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BOOK 3135

NOV 24 1917

Book "C"

(Subdivisions)

NOV 25 1918

FIELD NOTES

OF THE ~~SURVEY OF THE~~

Resurvey of the West half of the North boundary,

Retracement and Resurvey of part of the Subdivision lines,

and

Completion of survey of Subdivision lines, all of

Township 21 North, Range 17 West,

Of the Gila and Salt River Base and Meridian,

In the State of Arizona.

EXECUTED BY

Theo. O. Johnston, U.S. Surveyor,

and

Edward O. Lyman, U. S. Transitman,

~~In the capacity of U.S. Surveyor~~, under instructions dated Jan. 6, 1915,

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

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

Office, January 26, 1915.

Retracement, Resurvey
and Survey commenced February 3, 1915.

Retracement, Resurvey
and Survey completed February 15, 1915.

Executed under Assignment
Instructions dated Jan. 31, 1915.

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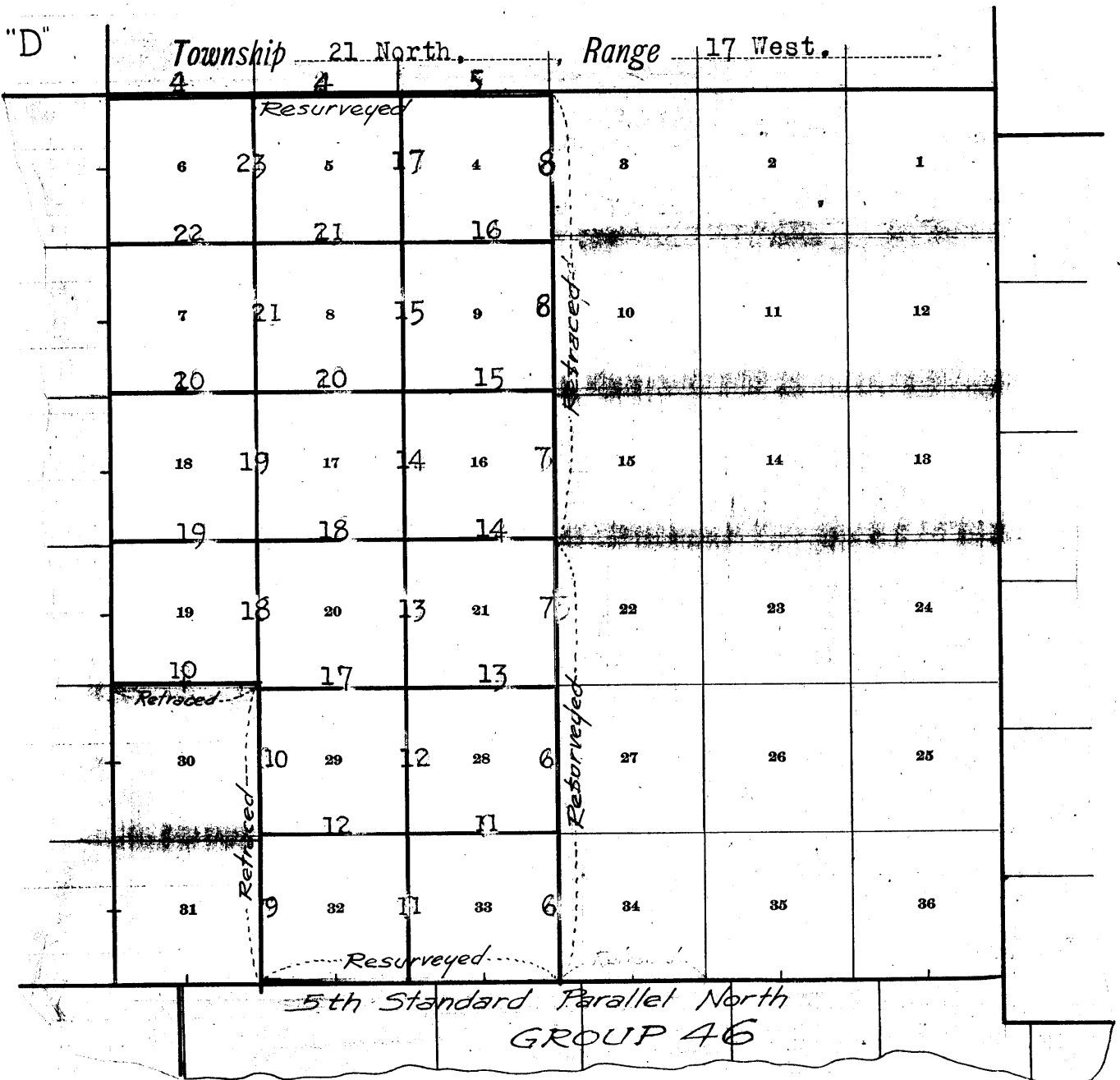
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BOOK 3135

Book "C"
(Subdivisions)

Group 44.

INDEX DIAGRAM.



-  Notes in this book (indexed)
-  Notes in book "B" Group 44.
-  Accepted surveyed lines.
-  Areas surveyed as per accepted plats on file.

Theo. O. Johnston, U.S. Surveyor

DIAGRAM,

BOOK 3185

Retracement & Resurvey Survey

SHOWING THE RESPECTIVE SURVEYS, RETRACEMENTS, AND RESURVEYS OF SUBDIVISION LINES AND MEANDERS OF LEFT BANK OF COLORADO RIVER EXECUTED BY EACH U.S. SURVEYOR AND U.S. TRANSITMAN UNDER INSTRUCTIONS FOR GROUP 44, ARIZONA.

Guy H. Richardson, U.S. Surveyor

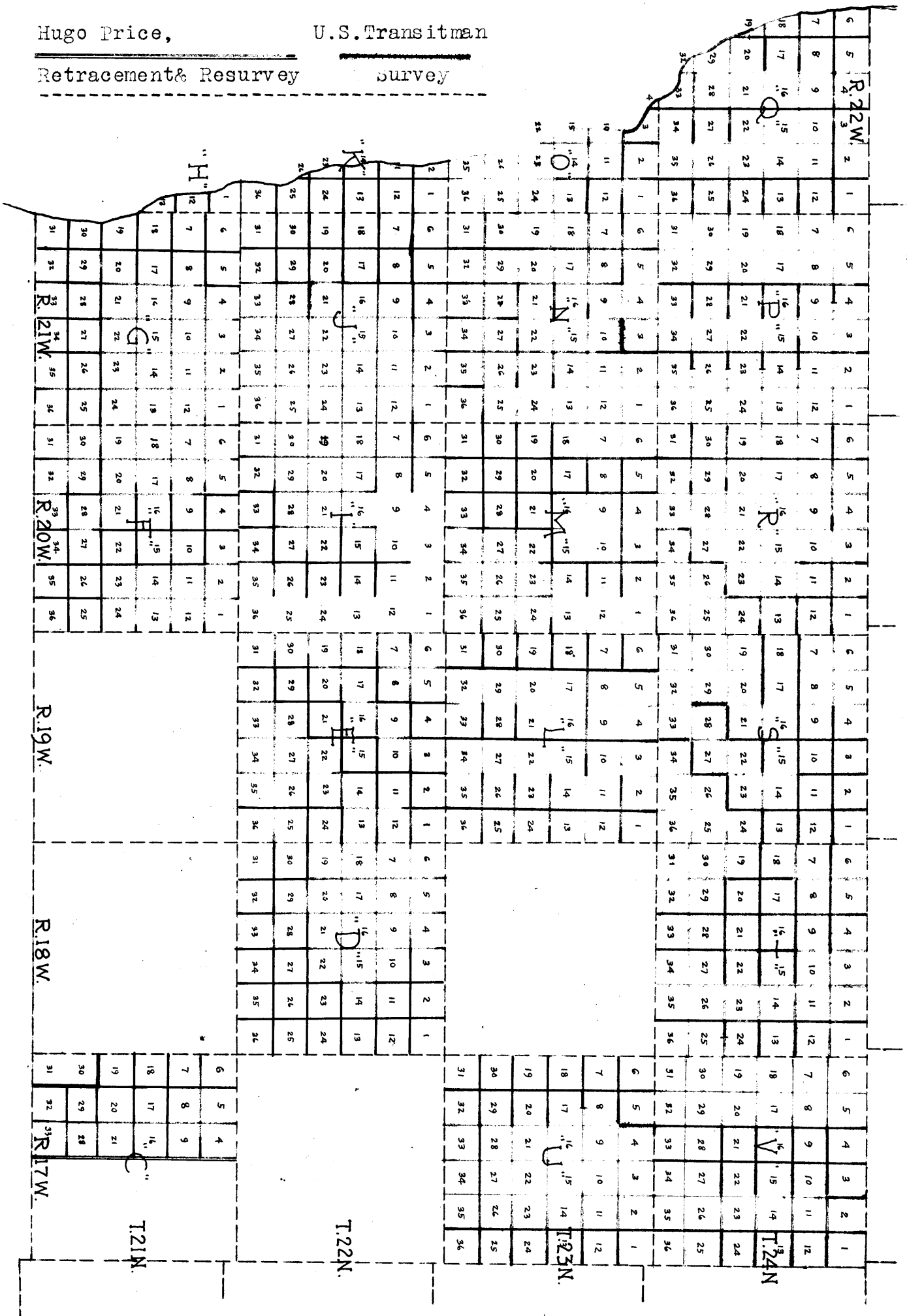
Retracement & Resurvey Survey

Edward O. Lyman, U.S. Transitman

Retracement & Resurvey Survey

Hugo Price, U.S. Transitman

Retracement & Resurvey Survey



BOOK 3135

FINAL CERTIFICATE OF U.S.SURVEYORS AND TRANSITMEN.

