

Book "C"

4-679

BOOK 3863

FIELD NOTES

OF THE SURVEY OF THE

Part of the Grand Canyon National Park Boundary

formed by

Part of the SUBDIVISION Lines of

Township 34 North, Range 3 East

Of the Gila and Salt River Base and Meridian,

In the State of Arizona

EXECUTED BY

Benjamin J. Kinsey, U.S. Surveyor

In the capacity of U. S. Surveyor, under Special Instructions dated May 11, 1927, issued by the District Cadastral Engineer to govern surveys included in Group No. 146, Arizona, which were approved by the Commissioner of the General Land Office, May 20, 1927, and Assignment Instructions dated July 8, 1927.

Survey commenced September 15, 1927.

Survey completed October 3, 1927.

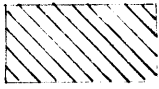
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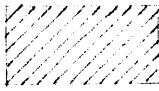
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Book "C"

Group 146 - Arizona



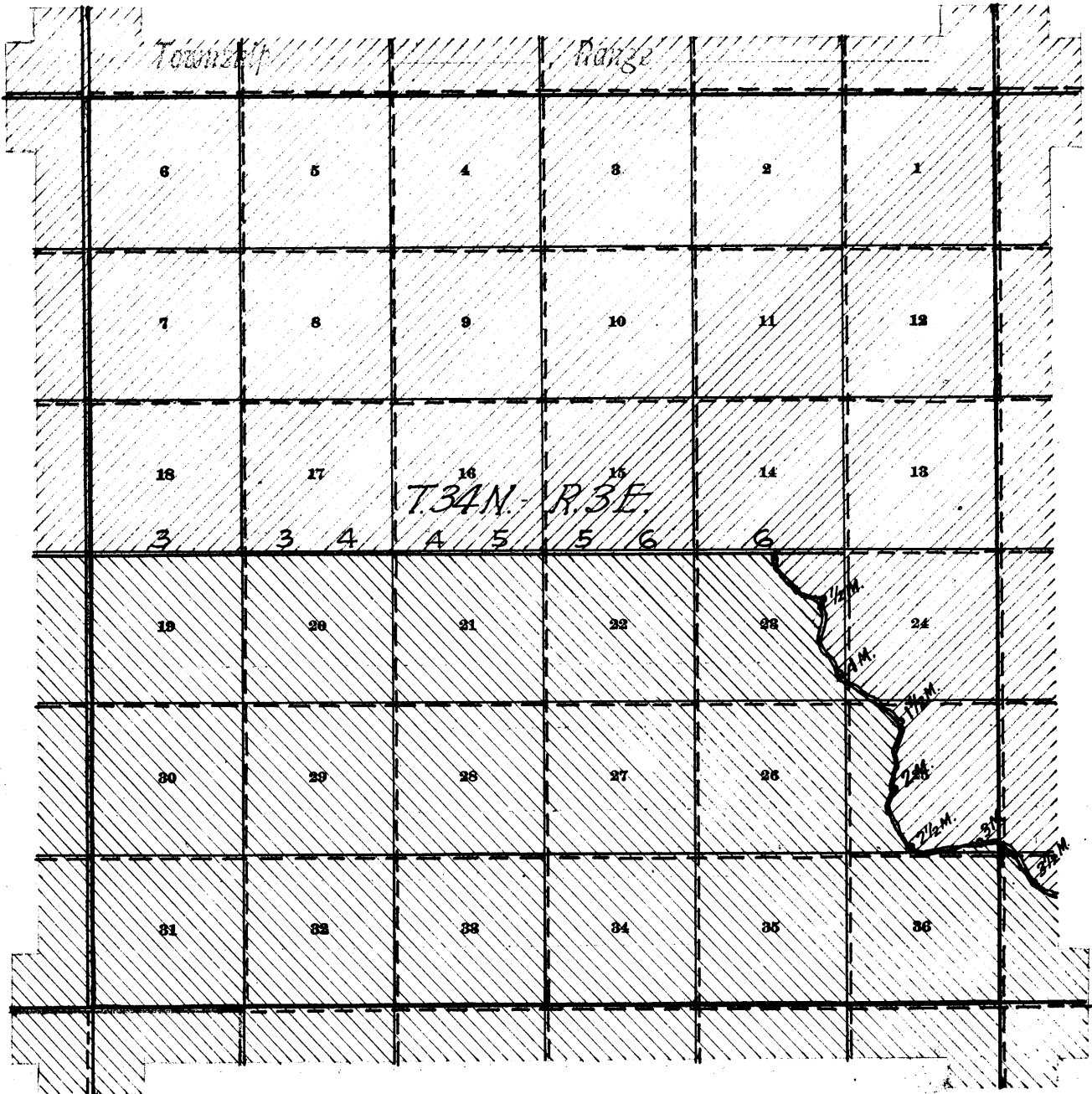
Land within Grand Canyon National Park.



