Book "D"
4—679

BOOK 4039

FIELD NOTES

OF THE SURVEY OF

PART (COMPLETION) OF THE NORTH BOUNDARY, and of

PART (COMPLETION) OF THE SUBDIVISION LINES OF

Township 41 North, Range 6 West

AND OF THE RESURVEY OF

PART OF THE NORTH BOUNDARY and

PART OF THE SUBDIVISION LINES OF

Township 41 North, Range 6 West

Of the Gila and Salt River Base and *Meridian,*

In the State of Arizona

EXECUTED BY

Ben D. Procter, U.S.Transitman

and

J.P.Hester, U.S.Transitman

In the capacity of U. S. Surveyors, ~~under~~ ~~Spec~~ial Instructions dated Sept. 15, *1933, issued by the District Cadastral Engineer to govern surveys included in Group No.* 188, Arizona, *which were approved by the Commissioner of the General Land Office,* October 9, *1933, and Assignment Instructions dated* June 6 &19, *1934*

Survey and Re-*Survey commenced* September 17, *1934.*

Survey and Re-*Survey completed* September 21, *1934.*

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Sent to Wash.-S.S. Letter 4-1-35

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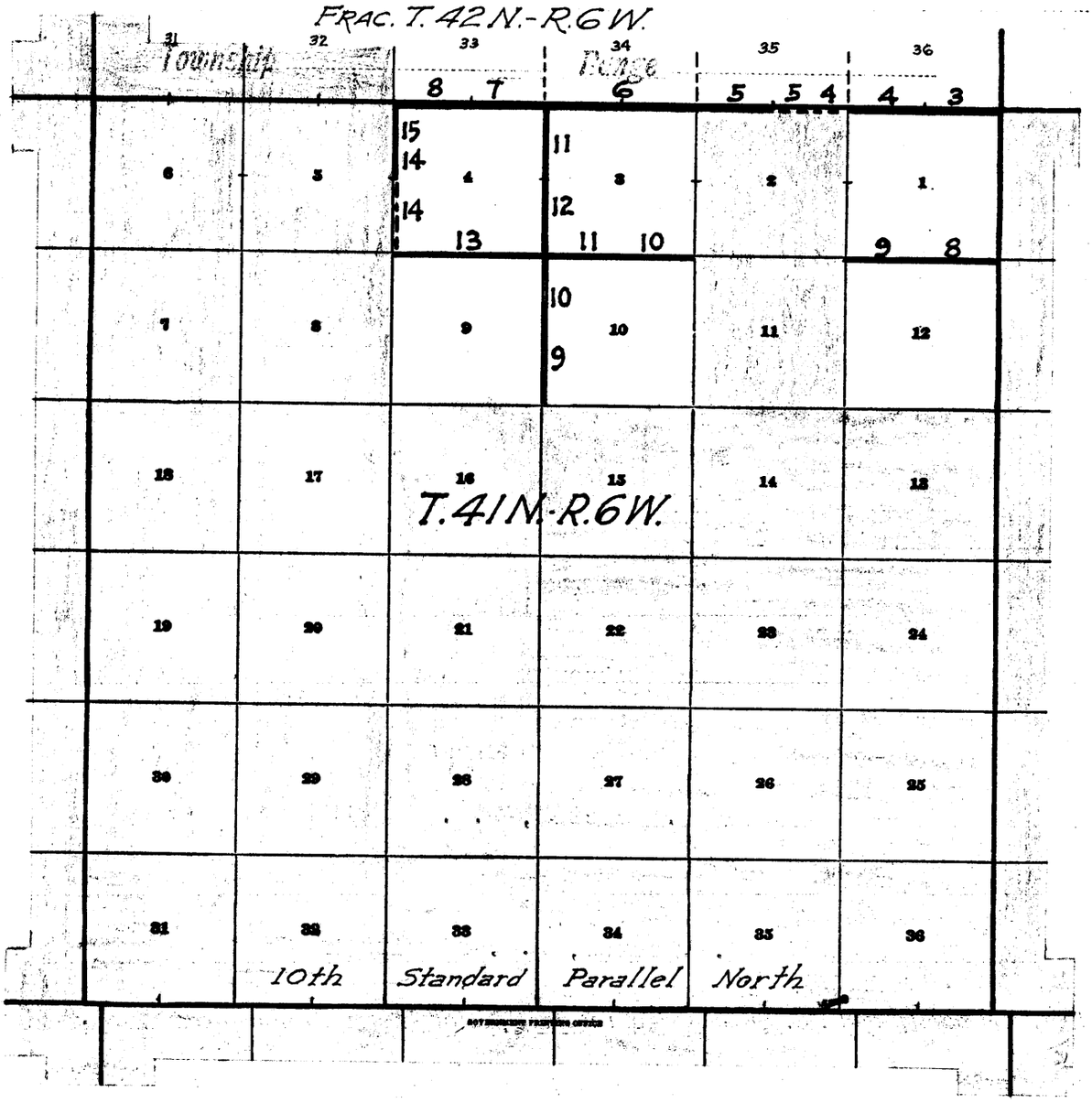
BOOK 4039

INDEX DIAGRAM.

FRAC. T. 42 N. - R. 6 W.



——— Lines of accepted surveys.

- - - - - - Unsurveyed.

▬▬▬ Lines surveyed under this group.

▬ ▬ ▬ ▬ Lines resurveyed under this group.

Areas surveyed as per accepted plats on file.

The surveys and resurveys hereinafter described were executed with Young & Sons light-mountain solar transits, constructed in accordance with the standard specifications of the General Land Office, Serial No.8477 used by J.P. Hester, U.S.Transitman, and Serial No. 8592 used by Ben D. Procter, U.S.Transitman. The instruments have horizontal circles with a diameter of 4½ ins., with two double verniers placed opposite each other reading to single minutes, and have vertical circles with diameter of 5 ins., with one double vernier reading to single minutes. The telescopes have fixed stadia wires with a focal constant of 1.5 lks. and a ratio of 1-132.

