3627

BOOK "L"

4—679

BOOK 3627

FIELD NOTES

OF THE SURVEY OF

Part of the West Boundary and

Part of the Subdivisions of

T.31 N., R.9 W.

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

In the State of ___ Arizona

EXECUTED BY

Dupree R. Averill

and

William E. Hiester

In the capacity of U. S. Surveyors, under Special Instructions dated March 17 *,* 1917*, issued by the United States Surveyor General to govern surveys included in Group No.* 72, Arizona *, which were approved by the Commissioner of the General Land Office,* March 29 *, 191* 7*, and Assignment Instructions dated* August 11 *, 19* 21

Survey commenced ___ December 5 *,* 19 21
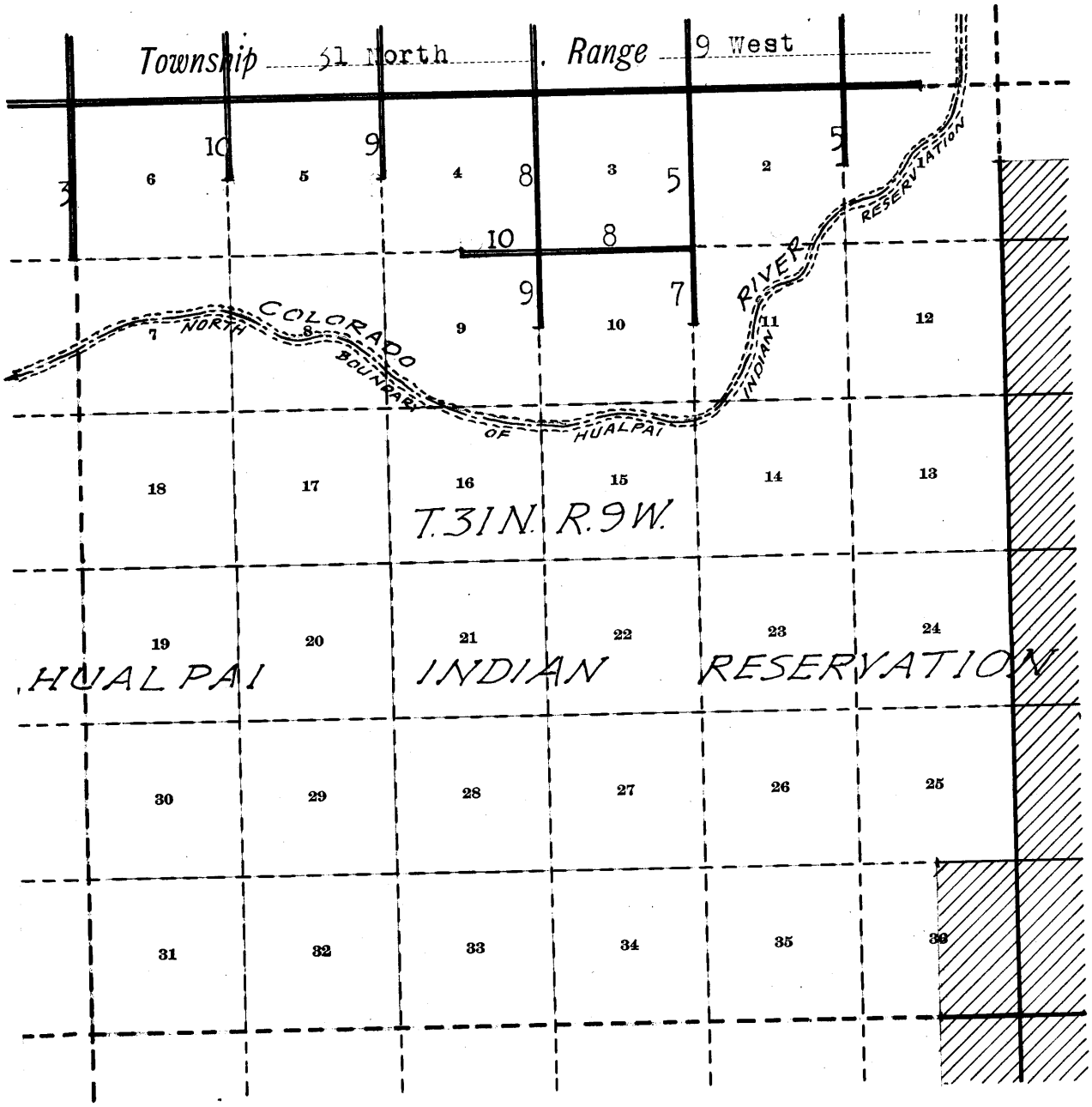
Survey completed ___ January 25 *,* 19 22

6—151

140

1A

3627

Book "L"

Group 72 - Arizona

BOOK 3627

INDEX DIAGRAM.