We, the undersigned, hereby certify on honor that, in pursuance of special instructions received from the U.S.Surveyor General for Arizona, bearing date of January 6, 1915, we have well, faithfully and truly, in our own proper persons, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of

G R O U P 44

which are represented on the diagram on the reverse hereof as having severally been executed by us, and under our direction; and we do further certify on honor that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U.S.Surveyor General of Arizona, and in the specific manner described in our respective field notes.

Thos. C. Johnston
U. S. Surveyor.

Guy N. Richardson
U. S. Surveyor.

Edward C. Lyman
U. S. Transitman.

Hugo Price
U. S. Transitman.

Resurvey W. half N. bdy., Retracement and Resurvey of part of the Subdivision lines, and completion of Subdivision of T. 21 N., R. 17 W.

Chains.

Retracements, Resurveys and surveys described in the field notes in this book commenced Feb. 3, 1915, and executed by Theo. O. Johnston, U.S. Surveyor, using a Young and Sons' light mountain transit No. 8493, and Edward C. Lyman, U. S. Transitman, using a Young and Sons' light mountain transit No. 8490. Both instruments have Smith solar attachments and full vertical circles. The horizontal limbs are provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs and vertical circles. All measurements made with steel tapes and clinometers.

All instruments were approved, conditional upon satisfactory field tests, by the assistant supervisor of surveys, on Jan. 31, 1915.

The initials "T.O.J." and "E.O.L." are inserted in the following notes at the beginning and ending of those portions of the notes describing the surveys executed by Theo. O. Johnston, U.S. Surveyor, and Edward C. Lyman, U.S. Transitman, respectively.

T.O.J.

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

At my camp, near the SW. cor. of sec. 35, in latitude 35° 10' N., longitude 114° 04 1/2' W., at 10h. 32. lm. p.m., l.m.t., I observe Polaris at western elongation, in accordance with instructions in the Manual, and mark a point in the line thus determined by a tack driven in a wooden stake firmly set in the ground 5 chs. N. of my station.

Feb. 3, 1915.

Feb. 4, 1915.

At 8h. 00m., a.m., l.m.t., I lay off the azimuth of Polaris 1° 23' .5 to the east, and mark the meridian thus determined by cutting a small groove in a stone firmly set in the ground east of the point established last night.

The magnetic bearing of the true meridian at 8h. 10m. a.m. is N. 15° 15' E.

Feb. 4, 1915.

T.O.J.

T.O.J. and E.O.L.

Preliminary to commencing the subdivision of this township, we retrace the N. and S. bdrs., and the Subdivision lines of the surveyed portion of the township bounding the part to be surveyed under this group, making diligent search for old cors. at 40.00 and 80.00 chs., and setting temp. points.

We transfer the meridian established as hereinabove described by observation on Polaris at eastern elongation, by carefully measured angles, to the S. bdy. of the Tp. (5th Standard Par. N.) and use transit angles in the same manner for obtaining the bearing of all lines throughout the survey of the Tp.

T.O.J. E.O.L.

Feb. 4, 1915.

Resurvey of West 1/2 of N. bdy. of Township 21 N., R. 17 W.

E.O.L. Feb. 13, 1915.

From the old cor. of secs. 3, 4, 33 and 34, and on the N. bdy. of the Tp., I run,

West on random line, bet. secs. 33 and 4.

40.00 Set temp. point. After diligent search, I fail to find any trace of the old 1/4 sec. cor.

80.00 Set temp. point. No trace of the old sec. cor.

Feb. 13, 1915, E.O.L.

T.O.J.

Feb. 13, 1915.

From the temp. point last above described, set by

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Resurvey of W. half of N. bdy. of T. 21 N., R. 17 West.

Chains.

- Edward O. Lyman, I run west on a random line on the N. bdrs. of secs. 5 and 6, making diligent search for the old cors. at 40.00 and 80.00 chs., setting temp. points, and at
- 161.40 Fall 5.13 chs. N. of the old cor. of Ts. 21 and 22 N., Rs. 17 and 18 W.,
The true course and dist. of line is therefore N. 88° 47' E.,
241.46 chs.
- Feb. 13, 1915.
-
- Feb. 15, 1915.
From the old cor. of Ts. 21 and 22 N., Rs. 17 and 18 W., which is a granite stone 10x8x7 ins., above ground, marked and witnessed as described by the Surveyor General, I resurvey the west half of N. bdy. of T. 21 N., R. 17 W., reestablishing the $\frac{1}{4}$ sec. and sec. cors. at distances proportional to the distances shown on original plat, as follows:
- N. 88° 47' E. on a true line, bet. secs. 6 and 31.
Ascending NW. slope of spur, through scattering undergrowth.
- 1.13 Top of small spur, slopes N., 22 ft. above the Tp. cor.
Descend NE. slope.
- 4.86 Foot of descent, 20 ft. bears NW. and SE. Thence along broken E. slope.
- 19.85 Begin to ascend over gradual west slope.
20.45 Wash, course SW. Ascend W. slope.
39.74 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished $\frac{1}{4}$ sec. cor., with brass cap, marked
- $\frac{1}{4}$ S 31 in N. half; and
S 6 in S. half; and
1915 in S. rim;
- and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
- 70.52 Summit of ascent, 860 ft. high; spur brs. NW. Thence along north slope.
- 80.08 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for reestablished cor. of secs. 5, 6, 31 and 32, with brass cap marked
- T 22 N S 31 on NW.,
R 17 W S 32 in NE.,
S 5 in SE., and
S 6 in SW. quadrants;
T 21 N in S. half; and
1915 in S. rim;
- and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
- Land, mountainous.
Soil, rocky, 4th rate.
Timber, none.
Undergrowth, cactus and sage.
-
- N. 88° 47' E. on a true line, bet. secs. 5 and 32.
Over mountainous land, ascending rocky NW. slope.
- 13.44 Top of ridge, 480 ft. above the sec. cor., bears NW. and SE.
Descend NE. slope, covered with large boulders.
- 18.20 Foot of descent of 100 ft. Ascend NW. slope.
21.78 Top of spur, 85 ft. high on line, slopes N. Descend NE. slope.
40.00 Foot of descent of 205 ft.
40.345 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished $\frac{1}{4}$ sec. cor., with brass cap, marked
- $\frac{1}{4}$ S 32 in N. half;
S 5 in S. half; and
1915 in S. rim;
- and raise a mound of stone $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
- 45.00 Ascend NW. slope.

Resurvey of W. half of N. bdy. of Township 21 N., R. 17 W.

Chains.
60.30 Summit of ascent of 240 ft.; divide bears N. and S. Descend E. slope.
69.16 Bottom of gulch, 190 ft. below divide, drains S. 20° E. Ascend SW. slope.
80.69 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for reestablished cor. of secs. 4, 5, 32 and 33, with brass cap, marked
T 22 N S 32 in NW.,
R 17 W S 33 in NE.,
S 4 in SE., and
S 5 in SW. quadrants;
T 21 N in S. half; and
1915 in S. rim;
and raise a mound of stone 3½ ft. base, 1½ ft. high, W. of cor.
Land, mountainous.
Soil, rocky, 4th rate.
Timber, none.

N. 88° 47' E. on a true line, bet. secs. 4 and 33.
Over mountainous land, ascending rocky SW. slope.
2.40 Top of ascent, 132 ft. above bottom of gulch; thence along S. slope.
12.00 Descend SE. slope.
21.00 Wash, course SE.
34.50 Wash, 265 ft. below spur crossed at 2.40 chs., course SE. Ascend SW. slope.
40.345 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished ¼ sec. cor., with brass cap, marked
¼ S 33 in N., and
S 4 in S. half; and
1915 in S. rim;
and raise a mound of stone, 3½ ft. base, 1½ ft. high, N. of cor.
41.00 Top of spur, 60 ft. above wash, slopes S. Descend SE. slope.
52.50 Enter scattering juniper brush, bears N. and S.
58.90 Wash, 210 ft. below spur, course south.
63.10 Wash, course SW. Ascend W. slope.
74.10 Continue ascent on NW. slope.
76.10 Summit of ascent, 285 ft. above wash; on spur, sloping to N. Descend NE. slope.
80.69 The old cor. of secs. 3, 4, 33 and 34, which is a malpais stone, 16x14x6 ins., above ground, marked and witnessed as described by the Surveyor General.
Land, mountainous.
Soil, sandy and rocky, 4th rate.
Timber, scattering juniper along east 27.35 chs.
Undergrowth, cactus, catclaw and thorn.
Feb. 15, 1915.
T.O.J.

