diam., brs. S. $6\frac{1}{2}^{\circ}$ E., 261 lks. dist., marked T 3 S R 30 E S 19 B T.
 A juniper, 10 ins. in diam., brs. S. $29\frac{3}{4}^{\circ}$ W., 193 lks. dist., marked T 3 S R 29 E S 24 B T.
 A cedar, 8 ins. in diam., brs. N. $32\frac{3}{4}^{\circ}$ W., 201 lks. dist., marked T 3 S R 29 E S 13 B T.

No old cor. found.

Land, mountainous.

Soil, rocky, 4th rate.

Timber, juniper, pinon and oak.

Undergrowth, scrub oak, manzanita and cacti.

February 11, 1914.

Feb. 12, 1914.

North, bet. secs. 13 and 18.

Over rolling, rocky bench, through scattering timber and dense undergrowth.

- 8.00 Leave bench, brs. NE and SW.; prospect shaft brs. E. about 75 lks. dist.; descend NW. slope.
 23.30 Silver Creek, 4 lks. wide, flows E.; clear water. 550 ft. below sec. cor.; ascend up gulch,
 25.20 Adobe house brs. west, 25 lks. dist.
 26.75 Rock corral brs. E. 25 lks. dist.
 28.00 Ascend SW. slope.
 32.00 Wash, course SW. Ascend S. slope.
 38.00 Spur ridge, slopes SE.; ascend SE. slope.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 12 ins. in the ground, supported by a mound of stone, for reestablished $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S. rim,
 $\frac{1}{4}$ S 13 on W., and
 S 18 on E. half; from which,
 A juniper, 10 ins. in diam., brs. S. $1\frac{1}{2}^{\circ}$ W., 316 lks. dist., marked $\frac{1}{4}$ S 13 B T.
 No other trees within limits. Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of cor. Pits impracticable.
 A granite stone 12x12x8 ins. above ground, marked $\frac{1}{4}$ on W. face, with a mound of stone on the W., brs. N. $54^{\circ}47'$ W., 221 lks. dist.
 I destroy this old cor.
 42.00 Wash, course SE.
 45.00 Spur brs. SE.; thence along east slope.
 52.00 Wash, course E.; ascend SE. slope.
 62.00 Gulch, course SE.; ascend S. slope.
 72.50 Enter rolling bench, brs. NE and SW., 750 ft. above Silver Creek.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the reestablished cor. of secs. 7, 12, 13 and 18, marked on brass cap,
 1913 on S. rim,
 T 3 S in N. half;
 R 30 E S 7 in NE.,
 S 18 in SE.,
 S 13 in SW., and
 R 29 E S 12 in NW. quadrant; from which,
 A juniper, 8 ins. in diam., brs. S. 13° E., 189 lks. dist., marked T 3 S R 30 E S 18 B T.
 A juniper, 10 ins. in diam., brs. S. $2\frac{1}{4}^{\circ}$ W., 243 lks. dist., marked T 3 S R 29 E S 13 B T.
 No other trees within limits. Pits impracticable.
 Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of cor.
 A stone 10x10x12 ins. above ground, marked with 4 notches on the S. and 2 notches on the N. edge, with a mound of stone on the W., brs. N. $46^{\circ}45'$ W., 356 lks. dist. from above corner. I destroy this old cor.
 Land, mountainous.
 Soil, rocky, 4th rate.

Resurvey of 5th Guide Mer. E. thro. T. 3 S. bet. Rs. 29 and 30 E. 11.

Chains.

Timber, scattering juniper, cedar and pinon.
Undergrowth, dense scrub oak, catclaw, mesquite and cacti.
Feb. 12, 1914

March 6, 1914: At 9h. 15m. a.m., l.m.t., I set off 33° 10½' N. on the lat. arc; 5° 47' S. on the decl. arc; and determine a meridian with the solar at the reestablished cor. of secs. 7, 12, 13 and 18.

Thence I run,

North, bet. secs. 7 and 12.
Over rolling bench, sloping south, through dense undergrowth and scattering timber.

- 4.00 Ascend S. slope of Walker's Butte.
- 30.00 Foot of cliff, 60 ft. high, brs. E. and W.
- 31.00 Top of cliff.
- 37.00 Top of Walker's Butte, 1130 ft. above sec. cor., brs. E. and W.

Note: March 6, 1914: At this point, I set off 5° 44½' S. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 33° 11' N. Descend north slope, 1490 ft. to sec. cor.

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

1913 on S. rim,
 ¼ S 12 in W., and
 S 7 in E. half; from which,
 An oak, 6 ins. in diam., brs. S. 2° E., 41 lks. dist., marked ¼ S 7 B T.
 An oak, 6 ins. in diam., brs. N. 60½° W., 72 lks. dist., marked ¼ S 12 B T.

No old corner found.

- 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 10 ins. in the ground, supported by a mound of stone, for reestablished cor. of secs. 1, 6, 7 and 12, marked on brass cap,

1913 on S. rim,
 T 3 S in N. half;
 R 30 E S 6 in NE,
 S 7 in SE.,
 S 12 in SW., and
 R 29 E S 1 in NW. quadrant; from which,
 A juniper, 6 ins. in diam., brs. S. 3¼° W., 77 lks. dist., marked T 3 S R 29 E S 12 B T.

No other trees within limits; no old cor. found. Raise a mound of stone 2 ft. base, 1½ ft. high, west of cor.

Pits impracticable.

Land, mountainous.

Soil, rocky, 4th rate.

Timber, scattering juniper, oak and pinon.
Undergrowth, dense scrub oak, mesquite and cacti.

North, bet. secs. 1 and 6.
Over rocky land, through scattering timber and dense undergrowth.

- 13.00 Descend 550 ft. to Sardine Creek.
- 17.00 Gulch, course NW.; descend along west slope.
- 25.00 Spur ridge, slopes NW.; descend N. slope.
- 30.00 Sardine Creek, 8 lks. wide, 4 ins. deep, clear water, gravel bottom, flows E. Ascend S. slope, 175 ft. to
- 36.00 Spur ridge, slopes SE.; descend NE. slope, 30 ft. to draw.

March 6, 1914.

Note: March 7, 1914: At this point, at 8h. 15m. a.m., l.m.t., I set off 33° 11½' N. on the lat. arc; 5° 24½' S. on the decl. arc; and determine a meridian with the solar.

12. Resurvey of 5th. Guide Meridian E. thro. T. 3 S., bet. Rs. 29 & 30 E.

Chains.

- 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., marked on brass cap,
 1913 on S. rim,
 $\frac{1}{4}$ S 1 on W., and
 S 6 on E. half; from which,
 A pinon, 8 ins. in diam., brs. S. $55\frac{1}{4}^{\circ}$ E., 88 lks. dist., marked $\frac{1}{4}$ S 6 B T.
 A cedar, 6 ins. in diam., brs. S. 12° W., 32 lks. dist., marked $\frac{1}{4}$ S 1 B T.
 No old corner found.
- 40.10 Draw, course SE.; ascend SW. slope, 490 ft. to
 53.00 Ridge, brs. NW. and SE.; descend NE. slope, 145 ft. to
 59.30 Canyon, course SE.; ascend south slope.
 67.00 Ascend SE. slope.
 77.03 Fall 106 lks. west of a cedar tree, 24 ins. in diam., an 8 inch limb of which is marked T ii S R XXX E S XXXI. I could not find marked stone. I destroy the marks on this tree.
- 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the reestablished cor. of Ts. 2 and 3 S., Rs. 29 and 30 E., marked on brass cap,
 1913 on S. rim,
 T 2 S in N.,
 R 30 E in E.,
 T 3 S in S., and
 R 29 E in W. half;
 S 31 in NE.,
 S 6 in SE.,
 S 1 in SW., and
 S 36 in NW. quadrant; from which,
 A cedar, 6 ins. in diam., brs. N. 74° E., 175 lks. dist., marked T 2 S R 30 E S 31 B T.
 A pinon, 6 ins. in diam., brs. S. $64\frac{1}{2}^{\circ}$ E., 130 lks. dist., marked T 3 S R 30 E S 6 B T.
 A cedar, 6 ins. in diam., brs. S. 47° W., 35 lks. dist., marked T 3 S R 29 E S 1 B T.
 A cedar, 6 ins. in diam., brs. N. $76\frac{1}{2}^{\circ}$ W., 60 lks. dist., marked T 2 S R 29 E S 36 B T.
- Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, mostly scattering, with patches of heavy pinon, cedar and oak.
 Undergrowth, dense cacti, scrub oak, mesquite and catclaw.
 March 7, 1914.

Resurvey of 5th. Guide Mer. E., thro. T. 2 S., bet. Rs. 29 & 30 E.

- March 12, 1914: At 9h. 20m. a.m., l.m.t., I set off $33^{\circ}12'N.$ on the lat. arc; $3^{\circ}26\frac{1}{2}'S.$ on the decl. arc; and determine a meridian with the solar at the reestablished cor. of Ts. 2 and 3 S., Rs. 29 and 30 E.
 Thence I run,
 North, bet. secs. 31 and 36.
 Over rocky land, through scattering timber and dense undergrowth. Ascend SE. slope, 625 ft. to
 18.00 Ridge (west end of Pat. Mountain), brs. E. and W.; descend N. slope, 285 ft.
 20.00 Trail, brs. NW. and SE.
 38.00 Gulch, course NW.; ascend SW. slope, 205 ft.
 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., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 36 on W., and
 S 31 on E. half; from which,
 A juniper, 16 ins. in diam., brs. S. 72° E., 110 lks. dist., marked $\frac{1}{4}$ S 31 B T.

Chains

A juniper, 12 ins. in diam., brs. N. $42\frac{1}{2}^{\circ}$ W., 96 lks. dist., marked $\frac{1}{4}$ S 36 B T.

The old $\frac{1}{4}$ sec. cor., a stone 12x6x8 ins., above ground, marked and witnessed as described by the Surveyor General, brs. S. $25^{\circ} 58'$ E., 4.79 chs. dist. I destroy this old cor.

56.00 Top of ascent; continue along west slope.

64.00 Descend NW. slope, 50 ft. to

80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the reestablished cor. of secs. 25, 30, 31 and 36, marked on brass cap,
 1914 on S. rim,
 T 2 S in N. half;
 R 30 E S 30 in NE.,
 S 31 in SE.,
 S 36 in SW., and
 R 29 E S 25 in NW. quadrant; from which,
 An oak, 9 ins. in diam., brs. N. 67° E., 174 lks. dist., marked T 2 S R 30 E S 30 B T.
 A juniper, 36 ins. in diam., brs. S. 85° E., 120 lks. dist., marked T 2 S R 30 E S 31 B T.
 An oak, 8 ins. in diam., brs. S. $83\frac{1}{2}^{\circ}$ W., 49 lks. dist., marked T 2 S R 29 E S 36 B T.
 A juniper, 24 ins. in diam., brs. N. $54\frac{1}{2}^{\circ}$ W., 151 lks. dist., marked T 2 S R 29 E S 25 B T.