Township _____ 31 North _____ . Range _____ 9 West

6	5	4	3	2	5
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19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

COLORADO

NORTH BOUNDARY OF HUALPAI

RIVER

INDIAN RESERVATION

T.31N. R.9W.

HUALPAI   INDIAN   RESERVATION
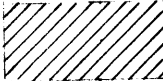
———————— Lines surveyed under this group.

———————— Accepted surveys.

— — — — — Unsurveyed.

////////// Areas surveyed as per accepted plats on file.
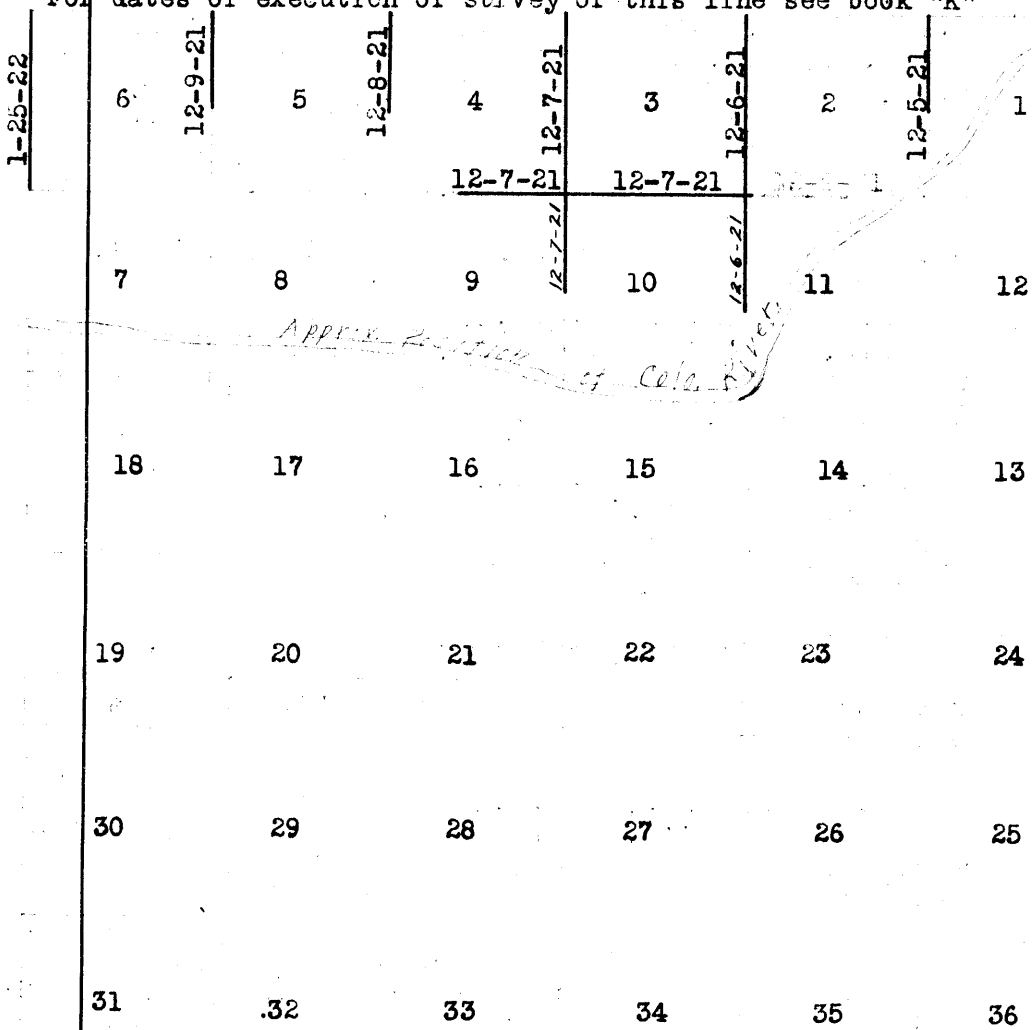
Book "L"

Group 72------Arizona

DATE DIAGRAM.

