

4162

4-679
(April 1933)

BOOK 4162

FIELD NOTES

OF THE SURVEY OF

PART OF NORTH BOUNDARY, (on 10th Standard Parallel North)

PART OF SUBDIVISION LINES of,

MEANDERS OF RIGHT BANK OF COLORADO RIVER thru SECTION 18 of, and

TRAVERSE OF RIGHT RIM OF GLEN CANYON of the COLORADO RIVER

thru Part of

TOWNSHIP 40 NORTH, RANGE 8 EAST

and of THE RESURVEY of

PART OF THE WEST BOUNDARY of

TOWNSHIP 40 NORTH, RANGE 8 EAST

Of the GILA AND SALT RIVER Meridian,

In the State of ARIZONA

EXECUTED BY

Benjamin J. Kinsey, Surveyor

and

Bert E. Wakeman, Transitman (P.W.)

supplemental
Under special instructions dated March 27, 1936, which provided
for the surveys included under Group No. 81, Arizona, bearing the approval of the
Commissioner of the General Land Office under date of July 24, 1936
and assignment instructions dated November 9, 1936.

Survey and Re-Survey commenced April 4, 1937

Survey and Re-Survey completed April 17, 1937

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4162

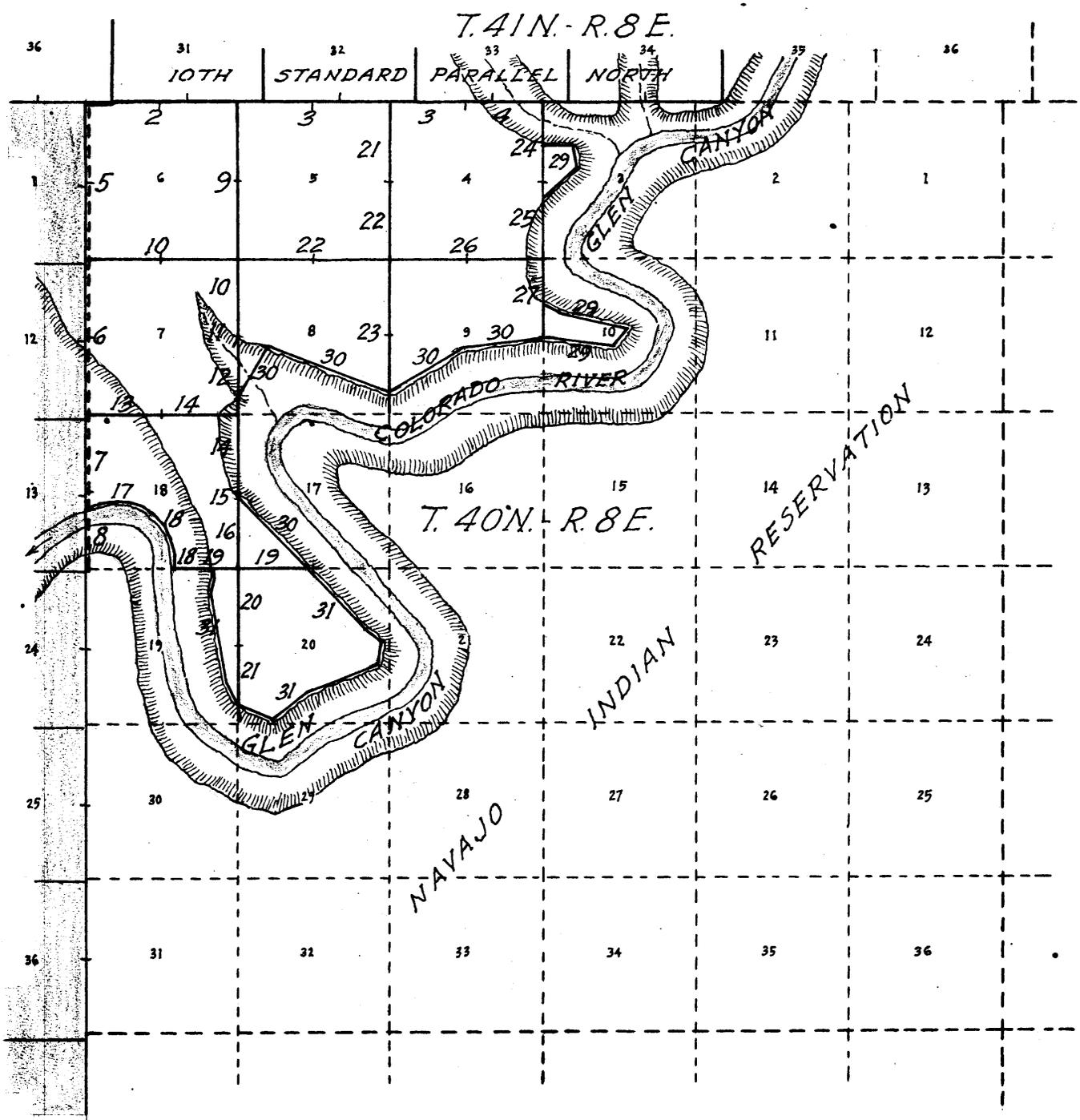
INDEX DIAGRAM.

Township _____, *Range* _____

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
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~ INDEX-DIAGRAM ~

BOOK 4162



——— Lines of accepted surveys.

- - - - - Unsurveyed lines.

==== Lines surveyed under this group.

==== Lines resurveyed under this group.

 Areas surveyed as per accepted plats on file.

The surveys and resurvey herein described were executed by Benjamin J. Kinsey, Surveyor, using Buff transit No. 18000, and by Bart E. Wakeman, Transitman (P.W.) using Young and Son's transit No. 8526. These instruments are each equipped with Smith solar attachment, and otherwise conform to the standard requirements of the General Land Office.

PRELIMINARY TEST OF INSTRUMENTS.

April 4, 1937: at station at the $\frac{1}{4}$ sec. cor. of secs. 13 and 18, T. 40 N., Rs. 7 and 8 E., G. & S.R. Meridian, Arizona, in latitude $36^{\circ}52'N.$, longitude $111^{\circ}35'W.$, and on the meridian determined at this station by Polaris observation on January 26 and 27, 1937, as described in the field notes of survey of T. 38 N., R. 6 E., test the solar apparatus of Buff transit No. 18000 and Young and Son's transit No. 8526 as follows:

At 9h. 00m., a.m., app.t., set off $36^{\circ}52'N.$ on the lat. arcs; $5^{\circ}43\frac{1}{2}'N.$ on the decl. arcs, and determine a meridian with each solar, both of which agree with the true meridian.

At app. noon, with the lat. arcs unchanged, observe the sun on the meridian and obtain a reading of $5^{\circ}46'N.$ on both decl. arcs, which agrees with the computed declination of the sun.

At 3h. 00m., p.m., app.t., with the lat. arcs unchanged, set off $5^{\circ}49\frac{1}{2}'N.$ on the decl. arcs, and determine a meridian with each solar, both of which agree with the true meridian.

As all of the solar observations, taken with these two instruments during the usual hours of solar work, agree within 1' with the true meridian, conclude that both instruments are in satisfactory adjustment on this date.

Unless otherwise specified, all measurements herein recorded were made with Lufkin steel tapes, 5 chs. in length, which were compared with a Lufkin standard tape and found correct. The measurements were made on the slope, the vertical angles determined by clinometers in good adjustment, and the slope measurements properly reduced to true horizontal values for entry in the field notes.

SURVEY: PART OF NORTH BDY. OF T. 40 N., R. 8 E.
(10th Std. Par. North)

2.

Chains

The following notes describe the establishment of $\frac{1}{4}$ sec. and sec. cors., alternately, at 40 ch. intervals, on the 10th Std. Par. N. thru part of R. 8 E., counting from the CC of Ts. 40 N., Rs. 7 and 8 E., for reference to areas in T. 40 N., R. 8 E. only. The 10th Std. Par. N. thru R. 7 E., and the E. bdy. of T. 40 N., R. 7 E., were surveyed in 1927 by W. E. Hiester, U.S. Surveyor, and said Parallel thru part of R. 8 E. was surveyed by B. J. Kinsey, Surveyor, under this group as described in field notes of survey of part of T. 41 N., R. 8 E. Topography having been recorded on the Parallel by Surveyors Hiester and Kinsey, the same is omitted in the following field notes.

The closing cor. of Ts. 40 N., Rs. 7 and 8 E., established by W. E. Hiester, U.S. Surveyor in 1927, is a brass-capped iron post, 3 ins. in diam., projecting 3 ft. above ground, firmly set in a mound of stone, with brass cap mkd. as described in the official record.

Thence

East, on N. bdy. of sec. 6, T. 40 N., R. 8 E.

Over rolling and mountainous land, thru scattering timber and undergrowth.

15.33 Intersect the std. cor. of Ts. 41 N., Rs. 7 and 8 E., established by W. E. Hiester, U.S. Surveyor in 1927, which is a brass-capped iron post, 3 ins. in diam., projecting 8 ins. above ground, firmly set, marked and witnessed as described in the official record.

Continue line and measurement.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on exposed surface rock, with a stone 8x6x3 ins. marked with a cross (+) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. of sec. 6 only, with brass cap mkd.

$\frac{1}{4}$ S6

1937

No bearing trees available.

55.33 Intersect the std. $\frac{1}{4}$ sec. cor. of sec. 31, T. 41 N., R. 8 E., established under this group, which is a brass cap, firmly set in solid rock, in concrete, marked and witnessed as described in field notes of survey of part of T. 41 N., R. 8 E.

Continue line and measurement.

80.00 Set a brass cap, $3\frac{1}{2}$ ins. in diam., with stem 3 ins. long, in solid rock, in concrete, for cor. of secs. 5 and 6 only, cap marked

T41N R8E

S31

S6	S5
T40N	R8E

1937

No bearing trees available.

SURVEY: PART OF NORTH BDY. OF T. 40 N., R. 8 E.

3

Chains

Raise a mound of stone, 4 ft. base, 2 ft. high, S. of cor.

Land, rolling, broken and mountainous.
Soil, rocky, 4th rate.
Timber, scrub cedar and pinyon.
Undergrowth, native weeds, oakbrush and cacti.

East, on N. bdy. of sec. 5, T. 40 N., R. 8 E.

Over mountainous land, thru scattering undergrowth.

- 15.33 Intersect the std. cor. of secs. 31 and 32, T. 41 N., R. 8 E., established under this group, which is a brass-capped iron post, 2 ins. in dian., projecting 28 ins. above ground, firmly set in ground and mound of stone, and marked on brass cap as described in the field notes of survey of part of T. 41 N., R. 8 E.

Continue line and measurement.