The instruments are equipped with improved Smith solar attachments, radius of latitude arcs 3½ ins. and of declination arcs 3.87 ins., each with verniers reading to single minutes. The instruments were in good condition, and having been placed in satisfactory adjustment prior to beginning the survey, were approved by the district cadastral engineer for Arizona and California. All instrumental adjustments were examined before making the field tests hereinafter recorded.

The directions of the lines were determined by solar transit method. The measurements were made on the slope with Lallie and Lufkin steel tapes, 5 chs. in length, graduated every link for the first 100 lks. and the balance at intervals of 10 lks. The tapes were tested by comparison with a Lufkin standard and found correct. The vertical angle of each slope measurement was determined with a clinometer in good adjustment; the horizontal equivalents are entered in the field note record.

The data furnished with the special instructions gives the geographic position of the SE. cor. of the Tp. as follows: latitude 36°54'12" N., longtitude 112°53'36"W.

Sept. 14, 1934; at camp in the SE. ¼ of sec. 7 of T.41 N., R.5 W., using instrument No.8477, at 8^h11^m p.m., l.m.t., we observe Polaris at eastern elongation, making two observations each with the telescope in direct and reversed positions, and mark the mean line with a tack in a stake about 5 chs. N. After daybreak on Sept. 15 we lay off the azimuth of Polaris, 1°18'45", to the W., and mark the meridian thus determined with a tack in a stake beside the fist.

As the latitude of the station can be accurately determined from recent nearby surveys and connections with the astronomically-located Ariz.-Utah boundary known to be 2½ miles N., no preliminary latitude observation is made.

Sept. 15, 1934; at every hour from 7 to 11 a.m. and from 1 to 5 p.m., app.t., we make proper settings on the arcs of the solar attachments and ascertain that the resulting orientation of the instruments, when compared with the meridian established by Polaris observation, have a maximum error of less than 1'30".

We repeat the tests of the arcs daily by noon observation and verify the meridional indications frequently during the period of the survey.

Observed magnetic declination is 16°15' E.

SURVEY OF PART (completion) AND RESURVEY OF PART OF NORTH BOUNDARY OF T.41 N., R. 6 W.

Chains

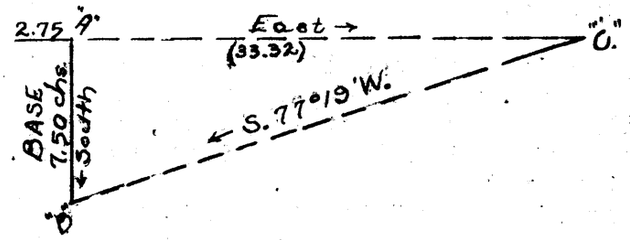
The N. bdrs. of secs. 5 and 6 and part of the N. bdy. of sec. 2 of T.41 N., R.6 W., were surveyed in 1916 by Thomas B. Matthews, U.S.S., with no retracements or resurveys of record.

The following notes describe the completion of the bdy., with all corners except that of secs. 2,3,34 and 35 of maximum control, and resurvey of E½ of N. bdy. of Sec. 2.

Beginning at the cor. of secs. 4,5 and fracl. secs. 32 and 33, hereinafter described,

East, on random line, on N. bdrs. of secs. 4 and 3.

2.75 To obtain measurement over cliffs forward, designate this point "A" and triangulate as follows: from "A", measure a base South, 7.50 chs. dist. to point "B". From a point "C", forward on line, point "B" bears S.77°19'W. Vertical angle "A" to "C" is plus 25°. Bearings checked by reading internal angles.



Station of "A"	2.75	chs.
Triangulated	33.32	"
Station "C"	36.07	"

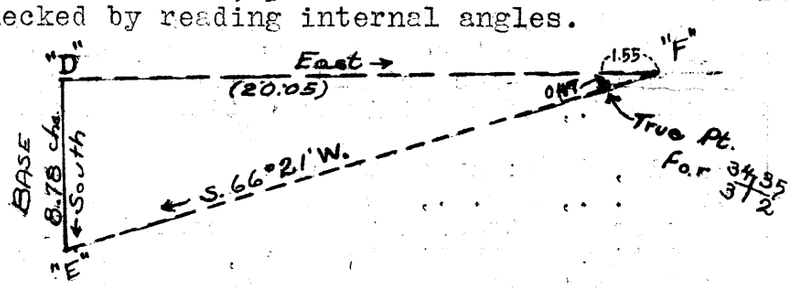
36.07 Triangulation point "C"; resume measurement by chaining.

40.00 Set temp. ¼ sec. cor.

80.00 Set temp. cor. of secs. 3,4 and fracl. secs. 33 and 34.

120.00 Set temp. ¼ sec. cor.

142.20 To obtain measurement across canyon ahead, triangulate as follows: designate this point: "D" and measure a base South, 8.78 chs. dist. to point "E". From a point, "F", forward on line, point "E" bears S.66°21'W. Bearings checked by reading internal angles.



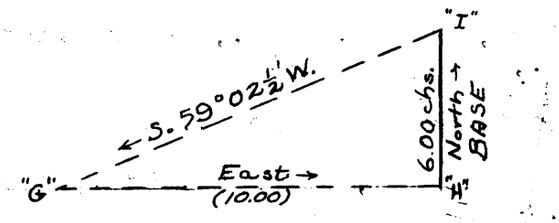
Station of "D"	142.20	chs.
Triangulated	20.05	"
Station "F"	162.25	"
Return measurement	1.55	
	160.70	chs.

160.70 A point 47 lks. N. of the true point for cor. of secs. 2 and 3 and of fracl. secs. 34 and 35, hereinafter described.