No old cor. found.
 Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, mostly scattering, with patches of heavy juniper, oak, pinon and cedar.
 Undergrowth, dense scrub oak.

North, bet. secs. 25 and 30.
 Over rocky land, through dense undergrowth and scattering timber.

Descend NW. slope, 600 ft. to canyon.

21.50 Descend N. slope.

37.50 Bottom of H L Canyon, course E. Ascend SE. slope, 150 ft. to ridge.

40.00 Set an iron post 3 ft. long, 1 in. in diam., 20 ins. in the ground, supported by a mound of stone, for reestablished $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 25 on W., and
 S 30 on E. half; from which,
 A juniper, 14 ins. in diam., brs. N. 66° E., 21 lks. dist., marked $\frac{1}{4}$ S 30 B T.
 An oak, 8 ins. in diam., brs. S. 14° W., 10 lks. dist., marked $\frac{1}{4}$ S 25 B T.

No old corner found.

44.22 Rocky spur ridge, slopes E. Set instrument at this point and take stadia measurement across rocky box canyon, course NE. from SE. Rod reading 6.825 ft. Ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Vertical angle plus $5^{\circ} 50'$; therefore, the distance to rod is. $.9897 \times 2 \times 6.825$ plus $.016 = 13.57$ chs., which added to 44.22 chs. =

57.79 Rod point on the SE. slope of ridge; ascend SE. slope.

60.00 Ridge, brs. NW. and SE.

March 12, 1914.

March 13, 1914: At 7h.30m. a.m., l.m.t., I set off $33^{\circ} 13\frac{1}{2}'$ N. on the lat. arc; $3^{\circ} 4'$ S. on the decl. arc; and determine a meridian with the solar at this point.

60.45 Trail, brs. NE. and SW. Descend NW. slope, 475 ft. to

79.20 Gulch, course NE.; ascend SE. slope.

80.00 Set an iron post 3 ft. long, 3 ins. in diam., 6 ins. in the ground, supported by a mound of stone, for the reestablished cor. of secs. 19, 24, 25 and 30, marked on brass cap,

14. Resurvey of 5th Guide Mer. E., thro. T. 2 S., bet. Rs. 29 and 30 E. Chains.

1914 on S. rim,
 T 2 S in N. half;
 R 30 E S 19 in NE.;
 S 30 in SE.,
 S 25 in SW., and
 R 29 E S 24 in NW. quadrant; from which,
 An oak, 6 ins. in diam., brs. N. 2° E., 82 lks.
 dist., marked T 2 S R 30 E S 19 B T.
 A juniper, 6 ins. in diam., brs. S. 80° E., 21 lks.
 dist., marked T 2 S R 30 E S 30 B T.
 An oak, 8 ins. in diam., brs. S. 23 $\frac{1}{2}$ ° W., 30 lks.
 dist., marked T 2 S R 29 E S 25 B T.
 A juniper, 10 ins. in diam., brs. N. 47° W., 56 lks.
 dist., marked T 2 S R 29 E S 24 B T.
 A stone, 18x12x3 ins/ above ground, marked and
 witnessed as described by the Surveyor
 General, brs. S. 51° 24' E., 9.56 chs. dist.
 I destroy this old corner.
 Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering, with patches of heavy juniper, oak and
 pinon.
 Undergrowth, dense scrub oak.

North, bet. secs. 19 and 24.
 Over rocky land, through scattering timber and undergrowth.
 Ascend rolling SE. slope, 290 ft. to
 25.00 Top of ascent; descend NE. slope, 200 ft. to
 34.25 Gulch, course SE.; ascend S. slope, 130 ft. to ridge.
 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., marked on
 brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 24 on W., and
 S 19 on E. half;
 raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, west
 of corner. Pits impracticable. No trees within limits.
 No old corner found.
 41.00 Ridge, brs. E. and W. Descend NW. slope, 320 ft. to
 53.00 Canyon, course NE. Ascend SE. slope, 195 ft. to
 72.00 Top of spur ridge, slopes E.; descend NE. slope, 110 ft. to
 78.00 Gulch, course NE. Ascend SE. slope.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for the reestablished cor. of secs. 13, 18,
 19 and 24, marked on brass cap,
 1914 on S. rim,
 T 2 S in N. half;
 R 30 E S 18 in NE.,
 S 19 in SE.,
 S 24 in SW., and
 R 29 E S 13 in NW. quadrant; from which,
 A pinon, 8 ins. in diam., brs. S. 86 $\frac{3}{4}$ ° E., 221
 lks. dist., marked T 2 S R 30 E S 19 B T.
 A pinon, 10 ins. in diam., brs. S. 68 $\frac{1}{2}$ ° W., 202
 lks. dist., marked T 2 S R 29 E S 24 B T.
 No other trees within limits; raise a mound of stone 2
 ft. base, 1 $\frac{1}{2}$ ft. high, west of cor. Pits impractica-
 ble. No old corner found.
 Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering pinon, juniper and oak.
 Undergrowth, scattering scrub oak and cacti.

North, bet. secs. 13 and 18.
 Over rocky land, through scattering timber and undergrowth.
 Ascend SE. slope, 70 ft. to

Resurvey of 5th Guide Mer. E. thro. T. 2 S. bet. Rs. 29 and 30 E. 15.

Chains.

6.00 Top of ascent; descend gradually over rolling bench, drains NE.

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., marked on brass cap, 1914 on S rim, $\frac{1}{4}$ S 13 on W., and S 18 on E. half; from which,
 A juniper, 6 ins. in diam., brs. E. 89 lks. dist., marked $\frac{1}{4}$ S 18 B T.
 A pinon, 6 ins. in diam., brs. S. $69\frac{1}{2}^{\circ}$ W., 138 lks. dist., marked $\frac{1}{4}$ S 13 B T.

No old corner found.

Note: March 13, 1914: At this cor., I set off $5^{\circ} 00\frac{1}{2}'$ S. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is $33^{\circ} 15' N.$

43.75 Wash, 40 lks. wide, course NE., 350 ft. below 6.00 chain point; continue over rolling, rocky land, drains NE.

80.00 Set an iron post 3 ft. long, 3 ins. in diam., 12 ins. in the ground, supported by a mound of stone, for the reestablished corner of secs. 7, 12, 13 and 18, marked on brass cap, 1914 on S. rim, T 2 S in N. half; R 30 E S 7 in NE., S 18 in SE., S 13 in SW., and R 29 E S 12 in NW. quadrant; from which,
 A pinon, 8 ins. in diam., brs. S. $49^{\circ} E.$, 126 lks. dist., marked T 2 S R 30 E S 18 B T.
 A cedar limb, 6 ins. in diam., brs. S. $15\frac{1}{2}^{\circ} W.$, 88 lks. dist., marked T 2 S R 29 E S 13 B T.

No other trees within limits.
 Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.
 A stone 20x14x6 ins. in a mound of stone, marked 4 notches on the S. and 2 notches on the N. edge, brs. S. $57^{\circ} 10' E.$, 13.60 chs. dist. I destroy this old cor.

Land, rolling.
 Soil, rocky, 4th rate.
 Timber, scattering cedar and pinon.
 Undergrowth, scattering scrub oak and cacti.

North, bet. secs. 7 and 12.

8.76 Over rolling, rocky bench land, drains NE. South edge of rocky box canyon, course NE., over which I cannot chain; therefore, set instrument at this point, and take stadia measurement. Rod reading, 1.960 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Level. The distance to rod is therefore $2x 1.960$ plus $.016 = 3.94$ chs., which added to 8.76 chs. =

12.70 Rod point on rocky ledge, brs. E. and W., 15 ft. high. March 13, 1914.

March 14, 1914. At 7h. 45m. a.m., l.m.t., I set off $33^{\circ} 16' N.$ on the lat. arc; $2^{\circ} 40' S.$ on the decl. arc; and determine a meridian with the solar at this point.

14.00 Trail, brs. E. and W.

15.00 Dry bed of Pigeon Creek, 20 lks. wide, course E.

16.00 Trail, brs. E. and W. Ascend S. slope of mountain, 795 ft. to

40.00 Ridge, brs. E. and W.
 Set an iron post, 3 ft. long, 1 in. in diam., 4 ins. in the ground, supported by a mound of stone, for reestablished $\frac{1}{4}$ sec. cor., marked on brass cap, 1914 on S rim, $\frac{1}{4}$ S 12 on W., and S 7 in E. half; from which,
 A cedar, 8 ins. in diam., brs. S. $36\frac{1}{2}^{\circ} W.$, 113 lks. dist., marked $\frac{1}{4}$ S 12 B T.

No other trees within limits. Pits impracticable. Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

16. Resurvey of 5th. Guide Mer. E. thro. T. 2 S. Rs. 29 and 30 E.

Chains.

No old corner found.
 Descend NE. slope, 775 ft. to
 64.30 Cow Creek, a small stream of water, 4 lks. wide, 3 ins. deep; clear water, flows SE. Ascend SW. slope. Ascend 480 ft. to corner.
 73.00 Ascend south slope.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 20 ins. in the ground, supported by a mound of stone, for the reestablished cor. of secs. 1, 6, 7 and 12, marked on brass cap,
 1914 on S. rim,
 T 2 S in N. half;
 R 30 E S 6 in NE.,
 S 7 in SE.,
 S 12 in SW., and
 R 29 E S 1 in NW. quadrant; from which,
 A cedar limb, 6 ins. in diam., brs. N. 85 1/2° E., 106 lks. dist., marked T 2 S R 30 E S 6 B T.
 A cedar limb, 6 ins. in diam., brs. S. 5 1/4° W., 127 lks. dist., marked T 2 S R 29 E S 12 B T.
 No other trees within limits. Pits impracticable.
 Raise a mound of stone 2 ft. base, 1 1/2 ft. high, west of corner.
 No old corner found.
 Land, rolling and mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering cedar, oak, juniper, and sycamore.
 Undergrowth, dense scrub oak and cacti.

