

3485

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BOOK 3485

Book "G"

247
1
SEP 12 1921

FIELD NOTES

OF THE RESURVEY OF

the West boundary,

and part of the Subdivision lines
AND OF THE SURVEY OF

part (completion) of the Subdivision lines of

Township 21 South, Range 28 East,

Of the Gila and Salt River Base and Meridian,

In the State of Arizona

EXECUTED BY

Guy R. Veal, and Karl L. Siebecker,

U. S. Transitmen,

In the capacity of U. S. Surveyors, under Special Instructions dated October 6, 1919, issued by the United States Surveyor General to govern surveys included in Group No. 102, Arizona, which were approved by the Commissioner of the General Land Office, October 24, 1919, and Assignment Instructions dated Nov 4 & 18, 1919

Resurvey and Survey commenced March 16, 1920

Resurvey and Survey completed March 26, 1920

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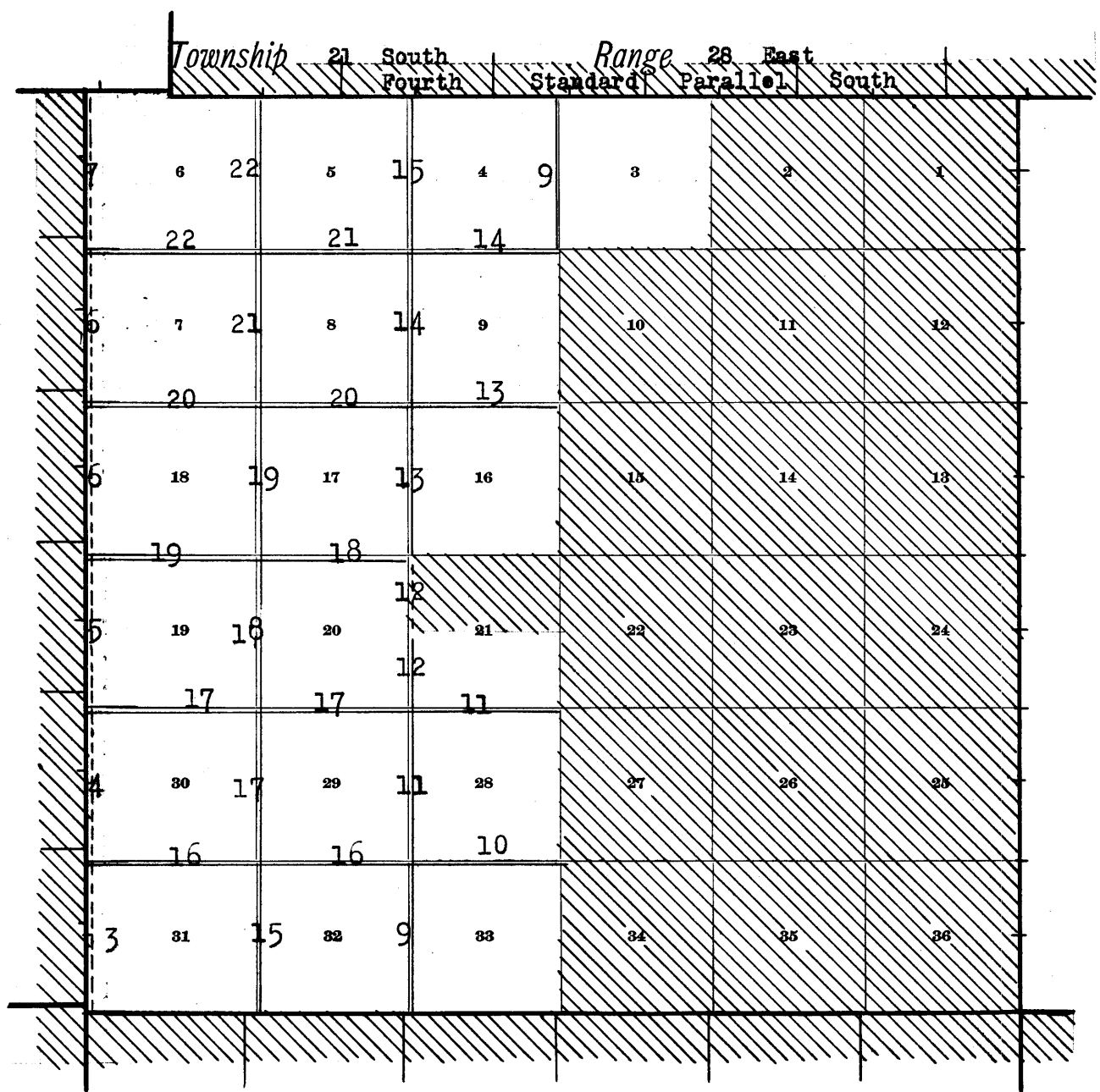
1A

Book "G"

Group 102 - - Arizona.

BOOK 3485

INDEX DIAGRAM.



- Lines resurveyed under this Group.
- ===== Lines surveyed under this Group.
- Accepted surveys.
- //// Areas surveyed as per accepted plats on file.

3485

Date Diagram

Township 21 South, Range 28 East,

Fourth Standard Parallel South

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

On the above diagram:-

black lines indicate surveys, and dotted black lines, resurveys, executed by Guy R. Veal, U. S. Transitman, and red lines indicate surveys, and dotted red lines, resurveys, executed by Karl L. Siebecker, U. S. Transitman, all on the dates shown thereon, and brown lines indicate accepted surveys.

Resurvey &

Surveys hereinafter described executed by Guy R. Veal, and Karl L. Siebecker, U. S. Transitmen, on dates shown on diagram on page 1 hereof, using respectively Buff solar transit No. 9939 and Young and Sons' light mountain transit No. 8522, described with certificate of approval by the Assistant Supervisor of Surveys in Book "A"

We examine the adjustments of the transits and correct all errors; then, to test the solar apparatus, by comparing their indications, resulting from solar observations made during a.m. and p.m. hours, with a meridian determined by observations on Polaris at elongation, we proceed as follows:

March 14, 1920, at our camp in sec. 17, T. 21 S., R. 28 E., G. and S. R. B. and M., lat. $31^{\circ}36'N.$, long. $109^{\circ}31\frac{1}{2}'W.$, at 7 hrs. 58.7 m., p.m., l.m.t., we observe Polaris at western elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined by a tack on a peg, driven firmly in the ground, 5 chs. N. of our station.

March 15, 1920, at 8 hrs. a.m., we lay off the azimuth of Polaris, $1^{\circ}18\frac{1}{2}'$ to the east, and mark the true meridian thus determined by a tack driven in a stake, 5 chs. N. of our station.

At 9 hrs. 0 m., a.m., l.m.t., we set off $31^{\circ}36'N.$ on the lat. arcs; $2^{\circ}3'S.$ on the decl. arcs; and determine a meridian with each solar, which in each case agrees with the true meridian.

At apparent noon, with the lat. arcs unchanged, we observe the sun on the meridian; with each solar; the resulting decl. in each case is $2^{\circ}0'S.$, which is the computed decl. of the sun.

At 3 hrs. 0 m., p.m., l.m.t., with the lat. arcs unchanged, we set off $1^{\circ}57'S.$ on the decl. arcs; and determine a meridian with each solar, which in each case agrees with the true meridian.

As all of the solar observations during the usual hours of solar work come within $1'30''$ of the true meridian, we conclude that the adjustments of the instruments are satisfactory.

Unless otherwise specified, all measurements are made with a Lufkin steel tape, 5 chs. in length, compared with a Chesterman standard steel tape and found correct. The measurements are made on the slope, the vertical angles determined and the slope measurements properly reduced to true horizontal distances.

Dependent Resurvey of West bdy. of Township 21 South, Range 28 E. 3

chains.

The west bdy. of T. 21 S., R. 28 E. was surveyed in 1885, by R. C. Powers, U.S.D.S., who established all corners thereon common to both T. 21 S., R. 27 E., and T. 21 S., R. 28 E.

The Powers cor. of Ts. 21 and 22 S., Rs. 27 and 28 E. was re-established in 1905, by John F. Hesse, U.S.D.S., as cor. of Ts. 27 and 28 S., R. 27 E. only, when he established closing cor. of Ts. 21 and 22 S., R. 28 E. at 6.93 chs. S. therefrom.

The cor. of Ts. 21 and 22 S., R. 27 E. was again reestablished in 1913 by John F. Hesse, U.S.S., when he resurveyed the entire east boundary of T. 21 S., R. 27 E., reestablishing all cors. thereon to refer to T. 21 S., R. 27 E. only.

All sec. and $\frac{1}{4}$ sec. cors. of Ts. 21 and 22 S., R. 27 E., and closing cor. of Ts. 21 S., Rs. 27 and 28 E. were monumented by Surveyor Hesse, with iron posts with brass caps.

No subsequent retracement or resurvey of this line is of record.

In the completion of survey of Subdivision lines of T. 21 S., R. 28 E., as hereinafter described, closing cors. are established against the W. bdy. thereof. It is not considered necessary to remeasure this line to determine the mid-points between said closing cors. for reestablishment of $\frac{1}{4}$ sec. cors. referring to W. range of secs. in said township, as each of said secs. closed well within allowable limits. Accordingly, each such $\frac{1}{4}$ sec. cor. is reestablished by measurement from the corresponding $\frac{1}{4}$ sec. cor. referring to areas in T. 21 S., R. 27 E., such distance as will locate, by computation based upon the record of the Hesse resurvey, the mid-point between closing cors., except the $\frac{1}{4}$ sec. cor. of sec. 6, which is reestablished at computed 40 chs. northing from the closing cor. of secs. 6 and 7. In the following notes of the resurvey of the W. bdy. of T. 21 S., R. 28 E., the distances which are actually chained are so noted, and the others are either described as "from record" or "computed from record," as the case may be, the items of topography being omitted, but the courses and general description of each mile copied from the record. Such a procedure was adopted in order to present the resurvey in the proper form.