- 40.00 Set a brass cap, $3\frac{1}{2}$ ins. in dian., with stem 3 ins. long, in solid rock, in concrete, for $\frac{1}{4}$ sec. cor. of sec. 5, only, with cap marked

$\frac{1}{4}$ S 5

1937

and raise a mound of stone, 4 ft. base, 2 ft. high, S. of cor.

- 55.33 Intersect the std. $\frac{1}{4}$ sec. cor. of sec. 32, established under this group, which is a brass-capped iron post, 1 in. in dian., projecting 3 ft. above exposed surface rock, firmly set in a mound of stone, and marked on brass cap as described in field notes of survey of part of T. 41 N., R. 8 E.

Continue line and measurement.

- 80.00 Set a brass cap, $3\frac{1}{2}$ ins. in dian., with stem 3 ins. long, in solid rock, in concrete, for cor. of secs. 4 and 5 only, with cap marked

T41N R8E

S32

S5 | S4
T40N | R8E

1937

and raise a mound of stone, 4 ft. base, 2 ft. high, S. of cor.

Land, mountainous.
Soil, rocky, 4th rate.
Timber, none.
Undergrowth, native weeds, oak brush and cacti.

East, on N. bdy. of sec. 4, T. 40 N., R. 8 E.

Over mountainous and broken land, thru scattering undergrowth.

- 15.33 Intersect the std. cor. of secs. 32 and 33, T. 41 N., R. 8 E., established under this group, which is a brass-

SURVEY: PART OF NORTH BDY. OF T. 40 N., R. 8 E.
(10th Std. Par. N.)

4

Chains

capped iron post, 2 ins. in diam., projecting 10 ins. above ground, firmly set in ground, with brass cap mkd. and witnessed as described in the field notes of survey of part of T. 41 N., R. 8 E.

Continue line and measurement.

40.00

Set a brass cap, $3\frac{1}{2}$ ins. in diam., with stem 3 ins. long, in solid rock, in concrete, for $\frac{1}{4}$ sec. cor. of sec. 4 only, with cap marked

S 4

1937

and raise a mound of stone, 4 ft. base, 2 ft. high, S. of cor.

55.33

Intersect the std. $\frac{1}{4}$ sec. cor. of sec. 33, T. 41 N., R. 8 E., established under this group, which is a brass-capped iron post, 1 in. in diam., projecting 22 ins. above ground, firmly set in ground and mound of stone, with brass cap marked as described in the field notes of survey of part of T. 41 N., R. 8 E.

Continue line and measurement.

80.00

True point for cor. of secs. 3 and 4, T. 40 N., R. 8 E., falls on cliff facing SW. on left or E. wall of canyon, course SE., where it is inaccessible and cannot be monumented, therefore establish witness cor. on the left rim of the canyon, at 3.93 chs. E. from the true cor. point, as follows:

Set an iron post, 3 ft. long, 1 in. in diam. (no 2 in. diam. post available) over a cross (+) chiseled in exposed surface rock, and in a mound of stone to top, for witness cor. to cor. of secs. 3 and 4 only, with brass cap marked

T41N R8E
S33
WC
S4 | S3
T40N | R8E

1937

Land, mountainous.

Soil, rocky, 4th rate.

Timber, none.

Undergrowth, native weeds, oakbrush and cacti.

RESURVEY: PART OF WEST BDY. OF T. 40 N., R. 8 E.

BOOK 4182

5

Chains

The entire E. bdy. of T. 40 N., R. 7 E. was surveyed in 1927 by W.E.Hiester, U.S.Surveyor, running the line due North, establishing $\frac{1}{4}$ sec. and sec. cors., alternately at 40 ch. intervals, counting from the cor. of Ts. 39 and 40 N., Rs. 7 and 8 E., and establishing closing cor. of Ts. 40 N., Rs. 7 and 8 E. at the point of intersection of the range line with the 10th Std. Par. N. All of the $\frac{1}{4}$ sec. and sec. cor. monuments established in this survey were marked and witnessed for reference to areas on both sides of the line.

No retracement or resurvey of any part of this line is of record.

The following notes describe a resurvey of the portion of this line between the original cor. of secs. 13, 18, 19 and 24, and the 10th Std. Par. N. In this resurvey, initiated at the closing cor. of Ts. 40 N., Rs. 7 and 8 E., and run South, $\frac{1}{4}$ sec. and sec. cors. are established, alternately at 40 ch. intervals, monumented with reference to areas E. of line only, and all of the original cor. monuments on this part of the range line are changed to refer to areas in T. 40 N., R. 7 E. only.

The topography taken in this resurvey agrees substantially with that given in the official record of the original survey, therefore topography is omitted from the following field notes of the resurvey.

The closing cor. of Ts. 40 N., Rs. 7 and 8 E., on the 10th Std. Parallel N. is a brass-capped iron post, 3 ins. in diam., projecting 3 ft. above ground, firmly set in a mound of stone, and marked on brass cap as described in the official record.

Thence,

South, on West bdy. of sec. 6, T. 40 N., R. 8 E.

Over rolling and mountainous land, thru scattering undergrowth.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground to bedrock, over a cross (+) 6 ins. long chiseled in bed rock, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. of sec. 6 only, with brass cap marked

$\frac{1}{4}$ S6

1937

40.64 Intersect the $\frac{1}{4}$ sec. cor. of secs. 1 and 6, which is a brass-capped iron post, 1 in. in diam., projecting 3 ft. above ground, firmly set in a mound of stone, and marked on brass-cap as described in the official record.

Alter this cor. monument to refer to the quarters of sec. 1, T. 40 N., R. 7 E. only, by changing the marking on the brass cap to read

$\frac{1}{4}$ S1

1927-37

Continue line and measurement

79.85 Set an iron post, 3 ft. long, 2 ins. in diam., over a cross (+) 8 ins. long, chiseled in exposed surface rock, and in a mound of stone to top, for witness cor. to cor.

RESURVEY: PART OF WEST BDY. OF T. 40 N., R. 8 E.

6.

Chains	<p>of secs. 6 and 7 only, with brass cap marked</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="border-right: 1px solid black; padding: 2px;">T40N</td> <td style="padding: 2px;">T40N</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">R7E</td> <td style="padding: 2px;">S6</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">S1</td> <td style="padding: 2px;">S7</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;"></td> <td style="padding: 2px;">R8E</td> </tr> </table> <p style="text-align: center;">WC</p> <p style="text-align: center;">1937</p> <p>80.00 True point for cor. of secs. 6 and 7 falls on a steep rocky slope, where it is impracticable to monument the cor., therefore establish witness cor. thereto at a point 15 lks. N. as described above.</p> <p>Land, rolling and mountainous. Soil, rocky, 4th rate. Timber, none. Undergrowth, native weeds, sage, greasebrush and cacti.</p>	T40N	T40N	R7E	S6	S1	S7		R8E
T40N	T40N								
R7E	S6								
S1	S7								
	R8E								
	<p>From true point for cor. of secs. 6 and 7.</p> <p>South on West bdy. of sec. 7, T. 40 N., R. 8 E.</p> <p>Over mountainous, rocky land, devoid of timber and undergrowth.</p> <p>0.64 Intersect the cor. of secs. 1, 6, 7 and 12, which is a brass-capped iron post, 2 ins. in diam., projecting 3 ft. above ground, firmly set in a mound of stone, and marked on the brass cap as described in the official record.</p> <p>Alter this cor. monument to refer to secs. 1 and 12, T. 40 N., R. 7 E. only by changing the marking on the brass cap to read</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="border-right: 1px solid black; padding: 2px;">T40N</td> <td style="padding: 2px;">T40N</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">S1</td> <td style="padding: 2px;">R8E</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">S12</td> <td style="padding: 2px;">S7</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">R7E</td> <td style="padding: 2px;"></td> </tr> </table> <p style="text-align: center;">1927-37</p> <p>Continue line and measurement.</p>	T40N	T40N	S1	R8E	S12	S7	R7E	
T40N	T40N								
S1	R8E								
S12	S7								
R7E									
	<p>40.00 Set an iron post, 3 ft. long, 1 in. in diam., over a cross (+) chiseled in exposed surface rock, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. of sec. 7 only, with brass cap marked</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="border-right: 1px solid black; padding: 2px;">$\frac{1}{4}$</td> <td style="padding: 2px;">S7</td> </tr> </table> <p style="text-align: center;">1937</p>	$\frac{1}{4}$	S7						
$\frac{1}{4}$	S7								
	<p>40.64 Intersect the $\frac{1}{4}$ sec. cor. of secs. 7 and 12, which is a brass-capped iron post, 1 in. in diam., projecting 3 ft. above ground, firmly set in a mound of stone, and marked on the brass cap as described in the official record.</p> <p>Alter this cor. monument to refer to the quarters of sec. 12, T. 40 N., R. 7 E. only, by changing the marking on the brass cap to read</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="border-right: 1px solid black; padding: 2px;">$\frac{1}{4}$ S12</td> <td style="padding: 2px;"></td> </tr> </table> <p style="text-align: center;">1927-37</p> <p>Continue line and measurement.</p>	$\frac{1}{4}$ S12							
$\frac{1}{4}$ S12									

RESURVEY: PART OF WEST BDY. of T. 40 N., R. 8 E. 1937

7.

Chains

79.70 Set an iron post, 3 ft. long, 2 ins. in diam., 26 ins. in the ground, for witness cor. to cor. of secs. 7 and 18 only, with brass cap marked

T40N	T40N
R7E	S7
S12	S18
	R8E
	WC

1937

and raise a mound of stone, 4 ft. base, 2 ft. high, E. of cor.

80.00 True point for cor. of secs. 7 and 18 falls on precipitous slope where it is impracticable to monument the cor., therefore establish witness cor. thereto at a point 30 lks. N. as described above.

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

From true point for cor. of secs. 7 and 18.

South, on west bdy. of sec. 18.

Over mountainous, rocky land, devoid of timber and undergrowth.

0.64 True point for cor. of secs. 7, 12, 13 and 18, on face of cliff, where it could not be monumented, and witness cor. thereto at a point 2.56 chs. S. was established as described in the 1927 survey record.

3.20 Intersect the witness cor. to cor. of secs. 7, 12, 13 and 18 established in 1927, which is a brass-capped iron post, 2 ins. diam., projecting 3 ft. above ground, firmly set in a mound of stone, with the brass cap marked as described in the official record.

Alter this cor. monument to witness the point for cor. of secs. 12 and 13, T. 40 N., R. 7 E. only, by changing the marking on the brass cap to read

WC	
T40N	T40N
S12	R8E
S13	S18
R8E	

1927-37

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. of sec. 18 only, with brass cap marked

$\frac{1}{4}$ S18

1937

and raise a mound of stone, 4 ft. base, 2 ft. high, E. of cor.

