

BOOK "E"

FIELD NOTES

OF THE SURVEY OF PART OF THE

SUBDIVISION LINES

of

T. 40 N., R. 5 W.

Of the Gila and Salt River Base and Meridian,

In the State of ARIZONA

EXECUTED BY

Jos. C. Thoma,

In the capacity of U. S. Surveyor, under instructions dated March 11, 1913, issued by the United States Surveyor General to govern surveys included in Group No. 29, which were approved by the Commissioner of the General Land Office, March 26, 1913.

Survey commenced August 12, 1914.

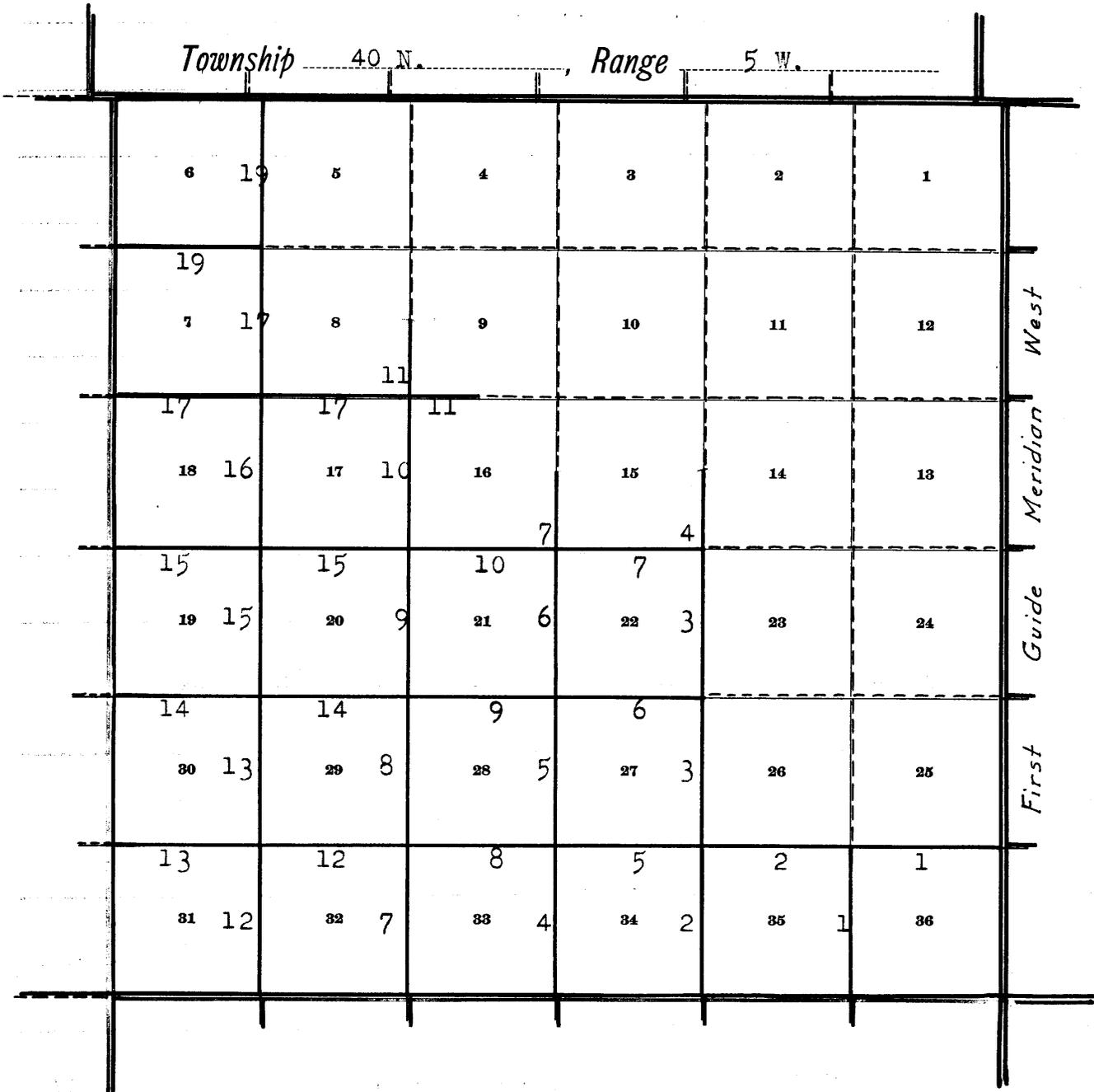
Survey completed August 19, 1914.

1A

Book "E"

BOOK 2859

INDEX DIAGRAM.



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Partial Subdivision of T. 40 N., R. 5 W.

Chains Survey commenced August 12, 1914, and executed with Young and Sons' light mountain transit No. 8535, with Smith solar attachment. For description of instrument, see page 1, Book "B." For test of instrument, see page 58, Book "A."

August 12, 1914: At the cor. of secs. 1, 2, 35, and 36, Ts. 39 and 40 N., R. 5 W., I set off 36° 49' N. on the lat. arc; 15° 8' N. on the decl. arc; and, at 8h 5m a. m., l. m. t., determine a meridian with the solar.

Thence I run

N. 0° 1' W., bet. secs. 35 and 36.

Desc. gradually over rolling land, through yellowtop and greasewood, over E. slope of Indian knoll.

15.00 Base of Indian knoll, bears NW. and SE., 50 ft. below cor.; asc. gradually over gently rolling land.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap

1914 on S. rim;
¼ in N.,
S36 in E., and
S35 in W. half;

dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist., and raise a mound of earth, 3½ ft. base, 1½ ft. high, W. of cor.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 25, 26, 35, and 36, marked on brass cap

1914 on S. rim;
T40NR5W in N. half;
S26 in NW.,
S25 in NE.,
S36 in SE., and
S35 in SW. quadrant;

dig pits, 18x18x12 ins., in each sec., 5½ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, rolling; drains SE.

Soil, light red sandy loam of medium texture, 3 to 5 ft. deep, on subsoil of light red clay.

No timber.

Undergrowth, greasewood and yellowtop.

Good grazing.

East, on a random line, bet. secs. 25 and 36.

40.00 Set temp. ¼ sec. cor.

80.00 Intersect the E. bdy. of the T., 7 lks. S. of the cor. of secs. 25, 30, 31, and 36.

Thence I run

S. 89° 57' W., on a true line, bet. secs. 25 and 36.

Asc. gradually over rolling land, through greasewood and yellowtop.

20.00 Top of ascent, bears N. and S.; desc. gradually.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap

1914 on S. rim;
S25 in N.,
S36 in S., and
¼ in W. half;

dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, N. of cor.

42.25 Wash, 10 lks. wide, 3 ft. deep, drains S.

59.00 Wash, 1 ch. wide, 15 ft. deep, drains SW.

63.25 Wash, 1 ch. wide, 5 ft. deep, drains S. 35° E.

80.00 The cor. of secs. 25, 26, 35, and 36.

Land, rolling, drains SE.

Soil, light red sandy loam of medium texture, 3 to 5 ft. deep, on subsoil of light red clay.