 North, bet. secs. 1 and 6.
 Through scattering timber and dense undergrowth. Ascend S. slope, 535 ft. to
 36.00 Ridge, brs. E. and W.; descend N. slope, 110 ft. to gulch.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in the ground, supported by a mound of stone, for reestablished 1/4 sec. cor., marked on brass cap,
 1914 on S. rim,
 1/4 S 1 on W., and
 S 6 on E. half; from which,
 A juniper, 16 ins. in diam., brs. S. 88 1/2° E., 46 lks. dist., marked 1/4 S 6 B T.
 A juniper, 8 ins. in diam., brs. S. 73° W., 57 lks. dist., marked 1/4 S 1 B T.
 No old corner found.
 42.75 Gulch, course NE. Ascend SE. slope, 150 ft. to
 55.00 Rocky spur ridge, slopes E. Descend NE. slope, 105 ft. to draw.
 60.05 Wire fence brs. E. and W.
 61.00 Head of a draw, course E.; ascend S. slope, 195 ft. to
 70.00 Spur ridge, slopes E.; descend NE. slope, 170 ft. to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 18 ins. in the ground, supported by a mound of stone, for reestablished cor. of Ts. 1 and 2 S., Rs. 29 and 30 E., marked on brass cap,
 1914 on S. rim,
 T 1 S in N.,
 R 30 E in E.,
 T 2 S in S., and
 R 29 E in W. half;
 S 31 in NE.,
 S 6 in SE.,
 S 1 in SW., and
 S 36 in NW. quadrant; from which,
 A juniper, 36 ins. in diam., brs. N. 55° E., 130 lks. dist., marked T 1 S R 30 E S 31 B T.
 A juniper, 16 ins. in diam., brs. S. 68 1/2° E., 165 lks. dist., marked T 2 S R 30 E S 6 B T.
 A juniper, 16 ins. in diam., brs. S. 70 1/4° W., 156 lks. dist., marked T 2 S R 29 E S 1 B T.

Resurvey of 5th Guide Mer. E. thro. T. 2S. bet. Rs. 29 and 30 E. 17 Chains.

A juniper, 32 ins. in diam., brs. N. 41° W., 90 lks. dist, marked T 1 S R 29 E S 36 B T.
 The old township cor., marked and witnessed as described by the Surveyor General, brs. S. 40° 49' E., 15.82 chs. dist. I destroy this old cor.
 The magnetic decl. of the true meridian, at 2h. 30m. p.m., is 13° E.
 Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering, with patches of heavy juniper, pinon and cedar.
 Undergrowth, dense scrub oak, juniper and cacti.
 March 14, 1914.

GENERAL DESCRIPTION.

Ts. 2 and 3 S., Rs. 29 and 30 E. are generally mountainous, covered with scattering timber and undergrowth, with patches of heavy timber and dense undergrowth; mostly good grazing. Drainage is to the east, towards the San Francisco River.

William B. Kimmel,
U. S. Surveyor.

Resurvey of the Gila and Salt River Base Line, through Range 28 East.

Resurvey commenced April 4, 1914, and executed with Young and Sons' Light Mountain Transit No. 8541.
 Knowing from recent and repeated tests of my instrument on a meridian established by observations on Polaris at elongation, that it is in correct adjustment, I proceed to the retracement of the south bdy. of sec. 36, T. 1 N., R. 28 E., to determine the error of closure in sec. 1, T. 1 S., R. 28 E.
 I begin at the original standard cor. of Tp. 1 N., Rs. 28 and 29 E. Lat. 33° 22' 33" N.; long. 109° 23' 46" W., which is an iron post, 4 ins. in diam., marked and witnessed as described by the Surveyor General, where-
 At 7h. 58m. a.m., l.m.t., I set off 33° 22½' N. on the lat. arc; 5° 33' N. on the decl. arc; and determine a meridian with the solar.

- 39.71 Thence I retrace, West, along the south bdy. of sec. 36, T. 1 N., R. 28 E. The original standard ¼ sec. cor., which is a granite stone, 14x9x8 ins. above ground, marked and witnessed as described by the Surveyor General.
- 79.18 Fall 1 link south of the original standard corner of secs. 35 and 36, which is an iron post, 4 ins. diam., marked and witnessed as described by the Surveyor General.
- No subdivisional lines, or mineral claims having been tied to the Base Line through this range; therefore, I return to the original standard cor. of Ts. 1 N., Rs. 28 and 29 E., and resurvey this line, destroying old cors. and reestablishing standard ¼ sec. and sec. cors. at intervals of 40 chs.
- West, on the south bdy. of sec. 36.
- Along north slope, through heavy timber and dense undergrowth.
- 4.20 Ascend NE. slope, 140 ft. to
- 13.20 Ridge, brs. NW. and SE. Descend SW. slope, 485 ft.
- 39.71 The original standard ¼ sec. cor. I destroy all trace of bearing trees; remove the stone, and at

18. Resurvey of the Gila & Salt River Base Line, thro. R. 28 E.

Chains.

- 40.00 Set the same stone, 26x12x8 ins., 20 ins. in the ground, for reestablished standard $\frac{1}{4}$ sec. cor., marked B L $\frac{1}{4}$ on N. face; from which,
 A pine, 10 ins. in diam., brs. N. $49\frac{1}{2}^{\circ}$ E., 83 lks. dist., marked S C $\frac{1}{4}$ S 36 B T.
 A pine, 6 ins. in diam., brs. N. $26\frac{1}{4}^{\circ}$ W., 40 lks. dist., marked S C $\frac{1}{4}$ S 35 B T.
- 43.20 Gulch, course NW. Ascend slight NE. slope, to
 45.20 Spur ridge, brs. N. Descend slight NW. slope, to
 47.00 Draw, course N. Ascend E. slope, 225 ft. to
 57.00 Thence along south slope, to
 60.00 Descend NW. slope, 85 ft. to
 65.40 Draw, course N. Ascend NE. slope, 130 ft.
 79.18 A point 1 link S. of the original standard cor. of secs. 35 and 36.
 I remove the iron post from its position, destroy all trace of the cor. at this point, and at
- 80.00 Set the same post, 30 ins. in the ground, for reestablished standard cor. of secs. 35 and 36, marked on brass cap, U.S. Forest Reserve Bdy. Post.
 No. 7 on S. side of cap,
 1902 on S. side of rim,
 RESERVE in NE. and NW. quadrants;
 Also marked,
 BL on N. side of rim,
 T 1 N S 36 in NE. quad. on rim,
 R 28 E S 35 in NW. quad. on rim,
 with 1 notch on E. and 5 notches on W. edge of rim,
 from which,
 A juniper, 20 ins. in diam., brs. N. 77° E., 157 lks. dist., marked S C T 1 N R 28 E S 36 B T.
 A juniper, 10 ins. diam., brs. N. $55\frac{1}{2}^{\circ}$ W., 136 lks. dist., marked S C T 1 N R 28 E S 35 B T.
- Land, hilly and mountainous.
 Soil, rocky 4th rate.
 Timber, dense juniper, pine, oak and cedar.
 Undergrowth, dense scrub oak.
 Mountainous land, 58 chs.
-
- West, on the south bdy. of sec. 35.
 Through scattering timber and undergrowth. Along north slope to
- 18.00 Descend west slope, 280 ft. to
 29.00 Gulch, course N. Ascend E. slope, 215 ft. to
 37.00 Thence over level land.
 38.46 The original standard $\frac{1}{4}$ sec. cor., which is a malpais stone 28x14x12 ins., in a mound of stone, marked and witnessed as described by the Surveyor General.
 I remove the stone, destroy the markings on the bearing trees and at
- 40.00 Set the same stone, 21 ins. in the ground, for reestablished standard $\frac{1}{4}$ sec. cor., marked
 B L $\frac{1}{4}$ on N. face; from which,
 A juniper, 10 ins. in diam., brs. N. $67\frac{3}{4}^{\circ}$ E., 192 lks. dist., marked S C $\frac{1}{4}$ S 35 B T.
 A juniper, 30 ins. in diam., brs. N. $35\frac{1}{4}^{\circ}$ W., 307 lks. dist., marked S C $\frac{1}{4}$ S 35 B T.
- 44.00 Draw, course N. Ascend slight NE. slope, to
 56.00 Low ridge, brs. NW. and SE. Descend west slope.
 78.49 At this point, the original standard cor. of secs. 34 and 35, which is an iron post 4 ins. diam., marked and witnessed as described by the Surveyor General, brs. N. 5 lks. dist. I remove the post, destroy all trace of the cor., and at
- 80.00 Set the same post, 30 ins. in the ground, for reestablished standard cor. of secs. 34 and 35, marked on brass cap,

Resurvey of Gila and Salt River Base Line thro. Range 28 East. 19.

Chains.

U. S. Forest Reserve Bdy. Post.
 No. 6 on S. side of cap,
 1902 on S. side of rim,
 RESERVE in NE. and NW. quadrants.

Also marked
 BL on N. side of rim,
 T 1 N S 35 in NE. quadrant on rim,
 R 28 E S 34 in NW. quad. on rim;
 with 2 notches on E., and 4 notches on W. edge of rim,
 from which,

A juniper, 30 ins. in diam., brs. N. $74\frac{1}{2}^{\circ}$ E., 236
 lks. dist., marked S C T 1 R 28 E S 35 B T.
 A juniper, 28 ins. in diam., brs. N. $8\frac{1}{2}^{\circ}$ W.,
 331 lks. dist., marked S C T 1 N R 28 E S
 34 B T.

Note: At this cor. April 4, 1914, I set off $5^{\circ} 36\frac{1}{2}'$ N.
 on the decl. arc; and at apparent noon, I observe the
 sun on the meridian; the resulting lat. is $33^{\circ} 22\frac{1}{2}'$ N.
 Land, level, rolling and mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering juniper, pine and oak.
 Undergrowth, scattering scrub oak on east 40 chs.
 Mountainous land, 20 chs.

West, on south bdy. of sec. 34.
 Descend SW. slope. Descend 600 ft. to Bear Canyon.
 20.00 Spur ridge, brs. SW. Descend NW. slope.
 38.08 At this point, the original standard $\frac{1}{4}$ sec. cor. brs. S. 3
 lks. dist., which is a malpais stone, 26x12x8 ins.,
 marked and witnessed as described by the Surveyor
 General. I remove the stone, destroy all evidence of
 the corner, and at
 40.00 Set the same stone, 20 ins. in the ground, for reestab-
 lished standard $\frac{1}{4}$ sec. cor., marked B L $\frac{1}{4}$ on N. face;
 from which,
 An oak limb, 10 ins. in diam., brs. N. $76\frac{1}{2}^{\circ}$ E.,
 88 lks. dist., marked S C $\frac{1}{4}$ S 34 B T.
 An oak, 6 ins. in diam., brs. N. 26° W., 26 lks.
 dist., marked S C $\frac{1}{4}$ S 34 B T.
 43.90 Enter Bear Canyon, course SW.
 45.00 Ascend SE. slope, 270 ft. to
 72.00 Thence over level land.
 78.05 The original standard cor. of secs. 33 and 34, which is
 an iron post, 4 ins. diam., marked and witnessed as
 described by the Surveyor General. I remove the post,
 destroy all trace of the cor., and at
 80.00 Set the same post, 30 ins. in the ground, for reestab-
 lished standard cor. of secs. 33 and 34, marked on
 brass cap,

U. S. Forest Reserve Bdy. Post,
 No. 5 on S. side of cap,
 1902 on S. side of rim,
 RESERVE in NE. and NW. quadrants.

Also marked
 BL on N. side of rim,
 T 1 N S 34 in NE. quad. on rim,
 R 28 E S 33 in NW. quad. on rim,
 with 3 notches on E. and W. edges of rim; and raise a
 mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Pits impracticable.
 Land, rolling, hilly and mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering cedar and oak.
 Undergrowth, very scattering scrub oak.
 Mountainous land, 44 chs.