Retracement of part of the Subdivision Lines in T. 21 N. R. 17 W.

Feb. 5, 6, and 13, 1915. E.O.L.
From the old standard cor. of secs. 33 and 34, on S. bdy. of Tp. (5th. Standard Parallel North) described in Book "B," I run,
N. 0° 02' W., on a random line, bet. secs. 33 and 34, 27 and 28, and 21 and 22, making diligent search for the old cors. at 40.00 and 80.00 chs., and setting temp. points; and at
239.03 Fall 215 lks. E., of the old cor. of secs. 15, 16, 21 and 22. From this corner I run,
N. 0° 02' W., on a random line, bet. secs. 15 and 16.
39.58 Fall 11 lks. W. of the old ¼ sec. cor.

Retracement & resurvey of part of Subdivision Lines in T.21N.R17W.

Chains	
	Thence I run, N.0° 02' W., on a random line, bet. secs.15 and 16 (N.½).
41.19	Fall 92 lks.W.of the old cor.of secs.9,10,15 and 16. Thence I run, N.0° 02' W., on a random line, bet. secs.9 and 10.
41.08	Fall 54 lks.E. of the old ¼ sec.cor. Thence I run, N.0°02' W., on a random line, bet. secs.9 and 10. (North half).
40.82	Fall 38 lks.W. of the old cor.of secs.3,4,9 and 10. Thence I run, N.0°08'W., on a random line, bet. secs.3 and 4.
41.06	Fall 107 lks.W. of the old ¼ sec.cor. Thence I run, N.0°08' W., on a random line, bet. secs.3 and 4 (North ½).
41.70	Fall 3 lks.W. of the old cor. of secs.3,4, 33 and 34, hereinbefore described.

Feb. 13, 1915.

Resurvey of part of the Subdivision lines in T.21 N.,R17 W.

Feb.5,1915.

I return to the old standard cor.of secs.33 and 34, on
the S.bdy.of the Tp.(5th.Standard Parallel North),and
proceed to resurvey the subdivision lines bet. secs.
33 and 34; 27 and 28, and 21 and 22, as follows:

N.0° 33' W., bet. secs.33 and 34.

Over rocky SE. slope, falling gradually towards the SE.,
cut by numerous gullies and washes.

30.15 Wash, 10 lks.wide, course SE.

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

¼ in N.half;

S 33 in W., and

S 34 in E.half, and

1915 in S.rim;

and raise a mound of stone, 3½ ft. base, 1½ ft. high,
W.of cor.59.10 Summit of ascent, 230 ft. above sec.cor., on rocky shoulder,
sloping to E. Descend steep NE. slope, 102 ft. to

72.80 Wash, 20 lks.wide, course SE.; ascend S.slope 58 ft. to

79.68 Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in
the ground, for reestablished cor.of secs.27,28,33 and
34, with brass cap, marked

T 21 N R 17 W in N.half;

S 28 in NW.,

S 27 in NE.,

S 34 in SE., and

S 33 in SW. quadrants; and

1915 in S.rim;

and raised a mound of stone, 3½ ft. base, 1½ ft. high,
W.of cor.

Land, rolling and mountainous.

Soil, rocky and gravelly, 3rd and 4th rate.

Timber, none.

Undergrowth, cactus, mesquite, catclaw and yucca.

N. 0°33' W., bet. secs. 27 and 28.

Ascending steep broken and rocky slope, 160 ft. to

4.74 Cliff, 25 ft.high, bears NE.and SW.

11.00 Top of spur, 300 ft.above sec.cor., sloping to W. Descend.

11.50 Descend over cliff, 35 ft.high, bears NW- and SE.

16.60 Descend over cliff, 30 ft.high, bears NW. and SE.

28.07 Wash, 200 ft. below spur, 8 lks.wide, drains SW. Thence
across point of spur, bears SE.

37.30 Same wash, 8 lks.wide, in bottom of canyon, draining SE.

Ascend SW. slope 45 ft. to

Resurvey of part of the Subdivision lines in T.21 N., R.17 W.

Chains	
39.84	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished $\frac{1}{4}$ sec. cor., with brass cap, marked $\frac{1}{4}$ in N. half; S 28 in W. half; S 27 in E. half; and 1915 in S. rim; and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
46.20	Summit of steep ascent, 140 ft. above the $\frac{1}{4}$ sec. cor. Thence ascend gradually over broken bench, bears NW. and SE.
60.00	Ascent becomes steep.
69.00	Summit of steep ascent of 160 ft. on ridge, bearing NW. and SE. Descend gradually on NE. slope.
75.70	Descend abruptly 220 ft. to
79.68	Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for reestablished cor. of secs. 21, 22, 27 and 28, with brass cap, marked T 21 NS 21 in NW., R 17 W S 22 in NE., S 27 in SE., and S 28 in SW. quadrants; and 1915 in S. rim; and raise a mound of stone $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Land, mountainous. Soil, volcanic boulders and ledges, 4th rate. Timber, none. Undergrowth, catclaw, greasewood and cactus. Feb. 5, 1915.

	Feb. 6, 1915. N. $0^{\circ}33'$ W., bet. secs. 21 and 22.
7.44	Descend NW. slope, 29 ft. to Wash, 5 lks. wide, course N. 60° E., Thence ascend gradually along general east slope.
23.80	Ascend over rim rock, 80 ft. high, bears E. and W.
24.50	Top of butte, 110 ft. high.
25.00	Descend 80 ft. over rim rock, bears E. and W.
28.50	Wash, 7 lks. wide, course S. 60° E. Thence over broken rocky ground, sloping generally to SE.
39.84	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished $\frac{1}{4}$ sec. cor., with brass cap marked $\frac{1}{4}$ in N. half; S 21 in W. half; S 22 in E. half, and 1915 in S. rim; and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
52.64	A pinnacle of rock, 40 ft. high, bears E. 2 chs. dist.
67.64	Wash, 5 lks. wide, course S. 70° E. Ascend.
75.94	Top of rocky butte, 70 ft. high.
77.00	Descend 55 ft. over cliff; bears NE. and SW.
79.68	The old cor. of secs. 15, 16, 21 and 22, which is a malpais stone, 20x12x16 ins. above ground, marked and witnessed as described by the Surveyor General. Land, broken and rolling. Soil, rocks and gravel, 4th rate. Timber, none. Undergrowth, cactus, catclaw, greasewood and yucca.

	<u>RETRACEMENT.</u>
	N. $0^{\circ}08'$ E., bet. secs. 15 and 16.
5.00	Across broken, rocky ground, undergrowth, scattering.
9.60	Wash, 5 lks. wide, course E. Ascend S. slope. Ascend over cliff, 40 ft. high, brs. NE. and SW.

Retracement of part of Subdivision lines in T.21 N., R.17 W.

Chains.

10.50 Top of spur, 110 ft. above wash, bears SW.
 12.00 Descend over broken cliffs, 40 ft. to
 20.00 Ascend gradually over broken rocky ground.
 34.40 Wagon road, bears E. and W. Ascend steep SE. slope.
 39.58 The old $\frac{1}{4}$ sec. cor., which is a malpais stone, 10x10x6 ins.
 above ground, marked and witnessed as described by
 the Surveyor General.

Thence I run,

N.1° 15'E., bet. secs. 15 and 16 (North half).

Ascend SE. slope.

1.82 Telephone line, bears N.78°W., and S.78° E.

5.90 Spur 45 ft. above the $\frac{1}{4}$ sec. cor., slopes SE. Descend
 NE. slope, 100 ft. to

15.30 Wash, 20 lks. wide, course SE. Ascend SW. slope.

29.00 Ascend S. slope.

31.50 Summit of ascent 220 ft. above wash, on spur, sloping SE.

Descend NE. slope, 44 ft. to

41.20 The old cor. of secs. 9, 10, 15 and 16, which is a basalt
 stone, 20x15x12 ins. above ground, marked and wit-
 nessed as described by the Surveyor General.

Land, rolling and mountainous.

Soil, rocks and gravel, 4th rate.

Timber, none.

Undergrowth, cactus, catclaw, sage, mesquite and yucca.

N.0° 48'W., bet. secs. 9 and 10.

Descending NE. slope, through scattering undergrowth, 85
 ft. to

5.00 Wash, 30 lks. wide, course E. Ascend SE. slope.

20.00 Ascend along east slope, 299 ft. to

32.00 Descend NE. slope, 66 ft. to

41.08 The old $\frac{1}{4}$ sec. cor., which is a malpais stone, 10x8x6 ins.
 above ground, marked and witnessed as described by the
 Surveyor General.

Thence I run,

N.0° 30'E. bet. secs. 9 and 10 (North $\frac{1}{2}$).