Land within Kaibab National Forest and Grand Canyon National Game Preserve.

BOOK 3863

INDEX DIAGRAM.

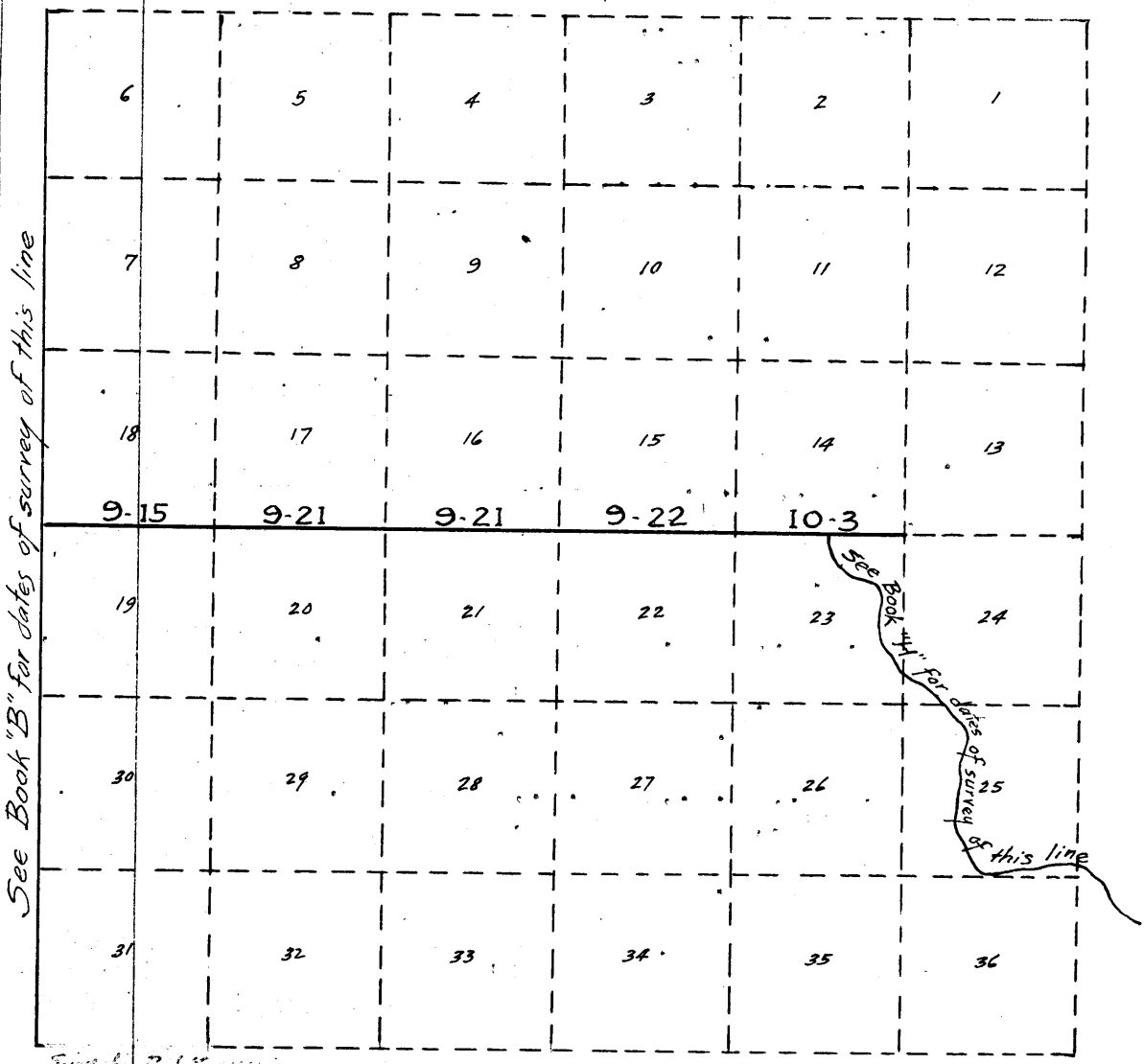


————— Surveyed under this group.

————— Accepted surveys.

----- Unsurveyed.

Book "C"
 Group 146 Arizona
 Township 34 North, Range 3 East
 DATE DIAGRAM
 1927



See Book "B" for dates of survey of this line

See Book "A" for dates of survey of this line

Surv. by D. H. ...
 No 1252

- Surveyed by Benjamin J. Kinsey, U.S. Surveyor, on dates shown thereon.
- Surveyed under this group. Notes and dates in other books.
- - - - - Accepted surveys.
- - - - - Unsurveyed.

The surveys herein described were executed by Benjamin J. Kinsey, U.S. Surveyor, on dates shown on diagram on page 1 hereof, using Buff transit No. 9940; the instrument is equipped with the 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
Buff Transit No. 9940

September, 18, 1927:

In camp near the $\frac{1}{4}$ sec. cor. of secs. 18 and 19, T. 34 N., Range 3 E., in latitude $36^{\circ}20'14''$ N., and longitude $112^{\circ}08'W.$, examine the adjustment of the instrument and find no error; then, to test the workings of the solar attachment, proceed as follows:

At 7h.52m., p.m., l.m.t., observe Polaris at eastern elongation, making four obsns., 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 peg, driven in ground about 5 chs. N.

Azimuth of Polaris at eastern elongation = $1^{\circ}20'59''$.

Sept. 19, 1927

Lay off the azimuth of Polaris $1^{\circ}21'$ to the west, and

mark the meridian thus determined by a tack in a west peg driven firmly in the ground, about 5 chs. N.

At 8h.00m., a.m., app.t., set off $36^{\circ}20'N.$, on the lat. arc; $1^{\circ}44\frac{1}{2}'N.$, on decl. 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 $11^{\circ}40'N.$, which agrees with the computed decl. of the sun.