Thence

Survey of Part (completion) and resurvey of part of
North boundary of T. 41 N., R. 6 W. [illegible] 4039

Chains	
	East, on random line, on N. bdrs. of secs. 2. and 1.
39.29	To obtain measurement over cliffs ahead triangulate as follows: designate this point "G". From a point, "H", forward on line, measure a base North, 6.00 chs. dist. to point "I", from which point "G" bears S.59°02½'W. Bearings checked by reading internal angles.



Station of "G"-------- 39.29 chs.
Triangulated---------- 10.00 "
Station "H"---------- 49.29 chs.

40.00	Set temp. ¼ sec. cor. Discontinue chaining.
49.03	A point 9 lks. N. of the witness ¼ sec. cor.
49.29	Triangulation point "H". Continue line and measurement over previously- surveyed portion of N. bdy. of sec. 2 for corner-finding purposes.
74.55	A point 9 lks. N. of the witness cor. for cor. of secs. 1 and 2 and of fracl. secs. 35 and 36, hereinafter described. Resume random line.
79.51	Set. temp. cor. of secs. 1 and 2 and of fracl. secs. 35 and 36. Cor. set 9 lks. S. of this point hereinafter described.
119.51	Set temp. ¼ sec. cor.
159.64	A point 56 lks. N. of the cor. of Tps. 41 and 42 N., Rs. 5 and 6 W., an iron post, 3 ins. diam., projecting 12 ins. above ground, firmly set, and mkd. on brass cap and witnessed as described in the official record.

Thence

N.89°40'W., on true line, on N. bdy. of sec. 1.

Desc. 10 ft. over gentle SW. slope; through scattering pine, juniper and pine timber and scattering brush.

8.60	Small drain, course S.; asc. 15 ft. over gentle SE. slope.
13.50	Spur, slopes S.; desc. 10 ft.
17.50	Swale, drains S.; asc. 15 ft.
21.20	Spur, slopes S.; desc. 119 ft. over SW. slope.
31.00	Wash, 20 lks. wide, course S.20°W.; asc. 36 ft.
35.00	Low spur, slopes S.; desc. 30 ft. over SW. slope.
40.06	Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground, and in a mound of stone, 4 ft. base, to top, for ¼ sec. cor., with brass cap mkd.

SURVEY OF PART (COMPLETION) AND RESURVEY OF PART OF NORTH BOUNDARY OF T. 41 N., R. 6 W.

Chains	
	$\frac{1}{4}\frac{S36}{S1}$ 1934 from which
	A juniper, 12 ins. diam., bears N.54°15'E., 82 lks. dist., mkd. ¼ S36 BT.
	A juniper, 14 ins. diam., bears S.16°45'W., 84 lks. dist., mkd. ¼ S1 BT.
	Desc. 10 ft. over SW. slope.
40.70	Wash, 20 lks. wide, course S.20°E.; asc. 60 ft. over E. slope.
45.50	Spur, slopes NE.; desc. 10 ft.
49.00	Small drain, course NE.; asc. 52 ft. over SE. slope.
53.40	Bare sandstone ridge, bears N. and S.; desc. 240 ft. over broken W. slope.
63.70	Wash, 10 lks. wide, course SW.; asc. 10 ft.
65.30	Short spur, slopes S.; desc. 177 ft. over broken SW. slope.
80.13	(4.96 chs. East of old W.C.) Set an iron post, 3 ft. long, 2 ins. diam., 4 ins. in the ground, and in a mound of stone, 5 ft. base, to top, for cor. of secs. 1 and 2 and of fracl. secs. 35 and 36, with brass cap mkd. T42NR6W S35 | S36 S 2 | S 1 T41N 1934 from which
	A pinon, 6 ins. diam., bears N.33½°E., 86 lks. dist., mkd. T42N R6W S36 BT.
	A juniper, 14 ins. diam., bears S.55¼°E., 44 lks. dist., mkd. T41N R6W S1 BT.
	A pinon, 8 ins. diam., bears S.6°W., 45 lks. dist., mkd. T41N R6W S2 BT.
	A pinon, 5 ins. diam., bears N.23°W., 101 lks. dist., mkd. T42N R6W S35 BT.
	Land: rolling. Soil: sandy, rocky, sandstone, 4th rate. Timber: juniper, pinon, pine. Undergrowth: sage, oak brush, manzanita.
	RESURVEY
	West, on true line, on N. bdy. of sec. 2. (E.½)
	Desc. 125 ft. over SW. slope; through scattering juniper, pinon and pine timber and scattering undergrowth.
1.50	Rimrock, 70 ft. high, bears irregularly NW. and SE.
4.96	The witness cor. to cor. of secs. 1 and 2 and of fracl. secs. 35 and 36, an iron post, 2 ins. diam., projecting 12 ins. above ground, firmly set, properly mkd. on brass cap and witnessed by a mound of stone W. of post.