Descend from cor. 52 ft. to

3.55 Wash, 4 lks. wide, course E. Ascend general south slope.

8.10 Wash, 4 lks. wide, course S. 10° E.

12.70 Same wash, 4 lks. wide, course S. 10°W.

26.50 Summit of ascent, 170 ft. above the $\frac{1}{4}$ sec. cor. on ridge,
 bears N.65°W., and SE. Descend north slope 134 ft. to

40.82 The old cor. of secs. 3, 4, 9 and 10, which is a malpais stone
 16x12x8 ins. above ground, marked and witnessed as
 described by the Surveyor General.

Land, mountainous.

Soil, rocks and gravel, 4th rate.

Timber, none.

Undergrowth, cactus, catclaw, mesquite, greasewood and
 yucca.

Feb. 6, 1915.

Feb. 13, 1915.

From the old cor. of secs. 3, 4, 33 and 34, on the N. bdy.

of the Tp. hereinbefore described, I run,

S.0°06'E., bet. secs. 3 and 4.

From cor. ascend NE. slope, through scattering juniper
 timber.

4.50 Summit of ascent 70 ft. above the sec. cor., on spur slop-
 ing E. Descend SE. slope. Leave timber, bears E. & W.

13.00 Continue descent on south slope.

30.85 Wash, 370 ft. below spur, course E. for 2 chs., and
 thence SE. Thence ascend N. slope 41 ft. to

41.70 The old $\frac{1}{4}$ sec. cor., which is a malpais stone 18x12x8
 ins. above ground, marked and witnessed as described
 by the surveyor general.

Retracement of part of the Subdivision lines in T.21 N., R.17 W.

Chains

Thence I run,
 S.1° 22' W., bet. secs.3 and 4, (South half).
 1.20 Top of ridge, bears NW.and SE. Descend SE. slope.
 8.30 Enter scattering juniper, bears E.and W.
 12.30 Wash, 115 ft. below the $\frac{1}{4}$ sec.cor., 12 lks.wide, course S.
 10°E. Ascend NE. slope 154 ft. to
 25.30 Summit of ascent, on spur sloping to SE. Thence descend
 S.slope, leaving scattering juniper, which bears E.and
 W.
 31.80 Descend SW.slope.
 40.55 Wash, 144 ft. below spur, 7 lks.wide, course S.20°E.
 41.07 The old cor.of secs.3,4,9 and 10, hereinbefore described.
 Land, mountainous.
 Soil, sandy and stony, 4th rate.
 Timber, scattering juniper, 19.80 chs.
 Undergrowth, cactus, catclaw and thorn.

Feb.13, 1915.
E.O.L.

T.O.J.
 Feb. 6, 1915.
 From the old standard cor. of secs.31 and 32 on the south
 bdy.of Tp. (5th. Standard Parallel North) described in
 Book "B," I run,
 37.08 North, on a random line, bet. secs.31 and 32.
 Fall 238 lks.west of the old $\frac{1}{4}$ sec.cor.
 Thence I run,
 North, on a random line, between secs. 31 and 32, (North
 half).
 42.69 Fall 15 lks.west of the old cor. of secs. 29,30,31 and 32.
 Thence I run,
 North, on a random line, bet. secs.29 and 30.
 40.60 Fall 200 lks.west of the old $\frac{1}{4}$ sec.cor.
 Thence I run,
 North, on a random line, bet. secs. 29 and 30, (North
 half).
 41.18 Fall 275 lks.E. of the old cor.of secs. 19,20,29 and 30.
 Thence I run,
 West, on a random line, bet. secs.19 and 30.
 40.91 Fall 31 lks.N.of the old $\frac{1}{4}$ sec.cor.
 Thence I run,
 West, on a random line, between secs. 19 and 30. (West
 half).
 41.44 Fall 81 lks.N.of the old cor.of secs. 19,24,25 and 30, on
 west bdy.of Tp.

I return to the old standard corner of secs.31 and 32,
 on south bdy.of Tp.(5th.Standard Parallel North), de-
 scribed in Book "B."
 Whence I run,
 N.3° 40'E., on a true line, bet. secs.31 and 32.
 Over level ground.
 5.00 Ground becomes broken and rolling.
 37.16 The old $\frac{1}{4}$ sec.cor., which is a granite stone, 24x14x5
 ins., firmly set in a mound of stone, marked and
 witnessed as described by the Surveyor General, 1 chain
 north of wash, 20 lks.wide, course W.
 Thence I run,
 N.0° 12'E., bet. secs. 31 and 32, (North half).
 Ascend gradually over rough W. slope.
 23.00 Slope becomes rougher and steeper.
 34.00 Summit of ascent 265 ft. above the $\frac{1}{4}$ sec.cor. Thence
 descend over rocky ground 100 ft.to

Retracement of part of the Subdivision lines in T.21 N., R.17 W.

Chains.

42.69 The old cor. of secs. 29, 30, 31 and 32, which is a malpais stone 18x12x9 ins., firmly set in a mound of stone, marked and witnessed as described by the Surveyor General. Cor. is about 25 lks. S. of the foot of descent.
 Land, roughly rolling.
 Soil, sandy and rocky, 4th rate.
 Timber and undergrowth, none.

N. 2° 49' E., bet. secs. 29 and 30.
 Over rolling ground.

6.00 Wash, 10 lks. wide, course W.

10.75 Wash, 15 lks. wide, course W. Ascend gradually along W. slope.

35.00 Wash, 50 lks. wide, 5 ft. banks, course W.

40.65 The old 1/4 sec. cor., which is a malpais stone, 24x12x3 ins., firmly set in a mound of stone, marked and witnessed as described by the Surveyor General.

Thence I run,

N. 3° 49' W., bet. secs. 29 and 30, (North half).

14.55 Center of wash, 30 lks. wide, course W. Ascend over rocky S. slope.

27.20 Rocky bench bears E. and W. Continue ascent.

41.27 The old cor. of secs. 19 and 20, 29 and 30, which is a malpais stone, 20x12x4 ins., firmly set in a mound of stone, marked and witnessed as described by the Surveyor General. Point is 500 ft. above the 1/4 sec. cor.

Land, rolling and mountainous.
 Soil, sandy and rocky, 4th rate.
 Timber and undergrowth, none.

S. 89° 34' W., bet. secs. 19 and 30.
 Descending rough W. slope, 450 ft. to

40.91 The old 1/4 sec. cor., which is a malpais stone, 24x12x8 ins., firmly set in a mound of stone, marked and witnessed as described by the Surveyor General.

Thence I run,

S. 88° 53' W., bet. secs. 19 and 30, (West half).

Ascend over small butte, 65 ft. to

5.60 Top of butte; descend west side of same, 100 ft. to

14.00 Foot of butte. Thence over rolling land.

41.45 The old cor. of secs. 19, 24, 25 and 30, which is a malpais stone, 10x8x8 ins. above ground, marked and witnessed as described by the Surveyor General.

Land, rolling and mountainous.
 Soil, sandy and rocky, 4th rate.
 Timber, and undergrowth, none.

Feb. 6, 1915.
 T.O.J.

Completion of survey of Subdivision of T. 21 N., R.17 W.

T.O.J.

Feb. 8, 1915.

From the reestablished standard cor. of secs. 32 and 33, on the south bdy. of the Tp. (5th. Standard Parallel N.) described in Book "B." I run,

North, on a random line for distance between secs. 32 and 33, setting temp. cors. at 40.00 and 80.00 chs.

T.O.J.

Completion of Subdivision of Township 21 North, Range 17 West.

Chains.

E.O.L. From the reestablished cor. of secs. 27, 28, 33 and 34, here- inbefore described, I run, west on a random line for distance between secs. 28 and 33, and at 79.27 chs., in- tersect the N. and S. line 34 lks. N. of the 80.00 chain point.

E.O.L.

T.O.J.

E.O.L.

At the intersection of the random lines as above described, we set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the cor. of secs. 28, 29, 32 and 33, with brass cap, marked,

- T 21 N S 29 in NW.,
R 17 W S 28 in NE.,
S 33 in SE., and
S 32 in SW. quadrants; and
1915 in S. rim;

and raise a mound of stone, 3 1/2 ft. base, 1 1/2 ft. high, W. of cor.

T.O.J.

E.O.L.

T.O.J.

South, bet. secs. 32 and 33.

On sectional guide meridian.

Descend SE. slope, 35 ft. to

4.50 Foot of descent. Wash drains E. Ascend broken N. slope, 260 ft. to

19.20 Top of ridge, brs. E. and W. Descend broken SE. slope 410 ft. to

40.00 Set an iron post 3 ft. long, 1 in. in diam., in a mound of stone for 1/4 sec. cor., with brass cap, marked

- 1/4 in N. half;
S 32 in W. half;
S 33 in E. half, and
1915 in S. rim;

and raise a mound of stone 3 1/2 ft. base, 1 1/2 ft. high, W. of cor. Impracticable to set cor. in the ground on account of stone.

From corner descend 40 ft. to

42.90 Foot of descent. Wash drains SE. Ascend N. slope, 140 ft. to

46.50 Top of ridge, brs. NW. and SE. Descend SW. slope.

52.73 Wash, drains SW.

80.34 The reestablished cor. of secs. 3, 4, 33 and 34, on S. bdy. of Tp. (5th. Standard Parallel North), described in Book "B." 500 ft. below ridge.