At 3h.00m., p.m., app.t., with lat. arc unchanged, set off $1^{\circ}37'N.$, 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 adjustment of the solar is satisfactory.

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

The measurements are made with a Lufkin steel tape 5 chs. in length, compared with a Lufkin standard and found correct.

Survey of Part of the Subdivision Lines
of

T.34 N., R.3 E., (Grand Canyon National Park Bdy.)

Chains

From the cor. of secs. 13, 18, 19 and 24, on the East Bdy. of T.34 N., R.2 E., described in book "B" of this group,

East, on true line bet. secs. 18 and 19, on Park Bdy. Over rolling, mountainous land, thru heavy timber and scattering undergrowth.

On slight ascent over W. slope.

11.50 Divide, brs. N.-S.

15.00 Leave divide, brs. N.-S.; desc. 40 ft. over NE slope.

22.25 Head of draw, course NE.; asc. 23 ft. over NE slope.

24.95 Spur, slopes NE. Desc. 86 ft. over NE slope.

39.15 Union Pacific Telephone line, brs. N-S.

Leave timber, brs. N-S. Across open VT. Park, about 5 chs. North of the southern end of same.

Desc. gradual E. slope.

39.20 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for the 1/4 sec. cor. of secs. 18 and 19, with brass cap mkd.

1/4 S 18
S 19

1927

from which,

a spruce, 36 ins. in diam., brs. N.83 1/2°W., 19 lks. dist., mkd. 1/4 S18 BT

an aspen, 12 ins. in diam., brs. S.37 1/4°W., 36 lks. dist., mkd. 1/4 S19 BT

45.30 Government telephone line, brs. NW-SE.

45.50 A lake of water, 2 chs. in diam., brs. N., about 4 chs. dist.

48.10 Wash, 10 lks. wide, course NW. Asc. gradual W. slope.

50.80 Highway, brs. N.5°E.-S.5°W.

On either side of this road and about 20 ft. from center set one aspen post 6 ins. in diam., mkd.