Part of T. 31 N.,R. 9 W.

For dates of execution of survey of this line see book "K"

| 1-25-22 | 6 | 12-9-21 | 5 | 12-8-21 | 4 | 12-7-21 | 3 | 12-6-21 | 2 | 12-5-21 | 1 |

12-7-21   12-7-21

| | 7 | | 8 | | 9 | 12-7-21 | 10 | 12-6-21 | 11 | | 12 |

APPROX &... of Colo ...

| 18 | 17 | 16 | 15 | 14 | 13 |

| 19 | 20 | 21 | 22 | 23 | 24 |

| 30 | 29 | 28 | 27 | 26 | 25 |

| 31 | .32 | 33 | 34 | 35 | 36 |

Lines in black surveyed by Dupree R. Averill.

Lines in red surveyed by William E. Hiester.

Survey commenced December 5, 1921, and executed with Buff
and Buff light mountain transit No. 9977; the instru-
ment is equipped with full vertical circle and Smith
solar attachment; unless otherwise specified, all azi-
muth determinations are accomplished with the solar
attachment.

Field test of Instrument No. 9977.

November 19, 1921. I examine the adjustments of the in-
strument and correct all errors; then, to test the
solar apparatus, by comparing its indications, result-
ing from observations made during a.m. and p.m. hours,
with a meridian established by Polaris observations, I
proceed as follows:

November 20, 1921. At our camp near the ¼ sec. cor. of
secs. 15 and 22, T. 32 N., R. 9 W., G. and S. R. B. and
M., Arizona, lat. 36°10'N., long. 113°15'W., at 3 hrs.
35 m., a.m., l.m.t., I observe Polaris at western elonga-
tion, making four observations, two each with the tel-
escope in direct and reversed positions, and marking
the mean point in the line thus determined on a peg
driven firmly in the ground, 5 chs. N.

Azimuth of Polaris at western elongation, 1°22½'.

At 8 hrs. 0 m., a.m., l.m.t., I lay off the azimuth of
Polaris, 1°22½' to the east, and mark the meridian
thus determined by a tack driven in a peg set firmly
in the ground, 5 chs. N.

At 9 hrs. 0 m., a.m., l.m.t., I set off 36°10'N. on the
lat. arc; 19°39'S. on the decl. arc; and determine a
meridian with the solar, which I find to agree with the
true meridian.

At apparent noon, with the lat. arc unchanged, I observe
the sun on the meridian with the solar. The resulting
reading of the decl. arc is 19°41'S., which agrees
with the computed decl. of the sun.

At 3 hrs. 0 m., p.m., l.m.t., with the lat. arc unchanged,
I set off 19°42'S. on the decl. arc and determine a
meridian with the solar, which I find to agree with the
true meridian.

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

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

| Chains	
	From the cor. of Ts. 31 and 32 N., Rs. 9 and 10 W., which
	is an iron post, described in Book "K",
	South, on a true line bet. secs. 1 and 6.
	Over broken land, through scattering timber and undergrowth.
	Asc. 265 ft. over NE. slope.
29.50	Desc. 70 ft. to
32.90	Draw, course E. Asc. 60 ft.
40.00	Mark a cross (+) on surface rock and over same set an
	iron post, 3 ft. long, 1 in. in diam., supported in
	a mound of stone 5 ft. base, 3 ft. high for ¼ sec. cor.
	marked on brass cap

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

$$S \; 1 \mid S \; 6$$

1922
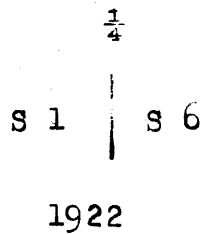
	Asc. 100 ft. to
50.00	Top of ascent. Desc. slightly over broken land.
77.70	Set an iron post, 3 ft. long, 2 ins. in diam., 6 ins. in
	the ground to bed rock, supported in a mound of stone
	4 ft. base, 2 ft. high, with stone marked cross (X)
	deposited at base of post, for witness cor. to the
	cor. of secs. 1, 6, 7 and 12, marked on brass cap

T 31 N

R 10 W | R 9 W

S 1 | S 6
——————
S 12 | S 7
W C
1922
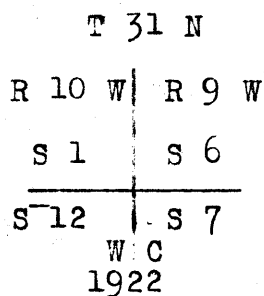
77.85	The north rim of canyon of the Colorado River, bears
	SE. and W. Impracticable to continue line.
80.00	The true point for cor. of secs. 1, 6, 7 and 12, falls
	on precipitous cliffs, where the cor. can not be
	established.
	Land; broken bench.
	Soil; rocky, 4th. rate.
	Timber; cedar.

