

Original.

4-679

Book C

BOOK 4017

FIELD NOTES

OF THE SURVEY OF THE

East and West boundaries of Township 37 North, Range 3 West,

the East, West and South boundaries of Township 38 North,

Range 3 West, and resurvey of a portion of the North boundary

of Township 38 North, Range 3 West,

Of the Gila and Salt River Meridian,

In the State of Arizona

EXECUTED BY

Walter H. Good, U. S. Surveyor

and

Benjamin J. Kinsey, U. S. Surveyor

In the capacity of U. S. Surveyor 3, under Special Instructions dated October 15,
19 32, issued by the District Cadastral Engineer to govern surveys included in Group
No. 180, which were approved by the Commissioner of the General Land
Office, June 17, 19 33, and Assignment Instructions dated March 7, 19 33
and May 18, 1933.

Survey commenced April 24, 19 33

Survey completed June 14, 19 33

4017

4017

INDEX DIAGRAM.

Township _____, *Range* _____

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Chains

Land, rolling.
Soil, rocky, 4th. rate.
Undergrowth, buck brush, sage and cacti.

N.0°08'E., on a true line bet. secs. 19 and 24.

Over nearly level land, through scattering undergrowth.

Desc. slightly over general N. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the ground to bed rock, with a limestone, 12 x 12 x 10 ins. marked X, deposited at the base and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. with brass cap marked

$\frac{1}{4}$

S 24 | S 19

1933

Continue descent over gradual N. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground for cor. of secs. 13, 18, 19 and 24, with brass cap marked

T38N
R4W R3W
S 13 | S 18
S 24 | S 19
1933

raise a mound of stone, 3 ft. base, 2 $\frac{1}{2}$ ft. high W. of cor.

Land, rolling.
Soil, rocky, 4th. rate.
Undergrowth, desert holly, buck brush, sage, and cacti.

N.0°08'E., on a true line bet. secs. 13 and 18.

Over nearly level land, through scattering undergrowth.

Desc. gradually over general N. slope.

37.50 Road, bears SE. and NW.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bed rock, with a limestone, 14 x 10 x 4 ins. deposited at the base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. with brass cap marked

$\frac{1}{4}$

S 13 | S 18

1933

Over nearly level land.

41.00 Draw, 10 lks. wide, course NW.

53.00 Same draw, course NE.

W.BDY OF T. 38 N., R. 3 W.

BOOK 4017

Chains Raise a mound of stone, 3 ft. base, 2½ ft. high W. of cor.

41.70 Shallow drain, 3 lks. wide, course NW.

68.40 Draw, 5 lks. wide, course W. Asc. gentle S. slope.

77.00 Low spur, slopes W.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 18 ins. in the ground to bed rock, with a sanstone 18 x 6 x 4 ins. marked X, deposited at the base, and in a mound of stone to top, for cor. of secs. 25, 30, 31 and 36, with brass cap marked

T38N	
R4W	R3W
S 25	S 30
S 36	S 31
1933	

Land, rolling.
Soil, rocky, 4th. rate.
Undergrowth, sagebrush and cacti.

N.0°08'E., on a true line bet. secs. 25 and 30.

Over rolling land, through scattering undergrowth. Desc. slight N. slope.

5.50 Draw, 10 lks. wide, course W. Asc. gentle S. slope.

31.60 Road on top of low divide, bears E. and W. Desc. gradual N. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bed rock, with a limestone 8 x 6 x 4 ins. marked X, deposited at the base, and in a mound of stone to top, for ¼ sec. cor. with brass cap marked

¼	
S 25	S 30
1933	

Continue gradual descent over N. slope.

54.30 Head of draw, 3 lks. wide, course NE.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground for cor. of secs. 19, 24, 25 and 30, with brass cap marked

T38N	
R4W	R3W
S 24	S 19
S 25	S 30
1933	

raise a mound of stone,

3 ft. base, 2½ ft. high W. of cor.

Chains N.89°54'W. bet. secs. 6 and 31.
 Over nearly level land, through scattering undergrowth.
 Desc. gentle W. slope.

1.00 Brooksley Reservoir, bears N. 4.00 chs. dist.
 Asc. over gradual E. slope.

1.66 Road, bears N. and S.

9.66 Drain, 3 lks. wide, course NE.

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

S 31
 $\frac{1}{4}$ ----
 S 6
 1933

3 ft. base, $2\frac{1}{2}$ ft. high N. of cor. raise a mound of stone

49.50 Top of ascent of E. slope. Desc. gentle W. slope.

79.42 The cor. of Ts. 37 and 38 N., Rs. 3 and 4 W.
 Land, rolling.
 Soil, rocky, 4th. rate.
 Timber, none.
 Undergrowth, sagebrush and cacti.

WEST. BDY. OF T. 38 N., R. 3 W.

From the cor. of Ts. 37 and 38 N., Rs. 3 and 4 W.,
 North, on a random line bet. Rs. 3 and 4 W., setting
 temp. $\frac{1}{4}$ sec. and sec. cors. at intervals of 40.00 and
 80.00 chs. until at

481.99 Intersect E. and W. line 110 lks. W. of the cor. of Tps.
 38 and 39 N., Rs. 3 and 4 W.
 I return to the cor. of Ts. 37 and 38 N., Rs. 3 and 4 W.
 Thence
 N.0°08'E., on a true line bet. secs. 31 and 36.
 Over nearly level land, through scattering undergrowth.

21.00 Drain, 3 lks. wide, course W.

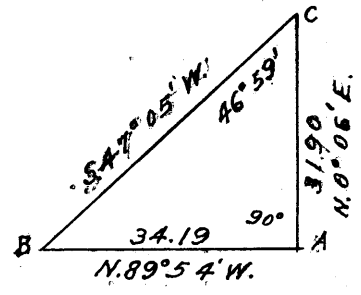
32.00 Low spur, slopes W. Desc. gentle NW. slope.

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

$\frac{1}{4}$
 S 36 | S 31
 1933

Chains

As this line ascends over impassable cliffs, forming the west wall of Kanab Canyon, I determine the distance by triangulation. I designate the initial point for cor. A, and set flag B on line on top of ledge. Measure a base N.0°06'E., 31.90 chs. to point C, from which flag B bears S.47°05'W. All angles as shown in diagram were measured by deflection. The vertical angle from A to B is + 32½°.



Distance by triangulation
= 34.19 chs.

Topography approximate.

- 3.00 Vertical bank of Kanab Wash, 35 ft. high, bears N. and S.
- 25.00 Foot of White ledge, with vertical face, 300 ft. high bears N. and S.
- 27.00 Top of White Ledge; asc. about 100 ft. to
- 32.00 Foot of Castle Ledge, with vertical face, 200 ft. high bears N. and S.
- 34.00 Top of Castle Ledge and W. rim of Kanab Canyon, bears N. and S.
- 34.19 Triangulation point B. Thence by direct measurement.
- Asc. over E. slope.
- 35.00 Top of ascent. Desc. slight W. slope over rolling land.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., over a cross (+) on bed rock, and in a mound of stone to top for ¼ sec. cor. with brass cap marked

S 32
 ¼ ----
 S 5
 1933

Desc. 55 ft. over gentle W. slope.

- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground for cor. of secs. 5, 6, 31 and 32, with brass cap marked

T38N R3W
 S 31 | S 32
 S 6 | S 5
 T37N
 1933

raise a mound of stone
3 ft. base, 2½ ft. high W. of cor.

Land, mountainous and rolling.
Soil, rocky, 4th. rate.
Timber, none.
Undergrowth, sagebrush and cacti,

Chains N.89°54'W., on a true line bet. secs. 4 and 33.
 Over rough mountainous land. Desc. 420 ft. over broken W. slope.

.80 House of E.C.Hatch, bears N.55°30'W.

16.05 Pipe line, bears SE. and NW.

18.20 Wash, 20 lks. wide, course NW.

23.30 Low spur, slopes NW. Desc. 30 ft. to

24.90 Wash, 20 lks. wide, course NW. Continue descent 70 ft.

33.60 Foot of descent.

39.00 Sandstone spur, slopes NW. Desc. slight SW. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 3 ins. in the ground to bed rock, with a stone marked X, deposited at the base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. with brass cap marked

$\frac{1}{4}$ S 33

 S 4
 1933

House of E.C.Hatch, bears N.26°30'E.

43.65 Wire fence, bears NE. and SW.

47.70 Gulch, 2 chs. wide, in bottom of Shinumo Canyon, course SW., about 10 chs. to junction with Kanab wash.

Thence over nearly level cultivated land.

