

2942

Book "J"  
4-679

Subdivisions

BOOK 2942

# FIELD NOTES

OF THE SURVEY OF THE

Subdivision Lines and

Meanders of the Left Bank of the Colorado River within

Fractional Township 15 North, Range 20 $\frac{1}{2}$  West.

2942

Of the Gila and Salt River Base and Meridian,

In the State of Arizona.

### EXECUTED BY

Otis Ross, U.S. Surveyor

and

John Gonin, U.S. Transitman

2942

~~In the capacity of U.S. Surveyor~~, under instructions dated December 28, 1914,

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

Group No. 42, which were approved by the Commissioner of the General Land

Office, January 22, 1915.

Survey commenced April 25, 1915.

Survey completed May 11, 1915.

Executed under assignment  
Instructions dated April 1, 1915.

Book "J"

Group 42, Arizona

SEE SPECIAL INDEX DIAGRAM

ECCN 2942

# INDEX DIAGRAM.

Township 15 North, Range 20 $\frac{1}{2}$  West.

6	5	4	3	8	2	1	1
			9		8		2
7	8	9	10	9	11	3	12
			11		10		3
18	17	16	15	11	14	4	18
			12		12		4
19	20	21	22	13	23	5	24
					13		5
30	29	28	27		26	6	25
							7
31	32	33	34		35	7	36

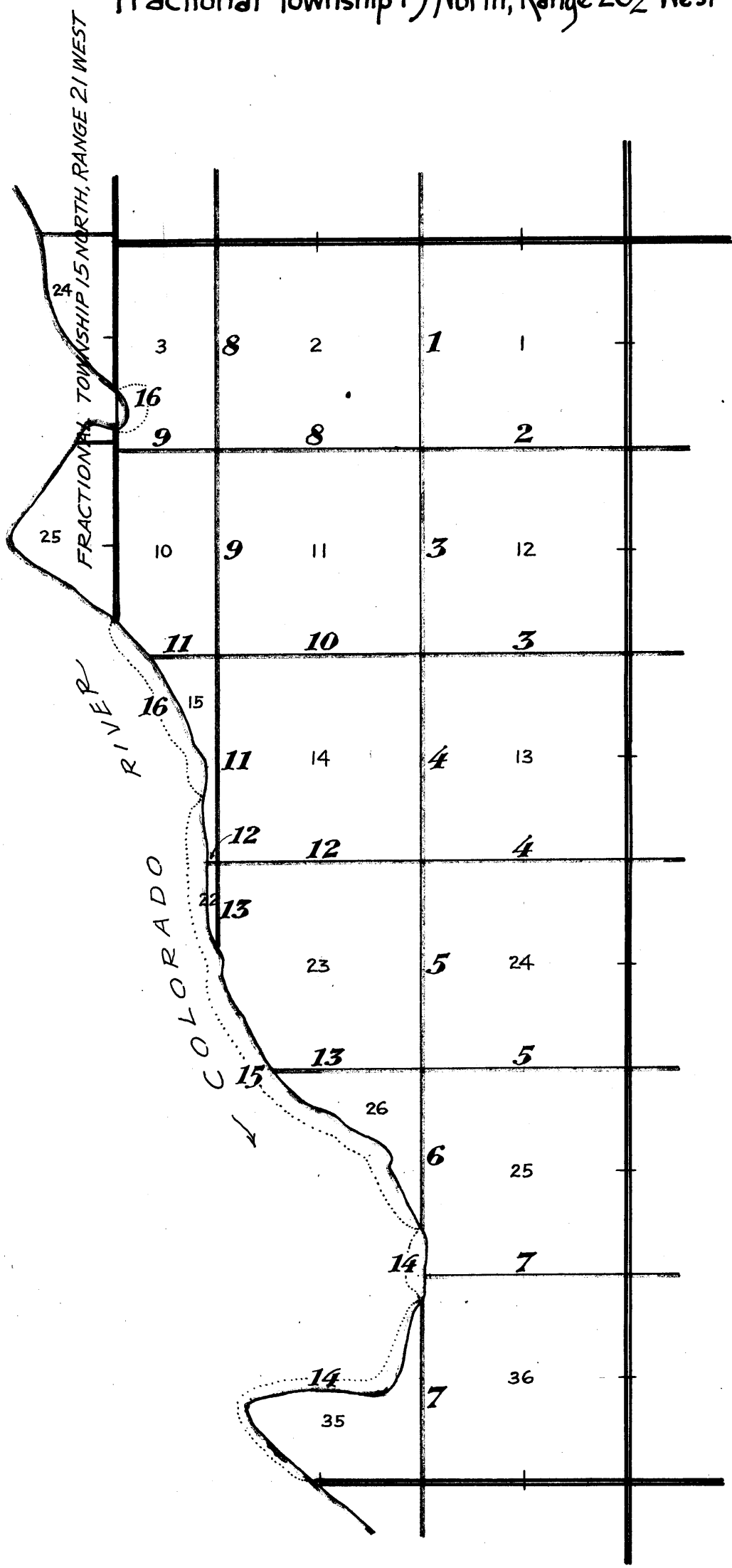
# Book "J"

Group 42 - Arizona

## INDEX-DIAGRAM

BOOK 2042

### Fractional Township 15 North, Range 20 1/2 West



Township Exterior. Notes in Book "A"

Subdivision and Meander Lines surveyed under this Group.

Subdivision of Fractional T. 15 N., R. 20 1/2 W.

Chains

Survey commenced Apr. 25, 1915, and executed jointly by Otis Ross, U. S. Surveyor, and John Gonin, U. S. Transitman, with Young and Sons' light mountain transits, Nos. 8487 and 7636, respectively, with Smith solar attachments. For description of instruments and certificate of approval, see subdivision of Fractional T. 14 N., R. 20 W., in Book "H".

In the following field notes, the initials O.R. and J.G. refer to Otis Ross, U. S. Surveyor, and John Gonin, U. S. Transitman, respectively.

We examine the adjustments of the transits, and find them satisfactory; then, to test the solars by comparing their indications, resulting from solar observations made during a.m. and p.m. hours, with a meridian established by observations on Polaris, we proceed as follows:-

At our camp, near the south bdy. of Sec. 24, Frac. T. 15 N., R. 20 1/2 W., in lat. 34° 37 1/2' N., long. 114° 24' W., at 9 hrs. 0 m., a.m., l.m.t., by our watches, which are set to correct local mean time, we set off 34° 37 1/2' N. on the lat. arcs; 13° 00' N, on the decl. arcs; and determine a meridian with each solar and mark a point in each meridian on pegs driven in the ground, 5 chs. N. of our stations.

At apparent noon, we set off 13° 2' N. on the decl. arcs; and observe the sun on the meridian with each solar; the resulting lats. are 34° 37 1/2' N.

At 3 hrs. 0 m., p.m., l.m.t., we set off 34° 37 1/2' N., on the lat arcs; 13° 5' N., on the decl. arcs; and determine a meridian with each solar. The lines thus determined coincide with the lines determined by a. m. observations.

At 6 hrs. 53.7 m., p.m., l.m.t., we observe Polaris near western elongation, with each transit, and mark a point in the lines thus determined by tacks driven in pegs, 5 chs. N. of our stations.