Land, rolling and mountainous.

Soil, rocks, 4th rate.

Timber, none.

Feb. 8, 1915.

T.O.J.

E.O.L.

Feb. 8, 1915. From cor. of secs. 28, 29, 32 and 33, East on sectional correction line, bet. secs. 28 and 33. Over gradually descending ground.

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

- 1/4 S 28 in N. half;
S 33 in S. half; and
1915 in S. rim;

and raise a mound of stone, 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.

56.70 Descend over rim rock, bears NW. and SE. Thence descend NE. slope, 245 ft. to

70.30 Foot of descent. Wash drains S. 30° E. Ascend SW. slope, 40 ft. to

79.27 The reestablished cor. of secs. 27, 28, 33 and 34, hereinbefore described.

12 Completion of Subdivision of Township 21 North, Range 17 W.

Chains.

Land, rolling and mountainous.
Soil, sand and rocks, 4th rate.
Timber, none.
Undergrowth, cactus and catclaw.

Feb. 8, 1915.
E. O.L.

T.O.J.
Feb. 8, 1915. From cor. of secs. 28, 29, 32 and 33,
West on sectional correctional line, bet. secs. 29 and 32.
Ascending over mountainous land, on broken SE. slope.
7.50 Top of dyke brs. N. and S.
36.10 Summit of ascent 200 ft. above the sec. cor. on ridge,
bears N. 20° E. and S. 20° W. Thence descend broken SW.
slope 40 ft. to
40.00 Set an iron post, 3 ft. long, 1 in. in diam., in a mound
of stone, for the $\frac{1}{4}$ sec. cor., with brass cap, marked
 $\frac{1}{4}$ S 29 in N. half,
S 32 in S. half; and
1915 in S. rim;
and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
N. of cor. Impracticable to set cor. in the ground,
on account of stone.
From cor., descend over cliff 40 ft. high, bears N. and S.,
and thence down broken W. slope, 620 ft. to
79.32 Intersect east bdy. of sec. 30, 102 lks. N. 2° 49' E., of the
old cor. of secs. 29, 30, 31 and 32, hereinbefore de-
scribed. At the point of intersection, I set an iron
post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground
for closing cor. of secs. 29 and 32, with brass cap,
marked
T 21 N in NW.,
R 17 W S 29 in NE., and
S 32 in SE. quadrant;
C C in E. half;
S 30 in W. half; and
1915 in S. rim;
and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
E. of cor. I change the old cor. of secs. 29, 30, 31 and
32, from a cor. of four to a cor. of two secs.
Land, mountainous.
Soil, rocky, 4th rate.
Timber, none.
Undergrowth, cactus and sage.

Feb. 8, 1915.
T.O.J.

E.O.L.
Feb. 8, 1915. From cor. of secs. 28, 29, 32 and 33,
North on sectional guide meridian, bet. secs. 28 and 29.
Ascend over stony SE. slope 18 ft. to
3.50 Top of spur, bears E. Descend N. slope 45 ft. to
7.75 Wash, drains N. 80° E. Thence ascend S. slope 75 ft. to
17.50 Summit of ascent, on spur, bears E. Descend N. slope.
27.90 Descend over cliff, 35 ft. high, brs. NW. and SE.
Continue descent on NE. slope.
39.25 Bottom of canyon, 100 ft. below sec. cor., drains S. 15° E.
Ascend 20 ft. to
40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the
ground, for $\frac{1}{4}$ sec. cor., with brass cap, marked
 $\frac{1}{4}$ in N. half;
S 29 in W. half; and
S 28 in E. half; and
1915 in S. rim;
and raise a mound of stone $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W.
of cor.
Descend from cor. 20 ft. to
40.80 Bottom of canyon, drains S. 30° E. Ascend S. slope.
52.00 Ascent becomes gradual.

Completion of Subdivision of Township 21 North, Range 17 West. 13

- Chains.
- 69.50 Top of ridge, 310 ft. above the $\frac{1}{4}$ sec.cor., bears E. and W. Descend N.slope, 15 ft.to
- 80.00 Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for the cor.of secs.20,21,28 and 29, with brass cap, marked
 T 21 N S 20 in NW.,
 R 17 W S 21 in NE.,
 S 28 in SE., and
 S 29 in SW. quadrants, and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W.of cor.
 Land, mountainous.
 Soil, sandy and rocky, 4th rate.
 Timber, none.
 Undergrowth, cactus and catclaw.
-
- 40.00 East, on a random line, bet. secs.21 and 28.
 Set temp.point.
- 78.42 Intersect the N. and S. line, 33 lks.N.of the cor.of secs. 21,22, 27 and 28, reestablished by me, as hereinbefore described.
 Thence I run,
 N.89° 46'W., on a true line, bet. secs.21 and 28.
 Over rolling, mountainous land, descending gradually along NW.slope.
- 9.90 Small wash, course N.60°E. Ascend gradually on E.slope.
- 19.40 A rocky butte 100 ft.high, brs.N.5.00 chs.dist.
- 38.42 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec.cor., with brass cap, marked
 $\frac{1}{4}$ S 21 in N.half;
 S 28 in S.half; and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N.of cor.
- 46.40 Continue ascent on SE.slope.
- 53.00 Continue ascent on E.slope.
- 68.00 Ascend becomes more gradual, general slope to NE.
- 78.42 The cor.of secs.20,21,28 and 29.
 Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, none.
 Undergrowth, cactus, yucca and catclaw.
 Feb. 8, 1915.
-
- Feb. 9, 1915.
 North on sectional guide meridian, bet. secs.20 and 21.
 Over rolling, mountainous land. descending N.slope.
- 12.50 Foot of descent. Ascend SE.slope.
- 19.00 Descend NE slope.
- 28.40 Wash, 20 lks.wide, course E. Ascend SE. slope.
- 33.00 On spur, sloping east from a butte, 75 ft.high, 2 chs.W. of line. Descend NE. slope.
- 35.70 Descend over cliff, 12 ft.high, bears NW. and SE.
- 40.00 Set an iron post, 3 ft.long, 1 in. in diam., in a mound of stone, for the $\frac{1}{4}$ sec.cor., with a brass cap, marked
 $\frac{1}{4}$ in N.half;
 S 20 in W half;
 S 21 in E.half, and
 1915 in S.rim;
 and raise a mound of stone $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft.high, W. of cor. Impracticable to set cor. in the ground on account of rocks.
 Thence over gradual east slope.
- 45.00 Descend NE: slope.

14 Completion of Subdivision of Township 21 North Range 17 West.

Chains.

- 66.90 Wash, course SE. Ascend over S.slope.
 68.00 Thence over west slope.
 80.00 Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in the ground for the cor.of secs. 16,17,20 and 21, with brass cap, marked
 T 21 N S 17 in NW.,
 R 17 W S 16 in NE.,
 S 21 in SE., and
 S 20 in SW. quadrants; and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W.of cor.
 Land, mountainous.
 Soil, sandy and stony, 4th rate.
 Timber, none.
 Undergrowth, cactus and catclaw.
-
- 12.25 East, on a true line, bet. secs.16 and 21.
 From cor. ascend SW. slope of butte, 80 ft.to
 Summit of ascent on S.slope of butte. Descend SE. slope, 100 ft.to
 40.00 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec.cor., with brass cap, marked
 $\frac{1}{4}$ S 16 in N.half;
 S 21 in S.half; and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N.of cor.
 Thence continue descent on SE.slope, 70 ft.to
 51.10 Descend along NE.slope.
 61.95 Wash, 7 lks.wide, course SE.
 73.25 Top of low ridge, bears NW.and SE.
 77.85 Intersect west bdy.of sac.15, 80 lks.N. $0^{\circ}08'$ E. of old cor.of secs. 15,16,21 and 22, hereinbefore described.
 At the point of intersection, I set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the closing cor. of secs. 16 and 21, with brass cap, marked
 T 21 N S 16 in NW.,
 R 17 W in NE., and
 S 21 in SW. quadrant;
 CC in W.half;
 S 15 in E.half; and
 1915 in S. rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft.base, $1\frac{1}{2}$ ft. high, W.of cor. I change the cor.of secs.15,16,21 and 22, from a cor.of four to a cor.of two secs.
 Land,mountainous.
 Soil, sandy and stony, 4th rate.
 Timber, none.
 Undergrowth, cactus, catclaw, and crucifixion thorns.
-
- 6.40 From cor.of secs.16,17, 20 and 21,
 North, on sectional guide meridian bet. secs.16 and 17.
 Along west slope.
 11.50 Enter bed of wash, course SW.
 22.60 Leave same, course SW. Ascend SE.slope.
 Butte, 60 ft.high,on line. Pass same by offsetting E. 154 lks. Thence north,on offset, 3.00 chains to
 25.60 Offset back, 154 lks.to line.
 26.70 Descend 45 ft.over cliff, bears E.and W.
 27.30 Wash, course E. Ascend 25 ft. on S.slope, and thence over E.slope.