78.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground for witness cor. of secs. 4, 5, 32 and 33, with brass cap marked

T38N R3W
 S 32 | S 33
 WC -----
 S 5 | S 4
 T37N
 1933

raise a mound of

stone, 3 ft. base, 2 ft. high W. of cor.

78.30 E. bank of Kanab Wash, 25 ft. high, bears N. and S.

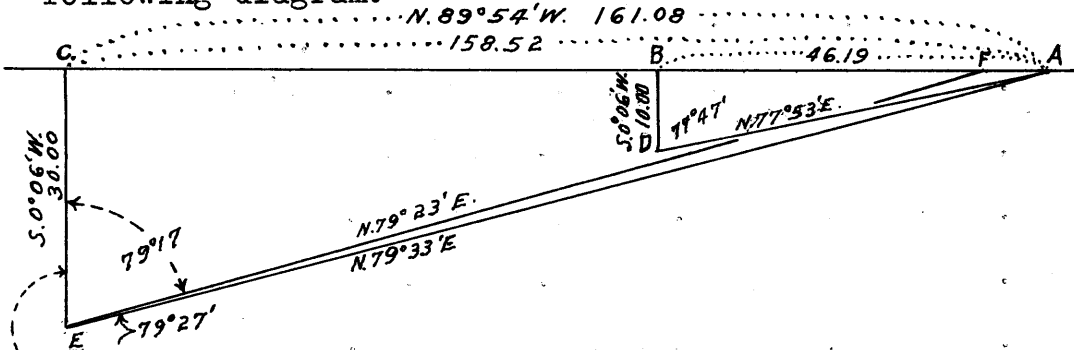
80.00 True point for cor. of secs. 4, 5, 32 and 33, falls in Kanab Wash.

Land, E. half, mountainous; W. half, level.
 Soil, E. half, rocky, 4th. rate; balance, sandy loam.
 Timber, none.
 Undergrowth, sagebrush, greasebrush and cacti,

From true point for cor.,
 N.89°54'W., on a true line bet. secs. 5 and 32.
 Over mountainous land.

Chains

Flag F is set on line just below Castle Ledge. The angles all measured by deflection are shown in the following diagram.



The distances by triangulation are

- A to B = 46.19 chs.
- A to C = 161.08 chs.
- F to C = 158.52 chs.

By computation dist. A to F = 2.56 chs.

$$\begin{array}{r} 33.80 \\ \hline 36.36 \end{array}$$

Topography approximately as follows:

Desc. over nearly vertical cliffs, about 250 ft.

- 35.50 Foot of Castle Ledge, bears N. and S.
- 36.36 Set an iron post, 3 ft. long, 1 in. diam., 14 ins. in the ground to bed rock, with a limestone 6 x 6 x 6 ins. marked X, deposited at the base, and in a mound of stone to top, for witness $\frac{1}{4}$ sec. cor. with brass cap marked

WC $\frac{1}{4}$	S 34

	S 3
	1933
- 38.50 Top of White Ledge, 300 ft. high, bears N. and S.
- 40.00 True point for $\frac{1}{4}$ sec. cor. falls on cliff and is inaccessible.
- 48.00 Gulch, course SW. Along broken S. slope.
- 79.99 Triangulation point B.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 8 ins. in the ground to bed rock, supported in a mound of stone to top, for cor. of secs. 3, 4, 33 and 34, with brass cap marked

T38N	R3W
S 33	S 34
S 4	S 3
T37N	
1933	

Mark cross (+) B O on ledge 2 lks. N. of cor.

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

N. BDY. OF T. 37 N., R. 3 W.

Chains Land, rolling and mountainous.
 Soil, rocky, 4th. rate.
 Timber, juniper and pinyon.
 Undergrowth, sage brush and cacti.

N.89°54'W., on a true line bet. secs. 2 and 35.

Over rolling land, through scattering timber and undergrowth. Asc. slight NE. slope.

12.30 Over nearly level land.

22.30 Desc. gentle NW. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 4 ins. in the ground to bed rock, with a limestone 10 x 8 x 5 ins. marked X, deposited at the base, and in a mound of stone 4 ft. base to top of post, for 1/4 sec. cor. with brass cap marked

	S	35
1/4	----	
	S	2
		1933

Over nearly level land, draining NW.

42.20 Drain, 3 lks. wide, course NW.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 16 ins. in the ground to bed rock, with a limestone 10 x 8 x 6 ins. marked X, deposited at the base, and in a mound of stone 4 ft. base to top of post, for cor. of secs. 2, 3, 34 and 35, with brass cap marked

T38N R3W	
S 34	S 35

S 3	S 2
T37N	
1933	

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

N.89°54'W., on a true line bet. secs. 3 and 34.

Over slightly rolling land, through scattering timber and undergrowth. Desc. gradual NW. slope.

21.60 E. rim of Kanab Canyon, bears N. and S. Desc. 150 ft. over W. slope to

33.80 Top of Castle Ledge, with nearly vertical face 80 ft. high, bears N. and S.

In order to determine the distance over cliffs by triangulation, I designate this point A, and set flag B on line below cliffs and flag C on line on W. rim of canyon. Also set point D, S.0°06'W., 10.00 dist. from B, and set point E, S.0°06'W., 30.00 chs. from C.

N. BDY. OF T. 37 N., R. 3 W.

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Chains From the cor. of Ts. 37 and 38 N., Rs. 2 and 3 W.,
 West, on a random line on N. bdy. of T. 37 N., R. 3 W.,
 setting temp. $\frac{1}{4}$ sec. and sec. cors. at intervals of
 40.00 and 80.00 chs. until at

193.80 A flag set 124.54 chs. E. of the cor. of Ts. 37 and 38 N.
 Rs. 3 and 4 W., bears N.89°42'W. about 2 miles dist.
 I return to the cor. of Ts. 37 and 38 N., Rs. 2 and 3 W.
 Thence
 N.89°54'W., on a true line bet. secs. 1 and 36.
 Over rolling mountainous land, through scattering timber
 and undergrowth. Asc. slight NE. slope.

10.50 Spur, slopes NW. Desc. 170 ft. over SW. slope.

24.40 Wash, 10 lks. wide, course NW. Asc. 144 ft. over NE.
 slope.

39.50 Spur, slopes N. Desc. NW. slope.

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

S 36
 $\frac{1}{4}$ ----
 S 1
 1933

from which,

A pinyon, 6 ins. diam., bears N.32°E., 29 lks. dist:
 marked $\frac{1}{4}$ S 36 B T

A pinyon, 14 ins. diam., bears S.78 $\frac{1}{4}$ °W., 69 lks. dist.
 marked $\frac{1}{4}$ S 1 B T

Raise a mound of stone, 3 ft. base, 2 $\frac{1}{2}$ ft. high N. of
 cor.

Continue descent over NW. slope.

42.88 Head of drain, course NW. Asc. NE. slope.

47.00 Over top of spur.

61.00 Leave spur and desc. 76 ft. over gradual SW. slope.

74.52 Wash, 5 lks. wide, course NW. Asc. over NE. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in
 the ground for cor. of secs. 1, 2, 35, and 36, with
 brass cap marked

T38N R3W
 S 35 | S 36
 S 2 | S 1
 T37N
 1933

from which,

A pinyon, 10 ins. diam., bears S.23°E., 236 lks. dist.
 marked T 37 N R 3 W S 1 B T

A pinyon, 14 ins. diam., bears S.49°W., 91 lks. dist.
 marked T 37 N R 3 W S 2 B T

Raise a mound of stone, 3 ft. base, 2 $\frac{1}{2}$ ft. high W. of
 cor.

E. BDY. OF T. 37 N., R. 3 W.

Chains

A juniper, 8 ins. diam., bears S. $35\frac{1}{2}^{\circ}$ E., 131 lks. dist., marked T 37 N R 2 W S 7 B T

A juniper, 12 ins. diam., bears S. $16\frac{1}{2}^{\circ}$ W., 140 lks. dist. marked T 37 N R 3 W S 12 B T

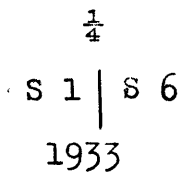
A juniper, 12 ins. diam., bears N. $39\frac{3}{4}^{\circ}$ W., 89 lks. dist. marked T 37 N R 3 W S 1 B T

Land, rolling.
Soil, rocky, 4th. rate.
Timber, juniper and pinyon.
Undergrowth, sagebrush, cacti and buck brush.

North, bet. secs. 1 and 6.

Over rolling land, through scattering timber and undergrowth.

