

Subdivisional
BOOK "ZN"

2618

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BOOK 2618

FIELD NOTES

OF THE SURVEY OF THE

Subdivision lines of Tp 30 N. R. 13 E.

Multiple horizontal dashed lines for handwritten notes.

Of the *Gila and Salt River Base and Meridian,*
in the Territory of Arizona

EXECUTED
AS SURVEYED BY

Van L. White, U.S. Plausitman, ~~United States Deputy Surveyor,~~
Special Instructions from the Commissioner of the General Land Office
*Under ~~his Contract No.~~ dated *Oct 2nd 1907 and May 15th 1908**

Survey commenced *February 14th*, 1911

Survey completed *March 2nd*, 1911

NAMES AND DUTIES OF ASSISTANTS.

T. Y. White	Chairman
Richard L. Shumway	Chairman
George B. Seig	Mound man
Harry Keyope	Mound man
Nelson Polacca	Axman
William R. Carson	Flagman

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Book No. 2618

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PRELIMINARY OATHS OF ASSISTANTS.

WE, T. Y. White and Richard L. Shumway

do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain upon even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

the Subdivisions lines of Tp 30 N. R. 13 E., G. & S. R. B. & M., Arizona.

T. Y. White, Chainman.

Richard L. Shumway, Chainman.

Subscribed and sworn to before me this 8th day of February, 1911



Van L. White

U.S. Transitman

WE, George B. Seig and Harry Keyope

do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of

the Subdiversion lines of Tp 30 N. R. 13 E., G. & S. R. B. & M., Arizona.

George B. Seig, Moundman.

Harry Keyope, Moundman.

Subscribed and sworn to before me this 8th day of February, 1911



Van L. White

U.S. Transitman

I, Nelson Polacca

do solemnly swear that I will well and truly perform the duties of axman in the establishment of corners and other duties, according to instructions given ~~us~~ to the best of ~~my~~ skill and ability, in the survey of

the Subdiversion lines of Tp 30 N. R. 13 E., G. & S. R. B. & M., Arizona.

Nelson Polacca, Axman.

Subscribed and sworn to before me this 8th day of February, 1911



Van L. White

U.S. Transitman

I, William R. Carson, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of

the Subdiversion lines of Tp 30 N. R. 13 E., G. & S. R. B. & M., Arizona.

William R. Carson, Flagman.

Subscribed and sworn to before me this 8th day of February, 1911



Van L. White

U.S. Transitman

Survey commenced February 14th 1911, and executed with a W. & L. E. Gurley engineers transit No. 76 with a Burt solar attachment. The horizontal limb is provided with one double number reading to single minutes of arc. The numbers of the latitude and declination arcs read to 0' 30" of arc.

Examine the adjustments of the transit and find them correct and know from recent tests of the solar apparatus by comparing its indications resulting from solar observations made during a.m. and p.m. hours with a meridian established by observations on polaris that the instrument is in satisfactory adjustment.

For last complete test of the instrument see the field notes of the survey of the 3rd Guide Meridian East through Np. 30 N., T. 13 E. ranged 12 and 13 E. in Standard Book "S"

Begin at the cor. of sec. 12, 35 and 36, on S. side of Np. ^{described in Exterior Book "AN"} which is established January 24th 1911
Latitude 35° 56' 41" N., Longitude 110° 54' 42" W.

At 8^h 14^m a.m. L.M.L. set off 35° 56' 1/2" N. on the lat. arc, 13° 12' 1/2" S. on the decl. arc, and determined a meridian with the solar at the above cor.; thence
Draw,

N. 0° 01' W., 3/4 sec. 35 and 36,

Descend NW. slope over rolling sandy land through scattering sage and greasewood brush undergrowth and bunch grass.

40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for 1/4 sec. cor. marked on brass cap 1/4 S 35 on W. half and S 36 on E. half.

Dig pits 18 x 18 x 12 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.

45.50 Dry ravine 10 lbs. wide course west. Land rolling sandy land bears E. and W. Enter hilly stony land bears E. and W. asc. S. slope.

57.00 Top of sand ridge bears E. and W. desc. gradually.

66.20 Top of sand stone bluff 150 ft. high bears N 26° E. and S 20° W. desc. abruptly.

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

Subdivision of Twp 30 N., R 13 E.

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Chain

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marked on brass cap T 30 N. S 26 in N.W., R 13 E.
 S 25 in N.E., S 36 in S.E. and S 35 in S.W. quadrants.
 Raised mound of stone 2 ft. base, 1 1/2 ft. high. W.
 of cor. Pits impracticable
 Land rolling and hilly.
 Soil sandy and stony 3rd and 4th rate.
 No timber

89° 58' E., on a random line, bet. sec. 25 and 36,
 40.00 Sep temp 1/4 sec cor.

79.96 Intersect E. lvs. of Twp, 10 lks. S. of the cor. of sec.
established by me Nov 16, 1903 as described in Exterior Book "AR"
 25, 30, 31, and 36, these 3 runs,

89° 58' W., on a true line, bet. sec. 25 and 36,

Descend gradually over N.W. slope, through
 scattering cedar timber and greasewood brush
 undergrowth

1.35 Cedar timber bears N.E. and S.W.

1.50 Top of perpendicular bluff. 50 ft. high. bears
 N 30° E. and S 30° W. bears rolling sandy land
 bears N.E. and S.W. Enter stony hilly land.
 descend abruptly over West. slope.

39.98 See an iron fork 3 ft. long. 1 in. in diam 26 ins.
 in the ground for 1/4 sec. cor. marked on brass
 cap by S 25 on N. half and S 36 on S. half.
 Dig pits 18x18x12 ins. E and W. of fork. 3 ft. dist.
 and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft.
 high. N. of cor.

46.20 East edge of Canyon bears N. and S. desc.

56.50 Dry ravine at bottom of Canyon. 40 lks. wide course N.W. and gradually
 79.96 The cor. of Secs 25, 26, 35 and 36, hereinbefore described.

Land rolling, hilly, and broken.
 Soil sandy and stony 3rd and 4th rate.
 Timber cedar

N 0° 01' W., bet. sec 25 and 26,

Descend N.W. slope over broken stony hilly land
 through scattering greasewood brush and bunch
 grass

23.75 Dry ravine 20 lks. wide course N 35° E. and

33.50 Top of rocky ridge bears E and W. desc.

40.00 See an iron fork 3 ft. long. 1 in. in diam 26 ins.

Chains

Subdivision of $7\frac{1}{2}$ 30 N., R 13 E

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- in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 26 on W half and S 25 on E. half
Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Pits impracticable
- 45.50 Dry ravine 20 lks. wide, 25 ft. below $\frac{1}{4}$ sec. cor. course $N 60^{\circ} E.$ asc.
- 45.70 Top of ridge bears N.E. and S.W. desc.
- 49.10 Dry ravine 20 lks. wide course $N 40^{\circ} E.$ asc.
- 55.50 Top of rocky ridge 30 ft. above ravine. bears $N 40^{\circ} E.$ and $S 40^{\circ} W.$ desc.
- 61.70 Dry ravine 10 lks. wide course N.E. asc.
- 66.50 Top of clay ridge bears N.E. and S.W. desc.
- 71.85 Dry ravine 30 lks. wide 3 ft. deep course N.E.
- 79.75 Dry ravine 10 lks. wide 2 ft. deep course $N 70^{\circ} E.$ asc.
- 80.00 Set an iron post 3 ft. long 2 ins. in diam. 24 ins. in the ground for cor. of secs. 23, 24, 25 and 26 marked on brass cap. T 30 N S 23 in N.W., R 13 E. S 24 in N.E., S 25 in S.E. and S 26 in S.W. quadrants. 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 hilly and broken.
Soil sandy, clayey, and stony 3rd and 4th rates.
No timber
-
- $N 89^{\circ} 58' E.$, on a random line, bet. sec. 24 and 25.
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 79.92 Intersect E. ldy of $7\frac{1}{2}$ 5 lks. S. of the cor. of sec. 19, 24, 25, and 26, established by me Nov. 16, 1910, as described in Exterior Book "AR" three runs
 $S 89^{\circ} 56' W.$, on a true line, bet. sec. 24 and 25, descend S.W. slope over hilly sandy and clayey land, through scattering sage and greasewood brush undergrowth and bunch grass
- 14.25 Dry ravine 20 lks. wide, 3 ft. deep course $N 20^{\circ} W$ asc.
- 30.00 Top of ridge bears N.E. and S.W. desc.
- 31.85 Dry ravine course N.E. asc
- 38.00 Top of sand ridge bears N. and S. desc. gradually over W. slope.
- 39.96 Set an iron post 3 ft. long 1 in. in diam. 26 ins.

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- in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 24 on N. half, and S 25 on S. half
 Dig pits 18x18x12 ins. E and W. of post 3 ft. dia. and raise a mound of earth $3\frac{1}{2}$ ft. base $1\frac{1}{2}$ ft. high. N. of cor.
- 45.15 Each edge of canyon bears N. and S. desc abruptly, over stony land.
- 69.45 Top of abrupt descent in canyon, cross dry ravine 40 lbs. wide course North, are gradually
- 76.80 Dry ravine 20 lbs. wide 3 ft. deep course N.E.
- 79.92 The cor. of sec. 23, 24, 25 and 26, hereinbefore described. Land hilly and broken. Soil sandy, clayey, and stony 3rd and 4th rate. No timber
- Note: Clouds obscure the sun at noon today rendering an observation for latitude impossible
 February 14, 1911

- Feb. 20th 1911, Oct. 8th 14th a.m. l.m.t., I set off $35^{\circ}58\frac{1}{2}'$ N. on the lat. arc $11^{\circ}07\frac{1}{2}'$ S. on the decl. arc and determine a meridian with the solar alt. the cor. of sec. 23, 24, 25 and 26, ^{hereinbefore described} thence I run, N. $0^{\circ}04'$ W., to sec. 23 and 24, Descend N.E. slope over sandy land, through scattering sage and greasewood bush undergrowth and bunch grass.
- 21.80 Dry ravine in bottom of canyon. 35 lbs. wide 5 ft. deep, course $N70^{\circ}$ W. are. S.W. slope.
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 23 on W. half, and S 24 on E. half. Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high. W. of cor. Pits impracticable.
- 41.20 Begin abrupt ascent over S. slope of clay ridge
- 52.00 Top of ridge 75 ft. above $\frac{1}{4}$ sec. cor. bears E. and W. desc. steep N.W. slope.
- 80.00 The ^{trip} point for the cor. of sec. 13, 14, 23, and 24 falls on unsafe ground on steep N.W. slope of ridge, therefore I continue my line and measurements and at.
- 81.70 Set an iron post 3 ft. long 2 ins in diam. 24

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Chain

- ins. in the ground for witness cor. to the cor. of sec. 13, 14, 23 and 24, marked on brass cap. WC. in N. half. T 30 N. S 14 in NW. R 13 E S 13 in NE., S 24 in SE. and S 23 in SW. quadrant.
 - Dig pits 18x18x12 ins. N.E., S.E., S.W. and N.W. of post. 5 1/2 ft. dish. and raise a mound of earth 4 ft. base, 2 ft. high. W. of cor.
 - Land hilly.
 - Soil sandy and stony 3rd and 4th rate.
 - No timber
-
- From the ^{true} post for cor. of sec. 13, 14, 23 and 24 on steep N.W. slope of ridge, I run,
 - N. 89° 56' E., on a random line, bet. sec. 13 and 24,
 - 40.00 Set temp. 1/4 sec. cor.
 - 80.04 Intersect E. bdy. of ^{the} 8 lks. S. of the cor. of established by me Nov 16, 1910 as described in Exterior Book "AR," sec. 13, 18, 19 and 24, thence I run,
 - S 89° 53' W., on a true line, bet. sec. 13 and 24,
 - Descend gradually over S.W. slope through scattering sage and greasewood bush undergrowth and bunch grass.
 - 9.25 East edge of Canyon bears N. and S., leave rolling sandy land bears N. and S., enter stony broken and hilly land. desc. abruptly over W. slope into Canyon!
 - 37.60 Foot. of abrupt rocky descent in Canyon 200 ft. below top of rim, cross dry ravine 30 lks. wide banks 4 ft. high. Course SW. asc. steeply.
 - 40.02 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground, for 1/4 sec. cor. marked on brass cap. N 48 13 on N. half and S 24 on S. half. Dig pits 18x18x12 ins. E and W. of post. 3 ft. dish. and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high N. of cor.
 - 42.25 Top of rocky ridge, bears N. and S. desc.
 - 53.55 Dry ravine 40 lks. wide Course north asc.
 - 57.00 Top of sand ridge bears N. and S. desc.
 - 59.00 Dry ravine 20 lks. wide Course N.E. asc.
 - 68.00 Along N.E. slopes
 - 80.04 Top of ascent; descend steep NW. slope True post for cor. of sec. 13, 14, 23, and 24, on steep

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CHAIN
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N.W. slope of ridge.
Land, rolling, hilly, and broken.
Soil sandy and stony 3rd and 4th rate.
No timber.