From the original closing cor. of Ts. 21 and 22 S., R. 28 E., which is a granite stone, 6x10x7 ins. above ground, marked "CC" and 6 grooves on E. face, and 6 grooves on each of N. and S. faces, and witnessed by 3 pits, one each N., S. and E. of cor., and mound of earth E. of cor. No bearing trees.

N. 0° 11' E. (as per record of retracement in 1909 by Jacobs and Curry, U.S. Deputy Surveyors), on true line on W. bdy. of sec. 31.

6.93 (From record) The reestablished cor. of Ts. 21 and 22 S., R. 27 E., which is an iron post 3 ins. in diam., projecting 12 ins. above ground, properly marked on brass cap, and witnessed by 3 pits, one each N., S. and W. of cor., and a mound of earth W. of cor. No bearing trees.

This cor. description and the above is taken from Surveyor Hesse's record, but the description of all the existing cors. N. of this cor. with the exception of the closing cor. on the 4th. Std. Parallel S. are from personal observations of the same by Surveyor Ross.

Thence

N. 0° 16' E. on true line, continuing measurement of W. bdy. of sec. 31.

40.085 (Mid-point computed from record) Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for reestablished $\frac{1}{4}$ sec. cor. of sec. 31 only, marked on brass cap,

4 Dependent Resurvey of West bdy. of Township 21 South, Range 28 E.

Chains.

1/4 S31

1920

Dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist. This cor. located by chaining S. 0°16' W., 7.055 chs. from 1/4 sec. cor. of sec. 36.

47.14

(Computed from record) The reestablished 1/4 sec. cor. of sec. 36, T. 21 S., R. 27 E., which is an iron post, 1 in. in diam., projecting 10 ins. above ground, firmly set, properly marked on brass cap, and witnessed by two pits, one each N. and S. of post, and a mound of earth, W. of cor. No bearing trees.

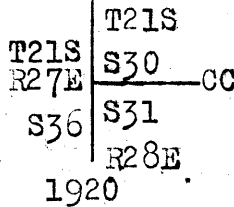
Thence,

N. 0°02' E., on true line, continuing measurement of W. bdy. of sec. 31.

80.17

(computed from record), Point of intersection of subdivision line, bet. secs. 30 and 31, T. 21 S., R. 28 E., surveyed due west, as hereinafter described, at which point,

Set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, for closing cor. of secs. 30 and 31, T. 21 S., R. 28 E., marked on brass cap,



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

Land, rolling.

Soil, sandy, mixed with gravel, and rocks, 2nd rate.

No timber.

Undergrowth, chaparral and greasewood.

From closing cor. of secs. 30 and 31,

N. 0°2' E., on true line, on W. bdy. of sec. 30.

7.54

(Chain measurement). The reestablished cor. of secs. 25 and 36, T. 21 S., R. 27 E., which is an iron post, 3 ins. in diam., projecting 12 ins. above ground, firmly set, properly marked on brass cap, and witnessed by a mound of stone W. of cor. No bearing trees. The record describes accessories to this cor. as pits and mound of earth, which apparently is an error.

Thence,

N. 0°6' W. on true line, continuing measurement of W. bdy. of sec. 30.

40.015

(Mid-point computed from record) Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post; for reestablished 1/4 sec. cor. of sec. 30 only, with brass cap, marked

1/4 S30

1920

This cor. is located by chaining S. 0°6' E., 7.895 chs. from 1/4 sec. cor. of sec. 25.

47.91

(Computed from record) The reestablished 1/4 sec. cor. of sec. 25, T. 21 S., R. 27 E., which is an iron post, 1 in. in diam., projecting 10 ins. above ground, firmly set, properly marked on brass cap, and witnessed by two pits, one each N. and S. of post, and mound of earth, W. of cor. No bearing trees.

Thence,

Chaind.

80.04 N.1°7'E. on true line, continuing measurement of W. bdy. of sec. 30.
 (80.03 chs. northing as computed from record) Point of intersection of subdivision line, bet. secs. 19 and 30, T. 21 S., R. 28 E., surveyed due west, as hereinafter described, at which point,
 Set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, for closing cor. of secs. 19 and 30, T. 21 S., R. 28 E., marked on brass cap,

T21S	T21S
R27E	S19
S25	S30
	R28E

1920

and raise a mound of stone, 2 ft. base, 1½ ft. high, E. of cor.

Land, rolling.

Soil, sandy, mixed with rocks and gravel; 2nd rate.

No timber.

Undergrowth, chaparral and greasewood.

8.27 From closing cor. of secs. 19 and 30,
 N.1°7'E., on true line, on W. bdy. of sec. 19.
 (Chain measurement) The reestablished cor. of secs. 24 and 25, T. 21 S., R. 27 E., which is an iron post, 3 ins. in diam., projecting 12 ins. above ground, firmly set, properly marked on brass cap, and witnessed by two pits, one each SW. and NW. of post, and mound of earth W. of cor. No bearing trees.

39.92 Thence,
 N.0°31'W., on true line, continuing measurement of W. bdy. of sec. 19.
 (Mid-point computed from record), Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for re-established ¼ sec. cor. of sec. 19, T. 21 S., R. 28 E., marked on brass cap,

¼S19

1920

48.62 and raise a mound of stone, 2 ft. base, 1½ ft. high, E. of cor. This cor. is located by chaining S.0°31'E., 8.70 chs. from ¼ sec. cor. of sec. 24.

(Computed from record), The reestablished ¼ sec. cor. of sec. 24, T. 21 S., R. 27 E., which is an iron post, 1 in. in diam., projecting 10 ins. above ground, firmly set, properly marked on brass cap, and witnessed by two pits, one each N. and S. of post, and mound of earth W. of cor. No bearing trees.

79.84 Thence,
 N.0°24'E., on true line, continuing measurement of W. bdy. of sec. 19.
 (Computed from record) Point of intersection of subdivision line bet. secs. 18 and 19, T. 21 S., R. 28 E., surveyed due west as hereinafter described, at which point,
 Set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, for closing cor. of secs. 18 and 19, T. 21 S., R. 28 E., marked on brass cap,

T21S	T21S
R27E	S18
S24	S19
	R28E

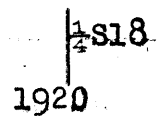
1920

6 Dependent Resurvey of West bdy. of Township 21 South, Range 28 E.

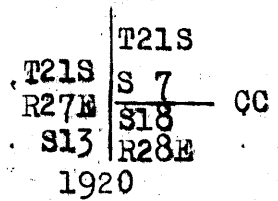
Chains.

and raise a mound of stone, 2 ft. base, 1½ ft. high, E. of cor.
 Land, rolling.
 Soil, sandy, mixed with gravel and rocks: 2nd rate.
 No timber.
 Undergrowth, greasewood, mesquite and chaparral.

- 9.19 From closing cor. of secs. 18 and 19, N.0°24'E., on a true line, on W. bdy. of sec. 18. (Chain measurement), The reestablished cor. of secs. 13 and 24, T. 21 S., R. 27 E., which is an iron post, 3 ins. in diam., projecting 12 ins. above ground, firmly set, properly marked on brass cap, and witnessed by a mound of stone, W. of cor. No bearing trees.
- 39.93 Thence, N.0°3'E., on true line, continuing measurement of W. bdy. of sec. 18. (Mid-point computed from record), Set an iron post, 3 ft. long, 1 in. in diam., 8 ins. in the ground, deposit marked (x) stone; and raise a mound of stone around post, for reestablished ¼ sec. cor. of sec. 18 only, with brass cap, marked



- 49.55 This cor. is located by chaining 9.62 chs. S.0°3'W., from ¼ sec. cor. of sec. 13. (Computed from record), The reestablished ¼ sec. cor. of sec. 13, T. 21 S., R. 27 E., which is an iron post, 1 in. in diam., projecting 10 ins. above ground, firmly set, properly marked on brass cap, and witnessed by a mound of stone, W. of cor. No bearing trees.
- 79.86 Thence, N.0°22'E., on true line, continuing measurement of W. bdy. of sec. 18. (Computed from record) Point of intersection of subdivision line, bet. secs. 7 and 18, T. 21 S., R. 28 E., surveyed due west as hereinafter described, at which point, Set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, for closing cor. of secs. 7 and 18, T. 21 S., R. 28 E., marked on brass cap,



and raise a mound of stone, 2 ft. base, 1½ ft. high, E. of cor.
 Land, rolling and mountainous:
 Soil, rocky, 4th rate.
 No timber.

- 10.08 From closing cor. of secs: 7 and 18, N.0°22'E., on true line, on W. bdy. of sec. 7. (Chain measurement) The reestablished cor. of secs. 12 and 13; T. 21 S.; R. 27 E., which is an iron post, 3 ins. in diam., projecting 12 ins. above ground, firmly set, properly marked on brass cap, and witnessed by a mound of stone, W. of cor. No bearing trees.
- 40.035 Thence, N.0°7'E., on true line, continuing measurement of W. bdy. of sec. 7. (Midpoint computed from record), Set an iron post, 3 ft.