Apr. 25, 1915.

Apr. 26, 1915. At 6 hrs. 30 m., a.m., l.m.t., we lay off the azimuth of Polaris, 1° 16' to the right, and mark a point in these meridians on the pegs driven in the ground, 5 chs. N. of our stations, on which the points set from a.m., and p.m. solar observations fall .4 ins. W. of the true meridian.

Each solar apparatus, by a.m. and p.m. observations defines positions for meridian 0' 21" W. of the true meridian established by Polaris observations; therefore we conclude that the adjustments of the instruments are satisfactory.

O. R. and J. G.

Apr. 26, 1916.

Apr. 27, 1915. O.R.

From the cor. of secs. 1, 2, 35 and 36, on the N. bdy. of the Tp., which is a stone, established by me, as described in Book "A", I run

S. 0° 1' E., bet. secs. 1 and 2.

Over mountainous land, through scattering undergrowth. Desc. 295 ft. to

9.48 Wash, 20 lks. wide, course W. Asc. NW. slope, 95 ft. to

12.77 Spur, slopes W. Desc. S. slope, 35 ft. to

14.05 Asc. 35 ft. to.

16.80 Desc. 35 ft. to

18.90 Asc. 40 ft. to

23.85 Desc. 75 ft. to

26.85 Gulch, course SW. Asc. 135 ft. to

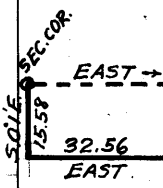
35.20 Spur, slopes SW. Desc. 75 ft.

40.00 Set a malpais stone, 16 x 10 x 5 ins., 11 ins. in the ground, for 1/4 sec. cor., marked 1/4 on W. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

Chains Pits impracticable.  
 - 47.84 Center of wash, 3 chs. wide, course W. Asc. N. slope, 475 ft.  
 - 69.34 Foot of cliff, brs. E. and W. Continue asc. to  
 74.46 Top of cliff. Chemehuevis Mountain Divide, brs. E. and W. Desc. 290 ft.  
 78.51 Foot of cliff, brs. E. and W. Continue desc. to  
 80.00 Set a malpais stone, 18 x 14 x 6 ins., 12 ins. in the ground, for cor. of secs. 1, 2, 11 and 12, marked with 1 notch on E. and 5 notches on S. edge; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.  
 Land, mountainous.  
 Soil, rocky, 4th rate.  
 No timber.  
 Undergrowth, greasewood and palo verde.  
 No grass.  
 Apr. 27, 1915: The sky was overcast at noon, making an observation for lat. impossible. Apr. 27, 1915.

May 5, 1915.

It being impracticable to chain measurement East on random line from the cor. of Secs. 1, 2, 11 and 12, because of perpendicular cliffs, I commence at said sec. cor. and run on offset line as follows:



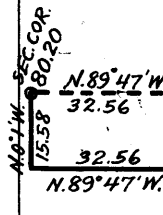
S. 0° 1' E., 15.58 chs.  
 East, 32.56 chs.  
 N. 0° 1' W., 15.58 chs., returning to random line bet. secs. 1 and 12 at

- 32.56 Thence continue measurement on random line East.  
 40.00 Set temp. 1/4 sec. cor.  
 80.20 Intersect E. Bdy. of Tp. 30 lks. N. of the cor. of secs. 1, 6, 7, and 12, which is a stone, established by me as described in Book "A"

Thence I run N. 89° 47' W., on a true line, bet. secs. 1 and 12. Over mountainous land, through scattering undergrowth. Desc. 320 ft. to

12.55 Wash, 50 lks. wide, course N.W. Asc. 25 ft. to  
 15.60 Desc. 75 ft. to  
 25.40 Asc. 10 ft. to  
 26.40 Desc. 35 ft. to  
 30.40 Asc. 10 ft. to  
 33.75 Spur, slopes N.W. Desc. 70 ft. to  
 37.40 Wash, 50 lks. wide, course N.E. Asc. along N. slope.  
 40.10 Set a malpais stone, 18 x 10 x 6 ins., 12 ins. in the ground, for 1/4 sec. cor., marked 1/4 on N. face; and raise a mound of stone 2 ft. base, 1 1/2 ft. high N. of cor. Pits impracticable.

47.64 Foot of steep ascent of Chemehuevis Mt. Divide, brs. N.W. and S.E. Impracticable to continue chaining on true line bet. secs. 1 and 12, therefore offset as follows:  
 S. 0° 1' E., 15.58 chs., Asc. 230 ft. to  
 12.88 Desc. 140 ft. to  
 15.58 Edge of cliff 150 ft. high brs. N. & S thence



N. 89° 47' W., 32.56 chs., Asc, 50 ft. to  
 4.43 Top of Chemehuevis Mt. Divide brs. NW. and S.E. Desc. 490 ft. to  
 32.56 Foot of desc. Thence Ascending 250 ft. to

80.20 The cor. of secs. 1, 2, 11 and 12.  
 Land, mountainous.  
 Soil, rocky, 4th rate.  
 No timber.  
 Undergrowth, greasewood and palo verde  
 May 5, 1915.

Subdivision of Fractional T. 15 N., R. 20 1/2 W. 3

Chains

Apr. 27, 1915.  
 S.0° 1' E., bet. secs. 11 and 12.  
 Over mountainous land, through scattering undergrowth.  
 Desc. 270 ft. to  
 16.05 Gulch, 10 lks. wide, course SE. Asc. 15 ft. to  
 17.30 Desc. 160 ft. to  
 33.67 Center of wash, 2 chs. wide, course SW. Thence over rolling land.  
 40.00 Set a malpais stone, 16 X 8 X 6 ins., 11 ins. in the ground, for 1/4 sec. cor., marked 1/4 on W. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.  
 42.36 Wash, 25 lks. wide, course W. Asc. NW. slope, 20 ft. to  
 49.09 Spur, slopes SW. Desc. 50 ft. to  
 57.28 Wash, 10 lks. wide, course SW. Asc. to  
 60.00 Desc. 25 ft. to  
 64.03 Gulch, 50 lks. wide, course SW. Asc. N. slope, 40 ft. to  
 66.21 Spur, slopes W. Desc. S. slope, 65 ft. to  
 69.65 Asc. 20 ft. to  
 71.85 Desc. 65 ft. to  
 77.32 Center of wash, 1 ch. wide, course W. Asc. N. slope, 75 ft. to  
 80.00 Set a malpais stone, 18 X 8 X 6 ins., 12 ins. in the ground, for cor. of secs. 11, 12, 13 and 14, marked with 1 notch on E. and 4 notches on S. edge; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.  
 Land, rolling and mountainous.  
 Soil, rocky 4th rate.  
 No timber.  
 Undergrowth, greasewood and palo verde.  
 No grass.  
 Apr. 27, 1915.