Note:- At the witness cor. to cor. of secs. 13, 14, 23.
and 24, ^{herebefore described} set off 11° 05' S. on the decl. arc and
at noon observe the sun on the meridian
and obtain a reading of 35° 59½' N. on the
lab. arc

From true point for cor. of secs. 13, 14, 23 and 24 on steep NW. slope of ridge, I run
N 0° 01' W., to cor. sec. 13 and 14,

Descend over hilly sandy and stony
land, through scattering sage and greasewood
bush, undergrowth and bunch grass.

1.70 W.C. to cor. of secs. 13, 14, 23 and 24, herebefore described
19.60 Dry ravine 50 lbs. wide course N 30° W. arc.

39.70 Top of rocky ridge bears E and W. desc.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins
in the ground for ¼ sec. cor. marked on brass
cop ¼ S 14 on W. half and S 13 on E. half.

Raise a mound of stone 2 ft. base, 1½ ft. high.
W. of cor. Pits impracticable.

40.14 Dry ravine course wash. asc. steep South slope.

62.00 Top of steep ascent. 100 ft. above ¼ sec. cor. are
gradually.

67.50 Top of 2nd ridge bears E and W. desc

77.75 Dry rocky ravine 80 ft. below top of ridge course
wash asc. steeply.

80.00 The point for the cor. of secs. 11, 12, 13 and 14
falls on unsafe ground on steep S. slope of
ridge, therefore on

79.60 Set an iron post 3 ft. long 2 in. in diam. 24
ins. in the ground for witness cor. to the cor.
of secs. 11, 12, 13, and 14. marked on brass
cop. W.C. in N. half. T 30 N. S 11 in N.W. R 13 E
S 12 in N.E., S 13 in S.E. and S 14 in S.W. quadrant.

Raise a mound of stone 2 ft. base, 1½ ft. high.
W. of cor. Pits impracticable

Land broken and hilly.
Soil sandy and stony 3rd and 4th rate.
No timber

February 20th 1911

Subdivision of Twp 30 N., R 13 E.

Chains

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- Feb. 21st 1911 At 8^h 14^m a.m. l.m.t., I set off $36^{\circ}00'$ N., on the l.h. arc, $10^{\circ}46'3''$ on the decl. arc, and determine a meridian with the solar at the true point for
1. Cor. of secs. 11, 12, 13 and 14, thence I run, $N. 89^{\circ}53' E.$, on a random line, bet. secs. 12 and 13,
- 40.00 Set temp $\frac{1}{4}$ sec. cor.
- 79.92 Intersect E. ldy. of Twp., 5 lks. N. of the cor. of secs. established by me, Nov. 16, 1910 as described in Exterior Book "AR" 7, 12, 13, and 18, thence I run, $S 89^{\circ}55' W.$, on a true line, bet. secs. 12 and 13, Descend N.W. slope over rolling sandy land through sage and greasewood brush undergrowth and bunch grass.
- 23.00 Foot of descent in depression bears N. and S. drains north are gradually
- 30.00 Top of sand ridge bears $N 35^{\circ} E$ and $S 35^{\circ} W$. desc.
- 39.96 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 12 on N. half and S 13 on S. 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.
- 76.00 Leave rolling land bears N.E. and S.W., Enter stony hilly land bears N.E. and S.W. desc. abruptly on N.W. slope.
- 79.15 Dry rocky ravine 15 lks. wide course S.W. asc.
- 79.92 The true point for cor. of secs. 11, 12, 13, and 14, on steep South slope. Land rolling and hilly. Soil sandy and stony 3rd and 4th rate. No timber
-
- From the true point for cor. of secs. 11, 12, 13 and 14 on steep South slope, I run, $N. 0^{\circ}01' W.$, bet. secs. 11 and 12,
- Ascend steep S. slope over stony hilly land through scattering sage and greasewood brush undergrowth and bunch grass.
- 3.50 Top of sand ridge bears N.E. and S.W. desc.
- 28.30 Dry ravine 20 lks. wide course $S 30^{\circ} W$. asc. Steep S.E. slope
- 35.60 Top of steep ascent. Leave hilly land bears N.E. and S.W. Enter rolling sandy land, are gradually
- 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on brass

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- Cap. $\frac{1}{4}$ S 11 on W. half and S 12 on E. half
Dig pits 18x18x12 ins N. and S. of post 3 ft. dia
and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft.
high W. of cor.
- 73.00 Top of sand ridge bears N.E. and S.W. decl.
gradually.
- 80.00 Set an iron post 3 ft. long 2 ins. in diam. 24
ins. in the ground for cor. of secs. 1, 2, 11,
and 12. marked on brass cap. T 30 N 3 2 in NW.
R13 E. S 1 in N.E., S 12 in S.E. and S 11 in S.W.
quadrant.
- Dig pits 18x18x12 ins. in each sec. $5\frac{1}{2}$ ft. dia.
and raise a mound of earth 4 ft. base, 2 ft.
high W. of cor.
- Land rolling and hilly.
Soil sandy and stony 3rd and 4th rate.
No timber.
- Note: At this cor. I set off $10^{\circ}46\frac{1}{2}'$ S. on the decl. arc
and at noon observe the sun on the meridian
and obtain a reading of $36^{\circ}01'$ N. on the lat. arc.
-
- N $89^{\circ}55'$ E., on a random line, bet. secs. 1 and 12,
40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 79.94 Intersect E. ldy. of T₁, 5 lks. S. of the cor. of secs.
1, 6, 7, and 12, established by me Nov. 16, 1910 as described in Exterior Book "AR"
^{Thence I run,}
S $89^{\circ}53'$ W., on a true line, bet. secs. 1 and 12,
Ascend E. slope over rolling sandy land through
scattering sage and greasewood brush undergrowth
and bunch grass.
- 3.00 Top of sand ridge bears N.E. and S.W. decl.
gently.
- 39.97 Set an iron post 3 ft. long. 1 in. in diam. 26
ins. in the ground for $\frac{1}{4}$ sec. cor. marked
on brass cap $\frac{1}{4}$ S 1 on N. half and S 12 on S. half
Dig pits 18x18x12 ins E. and W. of post. 3 ft. dia.
and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$
ft high. N. of cor.
- 63.30 Road to Oraibi, Arizona, bears N.W. and S.E. ascend.
- 79.94 The cor. of secs. 1, 2, 11, and 12 hereinbefore described.
Land rolling.
Soil sandy 3rd rate.

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Chain

No timber

40.00 Set temp. 1/4 sec. cor.
No 0° 01' W., on a random line, bet. secs. 1 and 2,

80.16 Ditch N. bdy. of Twp. 5 lks. N. 89° 57' E. of the cor. of
secs. 1, 2, 35 and 36, recently established by me as described in Exterior Book "AO"; thence I run,

S 0° 03' E. on a true line, bet. secs 1 and 2,
Ascend NW. slope over rolling sandy land through
scattering sage and greasewood brush under-
growth and bunch grass

40.16 Set an iron post 3 ft. long, 1 in. in diam 26 ins.
in the ground. for 1/4 sec. cor. marked on brass
cap 1/4 S 2 on W. half and S 1 on E. half
Dig pits 18x18x12 ins. N. and S. of post 3 ft.
diam. and raise a mound of earth 3 1/2 ft. base
1 1/2 ft. high W. of cor.

58.28 Road bears N 40° W. and S 40° E., to Oraibi, Arizona.

80.16 The cor. of secs. 1, 2, 11. and 12. hereinbefore described.
Land rolling
Soil sandy 3rd rate.
No timber

February 21st 1911

February 15th 1911 At 7^h 44^m a.m. I met, & set off 35° 56' 27".
on the lat. arc. 12° 52' S. on the decl. arc and determine
a meridian with the solar at the cor. of secs.

2, 3, 34. and 35 on S. bdy. of Twp.; recently established by
me as described in Exterior Book "AN"; thence I run,
N. 0° 01' W., bet. secs. 34 and 35,

Ascend S.E. slope over rolling sandy land through
scattering sage and greasewood brush undergrowth
and bunch grass.

11.82 Road bears N 35° W. and S 35° E., to Oraibi, Arizona.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in
the ground for 1/4 sec. cor. marked on brass cap 1/4
S 34 on W. half and S 35 on E. half.
Dig pits 18x18x12 ins. N. and S. of post 3 ft. diam. and
raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high W.
of cor.

This cor. is situated on top of sand ridge, bears
N.E. and S.W. due gradually.

80.00 Set an iron post 3 ft. long 2 ins. in diam. 2 1/2 ins. in

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the ground for cor. of sec. 26, 27, 34 and 35;
marked on brass cap T 30 N., S 27 in N.W., R 13 E. S 26
in N.E., S 35 in S.E. and S 34 in S.W. quadrants.

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.

Soil sandy 3rd rate.

No timber

S 89° 58' E, on a random line, bet. sec. 26 and 35;

40.00 Set temp. 1/4 sec. cor.

79.96 Intersect N. and S. line, 5 lks. S. of the cor. of sec.
25, 26, 35 and 36, hereinbefore described, thence 1 run,
W. on a true line, bet. sec. 26 and 35,

Descend N.W. slope over hilly land, through scattering
sage and greasewood bush undergrowth and bunch
grass.

.25 Dry ravine 20 lks. wide 2 ft. deep course N.E. and

14.60 Begin abrupt ascent over cliffs 150 ft. high.

16.75 Top of cliffs bears N and S., hard broken hilly land
bears N. and S., enter rolling sandy land, ascend grad.

39.98 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in
the ground for 1/4 sec. cor. marked on brass cap.
1/4 S 26 on N. half and S 35 on S. 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.

79.96 The cor. of sec. 26, 27, 34 and 35; hereinbefore described.

Land broken, hilly, and rolling.

Soil sandy and stony 3rd and 4th rate.

No timber

N 0° 01' W, bet. sec. 26 and 27,

Descend N.E. slope over rolling sandy land through
scattering sage and greasewood bush undergrowth
and bunch grass

25.85 Dry ravine 10 lks. wide course N.E. and

40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins.

in the ground for 1/4 sec. cor. marked on brass cap.

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Chains

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1/4 S 27 on W. half and S 26 on E. 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.

54.00 Top of sand ridge bears N.E. and S.W., desc., land rolling land bears N.E. and S.W., enters hilly land.

78.00 South edge of canyon, bears E. and W., enters stony land, descend abruptly.

80.00 The point for the cor. of secs. 22, 23, 26, and 27, falls in dry ravine 10 lbs. wide, course N.E., where natural causes would insure the destruction of the cor.; therefore I continue my alignment and measurements and ab.

80.25 Set an iron post 3 ft. long 2 ins. in diam. 24 ins. in the ground for witness cor. to cor. of secs. 22, 23, 26, and 27, marked on brass cap. W.C. in N. half T 30 N R 13 E S 23 in N.E., S 26 in S.E. and S 27 in S.W. quadrant.

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

Land rolling, broken and hilly.

Soil sandy and stony 3rd and 4th rate.

No timber.

Note: - At this W.C. I set off 12° 50' 5" on the decl. arc and at noon observed the sun on the meridian and obtain a reading of 35° 58' 1/2" N. on the lob. arc.

From the true point for cor. of secs. 22, 23, 26 and 27 in ravine, I run,

East, on a random line, bet. secs. 23 and 26,

40.00 Set temp. 1/4 sec. cor.

80.04 Intersect N. and S. line, 5 lbs. N. of the cor. of secs.

23, 24, 25 and 26, hereinbefore described, thence I run,

N. 89° 58' W., on a true line, bet. secs. 23 and 26,

Around E. slope of clay ridge over hilly stony land through scattering sage and greasewood brush undergrowth and bunch grass.

38.90 Top of ridge 80 ft. above 1/4 sec. cor. bears N. and S. desc.

40.02 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for 1/4 sec. cor. marked on brass cap. 1/4 S 23 on N. half and S 26 on S. half.

Dig pits 18x18x12 ins E and W. of post 3 ft. dist. and

BOOK 2618

- and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high
N. of cor.
- 44.10 Dry ravine 25 lbs. wide 3 ft. deep course north and
58.70 Top of steep ascent 100 ft. above ravine head.
Hald S. asc. gradually.
- 68.00 Top of sand ridge bears N. and S desc. W. slopes.
- 80.04 ~~The~~ point for cor. of secs. 22, 23, 26 and 27, in dry
ravine course N.E.
Land hilly.
Soil sandy, clayey, and stony 3rd and 4th rate.
No timber

From true point for cor. of secs. 22, 23, 26 and 27 in ravine, I run,

N. $0^{\circ} 01' W.$, bet. secs. 22 and 23,

Over hilly sandy and stony land, through scattering
sage and greasewood brush undergrowth and
 bunch grass.