SURVEY OF PART (COMPLETION) AND RESURVEY OF PART OF

NORTH BOUNDARY of T. 41 N., R. 6 W. BOOK 4039

Chains	
	This witness cor. is superseded by corner at true point but is not removed. Continuing over portion of line surveyed in 1916:
	Over gentle SW. slope.
19.60	Sandy wash, 40 lks. wide, 15 ft. deep, course S.
24.50	Sandy wash, 60 lks. wide, 6 ft. deep, course S.
30.22	Triangulation point "H", described on random line, bears 9 lks. N.
30.48	The witness cor. to ¼ sec. cor., an iron post, 1 in. diam., projecting 10 ins. above ground, firmly set, properly mkd. on brass cap, dated 1916, and witnessed by 2 bearing trees as described in the official record.
	Discontinue chaining; measurement by triangulation described on random line.
	Asc. 310 ft. over NE. slope and cliffs.
38.80	Bottom of cliff, 150 ft. high, bears N. and S.
40.00	True point for ¼ sec. cor. is difficult of access and impracticable to monument.
	Thence
	N. 89°52'W., on true line, on N. bdy. of sec. 2 (W.½), resuming survey with renewed measurement.
0.22	Triangulation point "G", on top of cliffs, described on random line, bears 9 lks. N.
	Asc. 165 ft. over broken NE. slope; through heavy juniper and pinon timber.
9.40	Spur, slopes S.; desc. 50 ft. over W. slope.
16.50	Drain, 10 lks. wide, course S.; asc. 20 ft.
21.30	Spur, slopes S.; desc. 15 ft.
25.80	Drain, 10 lks. wide, course S. 20°E.; asc. 65 ft. over E. slope.
31.00	Spur, slopes S. 30°E.; desc. 155 ft. over SW. slope to
37.96	Triangulation point "F", bears 47 lks. north; desc. 200 ft. over cliffs on rugged W. slope.
39.51	(Record distance, 2.45 chs. N. 0°01'W. of the 1916 witness cor. to cor. of secs. 2 and 3 and fracl. secs. 34 and 35, hereinafter described) True point for cor. of secs. 2 and 3, only, falls on S. face of boulder, 50 x 25 x 20 ft.; I mark a cross (X) at true point for cor. of secs. 2 and 3, only.
	Land: rolling and mountainous. Soil: sandy, sandstone, rocky, 3rd rate. Timber: juniper, pinon, pine. Undergrowth: sage, oak brush, manzanita.

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BOOK 4039

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SURVEY OF PART (COMPLETION) AND RESURVEY OF PART OF

NORTH BOUNDARY of T. 41 N., R. 6 W.

Chains	
	N. 89°50'W., on true line, on N. bdy. of sec. 3.
	Over rugged W. slope; through scattering juniper and pinon timber and scattering undergrowth.
0.33	(Midpoint bet. ¼ sec. cor. of secs. 2 and 35 and ¼ sec. cor. of secs. 3 and 34). True point for cor. of fracl. secs. 34 and 35, only, falls among boulders, an unsuitable place for monument. This point is 2.47 chs. N. 7°40'W. of the 1916 witness cor., which now has a double witness reference though the 1916 markings for a witness cor. to cor. of 4 secs. is unchanged. The witness cor. is an iron post, 2 ins. diam., projecting 12 ins. above ground, firmly set and mkd. on brass cap and witnessed as described in the official record.
	Through measurement by triangulation as described on random line; chain to wash for topography only.
	Desc. 225 ft. over broken SW. slope.
5.10	Wash, 80 lks. wide, 6 ft. deep, course S.; discontinue measurement by chaining; asc. approximately 430 ft. over broken E. slope.
18.50	Triangulation point "D" bears 42 lks. N.; resume chaining. Asc. 350 ft. over broken E. slope.
35.50	Ridge, bears N. and S.; desc. 60 ft. over W. slope.
40.17	Set an iron post, 3 ft. long, 1 in. diam., on exposed bedrock, supported in a mound of stone, 5 ft. base, by 2½ ft. high, for ¼ sec. cor., with brass cap mkd. ¼ S34 / S 3 1934 from which A pinion, 14 ins. diam., bears S. 57°E., 38 lks. dist., mkd. ¼ S3 BT. A pine, 10 ins. diam., bears N. 75¼°W., 74 lks. dist., mkd. ¼ S34 BT.
	Desc. 112 ft. over broken SW. slope.
48.10	Drain, 10 lks. wide, course S. 20°E.; asc. 170 ft. over E. slope.
54.50	Spur, slopes S.; desc. 92 ft. over W. slope.
60.80	Wash, 10 lks. wide, course S.; asc. 175 ft. over broken E. slope.
72.00	Spur, slopes S.; desc. 25 ft. over SW. slope.
75.60	Drain, 10 lks. wide, course S.; asc. 35 ft. over E. slope
79.30	Spur, slopes S.; over gentle W. slope.
80.35	Set an iron post, 3 ft. long, 2 ins. diam., on exposed bedrock, supported in a mound of stone, 6 ft. base by 2½ ft. high, for cor. of secs. 3 and 4 and of fracl. secs. 33 and 34, with brass cap mkd.

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Chains	
	T42NR6W S33 | S34 S4 | S3 T41N 1934
	from which
	A pine, 16 ins. diam., bears N. 20¼°E., 84 lks. dist. mkd. T42N R6W S34 BT
	A pinon, 14 ins. diam. bears S. 54°E., 54 lks. dist. mkd. T41N R6W S3 BT
	A pine, 20 ins. diam. bears S. 35¾° W., 82 lks. dist. mkd. T41N R6W S4 BT
	A pine, 16 ins. diam. bears N. 43½°W., 24 lks. dist. mkd. T42N R6W S33 BT
	Land: rolling, broken and mountainous. Soil: sandstone, sandy, 3rd rate. Timber: pinon, juniper, pine. Undergrowth: manzanita, sarvis, oak brush, sage.
	N. 89°50'W., on true line, on N. bdy. of sec. 4.
	Desc. 300 ft. over broken W. slope, to 26.30 chs.; through scattering juniper, pinon and yellow pine timber and scattering undergrowth.
2.50	Small drain, course SW.
6.50	Sandstone rim, 70 ft. high, bears N. and S.
26.30	Wash, 15 lks. wide, course N. 20°W.; asc. 25 ft.
32.70	Spur, slopes N.; desc. 50 ft. over W. slope.
34.70	Wash, 20 lks. wide, course N.; asc. 150 ft. over sandstone cliffs on E. slope.
40.17	Set an iron post, 3 ft. long, 1 in. diam. 12 ins. in the ground, and in a mound of stone, 4 ft. base, to top, for ¼ sec. cor., with brass cap mkd.
	¼ S33 / S4 1934
	from which
	A pinon, 6 ins. diam., bears S. 15°E., 22 lks. dist., mkd. ¼ S4 BT
	A pinon, 8 ins. diam., bears N. 23¼°W., 16 lks. dist., mkd. ¼ S33 BT
	Asc. 50 ft. over E. slope
42.00	Ridge, bears N. and S.; desc. 40 ft. over SW. slope.
44.28	Triangulation point "C" bears 10 lks. N.; discontinue chaining.
44.40	Top of cliff, bears N. and S.; desc. 918 ft. over cliffs and W. slope.
77.30	Draw, 50 lks. above mouth, course S. 30°W.; asc. slightly.