Survey of Part of
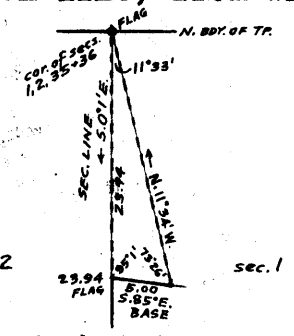## The West Boundary of T. 31 N., R. 9 W.

Undergrowth; black brush, scrub oak, dogwood, Spanish

bayonet, cacti and mesquite.

As the line bet. secs. 7 and 12 passes over very precip-

itous cliffs and rim rock, I discontinue the survey

of this range line. At about 60.00 chs. south of the

witness cor. to secs. 1, 6, 7 and 12, the Colorado

River flows West.

Survey of Part of the
Subdivision of T. 31 N., R. 9 W.

BOOK 3627

Chains	
	From the cor. of secs. 1, 2, 35 and 36, on the N. bdy. of Tp., which is an iron post, described in Book "K".
	S. 0° 1' E., bet. secs. 1 and 2.
	Over mountainous land, through scattering undergrowth.
	Impossible to chain this line, which descends over cliffs and slide rock. Set a flag ahead on line, from which I measure a base. S. 85° E. 5.00 chs., --impracticable to secure longer base -- from the E. end of which, flag at the cor. of secs. 1, 2, 35 and 36, brs. N. 11° 34' W. The three angles of the triangle are therefore 11° 33', 73° 26' and 95° 1', the sum of which is 180°. The distance triangulated is given by the sine proportion:

$$\frac{X}{5.00} = \frac{\sin. 73° 26'}{\sin. 11° 33'}$$

$$
\begin{aligned}
\log. 5.00 &= 0.698970 \\
\log. \sin. 73° 26' &= 9.981587 \\
& 0.680557 \\
\log. \sin. 11° 33' &= 9.301514 \\
\log. X &= 1.379043 \\
X &= 23.94 \text{ chs.}
\end{aligned}
$$

Chains	
23.94	Triangulation point, 670 ft. below cor. Continue S. 0° 1' E., bet. secs. 1 and 2, descending.
26.43	Wash, 10 lks. wide, course SW. Asc. 165 ft.
40.00	Set an iron post, 3 ft. long, 1 in. diam., on ledge rock in a mound of stone, 4 ft. base, 3 ft. high, with stone marked cross (X) alongside, for ¼ sec. cor., marked on brass cap

$$S 2 \mid S 1$$
1921

This cor. stands on top of cliff, 75 ft. high, bearing NE. and SW.

At 3.00 chs. S. of this cor. is edge of cliffs, bearing E. and NW., 1200 ft. above Colorado River.

Survey of south one-half of line between secs. 1 and 2 is impracticable.

Land, mountainous.
Soil, rocky, 4th rate.
No timber.
Undergrowth, black brush.

Chains	
	From the cor. of secs. 2, 3, 34 and 35, on the N. bdy. of Tp., which is an iron post, described in Book "K",
	S. 0° 1' E., bet. secs. 2 and 3.
	Over level land, through scattering undergrowth.
3.50	Wash, 10 lks. wide, course E.
40.00	Set an iron post, 3 ft. long, 1 in. diam., on ledge rock, in a mound of stone, 4 ft. base, 3 ft. high, over cross (X) on rock, for ¼ sec. cor., marked on brass cap

$$S 3 \mid S 2$$
1921

And raise a mound of stone, 4 ft. base, 3 ft. high W. of cor.

Chains	
41.12	Left rim of canyon, brs. NW. and SE. Impossible to chain

Survey of Part of the
Subdivision of T. 31 N., R. 9 W.