April 4, 1914.

20. Resurvey Gila & Salt River Base Line thro. R. 28 East.

Chains

- April 20, 1914: At 9h. 2m. a.m., l.m.t., I set off $33^{\circ} 22\frac{1}{2}'$ N. on the lat. arc; $11^{\circ} 23\frac{1}{2}'$ N. on the decl. arc; and determine a meridian with the solar at the reestablished standard cor. of secs. 33 and 34, above described.
- Thence I run,
West, on the south bdy, of sec. 33.
Over level land; no timber or undergrowth.
- 32.00 Trail, brs. NE. and SW.
38.02 The original standard $\frac{1}{4}$ sec. cor., which is a granite stone 28x14x10 ins., marked and witnessed as described by the Surveyor General. I remove the stone, destroy all trace of the cor., and at
- 40.00 Set the same stone, 21 ins. in the ground, for reestablished standard $\frac{1}{4}$ sec. cor., marked B L $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, north of cor. Pits impracticable.
- 54.00 Descend NW. slope, 200 ft.
58.00 Enter scattering timber and undergrowth, brs. N. and S?
70.00 Descend W. slope, to
75.60 Draw, course NW. Ascend NE. slope, 40 ft. to cor.
77.97 A point 1 link south of the original standard cor. of secs. 32 and 33, which is an iron post, 4 ins. diam., marked and witnessed as described by the Surveyor General. I remove the post, and destroy all trace of the cor., and at
- 80.00 Set the same post, 30 ins. in the ground, for reestablished standard cor. of secs. 32 and 33, marked on brass cap,
- U. S. Forest Reserve Bdy. Post,
No. 4 on S. side of cap,
1902 on S. side of rim,
RESERVE in NE. and NW. quadrants.
- Also marked
BL on N. side of rim,
T 1 N S 33 in NE. quad. on rim,
R 28 E S 32 in NW. quad. on rim;
with 4 notches on E. and 2 notches on W. edges of rim;
from which,
An oak, 8 ins. in diam., brs. N. $54\frac{1}{2}^{\circ}$ E., 118
lks. dist., marked S C T 1 N R 28 E S 33 B T.
An oak, 10 ins. in diam., brs. N. 25° W., 170 lks.
dist., marked S C T 1 N R 28 E S 32 B T.
- Land, level, rolling and hilly.
Soil, rocky, 4th rate.
Timber, scattering cedar and oak.
Undergrowth, scrub oak.
-
- West, on the S. bdy. of sec. 32.
Through scattering timber and undergrowth. Descend NW. slope, 70 ft. to
- 6.00 Draw, course N. Ascend NE. slope, 30 ft. to
10.00 Thence along N. slope, to
26.00 Descend NW. slope, 220 ft.
37.92 A point, 1 link N. of the original standard $\frac{1}{4}$ sec. cor., which is a malpais stone, 26x14x10 ins., marked and witnessed as described by the Surveyor General. I remove the stone, destroy all trace of the cor., and at
- 40.00 Set the same stone 20 ins. in the ground, for reestablished standard $\frac{1}{4}$ sec. cor., marked B L $\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
- 41.70 Trail, brs. NE. and SW.
44.00 Wash, course SW. Ascend SE. slope, 45 ft. to
54.00 Spur ridge, brs. SW. Descend W. slope, 35 ft. to
58.00 Draw, course SW. Ascend SE. slope, 115 ft. to
74.00 Spur ridge, brs. S. Descend SW. slope, 50 ft. to cor.
77.80 A point 1 link N. of the original standard cor. of secs. 31 and 32, which is an iron post, 4 ins. diam., marked and witnessed as described by the Surveyor

Resurvey of the Gila & Salt River Base Line thro. Range 28 East. 21

Chains.

General. I remove the post, destroy all evidence of the corner; and at

80.00 Set the same post, 36 ins. in the ground, for reestablished standard cor. of secs. 31 and 32, marked on brass cap, U. S. Forest Reserve Bdy. Post, No. 3 on S. side of cap, 1902 on S. side of rim RESERVE in NE and NW quadrants.

Also marked

BL on N. side of rim,
T 1 N S 32 in NE. quad. on rim,
R 88 E S 31 in NW. quad. on rim,
with 5 notches on E. and 1 notch on W. edge of rim; from which,

A cedar, 8 ins. in diam., brs. N. 38 $\frac{3}{4}$ ° E., 521 lks. dist., marked S C T 1 N R 28 E S 32 B T.
A cedar limb, 10 ins. in diam., brs. N. 49° W., 221 lks. dist., marked S C T 1 N R 28 E S 31 B T.

Land, rolling, hilly and mountainous.
Soil, rocky, 4th rate.
Timber, scattering cedar and oak.
Undergrowth, scattering scrub oak.
Mountainous land, 32 chs.

West, on the south bdy. of sec. 31.
Through scattering timber and undergrowth. Descend west slope, 145 ft. to

20.00 Enter wash, course SW.
26.00 Leave wash; ascend SE. slope, 15 ft. to
28.00 Thence over level land.
37.77 The original standard $\frac{1}{4}$ sec. cor., which is a granite stone, 26x12x6 ins., marked and witnessed as described by the Surveyor General. I remove the stone, destroy all trace of the corner, and at

40.00 Set the same stone, 20 ins. in the ground, for reestablished standard $\frac{1}{4}$ sec. cor., marked B L $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.

Along slight broken south slope.

44.00 Draw, course SW.; ascend.
48.00 Low spur ridge, brs. SW.; descend.
50.00 Draw, course SW.; ascend.
54.00 Spur ridge, brs. SW.; descend.
58.00 Draw, course S. Ascend E. slope, 50 ft. to
65.00 Ridge, brs. N. and S, Descend W. slope, 70 ft. to closing corner.

76.67 A point 3 lks. north of a stone, in a mound of stone, marked H. #2 on N. face.

77.71 A point 1 link N. of the original standard cor. of Ts. 1 N., Rs. 27 and 28 E., which is an iron post, 4 ins. diam., marked and witnessed as described by the Surveyor General. I remove this post, and destroy all trace of the cor.

77.80 Trail, brs. NE. and SW.
78.86 Intersect the east bdy. of the White Mountain Indian Reservation, 14.06 chs. north of the 37 mile cor., reestablished by me, as described in Book "C."
At the point of intersection, set the same post, which I removed from 77.71 chain station, 30 ins. in the ground, for closing cor. of T. 1 N., R. 28 E., and frac. T. 1 S. R. 28 E., and change marking on cap to read as follows:
T 1 N R 28 E S 31 in NE. side of cap,
T 1 S R 28 E S 5 on SE. side of cap,
W M I R on W. side of cap,
B L CC on E. side of cap,
RESERVE on NE. and NW. bevel;
U. S. F. S. bdy. Post No. 2 on top, and
1902 on S. bevel; from which,

22. Resurvey of the Gila & Salt River Base Line thro. R. 28 E.
Chains.

A cedar, 14 ins. in diam., brs. N. $60\frac{1}{2}^{\circ}$ E., 495
lks. dist., marked S C C C T1 N R 28 E S 31
B T?

No other trees within limits; raise a mound of stone 2
ft. base, $1\frac{1}{2}$ ft. high, E. of cor. Pits impracticable.

C. L. Nicol's house brs. N. 14° E., about 26 chs. dist.

Land, rolling, level, and hilly.

Soil, rocky, 4th rate.

Timber, scattering cedar and oak.

Undergrowth, scattering scrub oak.

I destroy all markings on the U.S. F&S. Bdy. Post No. 1, which
was established on the old White Mountain Indian Res-
ervation Bdy., about 20 chs. west of above described
closing corner.

April 20, 1914.

Retracement of Third Stand. Par. S., through Range 30 East.

Sept. 5, 1914: At 9h. a.m., l.m.t., I set off $32^{\circ}4\frac{1}{2}'$ N. on
the lat. arc; $6^{\circ}59'$ N. on the decl. arc; and determine
with the solar a meridian at the original standard
cor. of T. 15 S., R. 30 and 31 E., which is a stone,
marked and witnessed, as described in Book "Q."

Thence I run,

- 40.12 West, on a random line, on the south bdy. of sec. 36.
Fall 17 lks. S. of original standard $\frac{1}{4}$ sec. cor., which
is a stone $12 \times 6 \times 8$ ins. above ground, marked S C $\frac{1}{4}$ on
N. face; with a mound of stone N. of cor.
45.00 (40.00 chs. plus the easting of the E. bdy. of T. 15 S., R. 30
E.) Set temp. standard $\frac{1}{4}$ sec. cor.
80.10 Fall 24 lks. N. of witness cor. to standard cor. of secs.
35 and 36, which is an iron post, 4 ins. in diam., 12
ins. protruding from a mound of stone, marked on brass
cap,

T 15 S S 36 on NE., and
R 30 E S 35 on NW. bevel;
U S 1905 S C W C

Post No. 41 on top; (established by U.S. Geolog-
ical Survey).

- 85.00 Set temp. standard cor. for secs. 35 and 36. Note: At this
temp. cor. Sept. 5, 1914, I set off $6^{\circ}56'$ N. on the
decl. arc; and at apparent noon, observe the sun on
the meridian; the resulting lat. is $32^{\circ}4\frac{1}{2}'$ N.

Thence I run,

- 35.00 West, on random line on south bdy. of sec. 35.
No old cor. found.
40.00 Set temp. standard $\frac{1}{4}$ sec. cor.
41.25 Instrument point from which I take stadia measurement
across a rocky, cliffy N. slope (chaining impossible.)
Rod reading, 11.638 ft. Ratio 1 ft. = 2.00 chs. Focal
constant, 1.025 ft. Vertical angle, $+10^{\circ}30'$; the dis-
tance to rod is therefore $11.638 \times 2 \times .9668$ plus .016
= 22.52 chs., which added to 41.25 chs. =
63.77 Rod point on top of cliffs. Thence by chain measurement.
77.69 Fall 284 lks. S. of witness cor. to standard cor. of secs.
34 and 35, which is an iron post 4 ins. in diam., 12
ins. protruding from a mound of stone, marked on
brass cap,

T 15 S S 35 on NE., and
R 30 E S 34 on NW. bevel;

US FOREST RESERVE SCWC RESERVE POST NO. 42

1905 on top. (Established by U.S. Geological
Survey.)

- 80.00 Set temp. standard cor. of secs. 34 and 35.

Sept. 5, 1914.

Retracement of Third Stand. Par. South thro. Range 30 East. 23.

Chains.