40.64 Intersect the $\frac{1}{4}$ sec. cor. of secs. 13 and 18, which is a brass-capped iron post, 1 in. in diam., projecting 10 ins. above ground, firmly set, marked on brass cap and witnessed as described in the official record.

RESURVEY: PART OF WEST. BDY. OF T. 40 N., R. 8 E.

8.

Chains

Alter this cor. monument to refer to the quarters of sec. 13, T. 40 N., R. 7 E. only, by changing the marking on the brass cap to read

$$\frac{1}{4} S13$$

1927-37

Continue line and measurement.

48.25

(Record dist. of 7.61 chs. S. from $\frac{1}{4}$ sec. cor. of secs. 13 and 18) Mean high water mark of right bank of the Colorado River. The meander cor. of secs. 13 and 18 established at this point in 1927 has evidently been washed out, as diligent search in this vicinity fails to reveal any trace of the monument or accessory.

Reestablish this meander cor. at this point as follows:

Set an iron post, 3 ft. long, 3 ins. in diam., 26 ins. in the ground, for meander cor. of secs. 13 and 18, with brass cap marked

T40N	
R7E	R8E
S13	S18
MC	

1927-37

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

Thence across Colorado River; course SW. from E.

57.28

Intersect meander cor. of secs. 13 and 18; on mean high water mark of left bank of Colorado River which is a brass-capped iron post, 2 ins. diam., firmly set, marked and witnessed as described in the official record:

80.00

Set an iron post, 3 ft. long, 2 ins. in diam., 26 ins. in the ground, for cor. of secs. 18 and 19 only, with brass cap marked

T40N	T40N
R7E	R8E
S13	S18
	S19

1937

and raise a mound of stone 3 ft. base, 2 ft. high, E. of cor.

80.64

Intersect the cor. of secs. 13, 18, 19 and 24, which is a 2 in. diam. iron post, firmly set, with brass cap marked and witnessed as described in the official record. Alter this cor. monument to refer to secs. 13 and 24 only by changing marking on the brass cap to read.

T40N	
S13	T40N
S24	R8E
R7E	S19

1927-37

Land, mountainous.

Soil, rocky, 4th rate.

Timber, none.

Undergrowth, none except small willows along the River.

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

L. 4102

9.

Chains

The following notes describe the survey of the subdivision lines of that part of T. 40 N., R. 8 E. situate between the right rim of Glen Canyon of the Colorado River and the West and North boundaries of the township.

From the cor. of secs. 5 and 6, on the N. bdy. of the Tp. (10th Std. Par. N.) hereinbefore described.

S. 0°01'W., bet. secs. 5 and 6.

Over mountainous land, thru scattering low undergrowth.

Asc. 55 ft. over exposed sandstone on NW. slope to

8.60 Leave sandstone and mountainous land and enter rolling land, bears E. and W. Asc. 137 ft. over heavy sand on N. and NE. slopes to

32.50 Sand ridge, bears NW. and SE.; desc. 33 ft. over SW. slope to.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground to bedrock, with a stone 5x5x3 ins., marked with a cross (+) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor., with brass cap marked

$\frac{1}{4}$
.S6 .S5
.1937

Desc. slightly over sandy SW. slope to

41.70 Rim of sandstone outcropping, bears NW. and SE.; desc. 76 ft. over exposed sandstone on SW. slope to

56.90 Shallow wash, 100 lks. wide, course SE. at foot of sandstone slope.

Thence over nearly level, sandy land, sloping E. and SE.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 26 ins. in the ground with a stone 18x8x8 ins. marked with a cross (+) deposited alongside for cor. of secs. 5, 6, 7 and 8, with brass cap marked

T40N	R8E
S6	S5
S7	S8

1937

and dig pits 18x18x12 ins., in each sec. 3 ft. dist.

Land, mountainous, rolling and nearly level.

Soil, sandy, 4th rate.

Timber, none.

Undergrowth, native weeds, sage, grease brush and cacti.

West, on a random line, bet. secs. 6 and 7.

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

80.00 Intersect the true point for cor. of secs. 6 and 7 on the W. bdy. of the Tp., witnessed at a point 15 lks. N. as hereinbefore described.

Thence (from true cor. point)

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

10

Chains	
	East, on true line, bet. secs. 6 and 7. Over mountainous land, thru scattering low undergrowth. Asc. 10 ft. over S. slope to
1.30	Point of sandstone spur, slopes SE. from West at about 1.00 ch. NW. Desc. 187 ft. over exposed sandstone on E. slope.
7.00	Rocky gulch, 15 lks. wide, course NE. Leave mountainous and rocky land, and enter rolling sandy land, brs. NE. and SW. Asc. 15 ft. over NW. slope.
11.00	Spur, slopes NE.; desc. 35 ft. over SE. slope to
16.55	Wash, 15 lks. wide, course NE.; reenter mountainous and rocky land. Desc. 140 ft. over NE. slope to
28.93	Wash, 30 lks. wide, course NE.; asc. 20 ft. over NW. slope.
35.00	Rocky point of spur slopes N.; leave mountainous and enter rolling land. Desc. 30 ft. over NE. slope.
38.00	Enter wash, 100 lks. wide, in bend, course E. from NW. Desc. gradually in wash to
40.00	True point for $\frac{1}{4}$ sec. cor. falls in wash where it is impracticable to monument same, therefore establish witness cor. on line at 7.00 chs. E. as hereinafter described.
46.40	Leave wash, course NE. from W.; asc. 6 ft. over NW. slope to
47.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for witness cor. to $\frac{1}{4}$ sec. cor., with brass cap marked
	$WC \frac{\frac{1}{4} S 6}{S 7}$
	1937
	raise a mound of stone, 4 ft. base, 2 ft. high, N. of cor.
	This witness cor. is on a low spur, sloping NE. Leave rolling and enter nearly level sandy land. Desc. gradually over SE. slope to sec. cor.
55.30	Lee's Ferry trail, bears N. and S.
65.00	Wash; 100 lks. wide, course SE.
80.00	The cor. of secs. 5, 6, 7 and 8. Land, mountainous, rolling and nearly level. Soil, sandy and rocky, 4th rate. Timber, none. Undergrowth, native weeds, sage, grease brush and cacti.
	S. 0°01'W., bet. secs. 7 and 8. Over nearly level sandy land, thru scattering low undergrowth. Desc. gradually over SE. and S. slopes.

Chains	
13.50	Wash, 40 lks. wide, course SE. Enter gently rolling land; ascend 45 ft. over NE. slope, sandy and sandstone outcroppings.
30.00	Sandstone ridge, bears NW. and SE. from which a spur slopes S. at this point. Desc. gradually on top of spur to
40.00	Set an iron post, 3 ft. long, 1 in. in diam., on exposed surface rock, with a stone 4x4x3 ins., marked with a cross (+) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor., with brass cap marked
	$\frac{1}{4}$ s7 s8 1937
	Continue gradual descent on top of spur sloping S. to
41.00	Point of spur in left rim of side canyon, bearing NW. and SE. Discontinue chaining on sec. line at this point as the remainder of the sec. line crosses precipitous broken slopes of a side canyon, course SE. into Glen Canyon of the Colorado River, where chaining is impracticable, and as a triangulation of the remainder of the line is also impracticable, obtain measurement by an offset line thru the middle of E. $\frac{1}{2}$ of sec. 7 as follows:
Chains	From cor. of secs. 5, 6, 7 and 8,
	West, 20.00 chs. on line bet. secs. 6 and 7 to offset point.
	Thence
	S.0°01'W., on offset line, thru middle of E. $\frac{1}{2}$ of sec. 7, parallel to the sec. line bet. secs. 7 and 8.
	Over nearly level land, thru scattering low undergrowth.
	Desc. 25 ft. over SE. slope.
15.00	Wash, 10 lks. wide, course SE.; leave nearly level and enter rolling and mountainous land. Asc. 87 ft. over NE. slope.
30.80	Rocky knoll in spur sloping SE., which breaks abruptly into the side canyon at the right rim of same at about 5 chs. SE. from this point. Desc. 57 ft. over SW. slope.
35.75	Wash, 15 lks. wide, course SE.; asc. 30 ft. over NE. slope.
44.00	Spur, slopes SE.; desc. 46 ft. over SW. slope.
54.00	Wash, 10 lks. wide, course SE.; asc. 50 ft. over NE. slope.
61.60	Spur, slopes E.; desc. 20 ft. over S. slope.
67.00	Wash, 20 lks. wide, course E.; asc. 80 ft. over N. slope to

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

12

Chains

Chains	80.00	Spur, slopes E.; and theoretical point 20.00 chs. West from the true point for cor. of secs. 7, 8, 17 and 18. Thence East, on offset line, parallel to the sec. line bet. secs. 6 and 7.
	10.00	Set temp. witness cor. to cor. of secs. 7, 8, 17 and 18.
	12.00	Right rim of Glen Canyon of the Colorado River, bears NE. and SW. Precipitous descent of about 800 ft. over cliffs facing SE., on the canyon wall renders the remainder of the offset line impassable.
	20.00	True point for cor. of secs. 7, 8, 17 and 18 (80.00 chs. S. 0°01'W. from cor. of secs. 5, 6, 7 and 8) is on the canyon wall where it is inaccessible and cannot be monumented.
		The approximate topography of the S. $\frac{1}{2}$ of line bet. secs. 7 and 8, measured S. 0°01'W. from the cor. of secs. 5, 6, 7 and 8 and estimated by observation from the offset line, is as follows:
	50.00	Rocky wash, 30 lks. wide, course SE. in bottom of side canyon, about 250 ft. below the $\frac{1}{2}$ sec. cor. Asc. about 200 ft. over steep broken NE. slope.
	68.00	Point of spur, sloping NE., and right rim of side canyon, bearing NW. and SE.; desc. 30 ft. over SE. slope to
	72.00	Right rim of Glen Canyon of the Colorado River, bears NE. and SW. Desc. about 500 ft. over precipitous broken SE. slope to
	80.00	True point for cor. of secs. 7, 8, 17 and 18, on right wall of Glen Canyon where it is inaccessible. Witness cor. established 10.00 chs. W. as hereinafter described. Land, nearly level, rolling, broken and mountainous. Soil, sandy and rocky, 4th rate. Timber, none. Undergrowth, native weeds, sage, grease brush and cacti.
		From true point for cor. of secs. 7, 8, 17 and 18. West, on random line bet. secs. 7 and 18. Measurement of 8 chs. computed from offset line thru middle of E. $\frac{1}{2}$ of sec. 7, as hereinbefore described.
	8.00	Right rim of Glen Canyon. Continue line and measurement by chaining.
	40.00	Set temp. $\frac{1}{4}$ sec. cor.
	48.44	Right rim of Glen Canyon, bears NW. and SE. Beyond this point the remainder of the random sec. line crosses precipitous slopes and cliffs on the canyon wall, rendering continuation of chaining impracticable, therefore obtain measurement of such portion of the line by

Chains

triangulation, described as follows:

Designate 48.44 ch. station as "A".