Chains	

from this point. Set a flag ahead on line, from which I measure a base N. 73° 11' W. 6.80 chs. — impracticable to secure longer base — from the W. end of which, flag at the 41.12 ch. point brs. N. 8° 30' E. The three angles of the triangle are therefore 8° 31', 73° 10', and 98° 19', the sum of which is 180°. The distance triangulated is given by the sine proportion:

$$\frac{X}{6.80} = \frac{\sin. 98° 19'}{\sin. 8° 31'}$$

log. 6.80 = 0.832509
log. sin. 98° 19' = 9.995409
0.827918
log. sin. 8° 31' = 9.170547
log. X = 1.657371
X = 45.43 chs., which

added to 41.12 chs., gives 86.55 chs. Thence N. 0° 1' W., 6.55 chs., 86.55 - 6.55 =

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 16 ins. in the ground, in a mound of stone, 3 ft. base, 1½ ft. high, with stone marked cross (X) alongside, for cor. of secs. 2, 3, 10 and 11, marked on brass cap

T 31 N R 9 W
S 3 | S 2
S 10 | S 11
1921

And raise a mound of stone, 4 ft. base, 3 ft. high, W. of cor.

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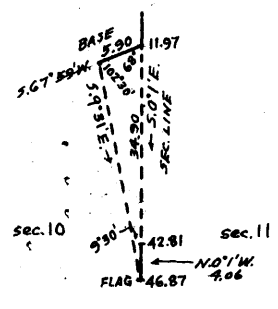Soil, rocky, 4th rate.
No timber.
Undergrowth, sagebrush.

The line bet. secs. 2 and 11 passes over precipitous slopes which render survey impracticable. At about 53½ chs. E. of the cor. of secs. 2, 3, 10 and 11 and about 1500 ft. below, the Colorado River flows SW.

Survey of Part of the
Subdivision of T. 31 N., R. 9 W.

Chains	
	From the cor. of secs. 2, 3, 10 and 11.
	S. 0° 1' E. bet. secs. 10 and 11.
	Over rolling mountainous land, through scattering under-growth.
	Asc. 135 ft.
5.50	Rim of canyon, brs. NW. and SE. Thence over level land.
11.97	Rim of canyon, brs. E. and W. Impossible to chain from this point. Set a flag ahead on line, and from the 11.97 ch. point, measure a base S. 67° 59' W. 5.90 chs. - impracticable to secure long-er base - from the W.end of which, flag brs. S. 9° 31' E. The three angles of the tri-angle are therefore 68°, 9°30' and 102° 30', the sum of which is 180°. The distance triangulated is given by the sine proportion:

$$\frac{X}{5.90} = \frac{\sin. 102° 30'}{\sin. 9° 50'}$$

log. 5.90	= 0.770852
log. sin. 102° 30'	= 9.989582
	0.760434
log. sin. 9° 30'	= 9.217609
log. X	= 1.542825
X	= 34.90 chs., which

added to 11.97 chs., gives 46.87 chs. Thence N. 0° 1' W., 4.06 chs.

40.00	The true point for ¼ sec. cor. inaccessible.
42.81	Impossible to get any nearer to the true point for ¼ sec. cor. Set an iron post, 3 ft. long, 1 in. diam., on ledge rock, in a mound of stone, 4 ft. base, 3 ft. high, with stone marked (X) alongside, for witness cor. to ¼ sec. cor., marked on brass cap

¼
W C
S 10 | S 11
1921

The survey of the south one-half of the line between
secs. 10 & 11 is impracticable.
At about 43.00 chs. S. of this W. C. and 1660 ft. below,
the Colorado River flows W.
Land, rolling mountainous.
Soil, rocky, 4th rate.
Timber, none.
Undergrowth, black brush.

	From the cor. of secs. 3, 4, 33 and 34, on the N. bdy. of Tp., which is an iron post, described in Book "K".
	S. 0° 2' E., bet. secs. 3 and 4.
	Over rolling land, through scattering undergrowth.
	Asc. 30 ft.
2.00	Desc. 85 ft.
14.10	Wash, 20 lks. wide, course SE.
17.30	Wash, 10 lks. wide, 10 ft. deep, course SE.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 28 ins. in the ground, for ¼ sec. cor., marked on brass cap

¼
S 4 | S 3
1921

Dig pits, 18 x 18 x 12 ins., N. and S. of post, 3 ft.
dist.