Sept. 7, 1914: At 9h. 40m. a.m., l.m.t., I set off $32^{\circ}4\frac{1}{2}'$ N. on the lat. arc; $6^{\circ}14'$ N. on the decl. arc; and determine with the solar a meridian at the temp. standard cor. of secs. 34 and 35.

Thence I run, West, on random line, on south bdy. of sec. 34.

5.33 Instrument point for stadia measurement across a rocky cliffy south slope (chaining impossible). Rod reading 9.536 ft.; ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Vertical angle plus 2° ; the distance to rod is therefore, $9.536 \times 2 \times .9988$ plus .016 = 19.16 chs. which added to 5.33 chs. =

24.49 Rod point on spur brs. SE. Thence by chain measurement.
37.69 No old corner found.

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

40.21 Instrument point for stadia measurement across a rocky cliffy north slope (chaining impossible.) Rod reading, 4.465 ft. Ratio, 1 ft. = 2.00 chs.; angle of depression = 6° Focal constant, 1.025 ft.; the distance to rod is therefore, $4.465 \times 2 \times .9891$ plus .016 = 8.85 chs., which added to 40.21 chs. =

49.06 Rod point on rocky point slopes N. Set instrument at this point, and take stadia measurement across broken cliffy N. slope (chaining impossible. Rod reading, 10.391 ft., ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Angle of depression -2° ; the distance to rod is therefore $10.391 \times 2 \times .9988$ plus .016 = 20.77 chs., which added to 49.06 chs. =

69.83 Rod point on rocky point slopes NE. Set instrument at this point, and take stadia measurement across broken rocky, cliffy N. slope (chaining impossible.) Rod reading 6.205 ft., ratio 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Angle of depression = $14^{\circ}30'$. The distance to rod is therefore, $6.205 \times 2 \times .9373$ plus .016 = 11.65 chs., which added to 69.83 chs. =

81.48 Rod point on rocky spur slopes N. Thence I return east 1.48 chs. to

80.00 Where I set temp. standard cor. for secs. 33 and 34. No old cor. found.

Thence I run, West, on random line on south bdy. of sec. 33.

1.48 Rod point on spur.
Note: At this point, Sept. 7, 1914, I set off $6^{\circ}11\frac{1}{2}'$ N. on the decl. arc; and at apparent noon, observe the sun on the meridian; the resulting lat. is $32^{\circ}4\frac{1}{2}'$ N.

From instrument at this point, I take stadia measurement over rocky cliffy N. slope (chaining impossible.) Rod reading, 7.497 ft. Ratio, 1 ft. = 4.00 chs. Focal constant, 1.025 ft.; vertical angle plus 1° ; the distance to rod is therefore $7.497 \times 4 \times .9997$ plus .016 = 29.99 chs., which added to 1.48 chs. =

31.47 Rod point on rocky point, slopes NE. Abandoned the use of instrument No. 8541 at this point.

Sept. 7, 1914.

Sept. 11, 1914:
Retracement completed with a Young and Sen's Light Mountain Transit No. 8588, described on page 1, Book "A." I examine the adjustment of this 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 my camp in the SW $\frac{1}{4}$ of sec. 31, T. 15 S., R. 30 E. Lat. $32^{\circ}4\frac{1}{2}'$ N. Longitude, $109^{\circ}19\frac{1}{2}'$ W.

Sept. 11, 1914: At 10h. 9m. p.m., l.m.t., by my watch, which is correct local mean time, I observe Polaris in accordance with Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground, about 4 chs. N. of my station.

24. Retracement of Third Stand. Par. South, thro. Range 30 East.

Chains.

- Sept. 12, 1914. At 3h. 59m. a.m., l.m.t., I observe Polaris in accordance with Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground, about 4 chs. north of the same station.
- Sept. 12, 1914: At 8h. a.m., l.m.t., I lay off the azimuth of Polaris, $1^{\circ}10'$ to the west, which is the azimuth corresponding to an hour angle of 3h. 56m. from the peg set Sept. 11, at 10h. 9m. p.m., and set a flag firmly in the ground, about 4 chs. north of my station.
- I also lay off the azimuth of Polaris, $0^{\circ}39'$ to the east, which is the azimuth corresponding to an hour angle of 1h. 52m. from the peg set Sept. 12, at 3h. 59m. a.m., the point falling on flag set about 4 chs. north of the station.
- Sept. 12, 1914: At 8h. 10m. a.m., l.m.t., I set off $32^{\circ}4\frac{1}{2}'$ N. on the lat. arc; $4^{\circ}22\frac{1}{2}'$ N. on the decl. arc; and determine with the solar a meridian which agrees with the flag set by Polaris observation.
- Sept. 12, 1914: I set off $4^{\circ}18'$ N. on the decl. arc; and at apparent noon, observe the sun on the meridian; the resulting lat. is $32^{\circ}4\frac{1}{2}'$ N.
- Sept. 12, 1914: At 4h. p.m., l.m.t., I set off $32^{\circ}4\frac{1}{2}'$ N. on the lat. arc; $4^{\circ}14\frac{1}{2}'$ N. on the decl. arc; and determine with the solar a meridian, which agrees with the a.m. observation, and the flag set by Polaris observation.
- I test the stadia wire interval, by setting rod 6.016 chs. from my station; the rod reading is 3.000 ft., which is correct.
- The magnetic decl. of the true meridian at noon is $13^{\circ}10'$ E., Sept 12, 1914.
- Sept. 13, 1914: At 10h. 30m. a.m., l.m.t., I set off $32^{\circ}4\frac{1}{2}'$ N. on the lat. arc; $3^{\circ}55\frac{1}{2}'$ N. on the decl. arc; and determine with the solar a meridian at the 31.47 chs. station on the Third Standard Parallel South, on south bdy. of sec. 33, set Sept. 7, 1914: Continue measurement on random line on south bdy. of sec. 33, as follows:
- 31.47 Stadia rod point, hereinbefore described. From instrument at this point, I take stadia measurement across the head of a rocky ganyon, course NE. (Chaining impossible). Rod reading, 6.000 ft., ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Vertical angle plus $17^{\circ}26'$. The distance to rod is therefore $6.000 \times 2 \times .9102$ plus $.016 = 10.94$ chs., which added to 31.47 chs. =
- 42.41 Rod point on east slope of ridge. Set temp. witness point for standard $\frac{1}{4}$ sec. cor. No old cor. found. Set instrument at this point, and take stadia measurement over cliffy east slope (chaining impossible). Rod reading, 6.755 ft.; ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Vertical angle plus $31^{\circ}16'$; the distance to rod is therefore $6.755 \times 2 \times .7354$ plus $.016 = 9.95$ chs., which added to 42.41 chs. =
- 52.36 Rod point on east slope of ridge, above cliffs. Thence by chain measurement to Sept. 13, 1914.
- 54.51 A point on west slope of same ridge, brs. N. and S. near top. Sept. 14, 1914: At 10h. a.m., l.m.t., I set off $32^{\circ}4\frac{1}{2}'$ N. on the lat. arc; $3^{\circ}34'$ N. on the decl. arc; and determine with the solar a meridian at this point. From instrument at this point, I take stadia measurement over deep gulch, course SE. (Chaining impossible) Rod reading, 6.713 ft. Ratio bet. center and outside wires 1 ft. = 4.00 chs. Focal constant, 1.025 ft. Vertical angle plus $15^{\circ}20'$; the distance to rod is therefore, $6.713 \times 4 \times .9301$ plus $.016 = 24.99$ chs., which added to 54.51 chs. =
- 79.50 Rod point on east slope of ridge. Thence by chain measurement.
- 80.00 Set temp. standard cor. for secs. 32 and 33. No old cor. found.
- Thence I run,
West on random line, on south bdy. of sec. 32.
- 4.41 A point on north slope of ridge. Set instrument at this

Retracement of Third Stand. Par. South thro. Range 30 E. 25.

Chains.

- point and take stadia measurement over cliffs (chaining impossible).
- Rod reading, 3.071 ft. Ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Angle of depression - $15^{\circ} 36'$; the dist. to rod is therefore, $3.071 \times 2 \times .9277$ plus $.016 \approx 5.71$ chs., which added to 4.41 chs. =
- 10.12 Rod point, on rocky point slopes NW. Set instrument at this point, and take stadia measurement over gulch and cliff (chaining impossible). Rod reading 11.302 ft.; ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Angle of depression - $16^{\circ} 44'$. The distance to rod is therefore $11.302 \times 2 \times .9171$ plus $.016 = 20.74$ chs., which added to 10.12 chs. =
- 30.86 Rod point on top of cliff, brs. N. and S. Note: At this point, Sept. 14, 1914, I set off $3^{\circ} 32'$ N. on the decl. arc; and at apparent noon, observe the sun on the meridian; the resulting lat. is $32^{\circ} 4\frac{1}{2}'$ N. From instrument at this point, I take stadia measurement across a deep canyon, course N. (chaining impossible). Rod reading, 11.944 ft. Ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Angle of depression, $25^{\circ} 56'$. The dist. to rod is therefore, $11.944 \times 2 \times .7948$ plus $.016 = 19.00$ chs., which added to 30.86 chs. =
- 49.86 Rod point on rocky point, slopes N. Set temp. witness point to standard $\frac{1}{4}$ sec. cor. No old corner found. Thence by chain measurement to
- 50.10 Set instrument at this point, and take stadia measurement over cliffs (Chaining impossible). Rod reading, 11.409 ft. Ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Vertical angle plus $10^{\circ} 6'$. The dist. to rod is therefore $11.409 \times 2 \times .9692$ plus $.016 = 22.13$ chs., which added to 50.10 chs. =
- 72.23 Rod point on top of spur, slopes N. Thence by chain measurement to
- 73.00 Set witness point for the standard cor. of secs. 31 and 32. No old cor. found.
- Sept. 14, 1914.
- Sept. 15, 1914: At 8h. 15m. a.m., l.m.t., I set off $32^{\circ} 4\frac{1}{2}'$ N. on the lat. arc; $3^{\circ} 13\frac{1}{2}'$ N. on the decl. arc; and determine with the solar a meridian at this point. From instrument at this point, I take stadia measurement over a gulch, course N., and a cliffy E. slope on west side of gulch (chaining impossible). Rod reading, 11.259 ft. Ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Vertical angle plus $25^{\circ} 14'$. The distance to rod is therefore, $11.259 \times 2 \times .8183$ plus $.016 = 18.44$ chs., which added to 73.00 chs. = 91.44 chs. = rod point on S. bdy. of sec. 31, at
- 11.44 Rod point on top of ridge, brs. N. and S. Continue measurement by chain, west on random line on south bdy. of sec. 31.
- 40.00 Set temp. standard $\frac{1}{4}$ sec. cor. No old cor. found.
- 44.01 On SW. slope of ridge. Discontinue chaining, and from instrument at this point, I take stadia measurement over a gulch, course NW. (Chaining impossible). Rod reading 4.777 ft. Ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Level. The distance to rod is therefore, $4.777 \text{ ft.} \times 2$ plus $.016 = 9.57$ chs., which added to 44.01 chs. =
- 53.58 Rod point on spur slopes N.; thence chain dist. to E
- 54.14 E edge of Wood Canyon, course NE. Discontinue chaining and take stadia measurement across canyon. (Chaining impossible.) Rod reading, 5.131 ft. Ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Angle of depression - 3° . The distance to rod is therefore $5.131 \times 2 \times .9973$ plus $.016 = 10.25$ chs., which added to 54.14 chs. =
- 64.39 Rod point on spur slopes N. Set instrument at this point, and take stadia measurement across a draw, course NE, (Chaining impossible). Rod reading, 7.937 ft. Ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Level. The distance to rod is therefore, 7.937×2 plus $.016 =$

26. Retracement of Third Stand. Par. South, thro. Range 30 E.

Chains.