2. Partial Subdivision of T. 40 N., R. 5 W.

Chains	No timber. Undergrowth, greasewood and yellowtop. Good grazing.

	From the cor. of secs. 2, 3, 34, and 35, Ts. 39 and 40 N., R. 5 W., whence a $\frac{3}{4}$ -in. galvanized iron post on the S. bdy. of the Kaibab Indian Reservation bears N. $46^{\circ} 16'$ E., I run
39.25	N. $00^{\circ} 1'$ W., bet. secs. 34 and 35. Desc. gradually over rolling land, through greasewood. Wash, 10 lks. wide, 3 ft. deep, drains E.; asc. gradually. Small storage reservoir for stock drinking water bears E. about 35 chs.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim; $\frac{1}{4}$ in N., S35 in E., and S34 in W. half; dig pits, $18 \times 18 \times 12$ ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
58.50	August 12, 1914: At this cor., I set off $15^{\circ} 5'$ N. on the decl. arc; and, at apparent noon, observe the sun on the meridian; the resulting lat. is $36^{\circ} 49'$ N. Ascend rather abruptly over S. slope of bench, 60. ft.; bears E. and NW.
60.00	Top of ascent; desc. gradually over rock outcrop.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 26, 27, 34, and 35, marked on brass cap 1914 on S. rim; T40NR5W in N. half; S27 in NW., S26 in NE., S35 in SE., and S34 in SW. quadrant; dig pits, $18 \times 18 \times 12$ ins., in each sec., $5\frac{1}{2}$ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, rolling; drains E. Soil, sandy loam and rocky. Subsoil, sandy loam, clay, and bedrock. No timber. Undergrowth, greasewood and yellowtop. Good grazing.

40.00	East, on a random line, bet. secs. 26 and 35. Set temp. $\frac{1}{4}$ sec. cor.
79.98	Intersect the N. and S. line, 3 lks. S. of the cor. of secs. 25, 26, 35, and 36, Thence I run S. $89^{\circ} 59'$ W., on a true line, bet. secs. 26 and 35. Over rolling land, through greasewood.
32.40	The $\frac{3}{4}$ -in. galvanized iron post on the S. bdy. of the Kaibab Indian Reservation bears S. $31^{\circ} 7'$ E.
39.99	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim; S26 in N., S35 in S., and $\frac{1}{2}$ in W. half; dig pits, $18 \times 18 \times 12$ ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
60.80	Wash, 80 lks. wide, 12 ft. deep, drains SE.; asc./gradual- ly.
79.98	The cor. of secs. 26, 27, 34, and 35. Land, gently rolling; drains SE.

Partial Subdivision of T. 40 N., R. 5 W.

Chains Soil, rocky, 4 chs.; red sandy loam, 76 chs. Subsoil, red sandy loam, exceptionally deep for 76 chs.
 No timber.
 Undergrowth, scattering greasewood and yellowtop.
 Good grazing.

N. 0° 1' W.; bet. secs. 26 and 27.

Desc. gradually over rolling land, through greasewood and yellowtop.

1.00 Wash, 25 lks. wide, 5 ft. deep, drains E.; asc. gradually.

12.50 Wash, 40 lks. wide, 10 ft. deep, drains SE.

18.00 Fork of two washes, 70 lks. wide, 12 ft. deep, from W. and NW. Drains SE. 1 ch. up the wash from the NW. is the intersection of two washes, one from N. and the other from N. 70° W.

26.70 Wash, 35 lks. wide, 10 ft. deep, drains SE. About 4 chs. down wash, is the mouth of a wash from the NE. which heads near the cor. of secs. 14, 15, 22, and 23.

36.00 Wash, 20 lks. wide, 8 ft. deep, drains SE. 50 lks. NW., wash runs on surface.

36.50 Road, Pipe springs to Cedar ridge, bears SW. and SE.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap

1914 on S. rim;

1/4 in N.,

S26 in E., and

S27 in W. half;

dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, W. of cor.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 22, 23, 26, and 27, marked on brass cap

1914 on S. rim;

T40NR5W in N. half;

S22 in NW.,

S23 in NE.,

S26 in SE., and

S27 in SW. quadrant;

dig pits, 18x18x12 ins. in each sec., 5 1/2 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Soil and subsoil, red sandy loam, exceptionally deep.

No timber.

Undergrowth, scattering greasewood.

Good grazing.

Land, gently rolling; drains SE.

N. 0° 1' W., bet. secs. 22 and 23.

Asc. gradually over rolling land, through greasewood.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap

1914 on S. rim;

1/4 in N.,

S23 in E., and

S22 in W. half;

dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, W. of cor.

60.00 Base of rolling foot hills of Red Ledges, bears E. and W.

66.70 Dim road, bears NE. and S. 70° W.

72.80 Road, from Pipe Springs to Hurricane and St. George, bears E. and W.

73.20 Wire fence and telephone line from Pipe Springs to Hurricane, bears N. 71° W. and S. 71° E., 6 chs., thence N. 80° E.

77.00 Head of wash, drains SE., bears E. 1 ch.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the

4. Partial Subdivision of T. 40 N., R. 5 W.

Chains ground, for the cor. of secs. 14, 15, 22, and 23, marked on brass cap
 1914 on S. rim;
 T40NR5W in N. half;
 S15 in NW.,
 S14 in NE.,
 S23 in SE., and
 S22 in SW. quadrant;
 dig pits, 18x18x12 ins., in each sec., 5 1/2 ft. dist.;
 and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.
 Land, rolling and broken; drains SE.
 Soil and subsoil, red sandy loam.
 No timber.
 Undergrowth, scattering greasewood and yellowtop.
 Good grazing.
 August 12, 1914.

August 17, 1914: I set off 36° 51' 30" N. on the lat. arc; and 13° 35' N. on the decl. arc; and, at 8h 19m a. m., 1. m. t., determine a meridian with the solar.
 Thence I run
 N. 0° 1' W., bet. secs. 14 and 15.
 Asc. over rolling broken foot hills of Red Ledges.
 16.00 Wire fence, bears N. 30° W. and S. 30° E.
 23.00 Top of ascent, bears E. and W.; desc. gradually.
 30.50 Small wash, drains W.; asc. abruptly.
 36.00 Rocky spur, projecting W., 75 ft. high.
 38.00 Base of spur, bears NE. and SW., 60 ft. below top; desc. gradually.
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap
 1914 on S. rim;
 1/4 in N.,
 S14 in E., and
 S15 in W. half; and
 raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.
 This cor. is established at the foot of perpendicular Red Ledges, 1000 ft. high. I discontinue line at this cor.
 Land, broken foot hills; drains SW.
 Soil, light red sandy loam, rocky; subsoil, light red sandy loam, rocky.
 Undergrowth, yellowtop and scattering greasewood and sage brush.
 Fair grazing.
 August 17, 1914.