Chains.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for the $\frac{1}{4}$ sec. cor., with brass cap, marked $\frac{1}{4}$ in N. half; S 17 in W. half; S 16 in E. half; and 1915 in S. rim; and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
From cor. ascend on SE. slope.

43.00 Spur slopes E.

47.61 Cliff, bears E. and W. Descend abrupt N. slope, 390 ft. to

61.00 Wash, 25 lks. wide, course N. 80° W. Ascend SW. slope.

67.90 Road to Chloride, bears N. 70° W. and S. 70° E. Telephone line on N. side.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 8, 9, 16 and 17, with brass cap, marked
T 21 N S 8 in NW.,
R 17 E S 9 in NE.,
S 16 in SE., and
S 17 in SW. quadrants; and
1915 in S. rim;
and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Cor. is 125 ft. above wash.
Land, mountainous.
Soil, sandy and stony, 4th rate.
Timber, none.
Undergrowth, cactus, catclaw and thorn.
Feb. 9, 1915.

Feb. 12, 1915:
East, on a random line, bet. secs. 9 and 16.

40.00 Set temp. point.

78.74 Intersect west bdy. of sec. 10, 30 lks. N. $0^{\circ} 48'$ W., of the cor. of secs. 9, 10, 15 and 16, hereinbefore described. Thence I run, N. $89^{\circ} 47'$ W., on a true line, bet. secs. 9 and 16. Ascend NE. slope, 200 ft. to

21.70 Summit of ascent on spur, bears SE. Descend W. slope, 150 ft. to

34.70 Wash, course S. 20° W.

38.74 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for $\frac{1}{4}$ sec. cor., with brass cap, marked $\frac{1}{4}$ S 9 in N. half; S 16 in S. half, and 1915 in S. rim; and raise a mound of stone $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

43.00 Wash, course SE. Ascend NE. slope 200 ft. to

58.00 Summit of ascent on NE. slope.

62.50 Top of ridge, brs. NW. and SE. Descend 440 ft. to

78.74 The cor. of secs. 8, 9, 16 and 17.
Land, mountainous.
Soil, rocks and gravel, 4th rate.
Timber, none.
Undergrowth, greasewood, yucca and cactus.

North, on sectional guide meridian, bet. secs. 8 and 9. Ascend SW. slope 60 ft. to

7.00 Summit of ascent; descend gradually over broken W. slope.

31.00 Wash, 25 lks. wide, course N. 70° W.

34.90 Wash, course W.

39.90 Wash, course W.

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

Chains.

- the ground, for $\frac{1}{4}$ sec.cor., with brass cap, marked
 $\frac{1}{4}$ in N.half;
 S 8 in W.half;
 S 9 in E.half; and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
 W.of cor.
 Ascend S.slope, 35 ft.to
 41.20 Thence descend over NW. slope.
 54.45 Small stream, 2 lks.wide, general course SW. Thence ascend
 25 ft.to
 57.50 Descend NW. slope.
 71.50 Wash, 10 lks.wide, course SW.
 73.00 Spring bears E. about 8.00 chs.dist.
 80.00 Set an iron post, 3 ft.long, 2 ins. in diam., 24 ins. in
 the ground, for the cor.of secs. 4, 5, 8 and 9, with
 brass cap, marked
 T 21 N S 5 in NW.,
 R 17 W S 4 in NE.,
 S 9 in SE., and
 S 8 in SW. quadrants; and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
 W.of cor.
 Land, rolling.
 Soil, sandy and stony, 4th rate.
 Timber, none.
 Undergrowth, cactus, catclaw and thorn.
-
- East, on a true line, bet. secs. 4 and 9.
 Ascend W. slope.
 15.20 Wash, 5 lks.wide, course S.60° W.
 29.00 Wash, 4 lks.wide, course S.85° W.
 32.35 Ridge, brs.N.and S. The head of a gulch draining SE.brs.
 S.4.00 chs. dist. Thence ascending along S. slope.
 40.00 Set an iron post, 3 ft, long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec.cor., with brass cap, marked
 $\frac{1}{4}$ S 4 in N half;
 S 9 in S.half; and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
 N.of cor. Point is 550 ft. above sec.cor.
 From cor. ascend SW.slope, 60 ft.to
 42.70 Top of ridge, bears NW. and SE. Descend NE. slope, 300
 ft.to
 78.80 Intersect west bdy.of sec.10, 158 lks.S.0°30'W., of the
 old cor. of secs. 3, 4, 9 and 10, hereinbefore described.
 At the point of intersection, I set an iron post, 3 ft.
 long, 2 ins. in diam., 24 ins. in the ground, for clos-
 ing cor. of secs. 4 and 9, with brass cap, marked
 T 21 N S 4 in NW.,
 R 17 W in NE., and
 S 9 in SW. quadrants;
 C C in W.half;
 S 10 in E.half; and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
 W.of cor. I change the old cor, of secs. 3, 4, 9 and 10,
 from a cor. of four to a cor. of two secs.
 Land, mountainous.
 Soil, sandy and stony, 4th rate.
 Timber, none.
 Undergrowth, cactus, catclaw and thorn.
 Feb. 12, 1915.
-

Chains.

- Feb. 13, 1915 From cor. of secs. 4, 5, 8 and 9, North, on sectional guide meridian, bet. secs. 4 and 5. Ascend SW. slope 34 ft. to
- 6.00 Descend NW. slope, 30 ft. to
- 8.30 Wash, 35 lks. wide, flows from NE. to W. Ascend S. slope.
- 15.00 Top of butte, 50 ft. above line, bears E. 1 chain dist. Thence ascend SW. slope.
- 26.70 Summit of ascent, 200 ft. above wash. Point is on W. slope of spur. Descend NW. slope 13 ft. to
- 31.00 Wash, 10 lks. wide, course from N. 10° W. to S. 25° W., bears W. 5 lks. dist. Ascend S. slope 150 ft. to
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap, marked $\frac{1}{4}$ in N. half; S 5 in W. half; S 4 in E. half; and 1915 in S. rim; and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
- 55.30 From cor. continue ascent on SW. slope. Same wash, noted at 55.30, 5 lks. wide, drains from NE. to W. Thence ascend SE. slope.
- 66.40 Top of main ridge, 320 ft. above the $\frac{1}{4}$ sec. cor., bears E. and W. Descend NE. slope, 20 ft. to
- 71.65 Wash, 10 lks. wide, course SE. Ascend S. slope, 175 ft. to
- 82.44 Intersect N. bdy. of the Tp. 81 lks. N. 88° 47' E. of the re-established cor. of secs. 4, 5, 32 and 33, hereinbefore described.
- At the point of intersection, I set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for closing cor. of secs. 4 and 5, with brass cap, marked T 22 N R 17 W S 33 in N. half; S 4 R 17 W in SE., and S 5 T 21 N in SW. quadrant; C C in S. half; and 1915 in S. rim; and raise a mound of stone $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, S. of cor. I change the reestablished cors. of secs. 4, 5, 32 and 33, and of quarter sections of secs. 4 and 33 and 5 and 32, to refer to the sections in Township 22 N., only
- Land, mountainous.
Soil, sandy and stony, 4th rate.
Timber, none.
Undergrowth, cactus, catclaw and thorn.

Feb. 13, 1915.
E. O.L.

- T.O.L.
- Feb. 9, 1915. From cor. of secs. 20, 21, 28 and 29, West, on a true line, bet. secs. 20 and 29. Ascending gradually over rolling, mountainous land, on NE. slope.
- 12.50 Top of dyke, brs. N. and S.
- 16.41 Ascend over cliff 50 ft. high. Thence ascend E. slope.
- 19.70 Top of cliff 200 ft. above the sec. cor. Thence over top of mesa, bears N. and S.
- 22.30 W. edge of mesa; descend over cliff 60 ft. high, bears N. and S.
- 25.40 Foot of cliff. Thence descend over SW. slope.
- 30.00 Foot of descent, 170 ft. below mesa, bears NW. and SE. Thence along broken south slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone, for $\frac{1}{4}$ sec. cor., with brass cap, marked, $\frac{1}{4}$ S 20 in N. half; S 29 in S. half; and 1915 in S. rim; and raise a mound of stone $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Impracticable to set cor. in ground on account of stone.

Chains.

From the $\frac{1}{4}$ sec.cor.; descend.
 48.34 Descend over cliff, 20 ft.high, bears N.and S. Thence descend SW.slope.
 53.41 Bottom of gulch, 360 ft.below the $\frac{1}{4}$ sec.cor.,drains S. Ascend broken S.slope.
 70.00 Top of ledge on spur 280 ft. above wash, bears SW. Descend W.slope 260 ft.to
 79.95 Intersect E.bdy.of sec.30, 73 lks.S. $3^{\circ}49'$ E. of the old cor. of secs.19,20,29 and 30. At the point of intersection, I set an iron post, 3 ft.long, 2 ins. in diam, 24 ins. in the ground, for the closing cor.of secs.20 and 29, with brass cap, marked,
 T 21 N in NW.,
 R 17 W S 29 in NE., and
 S 29 in SE.quadrant;
 C C in E half;
 S 30 in W.half; and
 1915 in S rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, E.of cor. I changè the old cor. of secs.19,20,29 and 30,from a cor.of four to a cor.of two secs.
 Land, mountainous.
 Soil, rocks, 4th rate.
 No timber or undergrowth.