Apr. 28, 1915: At 8 hrs. 0 m., a.m., 1.m.t., I set off 34° 39' N. on the lat. arc; 13° 57 1/2' N. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 11, 12, 13 and 14.  
 Thence I run  
 S.89° 47' E., on a random line, bet. secs. 12 and 13.  
 40.00 Set temp. 1/4 sec. cor.  
 80.20 Intersect E. bdy. of Tp., 11 lks. S. of the cor. of secs. 7, 12, 13 and 18, which is a rock in place, established by me, as described in Book "A".  
 Thence I run  
 N.89° 52' W., on a true line, bet. secs. 12 and 13.  
 Over mountainous land, through scattering undergrowth.  
 Desc. 120 ft. to  
 21.00 Center of wash, 1 ch. wide, course NW. Asc. 65 ft. to  
 26.40 Spur, slopes S. Desc. 75 ft. to  
 32.95 Center of wash, 2 chs. wide, course SW. Asc. 215 ft. to  
 38.50 Desc. 65 ft.  
 40.10 Point for cor. falls on rock in place, 12 X 14 X 6 ft. above ground. Marka cross(X) at cor. point, with 1/4 N. of same, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable.  
 40.50 Asc. 85 ft. to  
 43.80 Spur, slopes SW. Desc. NW. slope, 160 ft. to  
 47.15 Gulch, 15 lks. wide, course S. Asc. SE. slope, 160 ft. to  
 53.40 Spur, brs. SW. Desc. 375 ft. to  
 74.50 Wash, 50 lks. wide, course NW. Asc. 110 ft. to  
 80.20 The cor. of secs. 11, 12, 13 and 14.  
 Land, mountainous.  
 Soil, rocky, 4th rate.  
 No timber.  
 Undergrowth, greasewood, mesquite, cat claw and cacti.

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Subdivision of Fractional T. 15 N., R. 20 $\frac{1}{2}$  W.

Chains.

	Apr. 28, 1915: At this cor., I set off 14° 00' N. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 34° 39' N. O. R. Apr. 28, 1915.
	May 1, 1915: J. G. S. 0° 1' E., bet. secs. 13 and 14. Over mountainous land, through scattering undergrowth. Asc. 60 ft. to
2.15	Top of spur, brs. N. 45° W. Comes from S. 70° E. Desc. 230 ft. to
15.90	Enter wash, course N. 45° W.
23.00	Leave wash, course N. 45° W. Asc. 170 ft. to
36.00	Main spur, slopes N. 80° W. Desc. abruptly 120 ft. to
40.00	Set a limestone, 14 X 8 X 6 ins., in a mound of stone, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
	Asc. 50 ft. to
48.65	Short spur, slopes W. Thence along W. slope.
54.80	Desc. 70 ft. to
68.90	Center of wash, 1 ch. wide, course SW.
77.00	Desc. 15 ft. to
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of secs. 13, 14, 24 and frac. sec. 23, marked on brass cap 1915 on S. rim; T15N R20 $\frac{1}{2}$ W in N. half; S14 in NW., S13 in NE., S24 in SE. and S23 in SW. quadrant; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Land, mountainous. Soil, rocky, 4th rate. No timber. Undergrowth, greasewood, palo verde and cacti.
	May 1, 1915: At 9 hrs. 30 m., a.m., l.m.t., I set off 34° 38 $\frac{1}{2}$ ' N. on the lat. arc. 14° 53' N. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 13, 14, & 24 and frac. sec. 23 Thence I run S. 89° 52' E., on a random line, bet. secs. 13 and 24.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.00	Intersect E. bdy. of Tp., 19 lks. S. of the cor. of secs. 13, 18, 19 and 24, which is a stone, established by O. R., as described in Book "A". Thence I run West on a true line, bet. secs. 13 and 24. Over mountainous land, through scattering undergrowth. Desc. 520 ft. to
19.80	Foot of desc., brs. N. 30° W., and S. 30° E. Asc. 190 ft. to
38.10	Spur, slopes NW. Desc. 510 ft.
40.00	Set a granite stone, 24 X 8 X 6 ins., 18 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
65.00	Asc. 25 ft. to
68.90	Desc. 70 ft. to
76.00	Wash, 50 lks. wide, course S. 60° W..
80.00	The cor. of secs. 13, 14 & 24 and frac. sec. 23.

Subdivision of Fractional T. 15 N., R. 20 1/2 W.

Chains Land, mountainous.  
 No soil.  
 No timber.  
 Undergrowth, greasewood, palo verde and cacti.  
 May 1, 1915: At this cor., I set off 14° 56' N. on the lat. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 34° 38 1/2' N.  
 May 1, 1915.

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May 3, 1915:  
 At 9 hrs. 3 m., a.m., l.m.t., I set off 34° 38 1/2' N., on the lat. arc; 15° 30' N. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 13, 14, and 24, and frac. sec. 23.  
 Thence I run  
 S. 0° 1' E., bet. sec. 24, and frac. sec. 23.  
 Over rolling land, through scattering undergrowth.  
 4.50 Wash, 50 lks. wide, course S.W.  
 11.50 Center of wash, 1 ch. wide, course W.  
 26.20 Desc. 80 ft. to  
 40.00 Set a malpais stone, 16 x 7 x 6 ins., in a mound of stone, for 1/4 sec. cor., marked 1/4 on W. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.  
 Asc. 125 ft. to  
 61.30 Top of spur, slopes E. Desc. 115 ft. to.  
 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of sec. 24, and frac. secs. 23, 25 and 26, marked on brass cap.  
 1915 on S. rim;  
 T 15 N R 20 1/2 W in N. half;  
 S 23 in N.W.,  
 S 24 in N.E.,  
 S 25 in S.E., and  
 S 26 in S.W. quadrant;  
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.  
 Land, rolling.  
 Soil, rocky, 4th rate.  
 No timber.  
 Undergrowth, greasewood, and palo verde.

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East on a random line, bet. sec. 24, and frac. sec. 25.  
 40.00 Set temp. 1/4 sec. cor.  
 80.04 Intersect E. bdy. of Tp. 14 lks. S. of the cor. of secs. 19, 24, 25 and 30, which is a stone, established by O. R., as described in Book "A".  
 Thence I run  
 S. 89° 54' W., on a true line, bet. sec. 24, and frac. sec. 25.  
 Over mountainous land, through scattering undergrowth.  
 Along S. slope.  
 2.15 Thence over sharp ridges, bearing S. Desc. 65 ft. to  
 5.05 Asc. 55 ft. to  
 14.10 Desc. 130 ft. to  
 23.45 Asc. 80 ft. to  
 28.30 Desc. 55 ft. to  
 33.55 Asc. 60 ft. to  
 37.45 Thence along S. slope.  
 40.02 Point for 1/4 sec. cor. falls on a granite rock in place.  
 Mark a cross (X) at the cor. point, with 1/4 N. of same, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable.  
 Desc. 385 ft.  
 40.55 Cliff, 75 ft. high, hrs. N. and S.  
 64.05 Center of wash, 1 ch. wide, course S. Asc. 85 ft. to  
 68.35 Desc. 15 ft. to  
 69.75 Asc. 55 ft. to  
 80.04 The cor. of sec. 24, and frac. secs. 23, 25, and 26.  
 Land, mountainous.  
 Soil, rocky, 4th rate.  
 No timber.



Subdivision of Fractional T. 15 N., R. 20 1/2 W.

Chains

Undergrowth, greasewood and palo verde.  
May 3, 1915: At this cor., I set off 15° 32' N. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 34° 37 1/2' N.  
May 3, 1915.