August 13, 1914: At the cor. of secs. 3, 4, 33, and 34, Ts. 39 and 40 N., R. 5 W., I set off 36° 49' N. on the lat. arc; 14° 50' N. on the decl. arc; and, at 8h 5m a. m., 1. m. t., determine a meridian with the solar
 Thence I run
 N. 0° 2' W., bet. secs. 33 and 34.
 Asc. gradually over rolling land, through greasewood and yellowtop.
 37.00 Wash, 10 lks. wide, 4 ft. deep, drains SE.
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., marked on top of brass cap
 1914 on S. rim;
 1/4 in N.,
 S34 in E., and
 S33 in W. half;
 dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, W. of cor.
 This cor. is established on top of an ascent bearing E. and W.; desc. gradually.

Partial Subdivision of T. 40 N., R. 5 W.

5.

Chains
43.50 Wash, 6 lks. wide, 6 ft. deep; drains E.
54.50 Old road, bears N. 60° E., and S. 60° W.
80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 27, 28, 33, and 34, marked on brass cap
1914 on S. rim;
T40NR5W in N. half;
S28 in NE.,
S27 in NE.,
S34 in SE., and
S33 in SW. quadrant;
dig pits, 18x18x12 ins., in each sec., 5 1/2 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.
Land, rolling; drains SE.
Soil, light red sandy loam of medium texture, from 1 to 5 ft. deep, on subsoil of red clay.
Undergrowth, greasewood and yellowtop.
Good grazing.
No timber.

40.00 East, on a random line, bet. secs. 27 and 34.
Set temp. 1/4 sec. cor.
80.00 Intersect the N. and S. line at the cor. of secs. 26, 27, 34, and 35.
Thence I run
West, on true line, bet. secs. 27 and 34.
Over rolling land, through greasewood.
30.75 Wash, 10 lks. wide, 3 ft. deep, drains S. 75° W.
40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor.; marked on brass cap
1914 on S. rim;
S27 in N.,
S34 in S., and
1/4 in W. half;
dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.
44.30 Wash, 10 lks. wide, 4 ft. deep, drains SE.
63.30 Dim road, bears NE. and SW.
80.00 The cor. of secs. 27, 28, 33, and 34.
Land, rolling; drains SE.
Soil, light red sandy loam of medium texture, from 1 to 5 ft. deep, on subsoil of red clay.
Undergrowth, greasewood and yellowtop.
Good grazing.
No timber.

N. 0° 2' W., bet. secs. 27 and 28.
Desc. gradually over rolling land, through greasewood.
6.70 Wash, 15 lks. wide, 4 ft. deep, drains S. 80° E.
11.60 Wash, 15 lks. wide, 4 ft. deep, drains SE.; asc. gradually.
40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap
1914 on S. rim;
1/4 in N.,
S27 in E., and
S28 in W. half;
dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.
August 13, 1914: At this cor., I set off 14° 46' N. on the decl. arc; and, at apparent noon, observe the sun on the meridian; the resulting lat. is 36° 50' N.
80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 21, 22, 27, and 28, marked on brass cap

6. Partial Subdivision of T. 40 N., R. 5 W.

Chains	<p>1914 on S. rim; T40NR5W in N. half; S21 in NW., S22 in NE., S27 in SE., and S28 in SW. quadrant; dig pits, 18x18x12 ins., in each sec., 5½ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, gently rolling; drains SE. Soil and subsoil, red sandy loam, exceptionally deep. Undergrowth, scattered greasewood and yellowbrush. Good grazing. No timber.</p>
40.00	East, on a random line, bet. secs. 22 and 27. Set temp. ¼ sec. cor.
80.02	Intersect the N. and S. line, at the cor. of secs. 22, 23, 26, and 27. Thence I run
40.01	West, on a true line, bet. secs. 22 and 27. Over rolling land, through greasewood and yellowtop. Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap 1914 on S. rim; S22 in N., S27 in S., and ¼ in W. half; dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, N. of cor.
62.50	Wash, 15 lks. wide, 3 ft. deep, drains SE.
80.02	The cor. of secs. 21, 22, 27, and 28. Land, gently rolling; drains SE. Soil and subsoil, red sandy loam, exceptionally deep. Undergrowth, scattered greasewood and yellowtop. Good grazing. No timber.
14.75	N. 0° 2' W., bet. secs. 21 and 22. Asc. gradually over rolling land, through greasewood and yellowtop. Wash, 15 lks. wide, 3 ft. deep, drains SE.
35.70	Wash, 10 lks. wide, 2 ft. deep, drains SE.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap 1914 on S. rim; ¼ in N., S22 in E., and S21 in W. half; dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, W. of cor.
58.70	Dim road, bears E. and W.
61.00	Wash, 20 lks. wide, drains SE.
65.50	Same wash, 10 lks. wide, 2 ft. deep, drains SW.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of secs. 15, 16, 21, and 22, marked on brass cap 1914 on S. rim; T40NR5W in N. half; S16 in NW., S15 in NE., S22 in SE., and S21 in SW. quadrant; dig pits, 18x18x12 ins., in each sec., 5½ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, gently rolling; drains SE.

Partial Subdivision of T. 40 N., R. 5 W.

7.

Chains Soil and subsoil, red sandy loam, exceptionally deep. Undergrowth, scattered greasewood and yellowtop. Good grazing. No timber.

East, on a random line, bet. secs. 15 and 22.
 40.00 Set temp. $\frac{1}{4}$ sec. cor.
 80.06 Intersect the N. and S. line at the cor. of secs. 14, 15, 22, and 23.
 Thence I run
 West, on a true line, bet. secs. 15 and 22.
 Over broken and rolling foothills of Red Ledges; desc. gradually through greasewood and yellowtop.
 21.70 Wire fence and telephone line, Pipe Springs to Hurricane, bears N. 71° W. and S. 71° E.
 23.00 Wash, 30 lks. wide, 8 ft. deep, drains S.
 24.70 Road, Pipe Springs to Hurricane and St. George, bears N. 70° W. and S. 70° E.
 40.03 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap
 1914 on S. rim;
 S15 in N.,
 S22 in S., and
 $\frac{1}{4}$ in W. half;
 dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
 58.30 Wash, 40 lks. wide, 15 ft. deep, drains S.
 77.00 Wash, 10 lks. wide, 3 ft. deep, drains S.
 80.06 The cor. of secs. 15, 16, 21, and 22.
 Land, gently rolling.
 Soil and subsoil, red sandy loam, exceptionally deep. Undergrowth, scattered greasewood and yellowtop. Good grazing. No timber.

August 13, 1914.

August 17, 1914.
 N. 0° 2' W., bet. secs. 15 and 16.
 Asc. gradually over rolling land, through greasewood and yellowtop.
 18.50 Road, Pipe Springs to Hurricane and St. George, bears N. 70° W. and S. 70° E.
 20.55 Wire fence and telephone line, Pipe Springs to Hurricane, bears N. 71° W. and S. 71° E.
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap
 1914 on S. rim;
 $\frac{1}{4}$ in N.,
 S15 in E., and
 S16 in W. half;
 dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
 This cor. is established near the base of perpendicular cliffs of Red Ledges, 1000 ft. high. I discontinue the line at this point.
 Land, rolling, drains SW.
 Soil, light red sandy loam and gravel. Subsoil, dark red sandy loam and clay.
 Undergrowth, yellowtop and scattering greasewood and shad scale.
 No timber.
 Fair grazing.

August 17, 1914.