- 0.25 W. C. to cor. of secs. 22, 23, 26 and 27, hereinbefore described.
- 0.40 Same ravine 20 lbs. wide course N.W. asc. steeply
- 2.00 Top of ridge bears E. and W. desc.
- 4.10 The same ravine 30 lbs. wide 4 ft. deep course N.E.
asc.
- 11.43 Top of sand ridge 40 ft. above ravine bears E. and
W. desc.
- 18.60 The same ravine 25 lbs. wide course N.W. asc
- 20.00 Top of sand ridge bears E. and W. desc.
- 24.60 The same ravine, 25 lbs. wide course N.E. asc.
- 25.05 Top of sand ridge bears E. and W. desc.
- 27.75 The same ravine 20 lbs. wide course N.W. asc.
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in
the ground for $\frac{1}{4}$ sec. cor. marked on brass cap.
S 22 on W. half and S 23 on E. half.
Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high. W.
of cor. Pits impracticable.
- This cor. is situated on top of rocky ridge, bears
E. and W., desc. steep N.W. slopes.
- 58.30 Dry ravine 30 lbs. wide, in bottom of canyon,
course N.E. asc. abruptly.
- 75.00 Top of rocky ridge bears N.E. and S.W. desc. steeply.
- 80.00 Set an iron post 3 ft. long, 2 ins. in diam. 24 ins. in
the ground for cor. of secs. 14, 15, 22, and 23.
marked on brass cap T 30 N. S 15 in N.W., R 13 E. S 14
in N.E., S 23 in S.E., and S 22 in S.W. quadrants

Chain

Subdivision of T₁ 30 T₆ R 13 E.

13

Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high. W. of Cor. Pits impracticable
 Land very broken and hilly.
 Soil sandy and stony 3rd and 4th rate.
 No timber

February 15th 1911

- February 22nd 1911. At 8^h 14^m a.m. l.m.l. - D run off.
 $35^{\circ} 54\frac{1}{2}' N.$ on the lab. arc, $10^{\circ} 24\frac{1}{2}' S.$ on the decl. arc
 and determine a meridian with the solar at the
 Cor. of secs. 14, 15, 22, and 23, ^{above described} then set D run,
 $S 89^{\circ} 58' E.$, on a random line, bet. secs. 14 and 23,
 40.00 Set temp $\frac{1}{4}$ sec. cor.
 80.10 Intersect N. and S. line, 160 lbs. S of the witness
 Cor. to Cor. of secs. 13, 14, 23, and 24, ^{herein before described,} then set D run,
^{from true point for corner,}
 $N. 89^{\circ} 54' W.$, on a true line, bet. secs. 14 and 25,
 Descend N.W. slope over broken stony hilly land
 through scattering sage and greasewood brush under
 growth and bunch grass
 15.80 Dry ravine 40 lbs. wide, banks 6 ft. high course
 N.W. asc.
 36.00 Top of steep ascent 80 ft. above ravine. Head North
 and $S 30^{\circ} W.$ asc. gradually.
 38.30 Top of rocky ridge head N. and S. desc. W. slope.
 40.05 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor. marked on brass cap.
 $N 3 14$ on N. half and $S 23$ on S. half.
 Raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high. N
 of Cor. Pits impracticable.
 41.30 Dry ravine 30 ft. below $\frac{1}{4}$ sec. cor. course north asc.
 46.50 Top of ridge head N. and S. desc.
 53.00 East edge of canyon head N. and S. desc. abruptly.
 55.50 Bottom of canyon 100 ft. below top of rim. Cross dry
 ravine course north asc.
 58.00 Top of ascent on sand stone rim W. side of canyon
 head N. and S., head hilly land head N. and S. Enter
 rolling sandy land.
 62.60 East edge of canyon 100 ft. deep on sand stone
 rim rock. head N. and S. head rolling land head
 N. and S. Enter broken stony land. Descend abruptly
 65.00 Foot of descent in canyon, cross dry ravine course
 north asc. abruptly

Subdivision of Twp. 30 N., R13E.

14

Chain

BOOK 2618

- 67.00 Top of abrupt low sand stone rim rock. on W. side of Canyon bears N. and S.
- 69.20 East edge of Canyon, on rim rock. 100 ft. high. bears $N20^{\circ}E.$ and $S20^{\circ}W.$ desc. abruptly into Canyon.
- 73.50 Bottom of Canyon. Cross dry ravine 10 lbs wide course N.E. and abruptly
- 78.90 Top of abrupt-acute low sand stone rim rock. W. side of Canyon bears N. and S. asc. gradually
- 80.10 The cor. of secs 14, 15, 22, and 23, hereinbefore described. Land rolling hilly and broken. Soil sandy and stony 3rd and 4th rate. No timber

$N.0^{\circ}01'W.$, top. sec. 14. and 15,

Descend N. slope over broken stony land, ridges and ravines. through, scattering sage and greasewood bush undergrowth and bunch grass.

26.16 Dry ravine 75 ft. below sec. cor. course N.E. asc.

40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for sec. cor. marked on brass cap. $N48^{\circ}15'$ on W. half and $S14^{\circ}$ on E. half.

Dig pits $18 \times 18 \times 12$ ins N. and S. of post 3 ft. diam. and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high. W. of cor

Note: At this cor. I set off. $10^{\circ}22'S.$ on the decl. arc and at noon observe the sun on the meridian and obtain a reading of $35^{\circ}59\frac{1}{2}'N.$ on the lat. arc

40.75 Top of ridge 10 ft. above sec. cor. bears N.E. and S.W. desc

42.50 Dry ravine course N.E. asc.

48.30 Top of ridge bears N.E. and S.W. desc.

63.00 Top of bluff. 100 ft. high. bears N.E. and S.W. desc. abruptly over cliffs.

80.00 Top of abrupt rocky descent, ^{bears N.E. and S.W.} Set an iron post. 3 ft. long 2 ins. in diam. 24 ins. in the ground for cor. of secs. 10, 11, 14, and 15, marked on brass cap. $T30N.$ $S10$ in N.W., $R13E.$ $S11$ in N.E., $S14$ in S.E. and $S15$ in S.W. quadrant.

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

Subdivision of Tp 30 N., R 13 E.

Chains

Land broken and hilly.
Soil stony 4th rate.
No timber

40.00 S 89° 54' E, on a random line, bet. sec. 11 and 14,
Set temp. 1/4 sec. cor.

79.98 Intersect N. and S. line, 32 lks. N. of the witness cor.
to cor. of sec. 11, 12, 13, and 14, ^{hereinbefore described} thence S run,
From true point for corner,
N. 89° 57' W, on a true line, bet. sec. 11 and 14,

ascend steep rocky E. slope over hilly land through
scattering sage and greasewood brush undergrowth
and bunch grass.

3.80 Top of rocky ridge 40 ft. above cor. bear N.E. and
S.W. desc. steeply.

20.25 Dry ravine 20 lks. wide course north. and

30.00 Top of rocky peak 80 ft. above ravine desc.

39.99 Set an iron post 3 ft. long, 1 in. in diam. 26 ins.
in the ground for 1/4 sec. cor., marked out brass
cap 1/4 S 11 on N. half. and S 14 on S. half.
Dig pits 18x18x12 ins. E and W. of post 3 ft. dist.
and raised a mound of earth 3 1/2 ft. base, 1 1/2 ft.
high. N. of cor.

43.00 Dry ravine 50 lks. wide 8 ft. deep course N 25° W.
also.

70.60 Top of rocky ridge bear N 30° E. and S 30° W desc.
steeply.

79.98 The cor. of sec. 10, 11, 14 and 15, hereinbefore described.
Land broken and hilly.
Soil sandy and stony 3rd and 4th rate
No timber

February 22nd 1911

February 23rd 1911 At 7^h 43^{mn} a.m. l. mt. S. run off.
36° 00' N on the lat arc. 10° 02 1/2' S. on the decl arc.
and determined a meridian with the solar at the
cor. of sec. 10, 11, 14, and 15, ^{hereinbefore described} thence S run,
N. 0° 01' W, bet. sec. 10 and 11,

ascend S.E. slope over hilly sandy and stony land.

18.80 Top of rocky ridge bear N.E. and S.W. desc. steeply

32.00 Foot of descent in depression bear N.E. and S.W.
drains to the N.E. also.

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- 39.40 Top of ridge bears N.E. and S.W. desc.
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S10 on W. half. and S11 on E. half. Dig pits 18x18x12 ins. N. and S. of post 3 ft. dish. and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high. W. of cor.
- 77.00 Pook. of descent in dry ravine 50 lbs. wide banks 10 ft. high. Course N.W. asc. steeply.
- 80.00 Set an iron post 3 ft. long 2 ins. in diam. 24 ins. in the ground for cor. of secs. 2, 3, 10, and 11. marked on brass cap T 30 N. S 3 in N.W., R 13 E. S 2 in N.E. S 11 in S.E. and S 10 in S.W. 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 hilly and broken
Soil sandy and stony 3rd and 4th rate.
No timber

- 40.00 $S 89^{\circ} 57' E$, on a random line, bet. secs. 2 and 11, Set temp. $\frac{1}{4}$ sec. cor.
- 79.88 Intersect N. and S. line, 5 lbs. N. of the cor. of secs. 1, 2, 11, and 12, hereinbefore described, thence 1 run, $N. 89^{\circ} 55' W.$, on a true line, bet. secs. 2 and 11, Over rolling sandy N.W. slope, through scattering sage and greasewood brush undergrowth and bunch grass.
- 39.94 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 2 on N. half and S 11 on S. half. Dig pits 18x18x12 ins. E. and W. of post 3 ft. dish. and raise a mound of earth $3\frac{1}{2}$ ft. base $1\frac{1}{2}$ ft. high. N. of cor.
- Note: At this cor. I set off $10^{\circ} 00' S$. on the decl. arc and at noon observed the sun on the meridian and obtain a reading of $36^{\circ} 01' N$. on the lab. arc.
- 57.00 East edge of canyon on sand stone rim rock. bears N.W. and S.E., Land rolling sandy land bears N.W. and S.E., Enter broken stony hilly

Subdivision of Twp 30 N., R 13 E.

Chains

75.50 Land bears N.W. and S.E. descend abruptly
 79.88 Foot of abrupt descent. desc. gradually.
 The cor. of secs. 2, 3, 10, and 11, hereinbefore described.
 Land rolling, broken and hilly.
 Soil sandy and stony 3rd and 4th rate.
 No timber

40.00 N. 0° 01' W., on a random line, bet. secs. 2 and 3,
 Set temp. 1/4 sec. cor.
 80.20 Intersect N. line, of Twp., 18 lbs. N. 89° 57' E. of the cor. of
 sec. 2, 3, 34, and 35, recently established by me as described in Exterior Book "AO", thence I run,
 S. 0° 09' E., on a true line, bet. secs. 2 and 3,
 Arced N.W. slope over rolling sandy land
 through scattering sage and greasewood bush
 undergrowth and bunch grass.

16.00 Top of sand ridge bears N 30° E. and S 30° W
 desc. gradually.

35.70 Foot of descent in depression bears N.E. and
 S.W. ^{ditto S.W.} descend gradually.

40.20 Set an iron post 3 ft. long, 1 in. in diam. 26 in.
 in the ground. foot 1/4 sec. cor. marked out bears
 E of 1/4 S 30° W. half and S 2. on E. half.
 Dig pits 18x18x12 in. N. and S. of post 3 ft. dist.
 and raise a mound of earth 3 1/2 ft. high, 1 1/2 ft.
 high W. of cor

49.00 Top of sand ridge 20 ft. high bears N.E. and S.W.
 bears rolling land bears N.E. and S.W. Enter
 hilly land.

60.35 North Edge of escarpment on sand stone rim rock
 about 125 ft. high bears N.E. and S.W. desc
 abruptly over broken stony land.