May 4, 1915.  
At 8 hrs. 30 m., a.m., l.m.t., I set off 34° 37 1/2' N. on the lat. arc; 15° 47 1/2' N. on the decl. arc; and determine a meridian with the solar at the cor. of Sec. 24, and frac. secs. 23, 25, and 26.

Thence I run  
S. 0° 1' E., bet. frac. secs. 25 and 26.  
Over rolling ridges, through scattering undergrowth.

Asc. 20 ft. to  
4.00 Desc. 185 ft. to  
17.95 Asc. 35 ft. to  
26.00 Desc. 130 ft.  
40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap  
1915 on S. rim;  
1/4 in N.,  
S 25 in E. and  
S 26 in W. half;  
and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.

43.50 Enter bottom land.  
54.50 Center of wash, 1 ch. wide, course S. 60° W.  
62.55 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, on the left bank of the Colorado River, 6 ft. above water level, for meander cor. of frac. secs. 25 and 26, marked on brass cap  
1915 on S. rim;  
T 15 N R 20 1/2 W in N. half;  
M C S. of center;  
S 26 in N. W., and  
S 25 in N.E. sector;  
dig a pit, 36 x 36 x 12 ins., 8 ft. N. of post, and raise a mound of earth, 4 ft. base, 2 ft. high, N. of cor.  
Land, rolling.  
Soil, 1st and 2nd rate.  
No timber.  
Undergrowth, greasewood and palo verde.

To survey line bet. frac. secs. 25 and 36, I commence at the meander cor. of frac. secs. 25 and 26, on left bank of Colorado River and locate the meander cor. of frac. secs. 25 and 36 by means of offset line as follows:  
East 3.05 chs.  
S. 0° 1' E., 17.45 chs. (80. chs. - 62.55 chs.)  
West 1.62 chs. to point on left bank of Colorado River at mean high water mark, where I

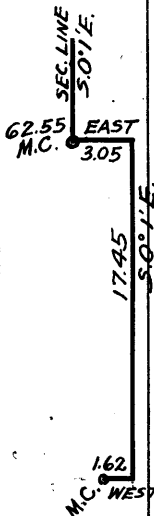
Set an iron post 3 ft. long, 1 in. diam., 26 ins. in the ground, for meander cor. of frac. secs. 25 and 36 marked on brass cap:

1915 on S. rim;  
M C W. of center;  
T 15 N R 20 1/2 W in N. half;  
S 25 in N.E., and  
S 36 in S.E. sector,

dig a pit 36 x 36 x 12 ins., 8 ft. E. of post, and raise a mound of earth, 4 ft. base, 2 ft. high E. of cor.

Thence I run  
N. 89° 54' E., on a random line, bet. frac. secs. 25 and 36.

38.57 Set temp. 1/4 sec. cor.  
78.75 Intersect E. bdy. of Tp., 14 lks. S. of the cor. of secs. 25, 30, 31 and 36, which is an iron post, established



Subdivision of Fractional T. 15 N., R. 20 1/2 W.

Chains by O.R., as described in Book "A".  
 Thence I run  
 S. 89° 48' W., on a true line, bet. frac. secs. 25 and 36  
 Over rolling land, through scattering undergrowth:  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for 1/4 sec. cor., marked on brass cap  
 1915 on S. rim;  
 S 25 in N.,  
 S 36 in S, and  
 1/4 in W. half;  
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 N. of cor. Pits impracticable.  
 78.75 The meander cor. of frac. secs. 25 and 36.  
 From this cor., an abandoned house brs. S. 52° 5' E.,  
 5 chs. dist.  
 Land, rolling.  
 Soil, 1st, 2nd and 3rd rate.  
 No timber.  
 Undergrowth, greasewood and palo verde.

To survey line bet. frac. secs. 35 and 36, I commence at  
 the meander cor. of frac. secs. 25 and 36, on left  
 bank of Colorado River and locate the meander cor. of  
 frac. secs. 35 and 36, by means of offset line as  
 follows:

- N. 89° 48' E., 1.62 chs.
- S. 0° 1' E., 10.31 chs.
- S. 89° 48' W., 3.05 chs., (1.62 chs. + 1.43

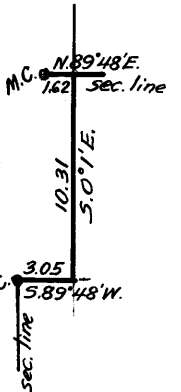
chs.) to a point  
 on left bank of Colorado River, where I  
 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, on the left bank of the Colorado River, at  
 mean high water mark, for meander cor. of frac. secs.  
 35 and 36, marked on brass cap  
 1915 on S. rim;  
 M C N. of center;  
 T 15 N R 20 1/2 W in S. half;  
 S 36 in S.E., and  
 S 35 in S.W. quadrant;  
 dig a pit, 36 x 36 x 12 ins., 8 ft. S. of post, and  
 raise a mound of earth, 4 ft. base, 2 ft. high, S. of  
 cor.

Thence I run  
 S 0° 1' E., on a random line bet. frac. secs. 35 and 36.  
 29.69 (40:00 chs. - 10.31 chs.) Set temp. 1/4 sec. cor.  
 69.39 Intersect the S. bdy. of the Tp., 10 lks. W. of the cor.  
 of sec. 1, and frac. secs. 2, 35, and 36, which is an  
 iron post, established by O. R., as described in  
 Book "A".

Thence I run  
 N. 0° 6' W., on a true line, bet. frac. secs. 35 and 36.  
 Over rolling and mountainous land, through scattering  
 undergrowth.  
 Asc. 30 ft. to  
 3.50 Top of asc., brs. E. and W. Desc. gradually 165 ft. to  
 39.95 Enter bottom land.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for 1/4 sec. cor., marked on brass cap  
 1915 on S. rim;  
 1/4 in N.,  
 S 36 in E., and  
 S 35 in W. half;

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 W. of cor. Pits impracticable.  
 69.39 The meander cor. of fractional secs. 35 and 36.  
 Land, rolling and level. Soil, 1st and 2nd rate.  
 No timber. Undergrowth, greasewood, palo verde & cacti.

O.R. on the ...  
 From cor. of secs. 2 & 35 and frac. secs. 3 & 34 on N. bdy. of  
 the Tp., established by me as described in book "A", I run,

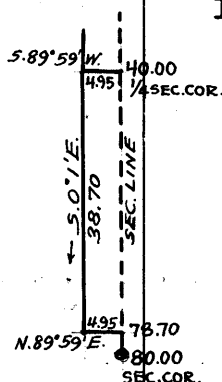
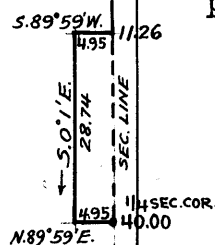


Chains S. 0° 1' E., bet. sec. 2 and frac. sec. 3.  
Over mountainous land through scattering undergrowth.  
Asc. 155 ft. to.