FOREST on N. and GCNP on S. faces.

53.40 Enter timber, brs. N-S. Asc. 242 ft. over W. slope.

73.90 Ridge, brs. N-S. Desc. slight E. slope to

89.20 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 17, 18, 19 and 20, with brass cap mkd.

T34N R3E
S18 S17
S19 S20

1927

from which,

an aspen, 5 ins. in diam., brs. N.82°E., 41 lks. dist., mkd. T34N R3E S17 BT

an aspen, 6 ins. in diam., brs. N.71°W., 32 lks. dist., mkd. T34N R3E S18 BT

an aspen, 6 ins. in diam., brs. S.80 1/2°E., 38 lks. dist., mkd. T34N R3E S20 BT

an aspen, 8 ins. in diam., brs. S.72 1/2°W., 31 lks. dist., mkd., T34N R3E S19 BT

Land, rolling, mountainous and level. Soil, rocky 3rd. rate.

Timber, fir, spruce, aspen and yellow pine.

Undergrowth, juniper brush.

East, on true line, bet. secs. 17 and 20, on Park Bdy.

Over rolling land, thru heavy timber and scattering undergrowth.

0.50 Shallow draw, course N. Asc. 23 ft. over NW slope.

3.50 Spur, slopes N. Desc. 23 ft. over NE slope.

Survey of Part of the Subdivision Lines

of

T. 34 N., R. 3 E. (Grand Canyon National Park Bdy.)

4

Chains

8.20 Draw, course NW. Asc. 108 ft. over NW slope.
 20.00 Spur, slopes N. Desc. 127 ft. over NE slope.
 33.20 Draw, course NE. Asc. gradual NW slope to
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground for the $\frac{1}{4}$ sec. cor. of secs. 17 and 20, with
 brass cap mkd.

$\frac{1}{4}$ $\frac{S 17}{S 20}$

1927 from which,
 an aspen, 8 ins. in diam., brs. N.48 $\frac{1}{2}$ °E., 35 lks.
 dist., mkd. $\frac{1}{4}$ S17 BT
 an aspen, 6 ins. in diam., brs. S.44°E., 46 lks.
 dist., mkd. $\frac{1}{4}$ S20 BT

Asc. gradual NW slope.
 50.30 Ridge, brs. NE-SW. Desc. 81 ft. over NE. slope.
 65.00 Draw, course S.80°E. Desc. along the N. edge of same.
 73.00 Junction of draw from SW; thence NE.
 Asc. 23 ft. over NW slope.
 75.00 Toe of spur, from S. Desc. gradual NE slope.
 77.40 Shallow draw, course NW.
 Asc. gradual SW slope to
 80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in
 the ground for the cor. of secs. 16, 17, 20 and 21, with
 brass cap mkd.

T34N R3E
 $\frac{S17 S16}{S20 S21}$

1927 from which,
 a fir, 6 ins. in diam., brs. N.70°E., 19 lks.
 dist., mkd. T34N R3E S16 BT
 a fir, 12 ins. in diam., brs. S.18°E., 3 lks.
 dist., mkd. T34N R3E S21 BT
 a fir, 14 ins. in diam., brs. S.21 $\frac{1}{2}$ °W., 29 lks.
 dist., mkd. T34N R3E S20 BT
 an aspen, 6 ins. in diam., brs. N.19°W., 20 lks.
 dist., mkd. T34N R3E S17 BT

Land, rolling.
 Soil, rocky 3rd. rate.
 Timber, fir, aspen, yellow pine and spruce.
 Undergrowth, juniper brush.