Survey of Part of the
Subdivision of T. 31 N., R. 9 W.

Chains	
	Thence along level E. slope.
69.80	Rim rock, 30 ft. high, brs. NW. and SE.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 28 ins. in the ground, for cor. of secs. 3, 4, 9 and 10, marked on brass cap

```
            T 31 N. R 9 W
                S 4 | S 3
                ─────────
                S 9 | S 10
                 1921
```

And raise a mound of stone, 3 ft. base, 3 ft. high, W. of cor.
Land, level and rolling.
Soil, 3rd and 4th rates.
Timber, none.
Undergrowth, sagebrush and black brush.

	East on a random line, bet. secs. 3 and 10.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.14	Intersect N. and S. line, 10 lks. N. of the cor. of secs. 2, 3, 10 and 11.

Thence
N. 89° 56' W., on a true line, bet. secs. 3 and 10.
Over rolling land, through scattering undergrowth. Asc.

2.65	Rim of canyon, brs. NW. and SE.
40.07	Set an iron post, 3 ft. long, 1 in. diam., on rock ledge, in a mound of stone, 5 ft. base, 3 ft. high, with stone marked cross (X) alongside, for $\frac{1}{4}$ sec. cor., marked on brass cap

```
         S 3
    ¼  ─────
         S 10
         1921
```

Desc. 50 ft.

57.65	Wash, 10 lks. wide, course SE. Asc. 50 ft.
70.15	Desc. 20 ft.
80.14	The cor. of secs. 3, 4, 9 and 10.

Land, rolling.
Soil, rocky, 4th rate.
No timber.
Undergrowth, sagebrush, and black brush.

From the cor. of secs. 3, 4, 9 and 10.
S. 0° 2' E., bet. secs. 9 and 10.
Over broken land, through scattering undergrowth.
Asc. 55 ft.

20.10	Rim of canyon, brs. SE. and NW. Desc. 610 ft. to
38.90	Set an iron post, 3 ft. long, 1 in. diam., 10 ins. in the ground, in a mound of stone, 3 ft. base, 2 ft. high, with stone marked cross (X) alongside, for witness cor. to $\frac{1}{4}$ sec. cor., marked on brass cap

```
            ¼
       S 9 | S 10
          W C
          1921
```

And raise a mound of stone, 4 ft. base, 3 ft. high, W. of cor.
Impossible to chain beyond this point. I determine the distance to the Colorado River as follows.
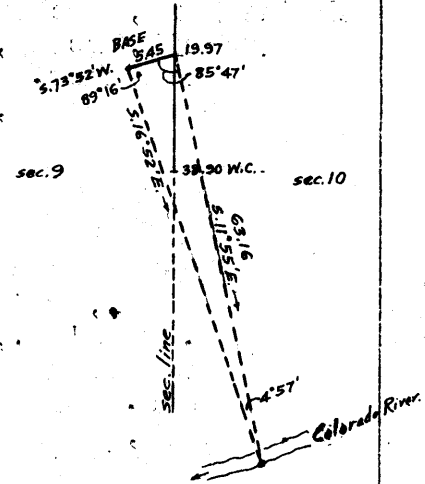From the 19.97 ch. point, I note the bearing of S. 11° 55' E. to an object on the opposite side of the river.
Measure a base S. 73° 52' W.
5.45 chs., from the W. end of which,

Chains	

the same object bears **S. 16°**
52' E. The three angles of
the triangle are therefore 85°
47', 4° 57', and 89° 16', the
sum of which is 180°. The dist-
ance triangulated is given by
the sine proportion:

$$\frac{X}{5.45} = \frac{\sin. 89° 16'}{\sin. 4° 57'}$$

log. 5.45 = 0.736397
log. sin.89° 16' = 9.999964
0.736361
log. sin. 4° 57' = 8.935942
log. X = 1.800419
X = 63.16 chs., which added to 19.97
chs., gives 83.13 chs. The Colorado River is 2250 ft.
below the rim of canyon.
Land, broken.
Soil, rocky, 4th rate.
No timber.
Undergrowth, sagebrush and black brush.

From the cor. of secs. 4, 5, 32 and 33, on the N. bdy.
of Tp., which is an iron post, described in Book "K",
S. 0° 3' E., bet. secs. 4 and 5
Over rolling land, through scattering undergrowth.