11.26 Chemehuevis Mt. Divide bears E. and W. As it is impracticable to continue chaining on sec. line S. from this point I run offset line in frac. sec. 3, as follows:  
S. 89° 59' W., 4.95 chs. Desc. 46 ft. thence  
S. 0° 1' E., 28.74 chs. Desc. 180 ft. to  
17.07 Wash 50 lks. wide, course S.W. thence desc. 100 ft. to  
28.74 Foot of desc., thence  
N. 89° 59' E., 4.95 chs. Asc. 120 ft. returning to sec. line at

40.00 where I set a malpais stone, 22 x 10 x 4 ins., 17 ins., in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
Impracticable to chain measurement S. from  $\frac{1}{4}$  sec. cor. therefore run on offset line in frac. sec. 3 as follows:  
S. 89° 59' W., 4.95 chs., Desc. 120 ft. thence  
S. 0° 1' E., 38.70 chs. Asc. 95 ft. to  
17.12 Top of spur slopes S.W., thence desc. 45 ft. to  
19.61 Wash, 10 lks. wide course S.W. Asc. 125 ft. on N.W. slope to  
27.40 Top of spur slopes W., thence desc. 100 ft. over cliffs.  
34.00 Foot of cliffs; thence ascend 20 ft. to  
38.70 Thence  
N. 89° 59' E., 4.95 chs., Ascending 150 ft. to a point on sec. line at

78.70 Thence continue S. 0° 1' E., on sec. line. Along W. slope  
80.00 Set a granite stone, 18 x 16 x 8 ins., in a mound of stone, for cor. of secs. 2 and 11, and frac. secs. 3 and 10, marked with 2 notches on E., and 5 notches on S. edges; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high W. of cor. Pits impracticable.  
In the W. half of sec. 2 are a number of high pointed peaks, known as "The Needles."  
Land, mountainous. Soil, 4th rate.  
No timber.  
Undergrowth, greasewood, catclaw and cacti. No grass.  
May 4, 1915.



May 5, 1915: At 8 hrs. 5 m., a.m., l.m.t., I set off 34° 40' N. on the lat. arc; 16° 4 $\frac{1}{2}$ ' N, on the decl. arc; and determine a meridian with the solar at the cor. of secs. 2 and 11, and frac. secs. 3 and 10.

Thence I run  
East on a random line, bet. secs. 2 and 11.  
40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
80.00 Intersect N. and S. line at the cor. of secs. 1, 2, 11 and 12.  
Thence I run  
West on a true line, bet. secs. 2 and 11.  
Over mountainous land, through scattering undergrowth.  
Desc. 35 ft. to  
2.30 Asc. 50 ft. to  
5.00 Desc. 30 ft. to  
7.10 Asc. E. slope, 90 ft. to  
12.61 Cliff spur, slopes S. Desc. 430 ft. to  
27.76 Center of Wash, 50 lks. wide, course SW.  
Asc. E. slope, 20 ft. to  
30.85 Spur, slopes SW. Desc. 100 ft. to  
39.03 Wash, 50 lks. wide, course S.E. Asc. 145 ft.  
40.00 Set a malpais stone, 16 x 12 x 8 ins., 11 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high N. of cor.

Subdivision of Fractional T. 15 N., R. 20 $\frac{1}{2}$  W.

Chains Pits impracticable

47.67 Spur, slopes S.W. Desc. 220 ft. to

53.23 Wash, course S.W. Asc. 15 ft. to

55.83 Spur, slopes S.W. Desc. 55 ft. to

69.77 Center of wash, 5 chs. wide, course S.W. Asc. S.E. slope, 335 ft.

76.73 Foot of cliff, 235 ft. high.

79.80 Top of cliff, brs. N. and S.

80.00 The cor. of secs. 2 and 11, and frac. secs. 3 and 10. Land, mountainous. Soil, rocky, 4th rate. No timber. Undergrowth, greasewood and palo verde.

May 5, 1915: At this cor., I set off 16° 7' N. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 34° 40' N.

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May 10, 1915: At 9 hrs. 3 m., a.m., l.m.t., I set off 34° 40' N. on the lat. arc; 17° 28' N. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 2 and 11, and frac. secs. 3 and 10 Thence I run West on a true line, bet. frac. secs. 3 and 10. Over mountainous land, through scattering undergrowth. Desc. 640 ft. to

39.24 Intersect E. bdy. of frac. T. 15 N., R. 21 W., 2.90 chs. S. of the cor. of frac. secs. 24 and 25, which is an iron post, established by me, as described in Book "A" Point for closing cor. falls on rock in place 8 x 8 x 6 ft. above ground. Mark a cross (X) at the exact point for closing cor. of frac. secs. 3 and 10, marked C C E. of cross, with 1 notch N. and 5 notches S. of same; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, E. of cor. Pits impracticable. Land, mountainous. Soil, rocky, 4th rate. No timber. Undergrowth, greasewood and palo verde. No grass. May 10, 1915.

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May 11, 1915: At 7 hrs. 55 m., a.m., l.m.t., I set off 34° 40' N., on the lat. arc; 17° 43 $\frac{1}{2}$ ' N. on the decl. arc; and determine a meridian with the solar at cor. of secs. 2 and 11 and frac. secs. 3 and 10. Thence I run S. 0° 1' E., bet. sec. 11 and frac. sec. 10. Over mountainous land, through scattering undergrowth. Asc. 25 ft. to

.75 Cliff spur, slopes W. Desc. 385 ft. to

12.25 Enter wash, course S.W.

32.50 Leave wash, course S.W. Asc. 70 ft. to

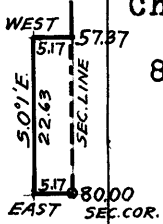
35.70 Desc. 25 ft. to

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked on brass cap 1915 on S. rim;  $\frac{1}{4}$  in N., S 11 in E., and S 10 in W. half; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor. Pits impracticable. Asc. 70 ft., over rolling sand hills, to

51.45 Desc. 55 ft. to

57.37 Foot of cliff, brs. N.W. and S.E. Impracticable to continue South on sec. line from this point, therefore run on offset line in frac sec. 10 as follows: West 5.17 chs. Asc. 45 ft., thence S. 0° 1' E, 22.63 chs. Desc. 147 ft. to 9.61 Wash 20 lks. wide, course S.W., Desc. 40 ft. to 22.63 Thence

Subdivision of Fractional T. 15 N., R. 20<sup>1</sup> W.



Chains

East 5.17 chs., Ascending 190 ft. over cliffs to.

80.00

Set a granite stone, 16 x 14 x 8 ins., in a mound of stone, for cor. of secs. 11 and 14, and frac. secs. 10 and 15, marked with 2 notches on E. and 4 notches on S. edge; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.

Land, mountainous.

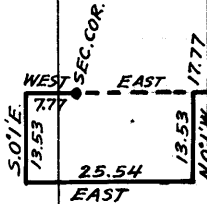
Soil, rocky, 4th rate.

No timber.

Undergrowth, greasewood and palo verde.

May 11, 1915.

Apr. 28, 1915. It being impracticable to chain measurement East on random line from cor. of secs. 11 and 14 and frac. secs. 10 and 15, on account of cliffs, I run on offset line as follows:



West 7.77 chs.,  
S. 0° 1' E., 13.53 chs.,  
East 25.54 chs.,  
N. 0° 1' W., 13.53 chs., to point on random

line at

17.77 Thence East, on random line bet. secs. 11 and 14.

40.00 Set temp. 1/4 sec. cor.

80.00 Intersect N. and S. line, at the cor. of secs. 11, 12, 13, and 14.

Thence I run

West on a true line, bet. secs. 11 and 14.