Set flag "B" ahead at the true point for cor. of secs. 7 and 18, on W. bdy. of Tp., 30 lks. S. of the witness cor. thereto, hereinbefore described.

Bearing "A" to "B" is West, with a vertical angle of - 29°.

Set flag "C" on the 1/4 sec. cor. of sec. 18 only on W. bdy. of Tp., which gives a base of south, 40.00 chs.

From "A" the flag "C" bears S. 40° 08' W.

The included angles of the triangle "A-B-C" are 49°52', 90°00' and 40°08', the sum of which is 180°00'.

Dist. on random sec. line to "A" = 48.44 chs. West
 Dist. triangulated from "A" to "B" = 31.52 chs. West
 Total length of random line = 79.96 chs. West.

As the flag "B" is on the sec. cor. point, the random line extended would therefore at

79.96 Intersect the true point for cor. of secs. 7 and 18 only, on W. bdy. of Tp., witnessed 30 lks. N. as hereinbefore described.

From true point for cor. of secs. 7 and 18, East, on true line, bet. secs. 7 and 18.

Over mountainous land, in Glen Canyon of the Colorado River, ascending 1078 ft. over cliffs and precipitous SW. slope. Measurement by triangulation to

31.52 Right rim of Glen Canyon of the Colorado River, bears NW. and SE.

Leave canyon. Thence over nearly level, boulder strewn land, thru scattering low undergrowth, continuing line and measurement by chaining.

39.98 Set an iron post, 3 ft. long, 1 in. in diam., over a cross (+) 8 ins. long chiseled in exposed surface rock, and in a mound of stone to top, for 1/4 sec. cor., with brass cap marked

1/4 S. 7
S 18

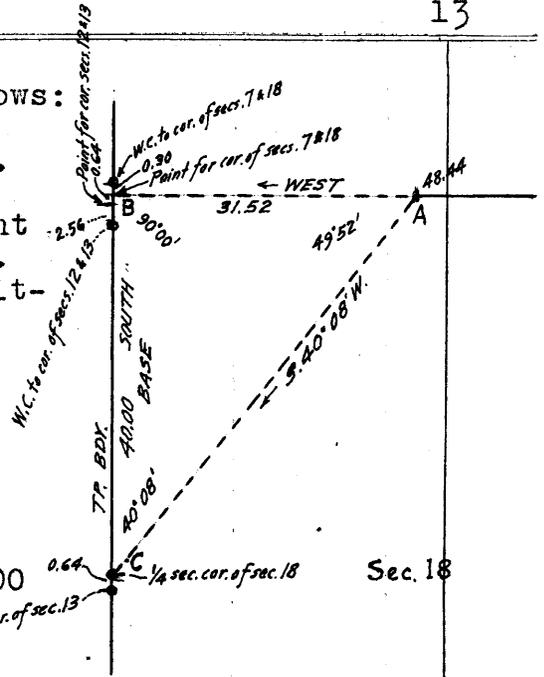
1937

Leave nearly level, and enter rolling land.

Desc. 185 ft. along top of spur, sloping E.

51.90 Trail, bears N. and S., extending from Lee's Ferry, Ariz. to Warm Creek Canyon, Utah.

68.00 Leave top of spur, sloping NE. from W. Desc. 55 ft. over SE. slope to rim of canyon.



SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

14

Chains									
69.96	Set an iron post, 3 ft. long, 2 ins. in diam., on exposed surface rock, with a stone 6x6x4 ins., marked with a cross (+) deposited at base, and in a mound of stone to top, for witness cor. to cor. of secs. 7, 8, 17 and 18, with brass cap marked.								
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>T40N</td> <td>R8E</td> <td></td> </tr> <tr> <td>S7</td> <td>S8</td> <td rowspan="2">WC</td> </tr> <tr> <td>S18</td> <td>S17</td> </tr> </table>	T40N	R8E		S7	S8	WC	S18	S17
T40N	R8E								
S7	S8	WC							
S18	S17								
	1937								
71.96	Right rim of Glen Canyon of the Colorado River, bears NE. and SW. Discontinue chaining as the remainder of the line is impassable. Measurement to sec. cor. point by offset line thru middle of E. $\frac{1}{2}$ of sec. 7, as hereinbefore described.								
	Desc. about 500 ft. over cliffs facing SE. on right wall of Glen Canyon.								
79.96	True point for cor. of secs. 7, 8, 17 and 18, on right wall of Glen Canyon, where it is inaccessible and cannot be monumented. Witness cor. established 10.00 chs. W. as hereinbefore described.								
	Land, E. 8 chs. and W. 35.52 chs. mountainous, remainder nearly level and rolling.								
	Soil, rocky and sandy, 4th rate.								
	Timber, none.								
	Undergrowth, native weeds, sage, grease brush and cacti.								
	From the true point for cor. of secs. 7, 8, 17 and 18.								
	S. 0°01'W., bet. secs. 17 and 18.								
	Over mountainous land, on the right wall of Glen Canyon of the Colorado River.								
	Measurement of the N. $\frac{1}{2}$ of this line by chaining is impracticable, therefore obtain measurement of this part of the line by offset and traverse thru NE. $\frac{1}{4}$ of sec. 18 as follows:								
	From a point on line bet. secs. 7 and 18, 28.47 chs. W. from true point for cor. of secs. 7, 8, 17 and 18.								
Chains	S. 0°01'W., on offset line in sec. 18, parallel to and 28.47 chs. W. from sec. line bet. secs. 17 and 18.								
	Over rolling land, thru scattering low undergrowth.								
	Desc. 25 ft. over S. slope.								
5.00	Wash, 10 lks. wide, course E.; asc. 22 ft. over N. slope.								
6.50	Point of spur, slopes NE.; desc. 40 ft. over SE. slope to wash.								
9.24	Trail, bears NE. and SW. (Lees Ferry, Ariz. to Warm Creek Canyon, Utah)								
10.25	Same trail, bears NW. and SE.								
13.50	Same trail, bears NE. and SW.								

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E. 15

15

Chains	
15.10	Wash, 15 lks. wide, course SE.; asc. gradually over NE. slope to offset point.
18.25	Trail, bears NW. and SE.
24.24	Offset point, 28.47 chs. West from 24.24 ch. station on sec. line bet. secs. 17 and 18. Thence on traverse to point on said sec. line as follows: S. 48°55'E., over mountainous land, devoid of timber or undergrowth. Desc. gradually over broken NE. slope.
0.84	Trail, bears NE. and SW. (Lees Ferry, Ariz. to Warm Creek Canyon, Utah). At about 3.50 chs. S. of this point the trail begins a sinuous descent over the canyon wall to Lees Ferry in the bottom of the canyon, on the N. side of the Colorado River.
4.70	Wash, 10 lks. wide, course NE. near head. Continue gradual descent over broken NE. slope.
10.92	Wash, 10 lks. wide, course NE., near head; asc. 101 ft. over NW. slope.
16.49	Top of round peak, 20 lks. in diam., where an iron pipe, 1 in. in diam., is firmly set in concrete, and projects 2 ft. above ground. No markings. This peak on its SW. side merges into the right rim of Glen Canyon of the Colorado River. Desc. 149 ft. over broken SE. slope to
20.92	Gulch, 20 lks. wide, course SW.; near head; asc. 15 ft. over W. slope to
22.63	Traverse point; Thence, South, 0.89 chs. to traverse point 11.41 chs. West from true point for the $\frac{1}{4}$ sec. cor. of secs. 17 and 18. Thence, East, 7.34 chs. to traverse point, 4.07 chs. W. from $\frac{1}{4}$ sec. cor. point and 1 ch. W. from right rim of Glen Canyon which at this point bears NW. and SE. Thence, South, 3.27 chs. to traverse point. Thence, East, 4.07 chs., descending gradually over NE. slope and returning to point on sec. line bet. secs. 17 and 18 at 43.27 chs. S. 0°01'W. from true point for cor. of secs. 7, 8, 17 and 18.

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

16

Chains

The approximate topography in the N. 43.27 chs. of the section line bet. secs. 17. and 18, is estimated as follows:

Desc. about 600 ft. over precipitous broken SE. slope.

22.00 Gulch, course E.; asc. about 800 ft. over precipitous broken NE. slope to rim of canyon.

40.00 True point for $\frac{1}{4}$ sec. cor. on right wall of Glen Canyon, about 3 chs. E. from the right rim of the canyon. As this point is inaccessible and cannot be monumented, witness cor. thereto is established on sec. line at 3.27 chs. S. $0^{\circ}01'W.$ as hereinafter described.

43.27 Right rim of Glen Canyon, bears NW. and E. about 50 lks., thence SE., and terminus of offset and traverse thru sec. 18, hereinbefore described.
Set a brass cap, $3\frac{1}{2}$ ins. in diam., with stem 3 ins. long, in solid rock, in concrete, for witness cor. to $\frac{1}{4}$ sec. cor., marked on cap

WC
 $\frac{1}{4}$
S18 | S17
1937.

and raise a mound of stone, 4 ft. base, 2 ft. high, W. of cor.

Continue line and measurement by chaining.

Over rolling and mountainous land, thru scattering low undergrowth.

Asc. gradually over NE. slope.

53.00 Low spur slopes SE.; desc. 10 ft. over SW. slope.

55.67 Wash, 10 lks. wide, course SE.; asc. 17 ft. over NE. slope.

60.00 Spur, slopes SE.; desc. 62 ft. over SW. slope.

63.15 Wash, 20 lks. wide, course SE.; asc. 10 ft. over NE. slope.

64.50 Low spur, slopes SE.; desc. gradually over S. slope.

70.00 Wash, 10 lks. wide, course E.; asc. gradually over NE. slope to

76.40 Wash, 10 lks. wide, course NE.; asc. 151 ft. over steep rocky NW. slope to

80.00 True point for cor. of secs. 17, 18, 19 and 20 falls on steep face of sloping rock, where it is impracticable to monument the cor.; therefore witness cor. is established at 1.34 chs. S. $0^{\circ}01'W.$, as hereinafter described.

Land, mountainous, rolling and broken.

Soil, rocky, 4th rate.

Timber, none.

Undergrowth, none in N. $\frac{1}{2}$; native weeds, sage, greasebrush and cacti in S. $\frac{1}{2}$.

