

FIELD NOTES

OF THE SURVEY OF

*Part of the West Boundary of
Township 32 North, Range 2 West*

*Part of the Subdivision Lines of
Township 32 North, Range 2 West*

and

*Part of the Grand Canyon National Park Boundary
formed by*

*Part of the Subdivision Lines of
Township 32 North, Range 2 West*

Of the Gila & Salt River Base and Meridian,

In the State of ARIZONA

EXECUTED BY

Leroy R. Hanson, U.S. Transitman

In the capacity of U. S. Surveyor..., under Special Instructions dated *May 11*, 1927,
issued by the District ~~Cadastral~~ *Engineer*, and to govern surveys included in Group
No. *145, Arizona*, which were approved by the Commissioner of the General Land
Office, *May 20*, 1927, and Assignment Instructions dated *Oct. 15*, 1927.

Survey commenced *November 3*, 1927.

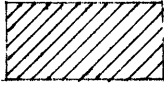
Survey completed *November 14*, 1927.

3905

3905

1A

Book "F"
Group 145- Arizona.



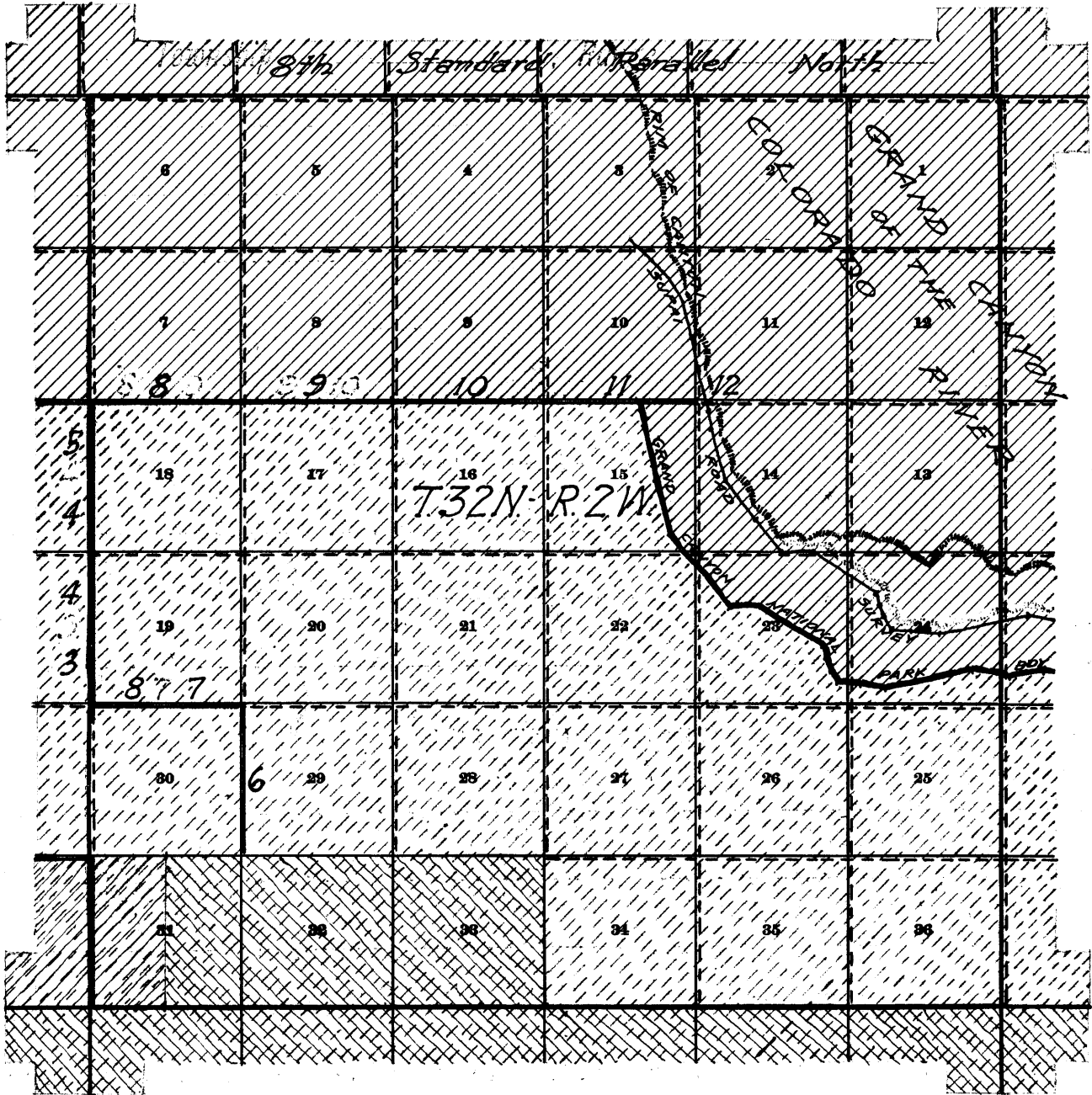
Land within Grand Canyon National Park.



Land within Tusayan National Forest.