= 15.89 chs., which added to 64.39 chs. =
 80.28 Rod point. Thence chain dist. to
 80.50 A point, 14.62 chs. S. of original standard cor. of T. 15 S.,
 Rs. 29 and 30 E., which is a stone, marked and wit-
 nessed as described by the Surveyor General. At a
 point 191 lks. west of which is a corner set by the
 U. S. Geological Survey, which is an iron post 4 ins.
 in diam., 12 ins. protruding from a mound of stone,
 marked on brass cap,
 US 1905 SCWC FOREST RESERVE BDRY POST NO. 46 on top;
 T 15 S R 30 E S 31 on NE., and
 R 29 E S 36 on NW. bevel; I destroy the mark-
 ing on this post, and also destroy the stone cor., and
 obliterate marks on bearing trees.
 As no accepted lines of survey are tied to the Third Stand-
 ard Parallel S. in R. 30 E., I make an independent re-
 survey of said line east, reestablishing the standard
 $\frac{1}{4}$ sec. and sec. cors. at intervals of 40 chs. from the
 SW. cor. of T. 15 S., R. 30 E., which I reestablish at
 this point (14.92 chs. south of original standard
 cor. of T. 15 S., Rs. 29 and 30 E., and 485.50 chs. west
 of original stand. cor. of T. 14 S., Rs. 30 and 31 E.) as
 follows:
 Set an iron post, 3 ft. long, 3 ins. in diam., 14 ins. in
 the ground, on bedrock, supported by a mound of stone
 for the SW. cor. of Tp. 15 S., R. 30 E., marked on brass
 cap,
 1914 on S. rim, and as shown below,
 T 15 S
 R 29 E R 30 E
 S 36 S 31
 from which,
 An oak, 10 ins. in diam., brs. N. $68\frac{1}{2}^{\circ}$ E., 116 lks.
 dist., marked T 15 S R 30 E S 31 S C B T.
 Sept. 15, 1914.

Retracement of 3rd. Standard Parallel S.S. of sec. 34, T15SR29E.

Aug. 28, 1914: At 9h. 10m. a.m., l.m.t., I set off $32^{\circ}4\frac{1}{2}'$ N.
 on the lat. arc; $9^{\circ}52\frac{1}{2}'$ N. on the decl. arc; and determine
 with the solar a meridian at the original standard cor.
 of secs. 33 and 34, T. 15 S., R. 29 E. on 3rd. Standard
 Parallel South, which is a cedar post 5 ins. square, pro-
 truding 2 ft. from a mound of stone, marked and witnessed
 as described by the Surveyor General.
 Thence I run,
 East, on a random line on south bdy. of sec. 34.
 Descending east slope, 50 ft., through scattering timber
 and undergrowth to
 2.85 Draw, course SE. Descend SE. slope, 75 ft. to
 15.85 Draw, course SE. Thence along south slope.
 19.80 Draw, course SW.; ascend NW. slope, 40 ft. to
 22.00 Spur slopes N.; descend NE. slope, 40 ft. to
 23.25 Draw, course NW.; ascend SW. slope.
 34.45 Draw, course SW.; ascend W. slope.
 39.55 Fall 14 lks. N. of original standard $\frac{1}{4}$ sec. cor.; a post 3 ins.
 square, protruding 8 ins. from a mound of stone, marked
 and witnessed as described by the Surveyor General.
 Therefore, the true course and distance of this half mile
 is S. $89^{\circ}48'$ E., 39.55 chs.
 Thence I run,
 East, on a random line, on south bdy. of sec. 34, on east
 half mile.
 2.45 Spur, slopes NE., 350 ft. above draw at 23.25 ch. point on
 west half mile; thence along south slope.
 2.93 Fall 10 lks. north of original closing cor. of secs. 2 and
 3, T. 16 S., R. 29 E., which is a stone 8x14x10 ins. above
 mound of stone, marked C C on S., with 2 notches on
 E. and 4 notches on Wedge. At a point 7 lks. S. of this

Retracement of 3rd. Stand. Par. S. south of sec. 34, T. 15 S. R. 29 E. 27.

Chains.

cor. is an iron post, $4\frac{1}{2}$ ins. in diam., with a brass cap, protruding 12 ins. from a mound of stone, marked
 US 1905 FOREST RESERVE
 W C RESERVE C C
 BOUNDARY POST No. 48 on top,
 T 16 S S sec. 3 on SW. &
 R 29 E on SE. bevel, and
 2 notches on E., and
 4 notches on W. edge of bevel.

4.50 Descend E. slope, 30 ft. to
 7.85 Head of draw, course N. Ascend NW. slope, 270 ft. to
 20.70 Spur ridge, slopes SW.; descend S. slope.
 28.00 Spur, slopes S.; descend SE. slope.
 34.85 Draw, course SW., 240 ft. below spur ridge at 20.70 ch. point.
 Ascend SW. slope, 140 ft. to
 40.35 Fall 153 lks. N. of the original standard cor. of secs. 34 and 35, which is a stone $20 \times 12 \times 4$ ins. above a mound of stone $20 \times 12 \times 4$ ins. above a mound of stone, marked and witnessed as described by the Surveyor General.
 True course and distance of this half mile is therefore, S. $87^{\circ}50'$ E., 40.38 chs.

Aug. 28, 1914.

Resurvey 3rd. Std. Par. S. south of secs. 35 & 36, T. 15 S., R. 29 E.

Resurvey commenced Aug. 28, 1914, with a Young and Sons' Light Mountain Transit No. 8541, and completed with Young and Sons' Light Mountain Transit No. 8588. For description and certificate of approval of both of these instruments, see page 1 of Book "A."

From the original standard cor. of secs. 34 and 35, hereinbefore described, I resurvey the south boundaries of secs. 35 and 36, T. 15 S., R. 29 E., independent of old standard cors. found within this distance on the Third Standard Parallel South, as no accepted lines of survey are tied thereto.

East, on a true line on the south bdy. of sec. 35. Through scattering timber and undergrowth. Ascend southwest slope, 20 ft. to

1.00 Spur ridge, slopes S.; descend SE. slope, 50 ft. to
 5.00 Draw, course SE. Ascend SW. slope, 55 ft. to
 10.00 Spur slopes SE. Descend SE. slope, 25 ft. to
 12.50 Draw, course SW. Ascend SW. slope, 125 ft. to
 17.50 Spur slopes S. Descend SE. slope, 40 ft. to
 21.00 Head of draw, course SW. Ascend SW. slope, 40 ft. to
 26.00 Spur slopes SE. Descend SE. slope, 20 ft. to
 27.25 Draw, course SW. Ascend SW. slope, 75 ft. to
 32.00 Ridge, divide bet. Sulphur Springs and San Simon Valleys, brs. NW. and SE.

Note: Aug. 28, 1914: At this point, I set off $9^{\circ}49\frac{1}{2}'$ N. on the decl. arc; and at apparent noon, observe the sun on the meridian; the resulting lat. is $32^{\circ}4\frac{1}{2}'$ N.
 Descend NE. slope, 225 ft. to
 39.25 Draw, course N. Descend N. slope, 175 ft. to gulch.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 8 ins. in the ground, on bedrock, supported by a mound of stone for reestablished standard $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim, and
 $\frac{1}{4}$ S 35 in N. half; from which,
 A pine, 5 ins. in diam., brs. N. $75\frac{3}{4}^{\circ}$ W., 36 lks. dist., marked S C $\frac{1}{4}$ S 35 B T.
 An oak, 7 ins. in diam., brs. N. $51\frac{1}{2}^{\circ}$ E., 39 lks. dist., marked S C $\frac{1}{4}$ S 35 B T.

No old corner found.

44.00 Gulch, course N.; ascend W. slope, 375 ft. to

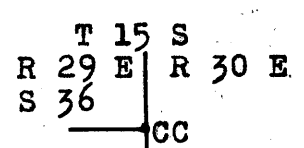
28. Resurvey 3rd. Std. Par. S. south of secs. 35 & 36, T. 15 S., R. 29 E.

Chains.

- 54.80 Spur ridge, slopes NE.; descend NE. slope, 390 ft. to
 72.00 Gulch, course N. 20° E.; ascend NW. slope, 275 ft. to
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 8 ins. in
 the ground, on bedrock, supported by a mound of stone,
 for the reestablished standard cor. of secs. 35 and 36,
 marked on brass cap,
 1914 on S. rim,
 T 15 S R 29 E in N. half;
 S 35 in NW., and
 S 36 in NE. quadrant; from which,
 A juniper, 8 ins. in diam., brs. N. 77½° W., 87
 lks. dist., marked S C T 15 S R 29 E S 35 BT.
 An oak, 10 ins. in diam., brs. N. 21° E., 24 lks.
 dist., marked S C T 15 S R 29 E S 36 B T.
- Land, mountainous.
 Soil, rocky, lime formation, 3rd and 4th rate.
 Timber, scattering, with patches of heavy pine, oak, cedar
 and juniper.
 Undergrowth, scattering, with patches of dense scrub oak,
 mesquite, catclaw and manzanita.
 Aug. 28, 1914.
-
- Sept. 16, 1914; with instrument No. 8588, at 1h. 50m. p.m.,
 1.m.t., I set off 32° 4½' N. on the lat. arc; 2° 43'
 N. on the decl. arc; and determine with the solar a
 meridian at the reestablished standard cor. of secs.
 35 and 36, described above.
- Thence I run,
 East, on a true line on the south bdy. of sec. 36.
 Through scattering timber and dense undergrowth. Ascend
 west slope, 15 ft. to
 .97 Spur slopes N. Fall 305 lks. north of original standard
 cor. of secs. 35 and 36, which is a stone 12x6x8 ins.
 above ground, marked with 5 notches on the west, and
 1 notch on E. edge, and S C on N. face; with a
 mound of stone north of cor. and bearing trees.
 I destroy this old cor., and obliterate marks on
 bearing trees.
- Continue along north slope.
 -3.00 Descend E. slope, 150 ft. to
 10.50 Canyon, course N. Ascend W. slope, 90 ft. to
 14.00 Ridge, divide bet. Emigrant and Wood Canyons, brs. NW.
 and SE. Descend NE. slope. Descend 775 ft. to closing
 corner.
- 28.00 Gulch, course NE. Continue descent over rolling land,
 slopes north.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for reestablished standard ¼ sec. cor.,
 marked on brass cap,
 1914 on S. rim, and
 ¼ S 36 on N. half; from which,
 An oak, 8 ins. in diam., brs. N. 62½° E., 49
 lks. dist., marked S C ¼ S 36 B T.
 An oak, 5 ins. in diam., brs. N. 28° W., 50 lks.
 dist., marked S C ¼ S 36 B T.
- No old corner found.
- 40.75 Draw, course NE.
 57.00 Draw, course NE.
 75.00 Draw, course NE.
 77.20 Draw, course N. Wagon road, brs. NW. and SE.
 81.00 Intersect the west bdy. of T. 15 S., R. 30 E., 20.66 chs.
 north of the SW. cor. of T. 15 S., R. 30 E., reestab-
 lished by me yesterday, as hereinbefore described.
 At point of intersection, set an iron post 3 ft. long, 3
 ins. in diam., 15 ins. in the ground, on bedrock, sup-
 ported by a mound of stone, for the closing cor. of
 T. 15 S., R. 29 E., marked on brass cap,
 1914 on S. rim, and as follows:

Resurvey of 3rd. Std. Par. S. south of sec. 36. T. 15 S. R. 29 E. 29.

