

Subdivisional ⁴⁻⁶⁷⁹

2377

203

FEB 24 1913

(1)

Book G.

BOOK 2377

FEB 7 - 1912

FIELD NOTES

OF THE SURVEY OF THE

Subdivisional Lines of T17N. R19W.

Of the *Sila* *Sup* *Sab* *River* *Dam* *and* Meridian,
Arizona

AS SURVEYED BY

William Alexander, United States Deputy Surveyor,

Under his Contract No. *156*, dated *May 26*, 1909

Survey commenced *December 3*, 1911

Survey completed *December 15*, 1911

NAMES AND DUTIES OF ASSISTANTS.

(13)

BOOK 2377

NAMES AND DUTIES OF ASSISTANTS.

David J. Moss	Chairman
Louis Van Watter	"
Robt. G. Sweet	"
B. P. Wulffmueter	"
E. Westover	Woundedman
Lawrence Skalov	"
Chas Clayton	Apman
Jack Ray	"
W. J. Nations	Flagman.

BOOK 2377

Book "G"

INDEX DIAGRAM.

Township 17 N, Range 19 W
----- EXTERIOR BOOK "F" -----

6	26	5	10	4	15	3	10	2	5	1
					14					
25		25		19		14		9 ² 10		5
	25			19						
7	24	8		9	14	10	9	11	5	12
			18						4	
24		23+24		18		13		9		4
			18							
18	23	17		16	13	15	8	14	4	13
			17							
23		22+23		17		12		8		3
19	22	20	17	21	12	22	7	23	3	24
22		21		16		11+12		7		2
30	21	29	16	28	11	27	7	26	2	25
20+21		20		15+16		11	6	6		1 ² 2
31	20	32	15	33	10	34	6	35	1	36

EXTERIOR BOOK "F"

ORIGINAL & SUPPLEMENTAL STANDARD BOOK "C"

4th Standard Parallel North
Meanders Page

10 206

PRELIMINARY OATHS OF ASSISTANTS.

BOOK 2377

David J. Cross
Louie Van Marter

Robt. L. Smoot
B. P. Wulffenstein

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 Subdivisional lines of T's 17, 18, & 19 N, R 19 W of the Gr S R B & M, Aug

David J. Cross
Louie Van Marter

Robt. L. Smoot, Chainman.
B. P. Wulffenstein, Chainman.

Subscribed and sworn to before me this 3rd day of December, 1911

In order to save delay and expense I take these oaths myself. A notary not being available.

William D. Alexander
U.S. Dep. Surveyor.



WE, E. Westover

and Laurence Skalar

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 Subdivisional lines of T's 17, 18, & 19 N, R 19 W of the Gr S R B & M, Aug.

E. Westover, Moundman.

Laurence Skalar, Moundman.

Subscribed and sworn to before me this 3rd day of December, 1911

To avoid great delay and expense I take these oaths myself. A notary not being available.

William D. Alexander
U.S. Dep. Surveyor.



WE, Chas. Clayton

and Jack Ray

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

The Subdivisional lines of T's 17, 18, & 19 N, R 19 W of the Gr S R B & M, Aug

Chas. Clayton, Axman.

Jack Ray, Axman.

Subscribed and sworn to before me this 3rd day of December, 1911

There is no notary available so in order to avoid great expense & delay I take these oaths myself.

William D. Alexander



I, W. J. Nations

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

Subdivisional lines of T's 17, 18, & 19 N, R 19 W of the Gr S R B & M, Aug.

W. J. Nations, Flagman.

Subscribed and sworn to before me this 3rd day of December, 1911

To avoid great delay and expense, a notary not being available I take the oaths myself.

William D. Alexander
U.S. Dep. Surveyor.



Subdivision of Township 17 North, Range 19 West.

Chains.

Survey commenced December 3, 1911, and was executed with a Young and Sons Light Mountain Transit No. 7520, the horizontal limb having two double verniers placed opposite to each other and reading to single minutes of arc, which is also the least reading of the latitude and declination arcs of the Smith Solar Attachment, which is fitted to this instrument.

The instrument was examined, tested on the true meridian at Phoenix, Arizona, found correct, and was approved by the U. S. Surveyor General of Arizona June 25, 1904.

I examine all the standard and bubble adjustments, and find them correct.

I begin at the Standard cor. of secs. 35 and 36, 4th. Standard Parallel North, on S.bdy. of T.17 N., R.19 W.; lat. $34^{\circ} 48' 44''$ N.; long. $114^{\circ} 13' 29''$ W., which is a granite stone in a monument of stones, marked and witnessed as described by the Surveyor General.

At 4h. 0m. p.m., l.m.t., I set off $22^{\circ} 0' S.$ on the decl. arc; $34^{\circ} 48\frac{1}{2}' N.$ on the lat. arc, and determine a meridian with the solar, and mark the line thus obtained by a tack driven in a stake set about 5 chains N. of my station.

December 3, 1911.

December 4, 1911. At 2h. 37m. a.m., l.m.t., I observe Polaris at its western elongation in accordance with the instructions in the Manual, and mark the line thus determined by a tack driven in a stake set westerly from the stake set yesterday by solar observation.