- .83 Draw, 5 lks. wide, course W. Asc. 68 ft. over S. slope.
- 8.50 Spur, slopes W. Desc. 90 ft. over NW. slope.
- 20.80 Wash, 30 lks. wide, course SW. Asc. 180 ft. over SE. slope.
- 34.00 Top of ascent. Over rolling land.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground for $\frac{1}{4}$ sec. cor. with brass cap marked

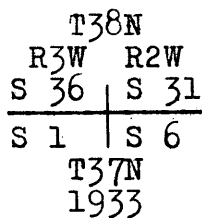


from which
A juniper, 8 ins. diam., bears N. $71\frac{1}{2}^{\circ}$ E., 27 lks. dist. marked $\frac{1}{4}$ S 6 B T

A pinyon, 10 ins. diam., bears S. $44\frac{1}{4}^{\circ}$ W., 58 lks. dist. marked $\frac{1}{4}$ S 1 B T

Raise a mound of stone, 3 ft. base, $2\frac{1}{2}$ ft. high W. of cor.

- 40.30 Head of wash, course W.
- 49.90 Road, bears NE. and SW.
- 52.50 Head of drain, 3 lks. wide, course NW.
- 72.50 Desc. gentle NE. slope.
- 80.00 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of Tps. 37 and 38 N., Rs. 2 and 3 W. with brass cap marked



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

Land, rolling. Soil, rocky, 4th. rate.
Timber, juniper and pinyon. Undergrowth, sage & buck brush.

W. BDY. OF T. 37 N., R. 3 W.

Chains. A juniper, 6 ins. diam., bears S. $32\frac{1}{4}^{\circ}$ W., 48 lks. dist. marked B T

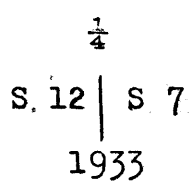
A juniper, 14 ins. diam., bears N. 52° W., 110 lks. dist. marked T 37 N R 3 W S 12 B T

Land, rolling,
Soil, rocky, 4th. rate.
Timber, juniper and pinyon.
Undergrowth, purple sage and cliff rose.

North, bet. secs. 7 and 12.

Over rolling land, through scattering timber and undergrowth. Desc. 36 ft. over NW. slope to

- 4.47 Draw, 5 lks. wide, course SW. Asc. 45 ft. over SE. slope.
- 12.50 Top of ascent. Over nearly level land.
- 35.00 Desc. 75 ft. over NW. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground for $\frac{1}{4}$ sec. cor. with brass cap marked



from which,

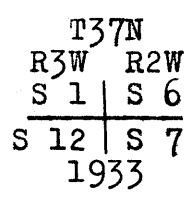
A juniper, 8 ins. diam., bears N. $59\frac{3}{4}^{\circ}$ E., 118 lks. dist. marked $\frac{1}{4}$ S 7 B T

A juniper, 10 ins. diam., bears S. 85° W., 84 lks. dist. marked $\frac{1}{4}$ S 12 B T

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

Desc. 80 ft. over broken NW. slope.

- 44.64 Wash, 10 lks. wide, course NW. Asc. 30 ft. over SW. slope.
- 46.40 Small spur, slopes W. Desc. 50 ft. over N. slope.
- 53.00 Wash, course W. Asc. 60 ft. over S. slope.
- 56.50 Spur, slopes W. Desc. 50 ft. over NW. slope.
- 60.75 Wash, 15 lks. wide, course SW. Asc. 210 ft. over SE. slope.
- 73.00 Spur, slopes W. Desc. 86 ft. over N. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 27 ins. in the ground for cor. of secs. 1, 6, 7 and 12, with brass cap marked



from which

A juniper, 14 ins. diam., bears N. 57° E., 102 lks. dist. marked T 37 N R 2 W S 6 B T

E. BDY. OF T. 37 N., R. 3 W.

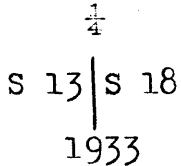
- Chains.
- A juniper, 18 ins. diam., bears S. 66° E., 112 lks. dist., marked T 37 N R 2 W S 19 B T
 - A juniper, 10 ins. diam., bears S. 75 1/4° W., 70 lks. dist., marked T 37 N R 3 W S 24 B T
 - A juniper, 10 ins. diam., bears N. 47 1/2° W., 194 lks. dist., marked T 37 N R 3 W S 13 B T

Land. rolling.
Soil. rocky. 4th. rate.
Timber. juniper and pinyon.
Undergrowth, sage brush and desert holly.

North. bet. secs. 13 and 18.

Over rolling land, through scattering timber and undergrowth. Asc. slightly.

- 2.30 Spur. slopes W. Desc. 110 ft. over NW. slope.
- 18.10 Draw, 10 lks. wide. course NW. Over level land.
- 23.80 Draw. 10 lks. wide, course SW. Asc. 84 ft. over SE. slope.
- 34.00 Spur. slopes W. Desc. NE. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground for 1/4 sec. cor. with brass cap marked



from which

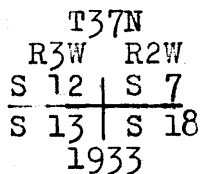
A juniper, 12 ins. diam., bears N. 52 3/4° E., 117 lks. dist., marked 1/4 S 18 B T

A juniper, 12 ins. diam., bears N. 17 1/2° W., 67 lks. dist., marked 1/4 S 13 B T

Raise a mound of stone, 3 ft. base, 2 1/2 ft. high W. of cor.

Desc. 70 ft. over NE. slope.

- 46.20 Draw. 10 lks. wide, course NW. Asc. 75 ft. over SW. slope.
- 60.60 Spur. slopes W. Desc. 113 ft. over NW. slope.
- 73.37 Wash, 10 lks. wide, course SW. Asc. 44 ft. over SE. slope.
- 79.00 Spur. slopes SW. Desc. NW. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 12 ins. in the ground to bed rock, with a lava stone 12 x 6 x 6 ins. marked X. deposited at the base, and in a mound of stone to top for cor. of secs. 7, 12, 13 and 18. with brass cap marked



from which

E. BDY. OF T. 37 N., R. 3 W.

Chains

A juniper, 16 ins. diam., bears S. $89\frac{1}{2}^{\circ}$ E., 53 lks. dist. marked T 37 N R 2 W S 30 B T

A juniper, 18 ins. diam., bears N. $38\frac{3}{4}^{\circ}$ W., 115 lks. dist. marked T 37 N R 3 W S 24 B T

Land, mountainous and rolling.
Soil, rocky, 4th. rate.
Timber, juniper and pinyon.
Undergrowth, cacti and buck brush.

North, bet. secs. 19 and 24.

Over rolling land, through scattering timber and undergrowth. Desc. slight NW. slope.

- 5.87 Draw, 5 lks. wide, course W. Asc. S. slope.
- 12.80 Spur, slopes W. Desc. 60 ft. to
- 26.80 Wash, 10 lks. wide, course SW. Asc. 40 ft. over SE. slope.
- 33.60 Fence, bears NW. and SE.
- 38.00 Spur, slopes W. Desc. gentle N. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground for $\frac{1}{4}$ sec. cor. with brass cap marked

$\frac{1}{4}$
S 24 | S 19
1933

A juniper, 18 ins. diam., bears N. $68\frac{1}{2}^{\circ}$ E., 73 lks. dist. marked $\frac{1}{4}$ S 19 B T. from which

A juniper, 18 ins. diam., bears N. $87\frac{1}{2}^{\circ}$ W., 137 lks. dist. marked $\frac{1}{4}$ S 24 B T.

- 41.50 Draw, 3 lks. wide, course W. Asc. gentle SW. slope.
- 54.00 Along W. slope.
- 61.40 Desc. NW. slope.
- 66.36 Draw, 4 lks. wide, course SW. Asc. SE. slope.
- 74.00 Asc. slight SW. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 14 ins. in the ground to bed rock, with a limestone 8 x 8 x 4 ins. deposited at the base, and in a mound of stone to top for cor. of secs. 13, 18, 19 and 24, with brass cap marked

T37N
R3W R2W
S 13 | S 18

S 24 | S 19
1933

A juniper, 18 ins. diam., bears N. $68\frac{1}{2}^{\circ}$ E., 150 lks. dist. marked T 37 N R 2 W S 18 B T from which

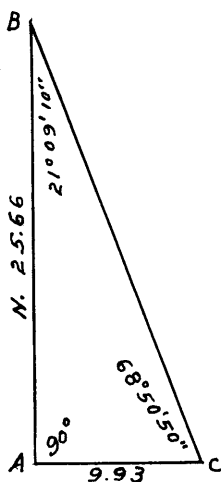
Chains

All angles by 3 repetitions, balanced to 180° as follows:

- At point A = 90°00'00".
- At point B = 21°09'10".
- At point C = 68°50'50".