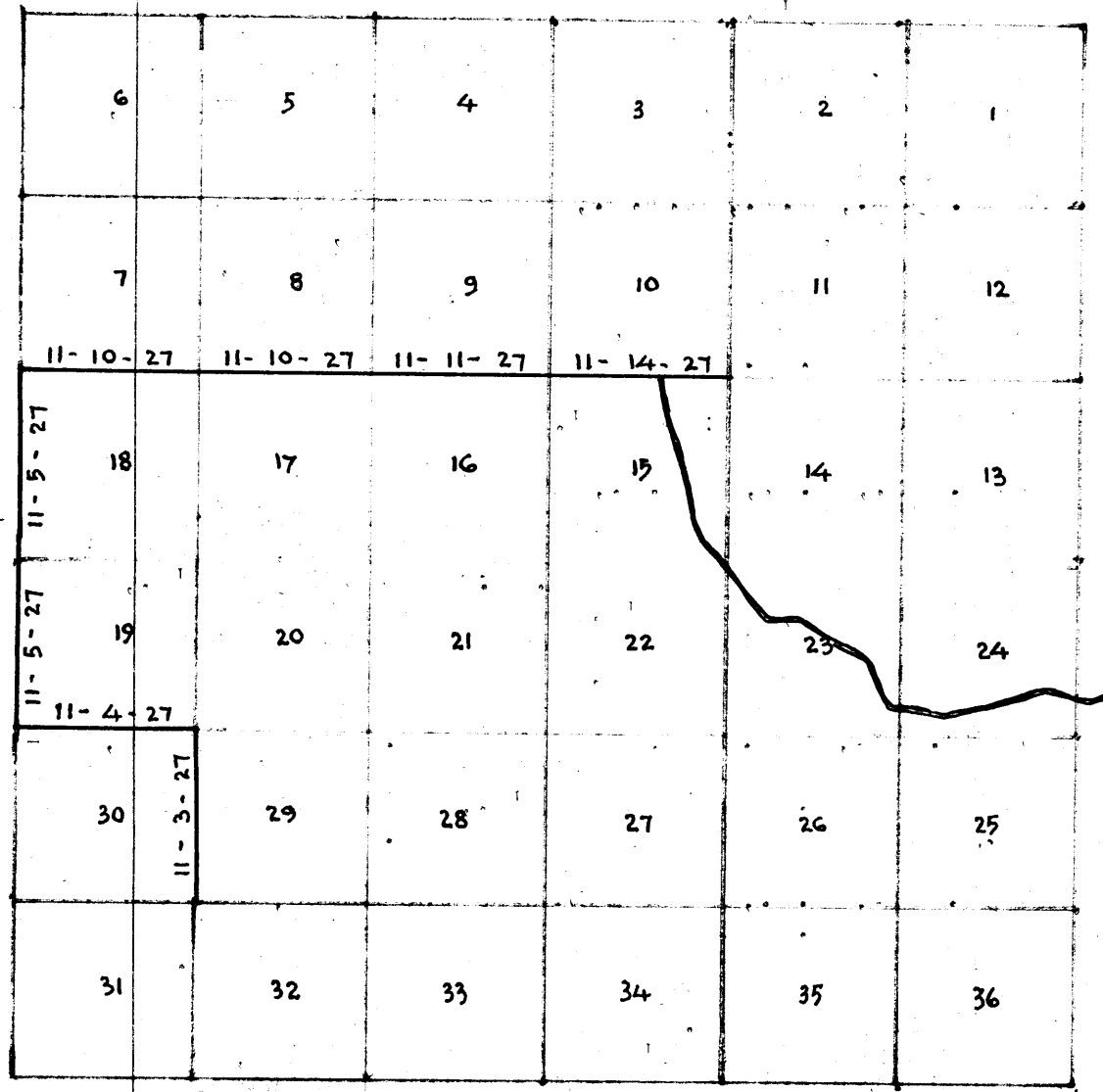
BOOK 3905

INDEX DIAGRAM.



- Lines surveyed under this group.
- Lines shown protracted on accepted plats (not actually surveyed)
- Unsurveyed
- Accepted, surveyed lines.
- Areas shown on accepted plats by protraction.
- Areas shown on accepted plats by actual surveys.

Book "F"
 Group 145 Arizona
 Township 32 North, Range 2 West
 DATE DIAGRAM
 1927



— Surveyed by Leroy R. Hanson, U.S. Transitman on dates shown thereon.

— Surveyed by Sidney E. Blout, U.S. Cadastral Engineer, Notes and dates in Book "H" of this group.

The surveys herein described were executed on dates shown on diagram on page 1 hereof, by Leroy R. Hanson, U.S. Transitman, using Young and Son Transit No. 8477; the instrument is equipped with Smith solar attachment and otherwise conforms to the standard requirements of the General Land Office. Unless otherwise specified all azimuth determinations are accomplished with the solar attachment.

PRELIMINARY FIELD TEST
of
Young & Son Transit No. 8477.
by
Leroy R. Hanson, U.S. Transitman.

November, 6, 1927: at camp at Pasture Wash Ranger Station, located in unsurveyed T. 32 N., R. 1 W., G. & S. R. B. & M., Arizona, in latitude $36^{\circ} 8' N.$, and approximate longitude $112^{\circ} 23\frac{1}{2}' W.$, examine the adjustments of the transit and find no errors; then to test the workings of the solar apparatus by comparing its indications with a true meridian established by Polaris observation, proceed as follows:

November, 7:

At 4h. 30m., a.m., l.m.t., observe Polaris at western elongation, making four observations, two each with the telescope in direct and reversed positions, and marking the mean point in the line thus determined by a tack set in top of a stake, driven firmly in the ground about 5 chs. N.

Azimuth of Polaris: $1^{\circ} 20' 23''$.