East, on true line, bet. secs. 16 and 21, on Park Bdy.
 Over rolling land, thru heavy timber and scattering under-
 growth.
 Asc. 23 ft. over NW slope.
 2.50 Spur, slopes NE. Desc. 23 ft. over SE slope.
 13.50 Draw, 200 lks. wide, course NE. Asc. gradual NW slope.
 19.00 Spur, slopes NE. Desc. 29 ft. over NE slope.
 23.50 Draw, 300 lks. wide, course N.10°W. Asc. 57 ft. over SW
 slope to
 30.00 Over level bench, brs. N-S., to
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground for the $\frac{1}{4}$ sec. cor. of secs. 16 and 21, with
 brass cap mkd.

Survey of Part of the Subdivision Lines

T.34 N., R.3 E., (Grand Canyon National Park Bdy.)

Chains

1/4 S 16

S 21

1927

from which,

an aspen, 18 ins. in diam., brs. N.27¹/₂°W., 20 lks.

dist., mkd. 1/4 S16 BT

a fir, 16 ins. in diam., brs. S.4°E., 28 lks.

dist., mkd. 1/4 S21 BT

Desc. slight NE slope.

52.00 Enter open draw, course N.30°W.

57.30 Leave open draw; asc. 146 ft. over SW slope.

62.00 Slope changes to South.

74.00 West edge of level divide, brs. N-S. Over top to

80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 15, 16, 21 and 22, with brass cap mkd.

T34N R3E

S16 S15

S21 S22

1927

from which,

a fir, 20 ins. in diam., brs. N.33°E., 23 lks.

dist., mkd. T34N R3E S15 BT

an aspen, 16 ins. in diam., brs. S.50°E., 5 lks.

dist., mkd. T34N R3E S22 BT

an aspen, 14 ins. in diam., brs. S.40¹/₂°W., 41 lks.

dist., mkd. T34N R3E S21 BT

an aspen, 6 ins. in diam., brs. N.51°W., 50 lks.

dist., mkd. T34N R3E S16 BT

Land, rolling and level.

Soil, rocky 3rd. rate.

Timber, fir, aspen, spruce and yellow pine.

Undergrowth, juniper brush.

East, on true line, bet. secs. 15 and 22, on Park Bdy.

Over rolling land, thru heavy timber and scattering undergrowth.

Over level divide.

14.00 Leave divide, brs. N-S. Desc. 23 ft. over SE slope.

23.20 Draw, near head, course S. Asc. 17 ft. over SW slope.

28.00 Spur, slopes S. Desc. gradual SE slope.

32.00 Draw, 50 lks. wide, course SW. Asc. 46 ft. over gradual W. slope to

40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for the 1/4 sec. cor. of secs. 15 and 22, with brass cap mkd.

1/4 S 15

S 22

1927

from which,

a fir, 14 ins. in diam., brs. N.72°E., 10 lks.

dist., mkd. 1/4 S15 BT

a yellow pine, 26 ins. in diam., brs. S.25°W., 52 lks.

dist., mkd. 1/4 S22 BT

Over level bench.

62.30 Shallow draw; course SE.

67.00 Leave top; desc. 21 ft. over gradual SE slope.

73.60 Draw, 200 lks. wide, course SW. Asc. 34 ft. over NW slope to

Survey of Part of the Subdivision Lines of
T.34 N., R.3 E. (Grand Canyon National Park Bdy.)

6

Chains

80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground for the cor. of secs. 14, 15, 22 and 23, with brass cap mkd.

T34N	R3E
S15	S14
S22	S23

. 1927 from which,
a balsam, 8 ins. in diam., brs. N.63 $\frac{1}{4}$ °E., 39 lks.
dist., mkd. T34N R3E S14 BT
a fir, 12 ins. in diam., brs. S.63°E., 25 lks.
dist., mkd. T34N R3E S23 BT
a fir, 16 ins. in diam., brs. S.83°W., 17nlks.
dist., mkd. T34N R3E S22 BT
a fir, 6 ins. in diam., brs. N.44°W., 42 lks.
dist., mkd. T34N R3E S15 BT

Land, rolling and level.
Soil, rocky 3rd. rate.
Timber, fir, aspen, yellow pine and spruce.
Undergrowth, juniper brush.

East, on true line, bet. secs. 14 and 23, on Park Bdy.
Over rolling land, thru heavy timber and scattering undergrowth.

Asc. gradual NW slope.