Distance A to B, by triangulation
 = 25.66 chs.
 18.72

 6.94



6.94 Triangulation point, on N. rim of Jumpup Canyon.

Asc. 490 ft. over SE. slope.

32.10 Top of Jumpup point. Jumpup trail, on spur ridge, bears NE. and SW. Desc. over gradual NW. slope.

38.00 Small spur, slopes NW. Desc. NE. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 20 ins. in the ground to bed rock, with a limestone, 14 x 8 x 6 ins. marked X, deposited at the base, and in a mound of stone to top, for 1/4 sec. cor. with brass cap marked

1/4

S 25 | S 30

1933

from which

A juniper, 16 ins. diam., bears N.40°E., 36 lks. dist. marked 1/4 S 30 B T

A juniper, 4 ins. diam., bears N.30 3/4°W., 66 lks. dist. marked B T

Thence over rolling land, through scattering timber. Desc. 60 ft. over NE. slope.

49.15 Draw, 3 lks. wide, course NW. Asc. SW. slope.

55.00 Low spur, slopes W. Desc, N. slope.

58.94 Draw, 3 lks. wide, course NW. Asc. SW. slope.

62.60 Small spur, slopes W. Desc. NE. slope.

71.90 Draw, 4 lks. wide, course NW. Thence along W. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, with a limestone 6 x 6 x 4 ins. deposited at the base, for cor. of secs. 19, 24, 25 and 30, with brass cap marked

T37N
 R3W R2W
 S 24 | S 19

 S 25 | S 30
 1933

from which

A juniper, 8 ins. diam., bears N.23 1/2°E., 162 lks. dist. marked T 37 N R 2 W S 19 B T

E. BDY. OF T. 37 N., R. 3 W.

BOOK 4017

Chains The standard cor. of Ts. 37 N., Rs. 2 and 3 W., is an iron post, 3 ins. diam., 12 ins. above ground, marked and witnessed as described in the official record.

Thence

North. bet. secs. 31 and 36.

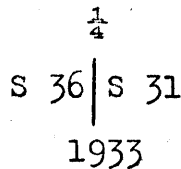
Over mountainous land, through scattering undergrowth. Along top of spur ridge, bearing N. and S.

10.00 Leave ridge. bearing NE. Desc, 55 ft. over broken NW. slope to

21.00 Desc. 435 ft. over steep NW. slope.

34.40 Wash, 3 lks. wide, course NW. Asc. 30 ft. over SW. slope.

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



raise a mound of stone, 3 ft. base, $2\frac{1}{2}$ ft. high W. of cor.

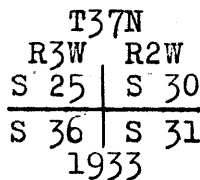
Asc. 23 ft. over SW. slope.

45.00 Top of small spur. Desc. 170 ft. over NW. slope.

62.60 Top of a series of ledges, 75 ft. high, bears NE. and SW. Desc. 515 ft. over same.

74.72 Wash, 30 lks. wide, in bottom of Jumpup Canyon, course SW. Asc. 115 ft. over SE. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 16 ins. in the ground to bed rock, with a sandstone 10 x 10 x 4 ins. marked X, deposited at the base, and in a mound of stone to top, for cor. of secs. 25, 30, 31 and 36, with brass cap marked



Land, mountainous.
Soil, rocky, 4th. rate.
Undergrowth, sage brush and cacti,

North, bet. secs. 25 and 30.

Over mountainous land, through scattering undergrowth.

3.00 Foot of impassable ledge, 150 ft. high, bears NE. and SW.

In order to determine the distance to top of ledge, I return to the 61.28 ch. point bet. secs. 31 and 36, which I designate point A, and set flag B on line on N. rim of canyon. Point C is taken easterly from A, a distance of 9.93 chs.

Chains Asc. over gradual SE. slope.
 66.00 Road. bears E. and W.
 67.80 Over nearly level land.
 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 20 ins. in the ground to bed rock, with a limestone, 14 x 12 x 2 ins. marked X, deposited at the base, and in a mound of stone to top, for cor. of secs. 1, 6, 7, and 12. with brass cap marked

T37N	
R4W	R3W
S 1	S 6
S 12	S 7
1933	

Land, mountainous and rolling.
 Soil, rocky, 4th. rate.
 Undergrowth, sage brush and cacti.

North, bet. secs. 1 and 6.

Over nearly level land, draining W., through scattering undergrowth.

9.00 Drain, course W.
 40.00 Set an iron post, 3 ft. long, 1 in. diam., over a cross (X) marked on solid bed rock, and supported in a mound of stone to top, for $\frac{1}{4}$ sec. cor. with brass cap marked

$\frac{1}{4}$	
S 1	S 6
1933	

Continue over nearly level land.

51.00 Drain, course W.
 75.00 Drain, 3 lks. wide. course W.
 80.00 Set an iron post, 3 ft. long, 3 ins. diam., 26 ins. in the ground for cor. of Ts. 37 and 38 N., Rs. 3 and 4 W., with brass cap marked

T38N	
R4W	R3W
S 36	S 31
S 1	S 6
T37N	
1933	

raise a mound of stone,
 $3\frac{1}{2}$ ft. base, $2\frac{1}{2}$ ft. high S. of cor.

Land, nearly level.
 Soil, rocky, 4th. rate.
 Undergrowth, sage brush and cacti.
 No timber.

Chains Desc. 405 ft. over broken and rocky NW. slope.
80.00 Set an iron post, 3 ft. long, 2 ins. diam., 10 ins. in the ground to bed rock, with a limestone 18 x 12 x 12 ins. marked with a cross (X), at the base and in a mound of stone to top, for cor. of secs. 7, 12, 13 and 18, with brass cap marked

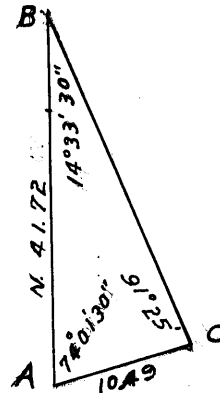
T37N	
R4W	R3W
S 12	S 7
S 13	S 18
1933	

Land, mountainous.
Soil, rocky, 4th. rate.
Undergrowth, sage brush and cacti.

North, bet. secs. 7 and 12.

Over mountainous land, through scattering undergrowth.

In order to determine the distance over impassable bluffs by triangulation, I return to the 65.53 ch. point bet. secs. 13 and 18, which I designate point A, and set flag B on line on top of ledge. Point C is taken N.74° 01'30"E., 10.49 chs. dist. from point A.



All angles by 3 repetitions, balanced to 180° as follows:

At point A = 74°01'30"
At point B = 14°33'30"
At point C = 91°25'00"

Distance A to B by triangulation = 41.72 chs.
14.47
27.25

Approximate topography.

18.00 Wash, in bottom of canyon, course SW. Asc. SE. slope.

24.00 Top of ledge, 300 ft. high, bears NE. and SW.

27.25 Point C of triangulation on rim of canyon. Thence asc. gradual SE. slope over rolling land.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 4 ins. in the ground to bed rock, with a limestone 8 x 6 x 4 ins. marked X, deposited at the base, and in a mound of stone to top, for ¼ sec. cor. with brass cap marked

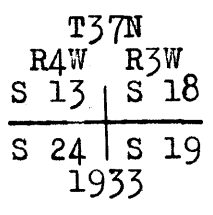
¼	
S 12	S 7
1933	

44.50 Drain, 3 lks. wide. course SW.

Chains Raise a mound of stone, 3 ft. base, 2 $\frac{1}{2}$ ft. high W. of Cor.

Asc. 456 ft. over broken and rocky SW. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., on bed rock, with a limestone, 18 x 10 x 6 ins. marked X, deposited at the base, and in a mound of stone to top, for cor. of secs. 13. 18. 19 and 24. with brass cap marked



Land, mountainous.
Soil, rocky, 4th. rate.
Undergrowth, sage and buck brush.

North, bet. secs. 13 and 18.

Over mountainous land, through scattering undergrowth.

5.00 Foot of impassable ledge, bears SE. and NW.

To determine the distance by triangulation, I return to the $\frac{1}{4}$ sec. cor. of secs. 19 and 24, which I designate point A, and set flag B on line on N. rim of Gramma Canyon. Point C is taken northwesterly from A, a distance of 17.10 chs.