At 9h. 00m., a.m., app.t., lay off the azimuth of Polaris $1^{\circ} 22' 0\frac{1}{2}''$ to the east and mark the true meridian thus accomplished by a tack set in top of a peg, driven firmly in the ground about 5 chs. N.; set off $36^{\circ} 8' N.$, on the latitude arc, $16^{\circ} 05\frac{1}{2}' S.$, on the declination arc and determine a meridian with the solar which is found to agree with the true meridian.

At 12h. 00m., app. noon, with the lat. arc unchanged, observe the sun on the meridian; the resultant reading of the decl. arc is $16^{\circ} 8\frac{1}{2}' S.$, which agrees with the calculated declination of the sun.

At 3h. 00m., p.m., with lat. arc unchanged, set off $16^{\circ} 10' S.$, on the decl. arc and determine a meridian with the solar which is found to agree with the true meridian.

As all of the obsns. taken during the usual hours of solar work agree within 1' of the true meridian, conclude that the instrument is in satisfactory adjustment.

Unless otherwise specified all measurements are made with a Lufkin steel tape 5 chs. in length, compared with a Lufkin Standard and found correct.

The measurements are made on the slope, the vertical angle determined and the slope measurements properly reduced to horizontal values.

Survey of Part of the West Boundary of T.32 N., R.2 W.

chains

The West bdy. of sec. 31, T. 32 N., R. 2 W. was measured by chaining and triangulation, by J. C. Dobbins, U.S.D.S., in 1900, but he did not establish the $\frac{1}{4}$ sec. cor. of secs. 31 and 36 or witness cor. thereto, therefore the south mile of the west bdy. of said Tp. is technically unsurveyed.

There is no record of any other portion of this Tp. bdy. having been surveyed, and no recorded establishment of the $\frac{1}{4}$ sec. cor. of secs. 31 and 36, or witness cor. thereto.

The following notes describe a survey of the portion of the Tp. bdy. west of secs. 19 and 18, executed as part of a traverse from the cor. of secs. 29, 30, 31 and 32, T. 32 N., R. 2 W. to the cor. of secs. 7, 12, 13 and 18, Ts. 32 N., Rs. 2 and 3 W., for the purpose of locating the latter cor. as an initial point from which to survey the fourth latitudinal subdivision lines of Ts. 32 N., Rs. 2 and 3 W., which form a part of the boundary of the Grand Canyon National Park.

 From true point for cor. of secs. 19, 24, 25 and 30, located by survey of the E. and N. bdrs. of sec. 30, T. 32 N., R. 2 W., as hereinafter described,

North, on true line, bet. secs. 19 and 24.

Over mountainous land, in N. fork of Dead Horse Canyon.

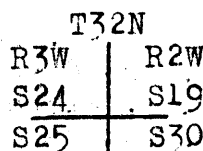
Measurement of 9.60 chs. by triangulation and traverse as hereinafter described in notes of subdivision line bet. secs. 19 and 30.

9.60 Ascend over precipitous SE. faces of cliffs to N. or right rim of N. fork of Dead Horse Canyon, bearing NE. and SW.

Leave mountainous and enter level land, dense timber and undergrowth.

9.82 Continue line and measurement by chaining.

Set an iron post, 3 ft. long, 2 ins. in diam., 6 ins. in the ground, to bedrock, deposit a stone mkd. with a cross (X) at base of post, and raise a mound of stone around post, for witness cor. to cor. of secs. 19, 24, 25 and 30, with brass cap mkd.,



WC

1927

from which,

a cedar, 10 ins. in diam., brs. N. $41\frac{1}{2}^{\circ}$ E., 139 lks.

dist., mkd. T32N R2W S19 WC BT

a pinyon, 8 ins. in diam., brs. S. $46\frac{3}{4}^{\circ}$ W., 70 lks.

dist., mkd. T32N R3W S24 WC BT

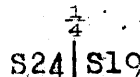
No other bearing trees available.

33.85 Continue over level land, thru dense timber and undergrowth Wash, course NW. Leave level and enter gently rolling land. Ascend gradually over SW. slope.

39.85 Point of low spur, sloping W.

Descend slightly over NW. slope to

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground to bedrock, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor. of secs. 19 and 24, with brass cap mkd.,



1927

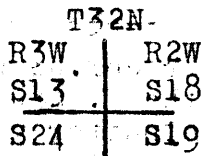
from which

a pinyon, 6 ins. in diam., brs. N. $7\frac{1}{2}^{\circ}$ E., 60 lks.

dist., mkd. $\frac{1}{4}$ S19 BT

Survey of Part of the West boundary of T.32 N., R.2 W.

chains
 a cedar, 5 ins. in diam., brs. S. 56 $\frac{1}{2}$ ° W., 46 lks.
 dist., mkd. $\frac{1}{4}$ S24 BT
 Descend gradually over NW. slope.
 46.25 Wash, 50 lks. wide, course SW.
 Ascend 96 ft. over SE. slope.
 53.90 Ridge, brs. E. and W.
 Descend gradually over N. slope.
 57.25 Wash, 10 lks. wide, course SW.
 Ascend gradually over SE. slope.
 63.00 Rim of bench, brs. NE. and SW.
 Thence over level land on bench.
 76.40 Rim of bench, brs. E. and W.
 Leave level and enter rolling land.
 Descend 43 ft. over N. slope to
 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the
 ground, for cor. of secs. 13, 18, 19 and 24, with brass
 cap mkd.,



1927

from which
 a cedar, 12 ins. in diam., brs. N. 58 $\frac{1}{2}$ ° E., 28 lks.
 dist., mkd. T32N R2W S18 BT
 a cedar, 10 ins. in diam., brs. S. 19° E., 63 lks.
 dist., mkd. T32N R2W S19 BT
 a cedar, 10 ins. in diam., brs. S. 75 $\frac{1}{2}$ ° W., 84 lks.
 dist., mkd. T32N R3W S24 BT
 a cedar, 12 ins. in diam., brs. N. 29° W., 183 lks.
 dist., mkd. T32N R3W S13 BT

Land, mountainous, level and rolling.
 Soil, rocky, 4th rate.
 Timber, cedar and pinyon.
 Undergrowth, sagebrush and cacti.