Dependent Resurvey of West bdy. of Township 21 South, Range 28 East. 7

Chains.

long, 1 in. in diam., 10 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for reestablished 1/4 sec. cor. of sec. 7 only, with brass cap, marked

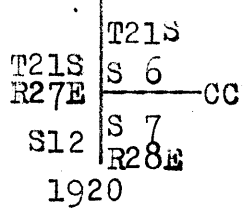


1920

50.47 This cor. is located by chaining S. 0° 7' W., 10.435 chs. from 1/4 sec. cor. of sec. 12. (Computed from record) The reestablished 1/4 sec. cor. of sec. 12, T. 21 S., R. 27 E., which is an iron post, 1 in. in diam., projecting 10 ins. above ground, firmly set, properly marked on brass cap, and witnessed by a mound of stone, W. of cor. No bearing trees.

80.07 Thence, N. 0° 35' E. on true line, continuing measurement of W. bdy. of sec. 7.

(Computed from record) Point of intersection of subdivision line bet. secs. 6 and 7, T. 21 S., R. 28 E. surveyed due west, as hereinafter described, at which point, Set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, for closing cor. of secs. 6 and 7, T. 21 S., R. 28 E., marked on brass cap,



and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, E. of cor.
Land, rolling and mountainous.
Soil, rocky, 4th rate.
No timber.

10.90 From closing cor. of secs. 6 and 7, N. 0° 35' E., on true line, on W. bdy. of sec. 6. (Chain measurement) The reestablished cor. of secs. 1 and 12, T. 21 S., R. 27 E., which is an iron post, 3 ins. in diam., projecting 12 ins. above ground, firmly set, properly marked on brass cap, and witnessed by a mound of stone, W. of cor. No bearing trees.

40.00 Thence, N. 0° 23' E., on true line, continuing measurement of W. bdy. of sec. 6.

(Computed from record) Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in the ground, deposit marked (x) stone, and raise a mound of stone, around post, for reestablished 1/4 sec. cor. of sec. 6 only, with brass cap, marked



1920

49.37 This cor. is located by chaining S. 0° 23' W., 9.37 chs. from 1/4 sec cor. of sec. 6.

(Computed from record), The reestablished 1/4 sec. cor. of sec. 1, T. 21 S., R. 27 E., which is an iron post, 1 in. in diam., projecting 10 ins. above ground, firmly set, properly marked on brass cap, and witnessed by a mound of stone, W. of cor. No bearing trees.

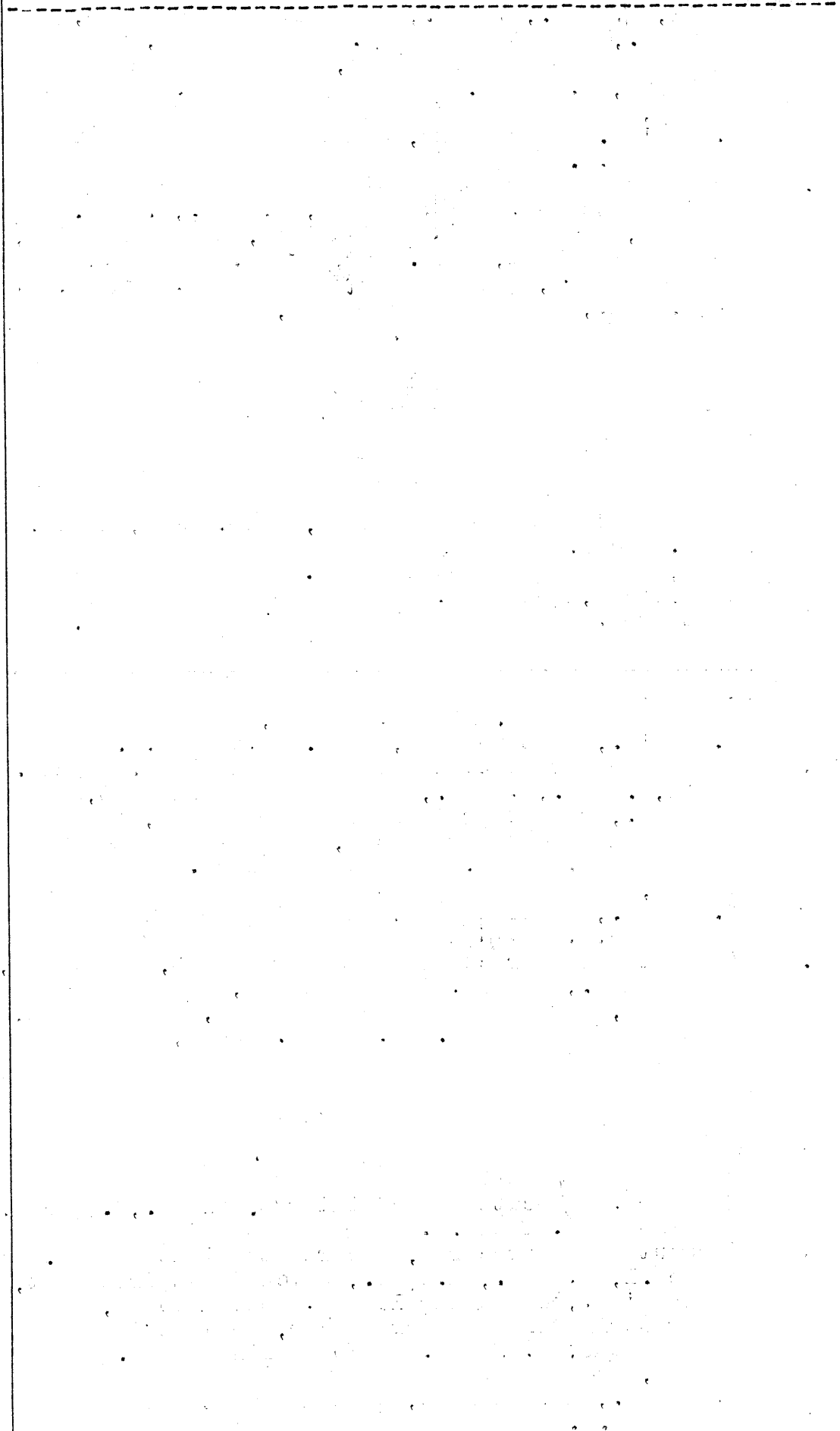
Thence, N. 0° 23' E., on true line, continuing measurement of W. bdy. of sec. 6.

Dependent resurvey of West bdy. of Township 21 South, Range 28 E.

Chains.
83.80

(Computed from record) The reestablished closing cor. of Ts. 21 S., Rs. 27 and 28 E., on 4th Std. Par. S., which is an iron post, 3 ins. in diam., projecting 12 ins. above ground, properly marked on brass cap, and witnessed by a mound of stone, S. of cor. No bearing trees. This cor. description is taken from record of the reestablishment of same by John F. Hesse, U.S.S., in 1913.

Land, hilly.
Soil, 4th rate, rocky.
No timber.



Survey of completion of Subdivision lines of T.21 S., R.28 E.

Chains.

The following notes describe the survey of the completion of the Subdivision lines of T.21 S., R.28 E., the accepted surveyed portion of the Subdivision lines having been executed by John F. Hesse, U.S.D.S. in 1905. No retracement or resurvey of Subdivision lines in this township is of record.

The original cor. of secs. 3, 4, 9 and 10, is a granite stone, 6x8x6 ins. above ground, firmly set, marked with 5 notches on S. edge, and 3 notches on E. edge, and witnessed by a mound of stone, W. of cor. No bearing trees.

Thence, N.0°2'W., on a true line, bet. secs. 3 and 4. Over rolling and broken land, thru. scattering undergrowth. Descend 45 ft.

3.95 Wash, 50 lks. wide, course SE. Ascend 35 ft.

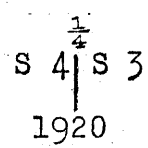
7.65 Thence over rolling land.

22.00 Wash, 20 lks. wide, course S.80° E.

32.00 S. Irvin's house and barn yard, bear west 8 chs. dist.

38.00 Wash, 30 lks. wide, course SE.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground, deposit marked (x) stone; and raise a mound of stone around post, for 1/4 sec. cor., with brass cap, marked

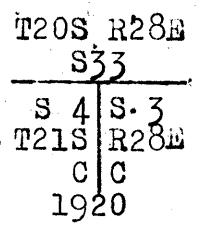


59.80 Road, brs. NW. and SE.

68.50 Cabin, 8x10xft., brs. E. 2 chs. dist.

81.47 Intersect the 4th. Standard Parallel South, 7.62 chs. W. of the standard 1/4 sec. cor. of sec. 33, T.20 S., R.28 E., re-established in 1916 by Sidney E. Blout, in his resurvey of the Parallel thru. W. 1/2 of Range 28 East, which is an iron post, 1 in. in diam., firmly set, properly marked on brass cap, and witnessed by a mound of stone N. of cor. No bearing trees.

At point of intersection, Set an iron post, 3 ft. long, 2 ins. in diam., 18 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for closing cor. of secs. 3 and 4, with brass cap, marked



Land, rolling and broken. Soil, sandy and rocky, 4th rate. No timber. Undergrowth, greasewood and mesquite.