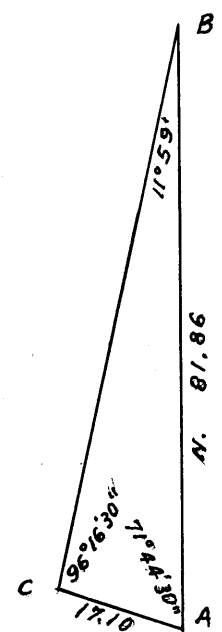
All angles by 3 repetitions, balanced to 180° as follows:

- At point A = 71°44'30"
- At point B = 11°59'00"
- At point C = 96°16'30"

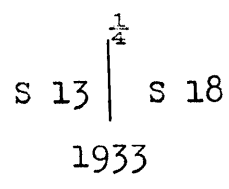
Distance A to B = 81.86 chs.
40.00

Return measure	41.86
	1.86

	40.00



40.00 Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bed rock, with a limestone, 8 x 8 x 6 ins. marked X, deposited at the base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor., with brass cap marked



Asc. 90 ft. over Steep S. slope.

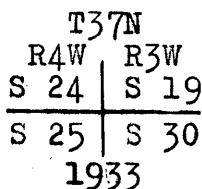
41.86 N. rim of Gramma Canyon, bears SE. and NW. Thence over broken bench.

65.53 Top of ledge, bears NE. and SW. Set flag on rim.

Chains

tablish a witness $\frac{1}{4}$ sec. cor.
 From the point 21.57 chs. E. of true point,
 N.10°30'E., on traverse line in sec. 30.
 .84 chs., Thence
 N.15°00'W.,
 4.39 chs., Thence
 N.20°00'W., Desc. 200 ft. over broken NE. slope.
 24.50 chs. Asc. 100 ft.
 30.75 " Desc. 150,ft.
 37.45 " Asc. 60 ft.
 40.35 " Thence
 West, Desc. 100 ft.
 6.78 chs. To point on true line, thence
 South, Asc. 90 ft.
 2.98 chs., to

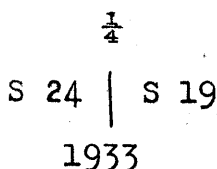
80.00 Set an iron post, 3 ft. long, 2 ins. diam., 18 ins. in the ground to bed rock, with a limestone 12 x 10 x 4 ins. deposited at the base, and in a mound of stone to top, for cor. of secs. 19, 24. 25 and 30, with brass cap marked



Land, mountainous.
 Soil, rocky, 4th. rate.
 Timber, none.
 Undergrowth, sage brush and caeti.

North. bet. secs. 19 and 24.
 Over mountainous land, through scattering undergrowth.
 Desc. 520 ft. over broken NE. slope.

19.90 Gramma spring, bears E. about 8 chs. dist.
 27.00 Foot of steen descent.
 30.15 Wash, 15 lks. wide, course E.
 35.15 Wash in bottom of Gramma Canyon, 2 chs. wide, course SE.
 Asc. 20 ft. over rocky SW. slope.
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground for $\frac{1}{4}$ sec. cor. with brass cap marked



W. BDY. OF T. 37 N., R. 3 W.

Chains	<p>The standard cor. of Ts. 37 N., Rs. 3 and 4 W., is an iron post, 3 ins. diam., properly marked and set in a mound of stone.</p>
	<p>Thence</p>
	<p>North, bet. secs. 31 and 36, the true line passes over broken sandstone ledges, where it is impossible to chain.</p>
	<p>From cor., traverse as follows:</p>
	<p>N. 9°30'E., over mountainous land, through scattering undergrowth. Asc. 590 ft. over SE slope.</p>
	<p>35.00 chs., foot of lime and shale ledge, 300 ft. high, 150 lks. W. bears W. and N.</p>
	<p>37.70 chs. Thence</p>
	<p>N. 10°30'E.,</p>
	<p>.70 chs. Desc. 60 ft. over NE. slope to</p>
	<p>2.86 " A point 6.74 chs. E. of true point for $\frac{1}{4}$ sec. cor.</p>
40.00	<p>The true point for $\frac{1}{4}$ sec. cor. is inaccessible and since it can not be approached within the required distance, no witness cor. was established.</p>
	<p>From 2.86 ch. point on traverse,</p>
	<p>N. 10°30'E., Desc. 300 ft. over broken and rocky NE. slope.</p>
	<p>13.70 chs., gully, 10 lks. wide. course E. Asc. 400 ft. over SE. slope.</p>
	<p>40.68 " A point 14.16 chs. E. of true point for cor.</p>
80.00	<p>The true point for cor. of secs. 25, 30, 31 and 36, is inaccessible and can not be approached within the required distance to establish a witness cor.</p>
	<p>At the point on traverse, 14.16 chs. E. of true point,</p>
	<p>Set a limestone, 28x18x18 ins., 6 ins. in the ground, marked with a cross (X).</p>
	<p>Land. mountainous.</p>
	<p>Soil. rocky, 4th. rate.</p>
	<p>Undergrowth, sagebrush and cacti.</p>
	<p>From true point for cor. of secs. 25, 30, 31 and 36.</p>
	<p>North, bet. secs. 25 and 30, the true line passes over precipitous slopes, where it is impossible to chain.</p>
	<p>From the point 14.16 chs. E. of true cor.,</p>
	<p>N. 10°30'E., on traverse line in sec. 30. Desc. 210 ft. over NE. slope.</p>
	<p>25.00 chs., wash, course E. Asc. 130 ft. over broken SE. slope.</p>
	<p>35.30 " Top of ascent. Desc. 40 ft.</p>
	<p>40.68 " A point 21.57 chs. E. of true point for $\frac{1}{4}$ sec. cor.</p>
40.00	<p>The true point for $\frac{1}{4}$ sec. cor. is inaccessible, and can not be approached within the required distance to es-</p>

Survey commenced April 25, 1933 and executed with Buff light mountain transit No. 14186, Gurley mountain transit No. 20116, and Young and Sons mountain transit No. 8540, all property of the General Land Office. The instruments are equipped with the Smith solar attachments and conform to the standard instrument specifications of the General Land Office. The instruments were in good condition prior to beginning the survey and were approved by the district cadastral engineer on March 7, 1933 and May 18, 1933.

The measurements were made with a Lallie steel tape, 5 chs. in length, graduated every link for the first 100 lks. and thereafter at intervals of 10 lks. The tape was first tested by comparison with a Lallie standard steel tape and found correct. The measurements were made on the slope, the vertical angles were determined by clinometers in good adjustment, the horizontal equivalents being shown in the field notes.

The data furnished with the special instructions gives the latitude at the southeast cor. of T.38 N., R.3 W. as $36^{\circ}38'28''$ N. and the longitude $112^{\circ}34'00''$ W.

As most of the lines to be established are in open country, where long fore and back sights can be obtained, the method of survey by running transit lines was used quite extensively. The azimuth was obtained from day light observation on Polaris and altitude observation on the sun taken at the initial point of survey and at frequent intervals thereafter, while on line.

In order to test the meridional indications of Young and Sons transit No. 8540, I make a series of observations as follows:

May 26, 1933, at camp, near the $\frac{1}{4}$ sec. cor. of T.38 N. R.3 W., G. & S.R.B. & M., Arizona, in latitude $36^{\circ}42\frac{1}{2}'$ N., longitude $112^{\circ}35\frac{1}{2}'$ W. of Greenwich, at 3h 26m a.m., l.m.t. I observe Polaris at eastern elongation, making four observations, two each with the telescope in direct and reversed positions, and mark the mean point in the line thus determined by a nail in a stake driven firmly in the ground 5 chs. N. of my station. Secs. 11 and 14,

I lay off the azimuth of Polaris $1^{\circ}19'$ to the west, and mark a point in the true meridian by a nail in a peg about 7 chs. N.

May 28: at 8h 00m a.m., app.t., at the same station, I set off $36^{\circ}42\frac{1}{2}'$ N. on the latitude arc, $21^{\circ}28'$ N. on the declination arc and determine a meridian with the solar, which falls within $1'$ of the meridian established from observation on Polaris.