Over mountainous land, through scattering undergrowth.

Asc. to

5.67 Spur, slopes N.W. Desc. S.W. slope, 210 ft. to.

21.34 Center of wash, 1 ch. wide, course N.W. Asc. N.E. slope, 65 ft. to

40.00 Set a granite stone, 16 x 8 x 6 ins. 11 ins. in the ground, for 1/4 sec. cor., marked 1/4 on N. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable.

Desc. 65 ft. to

45.00 Thence along S. slope.

50.30 Desc. 115 ft. to

54.56 Wash, 50 lks. wide, course S.W. Asc. 165 ft. to

62.23 Foot of cliff, brs. N. E. and S. W. It being impracticable to continue chaining West from this point on sec. line, I offset in sec. 14 as follows:

S. 0° 1' E., 13.53 chs. Desc. 95 ft., thence West 25.54 chs

9.77 Asc. 35 ft. to

12.77 Top of ascent. Thence along S. slope.

14.37 Desc. 60 ft. to

20.54 Enter wash, 6 chs. wide, course N.W.

25.54 Bank of wash, thence N. 0° 1' E., 13.53 chs. In wash 6 chs. wide, course N.W.

7.60 Leave wash. Asc. along W. slope to

13.53 Thence

East 7.77 Ascending 150 ft. to

80.00 The cor. of secs. 11 and 14, and frac. secs. 10 and 15.

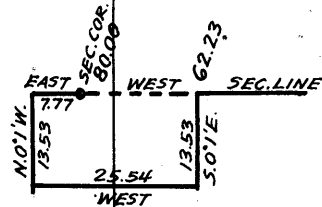
Land, mountainous.

Soil, rocky, 4th rate.

No timber.

Undergrowth, greasewood and palo verde.

Apr. 28, 1915.

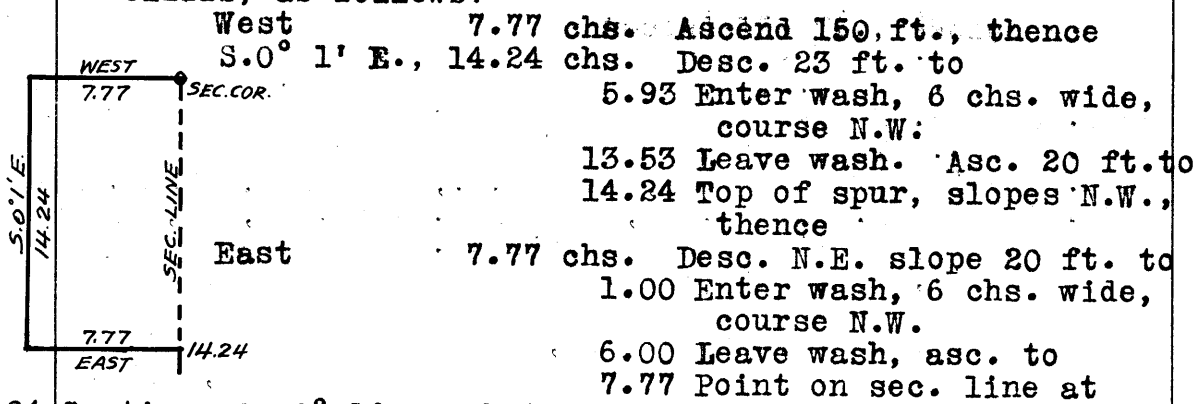


Subdivision of Fractional T. 15 N., R. 20 1/2 W.

Chains

May 11, 1915:  
 West on a true line, bet. frac. secs. 10 and 15.  
 Over mountainous land, through scattering undergrowth.  
 Desc. over cliffs, 190 ft.  
 5.18 Leave cliffs, desc. over sand hills.  
 25.11 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, on the left bank of the Colorado River, at mean high water mark, for meander cor. of frac. secs. 10 and 15, marked on brass cap  
 1915 on S. rim;  
 M C W. of center;  
 T 15 N R 20 1/2 W in N. half;  
 S 10 in N.E., and  
 S 15 in S.E. sector;  
 dig a pit, 36 x 36 x 12 ins., 8 ft. E. of post, and raise a mound of earth, 4 ft. base, 2 ft. high, E. of cor.  
 Land, Mountainous.  
 Soil, rocky, 4th rate, and sandy, 3rd rate.  
 No timber.  
 Undergrowth, greasewood and palo verde.  
 May 11, 1915: At this cor., I set off 17° 45 1/2' N., on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 34° 39' N.

It being impracticable to chain measurement South on sec. line from cor. of secs. 11 and 14, and frac. secs. 10 and 15, I offset from said cor. to avoid impassable cliffs, as follows:



- 14.24 Continue S. 0° 1' E., bet. sec. 14 and frac. sec. 15. Asc. 20 ft. to
- 15.26 Top of spur, slopes W. Desc. 65 ft. to,
- 18.78 Split in wash 6 chs. wide from S.E. One course N.W., and the other S.W.
- 23.50 Asc. 150 ft. to
- 27.82 Cliff spur, slopes N.W. Desc. slightly to
- 33.64 Wash, 50 lks. wide, course W. Asc. 25 ft. to
- 36.27 Spur, slopes S.W. Desc. 95 ft.
- 40.00 Set a granite stone, 18 x 10 x 5 ins., in a mound of stone, for 1/4 sec. cor., marked 1/4 on W. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.
- 49.00 Asc. 35 ft. to
- 50.15 Desc. 110 ft. to
- 54.04 Center of wash, 2 chs. wide, course N.W. Asc. 70 ft. to
- 56.22 Cliff ridge, brs. N.W. and S.E. Desc. 105 ft. to
- 59.13 Wash, 50 lks. wide, course N.W. Asc. 40 ft. to
- 71.44 Spur, slopes S.W. Desc. 55 ft. to
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of sec. 14, and frac. secs. 15, 22, and 23, marked on brass cap,

Chains

1915 on S. rim;  
 T 15 N R 20 $\frac{1}{2}$  W. in N. half;  
 S 15 in N.W.,  
 S 14 in NE.,  
 S 23 in S.E., and  
 S 22 in S. W., quadrant;  
 and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high,  
 W. of cor. Pits impracticable.

Land, Mountainous.

Soil, rocky, 4th rate.

No timber.

Undergrowth, greasewood, palo verde and mesquite.

May 11, 1915.

O. R.

May 1, 1915: J. G.

East on a random line, bet. sec. 14 and frac. sec. 23.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.79.86 Intersect N. and S. line, at the cor. of secs. 13, 14,  
and 24, and frac. sec. 23.

Thence I run

West on a true line, bet. sec. 14 and frac. sec. 23.

Over rolling ridges, through scattering undergrowth.

28.75 Center of wash, 80 lks. wide, course S. 70° W.

39.93 Set a granite stone, 20 x 10 x 8 ins., in a mound of stone  
for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; and raise a  
mound of stone 2 ft. base, 1 $\frac{1}{2}$  ft. high, N. of cor.  
Pits impracticable.

Desc. 15 ft. to

43.00 Asc. 25 ft. to

47.00 Desc. 55 ft. to

52.00 Asc. 110 ft. to

60.50 Point of long spur, from N.E., slopes S. Desc. 215 ft. to

79.86 The cor. of sec. 14, and frac. secs. 15, 22, and 23.

Land, rolling and mountainous.