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

17

Chains

From true point for cor. of secs. 17, 18, 19 and 20.
West, on random line, bet. secs. 18 and 19.

13.23

Right rim of Glen Canyon, bears N. and S. Discontinue chaining at this point owing to precipitous broken slopes on the canyon wall, and triangulate measurement of the remainder of the line as follows:

Designate 13.23 ch. station on random sec. line as "A".

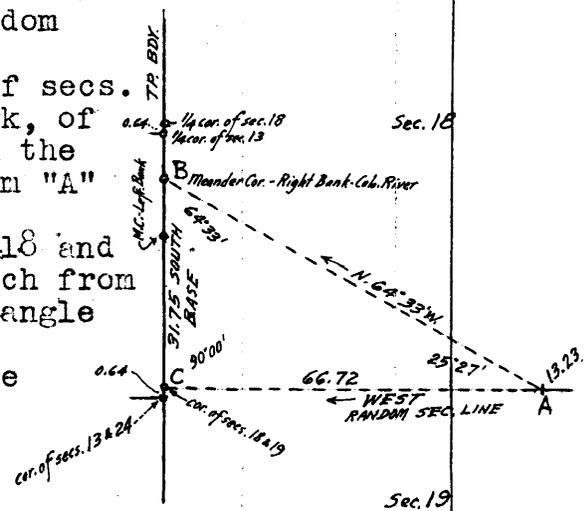
Set flag "B" on the meander cor. of secs. 13 and 18 at mean high water mark, of right bank of Colorado River, on the west bdy. of the Tp., which, from "A" bears N. $64^{\circ}33'W$.

Set flag "C" on the cor. of secs. 18 and 19 on the W. bdy. of the Tp. which from "A" bears West, with a vertical angle of $18^{\circ}4'$.

The included angles of the triangle "A-B-C" are $25^{\circ}27'$, $64^{\circ}33'$ and $90^{\circ}00'$, the sum of which is $180^{\circ}00'$.

The base "B-C" of the triangulation is South, 31.75 chs.

Dist. chained on random sec. line to "A" = 13.23 chs. W.
Dist. triangulated "A" to "C" = 66.72 " "
Total length of random sec. line = 79.95 chs. W.



79.95

Intersect the cor. of secs. 18 and 19, on W. bdy. of the Tp., hereinbefore described.

As the portion of this section line W. from the center of the Colorado River is within the NAVAJO INDIAN RESERVATION, and the survey of subdivision lines of T. 40 N., R. 8 E., being limited to that part of said Tp. situate between the Colorado River and the West and North bdrs. of the Tp., meander the mean high water mark of the right bank of the Colorado River upstream thru Sec. 18 from the meander cor. of secs. 13 and 18, of said right bank on W. bdy. of Tp. to point of intersection of said meanders with the true line between secs. 18 and 19, as described as follows:

From meander cor. of secs. 13 and 18, reestablished on W. bdy. of Tp., at 48.25 chs. South from true point for cor. of secs. 7 and 18 as hereinbefore described,

N. $75^{\circ}32'E$., 9.00 chs.; thence

N. $89^{\circ}08'E$., 5.00 chs.; thence

S. $72^{\circ}10'E$., 2.30 chs.; to meander angle point from which

SE. cor. of stone cabin #1, bears N. $51^{\circ}W$., 5.90 chs. dist.

NE. cor. of stone cabin #2, bears N. $55\frac{1}{2}^{\circ}W$., 2.90 " "

NE. cor. of stone cabin #3, bears N. $18\frac{1}{2}^{\circ}W$., 1.40 " "

SE. cor. of stone cabin #4, bears N. $39^{\circ}E$., 1.30 " "

SE. cor. of stone cabin #5, occupied as a residence by the local representative of the U.S. Geological Survey, bears N. $43^{\circ}E$., 4.60 chs. dist.

S. end of stone cabin #6, bears N. $39^{\circ}E$., 6.00 chs. dist.

W. end of stone garage #7, bears N. $75^{\circ}E$., 5.20 chs. dist.

W. end of stone cabin #8, bears N. $70\frac{1}{2}^{\circ}E$., 6.30 chs. dist.

Old mine shaft, bears N. $35^{\circ}W$., 10.60 chs. dist.

A brass tablet, 3 ins. in diam., marked "U.S. G.S. Gauging Station Reference Mark", cemented in a rock in place, 3 ft. W. of SW. cor. of stone cabin #1, bears N. $55\frac{1}{2}^{\circ}W$., 6.77 chs. dist.

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

18

Chains

From meander angle point,

S. $86^{\circ}32'E.$, 4.00 chs.; thence

N. $78^{\circ}15'E.$, 2.00 chs.; thence

S. $71^{\circ}11'E.$, 6.00 chs.; thence

S. $77^{\circ}13'E.$, 6.00 chs. to meander angle point. At 4.20 chs. on this course is a steel tower 30 ft. high, 12x10 ft. base, from which steel tramway extends S. $20^{\circ}W.$ across the river.

From meander angle point,

S. $49^{\circ}16'E.$, 8.00 chs.; thence,

S. $25^{\circ}00'E.$, 16.20 chs. to meander angle point. At 7.00 chs. on this course a spring bears N. $32\frac{1}{2}^{\circ}E.$, 2.89 chs. dist., and a stone cabin bears N. $87\frac{1}{2}^{\circ}E.$, 3.00 chs. dist.

From meander angle point,

S. $3^{\circ}32'W.$, 10.39 chs. to intersection with line bet. secs. 18 and 19. At 2.40 chs. on this course the steel tramway tower on the left bank of the Colorado River, bears S. $23\frac{1}{4}^{\circ}W.$

At the point of intersection (computed from the meanders to be 45.65 chs. East from the cor. of secs. 18 and 19 on the W. bdy. of the Tp.), set an iron post, 3 ft. long, 1 in. in diam., 36 ins. in the ground, with a glass bottle deposited at base for meander cor. of secs. 18 and 19, on mean high water mark on the right bank of the Colorado River, with brass cap marked

MC | S 18
| S 19

1937

from which

Steel tramway tower on left bank of the river, brs. S. $37\frac{1}{2}^{\circ}W.$

E. end of cable from tramway, anchored firmly in solid rock, brs. S. 7.90 chs. dist..

From meander cor.,

East, on true line, bet. secs. 18 and 19 (Part).

Over mountainous land, ascending over precipitous, broken, rocky W. slope of the right wall of Glen Canyon. Measurement to rim by triangulation hereinbefore described.

21.07 Right rim of Glen Canyon, bears N. and S. Leave canyon. Set temp. monument for traverse of rim thru sec. 19. Continue line and measurement by chaining.

Asc. 45 ft. over W. slope.

22.75 High, rocky spur, slopes N.; desc. 126 ft. over steep NE. slope to

Chains

- 28.20 Spur, slopes NE.; desc. 65 ft. over SE. slope.
- 30.80 Wash, 10 lks. wide, course NE.; asc. 99 ft. over NW. slope to
- 34.30 (79.95 chs. E. from cor. of secs. 18 and 19 on W. bdy. of the Tp.) True point for cor. of secs. 17, 18, 19 and 20.

Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, none.
 Undergrowth, native weeds, sage, greasebrush and cacti.

From true point for cor. of secs. 17, 18, 19 and 20.

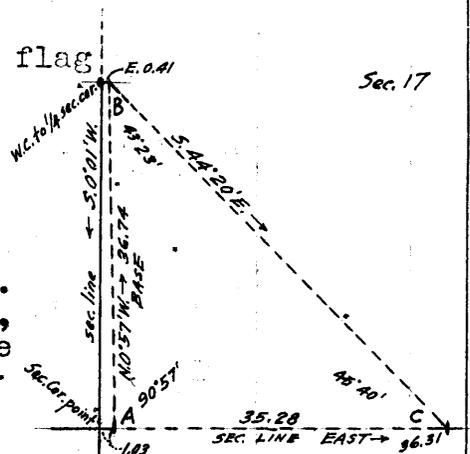
East, on true line, bet. secs. 17 and 20 (W. 1/2).

Over mountainous rocky land, devoid of timber or undergrowth.

Asc. 30 ft. over steep rocky NW. slope to

- 1.03 Rim, bears NE. and SW. Beyond this point to the right rim of Glen Canyon, chaining is impracticable, as the surface is very broken, consisting of bare sandstone ledges sloping in general to the NE., therefore triangulate measurement of the sec. line as described as follows:

Designating this point as "A" set flag "B" at a point 41 lks. E. from the witness cor. to 1/4 sec. cor. of secs. 17 and 18, which flag bears N. 0°57'W. from "A", and the length of line "A-B" the base of this triangulation, is computed from the sec. line bet. secs. 17 and 18 to be 36.74 chs. Set flag "C" ahead on section line near right rim of Glen Canyon, the bearing to which from flag "B" is S. 44°20'E.



The vertical angle "A" to "C" = - 5°
 Included angles of the triangle "A-B-C" are 90°57', 43°23' and 45°40', the sum of which is 180°00'.

Dist. chained on section line = 1.03 chs. East.
 Dist. triangulated "A" to "C" = 35.28 chs. East.
 Dist. sec. cor. point to "C" = 36.31 chs. East.

- 36.31 Triangulation point "C". Set a brass cap, 3 1/8 ins. in diam., with stem 3 ins. long, in exposed sandstone surface rock, in concrete, for witness cor. to 1/4 sec. cor. with cap marked

1/4 S 17 WC
 S 20

1937

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

- 36.41 Right rim of Glen Canyon of the Colorado River, bears NW. and SE.

Desc. over precipitous broken NE. slope on the Canyon wall.