Chains.



S. 31 from which,
 An oak, 7 ins. in diam., brs. N. $29\frac{1}{2}^\circ$ W., 76 lks. dist., marked S C T 15 S R 29 E S 36 B T.

Land, mountainous.
 Soil, rocky, lime formation, 3rd and 4th rate.
 Timber, scattering, with patches of heavy pine, oak, cedar, and juniper.
 Undergrowth, dense scrub oak, mesquite, catclaw and-manzanita.

Sept. 16, 1914.

Resurvey of Third Standard Parallel S., thro. Range 30 East.

Sept. 17, 1914:

Note: In resurveying this line, I destroy the markings on the iron post cors., which I found in retracing the line, and destroy all old stone cors.
 From the reestablished SW. cor. of Tp. 15 S. R. 30 E. hereinbefore described, I run,

- East, on a true line, on south bdy. of sec. 31.
- Through scattering timber and dense undergrowth. Descend SE. slope, 75 ft. to draw.
- .22 Thence by stadia measurement to spur as hereinbefore described.
- 6.00 (Approx) draw, course NE. Ascend NE. slope, 75 ft. to
- 16.10 Spur, slopes N. Thence by stadia measurement, as hereinbefore described.
- D. G. Taylor's house, brs. N. 24° E., about 10 chs. dist.; descend cliffy east slope, 150 ft. to canyon.
- 22.00 (Approx.) Wood Canyon, course NE.; ascend cliffy W. slope, 185 ft. to spur.
- 26.36 Instrument point of stadia measurement hereinbefore described; thence by chain measurement to
- 26.92 Spur, slopes N. Thence by stadia measurement, as hereinbefore described.
- 33.00 (Approx.) gulch, course NW.; ascend SW. slope, 1075 ft. to ridge.
- 36.49 Instrument point of stadia measurement hereinbefore described. Thence by chain measurement.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground, on bedrock, supported by a mound of stone for reestablished standard $\frac{1}{4}$ sec. cor., marked on brass cap,

1914 on S. rim,

$\frac{1}{4}$ S 31 on N. half; from which,

An oak, 9 ins. in diam., brs. N. 19° E., 14 lks. dist., marked S C $\frac{1}{4}$ S 31 B T.

An oak, 6 ins. in diam., brs. N. 72° W., 56 lks. dist., marked S C $\frac{1}{4}$ S 31 B T.

- 69.06 Ridge, brs. N. and S. Rod point of stadia measurement hereinbefore described; continue chain measurement descending cliffy E. slope, 570 ft. to

- 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 16 ins. in the ground, on bedrock, supported by a mound of stone, for the reestablished cor. of secs. 31 and 32, marked on brass cap,

1914 on S. rim,

T 15 S R 30 E in N. half;

S 31 in NW., and

S 32 in NE. quadrant; from which,

An oak, 6 ins. in diam., brs. N. 62° E., 52 lks. dist., marked S C T 15 S R 30 E S 32 B T.

30. Resurvey of Third Standard Parallel South, thro R. 30 E.
Chains.

A juniper, 8 ins. in diam., brs. N. 65° W., 5
lks. dist., marked S C T 15 S R 30 E S 31 B T.

Land, mountainous.

Soil, rocky, 4th rate, granite formation.

Timber, scattering pine, oak, cedar and juniper on moun-
tain; sycamore, cottonwood, ash and walnut along Wood
Canyon.

Undergrowth, dense mesquite, manzanita, mahogany and cat-
claw, and scrub oak.

Sept. 17 and 22, 1914.

Sept. 22, 1914:

East, on a true line on the south bdy. of sec. 32. By stadia
measurement hereinbefore described.

Through scattering timber and dense undergrowth. Descend
E. slope, 90 ft. to

2.50 (Approx.) gulch, course N. Ascend NW. slope, 100 ft. to
spur.

7.50 Instrument point of stadia measurement hereinbefore de-
scribed. Thence by chain measurement to

8.27 Spur slopes N. Thence by stadia measurement hereinbe-
fore described. Descend E. slope, 300 ft. to

21.00 (Approx.) foot of descent. Continue along cliffy N. slope.

30.40 Instrument point of stadia measurement hereinbefore de-
scribed. Thence by chain measurement.

30.64 Rocky point, slopes N.; descend east slope, 40 ft. to

32.75 Canyon, course N.; ascend W. slope, 700 ft. to spur.

40.00 Set an iron post 3 ft. long, 1 in. in diam., 18 ins. in
the ground, on bedrock, supported by a mound of stone,
for reestablished standard $\frac{1}{4}$ sec. cor., marked on
brass cap,

1914 on S. rim,

$\frac{1}{4}$ S 32 on N. half; from which,

An oak, 8 ins. in diam., brs. N. 81° E., 54 lks.
dist., marked S C $\frac{1}{4}$ S 32 B T.

An oak, 6 ins. in diam., brs. N. 69° W., 22 lks.
dist., marked S C $\frac{1}{4}$ S 32 B T. Discontinue

chaining.

49.64 Top of cliff, 100 ft. high, brs. N. and S. Instrument and
rod point of stadia measurement hereinbefore described.

Thence by stadia measurement.

52.00 (Approx.) spur, slopes N. Continue along steep, broken,
cliffy N. slope.

62.00 (Approx.) head of gulch, course N.; ascend cliffy NW.
slope.

70.38 Rocky point slopes NW., 400 ft. above 52 chain point. In-
strument and rod point of stadia measurement hereinbe-
fore described. Continue stadia measurement. Ascend
cliffy N. slope, 160 ft. to ridge.

76.09 Instrument point of stadia measurement hereinbefore de-
scribed. Thence by chain measurement.

79.00 Ridge, brs. NE. and SW.; descend E. slope, 10 ft. to

80.00 Set an iron post 3 ft. long, 3 ins. in diam., 4 ins. in the
ground, on bedrock, supported by a mound of stone, for
the reestablished standard cor. of secs. 32 and 33,
marked on brass cap,

1914 on S. rim,

T 15 S R 30 E in N. half;

S 32 in NW., and

S 33 in NE. quadrant; from which,

A pine, 6 ins. in diam., brs. N. 51° E., 88 lks.
dist., marked S C T 15 S R 30 E S 33 B T.

A pine, 5 ins. in diam., brs. N. 32° W., 74 lks.
dist., marked S C T 15 S R 30 E S 32 B T.

Land, mountainous.

Soil, rocky, 4th rate, granite formation.

Timber, scattering pine, oak, cedar and juniper.

Undergrowth, dense manzanita, mahogany, mesquite and catclaw,
and scrub oak.

Resurvey of Third Stand, Parallel S., through Range 30 E. 31.

Chains.

- East, on a true line on the south bdy. of sec. 33. Descend east slope, through scattering timber and dense undergrowth, chaining measurement to
- 1.00 Rod point on stadia measurement hereinbefore described. Discontinue chaining.
- 3.00 (Approx.) descend NE. slope.
- 15.00 (Approx.) gulch, course SE., 500 ft. below cor.; ascend rolling south slope, 50 ft. to
- 25.99 Instrument point of stadia measurement hereinbefore described; thence by chain measurement.
- 26.50 Rocky ridge, brs. N. and S. Descend cliffy east slope, 430 ft. to
- 28.14 Rod point of stadia measurement hereinbefore described; continue chaining to
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., on bedrock, on a flat place on top of cliffs, supported by a mound of stone, for reestablished standard $\frac{1}{4}$ sec. cor., marked on brass cap,
1914 on S. rim, and
 $\frac{1}{4}$ S 33 on N. half;
raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, 8 ft. NE. of cor. Impracticable to build on the N. Pits impracticable. There are trees within limits; but, not available for B Ts. Discontinue chaining.
- 46.00 Over broken cliffs, sloping NE. Descend 400 ft. to (Approx.) head of rocky canyon, course NE. Ascend cliffy NW. slope, 150 ft. to
- 49.03 Rocky point, slopes NE. Instrument and rod point of stadia measurements hereinbefore described. Continue stadia measurement over rocky, cliffy N. slope.
- 79.02 Rocky spur, slopes N. Instrument and rod point of stadia measurements hereinbefore described. Thence by chain measurement.
- 80.00 Set an iron post 3 ft. long, 3 ins. in diam., on bedrock, supported by a mound of stone, for the reestablished standard cor. of secs. 33 and 34, marked on brass cap,
1914 on S. rim,
T 15 S R 30 E in N. half;
S 33 in NW., and
S 34 in NE. quadrant; from which,
A pine, 6 ins. in diam., brs. N. 52° E., 74 lks. dist., marked S C T 15 S R 30 E S 34 B T.
A pine, 6 ins. in diam., brs. N. 30° W., 97 lks. dist., marked S C T 15 S R 30 E S 33 B T.
- Discontinue chaining.
Land, mountainous.
Soil, rocky, granite formation, 4th rate.
Timber, scattering pine, oak, cedar and juniper.
Undergrowth, dense manzanita, mahogany, scrub oak, mesquite and catclaw.