North, on true line, bet. secs. 13 and 18.
 Over rolling land, thru dense timber and undergrowth.
 Descend 23 ft. over N. slope.
 3.90 Wash, 10 lks. wide, course SW.
 Ascend 98 ft. over SE. slope.
 19.90 Rim of bench, brs. NE. and SW.
 Thence over level land on bench.
 21.40 Rim of bench, brs. E. and W. Leave level and enter
 mountainous land. Descend 221 ft. over N. slope.
 34.20 Wash, 10 lks. wide, course NW.
 Ascend 46 ft. over S. slope.
 39.25 Top of spur, slopes W.
 Thence across level top of spur to
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 12 ins. in the
 ground, to bedrock, and raise a md. of stone around
 post, for $\frac{1}{4}$ sec. cor. of secs. 13 and 18, with brass cap
 mkd.,



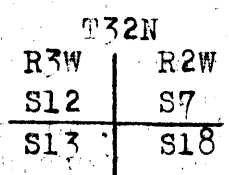
1927

from which
 a cedar, 12 ins. in diam., brs. N. 36 $\frac{1}{2}$ ° E., 40 lks.
 dist., mkd. $\frac{1}{4}$ S18 BT
 a cedar, 14 ins. in diam., brs. N. 31 $\frac{1}{2}$ ° W., 33 lks.
 dist., mkd. $\frac{1}{4}$ S13 BT

Descend 34 ft. over N. slope.
 46.70 Wash, 10 lks. wide, course SW.
 Ascend 245 ft. over SE. slope.

Survey of Part of the West boundary of T.32 N.,R.2 W.

- chains
- 56.80 Top of spur, about 150 lks. wide, sloping SW.
Descend 64 ft. over NW. slope.
- 64.00 Wash, 50 lks. wide, course NW. Enter rolling land.
Ascend 15 ft. over SW. slope.
- 66.75 Top of spur, about 60 lks. wide, sloping W.
Descend 27 ft. over N. slope.
- 73.10 Wash, 10 lks. wide, course SW.
Ascend 74 ft. over S. slope to
- 78.00 Point of spur, sloping S.
Ascend 25 ft. along top of spur to
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 6 ins. in the
ground to bedrock, deposit a stone marked with a cross
(X) at base of post, and raise a mound of stone around
post, for cor. of secs. 7, 12, 13 and 18, with brass cap
mkd.,

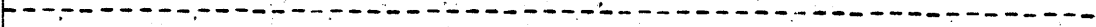


1927

from which
 a cedar, 6 ins. in diam., brs. N. 32 $\frac{1}{2}$ ° E., 25 lks.
 dist., mkd. T32N R2W S7 BT
 a cedar, 5 ins. in diam., brs. S. 12° E., 43 lks. dist.,
 mkd. T32N R2W S18 BT
 No other bearing trees available.

The Boundary of the Grand Canyon National Park
 extends east and west from this sec. cor., identical
 with the fourth latitudinal subdivision line of
 Ts. 32 N., Rs. 2 and 3 W., surveyed as hereinafter
 described and in Book "G" of this group.

Land, rolling, level and mountainous.
 Soil, rocky, 4th rate.
 Timber, pinyon and cedar.
 Undergrowth, sagebrush and cacti.



6 Survey of Part of the Subdivision Lines of T. 32 N., R. 2 W.

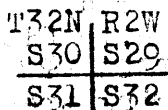
chains

The subdivision lines bounding secs. 31, 32 and 33, T. 32 N., R. 2 W. were surveyed by W. O. Secor, U. S. D. S. in 1900 and 1901, and no other survey, or retracement or resurvey of subdivision lines of this tp. is of record.

The following notes describe the survey of line bet. secs. 29 and 30, line bet. secs. 19 and 30, and the west four miles of the fourth latitudinal subdivision line of T. 32 N., R. 2 W. The survey of line bet. secs. 29 and 30, and line bet. secs. 19 and 30 is made as a part of a traverse to locate the cor. of secs. 7, 12, 13 and 18, on W. bdy. of the Tp., from which to initiate the survey of the fourth latitudinal subdivision lines of Ts. 32 N., Rs. 2 and 3 W., which form a part of the boundary of the Grand Canyon National Park.

The original cor. of secs. 29, 30, 31 and 32, is a limestone 6 X 12, 12 ins. above ground, firmly set, mkd. with 1 groove on S. face and 5 grooves on E. face, and witnessed by a mound of stone 3 ft. base, 1 1/2 ft. high, W. of cor. No bearing trees.

Reconstruct this cor. monument as follows:
 alongside old stone, set an iron post, 3 ft. long, 2 ins. in diam., 6 ins. in ground to bedrock, and raise a md. of stone around post, for cor. of secs. 29, 30, 31 and 32, with brass cap mkd.,



1927

No bearing trees available.