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

20

Chains													
40.00	<p>True point for the $\frac{1}{4}$ sec. cor. of secs. 17 and 20, is on the canyon wall where it is inaccessible, and cannot be monumented, therefore, witness cor. is established at 3.69 chs. West herefrom as described above.</p> <p>Land, mountainous and broken. Soil, rocky and exposed sandstone formation, 4th rate. Timber and undergrowth, none.</p>												
	<p>From true point for cor. of secs. 17, 18, 19 and 20, S. 0°01'W., bet. secs. 19 and 20.</p> <p>Over mountainous, rocky land, devoid of timber or undergrowth.</p> <p>Asc. 30 ft. over NW. slope to</p>												
1.34	<p>Set a brass cap, $3\frac{1}{2}$ ins. in diam., with stem 3 ins. long, in exposed sandstone surface rock, in concrete, for witness cor. to cor. of secs. 17, 18, 19 and 20, with cap marked</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td>WC</td> <td></td> </tr> <tr> <td>T40N</td> <td> </td> <td>R8E</td> </tr> <tr> <td>S18</td> <td> </td> <td>S17</td> </tr> <tr> <td>S19</td> <td> </td> <td>S20</td> </tr> </table> <p style="text-align: center;">1937</p> <p>and raise a mound of stone, 4 ft. base, 2 ft. high, W. of cor.</p> <p>Leave mountainous and enter gently rolling and broken land.</p> <p>Asc. slightly over N. slope.</p>		WC		T40N		R8E	S18		S17	S19		S20
	WC												
T40N		R8E											
S18		S17											
S19		S20											
2.30	Low spur slopes E.; desc. 40 ft. over S. slope.												
12.25	Gully, 6 lks. wide, course E.; asc. gradually over NE. slope.												
15.80	Descend gradually over SE. slope.												
20.75	Draw, course SE.; descend gradually over E. and SE. slopes over broken sandstone formations.												
40.00	<p>Set a brass cap, $3\frac{1}{2}$ ins. in diam., with stem 3 ins. long, in exposed sandstone surface rock, in concrete, for $\frac{1}{4}$ sec. cor., with brass cap marked</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td>$\frac{1}{4}$</td> <td></td> </tr> <tr> <td>S19</td> <td> </td> <td>S20</td> </tr> </table> <p style="text-align: center;">1937</p> <p>and raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.</p> <p>Continue over rolling and broken land, thru scattering low undergrowth.</p> <p>Descend gradually over SE. and S. slopes.</p>		$\frac{1}{4}$		S19		S20						
	$\frac{1}{4}$												
S19		S20											
52.10	Rocky wash, 6 lks. wide, course SE.; asc. gradually over NE. slope.												

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

FOOT 2162

21

Chains

- 54.00 Point of low spur, slopes SE.; desc. 17 ft. over S. slope.
- 56.20 Rocky wash, 7 lks. wide, course SE.; asc. 35 ft. over NE. slope.
- 62.70 Desc. 17 ft. over SE. slope.
- 67.65 Asc. 15 ft. over NE. slope to
- 70.05 Right rim of Glen Canyon of the Colorado River, bears NW. and SE.
Set a brass cap, $3\frac{1}{2}$ ins. diam., with stem 3 ins. long, in exposed sandstone surface rock, in concrete, for witness cor. to cor. of secs. 19, 20, 29 and 30, with cap marked

T40N	R8E
S19	S20
S30	S29
WC	

1937

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

Discontinue chaining of sec. line at this point, owing to precipitous broken descent into the canyon.

- 80.00 True point for cor. of secs. 19, 20, 29 and 30, falls on the right wall of Glen Canyon where it is inaccessible and cannot be monumented, therefore witness cor. thereto is established at 9.95 chs. N. $0^{\circ}01'E.$, as described above.

Land, mountainous, rolling and broken.

Soil, rocky and bare sandstone outcropping, 4th rate.

Timber, none.

Undergrowth, native weeds, sage, greasebrush and cacti, bet. $\frac{1}{4}$ sec. cor. and canyon rim; elsewhere there is no undergrowth along the line.

From the cor. of secs. 4 and 5, on the N. bdy. of the Tp. (10th Std. Par. N.), hereinbefore described.

S. $0^{\circ}01'W.$, bet. secs. 4 and 5.

Over mountainous and broken land, thru scattering low undergrowth.

Ascend 211 ft. over steep NW. slope to

- 14.00 Enter rolling land; asc. 92 ft. over gradual N. slope to
- 28.84 N. edge of top of ridge, bears E. and W. Thence across nearly level sandy top of ridge, bearing E. and W.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground to bedrock, with a stone 6x6x4 ins., marked with a cross (+) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor., with brass cap marked

$\frac{1}{4}$	
S5	S4

1937

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

22

Chains	Leave top of ridge; desc. 50 ft. over sandy S. slope to						
48.00	Sandstone rim, bears NW. and SE.; descend on SW. slope over broken bare sandstone to						
59.90	Leave bare sandstone, and enter nearly level sandy land, descend gradually over S. slope to						
75.90	Leave nearly level and enter rolling land; desc. 41 ft. over S. slope to						
80.00	Set an iron post, 3 ft. long, 2 ins. in diam., 26 ins. in the ground, for cor. of secs. 4, 5, 8 and 9, with brass cap marked						
	<table style="margin-left: auto; margin-right: auto;"> <tr> <td>T40N</td> <td>R8E</td> </tr> <tr> <td>S5</td> <td>S4</td> </tr> <tr> <td>S8</td> <td>S9</td> </tr> </table>	T40N	R8E	S5	S4	S8	S9
T40N	R8E						
S5	S4						
S8	S9						
	1937						
	and raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.						
	Land; mountainous, broken, nearly level and rolling. Soil, rocky, sandy and sandstone formation, 4th rate. Timber, none. Undergrowth, native weeds, sagebrush and cacti.						
	West, on random line, bet. secs. 5 and 8.						
40.00	Set temp. $\frac{1}{4}$ sec. cor.						
80.00	Intersect the cor. of secs. 5, 6, 7 and 8.						
	Thence,						
	East, on true line, bet. secs. 5 and 8:						
	Over nearly level, sandy land, thru scattering low undergrowth.						
	Desc. gradually over SE. slope.						
23.00	Wash, 20 lks. wide, course SE.; asc. gradually over SW. and S. slopes to						
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap mkd.						
	<table style="margin-left: auto; margin-right: auto;"> <tr> <td>$\frac{1}{4}$</td> <td>S 5</td> </tr> <tr> <td></td> <td>S 8</td> </tr> </table>	$\frac{1}{4}$	S 5		S 8		
$\frac{1}{4}$	S 5						
	S 8						
	1937						
	and raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.						
	Continue over nearly level, sandy land, ascending slightly over S. slope to						
52.00	Sandstone rim; bears NE. and SW.; leave nearly level sandy land, and enter rolling and broken land. Desc. 65 ft. over rocky SE. slope to						
58.80	Wash, 30 lks. wide, course SE.; leave rocky land and enters andy land.						
	Asc. gradually over SW. and S. slopes to						

Chains

80.00

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

Land, nearly level and rolling.

Soil, sandy and rocky, 4th rate.

Timber, none.

Undergrowth, native weeds, sage, greasebrush and cacti.

S. 0°01'W., bet. secs. 8 and 9.

Over rolling, sandy land, thru scattering low undergrowth.

Desc. 45 ft. over S. slope.

18.68

Wash, 30 lks. wide, course SW.; asc. 10 ft. over NW. slope.

22.20

Descend. 35 ft. over SW. slope to

29.25

Bend in wash, 50 lks. wide, course SW. from NW.; desc. gradually over rocky broken W. slope to

40.00

Set a brass cap, $3\frac{1}{2}$ ins. in diam., with stem 3 ins. long, in exposed sandstone surface rock, in concrete, for $\frac{1}{4}$ sec. cor., with cap marked

s8		s9
----	--	----

1937

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

Desc. slightly to

41.00

Wash, same as noted at 29.25 ch. station, 30 lks. wide, course SE.; asc. 17 ft. over NE. slope.

46.80

Point of spur, slopes SE.; desc. 41 ft. over SE. slope.

49.50

Same wash, 30 lks. wide, course SW.; asc. 68 ft. over NW. slope.

53.90

Spur, slopes SW.; desc. 60 ft. over S. slope to rim of canyon.

70.32

Set a brass cap, $3\frac{1}{2}$ ins. in diam., with stem 3 ins. long, in exposed sandstone surface rock, in concrete, for witness cor. to cor. of secs. 8, 9, 16 and 17, with cap marked

T40N		R8E
s8		s9
s17		s16

WC

1937

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

72.30

Right rim of Glen Canyon of the Colorado River in bend, bears NE. and NW. Discontinue chaining as the section line beyond this point crosses the precipitous broken wall of said canyon.

80.00

True point for cor. of secs. 8, 9, 16 and 17, falls on the right wall of Glen Canyon where it is inaccessible

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

24

Chains

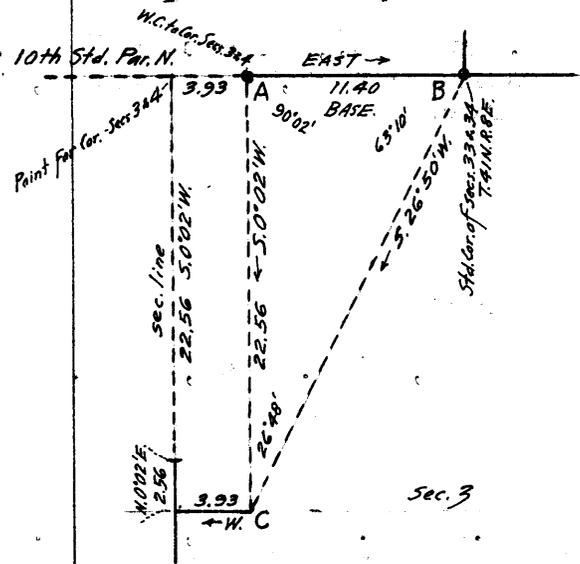
and cannot be monumented, therefore witness cor. is established at 9.68 chs. N. 0°01'E., as hereinbefore described.

Land, nearly level, rolling, broken and mountainous. Soil, sandy and rocky with sandstone formations, 4th rate. Timber, none. Undergrowth, native weeds, sage, greasebrush and cacti.

From the true point for cor. of secs. 3 and 4 on the N. bdy. of the Tp. (10th Std. Par. N.), witnessed 3.93 chs. E. as hereinbefore described.

S. 0°02'W., bet. secs. 3 and 4.

Over mountainous land, in canyon, course SE., with precipitous walls of bare sandstone. Desc. about 500 ft. over SW. slope to bottom of canyon. The sec. cor. point being inaccessible, and chaining across the canyon being impracticable, triangulate on offset as follows:



Designate witness cor. to cor. of secs. 3 and 4 as point "A", and the std. cor. of secs. 33 and 34, T. 41 N., R. 8 E., as "B", giving a base (A-B) for the triangulation East, 11.40 chs. Set flag "C" near right rim of the canyon, bearing S. 0°02'W., from "A" and S. 26°50'W. from "B". Vertical angle from "A" to "C" is + 8°. Included angles of the triangle "A-B-C" are 90°02', 63°10' and 26°48', the sum of which is 180°00'.

By computation of said triangle, line A-C thereof is found to be S. 0°02'W., 22.56 chs. and as line "A-C" is parallel to the sec. line. and 3.93 chs. E. therefrom, therefore, from point "C" chain measurement West. 3.93 chs. to 22.56 ch. station on section line, thence chain N. 0°02'E., 2.56 chs. to canyon rim.