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SURVEY OF PART (COMPLETION) AND RESURVEY OF PART OF NORTH BOUNDARY OF T. 41 N., R. 6 W.

Chains	
77.60	Triangulation point "A" bears 1 lk. N.; resume chaining.
80.35	The cor. of secs. 4, 5 and fracl. secs. 32 and 33, an iron post, 2 ins. diam., projecting 12 ins. above ground, firmly set, properly mkd. on brass cap, dated 1916, and witnessed by 4 bearing trees as described in the official record. Land: rolling and mountainous. Soil: sandy loam, rocky, 3rd and 4th rates Timber; juniper, pinon, yellow pine. Undergrowth: sage, service brush

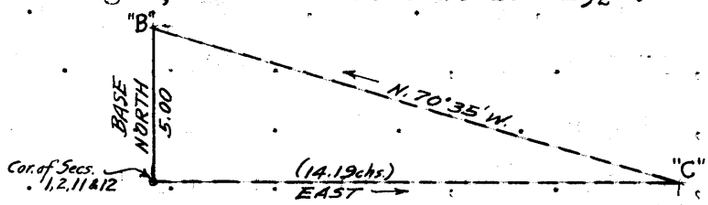
SURVEY OF PART (COMPLETION) and RESURVEY OF PART OF SUBDIVISION LINES OF T. 41 N., R. 6 W.

The subdivision lines of the greater part of this township were surveyed in 1916 by T.B.Matthews, U.S.S. and W.L. Nash, U.S.T. No other surveys, retracements or resurveys are of record. The following notes describe the survey of the completion of the subdivision lines of this township and the resurvey of the S½ of the line bet. secs. 4 and 5.

Beginning at the cor. of secs. 1, 2, 11 and 12.

East, on random line bet. secs. 1 and 12.

To obtain measurement over cliffs ahead, triangulate as follows: measure a base North, 5.00 chs. dist., to point "B"; from a point "C", ahead on line, point "B" bears N. 70°35'W. Bearings checked by deflection angles. Vertical angle, "C" to sec. cor. is -23½°.



14.19	Triangulation point "C"; resume chaining.
40.00	Set temp. ¼ sec. cor.
80.22	A point 23 lks. N. of the cor. of secs. 1,6,7 and 12, on the E. bdy. of the Tp., an iron post, 3 ins. diam., projecting 8 ins. above a mound of stone, firmly set, properly mkd. on brass cap, dated 1914, and witnessed by 4 bearing trees as described in the official record. Thence, from cor., N. 89°50'W., on true line, bet. secs. 1 and 12. Over mountainous land; through scattering pinon and juniper timber and scattering undergrowth. Asc. 246 ft. over broken E. slope.
14.00	Rocky spur, slopes N.; desc. 140 ft. over W. slope.
19.00	Head of ravine, course N.; asc. 23 ft.
24.00	Spur, slopes N.; desc. 200 ft. over broken NW. slope.
40.11	Set an iron post, 3 ft. long, 1 in. diam.; 6 ins. in the ground to bedrock, with a sandstone, 8x6x4 ins., mkd. with cross (X), deposited at base, and in a mound of stone to top, for ¼ sec. cor., with brass cap mkd.

Chains

$\frac{1}{4}\frac{S\ 1}{S12}$
1934

No suitable bearing trees available.

Desc. 125 ft. over W. slope.

47.20 Ravine, course NW.; asc. 64 ft. over NE. slope.

51.90 Flat, rocky spur, 1½ chs. wide, slopes N.; desc. 74 ft. over SW. slope.

54.60 Ravine, course N.; asc. 38 ft. over NE. slope.

58.50 Spur, slopes N.; desc. 66 ft. over W. slope.

63.40 Draw, course N.; asc. 21 ft. over E. slope.

66.00 Top of cliff, faces W.

66.03 Triangulation point "C" bears 4 lks. N.; discontinue measurement by chaining.

Desc. 374 ft. over cliffs and W. slope.

80.22 The cor. of secs. 1,2,11 and 12, an iron post, 2 ins. diam., projecting 12 ins. above ground, firmly set and properly mkd. on brass cap, dated 1916, with dim remains of old witness pits.

Land: rolling and mountainous.
Soil: W. 10 chs. sandy loam, 2nd rate; remainder 4th rate.
Timber: pinon, juniper, pine.
Undergrowth: sage, manzanita, oak brush, cacti.

Beginning at the cor. of secs. 9,10,15 and 16, an iron post, 2 ins. diam., projecting 12 ins. above a mound of stone, firmly set, properly mkd. on brass cap, dated 1916, and witnessed as described in the official record,

N.0°02'W., on true line, bet. secs. 9 and 10.

Asc. 293 ft. over rugged S. slope; through scattering pinon and juniper timber and scattering undergrowth.

14.20 Spur, slopes E.; desc. 87 ft. over N. slope.

21.60 Wash, 10 lks. wide, course E.; asc. 83 ft. over SE. slope.

26.70 Head of ravine, course E.

34.30 Top of ascent; desc. 26 ft. over NE. slope.

35.70 Wash, 10 lks. wide, course SE.; asc. 48 ft. over SE. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 22 ins. in the ground, and in a mound of stone to top, for ¼ sec. cor., with brass cap mkd.

$S9 \mid \frac{1}{4} \mid S10$
1934

from which

SURVEY OF PART (COMPLETION) and
RESURVEY OF PART OF SUBDIVISION LINES OF T. 41 N., R. 6 W.