74.00 Foot of abrupt descent, descend gradually.

80.20 The cor. of secs. 2, 3, 10, and 11, hereinbefore described.
 Land rolling broken and hilly.
 Soil sandy and stony 3rd and 4th rate.
 No timber

February 20th 1911

February 16th 1911
 At 8^h 14^m a.m. l.m.t. set off.
 35° 56' N. on the hor. arc. 12° 31' S. on the decl.
 arc. and determine a meridian with the solar

BOOK 2618

- at the cor. of sec 3, 4, 33. and 34. on S. side of
Twp. recently established by me as described in Exterior Book "AN," thence I run,
N. 65° 02' W., to cor. sec. 33 and 34,
Descend N.W. slope over hilly sandy land through
scattering sage and greasewood brush undergrowth
and bunch grass.
- 28.70 Road from Oraibi, Arizona to Pinal City, Arizona
bears N 65° W. and S 65° E.
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins.
in the ground for 1/4 sec. cor. marked on brass cap.
N 4 S 33 on W. half and S 34 on E. half.
Dig pits 18 x 18 x 12 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.
- 54.10 Dry ravine 15 lbs. wide course N.E. asc. S.E. slope.
- 71.40 Top of sand ridge bears E. and W. Extends E. of line
1.00 ch. dist. desc.
- 80.00 Set an iron post 3 ft. long 2 ins. in diam. 24 ins.
in the ground for cor. of sec. 27, 28, 33. and 34
marked on brass cap T 30 N. S 28 in N.W., R 13 E.
S 27 in N.E., S 34 in S.E. and S 33 in S.W. quadrants.
Raise a mound of stone, 2 ft. base 1 1/2 ft. high. W.
of cor. Pits impracticable
Land hilly.
Soil sandy 3rd rate.
No timber
-
- S 89° 58' E. on a random line, to cor. sec. 27 and 34,
40.00 Set temp. 1/4 sec. cor.
- 80.08 Intersect N. and S. line, 8 lbs. S. of the cor. of
sec. 26, 27, 34. and ^{hereinbefore described} 35, thence I run,
S 89° 59' W., on a true line, to cor. sec. 27 and 34,
ascend East slope over low sand hills, through
scattering sage and greasewood brush undergrowth
and bunch grass
- 26.05 Road to Oraibi, Arizona bears N 65° W. and S 65° E.
- 27.80 Top of sand ridge bears N.E. and S.W. desc.
- 32.70 Dry ravine 10 lbs. wide course N.E. asc.
- 40.04 Set an iron post 3 ft. long 1 in. in diam. 26 ins.
in the ground for 1/4 sec. cor. marked on brass
cap. N 4 S 27 on N. half and S 34 on S. half

Subdivision of Twp 30 N., R 13 E.

Chavira

Dig pits 18x18x12 ins. East W. of post 3ft. dish. and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high. N. of cor.

- 41.85 Top of sand ridge bears N and S. dec.
 - 55.00 Dry ravine 16 lbs. wide course North arc.
 - 69.00 Top of sand ridge bears N. and S. dec.
 - 80.08 The cor. of secs. 27, 28, 33, and 34, hereinbefore described.
- Sand hilly.
Soil sandy 3rd rate.
No timber

N 0° 02' W, bet. secs. 27 and 28;
Descend N.W. slope over hilly sandy land through scattering sage and greasewood brush undergrowth and bunch grass.

- 17.05 Dry ravine 10 lbs. wide course N 20° E. arc.
 - 22.00 The same ravine 10 lbs. wide 4 ft. deep course N 25° W. continue ascent
 - 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for 1/4 sec. cor. marked on brass cap 143 28 on W. half. and 327. on E. half.
- Dig pits 18x18x12 ins. N and S. of post 3ft. dish. and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high. W. of cor.
- 44.00 Top of ridge bears N.W. and S.E. dec.
 - 80.00 Set an iron post 3 ft. long, 2 ins. in diam. 24 ins. in the ground for cor. of secs. 21, 22, 27, and 28. marked on brass cap. T 30 N. S 21 in N.W. R 13 E S 22 in N.E., 327 in S.E. and 328 in S.W.
- quadrant
- Dig pits 18x18x12 ins. in each sec. 5 1/2 ft. dish. and raise a mound of earth, 4 ft. base, 2 ft. high. W. of cor.
- Sand hilly.
Soil sandy 3rd rate.
No timber

Note:- At this cor I set off 12° 29 1/2' S. on the decl. arc. and at noon observed the sun on the merid. arc and obtain a reading of 35° 58' 1/2" N. on the hor. arc.

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- 40.00 N. 89° 57' E., on a random line, bet. sec. 22 and 27,
Set trap. $\frac{1}{4}$ sec. cor.
- 80.10 Intersect N and S. line, 30 lbs. S. of the witness
arc. to cor. of sec. 22, 23, 26 and 27, hereinbefore described,
Thence 1 run, from true point for corner,
S. 89° 57' W., on a true line, bet. sec. 22 and 27,
Ascend E. slope over broken stony land through
scattering sage and greasewood bush undergrowth
and bunch grass.
- 6.40 Top of abrupt ascent on sand stone rimrock.
on W. edge of canyon bears N. and S., bears stony
land bears N. and S. Enters sandy land. Ascent
gradually over N.E. slope.
- 40.05 Set an iron post 3 ft. long, 1 in. in diam. 26 ins.
in the ground for $\frac{1}{4}$ sec. cor. marked on brass
cap. $\frac{1}{4}$ S 22 on N. half and S 27 on S. half
Dig pits 18x18x12 ins. E and W. of post 3 ft. diam.
and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft.
high. W. of cor.
- 52.60 Road to Oraibi, Arizona bears N.W. and S.E.
- 80.10 The cor. of sec. 21, 22, 27, and 28, hereinbefore described.
Land hilly and broken.
Soil sandy and stony 3rd and 4th rate.
No timber

N 0° 02' W. bet. sec. 21 and 22.

Ascend N. slope over rolling sandy land., through
scattering sage and greasewood bush undergrowth
and bunch grass.

- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins.
in the ground for $\frac{1}{4}$ sec. cor. marked on brass
cap. $\frac{1}{4}$ S 21 on W. half and S 22 on E. half.
Dig pits 18x18x12 ins. N. and S. of post. 3 ft. diam.
and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft.
high W. of cor.
- 55.90 Road to Oraibi, Arizona, bears N 70° W. and
S 70° E.
- 60.80 Dry ravine 10 lbs. wide course N.W. arc.
- 79.00 Top of sand ridge bears N.W. and S.E. desc.
- 80.00 Set an iron post 3 ft. long 2 ins. in diam. 24 ins.
in the ground for cor. of sec. 15, 16, 21 and 22

Subdivision of T₃₀N., R₁₃E.

21

Chain

marked on brass cap T₃₀N. S 16 in N.W., R₁₃E
 S 15 in N.E., S 22 in S.E. and S 21 in S.W. quadrant.
 Dig pits 18x18x12 ins. in each sec. 5 1/2 ft. dish.
 and raise a mound of earth 4 ft. base, 2 ft.
 high. W. of cor.
 Sand rolling.
 Soil sandy 3rd rate.
 No timber

February 16th 1911

- February 24th 1911. Ch. 8^h 13^m a.m., l.m.t. D res off.
 35° 59' 1/2 N. on the lab. arc. 9° 40' 1/2 S. on the decl. arc.
 and determine a meridian with the solar alt.
 the cor. of sec. 15, 16, 21, and 22^{above described}. thence D run,
 N 89° 57' E, on a random line, bet. sec. 15 and 22,
 40.00 Sub temp 1/4 sec. cor.
 80.02 Intersect N. and S. line, 12 lbs. S. of the cor. of
 sec. 14, 15, 22, and 23^{hereinbefore described}. thence D run,
 S 89° 52' W, on a true line, bet. sec. 15 and 22,
 Ascend E. slope of ridge over hilly clayey land
 through scattering sage and greasewood bush
 undergrowth and bunch grass.
 .80 Top of clay ridge 8 ft. above cor. bears N. and S. decl.
 W. slope into canyon.
 20.00 Foot descent in canyon bears N.E. and S.W. asc.
 steep E. slope over cliffs.
 25.50 Top of steep ascent on sand stone rim rock. W. side
 of canyon bears N 20° E and S 20° W. Rapid broken
 stony land. bears N.E. and S.W. Enter rolling sandy
 land.
 40.01 Set an iron post. 3 ft. long 1 in diameter. 26 ins in
 the ground for 1/4 sec. cor. marked on brass cap. 1/4
 S 15 on N. half and S 22 on S. half.
 Dig pits 18x18x12 ins E and W. of post. 3 ft. dish. and
 raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high W. of
 cor.
 43.75 East edge of canyon on sand stone rim rock
 50 ft. high. bears N. and S. Leave rolling sandy land
 bears N. and S., Enter stony hilly and broken land
 desc abruptly over cliffs and ledges into canyon
 51.00 Foot of abrupt descent in canyon. bears N and S.
 ascend abruptly over E. slope

BOOK 2618

61.25 Top of abrupt ascent. on sand stone rim rock on W. side of canyon bears N. and S., Lead broken stony land bears N. and S., Enter rolling sandy land

80.02 The cor. of secs. 15, 16, 21, and 22, hereinbefore described. Land rolling, broken, and hilly.

Soil sandy and stony 3rd and 4th rate.
No timber

N. 0° 02' W., bet. secs. 15 and 16,

Descend N. slope over rolling sandy land through scattering sage and greasewood brush undergrowth and bunch grass.

20.00 Dry ravine 45 lbs. wide 15 ft. below sec. cor. Course East also rocky South slope of knoll.

40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for 1/4 sec. cor. marked on brass cap 1/4 S 16 on W. half and S 15 on E. half.

Dig pits 18 x 18 x 12 ins. N. and S. of post 3 ft. dish. and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high W. of cor

49.00 Top of rocky knoll. Descend steeply over North slope.

80.00 The ^{true} point for the cor. of secs. 9, 10, 15, and 16, falls on unsafe ground on steep N.W. slope, therefore ab.

78.80 Set an iron post 3 ft. long, 2 ins. in diam. 24 ins. in the ground for witness cor. to the cor. of secs. 9, 10, 15 and 16. marked on brass cap. N.C. in N. half.

T 30 N 8 9 in N.W., R 13 E. S 10 in N.E., S 15 and S.E. and S 16 in S.W. quadrants.

Dig pits 18 x 18 x 12 ins. N.E., S.E., S.W. and N.W. of post. 5 1/2 ft. dish. and raise a mound of earth 4 ft. base 2 ft. high W. of cor

Land rolling broken and hilly.

Soil sandy and stony 3rd and 4th rate.
No timber

Draw the ^{true} point for cor. of secs. 9, 10, 15 and 16., Drive, N. 89° 52' E., on a random line, bet. secs. 10 and 15,

40.00 Set temp. 1/4 sec. cor.

Subdivision of Tp 20N. R 13E.

Chain

- 80.16 Intersect N and S. line, 5 lks. N. of the cor. of sec. 10, 11, 14 and ^{hereinbefore described} 15, ~~thence~~ S run, S 89° 54' W., on a true line, bet. sec. 10 and 15, ascend S.E. slope over stony hilly and broken land through scattering sage and greasewood bush undergrowth and bunch grass.
- 13.60 Top of rocky ridge 100 ft. above cor. bear N.E. and S.W. desc. abruptly.
- 19.00 East edge of Canyon, on sand stone ledge 50 ft. high bear N.E. and S.W. desc. over cliffs.
- 25.00 Bottom of Canyon 100 ft. deep. Course N.E. asc. abruptly.
- 38.80 Top of sand stone ledge on W. side of Canyon bear N. and S. asc. over sand ridges.
- 40.08 Set an iron post 3 ft. long 1 in. in diam., 26 ins in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 10 on N. half and S 15 on S. half. Dig pits 18x18x12 ins East W. of post. 3 ft. dish. and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high. N. of cor.
- 55.50 Summit of sand ridge bear N. and S. desc. steep West slope.
- 80.16 The ^{true} point for cor. of sec. 9, 10, 15 and 16, on steep N.W. slope Land hilly and broken. Soil sandy and stony 3rd and 4th rate. No timber.

NOTE: - At the witness cor. to cor. of sec. 9, 10, 15 and 16, ^{hereinbefore described,} S up off. 9° 38 $\frac{1}{2}$ ' S. on the decl. arc and at noon observe the sun on the meridian and obtain a reading of 36° 0 $\frac{1}{2}$ ' N. on the hor. arc.

- From the true point for cor. of sec. 9, 10, 15 and 16, 1 run, N. 0° 02' W., bet. sec. 9 and 10; Descend steep N.W. slope over stony hilly land through scattering sage and greasewood bush undergrowth.
- 15.70 South edge of Canyon on Cliffs. 100 ft. high. Bear N 25° E and S 25° W. descend abruptly into Canyon
- 22.30 Foot of descent in Canyon. Cross dry ravine. Course N.E. asc. abruptly.
- 29.30 Top of abrupt bench on sand stone Cliffs on N.