10.00 (Approx.) Bottom of side canyon, about 100 lks. wide, course SE.; asc. about 700 ft. over precipitous broken NE. slope to

20.00 Right rim of side canyon, bears NW. and SE., merging into right rim of Glen Canyon of the Colorado River at about 5 chs. SE.

Continue line and measurement by chaining. Leave mountainous land and canyon and enter gently rolling and broken land, thru scattering low undergrowth.

Asc. gradually over NE. slope.

22.56 Point of low spur, slopes E. Set temp. monument for traverse of right rim of Glen Canyon thru Sec. 3. Desc. gradually over SE. slope to

40.00 Set an iron post, 3 ft. long, 12 ins. in the ground to bedrock, and deposit a stone 5x5x3 ins. marked with a cross (+) at base, and in a mound of stone to top, for 1/4 sec. cor. of secs. 3 and 4, with brass cap marked

Chains

$\frac{1}{2}$
 S4 | S3
 1937

Continue over gently rolling land, thru scattering low undergrowth.

50.00 Set temp. monument for traverse of right rim of Glen Canyon thru Sec. 3.

50.10 Right rim of Glen Canyon of the Colorado River, bears NE. and SW. The sec. line beyond this point crosses precipitous broken slopes of the right wall of Glen Canyon and chaining is impracticable, therefore measure the remainder of this sec. line by offset thru sec. 4, as described as follows:

From 50.00 ch. station on section line,

West, 9.00 chs. to offset point. At 8.00 chs. on this line cross a wash, 15 lks. wide, course SE.

From offset point

S. $0^{\circ}02'W.$, on offset line, parallel to sec. line, over gently rolling land, west of and near the right rim of Glen Canyon.

Chains

29.50 Gully, course NE.;

30.00 Intersect E. and W. line at 9 chs. West from true point for cor. of secs. 3, 4, 9 and 10. Set temp. witness cor. and offset point.

Thence

East, 9.00 chs. to sec. cor. point, At 2.00 chs. on this line intersect the right rim of Glen Canyon of the Colorado River, bears slightly NE. and SE. Discontinue chaining.

80.00 True point for cor. of secs. 3, 4, 9 and 10 is on the right wall of Glen Canyon, where it is inaccessible and cannot be monumented, therefore witness cor. is established at 9.00 chs. W. as hereinafter described.

Land, mountainous in the canyons; elsewhere gently rolling and broken.

Soil, bare sandstone in canyons; elsewhere sandy and rocky 4th rate.

Timber, none.

Undergrowth, native weeds, sage, greasebrush and cacti on the plateau. None in the canyons.

From true point for cor. of secs. 3, 4, 9 and 10.

West, on random line, bet. secs. 4 and 9.

Measurement by offset to

7.00 Rim of canyon; leave canyon; continue line and measurement by chaining.

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

26

Chains										
9.00	Temp. witness cor. and offset point.									
40.00	Set temp. $\frac{1}{4}$ sec. cor.									
80.00	Intersect the cor. of secs. 4, 5, 8 and 9.									
	Thence,									
	East, on true line, bet. secs. 4 and 9:									
	Over rolling sandy land, thru scattering low undergrowth.									
	Over S. slope.									
5.00	Wash, 30 lks. wide, course S. from NE.; asc. 80 ft. over NW. slope.									
13.50	Spur, slopes SW.; desc. 30 ft. over SE. slope.									
19.00	Draw, course SW.; asc. 50 ft. over W. slope.									
30.00	Spur, slopes S.; desc. 10 ft. over SE. slope to									
35.00	Sandstone rim, bears NE. and SW.; desc. 54 ft. over broken sandstone outcropping on SE. slope.									
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 8 ins. in the ground to bedrock, with a stone 4x4x3 ins. marked with a cross (+) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor., with brass cap marked									
	$\frac{1}{4} \frac{S 4}{S 9}$									
	1937									
	Desc. 30 ft. over SE. slope.									
46.00	Desc. gradually over S. slope.									
50.00	Spur, slopes SE.; desc. 100 ft. over NE. slope to rim of canyon.									
70.25	Gully, course NE.									
71.00	Set a brass cap, $3\frac{1}{2}$ ins. in diam., with stem 3 ins. long, in exposed sandstone surface rock, for witness cor. to cor. of secs. 3, 4, 9 and 10, with cap marked									
	<table border="1" style="margin: auto;"> <tr> <td>T40N</td> <td>R8E</td> <td></td> </tr> <tr> <td>S4</td> <td>S3</td> <td>WC</td> </tr> <tr> <td>S9</td> <td>S10</td> <td></td> </tr> </table>	T40N	R8E		S4	S3	WC	S9	S10	
T40N	R8E									
S4	S3	WC								
S9	S10									
	1937									
	and raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.									
73.00	Right rim of Glen Canyon of the Colorado River, bears slightly NE. and SE., about 1000 ft. above the river. Discontinue chaining at this point, owing to precipitous broken descent over the canyon wall. Measurement to sec. cor. point by offset line thru sec. 4 as hereinbefore described.									
80.00	True point for cor. of secs. 3, 4, 9 and 10 on the canyon wall, where it is inaccessible, therefore witness cor. is established at 9.00 chs. W. as hereinbefore described.									

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

102

27

Chains

Land, rolling, broken and mountainous.
Soil, sandy and rocky, sandstone outcropping, 4th rate.
Timber, none.
Undergrowth, native weeds, sage, greasebrush and cacti,
except in canyon where there is no undergrowth.

From true point for cor. of secs. 3, 4, 9 and 10.

S. 0°02'W., bet. secs. 9 and 10 (N. $\frac{1}{2}$).

Over mountainous land, in Glen Canyon, across precipitous
slopes and cliffs on the right wall of said canyon.

Chaining on sec. line is impossible, therefore obtain
measurement to point on sec. line at rim of canyon by
offset in sec. 9 as described as follows:

Chains	From the witness cor. to cor. of secs. 3, 4, 9 and 10 (9.00 chs. W. of cor. point)
	S. 0°02'W., on offset line, parallel to sec. line
	Over rolling and broken land, thru scattering low undergrowth.
	Asc. 70 ft. over NE. slope.
10.00	Sandstone butte; desc. slightly over S. slope to
15.00	Leave butte and descend along top of low spur sloping S.
30.00	Offset point.
	Thence
	East, 9.00 chs. to point on sec. line 30 chs. S. 0°02'W. from sec. cor. point.
	Thence
	N. 0°02'E., 5.00 chs. along sec. line to

25.00 Right rim of Glen Canyon of the Colorado River, bears NW.
and SE.

Thence,

S. 0°02'W., bet. secs. 9 and 10.

Continuing measurement from true point for cor. of secs.
3, 4, 9 and 10.

Over rolling land, thru scattering low undergrowth.

25.41 Set temp. monument for traverse of canyon rim thru sec. 10.

Desc. 45 ft. over SE. slope to

40.00 Set a brass cap, $3\frac{1}{2}$ ins. in dian., with stem 3 ins. long,
in exposed sandstone surface rock, in concrete, for $\frac{1}{4}$
sec. cor., with cap marked

$\frac{1}{4}$
 S9 | S10
 1937

SURVEY: SUBDIVISION OF PART OF T. 40 N., R. 8 E.

Chains	and raise a mound of stone, 4 ft. base, 2 ft. high, W. of cor.
41.00	<p>Desc. slightly over SE. slope to</p> <p>Right rim of Glen Canyon of the Colorado River, brs. S. 81°E. and S. 81°W.</p> <p>Discontinue survey of the sec. line at this point as the remainder of the line is in the canyon and is impassable.</p> <p>Land, mountainous, rolling and broken. Soil, sandy and rocky, 4th rate. Timber, none. Undergrowth, native weeds, sage, greasebrush and cacti, except in the canyon where there is no undergrowth.</p>

TRAVERSE OF RIGHT RIM OF GLEN CANYON OF THE COLORADO RIVER
thru PART OF T. 40 N., R. 8 E.

29

Chains

The following notes describe a survey of the right rim of Glen Canyon of the Colorado River, downstream thru secs. 3, 10, 9, 8, 17 and 20 of said township, said secs. being rendered fractional by said canyon crossing them in such position that it was impossible to monument all of their cors. at true points for same or establish witness cors. thereto within prescribed limits. No traverse of said canyon rim was made in SE. $\frac{1}{4}$ of sec. 4 or NE. $\frac{1}{4}$ of sec. 9 by reason of the establishment of a witness cor. to cor. of secs. 3, 4, 9 and 10 within limits, which made the survey of sec. 4, and N. $\frac{1}{2}$ of sec. 9 complete. Traverse of the rim thru secs. 7 and 18 was also omitted, as the survey of the meanders of the right bank of the Colorado River thru sec. 18 made a complete survey of that portion of said section lying N. of said River, and all of the cors. of sec. 7 were either monumented at their true points or witnessed within prescribed limits.

The traverses described in the following notes give the minimum of courses consistent with the average bearings of the outline of the rim, keeping in as close proximity thereto as is practicable without taking dangerous risks in the execution of the survey.

From temp. monument at 22.56 ch. station on line bet. secs. 3 and 4.

Traverse thru sec. 3.

Over gently rolling and broken land, thru scattering low undergrowth.

S. 89°00'E., 15.00 chs., to angle point, thence

S. 7°15'E., 10.00 chs., to angle point, thence

S. 43°17'W., 23.71 chs. to temp. monument at 50.00 ch. station on sec. line bet. secs. 3 and 4, and 10 lks. N. of canyon rim.

Land, gently rolling and broken.

Soil, sandy and rocky, 4th rate.

Timber, none.

Undergrowth, native weeds, sage, greasebrush and cacti.

From temp. monument at 25.41 ch. station on line bet. secs. 9 and 10.

Traverse thru sec. 10.

Over gently rolling and broken land, thru scattering low undergrowth.

S. 60°00'E., 9.60 chs. to angle point, thence

S. 77°00'E., 34.00 chs. to angle point, thence

S. 36°00'W., 9.80 chs. to angle point, thence

N. 80°50'W., 36.26 chs. to the $\frac{1}{4}$ sec. cor. of secs. 9 and 10, hereinbefore described, 1.00 ch. N. of canyon rim.

Land, gently rolling and broken.

Soil, sandy and rocky, 4th rate.

Timber, none.

Undergrowth, native weeds, sage and cacti.

TRAVERSE OF RIGHT RIM OF GLEN CANYON OF THE COLORADO RIVER
thru PART OF T. 40 N., R. 8 E.

30

Chains

From the $\frac{1}{4}$ sec. cor. of secs. 9 and 10.

Traverse thru sec. 9.

Over rolling and broken land, thru scattering low undergrowth.