From the cor.of secs.19 and 30, I run,
 N. $0^{\circ}01'$ W., bet. secs.19 and 20, measuring from the closing cor. of secs. 20 and 29, 73 lks.S. $3^{\circ}49'$ E.
 Over mountainous land, along a broken W.slope.
 23.50 Descend NW. slope, 265 ft.to
 40.00 Set an iron post, 3 ft.long, 1 in. in diam., in a mound of stone, for $\frac{1}{4}$ sec.cor., with brass cap, marked
 $\frac{1}{4}$ in N.half;
 S 19 in W.half;
 S 20 in E.half; and
 1915 in S.rim;
 and raise a mound of stone $3\frac{1}{2}$ ft. base , $1\frac{1}{2}$ ft. high, W.of cor. Impracticable to set cor.in the ground on account of stone.
 From the $\frac{1}{4}$ sec.cor. descend 12 ft.to
 40.40 Wash, course N. 80° W.
 45.75 Wash, course SW. Ascend broken SE.slope, 250 ft.to
 80.00 Set an iron post, 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for the cor.of secs. 17,18,19 and 20,with brass cap, marked
 T 21 N S 18 in NW.,
 R 17 W S 17 in NE.,
 S 20 in SE., and
 S 19 in SW.quadrant, and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W.of cor.
 Land, mountainous.
 Soil, rocks and gravel, 4th rate.
 No timber or undergrowth.

East, on a random line, bet. secs. 17 and 20.
 40.00 Set temp. point.
 79.80 Fall 4 lks.N.of the cor.of secs. 16,17,20 and 21. Thence I run,
 N. $89^{\circ}58'$ W., on a true line, bet. secs.17 and 20. Over nearly level ground.
 5.00 Ascend SE. slope,115 ft.to
 17.00 Summit of ascent on S.slope of rocky point; descend/

Completion of Subdivision of Township 21 North, Range 17 West.

Chains.

gradually over broken S. slope.
 36.50 Ledge, 10 ft.high, bears N.and S.
 39.90 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec.cor., with brass cap, marked
 $\frac{1}{4}$ S 17 in N.half;
 S 20 in S.half; and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
 N.of cor. Point is 130 ft. below summit at 17.00 chs.
 From cor., descend broken SW. slope.
 48.50 S.edge of cliff.
 69.00 Wash, 560 ft. below the $\frac{1}{4}$ sec.cor., course S. 10° W.
 Ascend E.slope, 110 ft.to
 79.80 The cor.of secs.17,18,19 and 20.
 Land, mountainous.
 Soil, rocks.
 No timber or undergrowth.

Feb. 9,1915.

Feb. 12, 1915.
 West, on a true line, bet. secs.18 and 19.
 Over rocky east slope, mountainous land.
 11.64 Cliff, 10 ft.high, bears N.and S.
 13.55 Top of rocky ridge, 410 ft. above the sec.cor., bears N.
 and S. Descend W. slope, 520 ft.to
 40.00 Set an iron post, 3 ft.long, 1 in. in diam., in a mound
 of stone for the $\frac{1}{4}$ sec.cor., with brass cap, marked,
 $\frac{1}{4}$ S 18 in N.half;
 S 19 in S.half; and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
 N.of cor. Impracticable to set cor. in the ground
 on account of stone.
 From cor. descend over rocky SW. slope, 125 ft.to
 69.80 Ascend over SE. slope of low spur, 60 ft.to
 82.04 Intersect the W.bdy.of Tp. 67 lks.N. $0^{\circ}04'$ E.of reestab.
 cor. of secs. 13,18,19 and 24, which is a malpais
 stone,14x12x5 ins. above ground, marked and witnessed
 as described by the Surveyor General. At the point
 of intersection, I set an iron post 3 ft.long, 2 ins.
 in diam., 24 ins. in the ground, for closing cor. of
 secs. 18 and 19, with brass cap, marked
 T 21 N on N.half;
 C C in E.half;
 S 13 in W. half,
 S 18 in NE.,
 S 19 R 17 W in SE., and
 R 18 W in SW. quadrant; and
 1915 in S.rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
 E.of cor. I change the old sec.cor. from a cor.to four
 to a cor.to two secs., pertaining to R.18 W.,
 Land, mountainous and rolling.
 Soil, rocky and gravelly, 4th rate.
 No timber.

From cor.of secs.17, 18, 19 and 20,
 N. $0^{\circ}01'$ W., bet. secs.17 and 18.
 Over mountainous land, ascending over rocky SE. slope
 665 ft.to
 36.40 Summit of ascent. Thence over rolling top of ridge,
 brs. NE. and SW.
 40.00 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins.
 in the ground for $\frac{1}{4}$ sec.cor., with brass cap, marked
 $\frac{1}{4}$ in N.half;
 S 17 in E.half;

20 Completion of Subdivision of Township 21 North, Range 17 West

Chains.

- S 18 in W.half; and
1915 in S.rim;
and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W.
of cor.
- 50.00 Descend N.slope.
77.74 Wash, course N.80°W.
80.00 Point 670 ft. below the $\frac{1}{4}$ sec.cor. Set an iron post, 3 ft.
long, 2 ins.in diam., 24 ins. in the ground, for cor.
of secs. 7,8,17 and 18, with brass cap, marked
T 21 N S 7 in NW.,
R 17 W S 8 in NE.,
S 17 in SE., and
S 18 in SW.quadrant; and
1915 in S.rim;
and raise a mound of stone $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
W.of cor.
Land, rolling and mountainous.
Soil, rocky and gravelly, 4th rate.
No timber.
-
- 40.00 S.89°58'E., on a random line, bet. secs.8 and 17.
Set temp.point.
80.06 Fall 2 lks.N. of the cor. of secs. 8,9,16 and 17.
Thence I run,
N.89°57'W., on a true line, bet. secs.8 and 17.
Descend over rolling, mountainous land, on SW.slope, through
scattering undergrowth.
- 12.26 Road from Kingman to Chloride, brs. NW. and SE. Telephone
line on N.side.
35.00 Wash, 300 ft. below sec.cor., course NW. Thence over roll-
ing land, rough and broken.
40.03 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in
the ground, for $\frac{1}{4}$ sec.cor., with brass cap, marked
 $\frac{1}{4}$ S 8 in N.half;
S 17 in S.half; and
1915 in S.rim;
and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
N.of cor.
- 55.00 Same wash noted at 35.00 chs., course SW.
62.80 Same wash, course NW.
80.06 The cor.of secs. 7,8,17 and 18.
Land, rolling and mountainous.
Soil, rocky and gravelly, 4th rate.
No timber.
Undergrowth, yucca, cactus, sage and crucifixion thorn.
-
- West, on a true line, bet. secs.7 and 18.
Over rolling, mountainous land, through scattering under-
growth, on broken NW. slope.
- 1.50 Wash, course NW.
40.00 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in
the ground, for $\frac{1}{4}$ sec.cor., with brass cap, marked
 $\frac{1}{4}$ S 7 in N.half,
S 18 in S.half, and
1915 in S.rim;
and raise a mound of stone $3\frac{1}{2}$ ft.base, $1\frac{1}{2}$ ft. high.
N.of cor.
- 50.00 Center of same wash noted ay 1.50 chs., course S.60° W.
81.84 Intersect W.bdy. of $\frac{1}{4}$ p. 52 lks.N.0° 04' E. of reestab.
cor. of secs. 7,12,13 and 18, which is a malpais stone
10x6x5 ins., above ground, marked and witnessed as de-
scribed by the Surveyor General. At the point of
intersection, I set an iron post, 3 ft.long, 2 ins. in
diam., 24 ins.in the ground for closing cor.of secs.
7 and 18, with brass cap, marked,

Chains.

T 21 N in N.half;
 C C in E half;
 S 12 in W.half;
 S 7 in NE.,
 S 18 R 17 W in SE. and
 R 18 W in SW.quadrant; and
 1915 in S.rim;

and raise a mound of stone, 3½ ft. base, 1½ ft. high,
 E.of cor. I change the old sec.cor. to a cor.of two
 secs. pertaining to R.18 W.

Land, rolling mountainous; general slope to west.
 Soil, rocky and gravelly, 4th rate.

No timber.

Undergrowth, yucca, cactus and crucifixion thorn.
 Feb.12, 1915.

Feb. 13, 1915. From cor.of secs. 7,8,17 and 18,
 N.0°01'W. bet. secs. 7 and 8.
 Over rolling, mountainous land, over general SW. slope,
 through scattering undergrowth.