The cor. of secs. 32 and 33 on the S. bdy. of Tp. was established by John F. Hesse in 1905, as cor. of four secs., but changed to its present designation and description by Jacobs and Curry in 1908, when they established closing cors. for secs. in T.22 S., R.28 E.

This cor. is a limestone, 6x10x5 ins. above ground, firmly set, marked with 4 notches on E. edge, and 2 notches on W. edge, and witnessed by a mound of stone, N. of cor. No bearing trees.

Thence, N.0°2'W., bet. secs. 32 and 33.

10 Completion of Subdivision lines of T. 21 S., R. 28 E.

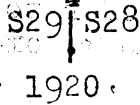
Chains.

- Over rolling land, thru. scattering undergrowth.
Ascend 35 ft.
Descend.
- 10.00
15.20 Wash, 10 lks. wide, course SW. Ascend 90 ft.
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 12 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor., with brass cap, marked
- S32 | S33
1920
- Ascend 50 ft.
Descend.
- 50.00
57.50 Wash, 10 lks. wide, course SW.
60.60 Gulch, 10 lks. wide, course SW. Ascend 480 ft., over S. slope.
73.60 Spur, slopes SW. Continue ascent.
80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 4 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for cor. of secs. 28, 29, 32 and 33, with brass cap, marked
- T21S | R28E
S29 | S28
S32 | S33
1920
- Land, rolling and mountainous.
Soil, sandy and rocky, 4th rate.
No timber.
Undergrowth, greasewood.
-
- 40.00 East, on a random line, bet. secs. 28 and 33.
80.26 Set temp. $\frac{1}{4}$ sec. cor.
Intersect N. and S. line, 28 lks. S. of the original cor. of secs. 27, 28, 33 and 34, which is a limestone, 6x6x22 ins. above ground, firmly set, marked with 1 notch on S. edge, and 3 notches on E. edge, and witnessed by a mound of stone, W. of cor. No bearing trees.
- Thence,
S. 89° 48' W., on a true line, bet. secs. 28 and 33.
Over mountainous land, thru. scattering undergrowth.
Descend 50 ft., over NW. slope.
- 6.25 Gulch, 10 lks. wide, course SW. Ascend 25 ft.
15.75 End of spur, slopes S. Descend 125 ft., over SW. slope.
26.75 Gulch, 10 lks. wide, course NW. Ascend 115 ft., over NE. slope.
- 36.35 Spur, slopes N. Descend 55 ft., over NW. slope, to
40.13 Set an iron post, 3 ft. long, 1 in. in diam., 22 ins. in the ground, deposit marked (x) stone, and raise a mound of stone, around post, for $\frac{1}{4}$ sec. cor., with brass cap, marked
- $\frac{1}{4}$ S 28
S 33
1920
- Descend 10 ft.
- 42.35 Head of gulch, 10 lks. wide, course NE. Ascend 235 ft., over NE. slope.
- 53.85 Spur, slopes NE. Descend 120 ft.
62.65 Divide; hrs: NW: and SE. Descend 115 ft., over SW. slope.
72.85 Gulch, 10 lks. wide, course SW. Ascend 130 ft.
78.95 Spur, slopes SE. Descend.
80.20 The cor. of secs. 28, 29, 32 and 33.
Land, mountainous.
Soil, rocky, 4th rate. No timber.
Undergrowth, ocotilla and mesquite.

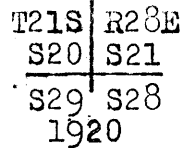
Completion of Subdivision lines of T. 21 S., R. 28 E.

Chains.

N.0°2'W., bet. secs. 28 and 29.
 Over mountainous land; thru scattering undergrowth.
 Ascend 95 ft., over SW. slope.
 5.90 Divide, brs. NW. and SE. Descend 275 ft.
 10.20 Head of gulch, course NW. Continue descent.
 20.00 Foot of descent; ascend.
 24.00 Spur, slopes NW. Descend 285 ft., over N. slope.
 39.00 Gulch, 10 lks. wide, course NW. Ascend.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in
 the ground, deposit marked (x) stone, and raise a mound
 of stone around post, for 1/4 sec. cor., with brass cap,
 marked



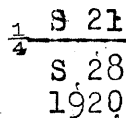
Ascend 50 ft.
 40.95 Descend 225 ft., over NW. slope.
 75.20 Wash, 15 lks. wide, course NE. Continue descent.
 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in
 the ground, for cor. of secs. 20; 21, 28 and 29, marked
 on brass cap;



and raise a mound of stone, 2 ft. base. 1 1/2 ft. high,
 W. of cor.
 Land, mountainous.
 Soil, rocky, 4th rate.
 No timber.
 Undergrowth, mesquite and ocotilla.

N. 89° 43' E., on a random line, bet. secs. 21 and 28.
 40.00 Set temp. 1/4 sec. cor.
 80.32 Intersect N. and S. line, 10 lks. N. of the original cor.
 of secs. 21, 22, 27 and 28, which is a limestone, 4x8x16
 ins., firmly set in a mound of stone, marked with 2
 notches on S. edge, and 3 notches on E. edge; and wit-
 nessed by a mound of stone, W. of cor. No bearing
 trees.

Thence,
 S. 89° 52' W., on a true line, bet. secs. 21 and 28.
 Over mountainous land, thru scattering undergrowth.
 Ascend 105 ft.
 8.90 Rocky knoll: Descend 250 ft., over W. slope.
 23.10 Gulch, course N. Ascend 220 ft.
 34.55 Spur, slopes S. Descend 115 ft., over W. slope, to
 40.16 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in
 the ground, deposit marked (x) stone, and raise a
 mound of stone, around post, for 1/4 sec. cor., with brass
 cap, marked



Descend 30 ft.
 42.50 Gulch, course S. Ascend 40 ft., over E. slope.
 48.50 Spur, slopes S. Descend 105 ft.
 64.55 Draw, course S. Thence along S. slope.
 69.60 Descend 75 ft.
 79.90 Wash, 40 lks. wide, course N. 10° W. Ascend.
 80.32 The cor. of secs. 20, 21, 28 and 29.
 Land, mountainous.
 Soil, rocky, 3rd rate.
 No timber.
 Undergrowth, greasewood.

12 Survey and Resurvey of Subdivision line bet. secs. 20 and 21.

Chains.

SURVEY.

The North half of line, bet. secs. 20 and 21 is an accepted surveyed line; therefore, survey the S. $\frac{1}{2}$ of said line, and resurvey the N. $\frac{1}{2}$ as follows:

40.42 From cor. of secs. 20, 21, 28 and 29,,
N. $0^{\circ}2'W.$, on a random line, bet. secs. 20 and 21 (S. $\frac{1}{2}$).
Fall 15 lks. E. of the original $\frac{1}{4}$ sec. cor. of secs. 20 and 21, which is a porphyry rock, 18x12x 24 ins. firmly set in a mound of stone, marked " $\frac{1}{4}$ " on W. face, and witnessed by a mound of stone, W. of cor., and one bearing tree, A walnut, 12 ins. in diam., S. $65^{\circ}W.$, 115 lks. dist., marked " $\frac{1}{4}$ S. 20. BT."

Change this cor., to refer to sec. 21 only, by destroying the mound of stone W. of cor., and raising a new mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, E. of cor. The original bearing tree becomes an accessory to the reestablished $\frac{1}{4}$ sec. cor. of sec. 20 only, hereinafter described.

True course and dist. of line back to cor. of secs. 20, 21, 28 and 29 are therefore, S. $0^{\circ}15'E.$, 40.42 chs.

0.27 From $\frac{1}{4}$ sec. cor. of sec. 21,
S. $0^{\circ}15'E.$, on true line, on W. bdy. of sec. 21 (S. $\frac{1}{2}$).
Over mountainous land, thru. scattering undergrowth.
Descend slightly over SW. slope, to
(Mid point of E. bdy. of sec. 20), Set an iron post, 3 ft. long, 1 in. in diam., on bed rock, supported in a mound of stone, containing marked (x) stone, for reestablished $\frac{1}{4}$ sec. cor. of sec. 20 only, with brass cap, marked

 $\frac{1}{4}$ S20

1920

from which,

The original bearing tree, a walnut, 12 ins. in diam., brs. S. $79^{\circ}W.$, 107 lks. dist.

17.42 Descend 75 ft. to sec. cor.
Wash, 40 lks. wide, course NW. Thence over broken E. slope, to
24.40 Same wash, course N. $20^{\circ}E.$ Thence along W. slope.
39.62 Same wash, course N. $20^{\circ}W.$
40.42 (40.15 chs. S. $0^{\circ}15'E.$, from $\frac{1}{4}$ sec. cor. of sec. 20), Intersect the cor. of secs. 20, 21, 28 and 29.

RESURVEY.

39.88 From $\frac{1}{4}$ sec. cor. of sec. 21,
N. $0^{\circ}2'W.$, on a random line, on W. bdy. of sec. 21 (N. $\frac{1}{2}$).
(80.30 chs. northing from cor. of secs. 20, 21, 28 and 29), Fall 17 lks. W. of the original cor. of secs. 16, 17, 20 and 21, which is a porphyry stone, 5x10x6 ins. above ground, firmly set, marked with 3 notches on S. edge, and 4 notches on E. edge; and witnessed by a mound of stone, W. of cor. No bearing trees.

True course and dist. of line back to $\frac{1}{4}$ sec. cor. of sec. 21 are therefore, S. $0^{\circ}13'W.$, 39.88 chs.