S. $81^{\circ}00'W.$, 44.00 chs. to angle point, thence

S. $57^{\circ}19'W.$, 43.41 chs. to the witness cor, to cor. of secs. 8, 9, 16 and 17, on sec. line bet. secs. 8 and 9 at 9.68 chs. N. $0^{\circ}01'E.$ from cor. point, and 1.98 chs. N. from canyon rim.

Land, rolling and broken.

Soil, sandy and rocky, 4th rate.

Timber, none.

Undergrowth, native weeds, sage, greasebrush and cacti.

From the witness cor. to cor. of secs. 8, 9, 16 and 17, on sec. line bet. secs. 8 and 9.

Traverse thru sec. 8.

Over rolling, broken and mountainous land, thru scattering low undergrowth.

N. $75^{\circ}00'W.$, 68.00 chs. to angle point, near junction of the rim of Glen Canyon with left rim of a side canyon, course SE. Thence (by triangulation)

S. $36^{\circ}36'W.$, 24.02 chs. across side canyon, to temp. monument on right rim of Glen Canyon, and on sec. line bet. secs. 7 and 8 at 8.00 chs. N. $0^{\circ}01'E.$ from the true point for the cor. of secs. 7, 8, 17 and 18.

Land, rolling, broken and mountainous.

Soil, sandy, rocky and sandstone outcropping, 4th rate.

Timber, none.

Undergrowth, native weeds, sage, greasebrush and cacti.

From witness cor. to $\frac{1}{4}$ sec. cor. of secs. 17 and 18 at 43.27 ch. station on the line bet. said secs.

Traverse thru sec. 17.

Over broken land, across sandstone formations, bare of timber or undergrowth.

Measurement by triangulation as hereinbefore described.

East, 0.41 chs., thence

S. $44^{\circ}20'E.$, 51.36 chs. to the witness cor. to $\frac{1}{4}$ sec. cor. of secs. 17 and 20, on the section line bet. said secs. at 3.69 chs. W. from true cor. point and 10 lks. W. from canyon rim.

Land, broken.

Soil, rocky and sandstone formations, 4th rate.

Timber, none.

Undergrowth, none.

TRAVERSE OF RIGHT RIM OF GLEN CANYON OF THE COLORADO RIVER
thru PART OF T. 40 N., R. 8 E.

BOOK 1182

31

Chains From the witness cor. to $\frac{1}{4}$ sec. cor. of secs. 17 and 20.
Traverse thru sec. 20.
Over broken and gently rolling land, devoid of timber or undergrowth.

S. 44°00'E., 44.11 chs. to angle point, thence
S. 53°45'E., 11.65 chs. to angle point, thence
S. 13°15'W., 12.03 chs. to angle point, thence
S. 67°30'W., 40.59 chs. to angle point, thence
S. 49°30'W., 23.45 chs. to angle point, thence
N. 58°51'W., 21.35 chs. to the witness cor. to cor. of secs. 19, 20, 29 and 30 on the sec. line bet. secs. 19 and 20 at 9.95 chs. N. 0°01'E. from the true cor. point.

Land, broken and gently rolling.
Soil, sandy, rocky and sandstone formations, 4th rate.
Timber, none.
Undergrowth, none.

From the witness cor. to cor. of secs. 19, 20, 29 and 30, on the sec. line bet. secs. 19 and 20 at 9.95 chs. N. 0°01'E. from the cor. point.

Traverse thru sec. 19.

Over rolling and broken land, thru scattering low undergrowth.

N. 30°15'W., 10.00 chs. to angle point, thence
N. 12°00'W., 9.63 chs. to angle point, thence
N. 10°30'W., 42.37 chs. to angle point, thence
N. 23°15'E., 3.55 chs. to angle point, thence
N. 3°30'E., 4.75 chs. to angle point, thence
N. 4°00'W., 2.36 chs. to temp. monument on sec. line bet. secs. 18 and 19 at canyon rim, and 13.23 chs. W. from true point for cor. of secs. 17, 18, 19 and 20.

Land, rolling and broken.
Soil, sandy and rocky, 4th rate.
Timber, none.
Undergrowth, native weeds, sage, greasebrush and cacti.

GENERAL DESCRIPTION.

The portion of T. 40 N., R. 8 E., surveyed as described in the foregoing field notes, embraces all of the land practicable to survey between the Colorado River and the West and North boundaries of said township. The Colorado River thru this township, flows thru a deep canyon known as Glen Canyon. A side canyon from the northwest enters Glen Canyon in the northwest quarter of section 3, and forms an outlet for the Ferry Swale which drains a large portion of T. 41 N., R. 8 E. Another side canyon enters Glen Canyon in the southwest quarter of section 8. The

Glen Canyon walls rise abruptly from the right bank of the river about 1,000 feet to the right rim, except in section 18 where there is a strip of nearly level and rolling land on each side in the bottom of the canyon.

The average elevation of the river thru this township is about 3100 feet and the average elevation of the plateau above the river is 4200 feet above sea level. The surface of the plateau varies from nearly level and gently rolling to mountainous, most of the drainage being southerly and easterly into the Colorado River.

The soil of the plateau is sandy and rocky, 4th rate, with a large area of exposed sand stone formation from which the elements have shaped grotesque designs, including caves, spiral like steeple rocks, etc.

There is no timber in the portion of the township surveyed. The undergrowth consists of native weeds, sage, greasebrush and cacti in a scattering growth, except in the canyons and areas where exposed sandstone prevails.

There is no permanent water supply on the plateau and the Colorado River and a spring in Section 18 in the bottom of the canyon on the north side of the river, constitute the only water supply.

There are no settlers located on the plateau. In section 18 there is a strip of land on the north side of the river about one-fourth mile wide and one-half mile long, whereon there are a group of stone cabins, a part of the settlement known as Lee's Ferry. This strip of land is covered by proclamation to the jurisdiction of the U.S. Geological Survey, and a representative of this government bureau occupies one of the cabins. The remainder of the cabins were not occupied at the time of the survey. The steel towers and tramway of the Lee's Ferry are located at the east end of this strip but the ferry has not been in use for about ten years. From the ferry, a trail leads a sinuous course up the canyon wall to the right rim of the canyon, thence extends northerly to Warm Creek Canyon, Utah. There are very dangerous places for animals to travel on this trail; the bulk of packing done from Lee's Ferry to the north; being now carried over another trail about two miles up Paria Creek in T. 40 N., R. 7 E. Aside from this trail there are no roads in the township, except in the bottom of the canyon in section 18, where there is a road on each side of the river extending easterly and westerly above the mean high water mark.

There are no improvements in the township except the ferry towers and tramway and the cabins in the canyon in section 18. The main part of the town of Lee's Ferry is located in the mouth of the Paria Canyon in section 13 of T. 40 N., R. 7 E.

There is an old mine shaft in section 18 near the group of stone buildings near the base of the canyon wall, but no operations are being carried on at the present time and there is no evidence now of valuable mineral deposits. This is the only indication of mining activity in the township.

The U.S. Geological Survey utilizes the strip on the north side of the river in section 18 for river gauging purposes. The lands on the plateau in portions, offer fair grazing and that is the only use to which they are now applied.

On the west boundary of section 7, the right rim of the Glen Canyon merges into the left rim of the Paria Canyon. Southwesterly thru T. 40 N., R. 7 E., the Colorado River flows thru a canyon known as Marble Canyon. About four miles southwesterly from Lee's Ferry is a steel bridge across the Colorado, known as Marble Canyon bridge, across which most of the travel passes between Arizona and Utah points. A secondary road from the bridge follows the river to Lee's Ferry.

The center of the Colorado River forms part of the boundary of the Navajo Indian Reservation, and said reservation embraces all of this township situate south and east of the center of the Colorado River.

FINAL TEST OF INSTRUMENTS.

The continued satisfactory adjustment of the instruments used in the execution of the surveys described in the foregoing field notes is indicated by results of tests of same April 18, 1937, as described in field notes of survey of T. 41 N., R. 5 E., G. & S.R.B. & M., Arizona, also executed under this group.

BOOK 4162 CERTIFICATE OF UNITED STATES SURVEYOR

I, Bert E. Wakeman, Transitman (P.W.), hereby certify upon honor that, in pursuance supplemental of special instructions received from the District Cadastral Engineer for Arizona bearing date of the 27th day of March, 1936, I have well, faithfully, and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of Subdivision Lines of, Traverse of Right Rim of Glen Canyon of the Colorado River thru, and Meanders of Right Bank of Colorado River in Section 18 of, Township 40 North, Range 8 East of the Gila and Salt River Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed by me, and under my direction; and that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the supplemental 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.

Phoenix, Arizona January 3, 1938

Bert E. Wakeman Transitman (P.W.)

APPROVAL

Office of U. S. Supervisor of Surveys,

18

The foregoing field notes of the survey of

executed by

under his special instructions dated, 19, 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. 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.

BOOK 4162

CERTIFICATE OF UNITED STATES SURVEYOR

I, Benjamin J. Kinsey Surveyor, hereby certify upon honor that, in pursuance
 supplemental of special instructions received from the District Cadastral Engineer for Arizona
 bearing date of the 27th day of March, 1936, I have well, faithfully, and truly
 in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instruc-
 tions, and the laws of the United States, surveyed all those parts or portions of
North Boundary (on 10th Standard Parallel North) of,
Subdivision Lines of, and
Traverse of Right Rim of Glen Canyon of the Colorado River thru
and resurveyed all those parts or portions of West Boundary of,
Township 40 North, Range 8 East of the Gila and
Salt River Meridian, in the State of Arizona, which are represented in
 the foregoing field notes as having been executed by me, and under my direction; and that all the corners of
 said and resurvey survey have been established and perpetuated in strict accordance with the Manual of Surveying Instruc-
 tions, and the supplemental 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.

Feb. 15, 1938.
 Phoenix, Arizona

Benjamin J. Kinsey
 Surveyor.

APPROVAL

OFFICE OF SUPERVISOR OF SURVEYS,
 Denver, Colorado, June 29, 1938.

The foregoing field notes of the survey of Part of North Boundary (on 10th Standard
Parallel North), Part of Subdivision Lines of, and
Traverse of Right Rim of Glen Canyon of the Colorado River thru, and
Meanders of Right Bank of Colorado River in Section 18 of,
and of the resurvey of part of the West Boundary of
Township 40 North, Range 8 East
of the Gila and Salt River Meridian, in the State of Arizona

executed by Benjamin J. Kinsey, Surveyor and Bert E. Wakeman, Transitman (PW)
 supplemental under a special instructions dated March 27, 1936 for Group 181, Arizona, 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.

Bert E. Wakeman
 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