Thence

N. 0° 3' W., on true line, bet. secs. 29 and 30.

Over level land, thru scattering timber and dense undergrowth.

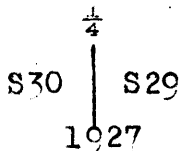
29.00 Leave level and enter rolling land.

Descend 25 ft. over NW. slope.

34.90 Wash, 30 lks. wide, course SW.

Ascend 55 ft. over SE. slope to

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground to bedrock, deposit a stone marked with a cross (X) at base of post, and raise a mound of stone around post, for 1/4 sec. cor. of secs. 29 and 30, with brass cap mkd.,



from which

a pinyon, 6 ins. in diam., brs. N. 77 1/2° W., 140 lks. dist., mkd. 1/4 S30 BT

No other bearing tree available.

Ascend 23 ft. over SE. slope to

44.00 Top of slope brs. NE. and SW. Thence over level land.

50.30 Top of slope, brs. NE. and SW. Enter rolling land.

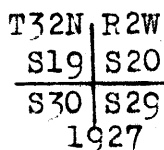
Descend 57 ft. over NW. slope.

56.90 Wash, 80 lks. wide, course S. 70° W.

Ascend 141 ft. over SE. slope.

70.00 Top of slope, brs. E. and W. Thence over level land.

80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 8 ins. in the ground to bedrock, and raise a mound of stone around post, for cor. of secs. 19, 20, 29 and 30, with brass cap mkd.,

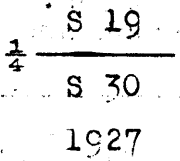


chains

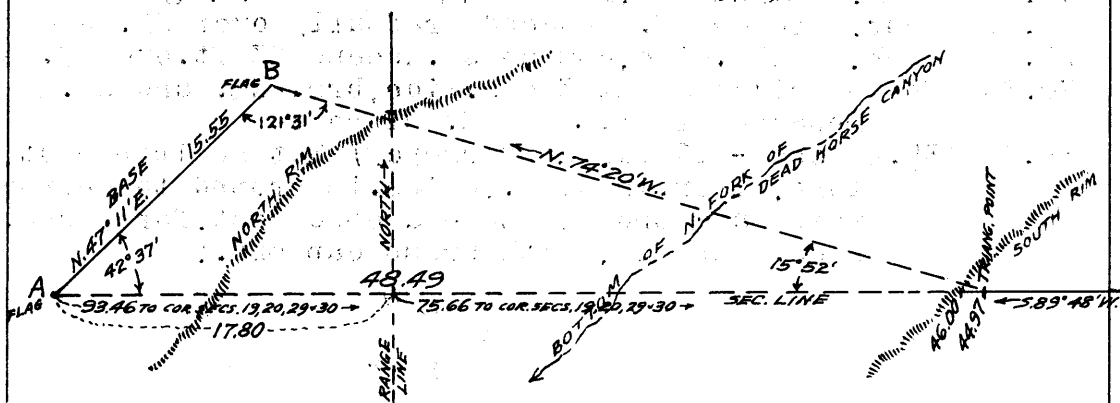
from which
 a pinyon, 8 ins.in diam.,brs. N.85°E., 87 lks.
 dist., mkd. T32N R2W S20 BT
 a pinyon, 10 ins.in diam.,brs. S.69½°E., 106 lks.
 dist., mkd. T32N R2W S29 BT
 a cedar, 8 ins.in diam.,brs. S.39°W., 188 lks.
 dist., mkd. T32N R2W S30 BT
 a cedar, 6 ins.in diam.,brs. N.62½°W.,192 lks.
 dist., mkd. T32N R2W S19 BT

Land, level and rolling.
 Soil, rocky, 4th rate.
 Timber, cedar and pinyon.
 Undergrowth, sagebrush and cacti.

S.89°48'W., on true line, bet. secs.19 and 30.
 Over level land, thru dense timber and undergrowth.
 19.50 Top of slope, brs. NW. and SE. Leave level and enter rolling
 land. Descend 136 ft. over SW. slope to
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 14 ins. in the
 ground to bedrock, deposit a stone mkd. with a cross
 (X) at base of post, and raise a md. of stone around
 post, for ¼ sec. cor. of secs. 19 and 30, with brass cap
 mkd.,



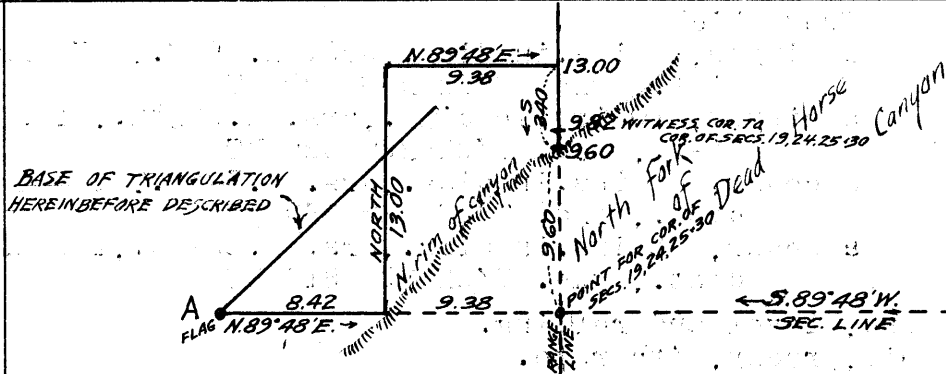
from which
 a cedar, 6 ins.in diam.,brs. N.18°W., 143 lks.
 dist., mkd. ¼ S19 BT
 No other bearing tree available.
 Descend 35 ft. over W. slope to canyon rim.
 44.97 Triangulation point. Continue chaining to
 46.00 South or left rim of N. fork of Dead Horse Canyon, brs.
 NE. and SW. The remainder of this subdivision line
 falls in the canyon and chaining is impracticable,
 therefore triangulate as follows:
 Set a flag (A) S.89°48'W. at a point beyond the N.
 or right rim of canyon, and from flag (A) measure a
 base N.47°11'E., 15.55 chs. and set flag (B).
 Flag (B) bears N.74°20'W. from 44.97 ch. station.