August 14, 1914: At the cor. of secs. 4, 5, 32 and 33, Ts. 39 and 40 N., R. 5 W. I set off 36° , 49' N. on the

8. Partial Subdivision of T. 40 N., R. 5 W.

Chains	lat. arc; 14° 31' N. on the decl. arc; and, at 8h 35m a. m., l. m. t., determine a meridian with the solar. Thence I run N. 0° 3' W., bet. secs. 32 and 33. Desc. gradually over rolling land, through greasewood. Old road, bears N. 60° E. and S. 60° W.
6.75	
40.00	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim; $\frac{1}{2}$ in N., S33 in E., and S32 in W. half; dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of secs. 28, 29, 32, and 33, marked on brass cap 1914 on S. rim; T40NR5W in N. half; S29 in NW., S28 in NE., S33 in SE., and S32 in SW. quadrant; dig pits, 18x18x12 ins., in each sec., 5 $\frac{1}{2}$ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, rolling, drains NE. Soil, light red sandy loam and fine gravel, on subsoil of red clay. Undergrowth, greasewood and grass. Good grazing.
40.00	East, on a random line, bet. secs. 28 and 33. Set temp. $\frac{1}{4}$ sec. cor.
80;03	Intersect the N. and S. line, 3 lks. S. of the cor. of secs. 27, 28, 33, and 34. Thence I run S. 89° 59' W., on a true line, bet. secs. 28 and 33. Asc. gradually over rolling land.
40.01 $\frac{1}{2}$	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim; S28 in N., S33 in S., and $\frac{1}{4}$ in W. half; dig pits, 18x18x12 ins. E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
44.00	Short spur, projecting N., 30 ft. above $\frac{1}{4}$ sec. cor; desc.
46.50	Wash, 5 lks. wide, 2 ft. deep, drains N. 35° E.; 30 ft. below spur; asc.
53.00	Short spur, projecting N., 20 ft. above wash; desc.
57.25	Wash, 10 lks. wide, 3 ft. deep, drains N., 20 ft. below top of spur; asc.
80.03	The cor. of secs. 28, 29, 32, and 33, 25 ft. above wash. Land, rolling, drains NE., Soil, light red sandy loam and fine gravel, on subsoil of red clay. Undergrowth, greasewood and grass. No timber. Good grazing.
40.00	N. 0° 3' W., bet. secs. 28 and 29. Desc. gradually over rolling land, through greasewood. Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim; $\frac{1}{2}$ in N.,

Partial Subdivision of T. 40 N., R. 5 W.

Chains

S28 in E., and
S29 in W. half;

dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.,
and raise a mound of earth, 3½ ft. base, 1½ ft. high,
W. of cor.

August 14, 1914: At this cor., I set off 14° 28' N. on
the decl. arc; and, at apparent noon, observe the sun
on the meridian; the resulting lst. is 36° 50' N.

50.50 Wash, 65 lks. wide, 13 ft. deep, drains E.; asc. over a
series of small washes, draining E.

69.00 Wash, 10 lks. wide, 7 ft. deep, drains S. 30° E.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in
the ground, for the cor. of secs. 20, 21, 28, and 29,
marked on brass cap

1914 on S. rim;
T40NR5W in N. half;

S20 in NW.,

S21 in NE.;

S28 in SE., and

S29 in SW. quadrant;

dig pits, 18x18x12 ins., in each sec., 5½ ft. dist.;
and raise a mound of earth, 4 ft. base, 2 ft. high, W.
of cor.

Land, rolling, drains NE.

Soil, light red sandy loam and fine gravel, on subsoil of
red clay.

Undergrowth, greasewood and grass.

No timber.

Good grazing.

N. 89° 59' E., on a random line, bet. secs. 21 and 28.

40.00 Set temp. ¼ sec. cor.

80.01 Intersect the N. and S. line, 4 lks. S. of the cor. of
secs. 21, 22, 27, and 28.

Thence I run

S. 89° 57' W., on a true line, bet. secs. 21 and 28.

Over rolling land, through greasewood and yellowtop.

40.00½ Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the
ground, for ¼ sec. cor., marked on brass cap

1914 on S. rim;

S21 in N.,

S28 in S., and

¼ in W. half;

dig pits, 18x18x12 ins., E. and W. of post, 3 ft.
dist.; and raise a mound of earth, 3½ ft. base, 1½ ft.
high, N. of cor.

55.00 Small natural reservoir, 2x4 chs.

80.01 The cor. of secs. 20, 21, 28, and 29.

Land, rolling, drains NE.

Soil, light red sandy loam and fine gravel, on subsoil of
red clay.

Undergrowth, greasewood and grass.

No timber.

Good grazing.

N. 0° 3' W., bet. secs. 20 and 21.

Asc. gradually over rolling land, through greasewood and
yellowtop.

17.00 Wash, 30 lks. wide, 2 ft. deep, drains SW.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the
ground, for ¼ sec. cor., marked on brass cap

1914 on S. rim;

¼ in N.,

S21 in E., and

S20 in W. half;

dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.;
and raise a mound of earth, 3½ ft. base, 1½ ft. high,
W. of cor.

51.00 Old dim road, bears N. 70° E. and S. 70° W.

10. Partial Subdivision of T. 40 N., R. 5 W.

Chains	
58.80	Wash, 40 lks. wide, 13 ft. deep, drains SE.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 16, 17, 20, and 21, marked on brass cap 1914 on S. rim; T4ONR5W in N. half; S17 in NW., S16 in NE., S21 in SE., and S20 in SW. quadrant; dig pits, 18x18x12 ins., in each sec., 5½ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, rolling and drains SW. in south half and SE. in N. half. Soil, dark red sand in S. half and light red sand in N. half; subsoil, dark red sandy loam. Undergrowth, greasewood and yellowtop. No timber. Fair grazing.
40.00	N. 89° 57' E., on a random line, bet. secs. 16 and 21. Set temp. ¼ sec. cor.
80.01	Intersect the N. and S. line, 5 lks. N. of the cor. of secs. 15, 16, 21, and 22. Thence I run S. 89° 59' W., on a true line, bet. secs. 16 and 21. Desc. gradually over rolling land, through greasewood and yellowtop.
11.20	Wash, 6 lks. wide, 2 ft. deep, drains S.
27.00	Wash, 20 lks. wide, 2 ft. deep, drains S.
30.60	Wash, 5 lks. wide, 2 ft. deep, drains S.; asc. gradually.
40.00½	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap 1914 on S. rim; S16 in N., and S21 in S., and ¼ in W. half; dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, N. of cor.
80.01	The cor. of secs. 16, 17, 20, and 21. Land, rolling; drains S. Soil, light red sandy loam, with subsoil of the same. Undergrowth, yellowtop and scattering greasewood. No timber. Good grazing. August 14, 1914.
	August 17, 1914. N. 0° 3' W., bet. secs. 16 and 17. Asc. gradually over rolling land, through greasewood and yellowtop.
32.50	Wash, at bend from NW., 60 lks. wide, 10 ft. deep; drains SW.
38.00	E. side same wash, from the W.; drains SW.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap 1914 on S. rim; ¼ in N., S16 in E., and S17 in W. half; dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, W. of cor. The 33-mile post, on the W. bdy. of the Kaibab Indian Reservation, which is a ¾-in. galvanized iron post, about 6 feet. above ground, bears N. 53° W., 20.43 chs. dist.