4.00	Wash, 20 lks. wide, course NW. Asc. 80 ft.
10.80	Spur, slopes W. Desc. 45 ft.
16.00	Thence over level land.
40.00	Set an iron post, 3 ft. long, 1 in. diam., on ledge rock in a mound of stone, 4 ft. base, 3 ft. high, with stone marked cross (X) alongside, for ¼ sec. cor., marked on brass cap

S 5 | ¼ | S 4
1921

At 8.19 chs. S. of this quarter-section corner is rim of
canyon brs. SE. & SW. Canyon 1400 ft. deep, course
SW.
Survey of S ½ of line bet. secs. 4 and 5 is impracticable.
Land, rolling and mountainous.
Soil, rocky, 4th rate.
No timber.
Undergrowth, sagebrush.

From the cor. of secs. 3, 4, 9 and 10.
West, on a true line, bet. secs. 4 and 9.
Over broken land, through scattering undergrowth.
Desc. 40 ft.

|	
31.80	Wash, 20 lks. wide, course NW.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the ground, in a mound of stone, 4 ft. base, 3 ft. high, with stone marked cross (X) alongside, for ¼ sec. cor., marked on brass cap

¼ | S 4
1921

At 23.27 chs. W. of this ¼ sec. cor. is the rim of the
canyon, brs. NE. & SW.
Survey of W. ½ of line bet. secs. 4 & 9 is impracticable.

Survey of Part of the
Subdivision of T. 31 N., R. 9 W.

Chains	
	Land, broken.
	Soil, rocky, 4th rate.
	No timber.
	Undergrowth, sagebrush, and black brush.

From the cor. of secs. 5, 6, 31 and 32, on the N. bdy. of
    Tp., which is an iron post, described in Book "K".
S. 0° 3' E., bet. secs. 5 and 6.
Over mountainous land, through scattering undergrowth.
Desc. 200 ft.

15.00 Wash, 20 lks. wide, course SE. Impossible to continue
    chaining from this point; triangulate as follows:
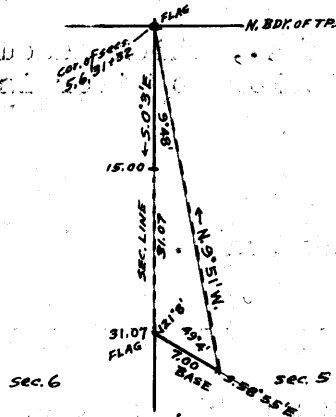
Set a flag ahead on line, from which I measure a base S. 58° 55' E. 7.00 chs. impracticable to secure longer base – from the E. end of which, flag at the cor. of secs. 5, 6, 31 and 32, brs. N. 9° 51' W. The three angles of the triangle are therefore 9° 48', 49° 4', and 121° 8', the sum of which is 180° The distance triangulated is given by the sine proportion:

$$\frac{X}{7.00} = \frac{\sin. 49° 4'}{\sin. 9° 48'}$$

log. 7.00 = 0.845098
log. sin. 49° 4' = 9.878219
              0.723317
log. sin. 9° 48' = 9.230984
        log. X   1.492333
            X   31.07 chs.

31.07 Spur, slopes SE. Desc. 55 ft.
40.00 Set an iron post, 3 ft. long, 1 in. diam., on ledge rock,
    in a mound of stone, 4 ft. base, 3 ft. high, with
    stone marked cross (X) alongside, for ¼ sec. cor.,
    marked on brass cap

$\frac{1}{4}$
S 6 | S 5
1921

From which
        A cedar, 10 ins. diam., brs. S. 48¾° W., 48 lks.
            dist., marked ¼ S 6 B T.
        No other trees within limits.
At 7.42 chs. S. of this ¼ sec. cor. is the rim of a canyon, and at about 20.00 chs. S. is the bottom of the
    same 1500 ft. below rim, course SE.
Impracticable to survey the S. ½ of line bet. secs. 5
    and 6.
Land, mountainous.
Soil, rocky, 4th rate.
Timber, scattering cedar.
Undergrowth, sagebrush.

No portion of the line bet. secs. 6 and 7 is surveyable.

    The continued satisfactory adjustment of the solar
transit during the survey of this township is indicated
from field tests as described in Book "J".