Chains	
	A juniper, 20 ins. diam., bears N.83¼°E., 120 lks. dist., mkd. ¼ S10 BT.
	A juniper, 14 ins. diam., bears S.76½°W., 131 lks. dist., mkd. ¼ S9 BT.
	Asc. 142 ft. over SE. slope.
45.80	To avoid point of cliff, about 200 ft. high, projecting E., offset East, 1.00 ch. dist. and parallel line.
46.25	Opposite point of cliff on true line and 240 ft. lower; desc. 102 ft. over NE. slope.
49.74	Offset West, 1.00 ch. dist. to true line; desc. 275 ft. over broken NE. slope.
67.80	Ravine, course NE.; asc. 11 ft.
72.60	Sandy spur, slopes E.; desc. 43 ft. over rolling N. slope.
79.20	Wash, 10 lks. wide, 4 ft. deep, course E.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 30 ins. in the ground, for cor. of secs. 3,4,9 and 10, with brass cap mkd.

T41NR6W
S4 | S3
S9 | S10
1934

from which

A pinon, 14 ins. diam., bears N.60½°E., 460 lks. dist., mkd. T41N R6W S3 BT.

A pinon, 8 ins. diam., bears S.79°E., 724 lks. dist., mkd. T41N R6W S10 BT.

A pinyon, 20 ins. diam., bears S.30¼°W., 803 lks.dist., mkd. T41N R6W S9 BT.

A juniper, 10 ins. diam., bears N.68¼°W., 272 lks.dist., mkd. T41N R6W S4 BT.

Land: rolling and mountainous.
Soil: sandy loam, 3rd and 4th rates.
Timber; pinon, juniper, pine.
Undergrowth: scrub oak, sage, buck brush, manzanita.

N.89°53'E., on random line, bet. secs. 3 and 10.

40.00	Set temp. ¼ sec. cor.
80.16	A point 7 lks. N. of the cor. of secs. 2,3,10 and 11, an iron post, 2 ins. diam., projecting 12 ins. above ground, firmly set, properly mkd. on brass cap, dated 1916, with dim remains of old witness pits.

Thence

S.89°56'W., on true line, bet. secs. 3 and 10.

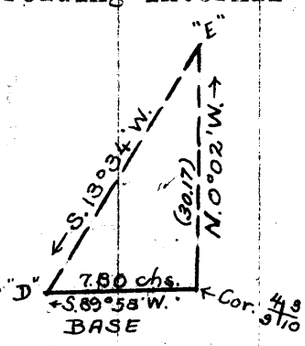
Asc. 135 ft. over increasing E. slope; through scattering pinon and juniper timber and scattering undergrowth.

SURVEY OF PART (COMPLETION) and
RESURVEY OF PART OF SUBDIVISION LINES OF T. 41 N., R. 6 W.

Chains	
15.30	Spur, slopes S.; desc. 104 ft. over rolling SW. slope.
29.20	Old road, bears SE. and NW.
35.20	Wash, 20 lks. wide, 8 ft. deep, course SE.; asc. 37 ft. over E. slope.
40.08	Set an iron post, 3 ft. long, 1 in. diam., 28 ins. in the ground, for ¼ sec. cor., with brass cap mkd. ¼ S 3. ¼ S10 1934 from which
	A juniper, 30 ins. diam., bears S.57½°W., 84 lks. dist., mkd. ¼ S10 BT.
	A juniper, 10 ins. diam., bears N.41°W., 142 lks. dist., mkd. ¼ S3 BT.
	Cor. stands on low sandy knoll.
	Desc. 14 ft. over W. slope.
45.60	Wash, 10 lks. wide, course S.; asc. slightly.
48.30	Drain, 5 lks. wide, 3 ft. deep, course S.; asc. 160 ft. over SE. slope.
63.20	Spur, slopes S.; desc. 133 ft. over SW. slope.
76.80	Wash, 50 lks. wide, 6 ft. deep, course SE.; asc. 14 ft.
80.16	The cor. of secs. 3,4,9 and 10.
	Land: rolling. Soil: gravel, rocky, 3rd rate. Timber: pinon, juniper, pine. Undergrowth: sage, manzanita, buck brush, cacti.

N.0°02'W., on random line, bet. secs. 3 and 4.

To obtain measurement over cliffs ahead triangulate as follows: measure a base S.89°58'W., 7.30 chs. dist., to point "D". From a point forward on line, designated "E", point "D" bears S.13°34'W. Vertical angle "E" to sec. cor. is -15°. Bearings checked by reading internal angles.



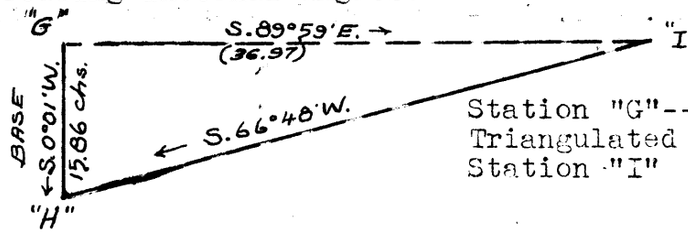
30.17	Triangulation point "E"; resume chaining.
40.00	Set temp. ¼ sec. cor.
80.70	Intersect the cor. of secs. 3 and 4 and of fracl. secs. 33 and 34, on the N. bdy. of the Tp., hereinbefore described.

Thence

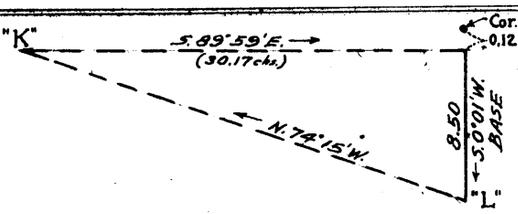
S.0°02'E., on true line, bet. secs. 3 and 4.

SURVEY OF PART (COMPLETION) and
RESURVEY OF PART OF SUBDIVISION LINES OF T. 41 N., R. 6 W.