BOOK 2618

- Side of canyon bears $N25^{\circ}E$ and $S25^{\circ}W$, level stony land toward N.E. and S.W. Enter clayey land and S.E. slope of ridge
- 38.75 Top of clay ridge bears $N20^{\circ}E$, and $S20^{\circ}W$. desc. N.W. slope.
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked out brass cap. $N4S9$ on W. half and $S10$ on E. half.
Raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high. W. of cor. Pits impracticable
- 40.35 Dry ravine 10 ft. below $\frac{1}{4}$ sec. cor. course N.E. asc.
- 42.00 Top of clay ridge 20 ft. above ravine bears $N20^{\circ}E$ and $S20^{\circ}W$. desc. abruptly.
- 72.00 Dry ravine course N.E. asc. S. slope of stony peak.
- 80.00 Set an iron post 3 ft. long 2 ins. in diam. 24 ins. in the ground for cor. of secs. 3, 4, 9, and 10. marked out brass cap $T30N. S4$ in N.W. R13E. $S3$ in N.E. $S10$ in S.E. and $S9$ in S.W. quadrant.
Raise a mound of stone, 2 ft. base. $1\frac{1}{2}$ ft. high. W. of cor. Pits impracticable
Land hilly and broken.
Soil sandy clayey and stony $\frac{4}{7}$ rate.
No timber
-
- $N89^{\circ}54'E$, on a random line, bet. secs. 3 and 10;
- 40.00 Set temp $\frac{1}{4}$ sec. cor.
- 80.10 Intersect N. and S. line, 8 lbs. S. of the cor. of secs. ^{hereinbefore described} 2, 3, 10 and 11, "thrued" drum,
 $S89^{\circ}51'W$. on a true line bet. secs. 3 and 10.
Descend S.W. slope over sandy land through scattering sage and greasewood brush undergrowth and bunch grass
- 3.60 Dry ravine 50 lbs. wide, 10 ft. deep course N.W. asc.
- 25.90 Point of clay ridge bears N. and S. desc.
- 37.00 Dry ravine 5 lbs. wide course N. asc.
- 40.05 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked out brass cap. $N4S3$ on N. half and $S10$ on S. half.
Dig pits $18 \times 18 \times 12$ ins. E and W. of post 3 ft. deep and raise a mound of earth $3\frac{1}{2}$ ft. base. $1\frac{1}{2}$ ft. high. N. of cor.

- 47.00 Top of Clay ridge bears N. and S. due gradually.
- 55.60 Leave undergrowth and bunch grass bears N. and S. Enter cultivated land bears N. 20.00 chs. and S. 15.00 chs. dish.
- 63.00 Leave cultivated land bears N. 20.00 chs. and S. 15.00 chs. dish., Enter undergrowth and bunch grass.
- 74.00 Begin steep ascent over S.E. slope of peak.
- 80.10 The cor. of secs. 3, 4, 9, and 10, hereinbefore described. Land hilly and broken. Soil sandy clayey and stony 3rd and 4th rate. No timber

- N. 0° 2' W. on a random line, bet. secs. 3 and 4,
- 40.00 Set temp. 1/4 sec. cor.
- 80.34 Intersect N. ldy. of Twp. 8 lks. N. 89° 57' E. of the cor. of sec. 3, 4, 33, and 34, recently established by me as described in Exterior Book "AO", thence I run,
- S. 0° 05' E. on a true line, bet. secs. 3 and 4, Descend S. slope over hilly sandy and stony land, through scattering sage and greasewood brush undergrowth and bunch grass.
- 4.80 Pyramine 10 lks. wide course N.E. asc.
- 18.55 Top of sand ridge bears N.E. and S.W. desc.
- 34.45 Top of descent. Leave undergrowth and bunch grass bears E and W. Enter level cultivated land bears E. 2.00 chs. and W. 5.00 chs. dish.
- 40.34 Set an iron post 3 ft. long 1 in. in diam 26 ins. in the ground for 1/4 sec. cor. marked out bears E 3 4 on W. half and S 3 on E. half. Dig pits 18x18x12 ins N and S. of post 3 ft. dish. and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high. W. of cor.
- 67.20 Leave level cultivated land bears E 10.00 chs. and W. 10.00 chs. dish., Enter hilly land and undergrowth. Asc. North slope of rocky peak.
- 78.00 Top of peak. 50 ft. high. desc. abruptly over South slope
- 80.34 The cor. of secs. 3, 4, 9, and 10, hereinbefore described. Land level and hilly. Soil sandy and stony 3rd and 4th rate. No timber

February 24th 1911

BOOK 2618

- February 17th 1911. 9^h 14^m a.m., l. mt. Dsch off. $35^{\circ} 56\frac{1}{2}'$
 N. on the lch. arc. $12^{\circ} 11' S$, on the lch. arc and
 determine a meridian with the solar on the
 cor. of secs. 4, 5, 32, and 33 on S. ldy. of Twp.,
 recently estab. by me as described in Exterior Book "AW", thence I run,
 N. $0^{\circ} 03' W$, lch. secs. 32, and 33,
 Around S. slope over rolling sandy land, through
 scattering sage and greasewood brush undergrowth
 and bunch grass
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in
 the ground for $\frac{1}{4}$ sec. cor. marked on base
 cap 14 S 32 on W. half and S 33 on E. half.
 Dig pits $18 \times 18 \times 12$ ins. N. and S. of post 3 ft.
 dia. and raise a mound of earth $3\frac{1}{2}$ ft. base
 $1\frac{1}{2}$ ft. high. W. of cor.
- 55.50 Top of sand ridge bears E and W, desc.
- 67.28 Road from Oraibi Arizona to Nuba City Arizona
 bears $77^{\circ} W$. and $87^{\circ} E$.
- 80.00 Set an iron post 3 ft. long 2 ins. in diam. 24
 ins. in the ground for cor. of secs. 28, 29, 32, and
 33, marked on base cap T 30 N S 29 in NW. R 13
 E. S 28 in NE. S 33 in SE. and S 32. in SW.
 quadrants.
 Dig pits $18 \times 18 \times 12$ ins. in each. sec. $5\frac{1}{2}$ ft. dia.
 and raise a mound of earth 4 ft. base, 2 ft.
 high. W. of cor.
 Land rolling.
 Soil sandy 3rd rate.
 No timber
-
- 40.00 S $89^{\circ} 58' E$, on a random line, lch. secs. 28 and 33,
 Set temp. $\frac{1}{4}$ sec. cor.
- 80.10 Intersect N. and S. line, 12 lbs. N. of the cor. of
 secs. 27, 28, 33, and ^{hereinbefore described,} 34, thence I run,
 N. $89^{\circ} 58' W$, on a true line, lch. secs. 28 and 33,
 Descend N.W. slope over low sand hills, through
 scattering sage and greasewood brush undergrowth
 and bunch grass
- 4.20 Dry ravine 10 lbs. wide course NW. asc.
- 8.70 Top of rocky ridge bears N and S, desc.
- 21.20 Dry ravine 10 lbs. wide 20 ft. below top of ridge

Chains

Subdivision of Twp 30 N., R 13 E

27

- Course N.W. asc.
- 31.00 Top of sand ridge bears $N40^{\circ}W$. and $S40^{\circ}E$. desc
S.W. slope over rolling land.
- 40.05 Set an iron post 3 ft. long, 1 in. in diam. 26 in.
in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap.
N. S 28 on N. half, and S 33 on S. 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.
- 80.10 The cor. of secs. 28, 29, 32, and 33, hereinbefore
described.
Land rolling and hilly.
Soil sandy and stony 3rd and 4th rate.
No timber
-
- N. $0^{\circ}03'W$, bet. secs. 28 and 29,
Descend N. slope over rolling sandy land, through
scattering sage and greasewood brush under-
growth and bunch grass.
- 21.50 Land rolling sandy land bears E. and W. Enter
hilly land. descend steep N. slope
- 30.80 Dry ravine 15 lbs. wide course $N35^{\circ}E$. asc.
- 33.20 Top of rocky ridge bears $N.E.$ and $S.W.$ desc.
- 38.85 Dry ravine 6 lbs. wide course $N30^{\circ}E$. asc.
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26
in. in the ground for $\frac{1}{4}$ sec. cor. marked on
brass cap N. S 29 on W. half and S 28 on E. 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.
- Note:- At this cor. I set off. $12^{\circ}08\frac{1}{2}'S$. on the decl.
arc and at noon observe the sun on the
meridian, and obtain a reading of. $35^{\circ}58'N$.
on the lab. arc.
- 44.50 Top of sand ridge bears $N.E.$ and $S.W.$ desc.
- 58.20 Dry ravine 20 lbs. wide course $N.E.$ asc
- 63.00 Top of sand ridge 25 ft. above ravine bears
 $N.E.$ and $S.W.$ desc.
- 70.00 Foot of descent in depression bears $N.E.$ and $S.W.$
drains to the $N.E.$ asc.
- 78.00 Top of sand ridge 20 ft. high bears $N.E.$ and $S.W.$
desc.

BOOK 2618

80.00 Set an iron post 3 ft. long 2 ins. in diam. 24 ins. in the ground for cor. of secs. 20, 21, 28, and 29, marked on brass cap. T 30 N. S 20 in N.W. T 13 E. S 21 in N.E., S 28 in S.E. and S 29 in S.W. quadrants.
 Dig pits 18 x 18 x 12 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 hilly.
 Soil sandy 3rd rate.
 No timber

S 89° 53' E., on a random line, bet. secs. 21 and 28,
 40.00 Set temp 1/4 sec. cor.
 80.00 Intersect N. and S. line at the cor. of secs. 21, 22, 27, and 28, ^{hereinbefore described} three times.
 N. 89° 53' W., on a true line, bet. secs. 21 and 28,
 Descend N.W. slope over hilly sandy and stony land through scattering sage and greasewood brush, undergrowth and bunch grass
 11.50 Dry ravine 25 lbs. wide course North asc.
 18.00 Top of sand ridge bet. N. and S. desc.
 24.90 Dry ravine 10 lbs. wide 20 ft. below top of ridge course North asc.
 28.00 Top of sand ridge bet. N. and S. desc.
 39.60 Dry ravine 10 lbs. wide course North asc.
 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for 1/4 sec. cor. marked on brass cap. 1/4 S 21 on N. half and S 28 on S. half.
 Dig pits 18 x 18 x 12 ins. each 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.
 59.00 Top of sand ridge bet. N. and S. desc.
 69.80 Dry ravine 15 lbs. wide course N.E. asc.
 72.00 Top of ridge bet. N.E. and S.W. desc.
 76.00 Dry ravine course N.E. asc.
 80.00 The cor. of secs. 20, 21, 28 and 29, hereinbefore described.
 Land hilly.
 Soil sandy and stony 3rd and 4th rate.
 No timber

February 17th 1911

Subdivision of P. 30 N., R. 18 E.

Chain

February 25th 1911^N Ch. 8th 13^m a.m. l.m.l. I set off.
 35°58'1/2" N. on the lab. arc, 9°18'1/2" S. on the decl.
 arc and determine a meridian with the
 solar at the cor. of sec. 20, 21, 28, and 29, ^{hereinbefore described}
 thence I run,
 N. 0°03' W., bet. sec. 20 and 21,
 Over rolling sandy land, sloped to the N.E., through
 scattering sage and greasewood brush undergrowth
 and bunch grass.
 6.00 Depress to brass N 35° E. and S 35° W drain to
 the N.E. arc.
 10.00 Top of sand ridged bank N.E. and S.W. decl. N.W. slope.
 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins.
 in the ground for cor. marked as brass
 cap N 45 20 on W. half and S 21 on E. half.
 Dig pits 18 x 18 x 12 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 Descend S.E. slope.
 80.00 Set an iron post 3 ft. long 2 ins. in diam.
 24 ins. in the ground for cor. of sec. 16, 17,
 20 and 21, marked as brass cap T 30 N, S 17
 in N.W., N 13 E. S 16 in N.E., S 21 in S.E. and S 20
 in S.W. quadrant
 Dig pits 18 x 18 x 12 ins. in each sec. 5 1/2 ft. dist.
 and raise a mound of earth 4 ft. base, 2 ft.
 high. W. of cor.
 Over rolling.
 Soil sandy 3rd rate.
 No timber

S 89°53' E., on a random line, bet. sec. 16 and 21,
 40.00 Set temp. 1/4 sec. cor.
 79.94 Intersect N. and S. line, 5 lks. S. of the cor. of sec.
 15, 16, 21 and 22, ^{hereinbefore described} thence I run,
 N. 89°55' W., on a true line, bet. sec. 16 and 21,
 Over rolling sandy land, through scattering sage
 and greasewood brush undergrowth and bunch
 grass.
 1.25 East edge of canyon on sand stone wall, 100
 ft. high. bears N.E. and S.W. Leave rolling sandy
 land bear N.E. and S.W. Enter broken stony land

BOOK 2618

- Descend abruptly.
- 11.50 Dry ravine in bottom of Canyon 150 ft. below top of rim. course N.E. and E. slope
- 21.50 Top of ascent on sandstone wall, W. side of Canyon. bears N.E. and S.W. Leads broken stony land bears N.W. and S.E. Enter rolling sandy land. Ascend gradually over E. slope of ridge
- 39.97 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on base Cap. $\frac{1}{4}$ 316 on N. half and 321 on S. half. Dig pits 18x18x12 ins. E and W. of post 3 ft. dia. and raise a mound of earth $3\frac{1}{2}$ ft. base, $\frac{1}{2}$ ft. high N. of cor.
- 42.00 Top of sand ridge bears N. and S. desc. gently
- 46.90 Mouth of descent in depression bears N. and S. Cherish North. asc. gently.
- 79.94 The cor. of secs. 16, 17, 20, and 21, hereinbefore described. Land rolling and broken Soil sandy and stony 3rd and 4th rate. No timber
- Note: - At this cor. I set off $9^{\circ}16'$ S. on the decl arc and at noon observe the sun on the meridian and obtain on the lab. arc a reading of $35^{\circ}59\frac{1}{2}'$.