Survey of Part of the
Subdivision of T. 31 N., R. 9 W.

Boundaries of that Portion of T. 31 N., R. 9 W.
Surveyed under Group 72.

Latitudes, departures and closing errors.

Line designated.	True bearing.	Dist. chs.	Latitudes. N. chs.	Latitudes. S. chs.	Departures. E. chs.	Departures. W. chs.
Subdivisional Boundary Sec. 3.	N. 89° 56' W.	80.14	.09			80.14
	N. 0° 2' W.	80.00	80.00			.05
	East	80.00			80.00	
	S. 0° 1' E.	80.00		80.00	.02	
Convergency					.01	
Totals			80.09	80.00	80.03	80.19
			80.00			80.03
Error in latitude			0.09			
Error in departure						0.16

GENERAL DESCRIPTION.

That Portion of T. 31 N., R. 9 W., surveyed at this
time is to all intents and purposes without value - no
minerals of any kind are embraced therein - grasing possi-
bilities are nil, because of the inaccessible nature of
the lands - there is no water, either running or in tanks,
save the Colorado River, which cannot be reached. Timber
consists of stunted cedars; all vegetation is sparse.
The soil is a shallow wind-blown sand, a great portion
of the land being surface rock.

4—680

FIELD ASSISTANTS. to
Dupree R.Averill and William E.Hiester, U.S.Surveyors.

NAMES.	CAPACITY.
Walter Thomas	First Chainman.
Henry Hiester	First Chainman.
Hale Pierce	Second Chainman.
George M. Tucker	Flagman.
Thomas I. Ison	Cornerman.
Henry McKelvey	Axman.

6—2764

BOOK 14 3627

CERTIFICATE OF UNITED STATES SURVEYOR.

I, __Dupree R. Averill__, U. S. Surveyor, hereby certify upon honor that, in pursuance

of special instructions received from the U. S. Surveyor General, for __Group 72, Arizona__

bearing date of the __17 th__ day of __March__, 1917, 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 _____

__The West Boundary of T.31 N.,R.9 W.__

_____ of the __Gila and Salt River__

__Base and__ Meridian, in the State of __Arizona__, which are represented in

and by diagram on page 1 hereof

the foregoing field notes/as having been executed by me, and under my direction; and that all the corners of

said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instruc-

tions, and the special written instructions of the U. S. Surveyor General, for __Group 72, 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, 1924

Dupree R. Averill
U. S. Surveyor.

~~APPROVAL.~~

~~OFFICE OF THE UNITED STATES SURVEYOR GENERAL,~~

_____, 19

~~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. Surveyor General.

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

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

_____
U. S. Surveyor General.

4—680

FIELD ASSISTANTS. *to*
Dupree R. Averill and William E. Hiester, U.S.Surveyors.

NAMES.	CAPACITY.

See page 13 of this book.

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CERTIFICATE OF UNITED STATES SURVEYOR.

16 BOOK 3627

I, __William E. Hiester_____, U. S. Surveyor, hereby certify upon honor that, in pursuance

of special instructions received from the U. S. Surveyor General, for ____Group 72, Arizona_____

bearing date of the __17 th_____ day of __March_____, 19 17, 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 _____

____The Subdivision of T. 31 N., R. 9 W._____

_____

_____

_____

_____ of the _Gila and Salt River

__Base and_____ Meridian, in the State of __Arizona_____, which are represented in

and by diagram on page 1 hereof

the foregoing field notes/as having been executed by me, and under my direction; and that all the corners of

said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instruc-

tions, and the special written instructions of the U. S. Surveyor General, for __Group 72, Arizona___

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

such survey.

Wolf Hole Arizona
March 14, 1924

William E Hiester
U. S. Surveyor.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona, May 15_____, 19 24

The foregoing field notes of the survey of _____

____Part of the West Boundary and_____

____Part of the Subdivision of T. 31 N., R. 9 W. of the_____

__Gila and Salt River Base and Meridian in the_____

__State of Arizona_____

_____

_____

executed by __Dupree R. Averill and William E. Hiester, U.S. Surveyors_____

under ~~his~~ special instructions dated ____March 17, 1917 for Group 72, Arizona____, having been

critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys

they describe, are hereby approved.

Charles M. Douohoe
U. S. Surveyor General.

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

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

_____

6—2764
~~U. S. Surveyor General.~~