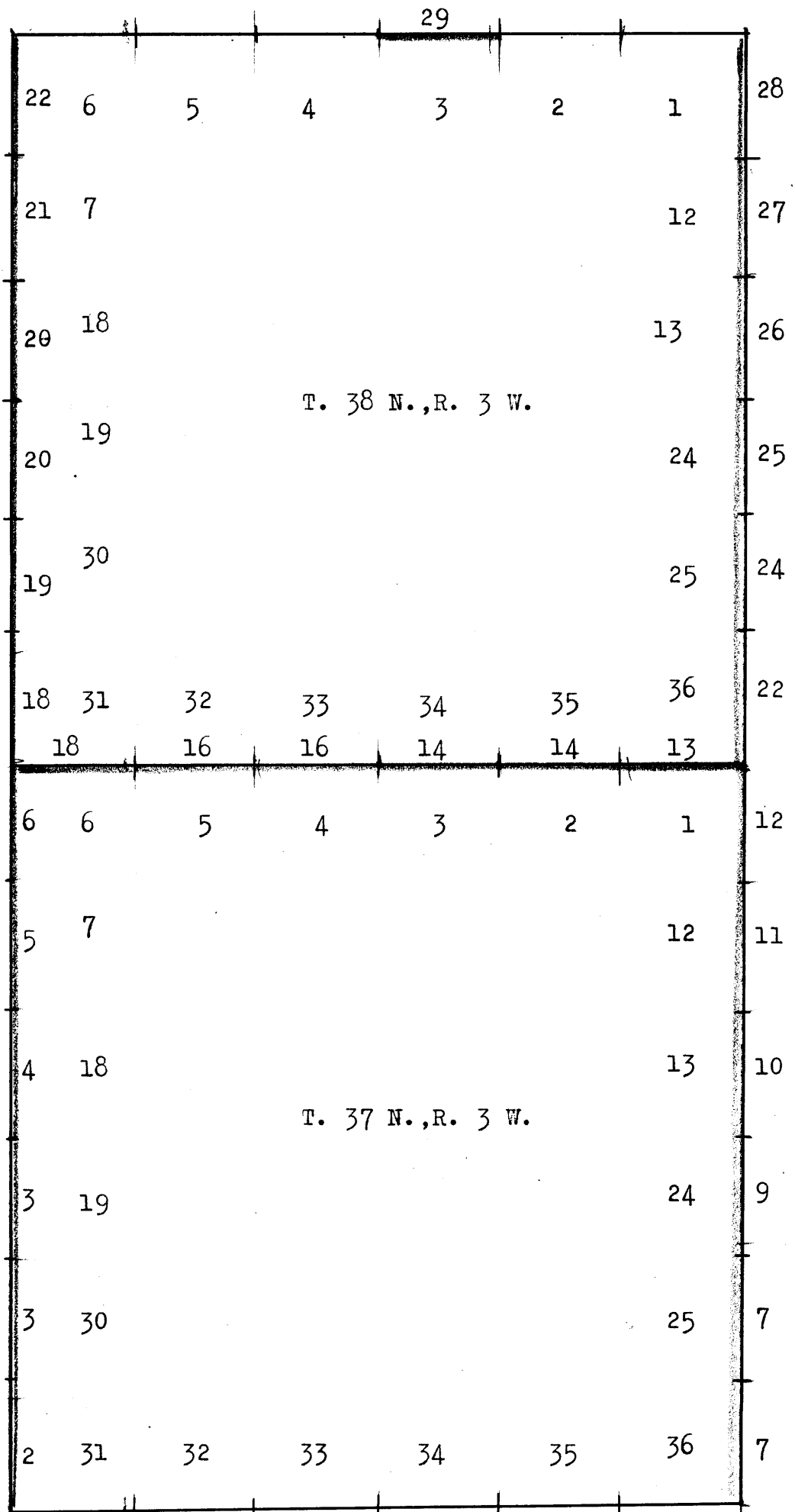
The test is repeated at hourly intervals throughout the usual hours of solar work, with the proper settings on the latitude and declination arcs, and in all cases the error is less than $1'30''$.

At 12h 00m app. noon, I make an altitude observation on the sun for latitude, making two observations each in direct and reversed positions.

The reduced latitude is $36^{\circ}42'40''$.

52
1A

INDEX DIAGRAM



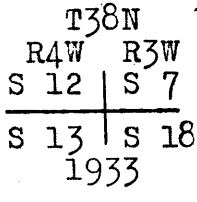
W. BDY. OF T. 38 N., R. 3 W.

Chains
53.70

Same road, bears NE. and SW.

80.00

Set an iron post, 3 ft. long, 2 ins. diam., 20 ins. in the ground to bed rock, with a limestone, 12 x 12 x 6 ins. marked X, deposited at the base, and in a mound of stone to top, for cor. of secs. 7, 12, 13 and 18, with brass cap marked



Land, rolling.
Soil, rocky, 4th. rate.
Undergrowth, buck brush, sage, and cacti.

N.0°08'E., on a true line bet. secs. 7 and 12.

Over nearly level land, through scattering undergrowth.

17.10

Road, bears NE. and SW.

20.00

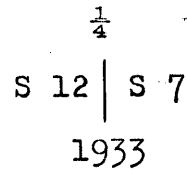
Desc. slight NW. slope.

33.30

Road, bears SE. and NW.

40.00

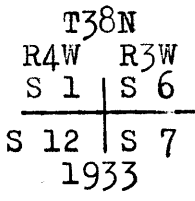
Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bed rock, with a sandstone, 14 x 12 x 6 ins. marked X, deposited at the base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. with brass cap marked



Desc. over gradual NW. slope.

80.00

Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground for cor. of secs. 1, 6, 7, and 12, with brass cap marked



3 ft. base, 2 $\frac{1}{2}$ ft. high W. of cor. raise a mound of stone

Land, rolling.
Soil, rocky, 4th. rate.
Undergrowth, sagebrush.

W. BDY. OF T. 38 N., R. 3 W.

Chains N.0°08'E., on a true line bet. secs. 1 and 6.
 Over rolling land, through scattering undergrowth.
 Desc. over slight NW. slope.

19.00 Top of ledge, 30 ft. high, bears NW. and SW.

29.00 Same ledge, bears E. Desc. 120 ft. over N. slope.

30.60 Trail, bears E. and W.

31.20 Water Canyon Wash, 20 lks. wide, course E. Asc. 130 ft. over S. slope.

35.00 Top of ledge, bears E. and W. Asc. gentle S. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground to bed rock, with a sandstone 12 x 10 x 2 ins. marked X, deposited at the base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. with brass cap marked

$\frac{1}{4}$
 S 1 | S 6
 1933

Continue ascent over slight S. slope.

47.50 Spur, slopes E. Desc. 117 ft. over NE. slope.

66.95 Wash in North Fork of Water Canyon, 20 lks. wide, course SE. Asc. 100 ft. over SW. slope.

79.66 Top of ledge, 20 ft. high, bears SE. and NW. Asc.

81.99 The cor. of Ts. 38 and 39 N., Rs. 3 and 4 W., which is an iron post, 3 ins. diam., marked and witnessed as described in the official record.

Land, rolling and broken.
 Soil, rocky, 4th. rate.
 Undergrowth, buck brush, sage and cacti.
 No timber.

E. BDY. OF T. 38 N., R. 3 W.

From the cor. of Ts. 37 and 38 N., Rs. 2 and 3 W.,
 N.0°08'E., on a random line bet. Rs. 2 and 3 W., setting temp. $\frac{1}{4}$ sec. and sec. cors. at intervals of 40.00 and 80.00 chs.

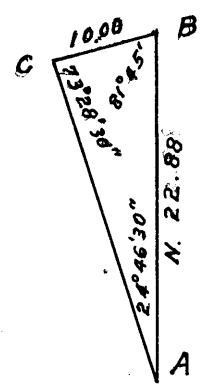
81.28 In order to determine the distance across a canyon, with precipitous slopes, I designate this point A, and set flag B on line on N. side of canyon. Point C is taken westerly from B a distance of 10.00 chs. All angles measured by deflection and balanced to 180° as follows:

At point A = 24°46'30"
 At point B = 81°45'00"
 At point C = 73°28'30"

E. BDY. OF T. 38 N., R. 3 W.

Chains

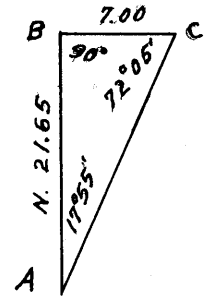
Dist. on random line = 81.28
 Dist. by triang. = 22.88
104.16



104.16 Point B. Thence by direct measure.

113.61 To determine the distance across precipitous canyon by triangulation, I designate this point A, and set flag B on line on N. side of canyon. Point C is taken easterly from B a dist. of 7.00 chs. All angles measured by deflection and balanced to 180° as follows:

At point A = 17° 55' 00"
 At point B = 90° 00' 00"
 At point C = 72° 05' 00"

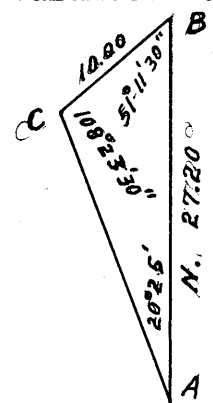


Dist. on random line = 113.61
 Dist. by triangulation = 21.65
135.26

135.26 Point B. Thence by direct measure.

325.48 To determine the distance over precipitous cliffs on S. side of Shinumo Canyon by triangulation, I designate this point A, and set flag B on line below cliffs. The vertical angle from A to B is -24° 35'. Point C is taken southwesterly from B, a distance of 10.00 chs. All angles measured by deflection and balanced to 180° as follows:

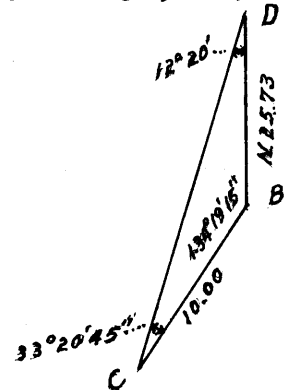
At point A = 20° 25' 00"
 At point B = 51° 11' 30"
 At point C = 108° 23' 30"



Dist. on random line = 325.48
 Dist. by triangulation = 27.20
352.68

352.68 Point B. To determine the distance up N. side of Shinumo Canyon, I set flag D above cliffs on N. rim, the vertical angle being 12° 20'. Point C is taken southwesterly a distance of 10.00 chs. All angles by 3 repetitions balanced to 180° as follows:

At point B = 134° 19' 15"
 At point D = 12° 20' 00"
 At point C = 33° 20' 45"



Dist. on random line = 352.68
 Dist. by triangulation = 25.73
378.41

378.41 Triangulation point. Thence by direct measure.

E. BDY. OF T. 38 N., R. 3 W.

Chains
482.78

Intersect E. and W. line, 14 lks. W. of the cor. of Tps. 38 and 39 N., Rs. 2 and 3 W.

I return to the cor. of Ts. 37 and 38 N., Rs. 2 and 3 W.,

Thence

N.0°09'E., on a true line bet. secs. 31 and 36.

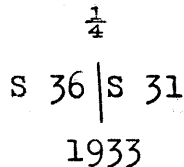
Over mountainous land, through scattering timber and undergrowth.

Desc. 190 ft. over NE. slope.

12.50 Wash, drains NW. Asc. 120 ft. over SW. slope.

22.84 Spur, slopes NW. Desc. 660 ft. over NE. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 20 ins. in the ground to bed rock, with a limestone 11x 6 x 5 ins. marked X, deposited at the base, and in a mound of stone to top, for 1/4 sec. cor. with brass cap marked



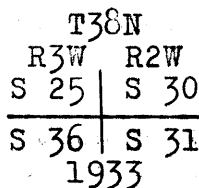
Continue descent 250 ft. over NE. slope.

48.80 Horse Spring Canyon, course W. Asc. 125 ft. over S. slope.

54.00 Rocky point on spur, sloping W. Desc. 120 ft. along broken W. slope.

64.70 Draw, course W. Asc. 644 ft. over broken S. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 8 ins. in the ground to bed rock, with a limestone 12 x 8 x 6 ins. marked X, deposited at the base, and in a mound of stone to top, for cor. of secs. 25, 30, 31 and 36 with brass cap marked



Land, mountainous.
Soil, rocky, 4th. rate.
Timber, juniper and pinyon.
Undergrowth, sagebrush and cacti.

N.0°09'E., on a true line bet. secs. 25 and 30.

Over mountainous land, through scattering timber and undergrowth. Asc. 30 ft. over broken S. slope.

1.28 Rocky point slopes W. Desc. 380 ft. into canyon.

28.66 Ridge, bears E. and W. Desc. 56 ft. over N. slope to

E. BDY. OF T. 38 N., R. 3 W.

Chains
34.10 Top of cliff, 60 ft. high faces N. Desc. 225 ft. over steep N. slope to

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, with a limestone 10 x 8 x 6 ins. marked X, deposited at the base, for $\frac{1}{4}$ sec. cor. with brass cap marked

$\frac{1}{4}$
S 25 | S 30
1933

Impracticable to build stone mound, on account of the steep slope.

Continue descent 175 ft. to

45.70 Wash, 20 lks. wide, course SW. Asc. SE. slope.

55.26 Top of cliff, 80 ft. high, facing S. Asc. slightly over flat, through medium heavy juniper and pinyon.

73.26 Top of ascent. Desc. slightly.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground for cor. of secs. 19, 24, 25 and 30, with brass cap marked

T38N
R3W R2W
S 24 | S 19
S 25 | S 30
1933

from which

A juniper, 14 ins. diam., bears N. $53\frac{1}{2}^{\circ}$ E., 111 lks. dist. marked T 38 N R 2 W S 19 B T

A juniper, 12 ins. diam., bears S. $25\frac{1}{2}^{\circ}$ E., 99 lks. dist., marked T 38 N R 2 W S 30 B T

A juniper, 4 ins. diam., bears N. $4\frac{1}{2}^{\circ}$ W., 98 lks. dist. marked T 38 N R 3 W S 24 B T

Raise a mound of stone, 3 ft. base, $2\frac{1}{2}$ ft. high W. of cor.

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

N. $0^{\circ}09'E.$, on a true line bet. secs. 19 and 24.

Over rolling land, through scattering timber and undergrowth. Desc. over broken NW. slope.

1.20 Rocky drain, course NW.

7.70 Drain, 5 lks. wide, course NW.

13.70 Desc. 80 ft. over steep N. slope.

17.30 Wash, 15 lks. wide, in small canyon, course W. Asc. 70 ft. over steep S. slope.

E. BDY. OF T. 38 N., R. 3 W.

Chains

- 20.50 Top of steep ascent. Asc. gradually.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground to bed rock, with a stone 8 x 6 x 4 ins. deposited at the base, and in a mound of stone to top for $\frac{1}{4}$ sec. cor. with brass cap marked

 $\frac{1}{4}$

S 24 | S 19

1933

A pinyon, 10 ins. diam., bears S. $26\frac{1}{2}^{\circ}$ E., 165 lks. dist., marked $\frac{1}{4}$ S 19 B T

A pinyon, 8 ins. diam., bears N. 50° W., 64 lks. dist. marked $\frac{1}{4}$ S 24 B T

Asc. slightly.

- 43.00 Top of spur, 3 chs. wide, slopes W. Desc. 40 ft. over gradual N. slope to
- 52.80 Desc. more abruptly 60 ft. to
- 55.20 Wash, 10 lks. wide, course W. Asc. 60 ft.
- 57.80 Asc. gradually.
- 62.80 Spur, slopes W. Over top of same.
- 76.00 Desc. over NE. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 18 ins. in the ground to bed rock, in a mound of stone to top, for cor. of secs. 13, 18, 19 and 24, with brass cap marked

T38N

R3W R2W

S 13 | S 18

S 24 | S 19

1933

A pinyon, 8 ins. diam., bears N. $74\frac{1}{2}^{\circ}$ E., 149 lks. dist. marked T 38 N R 2 W S 18 B T

A juniper, 10 ins. diam., bears S. $61\frac{1}{2}^{\circ}$ E., 162 lks. dist. marked T 38 N R 2 W S 19 B T

A juniper, 8 ins. diam., bears S. $10\frac{1}{4}^{\circ}$ W., 110 lks. dist. marked T 38 N R 3 W S 24 B T

A juniper, 8 ins. diam., bears N. $32\frac{1}{2}^{\circ}$ W., 240 lks. dist. marked T 38 N R 3 W S 13 B T

Land, mountainous.
Soil, rocky, 4th. rate.
Timber, juniper and pinyon.
Undergrowth, sage brush and cacti.

N. $0^{\circ}09'$ E., on a true line bet. secs. 13 and 18.

Over rolling land, through scattering timber and undergrowth. Desc. 143 ft. over NE. slope.

E. BDY. OF T. 38 N., R. 3 W.

Chains

11.23 Wash, 30 lks. wide, course NW. Asc. 210 ft. over SW. slope.

23.00 Top of ascent. Over nearly level land.

38.00 Asc. slight SW. slope.

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

$\frac{1}{4}$
S 13 | S 18

1933

raise a mound of stone,
3 $\frac{1}{2}$ ft. base, 2 $\frac{1}{2}$ ft. high W. of cor.

Asc. over slight SW. slope.

47.00 Spur, slopes SW. Desc. 35 ft. over NW. slope to

59.30 Rim of canyon, bears SE. and NW. Desc. over a series of ledges 10 to 80 ft. high, 616 ft. to

72.38 Wash, 30 lks. wide, course NW. Asc. 192 ft. over SW. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground for cor. of secs. 7, 12, 13 and 18, with brass cap marked

T38N
R3W R2W
S 12 | S 7
S 13 | S 18
1933

raise a mound of
stone, 3 $\frac{1}{2}$ ft. base, 2 $\frac{1}{2}$ ft. high W. of cor.

Land, mountainous.
Soil, rocky, 4th. rate.
Timber, juniper and pinyon.
Undergrowth, sagebrush and cacti.

N.0°09'E., on a true line bet. secs. 7 and 12.