N. $0^{\circ}03'$ W., bet. secs. 16 and 17,

Descend N. slope over rolling sandy land through scattering sage and greasewood bush. undergrowth and bunch grass.

- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on base Cap $\frac{1}{4}$ 317 on W. half and 316 on E. half. Dig pits 18x18x12 ins N. and S. of post 3 ft. dia. and raise a mound of earth $3\frac{1}{2}$ ft. base, $\frac{1}{2}$ ft. high. W. of cor.
- 60.71 South edge of Canyon 100 ft. deep. Leads rolling sandy land bears N.E. and S.W. Enter broken stony land, descend abruptly
- 71.80 Mouth of abrupt rocky descent in Canyon ^{course N.E.} 100 ft. below top of rim. Leads broken stony land bears N.E. and S.W. Enter rolling sandy land.
- 72.20 Dry ravine course N.E.

Subdivision of N 30 76, 1813 E.

Chains

80.00 Set an iron post 3 ft. long 2 ins. in diam. 24 ins. in the ground for cor. of sec. 8, 9, 16, and 17. marked on brass cap. T 30 N. S 8 in N.W. R 13 E 39 in N.E., S 16 in S.E. and S 17 in S.W. quadrants. Dig pits 18x18x12 ins. in each sec. 5 1/2 ft. dish, and raise a mound of earth 4 ft. base, 2 ft. high. W. of cor. Land rolling and broken. Soil sandy and stony 3rd and 4th rates. No timber.

40.00 Set temp. 1/4 sec. cor. S 89° 55' E., on a random line, bet. sec. 9 and 16,

79.90 Intersect N. and S. line, 102 lbs. N. of the witness cor. to cor. of sec. 9, 10, 15 and 16, ^{hereinbefore described} thence ^{from true point for corner, on steep N.W. slope} S 89° 57' W., on a true line, bet. sec. 9 and 16,

ascend steep rocky N.E. slope over stony hilly land through scattering sage and greasewood brush undergrowth and bunch grass

.60 Top of rocky spur 25 ft. above cor. bears N.E. and S.W. desc. steep N.W. slope into canyon 75 ft. deep.

18.00 Dry ravine ab. foot. of descent in Canyon Course N.E. asc. abruptly

33.00 Top of abrupt ascent on West edge of canyon bears N 30° E. and S 30° W. Desc. broken stony land bears N.E. and S.W. Enter rolling sandy land.

39.95 Set an iron post 3 ft. long 1 1/2 in. in diam. 26 ins. in the ground for 1/4 sec. cor. marked on brass cap. 1/4 9, on N. half and S 1/6 on S. half. Dig pits 18x18x12 ins. E and W. of post 3 ft. dish, and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high. N. of cor.

73.00 East edge of canyon on sand stone rim rock. 150 ft. high. bears N. and S., Desc. rolling sandy land bears N. and S., Enter broken stony land. descend abruptly over W. slope into canyon

74.50 Foot of descent in canyon, Desc. broken stony land bears N. and S. Enter rolling sandy land.

75.25 Dry ravine 20 lbs. wide 3 ft. deep ^{course} N.E.

79.90 The cor. of sec. 8, 9, 16, and 17, hereinbefore described. Land rolling and broken. Soil sandy and stony 3rd and 4th rates.

BOOK 2618

No timber

February 25th 1911

Feb. 27th 1911
 7^h 43^m a.m. l.m.t. Dusk off 36° 0' N.
 on the lat. arc. 8° 34' S. on the decl. arc. and
 determine a meridian with the solar alt. the
 cor. of secs. 8, 9, 16, and 17, ^{hereinbefore described} ~~chain~~ ^{traced} ~~traced~~ ^{traced}.

N. 0° 03' W., 7th. Secs. 8 and 9,

Over rolling sandy land in bottom of canyon,
 through scattering sage and greasewood brush
 undergrowth and touch grass.

5.00 Level rolling sandy land bears N.E. and S.W., Center
 broken stony land bears N.E. and S.W., around steep
 S.E. slope over ridges and ravines.

20.00 ^{Second South slope.}
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins.
 in the ground for $\frac{1}{4}$ sec. cor. marked on brass
 cap $\frac{1}{4}$ 38 on W. half and 39 on E. half.

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

40.75 Top of ridge 15 ft. above $\frac{1}{4}$ sec. cor., bears E and
 W. desc.

57.05 Dry ravine 15 lbs. wide 80 ft. below $\frac{1}{4}$ sec. cor.
 Course N 70° E. asc.

57.50 Top of rocky ridge 100 ft. above ravine bears
 E and W. desc. abruptly.

80.00 The point for the cor. of secs. 4, 5, 8, and 9, falls
 in bed of dry ravine 10 lbs wide course N.E., where
 natural causes would insure the destruction
 of the cor. therefore I continue my alignment and
 measurements. Asc S.E. slope

80.25 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins.
 in the ground for witness cor. to the cor. of secs.
 4, 5, 8, and 9, marked on brass cap W.C. in
 N. half., T 30 N. 55 in N.W., R 13 E. 34 in N.E.
 39 in S.E. and 38 in S.W. quadrants.

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

Sand rolling and broken.

Soil sandy clayey and stony 3rd and 4th rate
 No timber

Subdivision of $N\frac{1}{2}$ 30 N, R13E.

Chain

- From true point for cor. of secs. 4, 5, 8 and 9 in ravine, 1 run,
 $N. 89^{\circ} 57' E.$, on a random line, bet. secs. 4 and 9,
 40.00 Set temp $\frac{1}{4}$ sec. cor.
- 80.08 Intersect N. and S. line, 16 lks. N. of the cor. of
 secs. 3, 4, 9 and 10, ^{herein before described} thence 1 run,
 $N. 89^{\circ} 56' W.$, on a true line, bet. secs. 4 and 9,
 ascend S.E. slope over broken stony hilly land
 through scattering sage and greasewood brush,
 undergrowth and bunch grass.
- 1.40 Top of ridge 15 ft. above cor. bear N.E. and S.W.
 desc.
- 4.50 Foot of steep descent. Low hilly land bear
 N and S. Enter level sandy bottom land.
- 25.00 Level land bear N. and S. Enter stony
 hilly land ascend steep E. slope of ridge
- 28.20 Top of ridge bear N. and S. desc
- 32.00 Dry ravine 5 lks. wide course N.E. asc.
- 40.04 Set an iron post 3 ft. long, 1 in. in diam. 26 in.
 in the ground for $\frac{1}{4}$ sec. cor. marked on brass
 top $N 54^{\circ} W$ N. half and $S 4^{\circ} W$ S. half.
 Raise a mound of stone 2 ft. base $\frac{1}{2}$ ft. high.
 N. of cor. Pits impracticable.
- Note: - At this cor. Set off, $8^{\circ} 31' S.$ on the decl. arc
 and at noon observe the sun on the meridian
 and obtain a reading of $36^{\circ} 01' 71$, on the lat. arc.
- 40.76 Top of clay ridge 15 ft. above $\frac{1}{4}$ sec. cor.
 bear N.E. and S.W. desc steeply.
- 42.30 Foot of descent in canyon bear N. and S. asc
- 57.15 Top of clay ridge 40 ft. high. bear $N 30^{\circ} E.$ and
 $S 30^{\circ} W.$ desc
- 66.30 Dry ravine 20 lks. wide. 30 ft. below top of ridge
 course $N 40^{\circ} E.$ asc.
- 80.08 ^{true point for} the cor. of secs. 4, 5, 8 and 9, in ravine, course N.E.
 Land level and hilly.
 Soil sandy and stony 3^d and 4th rate.
 No timber

$N 0^{\circ} 3' W.$ on a random line bet. secs. 4 and
 5, From true point for cor. of secs. 4, 5, 8 and 9 in ravine, course N.E.

- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 80.32 Intersect N. liny. of $N\frac{1}{2}$. 12 lks. $N. 89^{\circ} 57' E.$ of the cor. of
 secs. 4, 5, 32 and 33, ^{recently established by me as described in}
 Exterior Book "AO" thence 1 run,

BOOK 2618

- S. $0^{\circ}08'E$, on a true line, Feb. sec. 4 and 5, around steep rocky N.W. slope over stony hilly land through scattering sage and greasewood brush undergrowth and bunch grass.
- 25.82 Top of rocky ridge bears $N40^{\circ}E$ and $S40^{\circ}W$. Desc. over S.E. slope.
- 39.52 Dry ravine 5 lvs. wide course N.E. asc.
- 40.32 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $N55$ on W. half and $S4$ on E. half. Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high. W. of cor. Pits impracticable
- 70.77 Top of ridge bears N.E. and S.W. desc.
- 74.02 Foot of descent in depression bears N.E. and S.W. drains to the N.E. asc.
- 76.32 Top of clay ridge bears E and W. desc.
- 80.07 Witness corner to cor. of secs. 4, 5, 8 and 9, hereinbefore described.
- 80.32 True point for cor. of secs. 4, 5, 8 and 9, in ravine course N.E.
Land hilly.
Soil sandy clayey and stony 3rd and 4th rate
No timber

February 27th 1911

- Feb. 18th 1911 Ch. 7^h 24^m a.m. l.m.l. & set off $35^{\circ}56\frac{1}{2}'N$ on the lat. arc $11^{\circ}50'$ S. on the decl. arc and determine a meridian with the solar at the cor. of secs. 5, 6, 31 and 32. on S. side of T₄ \wedge the true & run, recently established by me as described in Exterior Book "A", $N0^{\circ}03'W$, Feb. sec. 31 and 32, around S. slope over rolling sandy land through scattering sage and greasewood brush undergrowth and bunch grass
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $N31$ on W. half and $S32$ on E. 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.
- 80.00 Set an iron post 3 ft. long 2 ins. in diam. 24 ins. in the ground for cor. of secs. 29, 30, 31 and 32. marked on brass cap. T 30 N. S 30 in N.W. R 13 E. S 29 in N.E., S 32 in S.E. and S 31 in S.W. quadrant.

Subdivision of T₁ 30 N., R 13 E.

Chain

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.
Soil sandy 3rd rate.
No timber

40.00 S 89° 58' E., on a random line, bet. secs. 29 and 32, 1/4 sec. cor.
79.96 Intersect N. and S. line, at the cor. of secs. 28, 29 ^{hereinbefore described}, 32, and 33, thence I run,

N 89° 58' W., on a true line, bet. secs. 29 and 32, around S.E. slope over rolling sandy land through scattering sage and greasewood brush undergrowth and bunch grass

25.20 Road from Oraibi to Pinal City Arizona, bear N 70° W. and S. 70° E.

39.98 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for 1/4 sec. cor. marked out brass cap. 1/4 S 29 on N. half and S 32 on S. 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

79.96 The cor. of secs. 29, 30, 31, and 32 hereinbefore described.
Land rolling.
Soil sandy 3rd rate.
No timber

40.00 N 89° 58' W., on a random line, bet. secs 30 and 31, 1/4 sec. cor.

79.64 Intersect the 3rd Guide Meridian East. 8 lbs. S. of the cor. of secs. 25, 30, 31 and 36, recently established by me as described in Standard Book "5", thence I run,

S 89° 55' E., on a true line, bet. secs. 30 and 31, over rolling sandy land through scattering sage and greasewood brush and bunch grass.

39.64 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground for 1/4 sec. cor. marked out brass cap. 1/4 S 30 on N. half and S 31 on S. half.

BOOK 2618

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 W. of cor.

79.64 The cor. of sec. 29, 30, 31 and 32, hereinbefore described

Land rolling

Soil sandy 3rd rate.