Soil, rocky 4th rate.

No timber.

Undergrowth, greasewood, palo verde and cacti.

May 1, 1916.

J. G.

May 11, 1915: O. R.

West on a true line, bet. frac. secs. 15 and 22.

Over bottom land, through dense undergrowth.

3.24 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
ground, on the left bank of the Colorado River, at  
mean high water mark, for meander cor. of frac. secs.  
15 and 22, marked on brass cap

1915 on S. rim;

M C W. of center;

T 15 N R 20 $\frac{1}{2}$  W in N. half;

S 15 in N.E., and

S 22 in S.E. sector;

dig a pit, 36 x 36 x 12 ins., 8 ft. E. of post, and  
raise a mound of earth, 4 ft. base, 2 ft. high, E. of  
cor.

Land, level bottom.

Soil, sandy, 3rd rate.

No timber.

Undergrowth, mesquite, palo verde, cat claw, willow and  
arrow-weed.

Subdivision of Fractional T. 15 N., R. 20 $\frac{1}{2}$  W. 13.

Chains

From the cor. of sec. 14 and frac. secs. 15, 22 and 23, I run, S. 0° 1' E., on a true line, bet. frac. secs. 22 and 23. Over bottom land, through dense undergrowth.

29.00 Leave bottom land, brs. NW. and SE. Asc. 70 ft. to

31.75 Spur, slopes SW. Desc. 45 ft. to

32.87 Set a malpais stone, 20 X 10 X 10 ins., in a mound of stone, on the left bank of the Colorado River, at mean high water mark, for meander cor. of frac. secs. 22 and 23, marked MC on S., with 2 notches on E. edge; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.

Land, level and mountainous.  
Soil, sandy 3rd rate, and rocky, 4th rate.  
No timber.  
Undergrowth, arrow-weed, mesquite, cat claw, and willow.  
No grass.

O. R.  
May 11, 1915.

May 3, 1915: J. G.

From the cor. of sec. 24 and frac. secs. 23, 25 and 26, I run, West on a true line, bet. frac. secs. 23 and 26. Over mountainous land, through scattering undergrowth.

Desc. gradually 185 ft. to

27.70 Asc. 70 ft. to

30.60 Ridge, brs. N. and S. Desc. 120 ft. to

39.00 Enter bottom land.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked on brass cap  
1915 on S. rim;  
S23 in N.,  
S26 in S. and  
 $\frac{1}{4}$  in W. half;  
dig pits, 18 X 18 X 12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3 $\frac{1}{2}$  ft. base, 1 $\frac{1}{2}$  ft. high, N. of cor.

58.40 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, on the left bank of the Colorado River, 15 ft. above water line, for meander cor. of frac. secs. 23 and 26, marked on brass cap  
1915 on S. rim;  
MC W. of center;  
T15N R20 $\frac{1}{2}$ W in N. half;  
S23 in NE., and  
S26 in SE. sector;  
dig a pit, 36 X 36 X 12 ins., 8 ft. E. of post, and raise a mound of earth, 4 ft. base, 2 ft. high, E. of cor.

Land, level and mountainous.  
Soil, 1st and 2nd rate on bottom land; 3rd and 4th rate on mountains.  
No timber.  
Undergrowth, greasewood, palo verde and mesquite.

J. G.  
May 3, 1915.



Meanders of the Left Bank of the Colorado River  
within, Fractional T. 15 N., R. 20 $\frac{1}{2}$  W.

14

Meanders of the left bank of the Colorado River, up stream.

May 4, 1915, J. G.

I commence at the meander cor. of frac. secs. 2 and 35, on the S. bdy. of the Tp., which is an iron post, established by me, as described in Book "A".

Thence I run with meanders in frac. sec. 35.

Over bottom land, through dense undergrowth.

N. 42 $\frac{3}{4}$ <sup>o</sup> W. 9.30 chs.

N. 30 $\frac{1}{2}$ <sup>o</sup> W. 7.40 "

N. 50<sup>o</sup> W. 5.90 "

N. 44<sup>o</sup> W. 11.20 "

N. 22 $\frac{1}{2}$ <sup>o</sup> W. 1.80 "

N. 35<sup>o</sup> W. 4.40 "

N. 34 $\frac{1}{2}$ <sup>o</sup> E. 2.20 "

N. 69 $\frac{1}{4}$ <sup>o</sup> E. 6.50 "

N. 74 $\frac{1}{2}$ <sup>o</sup> E. 5.20 "

N. 79 $\frac{1}{4}$ <sup>o</sup> E. 7.10 "

N. 89 $\frac{1}{4}$ <sup>o</sup> E. 8.90 "

Along water's edge.

Asc. over broken cliffs, 75 to 100 ft. above water.

May 4, 1915.

May 5, 1915: At 8 hrs. 7 m., a.m., l.m.t., I set off 34<sup>o</sup> 36' N. on the lat. arc; 16<sup>o</sup> 4 $\frac{1}{2}$ ' N. on the decl. arc; and determine a meridian with the solar.

Thence I continue with meanders in frac. sec. 35

S. 78 $\frac{3}{4}$ <sup>o</sup> E. 9.00 chs. Over cliffs, 100 ft. above water. On this course, desc. 80 ft. to 3.60 chs., and asc. 120 ft. to 8.30 chs.

S. 87 $\frac{3}{4}$ <sup>o</sup> E. 18.40 " Desc. 130 ft. to 9.90 chs., thence over level land.

N. 27<sup>o</sup> E. 13.80 " Through dense undergrowth.

N. 14<sup>o</sup> 57' E. 23.10 To the meander cor. of frac. secs. 35 and 36.

Land, level and mountainous.

Soil, on bottom land, 1st and 2nd rate; on cliffs, 4th rate.

No timber.

Undergrowth, greasewood, palo verde, arrow-weed, and mesquite.

May 5, 1915: At this cor., I set off 16<sup>o</sup> 7' N. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 34<sup>o</sup> 36 $\frac{1}{2}$ ' N.

Thence in frac. sec. 36.

Over level land, through dense undergrowth.

N. 18 $\frac{1}{2}$ <sup>o</sup> E. 3.70 chs.

N. 0<sup>o</sup> 10' E. 6.78 " To the meander cor. of frac. secs. 25 and 36.

Land, level.

Soil, sandy loam, 1st and 2nd rate.

No timber.

Undergrowth, greasewood, mesquite and arrow-weed.

Thence in frac. sec. 25.

Over level land, through dense undergrowth.

N. 6 $\frac{3}{4}$ <sup>o</sup> E. 7.90 chs.

N. 12<sup>o</sup> 57' W. 9.68 " To the meander cor. of frac. secs. 25 and 26.

Land, level.

Soil, sandy loam, 1st and 2nd rate.

No timber.

Undergrowth, greasewood, willow, mesquite and catclaw.

Meanders of the Left Bank of the Colorado River

within Fractional T. 15 N., R. 20 $\frac{1}{2}$  W.

15.

Meanders of the left bank of the Colorado River, up stream. Thence in frac. sec. 26.

Over level land, through dense undergrowth.