15.00 Over nearly level bench, brs. N-S.

39.80 Leave top; desc. gradual E. slope to

40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for the $\frac{1}{4}$ sec. cor. of secs. 14 and 23, with brass cap mkd.

$\frac{1}{4}$ S 14
S 23

. 1927 from which,
an aspen, 8 ins. in diam., brs. N.83 $\frac{1}{4}$ °E., 20 lks.
dist., mkd. $\frac{1}{4}$ S14 BT
an aspen, 6 ins. in diam., brs. S.18 $\frac{1}{2}$ °W., 33 lks.
dist., mkd. $\frac{1}{4}$ S23 BT

Desc. gradual E. slope.

40.95 Blazed trail, Thompson Canyon to South Canyon, brs. NE-SW.

41.50 Draw, near head, course S. Asc. slight W. slope to

44.40 Divide between South and Thompson Canyons, brs. NW-SE.
Mark this point as follows:

an aspen, 8 ins. in diam., is coincident with this point, cut off this tree 4 ft. above ground and mark FOREST on NE face and PARK on SW face. Leave Park Bdy.

45.00 Leave divide, desc. 482 ft. over steep NE. slope.

60.50 Wash, 10 lks. wide, course S.70°E.

Asc. slight SW slope.

62.00 Desc. 224 ft. over SE slope.

70.60 Bend in blazed trail, from NW to NE., brs. N.50 lks. dist.

75.26 Draw, course NE. Asc. 50 ft. over NW slope to

80.00 Set an iron post 3 ft. long, 2 ins. in diam., 12 ins. in the ground for the cor. of secs. 13, 14, 23 and 24, with brass cap mkd.

Survey of Part of the Subdivision Lines
of

T.34 N. R.3 E.

Chains

T34N	R3E
S14	S13
<hr/>	
S23	S24

1927

from which,

- a fir, 10 ins. in diam., brs. N.6°E., 27 lks.
dist., mkd. T34N R3E S13 BT
- a fir, 16 ins. in diam., brs. S.66°E., 20 lks.
dist., mkd. T34N R3E S24 BT
- a fir, 12 ins. in diam., brs. S.24°W., 6 lks.
dist., mkd. T34N R3E S23 BT
- a fir, 8 ins. in diam., brs. N.38°W., 9 lks.
dist., mkd. T34N R3E S14 BT

Land, rolling and level.
Soil, rocky 4th. rate.
Timber, fir, aspen, yellow pine and spruce.
Undergrowth, juniper brush.

The continued satisfactory adjustment of the instrument is indicated by test referred to in book "D" of this group.
To insure accuracy of measurement all lines of the foregoing notes were re-chained.

GENERAL DESCRIPTION.

Land: rolling, mountainous in character and lie on the top of Buckskin Mountain, with an elevation of between 8500 and 9000 ft. above sea level.
Soil; rocky 3rd and 4th. rate, about 2 ft. down to bed-rock.
Timber; fine growth of fir, spruce, yellow pine and aspen.
Undergrowth; juniper brush and young timber.
Settlement; none.
Water; one pond of stock water near line in sec. 18.
Roads; Highway to North Rim and to Fredonia, crosses line bet. secs. 18 and 19.
Mineral; no evidence was noted.
All lands are within the Kaibab Natl. Forest to the N. and Grand Canyon National Park to the S. (as far E. as divide in secs. 14-23).

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BOOK 3863

CERTIFICATE OF UNITED STATES SURVEYOR.

I, Benjamin J. Kinsey, U. S. Surveyor, hereby certify upon honor that, in pursuance of special instructions received from the District Cadastral Engineer, for Group 146, 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 SUBDIVISION Lines of

Township 34 North, Range 3 East of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed by 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 146, 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: April 18, 1928.

Benjamin J. Kinsey
U.S. Surveyor.

APPROVAL.

OFFICE OF THE U.S. SUPERVISOR OF SURVEYS,

Denver, Colo., November 8, 1929

The foregoing field notes of the survey of

Part of the SUBDIVISION Lines (Grand Canyon National Park Bdy.)

of

Township 34 North, Range 3 East

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

executed by Benjamin J. Kinsey, U.S. Surveyor

under his special instructions dated May 11, 1927 for Group 146, 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.