From cor. of secs. 16, 17, 20 and 21,
S. $0^{\circ}13'W.$, on true line, on W. bdy. of sec. 21 (N. $\frac{1}{2}$).
Over mountainous land, thru. scattering undergrowth.
Ascend 40 ft., over N. slope.

9.00 Spur, slopes E. Descend 270 ft., over S. slope.
26.65 Road, brs. E. and W.
27.90 Center of wash, 100 lks. wide, course W. Ascend 50 ft.
32.30 Spur, slopes W. Descend 15 ft. to
39.88 Intersect the $\frac{1}{4}$ sec. cor. of sec. 21, hereinbefore described.
Land, mountainous.
Soil, rocky loam, 3rd rate.
No timber.
Undergrowth, greasewood and mesal.

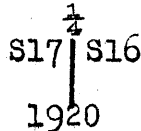
Completion of Subdivision Lines of T. 21 S., R. 28 E., S. 1 E.

Chains.

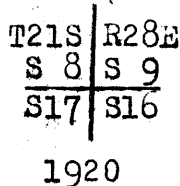
SURVEY.

From original cor. of secs. 16, 17, 20 and 21, N. 0° 2' W., bet. secs. 16 and 17. Over mountainous land, thru. scattering undergrowth. Descend 10 ft.

- 1.75 Small wash, course E. Ascend 40 ft.
- 8.00 Spur, slopes E. Descend 75 ft.
- 13.75 Gulch, course E. Ascend 200 ft., over SE. slope.
- 19.80 Descend 70 ft., over NE. slope.
- 27.75 Gulch, course E. Ascend 260 ft., over steep S. slope, to
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for 1/4 sec. cor., with brass cap, marked

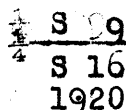


- 46.60 Ascend 160 ft., over steep SW. slope.
- 54.50 Spur, slopes SE. Descend 80 ft., over NE. slope.
- 75.30 Gulch, course SE. Ascend 635 ft., over S. slope.
- 80.00 Ridge, brs. NW. and SE. Descend 75 ft., over NE. slope, to
- Set an iron post, 3 ft. long, 2 ins. in diam., 6 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for cor. of secs. 8, 9, 16 and 17, with brass cap, marked



Land, mountainous. Soil, rocky, 4th rate. No timber. Undergrowth, scrub oak and cedar and cactus.

- 40.00 East, on random line, bet. secs. 9 and 16.
- 80.00 Set temp. 1/4 sec. cor.
- Intersect N. and S. line, 7 lks. S. of the original cor. of secs. 9, 10, 15 and 16, which is a limestone, 4x8x16 ins., above ground, firmly set, at fence cor., from which fence extends SE. and SW. Stone is marked with 4 notches on S. edge, and 3 notches on E. edge, and witnessed by a mound of stone W. of cor. No bearing trees.
- thence,
- S. 89° 57' W., on true line, bet. secs. 9 and 16.
- Over level land, devoid of timber or undergrowth.
- 1.00 Road, brs. NW. and SE.
- 16.50 Road, brs. NW. and SE.
- 24.50 Wash, course SE. Leave level; and enter mountainous land. Ascend 195 ft., over E. slope.
- 35.00 Spur, slopes N. Descend 40 ft., over W. slope, to
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for 1/4 sec. cor., with brass cap, marked



- 46.00 Descend 70 ft., over W. slope.
- Gulch, course N. Ascend 715 ft., over steep E. slope, to sec. cor.
- 60.00 Enter scattering undergrowth.
- 80.00 The cor. of secs. 8, 9, 16 and 17.
- Land, level and mountainous.

14 Completion of Subdivision lines of T. 21 S., R. 28 E.

Chains.

Soil, gravelly and rocky, 3rd and 4th rate. No timber. Undergrowth, scrub cedar, catclaw and cactus in W. 20 chs. only.

N. 0° 2' W., bet. secs. 8 and 9. Over mountainous land, thru. scattering undergrowth. Descend 400 ft.

34.60 Road, brs. SW and NE., in wash, course NE. Continue descent.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for 1/4 sec. cor., with brass cap, marked

S 8 1/2 S 9
1920

Ascend.

41.00 End of spur, slopes E: Descend.

46.00 Gulch, course NE. Ascend 555 ft., over S. slope.

70.00 Spur; slopes SE. Descend 135 ft., over NE slope.

78.50 Gulch, course E. Ascend 35 ft. to

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 16 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for cor. of secs. 4, 5, 8 and 9, marked on brass cap.

T21S R28E
S85 S94
S 8 1/2 S 9
1920

Land, mountainous.

41.00 Soil, sandy and rocky, 4th rate.

No timber.

Undergrowth, scattering cedar and catclaw.

N. 89° 57' E., on a random line, bet. secs. 4 and 9.

40.00 Set temp. 1/4 sec. cor.

80.14 Intersect N. and S. line, 14 lks. N. of the original cor. of secs. 3, 4, 9 and 10, here in before described.

Thence,

N. 89° 57' W., on a true line, bet. secs. 4 and 9.

Over rolling and mountainous land, thru. scattering undergrowth.

Ascend 25 ft.

2.15 Ridge, brs. N. and S. Descend 85 ft.

10.15 Center of wash, 40 lks. wide, course W. from S. Descend in wash.

28.15 Leave wash, course SW. Thence over rolling land.

32.95 Wire fence, brs. NW. and SE.

40.07 Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for 1/4 sec. cor., marked on brass cap,

1/4 S 4
S 9
1920

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

44.45 Wire fence, brs. N. and S. Ascend 200 ft., over SE. slope.

45.05 Cabin, 8x10 ft., brs. N. 5 chs. dist.

68.80 Descend.

70.65 Gulch; course SE. Ascend 225 ft.

80.14 The cor. of secs. 4, 5, 8 and 9.

Land, rolling and mountainous.

Soil, sandy and rocky; 4th rate. No timber.

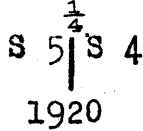
Undergrowth, scrub cedar and catclaw.

Survey of Completion of Subdivision of T.21 S., R.28 E.

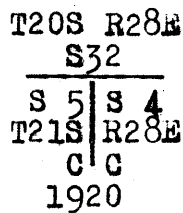
Chains.

N.0°2'W., on a true line, bet. secs. 4 and 5.
Over rolling and broken land, thru scattering undergrowth.
Ascend 70 ft.

- 1.30 Spur, slopes SE. Continue ascent 50 ft.
- 10.75 Spur, slopes NE. Descend 300 ft., over NW slope.
- 22.60 Gulch, 10 lks. wide, course NE. Ascend 125 ft., over SE slope.
- 34.00 Spur, slopes NE. Descend 165 ft.
- 39.80 Gulch, 5 lks. wide, course NE. Ascend.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for 1/4 sec. cor., with brass cap, marked



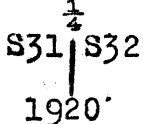
- 41.50 Spur, slopes NE. Descend 25 ft., over N. slope
- 44.90 Gulch, 3 lks. wide, course E. Ascend 55 ft.
- 49.90 Spur, slopes NE. Descend 80 ft., over N. slope.
- 59.25 Gulch, 5 lks. wide, course NE. Ascend 185 ft., over SE slope, to
- 81.65 Intersect the 4th Standard Parallel South, 7.93 chs. W. of the standard 1/4 sec. cor. of sec. 32, T.20 S., R.28 E., reestablished by Sidney E. Blout, U.S.S. in 1916, which is an iron post 1 in. in diam., projecting 10 ins. above ground, firmly set, properly marked on brass cap, and witnessed by a mound of stone, N. of cor. No bearing trees.
At the point of intersection, Set an iron post, 3 ft. long, 2 ins. in diam., 6 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for closing cor. of secs. 4 and 5, with brass cap, marked



Land, rolling and broken.
Soil, rocky, 4th rate.
No timber.
Undergrowth, mesquite, greasewood and oak.

The cor. of secs. 31 and 32, on the S. bdy. of the Tp. was established by John F. Hesse, in 1905, as cor. of 4 secs., but the cor. was changed to its present designation and description by Jacobs and Curry in 1908, when they established closing cors. for the secs. in T.22 S., R.28 E. This cor. is a limestone, 6x5x8 ins. above ground, firmly set, marked with 1 notch on W. edge, and 5 notches on E. edge, witnessed by a mound of stone, N. of cor. No bearing trees.

- Thence,
- N.0°3'W., bet. secs. 31 and 32.
- Over rolling land, thru scattering undergrowth.
- 10.00 Ascend 105 ft. to
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for 1/4 sec. cor., marked on brass cap,



and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.
Ascend 70 ft.

16 Completion of Subdivision of Township 21 South, Range 28 East.

Chains.									
65.00	Descend.								
74.10	Wash, 10 lks. wide, course SW. Ascend 35 ft. to								
80.00	Set an iron post, 3 ft. long, 2 ins. in diam., 18 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for cor. of secs. 29, 30, 31 and 32, with brass cap, marked								
	<table border="1"> <tbody> <tr> <td>T21S</td> <td>R28E</td> </tr> <tr> <td>S30</td> <td>S29</td> </tr> <tr> <td>S31</td> <td>S32</td> </tr> <tr> <td colspan="2">1920</td> </tr> </tbody> </table>	T21S	R28E	S30	S29	S31	S32	1920	
T21S	R28E								
S30	S29								
S31	S32								
1920									
	Land, rolling. Land, gravelly, 3rd rate. No timber. Undergrowth, greasewood and mescal.								