Over mountainous land, through scattering timber and undergrowth. Asc. 193 ft. over steep SW. slope.

5.48 S. rim of Shinumo Canyon. Spur, slopes W. The line descends over a series of impassable ledges, bearing NE. and SW., 820 ft.

30.00 Foot of descent. Enter bottom of canyon.

37.00 Road, bears NE. and SW.

38.00 Wash, 30 lks. wide, in bottom of canyon, course SW.

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

$\frac{1}{4}$
S 12 | S 7
1933

E. BDY. OF T. 38 N., R. 3 W.

Chains Raise a mound of stone, $3\frac{1}{2}$ ft. base, $2\frac{1}{2}$ ft. high W. of cor.

Continue over bottom, ascending slightly.

50.00 Trail, bears E. and W.

51.00 Leave bottom and asc. steep SE. slope.

53.00 Foot of cliff, 90 ft. high, bears E. and W. The line ascends 420 ft. over precipitous cliffs.

58.42 Top of ledge. Continue ascent 380 ft. over steep SE. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., over a cross (+) marked on bed rock, and in a mound of stone to top for cor. of secs. 1, 6, 7 and 12, with brass cap marked

T38N	
R3W	R2W
S 1	S 6
S 12	S 7
1933	

Land, mountainous.
Soil, rocky, 4th. rate.
Timber, scattering juniper and pinyon.
Undergrowth, buck brush, sage, and cacti.

N. $0^{\circ}09'E.$, on a true line bet. secs. 1 and 6.

Over mountainous land, through scattering undergrowth.
Asc. 157 ft. over broken ledges, facing SE.

7.00 N. rim of canyon, bears E. and W. Over level land.

26.00 Desc. 112 ft. over NW. slope.

35.20 Asc. 24 ft.

37.20 Desc. 60 ft. over NW. slope.

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

$\frac{1}{4}$	
S 1	S 6
1933	

raise a mound of stone

$3\frac{1}{2}$ ft. base, $2\frac{1}{2}$ ft. high W. of cor.

40.40 Wash, 3 lks. wide, course SW. Asc. 125 ft. over S. slope.

47.20 Along broken W. slope.

66.60 Drain, 5 lks. wide, course NW.

73.03 Wash, 10 lks. wide, course SW. Asc. slight SE. slope.

82.78 The cor. of Ts. 38 and 39 N., Rs. 2 and 3 W., which is an iron post, 3 ins. diam., marked and witnessed as described in the official record.

E. BDY. OF T. 38 N., R. 3 W.

4017

Chains

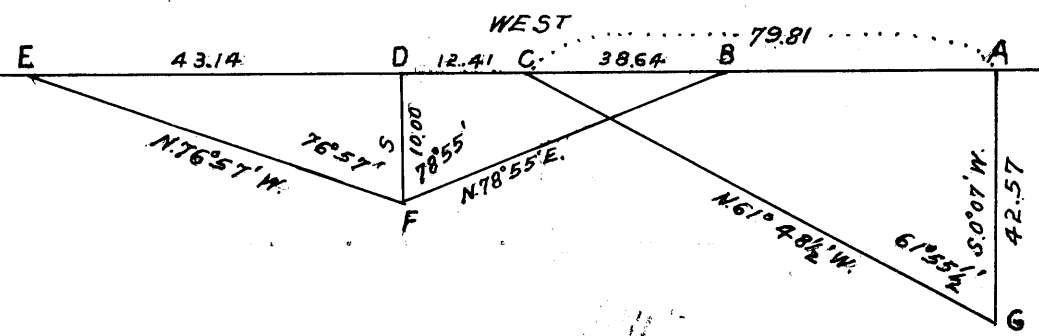
Land, mountainous.
Soil, rocky, 4th. rate.
Timber, none.
Undergrowth, buck brush, sage, and cacti.

A PORTION OF THE N. BDY. OF T. 38 N., R. 3 W.

The north bdy. of T. 38 N., R. 3 W. was surveyed by J. C. Thoma, U.S. Surveyor in 1914, but monuments were not established for the cor. of secs. 3, 4, 33 and 34, or the $\frac{1}{4}$ sec. cor. of secs. 3 and 34.

From the cor. of secs. 2, 3, 34 and 35 on N. bdy. of T., West, on a random line bet. secs. 3 and 34.

The western portion of this line passes over precipitous cliffs, forming the E. wall of Kanab Canyon, where it is impossible to make direct measurement. In order to determine the distance by triangulation, I designate the cor. of secs. 2, 3, 34 and 35 point A, and set flags B, C, D, and E. on line. Point F is taken 10.00 chs. S. of D, and point G is taken at the $\frac{1}{4}$ sec. cor. of secs. 2 and 3, which is S. $0^{\circ}07'W.$, 42.57 chs. dist. from A. The angles, all measured by deflection are shown on the diagram below.



By triangulation,

- Dist. A to C = 79.81 chs.
- B to D = 51.05 "
- D to E = 43.14 "

From point F, traverse as follows:

- East, 12.21 chs.
- North, 10.00 chs.
- East, .20 chs. to point C

135.36

The distance A to E as determined by computation is Point E., from which the witness $\frac{1}{4}$ sec. cor. bet. secs. 4 and 33 bears E., 2.96 chs. dist.; an iron post, 1 in. diam. in a mound of stone, marked and witnessed as described in the official record:

160.00

Thence by direct measure, intersect the cor. of secs. 4, 5, 32 and 33, which is an iron post, marked and witnessed as described in the official record.

I return to the cor. of secs. 2, 3, 34 and 35, which is an iron post, marked and witnessed as described in the official record.

Thence

A PORTION OF THE N. BDY. OF T.38 N., R.3 W.

- Chains West, on a true line bet. secs. 3 and 34.
Over mountainous land, through scattering undergrowth.
- 40.00 True point for $\frac{1}{4}$ sec. cor. falls on cliff, 100 ft. high bearing SE. and NW. and is inaccessible.
- 41.17 Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground to bed rock, with stone marked X, deposited at the base, and in a mound of stone to top, for witness $\frac{1}{4}$ sec. cor. with brass cap marked
- | | | |
|---------------|-------|----|
| | S 34 | |
| $\frac{1}{4}$ | ----- | WC |
| | S 3 | |
| | 1933 | |
- 79.80 Set an iron post, 3 ft. long, 2 ins. diam., 4 ins. in the ground to bed rock, with a stone marked X, deposited at the base and in a mound of stone to top, for witness cor. of secs. 3, 4, 33 and 34, with brass cap marked
- | | | |
|----|------|------|
| | T39N | R3W |
| | S 33 | S 34 |
| WC | S 4 | S 3 |
| | T38N | |
| | 1933 | |
- 80.00 True point for cor. falls on cliff, where corner monument can not be properly established.
Land, mountainous. Soil, rocky, 14th. rate.
No timber. Undergrowth, sage and cacti.

For final test of the solar attachment and general description of the township, see the field notes of the subdivision of T.38 N., R.3 W., surveyed under this group.

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BOOK 4017

CERTIFICATE OF UNITED STATES SURVEYOR

Benjamin J. Kinsey,
We, **Walter H. Good** and **Benjamin J. Kinsey,** U. S. Surveyor, hereby certify upon honor that, in pursuance of special instructions received from the District Cadastral Engineer for **Arizona** bearing date of the **15th.** day of **October**, 19**32,** ^{we} have well, faithfully, and truly in ^{our} ~~my~~ own proper person^s, 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 East and West boundaries of Township 37 North, Range 3 West, and the East, West and South boundaries of Township 38 North, Range 3 West, and resurveyed a portion of the North boundary of Township 38 North, Range 3 West,** 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 ^{us} ~~me~~, and under ^{our} ~~my~~ direction; and that all the corners of said survey ^{and resurvey} have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the District Cadastral Engineer for **Arizona** and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey. and ^{resurvey.}

Benjamin J. Kinsey
U.S. Surveyor.
Phoenix, Ariz.
Oct. 2-1933

Walter H. Good
U. S. Surveyor.
Boise, Idaho,
September 9, 1933.

APPROVAL

OFFICE OF U. S. SUPERVISOR OF SURVEYS,
Denver, Colorado, January 21, 1935.

The foregoing field notes of the survey of **the East and West boundaries of Township 37 North, Range 3 West, and the East, West and South boundaries of Township 38 North, Range 3 West, and resurvey of a portion of the North boundary of Township, 38 North, Range 3 West, of the Gila and Salt River Meridian in the State of Arizona,**

executed by **Walter H. Good, U.S. Surveyor and Benjamin J. Kinsey, U. S. Surveyor,** under ^{their} ~~his~~ special instructions dated **October 15**, 19**32,** 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.

Walter H. Good
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