No timber

Note: - At this cor. I set off $11^{\circ}47\frac{1}{2}'S.$ on the decl. arc and at noon observe the sun on the meridian and obtain a reading of $35^{\circ}58'N.$ on the lat. arc.

$N.0^{\circ}03'W.$, bet. sec. 29, and 30,

across S.W. slope over rolling sandy land through scattering sage and greasewood bush undergrowth and bunch grass

9.00 Top of sand ridge bears N.E. and S.W. S.W. rolling land bears N.E. and S.W. Enter hilly land desc.

26.20 Road from Oraibi Arizona to Puba City Arizona bears $N70^{\circ}W.$ and $S70^{\circ}E.$

40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for $\frac{1}{4}$ sec. cor. marked on base cop $\frac{1}{4}$ S 30 W W. half. and S 29 on E. 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.

67.76 Dry ravine 20 lbs. wide course N.W. arc.

79.70 Top of clay ridge bears E and W. desc.

80.00 Set an iron post 3 ft. long 2 ins. in diam. 24 ins. in the ground for cor. of sec. 19, 20, 29, and 30, marked on base cop. T 30 N S 19 in N.W., R 13 E, S 20 in N.E. S 29 in S.E. and S 30 in S.W. quadrants.

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, and hilly.

Soil sandy and clayey 3rd and 4th rate.

chains

No timber

- 40.00 Sth temp $\frac{1}{4}$ sec. cor.
 79.94 Intersect N. and S. line, 5 lks. S. of the cor. of
 sec. 20, 21, 28, and 29, ^{hereinbefore described} thence I run,
 West., on a true line, bet. sec. 20 and 29,
 Descend gradually over N.W. slope, through
 scattering sage and greasewood bush under-
 growth and bunch grass.
 3.50 Hook of descent in depression bears N.E. and
 S.W., drains to the N.E. and gradually.
 39.97 Set an iron post 3 ft. long 1 in. in diam. 26 in.
 in the ground for $\frac{1}{4}$ sec. cor. marked on brass
 cap 320 on N. half and 329 on S. half.
 Dig pits 18x18x12 in. 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.
 42.80 Top of sand ridge bears N.E. and S.W. Low
 rolling land bears N.E. and S.W. Enter hilly
 land. desc. N.W. slope
 49.50 Dry ravine 10 lks. wide course N 20° E. asc.
 56.00 Top of sand ridge bears N. and S. desc.
 61.80 Dry ravine 10 lks. wide course N 20° E. asc.
 67.40 Top of sand ridge bears N. and S. desc.
 79.94 The cor. of sec. 19, 20, 29, and 30, hereinbefore described.
 Land rolling and hilly.
 Soil sandy 3rd rate.
 No timber

February 18, 1911.

- February 28th 1911. At 9^h 13^m a.m., l.m.l. I set off
 35° 58' N. on the lat. arc., 8° 11' S. on the decl.
 arc. and determine a meridian with the
 solar at the cor. of sec. 19, 20, 29, and 30, ^{hereinbefore described}
 thence I run,
 N. 89° 55' W., on a random line, bet. sec. 19, and 30,
 40.00 Sth temp $\frac{1}{4}$ sec. cor.
 79.72 Intersect the 3rd Guide Meridian East, 5 lks.
 S. of the cor. of sec. 19, 24, 25 and 30, recently
 established by me as described in Standard Book "S", thence I run,

- S. 89° 53' E., on a true line, bet. sec. 19 and 30,
 Over level sandy land, through scattering sage and
 greasewood brush undergrowth and bunch grass
 13.00 Leave level land bears N and S. Enter hilly land
 descend E. slope.
- 27.00 Dry ravine 15 lbs. wide course north asc.
- 31.40 Wp of clay ridge bears N. and S. desc.
- 39.72 Set an iron post 3 ft. long 1 in. in diam. 26 ins.
 in the ground for 1/4 sec. cor. marked on brass
 cap 1/4 S 19 on N. half and S 30 on S. half.
 Dig pits 18 x 18 x 12 ins. E and W. of post 3 ft. dia.
 and raise a mound of earth 3 1/2 ft. base, 1 1/2
 ft. high. N. of cor.
- 49.95 Dry ravine 8 lbs. wide course north asc.
- 55.00 Wp of clay ridge 20 ft. above ravine bears, N.
 and S. desc.
- 61.80 Dry ravine 25 lbs. wide 4 ft. deep course north
 asc.
- 64.40 Wp of ridge bears N. and S. desc.
- 69.55 Dry ravine 20 lbs. wide course N.W. asc.
- 73.45 Wp of clay ridge 25 ft. high. bears N and S. desc.
- 75.95 Dry ravine 12 lbs. wide course N.E. asc. steeply
- 79.72 The cor. of sec. 19, 20, 29 and 30, hereinbefore described.
 Land level and hilly.
 Soil sandy and clayey 3rd and 4th rate.
 No timber
-
- N. 0° 03' W, bet. sec. 19 and 30;
 Descend steep N.W. slope over hilly land, through
 scattering sage and greasewood brush under-
 growth and bunch grass.
- 8.25 Dry ravine 20 ft. below cor. course N.E. asc.
- 9.75 Wp of clay ridge bears E and W. desc.
- 10.60 Same ravine course N.W. asc.
- 20.00 Wp of ridge bears N.W. and S.E. desc.
- 28.40 Dry ravine 25 lbs. wide 3 ft. deep course N.E. asc.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins.
 in the ground for 1/4 sec. cor. marked on brass
 cap, 1/4 S 19 on W. half and S 20 on E. half.
 Dig pits 18 x 18 x 12 ins. N. and S. of post 3 ft. dia. and
 raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high. W. of cor.

Chains

- 52.00 Top of sand ridge bears N.E. and S.W. desc.
- 61.40 Dry ravine 15 lks. wide course N.E. asc.
- 69.00 Top of sand ridge bears N.E. and S.W. desc.
- 76.15 Dry ravine 15 lks. wide course N.E. asc.
- 80.00 Set an iron post, 3 ft. long 2 in. in diam. 24 in. in the ground for cor. of secs. 17, 18, 19 and 20. marked on brass cap. T 30 N. S 18 in N.W., R 13 E S 17 in N.E. S 20 in S.E. and S 19 in S.W. quadrants.

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

Land broken and hilly.

Soil sandy and clayey 3rd and 4th rate.

No timber

Note: At this cor. I set off. $8^{\circ}08\frac{1}{2}'$ S. on the decl. arc and at noon observe the sun on the meridian and obtain a reading of $35^{\circ}59\frac{1}{2}'$ on the hor. arc.

- 40.00 East, on a random line, bet. secs. 17 and 20, set temp. 1/4 sec. cor.
- 80.02 Intersect N. and S. line 8 lks. S. of the cor. of secs. 16, 17, 20, and 21 ^{hereinbefore described} then set a run, $S 89^{\circ}57' W.$, on a true line, bet. secs. 17 and 20, around East slope over hilly sandy land through scattering sage and greasewood brush undergrowth and bunch grass.

- 17.00 Top of sand ridge bears N.E. and S.W. desc.
- 39.00 Dry ravine 20 lks. wide course North asc.
- 40.01 Set an iron post 3 ft. long 1 in. in diam. 26 in. in the ground for 1/4 sec. cor. marked on brass cap 1/4 S 17 on N. half. and S 20 on S. half.

Dig pits 18x18x12 in. East W. of post 3 ft. dia. and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high. N. of cor.

- 40.40 A deserted Indian Hogan bears S. 140 lks. dist.
- 40.50 Top of sand ridge bears N. and S. desc.
- 51.75 Dry ravine 15 lks. wide course North asc.
- 62.30 Top of sand ridge bears N. and S. desc.

BOOK 2618

72.65 - 1/4 sec. Ravine, 30 lbs wide, Course North. acc.
 80.02 The cor. of secs. 17, 18, 19. and 20, hereinbefore described.
 Land hilly and broken.
 Soil sandy 3rd rate.
 No timber

40.00 N. 89° 53' W., on a random line, bet. secs. 18 and 19,
 1/4 sec. cor.

79.60 Intersect 3rd Guide Meridian East. 5 lbs. S. of
 the cor. of secs. 18, 19 and 24, recently estab. by me
 as described in Standard Book "5", thence 1 run,
 S. 89° 51' E., on a true line, bet. secs. 18 and 19,
 descend N.E. slope over hilly sandy and stony land
 through scattering sage and greasewood bush
 undergrowth and bunch grass.

3.05 Dry ravine 15 lbs wide 30 ft. below cor. Course N.E.
 acc.

8.60 Top of sand ridge bears N. and S. desc.

28.50 Dry ravine 10 lbs. wide Course N.E. acc.

31.85 Top of clay ridge bears N.E. and S.W. desc.

32.60 Saw an iron post 3 ft. long 1 in. in diam. 26 in.
 in the ground for witness cor. to the 1/4 sec. cor.
 which falls on solid sand stone ledge in
 bottom of canyon, marked on brass cap.
 T30 N. 17 E. in N. half. S 18., S 19 in W. half and
 W. C. 1/4 in E. half.

Raise a mound of stone 2 ft. base. 1 1/2 ft. high. N.
 of cor. It is impracticable.

32.90 West edge of canyon on sand stone ledge 30
 ft. high bears N and S. descend abruptly.

39.60 Dry ravine in bottom of canyon Course North
 acc. abruptly. Point for 1/4 sec. cor.

47.50 Top of abrupt ascent on sand stone ledge 30
 ft. high. E. side of canyon, bears N. and S. acc.
 steep W. slope of sand ridge.

66.65 Top of sand ridge bears N. and S. desc. steeply.

79.60 The cor. of secs. 17, 18, 19. and 20, hereinbefore described.
 Land broken and hilly.

Soil sandy and stony 3rd and 4th rate.
 No timber

February 28th 1911

Subdivision of Twp 30 N., R 13 E.

Chain

41

- March 1st 1911: Ab. 7^h 13^m a.m. l.m.t. Dash off.
 35° 59½' N. on the lat. arc. 7° 48½' S. on the decl. arc.
 and determine a meridian with the solar alt.
 the cor. of secs. 17, 18, 19, and 20, ^{hereinbefore described} ~~three~~ Drum,
 N. 0° 03' W., bet. secs. 17 and 18,
 Around S.E. slope over hilly sandy and stony land
 through scattering sage and greasewood brush
 undergrowth and bunch grass.
- 37.00 Top of sand ridge bears N 40° E and S 40° W.
 due N.W. slope.
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins.
 in the ground for ¼ sec. cor. marked on
 brass cap ¼ S 18 on W. half and S 17 on E. half.
 Dig pits 18 x 18 x 12 ins. N. and S. of post 3 ft. dia.
 and raise a mound of earth 3½ ft. base, 1½ ft.
 high. W. of cor.
- 53.90 South edge of Canyon bears E and W. due abruptly
 over sand stone cliffs
- 58.00 Foot of descent in Canyon course N.W. arc abruptly
- 79.25 Top of abrupt ascent on rim of canyon bears
 N.W. and S.E. arc gradually.
- 80.00 Set an iron post 3 ft. long 2 ins. in diam. 24
 ins. in the ground for cor. of secs. 7, 8, 17, and
 18. marked on brass cap. T 30 N. S 7 in N.W. R 13 E,
 S 8 in N.E. S 17 in S.E. and S 18 in S.W. quadrant.
 Raise a mound of stone 2 ft. base, 1½ ft. high.
 W. of cor. Pits impracticable
 Land broken and hilly.
 Soil sandy and stony 3rd and 4th rates
 No timber

- N. 89° 57' E, on a random line, bet. secs. 8 and 17,
 40.00 Set temp. ¼ sec. Cor.
- 79.92 Intersect N. and S. line 12 lbs. N. of the cor. of
 secs. 8, 9, 16, and 17, ^{hereinbefore described} ~~three~~ Drum,
 N. 89° 58' W., on a true line, bet. secs. 8 and 17,
 Around E. slope over stony hilly and broken land.
 through scattering sage and greasewood brush
 undergrowth and bunch grass
- 7.90 Top of abrupt ascent on sand stone rim rock,
 West side of canyon, arc gradually E slope of.