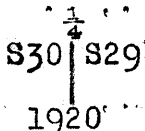
	East, on a random line, bet. secs. 29 and 32.								
40.00	Set temp. $\frac{1}{4}$ sec. cor.								
80.20	Intersect N. and S. line, 35 lks. S. of the cor. of secs. 28, 29, 32 and 33, hereinbefore described.								
	Thence, S. $89^{\circ}45'$ W., on a true line, bet. secs. 29 and 32. Over mountainous land, thru. scattering undergrowth. Descend 515 ft., over SW. slope.								
11.20	Gulch, 10 lks. wide, course SW. Ascend 115 ft., over SE. slope.								
15.80	Spur, slopes SW. Descend 115 ft.								
19.80	Gulch, 10 lks. wide, course SW. Ascend 55 ft.								
25.40	Spur, slopes SW. Descend 125 ft. to								
40.10	Set an iron post, 3 ft. long, 1 in. in diam., 20 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor., with brass cap, marked								
	<table border="1"> <tbody> <tr> <td>$\frac{1}{4}$ S 29</td> </tr> <tr> <td>S 32</td> </tr> <tr> <td>1920</td> </tr> </tbody> </table>	$\frac{1}{4}$ S 29	S 32	1920					
$\frac{1}{4}$ S 29									
S 32									
1920									
	Descend 125 ft.								
62.00	Wash, 20 lks. wide, course SW. Ascend.								
65.20	Descend 50 ft. to								
80.20	The cor. of secs. 29, 30, 31 and 32. Land, mountainous. Soil, sandy and gravelly, 3rd and 4th rate. No timber. Undergrowth, greasewood, and mescal.								

	West, on a true line, bet. secs. 30 and 31.								
	Over rolling land, thru. scattering undergrowth.								
5.00	Four wire fence, brs. NE and SW.								
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,								
	<table border="1"> <tbody> <tr> <td>$\frac{1}{4}$ S 30</td> </tr> <tr> <td>S 31</td> </tr> <tr> <td>1920</td> </tr> </tbody> </table>	$\frac{1}{4}$ S 30	S 31	1920					
$\frac{1}{4}$ S 30									
S 31									
1920									
	and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.								
49.60	Dim road, brs. N. and S.								
86.30	Road, brs. NW. and SE.								
93.52	Intersect W. bdy. of Tp., 7.54 chs. S. $0^{\circ}2'$ W. of reestablished cor. of secs. 25 and 36, T. 21 S., R. 27 E., at which point, establish the closing cor. of secs. 30 and 31, T. 21 S.; R. 28 E., as hereinbefore described. Land, rolling. Soil, gravelly, 3rd rate. No timber, Undergrowth, greasewood.								

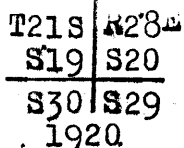
Completion of Subdivision of T. 21 S. R. 28 E.

Chains.

From cor. of secs. 29, 30, 31 and 32,
 N. 0° 3' W., bet. secs. 29 and 30.
 Over rolling land, thru. scattering undergrowth.
 Ascend 100 ft., over SW. slope.
 10.60 Four wire fence, 4 brs. NE and SW.
 17.00 Descend.
 17.35 Draw, 3 lks. wide, course SW. Ascend.
 21.90 Spur, slopes W. Descend 20 ft.
 34.00 Wash, 10 lks. wide, course SW. Ascend 30 ft. to
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,

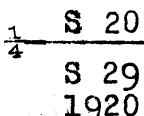


and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of
 cor.
 Ascend 75 ft.
 55.00 Spur, slopes W. Descend 75 ft., over NW. slope, to
 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 12 ins. in
 the ground, deposit marked (x) stone; and raise a mound
 of stone around post, for cor. of secs. 19, 20, 29 and 30,
 with brass cap, marked



Land, rolling.
 Soil, gravelly, 3rd and 4th rate.
 No timber.
 Undergrowth, greasewood.

N. 89° 45' E., on a random line, bet. secs. 20 and 29.
 40.00 Set temp. $\frac{1}{4}$ sec. cor.
 80.36 Intersect N. and S. line, 5 lks. N. of the cor. of secs. 20,
 21, 28 and 29, hereinbefore described.
 Thence,
 S. 89° 47' W., on a true line, bet. secs. 20 and 29.
 Over mountainous land, thru. scattering undergrowth.
 Ascend 200 ft.
 13.50 Spur, slopes NW. Continue ascent, 40 ft.
 19.60 Spur, slopes N. Descend 90 ft.
 26.00 Wash, 15 lks. wide, course N. Ascend 110 ft. to $\frac{1}{4}$ sec. cor.
 37.00 Spur, slopes NE. Continue ascent.
 40.18 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in
 the ground, deposit marked (x) stone, and raise a mound
 of stone around post, for $\frac{1}{4}$ sec. cor., marked with brass
 cap,



Ascend 285 ft.
 53.70 Ridge, brs. N. and S. Descend 305 ft., over W. slope, to
 80.36 The cor. of secs. 19, 20, 29 and 30.
 Land, mountainous.
 Soil, rocky, 4th rate.
 No timber.
 Undergrowth, ocotilla and mesquite.

West, on a true line, bet. secs. 19 and 30.
 Over rolling land, thru. scattering undergrowth.

18 Completion of Subdivision of Township 21 South, Range 28 East.

Chains.

11.30 Road, brs.NE.and SW.
40.00 Set an iron post, 3.ft.long, 1.in.in.diam., 27 ins. in the ground, for 1/4 sec.cor., marked on brass cap,

1/4 S 19
S 30
1920

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

62.70 Road, brs.N.and S.
93.00 Intersect W bdy.of Tp., 8.27 chs.S.1° 7'W. of the reestablished cor.of secs. 24 and 25, T.21 S.,R.27 E., at which point establish the closing cor. of secs.19 and 30, T.21 S., R.28 E., as hereinbefore described.

Land, rolling.
Soil,sandy and gravelly, 3rd rate.
No timber.
Undergrowth, greasewood.

From cor.of secs. 19,20, 29 and 30,
N.0°3'W., bet. secs.19 and 20.
Over rolling land, thru. scattering undergrowth.

4.30 Road, brs. NE. and SW.
13.30 Wash,10 lks.wide, course W. Ascend 275 ft.,over mountainous S.slope.
38.60 Spur,slopes W. Descend 10 ft.to
40.00 Set an iron post, 3 ft.long, 1 in. in diam., 6 ins. in the ground, deposit marked (x) stone; and raise a mound of stone around post, for 1/4 sec.cor., with brass cap, marked

S19 | S20
|
1920

Ascend.
45.00 Saddle of ridge, brs.NW. and SE. Descend NE.slope/
48.60 Head of gulch, 10 lks.wide, course NE. Ascend 190 ft..
67.55 Spur,slopes NE. Descend 400 ft.,over N.slope to sec.cor.
69.43 Shaft of Heffern Mine, brs.N.48°E.
80.00 Set an iron post, 3 ft.long, 2 ins. in diam., 8 ins.in the ground, deposit marked (x) stone, and raise a mound of stone around post for cor.of secs.17,18,19 and 20, with brass cap, marked

T21S | R28E
S18 | S17

S19 | S20
1920

Land,mountainous.
Soil,rocky, 4th rate.
No timber.
Undergrowth, mesquite, ocotilla and mescal.

N.89°47'E., on a random line, bet. secs.17 and 20.
40.00 Set temp.1/4 sec.cor.
80.00 Intersect N. and S line, 7 lks.S. of the original cor. of secs.16,17,20 and 21, hereinbefore described. Thence S.89°44'W., on a true line, bet. secs.17 and 20.
Over mountainous land, thru. scattering undergrowth.
Descend.
0.20 Small gulch,course NE. Ascend 585 ft., over NE.slope.
20.00 Spur,slopes SE. Descend 380 ft., over SW.slope,to
31.00 Spur,slopes SW. Descend 310 ft.to

Completion of Subdivision of Township 21 South, Range 28 East. 19

Chains.	
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor., with brass cap, marked
	$\frac{1}{4}$ S 17 S 20 1920
50.00	Descend 240 ft.
61.00	Gulch, course S. Ascend.
61.70	Descend 115 ft.
65.00	Wash, 30 lks. wide, course NW. Thence over rolling land.
66.20	Road, brs. N. to Heffern Mine and S.
67.00	Road, brs. NW. and SE.
70.00	Pipe line, brs. NW. and SE., drains NW. Ascend 25 ft.
75.00	End of spur, slopes N. Descend 15 ft.
80.00	Ascend 15 ft. to
	The cor. of secs. 17, 18, 19 and 20.
	Land, mountainous.
	Soil, rocky, 4th rate.
	No timber.
	Undergrowth, ocotilla and cactus.