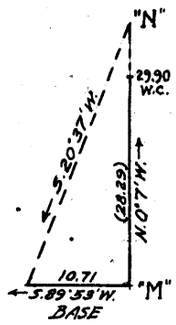
Chains	
	Desc. 271 ft. over rocky S. slope; through scattering pinon, juniper and pine timber and scattering brush.
32.30	Ravine, course SW.; asc. 16 ft.
35.90	Saddle in spur, slopes SW.; desc. 27 ft.
37.70	Ravine, course SW.; desc. 37 ft. over SW. slope.
40.70	Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the ground, with a stone, 8 x 6 x 6 ins., mkd. X, deposited at base, and in a mound of stone to top, for ¼ sec. cor., with brass cap mkd.
	¼ S4 | S3 1934
	No bearing trees available.
	Desc. 70 ft. over SW. slope.
50.53	Triangulation point "E", on top of cliff, faces S.70°W.; discontinue chaining.
	Desc. 512 ft. over cliffs and general SW. slope.
77.70	(Approx.) Wash, 30 lks. wide, 4 ft. deep, course SE.; asc. slightly.
80.70	The cor. of secs. 3,4,9 and 10.
	Land: mountainous and rolling. Soil: sandy, rocky, 3rd and 4th rates. Timber: juniper, pinon, pine. Undergrowth: sage, buck brush, manzanita, cacti.

	Beginning at the cor. of secs. 4,5,8 and 9,
	S.89°59'E., on random line, bet. secs. 4 and 9.
2.10	To obtain measurement over cliffs ahead triangulate as follows: designate this point "G" and measure a base S.0°01'W., 15.86 chs. dist. to point "H". From a point, "I", forward on line, point "H" bears S.66°48'W. Vertical angle "I" to "G" is -23°34'. All bearings checked by reading internal angles.
	 Station "G"-----2.10 chs. Triangulated --36.97 " Station "I" 39.07 chs.
39.07	Triangulation point "I"; resume chaining.
~~40.00~~	~~Set~~ temp. ¼ sec. cor.
49.79	To obtain measurement over cliffs ahead triangulate as follows: designate this point "K" and extend line forward to a point 12 lks. S. of the cor. of secs. 3,4,9 and 10, from which point measure a base S.0°01'W., 8.50 chs. dist. to point "L". From "L" point "K" bears N. 74°15'W. Vertical angle "K" to sec. cor. is -25°35'. All bearings checked by reading internal angles.

U. S. GOVERNMENT PRINTING OFFICE: 1931 6—8155

Chains	
	 Station "K"----- 49.79 chs. Triangulated---- 30.17 " 79.96 chs.
79.96	A point 12 lks. S. of the cor. of secs. 3,4,9 and 10.
	Thence
	S. 89°56'W., on true line, bet. secs. 4 and 9
	Measurement by triangulation as described on random line.
	Asc. 864 ft. over E. slope and cliffs facing E.; through scattering pinon and juniper timber and scattering brush.
30.17	Triangulation point "K" bears 7½ lks. S.; top of cliff, faces N. 70°E.; resume chaining.
	Asc. 146 ft. over E. slope.
37.00	Ridge, bears S. 17°E. and N. 17°W.; desc. 53 ft. over rocky W. slope.
39.98	Set an iron post, 3 ft. long, 1 in. diam., on cross (x) on exposed bedrock, and in a mound of stone, 5 ft. base, to top, for ¼ sec. cor., with brass cap mkd.
	S4 ¼ S9 1934
	No bearing trees available.
40.89	Triangulation point "I" bears 5½ lks. S.; discontinue chaining.
41.00	Cliff, bears N. and S.; desc. 973 ft. over cliff and steep W. slope.
77.86	Triangulation point "G"; resume chaining; desc. 58 ft. over SW. slope.
79.96	The cor. of secs. 4, 5, 8 and 9, an iron post, 2 ins. diam. projecting 12 ins. above ground, firmly set, properly mkd. on brass cap, dated 1916, witnessed by a mound of stone W. of cor. Land: mountainous. Soil: rocky, 4th rate. Timber: juniper, pinon. Undergrowth: sage, huck brush, manzanita, cacti.
	RESURVEY
	From the cor. of secs. 4, 5, 8 and 9, N. 0° 3'W., on random line, bet. secs. 4 and 5 (S½)
29.90	A point 3½ lks. E. of witness cor. to ¼ sec. cor. To maintain alignment thru the witness cor., and record dist. (9.96 chs.) therefrom to the point for ¼ sec. cor., gives a true course and dist. for the S½ of line bet. secs. 4 and 5, N. 0°7'W., 39.86 chs. Return to the cor. of secs. 4, 5, 8 and 9 Thence N. 0°7'W., on true line, bet. secs. 4 and 5 (S½).

Chains	
	Asc. 30 ft. over SW. slope, through scattering juniper and pinon timber and undergrowth
3.90	Sharp spur, slopes S. 70°W.
4.08	To obtain measurement over cliff north of the witness cor. to ¼ sec. cor., triangulate as follows. designate this point "M" and measure a base S. 89° 53'W., 10.71 chs. therefrom. From a point ahead on line, designated "N" the W. end of base bears S. 20° 37' W. Vertical angle from "N" to "M" is -23°. All bearings checked by reading internal angles.



Station "M"------ 4.08 chs.
Triangulated-----28.29 "
Station "N"------32.37 chs.

Continue chaining
Along W. slope

10.50	Spur, slopes S. 70°W., Desc. 50 ft. over NW. slope.
13.60	Wash, 20 lks. wide, 3 ft. deep, course S. 70°W., Asc. 407 ft. over S. slope to
29.90	The witness cor. to ¼ sec. cor., which is an iron post, 1 in. in diam. projecting 10 ins. above ground, firmly set, mkd. on brass cap and witnessed as described in the official record
	Discontinue chaining.
	Asc. 370 ft. over cliff facing S.
32.37	Triangulation point "N". Resume chaining. Asc. 140 ft. over S. slope.
39.86	Set an iron post, 3 ft. long, 1 in. in diam., on cross (X) on exposed bedrock, supported in a mound of stone, 5 ft. base, to top, for ¼ sec. cor., with brass cap mkd.

$$S5 \;\Big|^{\frac{1}{4}}\; S4$$
1934

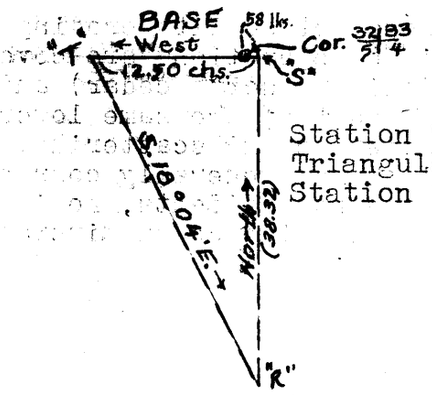
No suitable bearing trees available.