N. 19° W. 6.00 chs.  
N. 24 $\frac{1}{4}$ ° W. 9.20 " At 1.25 chs. on this course, wash, 1 ch. wide, course W.

N. 34° W. 6.70 "

N. 40 $\frac{1}{4}$ ° W. 8.30 "

N. 56 $\frac{3}{8}$ ° W. 2.60 On this course, asc. 45 ft. to top of Mohave Rock, in bend of River.

N. 48 $\frac{3}{4}$ ° E. 4.70 " Desc. 55 ft. from Mohave Rock, to 4.70 chs.; thence over level land.

N. 21° W. 3.20 "

N. 65 $\frac{3}{4}$ ° W. 34.80 "

N. 39° 24' W. 19.20 " To the meander cor. of frac. secs. 23 and 26.

Land, level bottom.

Soil, 1st and 2nd rate, sandy loam.

No timber of any size.

Undergrowth, greasewood, mesquite, willow and cat-claw.

May 5, 1915.

May 6, 1915: At 7 hrs. 50 m., a.m., l.m.t., I set off 34° 37 $\frac{1}{2}$ ' N. on the lat. arc; 16° 21 $\frac{1}{2}$ ' N. on the decl. arc; and determine a meridian with the solar at the meander cor. of frac. secs. 23 and 26.

Thence I run with meanders in frac. sec. 23.

Over level bottom land, through dense undergrowth.

N. 39 $\frac{3}{4}$ ° W. 9.50 chs.

N. 28° W. 27.40 " At 23.90 chs. on this course, leave bottom land, and asc. over broken cliffs.

N. 16 $\frac{3}{4}$ ° E. 6.90 "

N. 33 $\frac{1}{4}$ ° W. 5.10 "

N. 21 $\frac{1}{2}$ ° W. 5.02 " To the meander cor. of frac. secs. 22 and 23.

Land, level bottom and broken cliffs.

Soil, sandy loam, 1st and 2nd rate; and rocky, 4th rate.

No timber.

Undergrowth, greasewood, mesquite and cat claw.

Thence in frac. sec. 22.

Over broken cliffs, through scattering undergrowth.

N. 14 $\frac{1}{2}$ ° W. 8.00 chs. At 5.40 chs. on this course, enter bottom land.

N. 2 $\frac{3}{4}$ ° W. 25.10 " To the meander cor. of frac. secs. 15 and 22.

Land, level bottom and broken cliffs.

Soil, sandy loam, 1st and 2nd rate; and rocky, 4th rate.

No timber.

Undergrowth, greasewood, mesquite and cat claw.

May 6, 1915: At this cor., I set off 16° 24' N. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 34° 38 $\frac{1}{2}$ ' N.

Thence in frac. sec. 15.

Over level land, through dense undergrowth.

N. 3 $\frac{1}{2}$ ° W. 9.80 chs.

North. 12.50 chs. Over low broken cliffs.

N. 76 $\frac{1}{2}$ ° E. 2.60 " Over broken ridge.

## Meanders of the Left Bank of the Colorado River

within Fractional T. 15 N., R. 20<sup>1</sup> W.

Meanders of the left bank of the Colorado River, up stream.

N.  $8\frac{1}{2}^{\circ}$  W. 18.20 chs. Through dense undergrowth,  
over bottom land.  
N.  $49\frac{1}{8}^{\circ}$  W. 3.80 " Over low, broken ridges.  
N.  $4^{\circ}$  W. 2.50 " Over low, broken ridges.  
N.  $2\frac{1}{8}^{\circ}$  E. 6.70 " Over low, broken ridges.  
N.  $33\frac{3}{4}^{\circ}$  W. 33.01 " To the meander cor. of fracl.  
secs. 10 and 15. At 0.50 chs. on this course, enter level  
bottom land.  
Land, level bottom and low broken ridges.  
Soil, sandy 3rd rate.  
No timber.  
Undergrowth, mesquite, cat claw, willow and arrow-weed.  
Poor grass.

J. G.  
May 6, 1915.

May 11, 1915. O. R.

Thence in frac. sec. 10.

Over bottom land, through dense undergrowth.

N.  $46\frac{3}{4}^{\circ}$  W. 13.40 chs. At 10.00 chs. on this course,  
leave bottom land; thence  
over broken bluffs.

N.  $41\frac{1}{2}^{\circ}$  W. 6.50 " To the meander cor. of fracl.  
secs. 10 and 25, described in book "A".

Land, level and broken.

Soil, sandy loam, 1st and 2nd rate; and rocky, 4th rate.

No timber.

Undergrowth, greasewood, mesquite, willow, cat claw and  
arrow-weed.

May 11, 1915.

Meanders of the left bank of the Colorado River, down stream.

May 8, 1915.

From the meander cor. of fracl. secs. 3 and 24, described  
in book "A", I run with meanders in frac. sec. 3.

Over broken cliffs, through scattering undergrowth.

S.  $15^{\circ}$  E. 7.07 chs.

S.  $25\frac{1}{2}^{\circ}$  E. 3.52 " Leave broken, enter bottom land.  
Enter dense undergrowth.

S.  $28\frac{1}{2}^{\circ}$  W. 7.07 " To the meander cor. of fracl.  
secs. 3 and 24, described in

Land, level bottom and broken. (book "A").

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

No timber.

Undergrowth, mesquite, cat claw and arrow-weed.

No grass.

O.R.  
May 8, 1915.

## GENERAL DESCRIPTION.

The northern half of this fractional Tp. is very rough  
consisting of numerous needle peaks known as the Needles.  
The gulches have cliff walls for banks, and all the hills  
have perpendicular drops of from 40 to 400 ft. The hills  
have no soil, but are malpais rock.

The south half breaks into low, sandy hills, and supports  
a scattering growth of greasewood, palo verde and mesquite.

This Tp. is bounded on the west by the Colorado River,  
which in the north half has no bottom land, but runs  
through gorges with perpendicular sides, while in the  
extreme south, through secs. 25 and 36, the bottom land

is about one-half of a mile wide, and supports a dense growth of mesquite, cat claw, willow and arrow-weed.

There is an abandoned cabin in sec. 36, but there are no settlers in the Tp.

W. J. Carver, Jr.

U. S. Department of the Interior.

198  
18

For Certificate of U.S. Surveyor and U.S. Transitman  
see page II, Book "B" of this Group.

**FINAL OATH OF UNITED STATES SURVEYOR.**

2942

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, April 10 \_\_\_\_\_, 1917.

The foregoing field notes of the survey of the Subdivision lines and  
the Meanders of the Left Bank of the Colorado River  
within of Frac. Township 15 North, Range 20 1/2 West.  
of the Gila and Salt River Base and Meridian,  
in the State of Arizona  
executed by Otis Ross, U.S. Surveyor and  
John Gonin, U.S. Transitman  
under special instructions dated December 28, 1914 for Group 42, Arizona, having been  
critically examined, and the necessary corrections and explanations made, the said field notes, and the  
surveys they describe, are hereby approved.

Surveyor General  
of Arizona.

~~I certify that the foregoing transcript of the field notes of the above described surveys in~~  
~~Book "B", \_\_\_\_\_, has been correctly copied from the original notes on file in this office.~~

~~Surveyor General~~  
~~of Arizona.~~