BOOK 2618

- of sand ridge
- 39.96 Set an iron post 3 ft. long 1 in. in diam. 26 in. in the ground for $\frac{1}{4}$ sec. cor. marked on brass cap $\frac{1}{4}$ S 8 on N. half and S 17 on S. half. Dig pits 18x18x12 ins. East W. of post. 3 ft. deep. and raise a mound of earth $3\frac{1}{2}$ ft. base $1\frac{1}{2}$ ft. high. N. of cor.
- Note:— On this cor. I set off. $7^{\circ}46'$ S. on the decl. arc. and at noon observe the sun on the meridian and obtain a reading of. $36^{\circ}00'$ N. on the lab. arc.
- 70.00 Top of sand ridge bears N.E. and S.W. desc. gradually over N.W. slope.
- 79.92 The cor. of secs. 7, 8, 17, and 18, hereinbefore described. Land broken and hilly. Soil sandy and stony 3rd and 4th rate. No timber

- W $89^{\circ}51'$ W. on a random line bet. secs. 7 and 18
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 79.56 Intersect the 3rd Guide Meridian East. 8 lbs. N. of the cor. of ^{recently estab. by me as described in Standard Book "5"} secs. 7, 12, 13, and 18, thence I run, $S 89^{\circ}54' E$ on a true line bet. secs. 7 and 18. Ascend N.W. slope over hilly land, through scattering sage and greasewood bush undergrowth and bunch grass.
- 11.00 Begin abrupt ascent over bluff 150 ft. high. bears N. and S.
- 15.00 Top of bluff. Leave hilly land bears N. and S. Enter rolling sandy land.
- 39.56 Set an iron post 3 ft. long 1 in. in diam. 26 in. in the ground for $\frac{1}{4}$ sec. cor., marked on brass cap $\frac{1}{4}$ S 7 on N. half and S 18 on S. half. Raise a mound of stone 2 ft. base. $1\frac{1}{2}$ ft. high. N. of cor. Pits impracticable
- 46.35 West edge of Canyon bears N.W. and S.E., Leave rolling sandy land bears N.W. and S.E. Enter stony broken land descend abruptly.
- 60.00 Bottom of Canyon. Cross. rimmed creek N.E. arc.
- 77.40 Top of abrupt ascent on E. edge of Canyon bears N. and S.E. arc. gradually.
- 79.56 The cor. of secs. 7, 8, 17, and 18, hereinbefore described.

Chains

Subdivision of T₁₄ 30 N., R 13 E.

43

Land rolling, hilly, and broken.
Soil sandy and stony 3rd and 4th rate.
No timber

N₆₀° 03' W., 1/4 sec. 7 and 8,

Descend N.W. slope over sandy land, through scattering sage and greasewood brush undergrowth and bunch grass.

- 30' South edge of canyon bears N.E. and S.W., desc. abruptly over broken stony N.W. slope into canyon
- 40.00 Set an iron post 3 ft. long 1 in. in diam. 26 ins. in the ground for 1/4 sec. cor. marked on brass cap 57 on W. half and 58 on E. half. Raise a mound of stone 2 ft. base, 1 1/2 ft. high. W. of cor. Pile impracticable
- 40.40 Foot of steep rocky descent in canyon, leave broken land bears N.E. and S.W. Enter rolling bottom land. Cross dry ravine 20 lbs wide course N.E.
- 48.65 Leave rolling land bears N.E. and S.W., Enter broken stony land. Ascend abruptly over S.E. slope.
- 55.00 Top of rocky spur 150 ft. above bottom of canyon bears N 40° E and S 40° W. desc. abruptly.
- 71.00 Dry ravine 125 ft. below top of spur. course N 45° E. ascend.
- 79.75 Top of rocky ridge bears N.E. and S.W. desc. very abruptly.
- 80.00 The point for cor. of secs. 5, 6, 7, and 8. falls on unsafe ground on steep N. slope of ridge, therefore return to top of ridge and at:
- 79.75 Set an iron post 3 ft. long 2 ins. in diam. 24 ins. in the ground for witness cor. to cor. of secs 5, 6, 7 and 8. marked on brass cap. W.C. in N. half. T 30 N. S 6 in N.W., R 13 E. 35 in N.E., 38 in S.E. and 37 in S.W. quadrants. Raise a mound of stone 2 ft. base, 1 1/2 ft. high. W. of cor. Pile impracticable
- Land rolling hilly and broken
Soil sandy and stony, 3rd and 4th rate.
No timber

March 1st 1900

BOOK 2618

- March 2nd 1911^h Ah. 8^h 14^m a.m. l.m. l. D run off.
 36° 01' N. on the lab. arc 7° 26' S on the decl. arc and
 determine a meridian with the solar, the point for
 cor. of secs. 5, 6, 7, and 8, ^{on steep N. slope} thence D run,
 S 89° 58' E, on a random line, bet. secs. 5 and 8,
 40.00 Set temp. 1/4 sec. cor.
- 80.10 Intersect N. and S. line, 35 lbs. S. of the witness
 cor. to cor. of secs. 4, 5, 8, and 7, ^{hereinbefore described,} thence D run,
^{From true point for corner,} S 89° 58' W, on a true line, bet. secs. 5 and 8,
 Ascend East slope over stony and clayey land through
 scattering sage and greasewood brush undergrowth
 and bunch grass.
- 4.20 Top of clay ridge 25 ft. above cor. bears N. and S.
 desc. abruptly.
- 29.20 Dry ravine 100 ft. below top of ridge course N 25° E
 desc. abruptly
- 37.30 Top of clay ridge bears N. and S. desc.
- 40.05 Set an iron post 3 ft. long, 1 in. in diam. 26 ins.
 in the ground for 1/4 sec. cor. marked out brass
 cap 1/4 35 on N. half and 38 on S. half.
 Dig pits 18 x 18 x 12 ins E. and W. of post 3 ft. dia.
 and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft.
 high N. of cor.
- 53.15 Foot of abrupt descent 75 ft. below 1/4 sec. cor, Low
 hilly land bears N. and S., Enter rolling sandy
 bottom land bears N. and S. Cross dry ravine course NE.
- 64.00 Dry ravine 20 lbs wide course NE.
- 65.00 Enter rolling sandy land bears N.E. and S.W.
 Enter stony hilly land.. Ascend steep rocky
 S.E. slope.
- 80.10 True point for cor. of secs. 5, 6, 7, and 8, on steep North slope.
 Land rolling, hilly, and broken.
 Soil sandy, and stony 3rd and 4th rates.
 No timber
-
- From true point for cor. of secs. 5, 6, 7, and 8, D run,
 N 89° 54' W, on a random line, bet. secs. 6 and 7,
 40.00 Set temp. 1/4 sec. cor.
- 79.38 Intersect the 3rd Guide Meridian East. 14 lbs. S.
^{recently estab. by me as described, in Standard Book "5"}
 of the cor. of secs. 1, 6, 7, and 12, thence D run,
 S 89° 48' E, on a true line, bet. secs. 6 and 7,
 Ascend steep W. slope over broken stony land
 through scattering sage and greasewood brush

Chains

- 28.00 Undergrowth and bunch grass
Begin ascent over E. wall of canyon
 - 31.35 Top of abrupt ascent on wall of canyon 150
ft. high. Bears N. and S., are gradually.
 - 39.38 Set an iron post 3 ft. long 1 in. in diam. 26 ins
in the ground for $\frac{1}{4}$ sec. cor. marked on brass
cap $\frac{1}{4}$ S 60 W N. half and S 70 W S. half.
Dig pits 18 x 18 x 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.
 - 53.00 West edge of canyon bears N.E. and S.W. desc.
abruptly over cliffs and ledges.
 - 70.30 Bottom of canyon 150 ft. deep cross dry run is
25 lbs. wide course N.E. ascend abruptly over
N.W. slope
 - 79.38 True point for cor. of secs. 5, 6, 7 and 8, on steep North
side. Sand broken and hilly.
Soil sandy and stony 3rd and 4th rates.
No timber.
-
- Note: - At this cor. I set off 7²³ S. on the decl. arc and
at noon observe the sun on the meridian
and obtain a reading of $36^{\circ}01'N.$ on the lat. arc.
-
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
 - 80.18 Intersect N. bdy. of Twp. 10 lbs. N. $89^{\circ}57'E.$ of the cor.
of secs. 5, 6, 31, and 32, recently estab. by me as described in
Exterior Book "A0", thence I run,
 $S. 0^{\circ}07'E.$, on a true line, bet. secs. 5 and 6,
ascend gentle N.W. slope over rolling sandy
land, through sage and greasewood brush
undergrowth and bunch grass.
 - 40.18 Set an iron post 3 ft. long 1 in. in diam. 26
ins. in the ground for $\frac{1}{4}$ sec. cor. marked on
brass cap. $\frac{1}{4}$ S 60 W W. half and S 55 W E. half
Dig pits 18 x 18 x 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.
 - 45.20 Top of sand ridge bears N.E. and S.W., land
rolling land bears N.E. and S.W. Enter hilly
stony land. desc. S.E. slope of ridge.

BOOK 2618

- 55.88 North edge of Canyon. bears $N40^{\circ}E.$ and $S40^{\circ}W.$ descend abruptly over cliffs and ledges.
- 62.50 Dry ravine in bottom of Canyon. Course $N.E.$ are.
- 78.00 Top of abrupt ascent on sand stone rim rock on South edge of canyon bears $N60^{\circ}W.$ and $S60^{\circ}E.$ arend steep rocky $N.$ slope of ridge
- 80.18 Tree point for vol. of sec. 5, 6, 7, and 8, on steep North slope.
Land rolling hilly and broken
Soil sandy and stony 3rd and 4th rate.
No timber

March 2nd 1891

General Description

The land contained in this township is very rough, broken, and hilly with very little level land.

The township is cut by numerous deep canyons with sharp, clay ridges between the sides of which are very abrupt and difficult of ascent.

The soil over the major portion of the township is very poor and can nearly all be classed as third and fourth rate.

The tops of the ridges and the mesa land in the northeastern and south western parts of the township is covered with a good growth of bunch grass, but on the steep slopes of the ridges and canyon sides very little vegetation of any kind is found.

In sections 3 and 4 there is a small amount of level land which is being farmed by the Indians, with poor success.

There is no timber or water in the township. Limestone and sandstone ledges are found in many places in the township, but the stone is of such a nature that it disintegrates when exposed to the air.

No mineral was found in the township although from surface indications, I think it quite probable that extensive coal beds underlie a large portion of the

rough part of the township
There is one family of Navajo Indians residing
in section 20.

Mar. 2 - 1911

Van L. White
U.S. Geologist

U.S. TRANSITMAN
FINAL OATHS OF ~~DEPUTY SURVEYOR~~ AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by Van L. White

U.S. Transitman, ~~United States Deputy Surveyor~~, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the Subdivision lines of Tp 30 N. R. 13 E., of the G. & S. R. B. & M. Arizona showing the respective capacities in which they acted:

- T. G. White, Chairman.
- Richard L. Shumway, Chairman.
- George B. Sieg, Moundman.
- Harry Keyops, Moundman.
- Nelson Polacco, Axman.
- ~~Axman.~~
- William R. Carson, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Van L. White

U.S. Transitman, ~~United States Deputy Surveyor~~, in surveying all those parts or portions of the Subdivision lines of Tp 30 N. R. 13 E.

of the Gila and Salt River Basins and Meridian, Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully ~~surveyed~~ ^{executed} and the corner monuments established, according to the instructions furnished by the ~~United States Surveyor General for~~ Commissioner of the General Land Office

- T. G. White, Chairman.
- Richard L. Shumway, Chairman.
- George B. Sieg, Moundman.
- Harry Keyops, Moundman.
- Nelson Polacco, Axman.
- ~~Axman.~~
- William R. Carson, Flagman.

Subscribed and sworn to before me this 15th day of May, 19 11

Van L. White
U.S. Transitman



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BOOK 2618

TRANSITMAN
FINAL OATH OF ~~UNITED STATES DEPUTY SURVEYOR.~~

I, Van L. White U.S. Transitman, ~~United States Deputy Surveyor~~, do solemnly swear that, in pursuance of ~~a contract~~ Special Instructions received from ~~the Commissioner of the General United States Surveyor General for~~ Land Office, bearing date of the 2nd day of Oct. 1907 ~~and~~ and the 15th day of May, 1908, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the ~~United States Surveyor General~~ Commissioner of the ~~Land Office~~, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the Subdivision lines of Township No. 30 North of Range No. 13 East

of the Gila and Salt River Base and Meridian, in the Territory of Arizona, which are represented in the foregoing field notes as having been surveyed 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 ~~United States Surveyor General~~ Commissioner of the ~~Land Office~~ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Van L. White
~~United States Deputy Surveyor~~
Transitman

Subscribed by said Van L. White, and sworn to before me }
this 27th day of December, 1912



Dutton R. Taylor
U.S. Commissioner
at Las Cruces, N.M.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona **APR 25**, 1914

The foregoing field notes of the survey of the
Subdivision lines of

Township No. 30 North - Range No. 13 East
of the

Gila and Salt River Base and Meridian, Arizona.

executed by VAN L. WHITE, U.S. Transitman, under Special Instructions
~~executed by~~ from the Commissioner of the General Land Office

under his contract No. _____, dated October 2, 1907 and May 15, 1908, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank Ingalls
~~United States Surveyor General~~
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.

United States Surveyor General