Dist. chained on sec. line	44.97 chs. S.89°48'W.
Dist. triangulated	48.49 " "
Total dist.	93.46 chs. S.89°48'W.
Theoretical length of sec. line	75.66 " "
Dist. flag(A) from sec. cor. point	17.80 chs. S.89°48'W.

The sec. cor. point on W. bdy. of Tp. being inaccessible,
 traverse from flag(A) to a point on Tp. bdy. at N. rim
 of canyon as follows:
 N.89°48'E., 8.42 chs. to canyon rim, thence
 North 13.00 chs. to traverse point, thence
 N.89°48'E., 9.38 chs. to point on Tp. bdy., thence
 South 3.40 chs. on Tp. bdy. to N. rim of canyon
 at 9.60 chs. North from the
 true point for cor. of secs.
 19, 24, 25 and 30.

chains



64.00 (Approximate) Bottom of North Fork of Dead Horse Canyon, course SW., about 560 ft. below 44.97 ch. station on sec. line.

75.66 Ascend about 560 ft. over cliffs to True point for cor. of secs. 19, 24, 25 and 30, on w. bdy. of the tp.

This sec. cor. point being inaccessible, a witness cor. is established at 9.82 chs. North as hereinbefore described in notes of survey of Part of West bdy.

Land, level, rolling and mountainous.
Soil, rocky, 4th rate.
Timber, cedar and pinyon.
Undergrowth, sagebrush and cacti.

Subdivision Lines of T.32 N., R.2 W. forming
Part of
GRAND CANYON NATIONAL PARK BOUNDARY

From cor. of secs. 7, 12, 13 and 18, on W. bdy. of Tp., hereinbefore described, East, on true line, bet. secs. 7 and 18, on the Bdy. of Grand Canyon National Park.

Over rolling land, thru dense timber and scattering undergrowth.

Descend 29 ft. over E. slope.

5.00 Ascend 28 ft. over NW. slope.

8.46 Spur, slopes SW. Descend 47 ft. over SE. slope.

14.00 Wash, 20 lks. wide, course SW. Ascend 51 ft. over NW. slope.

18.80 Spur, slopes SW. Descend gradually over SE. slope.

27.80 Wash, 20 lks. wide, course SW. Ascend 23 ft. over W. slope.

30.30 Top of ridge, about 3 chs. wide, brs. NE. and SW.

Descend 31 ft. over SE. slope to

35.49 (35.60 chs. - 17 lks. convergency) Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in ground to bedrock, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor. of secs. 7 and 18, with brass cap mkd.,

S 7
—
S 18

1927

from which

a pinyon, 10 ins. in diam., brs. N. $16\frac{1}{2}^\circ$ E., 151 lks.

dist., mkd. $\frac{1}{4}$ S7 BT

a cedar, 8 ins. in diam., brs. S. $64\frac{1}{2}^\circ$ W., 36 lks.

dist., mkd. $\frac{1}{4}$ S18 BT

Descend 131 ft. over SE. slope.

51.90 Wash, 10 lks. wide, course SW.

Ascend 57 ft. over W. slope.

57.50 Spur, slopes NW. Ascend 76 ft. over N. slope.

65.00 Top of ridge, brs. NE. and SW.

Thence over level land on top of ridge.

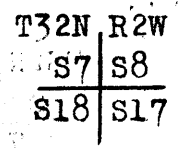
69.00 Leave top of ridge, brs. N. and S.

Descend 29 ft. over E. slope to

75.49 Set an iron post, 3 ft. long, 2 ins. in diam., 10 ins. in

Survey of Part of the Subdivision Lines of T.32 N., R.2 W. 9

chains in the ground, to bedrock, and raise a mound of stone around post, for cor. of secs. 7, 8, 17 and 18, with brass cap mkd.,



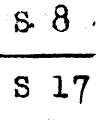
1927

- from which
- a pinyon, 10 ins. in diam., brs. N.72°E., 36 lks. dist. mkd. T32N R2W S8 BT
- a cedar, 5 ins. in diam., brs. S.122°E., 64 lks. dist. mkd. T32N R2W S17 BT
- a pinyon, 12 ins. in diam., brs. S.45³/₄°W., 108 lks. dist. mkd. T32N R2W S18 BT
- a pinyon, 12 ins. in diam., brs. N.37°W., 191 lks. dist. mkd. T32N R2W S7 BT

Land, rolling and level.
 Soil, rocky, 4th rate.
 Timber, cedar and pinyon.
 Undergrowth, sagebrush and cacti.

East, on true line, bet. secs. 8 and 17, on Park boundary.
 Over rolling land, thru dense timber and scattering undergrowth.