Partial Subdivision of T. 40 N., R. 5 W.

Chains

44.50 Road, Pipe Springs to St. George, bears N. 77° W. and S. 71° E.

45.50 Wire fence, and telephone line, bear N. 77° W. and S. 71° E.

48.75 Same wash, 50 lks. wide, 8 ft. deep, drains S. 35° W.

50.25 Same wash, drains SE.

56.50 Same wash, drains S. 60° W.

59.50 Same wash, drains SE.

61.50 Same wash, at bend from NW., drains SW.

69.00 Same wash, drains S. 35° W.

76.00 Forks of 3 washes, one from N. 70° W., one from N. 35° W., and one from N. 30° E.; all drain into large wash 50 lks. E.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 8, 9, 16, and 17, marked on brass cap
 1914 on S. rim;
 T40NR5W in N. half;
 S8 in NW.,
 S9 in NE.,
 S16 in SE., and
 S17 in SW. quadrant;
 dig pits, 18x18x12 ins., in each sec., 5½ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. No trees within limits.

Land, rolling; drains S.

Soil and subsoil, red sandy loam.

Some cedar timber.

Undergrowth, yellowtop and scattering greasewood.

Fair grazing.

East, bet. secs. 9 and 16, on a true line.

Over broken foot hills of Red Ledges.

0.75 Wash, 5 lks. wide, 1 ft. deep; drains S. 30° W.

5.25 Wash, from canyon, 50 lks. wide, 6 ft. deep; drains SW.

34.00 Base of broken foot hills of Red Ledges, bears N. and S.; enter scrub cedar and pinion timber.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap
 1914 on S. rim;
 S9 in N.,
 S16 in S., and
 ¼ in W. half; and
 raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. Pits impracticable. Trees too scrubby for bearing trees.

This cor. is located under the perpendicular cliffs of Red Ledges. I therefore discontinue the line at this point.

Land, rolling and broken.

Soil, light red sandy loam, stony, with subsoil of red clay and rock.

Timber, scrub cedar and pinion.

Undergrowth, yellowtop, greasewood, and some sage.

August 17, 1914: At the cor. of secs. 8, 9, 16, and 17, I set off 13° 32' N. on the decl. arc; and, at apparent noon, observe the sun on the meridian; the resulting lat. is 36° 52' N.

Thence I run
 N. 0° 3' W., bet. secs. 8 and 9.

Asc. over broken foot hills of Red Ledges, through greasewood, shad scale, and yellowtop.

27.00 Base of Red Ledges, bears E. and S. 70° W.; asc. over rocky slope.

30.00 Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the ground, to bedrock, surrounded by a mound of stone, for witness cor. to ¼ sec. cor., marked on brass cap

12. Partial Subdivision of T. 40 N., R. 5 W.

Chains	<p>1914 on S. rim; WC$\frac{1}{4}$ in N., S9 in E., and S8 in W. half; and raise a mound of stone, 2 ft. base, 1$\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. No trees within limits.</p>
40.00	<p>True point for $\frac{1}{4}$ sec. cor., falls on perpendicular ledge. Land, broken foot hills; drains S.. Soil, light red sandy loam, with subsoil of same. Some cedar timber. Undergrowth, yellowtop, shad scale, and greasewood. Fair grazing. I discontinue the line at this point. August 17, 1914.</p>

40.00	<p>August 15, 1914: At the cor. of secs. 5, 6, 31, and 32, Ts. 39 and 40 N., R. 5 W. X I set off 36$^{\circ}$ 49' N. on the lat. arc; 14$^{\circ}$ 13' N. on the decl. arc; and, at 8h 4m a. m., l. m. t., determine a meridian with the solar. Thence I run N. 0$^{\circ}$ 3' W., bet. secs. 31 and 32. Over rolling land, through grass and greasewood; desc. gradually.</p>
40.00	<p>Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ in N., S32 in E., and S31 in W. half; 1914 on S. rim; dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3$\frac{1}{2}$ ft. base, 1$\frac{1}{2}$ ft. high, W. of cor.</p>
80.00	<p>Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 29, 30, 31, and 32, marked on brass cap 1914 on S. rim; T40NR5W in N. half; S30 in NW., S29 in NE., S32 in SE., and S31 in SW. quadrant; dig pits, 18x18x12 ins., in each sec., 5$\frac{1}{2}$ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, rolling, drains NE. Soil, light red sandy loam, of medium texture, from 3 to 10 ft. deep, on subsoil of gravel and red clay. Undergrowth, greasewood. No timber. Good grazing.</p>

40.00	<p>East, on a random line, bet. secs. 29 and 32. Set temp. $\frac{1}{4}$ sec. cor.</p>
80.03	<p>Intersect the N. and S. line, 3 lks. S. of the cor. of secs. 28, 29, 32, and 33. Thence I run S. 89$^{\circ}$ 59' W., on a true line, bet. secs. 29 and 32. Desc. gradually over rolling land.</p>
31.40	<p>Wash, 50 lks. wide, 2 ft. deep, drains NE.</p>
40.01 $\frac{1}{2}$	<p>Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim; S29 in N., S32 in S., and $\frac{1}{4}$ in W. half; dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3$\frac{1}{2}$ ft. base, 1$\frac{1}{2}$ ft. high, N. of cor.</p>
80.03	<p>The cor. of secs. 29, 30, 31, and 32.</p>

Chains	Land, rolling; drains NE. Soil, light red sandy loam, of medium texture, from 3 to 10 ft. deep, on subsoil of gravel and red clay. Undergrowth, greasewood. No timber. Good grazing.

	West, on a random line, bet. secs. 30 and 31.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
78.70	Intersect the W. bdy. of the T., 2 lks. S. of the cor. of secs. 25, 30, 31, and 36. Thence I run
	S. $89^{\circ} 59'$ E., on a true line, bet. secs. 30 and 31 .
	Asc. gradually over rolling land, through greasewood.
20.00	Spur, 20 ft. high, projecting NE.; desc.
25.00	Hollow, 20 ft. below top of spur, drains NE.; asc. gradually.
38.70	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim; S30 in N., S31 in S. half; and $\frac{1}{4}$ in W. half; dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
43.75	Spur, 30 ft. above hollow, projecting NE.; desc. gradually.
53.20	Wash, in hollow, 5 lks. wide; drains NE.; asc. gradually.
68.70	Spur, projecting NE., 30 ft. high; desc. gradually.
71.00	Hollow, drains NE.; asc. gradually.
78.70	The cor. of secs. 29, 30, 31, and 32. Land, rolling; drains NE. Soil, light red sandy loam, of medium texture, from 3 to 10 ft. deep, on subsoil of gravel and red clay. Undergrowth, greasewood. No timber. Good grazing.