	West, on a true line, bet. secs. 18 and 19.
	Over rolling and mountainous land, thru. scattering undergrowth.
	Ascend 30 ft.
8.00	Descend 10 ft.
10.00	Head of gulch, course NW. Ascend 25 ft.
13.95	Spur, slopes NW. Descend 45 ft.
19.50	Wash, 10 lks. wide, course N. Ascend 175 ft.
36.10	Spur, slopes N. Descend 50 ft.
39.20	Head of gulch, course NW. Ascend to
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor., with brass cap, marked
	$\frac{1}{4}$ S 18 S 19 1920
	Ascend 110 ft.
48.00	Spur, slopes NW. Descend 230 ft.
59.90	Gulch, 10 lks. wide, course NW. Ascend 65 ft.
69.10	Ridge, brs. NW. and SE. Descend 120 ft. to
86.40	Road, brs. NW. and SE. Thence over level land.
93.08	Intersect W. bdy. of Tp., 9.19 chs. S. 0°24' W. of the reestablished cor. of secs. 13 and 24, T. 21 S., R. 27 E., at which point establish the closing cor. of secs. 18 and 19, T. 21 S., R. 28 E., as hereinbefore described.
	Land, mountainous and level.
	Soil, rocky, 4th rate.
	No timber.
	Undergrowth, greasewood.

	From cor. of secs. 17, 18, 19 and 20;
	N. 0°3' W., bet. secs. 17 and 18.
	Over mountainous land, thru. scattering undergrowth.
	Descend.
4.00	Wash, 30 lks. wide, course NW. Road in wash, brs. NW. to McNeal, and SE. to Heffern Mine. Ascend.
12.00	Spur, slopes SW. Descend.
25.00	Gulch, 10 lks. wide, course SW. Ascend.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor., with brass cap, marked

20 Completion of Subdivision of Township 21 South, Range 28 E.

Chains.

$\frac{1}{4}$
 S18 | S17
 1920

41.50 Ascend.
 72.00 Ridge, brs. NW. and SE. Descend 300 ft. to
 80.00 Wash, 15 lks. wide, course W. Thence over level land.
 Set an iron post, 3 ft. long, 2 ins. in diam., 18 ins. in
 the ground, deposit marked (x) stone, and raise a mound
 of stone around post, for cor. of secs. 7, 8, 17 and 18,
 with brass cap, marked

T21S	R28E
S 7	S 8
S18	S17

 1920

41.50 Land, mountainous and level.
 72.00 Soil, gravelly and rocky, 4th rate.
 80.00 No timber. 6 wide, course W. Thence over level land.
 Undergrowth, mesquite and ocotilla, in diam., 18 ins. in
 the ground, deposit marked (x) stone; and raise a mound
 of stone around post, for cor. of secs. 7, 8, 17 and 18,
 with brass cap, marked

40.00 N. 89° 44' E., on a random line, bet. secs. 8 and 17.
 80.22 Set temp. $\frac{1}{4}$ sec. cor.
 Intersect N. and S line, 8 lks. S. of the cor. of secs. 8, 9,
 16 and 17, hereinbefore described.

Thence
 S. 89° 41' W., on a true line, bet. secs. 8 and 17.
 Over mountainous land, thru. scattering undergrowth. As-
 cend 80 ft., over NE. slope.

4.20 Spur, slopes SE. Descend 125 ft., over W. slope.
 16.20 Gulch, 10 lks. wide, course SE. Ascend 75 ft.
 20.20 Spur, slopes S. Descend 325 ft., over SW. slope.
 30.20 Wash, 20 lks. wide, course S, 25° E. Ascend 350 ft.
 36.90 Ridge, brs. NW. and SE. Descend 100 ft. to
 40.11 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the
 ground, deposit marked (x) stone, and raise a mound of
 stone around post, for $\frac{1}{4}$ sec. cor., with brass cap,
 marked

$\frac{1}{4}$ S 8
 S 17
 1920

47.80 Descend 325 ft.
 Head of gulch, course SW. Descend 565 ft., over SW. slope,
 to sec. cor.

80.00 Road, brs. NW. to McNeal and SE. to Heffern Mine.

80.22 The cor. of secs. 7, 8, 17 and 18.

Land, mountainous.
 Soil, rocky, 4th rate.
 No timber.
 Undergrowth, scattering oak, ocotilla, mescal and cactus.

West, on a true line, bet. secs. 7 and 18.
 Over heavily rolling land, thru. scattering undergrowth.
 Wash, 20 lks. wide, course SW.

1.90 Ascend 45 ft.
 15.00 Spur, slopes SW. Descend 40 ft.
 27.00 Gulch, 15 lks. wide, course S. Ascend 35 ft.
 33.50 Spur, slopes S. Descend.

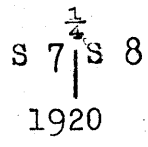
37.35 Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in
 the ground, deposit marked (x) stone, and raise a mound
 of stone around post, for $\frac{1}{4}$ sec. cor., with brass cap,
 marked

$\frac{1}{4}$ S 7
 S 18
 1920

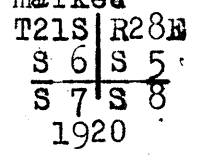
Chains.

Ascend 140 ft.
 50.70 Spur, slopes SE. Descend 200 ft.
 68.90 Wash, 15 lks.wide, course SW. Thence over gently rolling land.
 71.10 Wash, 10 lks.wide, course S.
 87.70 Road brs.NE. to Heffern Mine and SW. to McNeal.
 92.38 Intersect W. bdy.of Tp., 10.08 chs. S.0° 22'W.of the re-established cor.of secs.12 and 13, T.21 S. R.27 E., at which point establish the closing cor.of secs. 7 and 18, T.21 S.,R.28 E., as hereinbefore described.
 Land, heavily and gently rolling.
 Soil, rocky, 4th rate.
 No timber.
 Undergrowth, mesquite, ocotilla and greasewood.

 From cor.of secs. 7,8,17 and 18,
 N.0°3'W., bet. secs.7 and 8.
 Over level land, thru. scattering undergrowth.
 0.15 Road brs.NW. to McNeal and SE. to Heffern Mine.
 4.00 Wash, 30 lks.wide, course SW.
 14.30 Same wash, course SE. Leave level and enter mountainous land. Ascend 250 ft., over SW.slope.
 29.50 Spur, slopes NW/ Descend 65 ft. to
 40.00 Set an iron post, 3 ft.long, 1 in. in diam., 16 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for $\frac{1}{4}$ sec.cor., with brass cap, marked



Descend 65 ft.
 46.00 Wash, 20 lks.wide, course W. Ascend 215 ft.
 69.60 Spur, slopes W. Descend 25 ft.
 75.75 Wash, 20 lks.wide, course SW. Ascend 135 ft., over S. slope, to
 80.00 Set an iron post, 3 ft.long, 2 ins. in diam., 20 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for cor.of secs.5,6,7 and 8; with brass cap, marked



Land, level and mountainous.
 Soil, rocky, 4th rate.
 No timber.
 Undergrowth, ocotilla and mescal.

 N.89°41'E., on a random line, bet. secs.5 and 8.
 40.00 Set temp. $\frac{1}{4}$ sec.cor.
 60.30 Intersect N. and S. line, 14 lks.N.of the cor.of secs.4, 5, 8 and 9, hereinbefore described.
 Thence,
 S.89°47'W., on a true line, bet. secs.5 and 8.
 Over mountainous land, thru. scattering undergrowth.
 Descend.
 0.30 Gulch, 5 lks.wide, course SE. Ascend over NE.slope.
 8.30 Spur, slopes SE. Descend 185 ft.
 19.90 Spur, slopes SW. Continue descent.
 26.30 Wash, 10 lks.wide, course S. Ascend 155 ft.
 33.15 Spur, slopes SE. Descend.
 36.10 Head of gulch, course SE. Ascend 125 ft. to
 40.15 Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for $\frac{1}{4}$ sec.cor., with

22 Completion of Subdivision of Township 21 South, Range 28 East.

Chains.

brass cap, marked

$$\frac{1}{4} \begin{array}{r} S \ 5 \\ S \ 8 \\ \hline 1920 \end{array}$$

Ascend.
 45.35 Spur, slopes NE. Ascend 215 ft.
 53.85 Ridge, brs. NW and SE. Descend 400 ft.
 72.80 Gulch, 10 lks. wide, course SW. Ascend 100 ft. to
 80.30 The cor. of secs. 5, 6, 7 and 8.
 Land, mountainous.
 Soil, rocky, 4th rate.
 No timber.
 Undergrowth, cactus and scrub oak.

West, on a true line, bet. secs. 6 and 7.
 Over rolling and mountainous land, thru scattering undergrowth.

7.00 Descend 35 ft.
 14.00 Gulch, 5 lks. wide, course SE. Ascend 90 ft.
 18.15 Ridge, brs. N. and S. Thence along N. slope.
 20.00 Ascend 55 ft.
 25.60 Spur, slopes NW. Descend 35 ft.
 31.00 Head of gulch, 5 lks. wide, course NE. Ascend 55 ft.
 37.50 Spur, slopes NW. Descend 65 ft. to
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 8 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor., with brass cap, marked,

$$\frac{1}{4} \begin{array}{r} S \ 6 \\ S \ 7 \\ \hline 1920 \end{array}$$

Descend 380 ft.
 60.30 Wash, 20 lks. wide, course SE. Ascend 125 ft.
 70.70 Spur, slopes S. Descend 230 ft.
 77.90 Head of gulch, course SW. Ascend 15 ft.
 80.90 Spur, slopes SW. Descend 150 ft. to
 91.86 Intersect W. bdy. of Tp., 10.90 chs. S. 0°35' W., of the re-established cor. of secs. 1 and 12, T. 21 S., R. 27 E., at which point establish the closing cor. of secs. 6 and 7, T. 21 S., R. 28 E., as hereinbefore described.
 Land, rolling and mountainous.
 Soil, rocky, 3rd rate.
 No timber.
 Undergrowth, ocotilla and greasewood.