- Descend gradually over E. slope.
- 7.60 Wash, 20 lks. wide, course SW. Ascend 51 ft. over W. slope.
- 15.00 Spur, slopes N. Descend 51 ft. over NE. slope.
- 17.90 Wash, 10 lks. wide, course NW. Ascend 10 ft. over W. slope.
- 27.40 Spur, slopes S. Descend gradually over SE. slope.
- 32.00 Wash, 30 lks. wide, course SW. Ascend gradually over NW. slope to
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground to bedrock, and raise a mound of stone around post, for $\frac{1}{4}$ sec. cor. of secs. 8 and 17, with brass cap mkd.,



1927

- from which
- a cedar, 10 ins. in diam., brs. N.48°E., 35 lks. dist. mkd. $\frac{1}{4}$ S8 BT
- a pinyon, 8 ins. in diam., brs. S.53°E., 94 lks. dist. mkd. $\frac{1}{4}$ S17 BT

- Ascend gradually over NW. slope.
- 40.25 Top of ridge, brs. NE. and SW. Thence over level top of ridge.
- 53.50 Leave top of ridge. Descend 52 ft. over E. slope.
- 60.90 Wash, 10 lks. wide, course SW. Ascend 17 ft. over W. slope.
- 65.00 Spur, slopes N. Descend 21 ft. over NE. slope.
- 68.40 Wash, 10 lks. wide, course NW. Ascend 58 ft. over W. slope.
- 79.00 Top of spur, slopes N. Thence over level top of spur to
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 10 ins. in

10 Survey of Part of the Subdivision Lines of T.32 N., R.2 W.

chains

the ground to bedrock, and raise a mound of stone around post, for cor. of secs. 8, 9, 16 and 17, with brass cap mkd.,

T32N R2W	
S8	S9
S17	S16

1927

from which

- a pinyon, 10 ins. in diam., brs. N. 77° E., 52 lks.
dist., mkd. T32N. R2W S9 BT
- a cedar 12 ins. in diam., brs. S. 60° E., 79 lks.
dist., mkd. T32N. R2W S16 BT
- a pinyon, 10 ins. in diam., brs. S. 33½° W., 63 lks.
dist., mkd. T32N. R2W S17 BT
- a pinyon, 6 ins. in diam., brs. N. 63½° W., 38 lks.
dist., mkd. T32N R2W S8 BT

Land, rolling and level.
Soil, rocky, 4th rate.
Timber, cedar and pinyon.
Undergrowth, sagebrush and cacti.

East, on true line, bet. secs. 9 and 16, on Park boundary.
Over level land on top of spur, sloping N., thru dense timber and scattering undergrowth.

- 3.85 Leave top of spur, Descend 29 ft. over NE. slope.
- 9.60 Wash, 10 lks. wide, course N.
Ascend 35 ft. over W. slope.
- 16.50 Top of spur, slopes N.
Thence over level top of spur.
- 19.50 Leave top of spur.
Descend 14 ft. over NE. slope.
- 25.60 Wash, 10 lks. wide, course N. 80° W.
Ascend gradually over SW. slope.
- 33.00 Toe of spur sloping S. Thence along N. edge of wash at bend of same, course S. 80° W. from S. 80° E.
- 35.00 Ascend gradually over SW. slope to
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 4 ins. in the ground to bedrock, and raise a mound of stone around post, for ¼ sec. cor. of secs. 9 and 16, with brass cap mkd.,

S 9	
¼	S 16

1927

from which

- a pinyon, 18 ins. in diam., brs. N. 4° E., 143 lks.
dist., mkd. ¼ S9 BT
- a cedar, 4 ins. in diam., brs. S. 7½° W., 93 lks.
dist., mkd. ¼ S16 BT

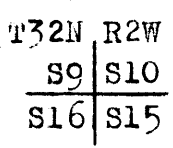
Ascend gradually over SW. slope.

- 46.19 A point from which U.S.G.S. bench mark 6166 bears North 23.27 chs. dist.
- 56.50 Top of spur, slopes SE.
Thence over level top of spur.
- 63.50 Leave top of spur. Descend gradually over SE. slope.
- 66.30 Road, brs. NW. and SE. Extends from Grand Canyon, Ariz. to head of trail leading to Supai Indian village.
- 69.00 Wash, 10 lks. wide, course SW. Ascend gradually over NW. slope.
- 71.50 Point of spur, sloping N. Descend gradually over NE. slope
- 76.50 Wash, 10 lks. wide, course NW.
Thence along S. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in

Survey of Part of the Subdivision Lines of T.32 N., R.2 W.

chains

the ground, for cor. of secs. 9, 10, 15 and 16, with brass cap mkd.,



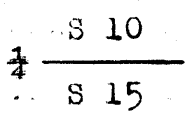
1927

- from which
- a pinyon, 10 ins. in diam., brs. N. 62° E., 123 lks. dist., mkd. T32N R2W S10 BT
- a cedar, 8 ins. in diam., brs. S. 38½° E., 96 lks. dist., mkd. T32N R2W S15 BT
- a cedar, 10 ins. in diam., brs. S. 86½° W., 76 lks. dist., mkd. T32N R2W S16 BT
- a pinyon, 6 ins. in diam., brs. N. 10° W., 67 lks. dist., mkd. T32N R2W S9 BT

Land, rolling and level.
 Soil, rocky, 4th rate.
 Timber, cedar and pinyon.
 Undergrowth, sagebrush and cacti.

East, on true line, bet. secs. 10 and 15, on Park boundary. over rolling land, thru dense timber and scattering undergrowth.