	August 15, 1914: I set off $14^{\circ} 10'$ N. on the decl; arc; and, at apparent noon, observe the sun on the meridian; the resulting lat. is $36^{\circ} 50'$ N.
	Thence I run
	N. $0^{\circ} 3'$ W., bet. secs. 29 and 30.
	Desc. gradually over rolling land, through greasewood.
5.30	Wash, in hollow, drains NE.; asc. gradually.
15.00	Spur, 20 ft. high, projecting NE.; desc. gradually.
33.60	Wash, in hollow, drains NE.; asc. slightly.
35.00	Point of low spur, projecting NE.; desc. gradually.
39.40	Wash, in hollow, drains NE.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim; $\frac{1}{4}$ in N., S29 in E., and S30 in W. half; dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
49.50	Wash, 15 lks. wide, 3 ft. deep; drains E.
60.50	Wash, 15 lks. wide, 2 ft. deep; drains E.
65.75	Wash, 20 lks. wide, 4 ft. deep; drains E.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 19, 20, 29, and 30, marked on brass cap 1914 on S. rim; T40NR5W in N. half; S19 in NW., S20 in NE.,

14. Partial Subdivision of T. 40 N., R. 5 W.

Chains	S29 in SE., and S30 in SW. quadrant; dig pits, 18x18x12 ins., in each sec., $5\frac{1}{2}$ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, rolling; drains E. Soil, light red sandy loam in gravel. Subsoil, dark red sandy loam. Undergrowth, grass in south half; yellowtop and weeds in north half. Exceptionally good grazing. No timber.
40.00	N. $89^{\circ} 59'$ E., on a random line, bet. secs. 20 and 29. Set temp. $\frac{1}{4}$ sec. cor.,
80.03	Intersect the N. and S. line, at the cor. of secs. 20, 21, 28, and 29. Thence I run S. $89^{\circ} 59'$ W., on a true line, bet. secs. 20 and 29. Over rolling land, draining S.
1.00	Wash, 8 lks. wide, 1 ft. deep; drains SE.
15.00	Wash, 7 lks. wide, 3 ft. deep; drains S.
23.00	Wash, 10 lks. wide, 3 ft. deep; drains S.
24.60	Wash, 15 lks. wide, 4 ft. deep; drains SE.
40.01 $\frac{1}{2}$	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim; S20 in N., S29 in S., and $\frac{1}{4}$ in W. half; dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
49.60	Wash, 6 lks. wide, 3 ft. deep; drains S.
73.50	Wash, 6 lks. wide; 3 ft. deep; drains S.
80.03	The cor. of secs. 19, 20, 29, and 30. Land, rolling; drains S. Soil, light red sandy loam; subsoil, dark red sandy loam. Undergrowth, yellowtop and some greasewood. Good grazing. No timber.
40.00	N. $89^{\circ} 59'$ W., on a random line, bet. secs. 19 and 30. Set temp. $\frac{1}{4}$ sec. cor.
78.63	Intersect the W. bdy. of the T., 5 lks. N. of the true cor. point of secs. 19, 24, 25, and 30. Thence I run N. $89^{\circ} 59'$ E., on a true line, bet. secs. 19 and 30. Asc. gradually over rolling land.
38.63	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim; S19 in N., S30 in S., and $\frac{1}{4}$ in W. half; dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
63.60	Small wash, 10 lks. wide, drains S. 35° E. Wash heads 15 chs. NW.
78.63	The cor. of secs. 19, 20, 29, and 30. Land, gently rolling; drains SE. Soil, light red sandy loam and clay. Subsoil, dark red sandy loam and clay. Undergrowth, short weeds. Poor grazing. No timber.

Partial Subdivision of T. 40 N., R. 5 W.

Chains N. 00° 3' W., bet. secs. 19 and 20.
 Asc. gradually over rolling land, through yellowtop and greasewood.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap
 1914 on S. rim;
 $\frac{1}{4}$ in N.,
 S20 in E., and
 S19 in W. half;
 dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

62.40 Wash, 50 lks. wide, 15 ft. deep; drains SE.

80.00 Wash on top of ascent, bears NW. and SE.; desc. gradually.
 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 17, 18, 19, and 20, marked on brass cap
 1914 on S. rim;
 T40NR5W in N. half;
 S18 in NW.,
 S17 in NE.,
 S20 in SE., and
 S19 in SW. quadrant;
 dig pits, 18x18x12 ins., in each sec., $5\frac{1}{2}$ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, gently rolling; drains SE.
 Soil, light red sandy loam and clay, 10 chs; light red sandy loam, 70 chs. Subsoil, dark red sandy loam and clay.
 Undergrowth, yellowbrush and scattering greasewood.
 Poor grazing.
 No timber.

August 15, 1914.

 August 17, 1914.

40.00 N. 89° 59' E., on a random line, bet. secs. 17 and 20.
 Set temp. $\frac{1}{4}$ sec. cor.

80.04 Intersect the N. and S. line, at the cor. of secs. 16, 17, 20, and 21.
 Thence I run
 S. 89° 59' W., on a true line, bet. secs. 17 and 20.
 Desc. gradually over rolling land, through greasewood and yellowtop.

9.50 Wash, 15 lks. wide, 6 ft. deep; drains S.

40.02 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap
 1914 on S. rim;
 S17 in N.,
 S20 in S., and
 $\frac{1}{4}$ in W. half;
 dig pits, 18x18x12 ins. E. and W. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

47.50 Wash, 15 lks. wide, 5 ft. deep; drains S.

80.04 The cor. of secs. 17, 18, 19, and 20.
 Land, gently rolling; drains S.
 Soil, light red sandy loam.
 Subsoil, dark red sandy loam.
 Undergrowth, yellowtop and greasewood.
 Good grazing.
 No timber.

 S. 89° 59' W., on a random line, bet. secs. 18 and 19.
 40.00 Set temp. $\frac{1}{4}$ sec. cor.
 78.42 Intersect the W. bdy. of the T., 2 lks. S. of the cor. of secs. 13, 18, 19, and 24.
 Thence I run