- 2.30 Wash, course W.
- 8.40 Road from Kingman to Chloride, bears E.and W.
- 14.10 Telephone line, brs.N.70°W. and S. 70° E.
- 17.80 Wash, course SW.
- 29.00 Wash, course SW.
- 30.00 Telephone line, bears NW. and SE.
- 35.00 Wash, 250 lks.wide, course SW.
- 40.00 Set an iron post 3 ft.long, 1 in. in diam., in a mound
 of stone, for ¼ sec.cor., with brass cap, marked
 ¼ in N.half
 S 7 in W.half;
 S 8 in E.half; and
 1915 in S.rim;
 and raise a mound of stone, 3½ ft. base, 1½ ft. high,
 W.of cor. Impracticable to set cor,in the ground on
 account of stone.
- 62.60 Top of low butte, 135 ft.above the ¼ sec.cor.
- 66.40 Ascend SE.slope, over mountainous land, 175 ft.to
- 80.00 Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in
 the ground, for the cor.of secs.5,6,7 and 8, with
 brass cap, marked

T 21 N S 6 in NW.,
 R 17 W S 5 in NE.,
 S 8 in SE., and
 S 7 in SW. quadrant; and
 1915 in S.rim;

and raise a mound of stone 3½ ft. base,1½ ft. high,
 W of cor.

Land; rolling and mountainous.
 Soil, sandy and rocky, 4th rate.

No timber.

Undergrowth, yucca, cactus, sage and catclaw.
 Feb. 13, 1915.
 T.O.J.

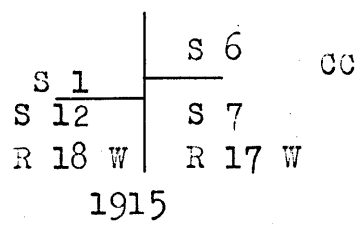
E.O.L.
 Feb.13, 1915.
 The cor.of secs.4,5,8 and 9, bears east from the cor.
 of secs. 5,6,7 and 8, so I run,
 East,on a random line, bet. secs.5 and 8.

- 40.00 Set temp.point.
- 80.34 The cor.of secs.4,5,8 and 9.
 Thence I run,
 West,on a true line, bet. secs. 5 and 8.

Chains.

Descend W.slope.
 11.80 Wash, 100 lks. wide, course S. Ascend E.slope.
 17.00 Thence ascend SE.slope.
 23.00 Ascend E.slope, covered with large boulders.
 39.30 Top of ridge, 360 ft. above wash, bears N. and S.
 40.17 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap, marked,
 $\frac{1}{4}$ S 5 in N. half
 $\frac{1}{4}$ S 8 in S. half; and
 1915 in S. rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
 From cor. descend 315 ft. to
 56.00 Ascend SE.slope, 29 ft. to
 59.30 Top of spur, bears S. Descend W.slope 75 ft. to
 63.60 Wash, 5 lks. wide, course S. 30° W. Ascend SE.slope 25 ft. to
 73.75 Thence along S.slope.
 80.34 The cor. of secs. 5, 6, 7 and 8.
 Land, mountainous.
 Soil, sandy and stony, 4th rate.
 No timber.
 Undergrowth, cactus, catclaw and thorn.

 West, on a true line, bet. secs. 6 and 7.
 Ascend SE.slope 40 ft. to
 2.00 Thence along S.slope.
 11.50 On spur, 50 ft. above sec. cor., bears SW. Descend steep SW. slope.
 32.50 Low spur, brs. SW. Thence descend NW.slope.
 40.00 Point 400 ft. below spur noted at 11.50 chs.
 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap, marked
 $\frac{1}{4}$ S 6 in N. half;
 $\frac{1}{4}$ S 7 in S. half; and
 1915 in S. rim;
 and raise a mound of stone $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, S. of cor. Impossible to place mound north of cor. in the regular manner, no suitable ground being available.
 41.50 Dry wash, 20 lks. wide, course S. 80° W. Thence over slightly descending SW. slope.
 64.86 Telephone line, bears N. 50° W. and S. 50° E.
 65.25 Wash, 20 lks. wide, course S. 60° W.
 81.96 Intersect W. bdy. of Tp. 86 lks. N. $0^\circ 04'$ E. of reestab. cor. of secs. 1, 6, 7 and 12, which is a malpais stone, $8 \times 8 \times 5$ ins. above ground, marked and witnessed as described by the Surveyor General. At the point of intersection, I set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for the closing cor. of secs. 6 and 7, with brass cap, marked,
 T 21 N



and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, E. of cor. I change the old sec. cor. to a cor. of two secs. pertaining to secs. 1 and 12, T. 21 N., R. 18 W.
 Land, mountainous and rolling.
 Soil, sandy and stony, 4th rate in E. half; and 2nd rate in W. half.
 No timber.
 Undergrowth, cactus, catclaw and thorn.
 Mountainous land, 41.50 chs.

Feb. 13, 1915.
 E.O.L.

Chains.

T. O. J. From cor. of secs. 5, 6, 7 and 8,
 N. $0^{\circ}01'$ W., bet. secs. 5 and 6.
 Ascend over mountainous land, over rocky S. slope 130 ft.
 to
 4.60 Top of ridge; descend NW. slope.
 16.10 Top of spur, bears W. Descend NW. slope,
 19.30 Foot of descent 160 ft. below ridge; ascend SW. slope
 360 ft. to
 34.00 Summit of ascent. Thence along west slope.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor., with brass cap, marked,
 $\frac{1}{4}$ in N. half;
 S 6 in W. half;
 S 5 in E. half; and
 1915 in S. rim;
 and raise a mound of stone $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
 W. of cor.
 From cor. ascend on S. slope, 100 ft. to
 45.55 Top of ridge, bears E. and W. Descend N. slope 285 ft. to
 59.16 Bottom of gulch, bears W. Ascend S. slope 450 ft. to
 77.60 Top of ridge, bears E. and W. Descend N. slope.
 80.74 Intersect N. bdy. of Tp., 158 lks. N. $88^{\circ}47'$ E. of the cor.
 of secs. 5, 6, 31 and 32, reestablished, as hereinbefore
 described. At the point of intersection, I set an iron
 post, 3 ft. long, 2 ins. in diam., 24 ins. in the
 ground, for the closing cor. of secs. 5 and 6, with
 brass cap, marked
 T 22 N R 17 W S 32 in N. half;
 S 5 R 17 W in SE., and
 S 6 T 21 N in SW. quadrant;
 C C in S. half; and
 1915 in S rim;
 and raise a mound of stone, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
 S. of cor. I change the reestablished cor. of secs. 5, 6,
 31 and 32 to a cor. of two secs. pertaining to secs. 31
 and 32, and the $\frac{1}{4}$ sec. cor. of secs. 6 and 31 to $\frac{1}{4}$ sec.
 cor. pertaining to sec. 31 only.
 Land. mountainous.
 Soil, rocky, 4th rate.
 No timber.

Feb. 13, 1915.
 T. O. J.

For table of Latitudes and Departures see Book "A."

GENERAL DESCRIPTION.

The portion of this township surveyed by us consists of
 rough, mountainous land, lying in the extreme southern
 part of the Cerbat range of mountains.
 The soil is very rocky, with no vegetation except cactus,
 yucca, catclaw, greasewood and sage.
 There is a spring of good clear water, known locally as
 Coyote Holes, in section 17. The water is piped
 about 20.00 chs. to a trough alongside the Kingman-
 Chloride wagonroad, in section 8.
 There are no settlers in this part of the township.
 Considerable prospecting appears to have been done, but
 no valuable mineral deposits have been developed.

BOOK 3135

26

FOR CERTIFICATE OF UNITED STATES SURVEYOR.
AND UNITED STATES TRANSITMAN

See page 2 of this book, also of book "A"

I, _____, U. S. Surveyor, do solemnly swear that, in pursuance
of special instructions received from the U. S. Surveyor General for _____
bearing date of the _____ day of _____, 191 _____, I have well, faithfully, and truly,
in my own proper person, and in strict conformity with said instructions, the Manual of Surveying
Instructions, and the laws of the United States, surveyed all those parts or portions of _____

_____ of the _____
_____ Meridian, in the State of _____, which are represented in
the foregoing field notes as having been executed by me, and under my direction; and I do further
solemnly swear that all the corners of said survey have been established and perpetuated in strict accord-
ance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor
General for _____ and in the specific manner described in the field notes, and that
the foregoing are the original field notes of such survey.

U. S. Surveyor.

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



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona, *March 9*, 191*8*

The foregoing field notes of the Resurvey of the
West half of the North boundary,
Retracement and Resurvey of part of the Subdivision lines, and com-
pletion of survey of Subdivision lines, all of TOWNSHIP 21 N., R.17 W.,
of the Gila and Salt River Base and Meridian, in the State of Arizona,

executed by Theo. O. Johnston, U. S. Surveyor, and Edward O. Lyman, U. S. Transitman,
under special instructions dated January 6, 1915, for Group 44, ~~191~~, having been
critically examined, and the necessary corrections and explanations made, the said field notes, and the
retracements, resurveys and
surveys they describe, are hereby approved.

U. S. Surveyor General.
of Arizona.

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