- 1.00 Descend slightly over SE. slope. Enter draw, course SW. from E. Ascend gradually in draw.
- 14.50 Leave draw, course W. from SE. Ascend 44 ft. over W. slope.
- 36.00 Ridge, brs. NE. and SW. Descend 33 ft. over SE. slope to
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor. of secs. 10 and 15, with brass cap mkd.,



1927

- from which
- a pinyon, 12 ins. in diam., brs. S. 53° E., 49 lks. dist., mkd. ¼ S15 BT
- a pinyon, 12 ins. in diam., brs. N. 57° W., 27 lks. dist., mkd. ¼ S10 BT

- 41.20 Descend gradually over SE. slope. Wash, 20 lks. wide, course SW. Ascend 42 ft. over NW. slope.
- 49.00 Ridge, brs. NE. and SW. Thence over level top of ridge.
- 50.91 Intersect the portion of the boundary of the Grand Canyon National Park surveyed parallel to, and 40 chs. S. 45° W. from, the Supai Road Survey executed in 1925 by engineers of the U.S. Bureau of Public Roads. Angle Point 17M+42.65 of Park bdy. established at this point of intersection as described in book "H" of this group. Leave Park bdy. and enter the Park, continuing line and measurement.
- 63.50 Leave top of ridge. Descend gradually over SE. slope.
- 70.00 Wash, 10 lks. wide, course SW. Ascend gradually over W. slope to
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 10, 11, 14 and 15, with brass cap mkd.

chains

T32N R2W	
S10	S11
S15	S14

1927

from which

- a pinyon, 8 ins. in diam., brs. N.21°E., 50 lks.
 dist., mkd., T32N R2W S11 BT
- a pinyon, 10 ins. in diam., brs. S.62½°E., 72 lks.
 dist., mkd., T32N R2W S14 BT
- a pinyon, 12 ins. in diam., brs. S.38½°W., 51 lks.
 dist., mkd., T32N R2W S15 BT
- a cedar, 18 ins. in diam., brs. N.83½°W., 64 lks.
 dist., mkd., T32N R2W S10 BT

Land, rolling and level.
 Soil, rocky, 4th rate.
 Timber, cedar and pinyon.
 Undergrowth, sagebrush and cacti.

East, on blank line, bet. parts of secs. 11 and 14 (unsurv.)
 within Grand Canyon National Park.

- 3.00 Across level top of low ridge bearing NE. and SW.
 Leave top of ridge. Descend gradually over E. slope.
- 4.97 Intersect the center line of the Supai Road (1925 survey)
 at a point 1 lk. S.14°10'E. from a stake thereon
 marked 1310+15
- 6.00 Intersect the south or left rim of the Grand Canyon of
 the Colorado River, bearing NW. and SE.
 Beyond this point the sec. line is within the canyon
 and is unsurveyable.

Note: To check measurement of the portion of the G.C.N.P.
 bdy. described in the foregoing notes, rechain the
 same and find no errors.

For field test indicating continued satisfactory adjust-
 ment of the instrument used on the surveys herein-
 before described, see Book "A" of this group.

GENERAL DESCRIPTION.

The lands along the lines surveyed as described in the
 foregoing notes are on the Coconino Plateau and the
 surface is mainly rolling, except in secs. 19 and
 30, where the surface is mountainous.
 The elevation above sea level is about 6000 ft.
 The greater part of the NE. quarter of T.32 N., R.2
 W. is within the Grand Canyon of the Colorado River.
 The timber consists of cedar and pinyon, and the undergrowth
 is sagebrush and various forms of cacti.
 The soil is sandy and rocky, 4th rate.
 There is no water in the tp., and no settlers.
 No evidence of valuable mineral was found.
 The road from Grand Canyon, Ariz. to Hilltop, at head of
 trail to Supai Indian village, crosses the central
 part of the tp. with a general bearing NW. and SE.
 The "Supai Road" surveyed in 1925 by U.S. Bureau of Public
 Roads, crosses the tp., and a portion of the Grand
 Canyon National Park is surveyed parallel thereto
 at 40 chs. S.45°W. therefrom as described in Book "H"
 of this group.
 The N. two tiers of secs., secs. 13 & 14, and parts of secs.
 15, 22, 23 & 24 are within Grand Canyon National Park.

4-680

FIELD ASSISTANTS.
to
Leroy R. Hanson, U.S. Transitman

NAMES.	CAPACITY.
McMillan Pollock	1st Chainman
Charles McDonald	2nd Chainman
Floyd Wright	Flagman
Ivan Workman	Axman

CERTIFICATE OF UNITED STATES SURVEYOR.

BOOK 3905

I, Leroy R. Hanson U.S. Transitman, hereby certify upon honor that, in pursuance of special instructions received from the District Cadastral Engineer for Group 145, Arizona bearing date of the 11th day of May, 1927, 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

the West Boundary

and

Subdivision Lines of

Township 32 North, Range 2 West 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 Instructions, and the special written instructions of the District Cadastral Engineer, for Group 145, Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Place: Phoenix, Arizona

Date: May 1, 1928.

Leroy R. Hanson U.S. Transitman

APPROVAL.

OFFICE OF THE U.S. Supervisor of Surveys, etc.,

Denver, Colo., April 20, 1929

The foregoing field notes of the survey of

Part of the West Boundary

and

Part of the Subdivision Lines

of

Township 32 North, Range 2 West

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

executed by Leroy R. Hanson, U.S. Transitman

under his special instructions dated May 11, 1927 for Group 145, Arizona, 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. Surveyor General