16. Partial Subdivision of T. 40 N., R. 5 W.

- Chains East, on a true line, bet. secs. 18 and 19.
Asc. gradually over rolling land, through greasewood and yellowtop.
- 38.42 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap
1914 on S. rim;
S18 in N.,
S19 in S., and
 $\frac{1}{4}$ in W. half;
dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
- 54.40 Wash, 50 lks. wide, 15 ft. deep; drains SE.
Wash on top of ascent, bears NW. and SE.; desc. gradually.
- 78.42 The cor. of secs. 17, 18, 19, and 20.
Land, gently rolling; drains SE.
Soil, light red sandy loam, 65 chs., light red sandy loam and clay, 15 chs. Subsoil, dark red sandy loam and clay.
Undergrowth, some greasewood and weeds.
Fair grazing.
No timber.
- August 17, 1914.
-
- August 18, 1914: At the cor. of secs. 17, 18, 19, and 20, I set off $36^{\circ} 51' 30''$ N. on the lat. arc; $13^{\circ} 16'$ N. on the decl. arc; and, at 8h 34m a. m., 1. m. t., determine a meridian with the solar.
Thence I run
N. $0^{\circ} 3'$ W., bet. secs. 17 and 18.
Desc. gradually over rolling land, through yellowtop.
- 31.00 Wash, 10 lks. wide, 4 ft. deep, drains SE.; asc. gradually.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap
1914 on S. rim;
 $\frac{1}{4}$ in N.,
S17 in E., and
S18 in W. half;
dig pits, 18x18x12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
- 55.75 New road, bears N. 60° W. and S. 60° E.
- 70.20 Road, Pipe Springs to Hurricane and St. George, bears N. 70° W. and S. 70° E.
- 73.40 Telephone line, bears N. 62° W. and S. 62° E.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the cor. of secs. 7, 8, 17, and 18, marked on brass cap
1914 on S. rim;
T40NR5W in N. half;
S7 in NW.,
S8 in NE.,
S17 in SE., and
S18 in SW. quadrant; dig pits, 18x18x12 ins. in each sec., $5\frac{1}{2}$ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.
Land, gently rolling; drains NE. in S. half and SW. in N. half.
Soil, light red sandy loam and clay; subsoil, dark red sandy loam and clay.
Undergrowth, yellowtop.
Fair grazing.
No timber.
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Chains	N. 89° 59' E., on a random line, bet. secs. 8 and 17.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.06	Intersect the N. and S. line, 9 lks. N. of the cor. of secs. 8, 9, 16, and 17.
	Thence I run
	N. 89° 57' W., on a true line, bet. secs. 8 and 17.
	Asc. gradually over rolling land, through yellowtop and shad scale.
11.00	Wire fence, bears N. and S.
18.50	Top of ascent, bears N. and S.; desc. gradually.
32.00	Wash, 5 lks. wide, 2 ft. deep; drains S. 35° W.
40.03	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap
	1914 on S. rim;
	S8 in N.,
	S17 in S., and
	$\frac{1}{4}$ in W. half; from which
	A cedar, 10 ins. diam., bears S. 76° W., 173 lks. dist., marked $\frac{1}{4}$ S17BT.
	A cedar, 12 ins. diam., bears N. 62° 45' W., 500 lks. dist., marked $\frac{1}{4}$ S8BT.
43.25	Wash, 8 lks. wide, 2 ft. deep, drains SE. A few scattering scrub cedars along its banks.
71.00	Wash, 6 lks. wide, 2 ft. deep; drains S.
75.60	Wash, 5 lks. wide, 2 ft. deep; drains S.
78.50	Road to C. B. Jamison's ranch, bears NW. and SE.
80.06	The cor. of secs. 7, 8, 17, and 18.
	Land, rolling; drains, S.
	Soil, light red sandy loam and gravel; subsoil, red sandy loam and clay.
	Some cedar.
	Undergrowth, yellowtop and shad scale.

	August 18, 1914: I set off 13° 13' N. on the decl. arc; and, at apparent noon, observe the sun on the meridian; the resulting lat. is 36° 52' N.
	Thence I run
	West, on a random line, bet. secs. 7 and 18.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
78.29	Intersect the W. bdy. of the T., 9 lks. N. of the cor. of secs. 7, 12, 13, and 18.
	Thence I run
	N. 89° 56' E., on a true line, bet. secs. 7 and 18.
	Over rolling land, through yellowtop and greasewood.
23.00	W. bank of wash, 5 ft. high, bears N. 35° W. and SE.
24.00	Center of wash, 20 ft. deep, drains SE.
24.50	E. bank of wash, 8 ft. high, bears N. 35° W. and SE.
38.29	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap
	1914 on S. rim;
	S7 in N.,
	S18 in S., and
	$\frac{1}{4}$ in W. half;
	dig pits, 18x18x12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
48.00	Road from Pipe Springs to Hurricane and St. George, bears N. 70° W. and S. 70° E.
65.40	Wash, 6 lks. wide, 3 ft. deep, drains S. 35° W.
65.55	Telephone line, bears N. 62° W. and S. 62° E.
78.29	The cor. of secs. 7, 8, 17, and 18.
	Land, rolling; drains SE.
	Soil, light red sandy loam and clay on subsoil of red sandy loam and clay.
	Undergrowth, yellowtop and scattering greasewood.
	No timber.

	N. 0° 3' W., bet. secs. 7 and 8.
	Asc. gradually over rolling land, through yellowtop.

18. Partial Subdivision of T. 40 N., R. 5 W.

Chains

1.50

Road, to C. B. Jamison's ranch, bears NW. and SE.

24.00

Base of Red Ledges, 900 ft. high, bears S. 50° E. and S. 80° W. It is impracticable to chain over the ledges. To obtain the distance to the top, I triangulate according to the following:

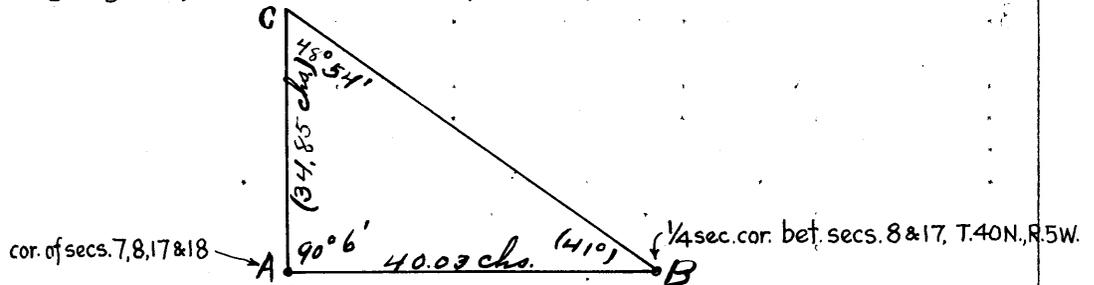
I set a flag ahead on line on top of the ledge. This I call "C." The cor. of secs. 7, 8, 17, and 18, I call "A" and the $\frac{1}{4}$ sec. cor. bet. secs. 8 and 17, I call "B." The bearing of the line bet. secs. 8 and 17 is S. $89^{\circ} 57'$ E. The angle at "C" between "A" and "B" is measured and found to be $48^{\circ} 54'$. The angle at "A" between "B" and "C" is $90^{\circ} 6'$. The angle at "B" between "A" and "C" is computed to be 41° . The base, or the distance between the $\frac{1}{4}$ sec. cor. bet. secs. 8 and 17 and the cor. of secs. 7, 8, 17, and 18 is 40.03 chs. I compute the distance "A-C" as follows:

$$\text{Colog. sin. } 48^{\circ} 45' = 0.1228302$$

$$\text{Log. sin. } 41^{\circ} 00' = 9.8169429$$

$$\text{Log. } 40.03 \text{ chs.} = 1.6023856$$

$$\text{Log. } 34.85 \text{ chs.} = 1.5422087$$



34.85

Triangulation point on top of spur from Red Ledges, projecting W., 900 ft. above section cor.; desc. abruptly.

40.00

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

1914 on S. rim;

 $\frac{1}{4}$ in N.,

38 in E., and

S7 in W. half;

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. No trees near.

This cor. is established 70 ft. below the top of the spur on which the triangulation point is located; continue abrupt descent, over broken rocky slope.

58.00

Base of abrupt descent, bears E. and S. 80° W.