From cor. of secs. 5, 6, 7 and 8,
 N. 0° 3' W., on a true line, bet. secs. 5 and 6.
 Over mountainous land, thru scattering undergrowth.

Ascend 365 ft., over SE. slope, to
 14.90 Spur, slopes SW. Ascend 70 ft.
 19.00 Spur, slopes SW. Descend 85 ft.
 23.50 Spur, slopes NW. Descend 395 ft.
 37.60 Wash, 10 lks. wide, course SW. Ascend 55 ft. to
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor., with brass cap, marked

$$S \ 6 \begin{array}{r} \frac{1}{4} \\ S \ 5 \\ \hline 1920 \end{array}$$

Ascend 25 ft.
 41.50 Spur, slopes SW. Descend.
 46.80 Gulch, course SW. Ascend 390 ft.
 60.50 Spur, slopes SW. Ascend 420 ft. to

Completion of Subdivision of Township 21 South, Range 28 East. 23

Chains.
82.09

Intersect the 4th Std. Parallel North, 7.95 chs. West of the standard $\frac{1}{4}$ sec. cor. of sec. 31, T. 20 S., R. 28 E., reestablished by Sidney E. Blout in 1916, which is an iron post, 1 in. in diam., projecting 10 ins. above ground firmly set, properly marked on brass cap; and witnessed by a mound of stone, N. of cor. No bearing trees. At the point of intersection; Set an iron post 3 ft. long, 2 ins. in diam., 10 ins. in the ground, deposit marked (x) stone, and raise a mound of stone around post, for closing cor. of secs. 5 and 6, with brass cap, marked

T20S R28E
S31
S 6 | S 5
T21S | R28E
C | C
1920

Land, mountainous.
Soil, rocky, 4th rate.
No timber.
Undergrowth, mesquite, ocotilla and greasewood.

Boundaries of that part of T. 21 S., R. 28 E., surveyed under this Group.

Latitudes, departures, and closing errors.

Line designated.	True bearing.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
South boundary,	West,	253.39				253.39
West boundary,	N. 0° 11' E.	6.93	6.93		.02	
	N. 0° 16' E.	40.21	40.21		.19	
	N. 0° 2' E.	40.57	40.57		.02	
	N. 0° 6' W.	40.37	40.37			.07
	N. 1° 7' E.	40.40	40.39		.79	
	N. 0° 31' W.	40.35	40.35			.36
	N. 0° 24' E.	40.41	40.41		.28	
	N. 0° 3' E.	40.36	40.36		.04	
	N. 0° 22' E.	40.39	40.39		.26	
	N. 0° 7' E.	40.39	40.39		.08	
N. 0° 35' E.	40.50	40.50		.41		
N. 0° 23' E.	72.90	72.90		.27		
North boundary (4th. Std. Par. S.)	S. 89° 43' E.	9.91		.05	9.91	
	S. 89° 40' E.	40.14		.23	40.14	
	South East,	1.60 282.32		1.60		
Subdivisional boundary,	S. 89° 57' E.	81.09		81.09	.02	
	S. 0° 2' E.	400.00		400.00	.23	
	S. 89° 57' W.	80.16		.07		80.16
Convergency,					.25	
Totals,			483.77	483.04	335.23	333.98
			483.04		333.98	
Error in latitude,			.73			
Error in departure,					1.25	

Final Field Tests of Instruments, Young & Son's No. 8522.

Examine the adjustments of the transit, and find them in good condition; then, to test the solar apparatus, by comparing its indications, resulting from solar observations made during a.m. and p.m. hours, with a meridian

determined by observations on Polaris at elongation, proceed as follows:

March 21, 1920. At camp, in sec. 17, T. 21 S., R. 28 E., at 9h. a.m., l.m.t., lat. $31^{\circ}35'N.$, long. $109^{\circ}31\frac{1}{2}'W.$ using the meridian determined as hereinbefore described, set off $31^{\circ}35'N.$ on the lat. arc; $0^{\circ}19\frac{1}{2}'N.$ on the decl. arc, and determine a meridian with the solar, which agrees with the true meridian.

At apparent noon, with the lat. arc unchanged, observe the sun on the meridian; the resulting decl. is $0^{\circ}22'N.$, which is the computed decl. of the sun,

At 3h. 0m., p.m., l.m.t., with the lat. arc unchanged, set off $0^{\circ}25'N.$ on the decl. arc; and determine a meridian with the solar, which agrees with the true meridian.

As all of the solar observations during the usual hours of the solar work come within $1'30''$ of the true meridian conclude that the adjustments of the instrument are satisfactory.

Buff Solar Transit No. 9939.

March 28, 1920; At camp in sec. 17, T. 21 S., R. 28 E., G. and S. R. B. and M., lat. $31^{\circ}36'N.$, long. $109^{\circ}31\frac{1}{2}'W.$, using the meridian determined as hereinbefore described, at 9h. 0m. a.m., l.m.t., set off $31^{\circ}36'N.$ on the lat. arc; $3^{\circ}4'N.$ on the decl. arc, and determine a meridian with the solar, which agrees with the true meridian.

At apparent noon, with the lat. arc unchanged, observe the sun on the meridian; the resulting decl. is $3^{\circ}7'N.$, which is the computed decl. of the sun.

At 3h. 0m., p.m., l.m.t., with the lat. arc unchanged, set off $3^{\circ}10'N.$ on the decl. arc, and determine a meridian with the solar, which agrees with the true meridian.

As all of the solar observations during the usual hours of solar work come within $1'30''$ of the true meridian, conclude that the adjustments of the instrument are satisfactory.

GENERAL DESCRIPTION.

The part of this township surveyed under this group lies at the southern end of the Swisshelm Mountains, and is very rough and broken, except in the southwest corner. Leslie Canyon, flowing west, divides the township into halves. The drainage is very irregular. The north central parts drain south into Leslie Canyon. The northern end drains to the SE. and SW. In the south, the drainage is to the southwest.

The soil in the southern end is sandy and gravelly and of 3rd rate. Elsewhere, it is very thin and rocky, and barely supports a little grass, brush and stunted trees. There are a few scattering stunted oak and cedar trees. They are of no commercial value.

There is one copper mine in the SW. $\frac{1}{4}$ of sec. 17, it is not being operated at present, and no ore has ever been shipped. There are numerous prospect holes throughout the mountainous part of the township, with indications of copper ore, but it appears doubtful if any of the ore is of much value.

There is no water in the township, although there are springs in Leslie Canyon in sec. 21. A dam has been put across the canyon in that section, and water carried down the canyon in a pipe line to a reservoir in T. 21 S. R. 27 E.

GENERAL DESCRIPTION (continued)

There is one settler, located in sec.4.
The township affords fair grazing. The only other industrial possibility is mining. There are indications of copper throughout the township, but so far, but one shaft has been put down, and no ore shipped from it.

BOOK 3485

4-680

FIELD ASSISTANTS.

to Karl L. Siebecker, U. S. Transitman

NAMES.	CAPACITY.
<i>See page 51 of book "A" of this group.</i>	

28 BOOK 3485

CERTIFICATE OF UNITED STATES TRANSITMAN.

I, Karl L. Siebecker, U. S. Transitman, hereby certify upon honor that, in pursuance of special instructions received from the U. S. Surveyor General for Group 102, Arizona, bearing date of the 6th day of October, 1919, 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, resurveyed and surveyed all those parts or portions of the Subdivision lines of Township 21 South, Range 28 East,

of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in and by diagram on page 1 hereof the foregoing field notes as having been executed by me, and under my direction; and that all the corners of resurvey and 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, for Group 102, Arizona,

and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Place - Augusta, Mont.
Date - Sept. 5th 1921

Karl L. Siebecker
U. S. Transitman

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

, 191-

The foregoing field notes of the survey of

executed by

under his special instructions dated, 191-, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above described surveys in

has been correctly copied from the original notes on file in this office.

U. S. Surveyor General.

CERTIFICATE OF UNITED STATES TRANSITMAN.

I, Guy R. Veal, U. S. Transitman, hereby certify upon honor that, in pursuance of special instructions received from the U. S. Surveyor General for Group 102, Arizona,

bearing date of the 6th day of October, 1919, I have well, faithfully, and truly

in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, re-surveyed all those parts or portions of the West boundary, and

surveyed all those parts or portions of the Subdivision lines of

Towaship 21 South, Range 28 East,

of the Gila and Salt River

Base and Meridian, in the State of Arizona,

and by diagram on page 1 hereof the foregoing field notes as having been executed by me, and under my direction; and that all the corners of resurvey and said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instruc-

tions, and the special written instructions of the U. S. Surveyor General, for Group 102, Arizona,

and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Place Lawas City, Mich.
Date August 15, 1921

Guy R. Veal,
U. S. Transitman

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix Arizona, SEP 15 1921

The foregoing field notes of the survey of the West boundary, and of part of the Subdivision lines, and of the survey of part (completion) of the Subdivision lines of

Township 21 South, Range 28 East,

of the Gila and Salt River Base and Meridian,

in the State of Arizona,

executed by Guy R. Veal, and Karl L. Siebecker, U. S. Transitmen,

under the special instructions dated October 6, 1919 for Group 102 Arizona, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank P. Smith
U. S. Surveyor General.

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

U. S. Surveyor General.