- East, on a true line on the south bdy. of sec. 34; By stadia measurement hereinbefore described.
- Along broken, rocky, cliffy north slope, through scattering timber and dense undergrowth. Ascend 200 ft. to
- 10.67 Rocky point, slopes NE. Instrument and rod point of stadia measurement hereinbefore described. Continue stadia measurement along cliffy north slope, to
- 31.44 Rocky point slopes N. Instrument and rod point of stadia measurement hereinbefore described. Continue stadia measurement over cliffy N. slope, to
- 40.29 Point beyond cliffs on NW. slope of ridge. Instrument point of stadia measurement hereinbefore described. To reestablished standard $\frac{1}{4}$ sec. cor. in its proper position, I return by chain measurement, 29 lks. west to
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 20 ins. in the ground, on bedrock, supported by a mound of stone, for reestablished standard $\frac{1}{4}$ sec. cor., marked on brass cap,

32. Resurvey of Third Stand. Parallel S., thro. Range 30 East.

Chains.

- 1914 on S. rim, and
 $\frac{1}{4}$ S 34 on N. half; from which,
 A pine, 14 ins. in diam., brs. N. 50° E., 88 lks.
 dist., marked S C $\frac{1}{4}$ S 34 B T.
 An oak, 4 ins. in diam., brs. N. 12° W., 32 lks.
 dist., marked S C $\frac{1}{4}$ S 34 B T.
- Thence east by-chain measurement.
 Ascend NW. slope, 125 ft. to
 45.75 Ridge, brs. NE. and SW.; descend SE. slope.
 50.00 Descend S. slope.
 56.01 Rocky spur, slopes SE., 125 ft. below ridge. Rod point of
 stadia measurement, hereinbefore described. Discon-
 tinue chaining. Thence by stadia measurement. Over
 rocky, broken, elfy south slope.
 75.17 Instrument point of stadia measurement hereinbefore de-
 scribed. Thence by chain measurement
 76.00 Saddle in ridge, brs. NW. and SE.; descend rocky NE. slope.
 150 ft. to
 80.00 Bare rock, slopes NE.; impracticable to reestablish stand-
 ard corner sec. cor. at this point; therefore, at a
 point 30 lks. N. 0° 2' E., set an iron post 3 ft. long,
 3 ins. in diam., 4 ins. in the ground, on bedrock, sup-
 ported by a mound of stone, for witness to standard
 cor. of secs. 34 and 35, marked on brass cap,
 1914 on S. rim,
 W C S. of center,
 T 15 S R 30 E in N. half;
 S 34 in NW., and
 S 35 in NE. quadrant; from which
 A pine, 10 ins. in diam., brs. N. 30° E., 139
 lks. dist., marked W C S C T 15 S R 30 E
 S 35 B T.
 An oak, 8 ins. in diam., brs. N. 41° W., 119 lks.
 dist., marked W C S C T 15 S R 30 E S 34 B T.
- Land, mountainous.
 Soil, rocky, granite formation, 4th rate.
 Timber, scattering pine, oak, cedar and juniper.
 Undergrowth, dense scrub oak, manzanita, mahogany, mes-
 quite and catclaw.

Sept. 22 and 26, 1914.

- East, on a true line on the south bdy. of sec. 35, from the
 true point for standard cor. of secs. 34 and 35, by
 chain measurement.
 Through scattering timber and dense undergrowth. Descend
 NE. slope, 275 ft. to
 16.73 Top of cliffs, brs. NW. and SE. Rod point of stadia meas-
 urement hereinbefore described. Discontinue chaining.
 Thence by stadia measurement, over rocky, cliffy north
 slope; descend 265 ft. to
 39.60 Rocky point slopes N. Instrument point of stadia meas-
 urement hereinbefore described. Thence by chain meas-
 urement. Descend NE. slope, 500 ft. to foot of moun-
 tain.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 12 ins. in
 the ground, on bedrock, supported by a mound of stone,
 for reestablished standard $\frac{1}{4}$ sec. cor., marked on brass
 cap,
 1914 on S. rim; and
 $\frac{1}{4}$ S 35 on N. half; from which,
 A cedar, 8 ins. in diam., brs. N. 86° W., 49 lks.
 dist., marked S C $\frac{1}{4}$ S 35 B T.
 No other trees within limits; raise a mound of stone 2
 ft. base, $1\frac{1}{2}$ ft. high, 6 ft. NW. of cor. Impracticable
 to build mound north of cor. Pits impracticable.
 46.90 Draw, course NE.
 57.90 Draw, course NE.
 59.30 Wire fence brs. NE. and SW.
 60.00 An igneous boulder, 30x15x12 ft. on line.

Resurvey of Third Stand Parallel S. through R. 30 East. 33.

Chains.

66.50 Head of draw, course NE., foot of mountain, brs. NW. and SE.
 Continue to descend over rolling N. slope.

69.15 Draw, course NE.

76.50 Wash, course NE., 10 lks. wide, 18 ins. deep, 100 ft. below
 foot of mountain.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for reestablished standard cor. of secs.
 35 and 36, marked on brass cap,
 1914 on S. rim,
 T15 S R 30 E in N. half;
 S 35 in NW., and
 S 36 in NE. quadrant;
 raise a mound of stone 2 ft. base, 1 1/2 ft. high, north
 of corner. Pits impracticable.

Land, mountainous.
 Soil, rocky, igneous formation, 4th rate.
 Timber, scattering pine, oak, cedar and juniper.
 Undergrowth, dense manzanita, mahogany, mesquite, scrub
 oak and catclaw.

Sept. 26 and 23, 1914.

Chains

East, on a true line on S. bdy. of sec. 36
 Over rolling land, through scattering timber and dense
 undergrowth.

2.75 Wash, 20 lks. wide, 30 ins. deep, course NE.

3.85 Wire fence, bears NW. & East.

7.10 Wash, 15 lks. wide, 3 ft. deep, course N.

11.25 Wash, 25 lks. wide, 2 ft. deep, course N.

22.60 Wash, 80 lks. wide, 3 ft. deep, course NE.

25.15 Wash, 10 lks. wide, 1 ft. deep, course NE.

33.40 Wash, 10 lks. wide, 2 ft. deep, course NE.

40.00 Set an iron post, 3 ft. long, 1 in in diam., 26 ins. in
 the ground, for reestab. std. 1/4 sec. cor. marked on brass
 cap,
 1914 on S. rim, and
 1/4 S 36 on N. half
 raise a mound of stone 2 ft. base, 1 1/2 ft. high, N. of cor.
 Pits impracticable.

40.20 Wash, 8 lks. wide, 18 ins. deep, course NE.

64.75 Wash, 15 lks. wide, 2 ft. deep, course NE.

85.50 The orig. std. cor. of Ts. 15 S., Rs. 30 & 31 E., which is
 a stone, 11, marked and witnessed as hereinbefore
 described.

Land rolling.
 Soil, sandy loam, gumbo, stony & gravelly, 2nd to 4th rate.
 Timber, scattering oak and umbrella.
 Undergrowth, dense mesquite and catclaw.

September 23, 1914.

William B. Kimmel

U.S. Surveyor.

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,

William B. Kimmel

, U. S. Surveyor, during the periods and in the capacities

stated opposite our several signatures, in^{re} surveying all those parts or portions of *the 1st Standard Parallel North, N. of frac. T. 4 1/2 N.: R. 32 E., the 1st Standard Parallel South in Rs. 28 and 29 E., the 5th Guide Meridian East thru Tps. 2 & 3 S., bet. Rs. 29 and 30 E., the Gila & Salt River Base Line thru R. 28 E. and the 3rd Standard Parallel South in Rs. 29 and 30 E.*

of the *Gila and Salt River* Meridian, in the State of *Arizona*

which are represented in the foregoing field notes as having been executed by him, and under his direction; and that said^{re} surveys have been, in all respects, to the best of our knowledge and belief, well and faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
<i>L. P. ...</i>	Aug. 30, 1913.	Dec. 23, 1913.	Flagman.
<i>O. D. Bray</i>	Sept. 9, 1913,	April 22, 1914.	Axman, Moundman.
<i>S. H. O'Leary</i>	Aug. 27, 1913.	July 3, 1914.	Chainman.
<i>Abrey W. ...</i>	Sept. 1, 1913.	Nov. 4, 1914.	Moundman, Chainman.
<i>L. E. Andrews</i>	Jan. 21, 1914.	June 13, 1914.	Flagman, Moundman.
<i>A. R. Dickson</i>	Sept. 2, 1914.	Oct. 17, 1914.	Axman, Flagman..
<i>A. C. Tilton</i>	July 7, 1914.	Nov. 4, 1914.	Moundman.
<i>S. H. Mitchell</i>	July 7, 1914.	Oct. 17, 1914.	Flagman.
<i>J. J. Gamble</i>	May, 5, 1914.	Nov. 4, 1914.	Flagman, Chainman.

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

William B. Kimmel.
U. S. Surveyor.

FINAL OATH OF UNITED STATES SURVEYOR.

I, William B. Kimmell, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for Arizona for Group 26 dated Aug. 25, 1910, Aug. 9, 1912, Feb. 18, 1913 and Dec. 30, 1913 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, ^{re}surveyed all those parts or portions of the 1st Standard Parallel North, N. of frac. T. 4 1/2 N. R. 32 E., the 1st Standard Parallel South in Rs. 28 & 29 E., the 5th Guide Meridian East thru Ts. 2 & 3 S. bet. Rs. 29 & 30 E. the Gila & Salt River Base Line thru R. 28 E. and the 3rd Standard Parallel South in Rs. 29 & 30 E.

of the Gila & Salt River Meridian, in the State of Arizona, 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 ^{re}surveys have been ^{re}established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Arizona for Grp 26 and in the specific manner described in the field notes, and that the foregoing are the original field notes of such ^{re}surveys.

William B. Kimmell
U. S. Surveyor.

Subscribed by said William B. Kimmell, and sworn to before me }
this 4th day of March, 1915



Frank Ingalls
SURVEYOR GENERAL OF ARIZONA

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix Ariz., June 19, 1915

The foregoing field notes of the ~~survey of~~ ^{retracement & resurvey} of the 1st Std. Par. North, N. of frac. T. 4 1/2 N., R. 32 E., the resurvey of the 1st Std. Par. South, thru parts of Rs. 28 & 29 E., the 5th Guide Meridian East, thru Ts. 2 & 3 S. bet. Rs. 29 & 30 E., and the Gila & Salt River Base Line thru R. 28 E., and the retracement & resurvey of the 3rd Standard Parallel South, thru the E 1/2 of R. 29 E. and thru R. 30 E. of the Gila and Salt River ~~Pa~~ Meridian, in the State of Arizona,

executed by William B. Kimmell, U.S. Surveyor ^{FOR GROUP 26} under his special instructions, dated Aug. 25, 1910, Aug. 9, 1912, Feb. 18, 1913 & Dec. 30, 1913, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the resurveys they describe, are hereby approved.

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

~~I certify that the foregoing transcript of the field notes of the above-described surveys in~~
~~has been correctly copied from the original notes on file in this office.~~