SURVEY

North, on random line, bet. secs. 4 and 5 (N. ½)

2.56	To obtain measurement over cliffs ahead triangulate as follows: designate this point: "R" and from a point: "S", forward on line, measure a base West, 12.50 chs. dist. to point "T", from which point "R" bears S. 18° 04' E. All bearings checked by reading internal angles.

Chains



Station "R"------- 2.56 chs.
Triangulated ---- 38.32 "
Station "S"------ 40.88 chs.

40.88 Triangulation point "S", 58 lks. East of the cor. of secs. 4 and 5 and of fracl. secs. 32 and 33, on N. bdy. of the township, hereinbefore described.

Thence, from cor.,

S.0°49'E., on true line, bet. secs. 4 and 5 (N.½).

Through scattering juniper and pinon timber and scattering undergrowth; measurement by triangulation as described on random line.

Asc. 570 ft. over N. slope to foot of cliffs and 145 ft. over cliffs, face N., to

38.32 Triangulation point "R" bears 3 lks. E. Top of Vermilion Cliffs, bears E. and W.; resume chaining.

Asc. 10 ft. over N. slope.

39.10 Spur, slopes W.; desc. 12 ft.

40.88 The ¼ sec. cor. of secs. 4 and 5.

Land: mountainous and rolling.
Soil: sandy, rocky, 3rd and 4th rates.
Timber: juniper, pinon.
Undergrowth: sage, service, oak brush, manzanita.

FINAL TEST OF SOLAR ATTACHMENTS

Sept. 22, 1934; on the meridian described on page 1, at 8 a.m., app.t., we set off 36°58' on the lat. arcs and 0°27'N. on the decl. arcs and orient the instruments with the solars; the lines of sight agree within 1½' with the meridian established by Polaris observation.
At 4 p.m., app.t., with the same lat. setting, we set off 0°19'N. on the decl. arcs and orient the instruments with the solars; the lines of sight agree within 1½' with the meridian established by Polaris observation.

GENERAL DESCRIPTION

The foregoing notes describe the survey of areas in T.41 N., R.6 W., not covered by the previous subdividing in the Tp. on account of the rugged escarpments known as Vermilion Cliffs.

The cliffs are of a red sandstone formation and are from 100 to 400 ft. high, frequently vertical and everywhere nearly so, sloping from their bases at a decreasing rate to flat valleys and rising from their tops to spurs and

flat ridges dotted with eroding sandstone buttes.

The higher elevations are covered by a fair growth of pinon, juniper (scrub cedar) and pine timber; there is a smaller amount of the same lower. Undergrowth is of the usual varieties and scattering.

Soil is sand, generally coarse and frequently shallow.

There are no residents, no improvements, no permanent water and no evidence of mineral.

U. S. GOVERNMENT PRINTING OFFICE: 1921 6—8155

BOOK 4039

4—680
(August, 1926)

FIELD ASSISTANTS.

NAMES.	CAPACITY.
To Ben D. Procter, U.S. Transitman	
Neil Greenhaw	1st Chainman
Orson A. Stone	2nd Chainman
Charles L. Turner	Flagman
Albert A. Blevins	Moundsman
Bill Carver	Moundsman
James A. Kelly	Axman
Guy Tripp	Axman
Paul Hultquist	Axman
Francis T. Sweeney	Axman
To J. P. Hester, U.S. Transitman	
James B. Chumbley	1st Chainman
Dawson Cooley	2nd Chainman
Paul Greenhaw, Sr.	Flagman
James E. Kelly	Axman
Perry Munger, Jr.	Axman
Frank Burt	Moundsman
M.L. Patrick	Moundsman
Merrill E. Silverthorn	Axman

6—2764

232

18

BOOK 4039

CERTIFICATE OF UNITED STATES SURVEYOR

We, Ben D. Procter, U.S.Transitman, and J.P.Hester, U.S.Transitman, hereby certify upon honor that, in pursuance of special instructions received from the District Cadastral Engineer for Arizona bearing date of the 15th day of September, 1933, we have well, faithfully, and truly in our own proper persons, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed and resurveyed all those parts or portions of the North Boundary and Subdivision lines of

Township 41 North, Range 6 West

of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed by us, and under our direction; and that all the corners of said survey and resurvey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the District Cadastral Engineer for Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey and resurvey.

Ben D. Procter
U.S.Transitman
Phoenix, Ariz.
Dec.15,1934

J.P.Hester
U.S.Transitman
Phoenix, Ariz.
Dec. 15, 1934

APPROVAL

OFFICE OF U. S. SUPERVISOR OF SURVEYS,

Denver, Colo. APR 1 - 1935, ~~193-~~

The foregoing field notes of the survey of part (completion) of the North Boundary and of part (completion) of the Subdivision Lines and of the resurvey of Part of the North Bdy. and part of the Subdivision Lines of

Township 41 North, Range 6 West

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

executed by Ben D. Procter and J.P.Hester, U.S.Transitmen under special instructions dated September 15, 1933, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys and resurveys they describe, are hereby approved.

U.S. Supervisor of Surveys.

~~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. Supervisor of Surveys.~~

U. S. GOVERNMENT PRINTING OFFICE: 1927 6—2764