60.00

Wash, in canyon, 700 ft. below top, 20 lks. wide, 3 ft. deep; course, W.

65.00

Wash, 25 lks. wide, 3 ft. deep, drains SW. for 3 chs., thence N. 35° W.; asc. over steep rocky broken land.

80.00

Set an iron post, 3 ft. long, 2 ins. diam., 12 ins. in the ground, to bedrock, surrounded by a mound of stone, for the cor. of secs. 5, 6, 7, and 8, marked on brass cap

1914 on S. rim;

T40NR5W in N. half;

S6 in NW.,

S5 in NE.,

S8 in SE., and

S7 in SW. quadrant; and

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

A pinion, 12 ins. diam., bears N. $75^{\circ} 15'$ E., 35 lks. dist., marked T40NR5WS5BT.

A cedar, 14 ins. diam., bears S. 16° E., 70 lks. dist., marked T40NR5WS8BT.

A pinion, 12 ins. diam., bears S. $30^{\circ} 30'$ W., 68 lks. dist., marked T40NR5WS7BT.

A pinion, 10 ins. diam., bears N. $18^{\circ} 15'$ W., 75 lks. dist., marked T40NR5WS6BT.

This cor. is located on a rocky spur, 300 ft. above wash. Spur projects W.

Land, rough and broken, 56 chs.; rolling, 24 chs.

Soil, light red sandy loam, of medium texture, 24 chs.;

Partial Subdivision of T. 40 N., R. 5 W.

Chains rocky, 56 chs. Subsoil, hard red clay, 24 chs.; stony and sandstone bedrock, 56 chs.
 Scattering scrub cedar and pinion, 56 chs.
 Undergrowth, yellowtop.
 Good grazing, 24 chs.
 August 18, 1914.

August 19, 1914: At the cor. of secs. 5, 6, 7, and 8, I set off 36° 53' N. on the lat. arc; 12° 55' N. on the decl. arc; and, at 10h 4m a. m., l. m. t., determine a meridian with the solar.

- Thence I run
 S. 89° 56' W., on a random line, bet. secs. 6 and 7.
 40.00 Set temp. 1/4 sec. cor.
 78.26 Intersect the W. bdy. of the T., 7 lks. S. of the cor. of secs. 1, 6, 7, and 12.
 Thence I run
 N. 89° 59' E., on a true line, bet. secs. 6 and 7.
 Over broken, mountainous land, cut by deep canyons, draining S., through dense scrub cedar and pinion timber.
 23.00 Leave broken land, bears NW. and SE.; enter rolling top of mesa, near S. edge.
 37.51 Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground, to bedrock, surrounded by amount of stone, for witness cor. to the quarter section corner, marked on brass cap
 1914 on S. rim;
 S6 in N.,
 WC in E.,
 S7 in S., and
 1/4 in W. half;
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable. Trees too small for bearing trees.
 38.26 True point for 1/4 sec. cor., falls on edge of canyon, draining E.; desc. abruptly over ledge, 100 ft. high, bears N. 80° E. and S. 80° W.
 44.00 Bottom of canyon, drains S., 100 ft. below top; asc. abruptly over ledges. Canyon heads 2 chs. N.
 48.25 Top of abrupt ascent, bears N. and S.; asc. gradually.
 68.00 Top of ascent, bears N. and S., 100 ft. above bottom of canyon; desc. abruptly.
 73.25 Wash, in bottom of canyon, 20 lks. wide, 3 ft. deep; drains SW.; 115 ft. below top of ascent; asc. abruptly over ledges.
 78.26 The cor. of secs. 5, 6, 7, and 8, 100 ft. above bottom of wash.
 Land, rough and broken, cut by canyons, draining S.
 Soil, rocky.
 Timber, scattering scrub cedar and pinion.
 No grazing.
 August 19, 1914: No observation for lat. taken at noon; walking on line.

N. 0° 3' W., on a true line, bet. secs. 5 and 6.
 Desc. abruptly over rough, broken land, through dense scrub cedar and pinion timber.

- 5.00 Bottom of gulch, 75 ft. below cor., drains SW.; asc. abruptly over broken land, draining SE.
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap
 1914 on S. rim;
 1/4 in N.,
 S5 in E., and
 S6 in W. half; from which
 A cedar, 8 ins. diam., bears S. 39° 30' E., 27 lks. dist., marked 1/4 S5BT.
 A pinion, 10 ins. diam., bears S. 29° 15' W., 64 lks. dist., marked 1/4 S6BT.

20. Partial Subdivision of T. 40 N., R. 5 W.

Chains
41.50 Continue over broken land.
Edge of mesa, 200 ft. above bottom of gulch, bears E. and W.; continue over gently rolling sagebrush mesa; leave dense scrub cedar and piñon timber.

73.75 Intersect the 10th Standard Parallel North, 8.54 chs. E. of the standard cor. of secs. 31 and 32, T. 41 N., R. 5 W. At point of intersection I
Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for the closing corner of secs. 5 and 6, marked on brass cap
1914 on S. rim;
T41NR5WS32 in N. and
T40NR5WCCin S. half;
S5 in SE. and
S6 in SW. quadrant;
dig pits, 24x18x12 ins., crosswise on each line, E. and W., 3 ft., and S. of post, 7 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, S. of cor.
Land, rough, broken, and steep.
Soil, rocky and sandy.
Timber, scrub cedar and piñon.
Undergrowth, sage.
Scant grazing.

August 19, 1914.

GENERAL DESCRIPTION.

The land in this township, under the Red Ledges, is gently rolling, with a southern exposure, cut by numerous washes. The land on the Red Ledges is rough and broken and of little or no value for grazing or farming, cut by many canyons, with perpendicular sandstone walls making it impracticable to survey.

The soil, under the Red Ledges, is a light red sandy loam of medium texture, from 1 to 10 ft. in depth, and well adapted to farming. Greasewood, shad scale, yellowtop, and grass afford good grazing for cattle and sheep.

Mr. C. B. Jamison, whose post office address is Moccasin, Arizona, is the only settler in the township. His improvements consist of one stone house, with canvas roof, about 1500 ft. of wire fence, and about 20 acres of cultivated land, raising an average crop of dry-farm corn.

The small reservoir in sec. 35 is formed by damming a draw and storing rain-water for cattle.

No indications of mineral or oil were found in this township.

Geo. E. Thomas
U. S. Surveyor.

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BOOK 2859

FOR FINAL OATH OF UNITED STATES SURVEYOR.

See Book "A"

I, _____, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for _____ bearing date of the _____ day of _____, 191____, 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 _____ of the _____ Meridian, in the State of _____, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear 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 U. S. Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

U. S. Surveyor.

Subscribed by said _____, and sworn to before me }
 this _____ day of _____, 191____



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix Arizona Feb. 15, 1916

The foregoing field notes of the survey of *part of the*
Subdivision lines of
Township 40 North - Range 5 West
of the Gila and Salt River Base and Meridian
in the State of Arizona

executed by *Jos. C. Thoma, U.S. Surveyor*
 under his special instructions dated *March 11, 1913 for Group 29*, ~~191~~____, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank D. Roth

U. S. Surveyor General.
OF ARIZONA.

~~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.~~