At 6h. 0m. a.m., l.m.t., I turn off $1^{\circ} 25'$ to the east, and find that this line is approximately one eighth of an inch W. of the solar meridian of yesterday.

At 8h. 0m. a.m., l.m.t., I set off $22^{\circ} 05' S.$ on the decl. arc; $34^{\circ} 48\frac{1}{2}' N.$ on the lat. arc, and determine a meridian with the solar. This line coincides with the stellar meridian. I conclude that the adjustment of my instrument is satisfactory. Magnetic variation, $N. 15^{\circ} 00' E.$

Thence I run,
N. $0^{\circ} 04' W.$, between secs. 35 and 36.

Over mountainous land, covered with loose rock.

22.00 Wash, 20 lks. wide, course E., Ascend.

37.00 Descend.

40.00 Set a porphyry stone $8 \times 11 \times 15$ ins., 10 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Descend NW. slope.

49.00 Wash 5 lks. wide, course W. Ascend SE. slope of high mountain.

80.00 Set a porphyry stone $7 \times 12 \times 19$ ins., 15 ins. in the ground, for the cor. of secs. 25, 26, 35 and 36, marked with 1 notch on the E. and 1 notch on the S. edges; and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Land, mountainous and covered with loose rock.

Soil, 4th rate, stony.

Scattering greasewood and cactus brush.

Mountainous land, covered with loose rock, and exceptionally difficult to survey, 80.00 chs.

Thence I run,

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

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.95 Intersect the Fifth Guide Meridian West at a point 7 lks. S. of the cor. of secs. 25, 30, 31 and 36. A lava stone 5 ins. above ground, marked and witnessed as described by the Surveyor-General.

2. Subdivision of Township 17 North, Range 19 West.

Chains.

- Thence I run,
S.89°57'W. on a true line, between secs.25 and 36.
Over mountainous land, covered with loose rock.
Ascend.
- 15.00 High malpais ridge, course N.and S.; descend.
30.30 Wash, 40 lks.wide, course NW.
Ascend.
- 39.97½ Set a malpais stone 10x10x12 ins., 8 ins. in the ground
for the ¼ sec.cor., marked ¼ on the N.face, and raise
a mound of stones 3 ft.base, 1½ ft. high, N.of cor.
Pits impracticable.
Ascend over mountainous land.
- 79.95 The cor.of secs .25,26, 35 and 36, heretofore described.
Land extremely mountainous, and covered with loose rock.
Soil, 3rd and 4th rate, stony.
Scattering greasewood and cactus brush.
Mountainous land, covered with loose rock, and exception-
ally difficult to survey, 79.95 chs.
-
- At noon, at the above cor. I set off 22° 9½'S. on
the decl.arc, and observe the sun on the meridian. The
resulting lat. reading is 34° 49½'N.
- Thence I run,
N.0°04'W., bet. secs.25 and 26.
Over mountainous land, covered with loose rocks and boul-
ders.
- Descend NE.slope of high mountain.
- 27.00 Wash, 40 lks.wide, course W. Ascend.
40.00 Set a porphyry stone 9x10x16 ins., 11 in. in the ground
for the ¼ sec.cor., marked ¼ on the W.face, and raise
a mound of stones 3 ft. base, 1½ ft. high, W.of cor.
Pits impracticable.
Descend.
- 42.00 Gully, course SW. Ascend.
48.50 Ridge, ~~course~~ SW. Descend.
55.70 Gulch, 5 lks.wide, course SW. Ascend.
60.00 Ridge, ~~course~~ SW. and NE. Descend.
66.00 Gulch wash 5 lks.wide, course SW. Ascend.
80.00 Set a porphyry stone 8x10x13 ins., 9 ins. in the ground
for the cor.of secs.23,24,25 and 26, marked with 1
notch on the E. and 2 notches on the S.edges, and
raise a mound of stones 3 ft.base, 1½ ft. high, W.of
cor. Pits impracticable.
Land, mountainous, and covered with loose rock and boul-
ders.
Soil, 4th rate, stony.
Scattering greasewood and cactus brush.
No grass.
Mountainous land, covered with loose rock and exception-
ally difficult to survey, 80.00 chs.
-
- Thence I run,
N.89°57'E., on a random line, bet. secs.24 and 25.
- 40.00 Set temp. ¼ sec.cor.
80.05 Intersect the Fifth Guide Meridian West at the cor.of
secs. 19,24, 25 and 30, a lava stone in mound of
stones, marked and witnessed as described by the Sur-
veyor General.
- Thence I run,
S.89°57'W., on a true line, bet. secs.24 and 25.
Over mountainous land, covered with boulders and loose
rock.
- Descend NNW.slope of high mountain.
- 20.80 Canyon, wash 20 lks.wide, course SW.; ascend.
24.00 Ridge, N.and S.; descend.
28.00 Canyon, wash, 40 lks.wide, course S.; ascend.
38.80 Rock ridge, ~~course~~ N.and S.; descend.
40.02½ Set a porphyry stone, 8x10x18 ins., 12 ins., in the ground

Chains.

- for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the N. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
Continue descent.
- 49.80 Canyon, wash 20 lks. wide, course SE.; ascend.
70.00 Top of high rock ridge, bearings N. and S.; descend.
80.05 The cor. of secs. 23, 24, 25 and 26, heretofore described. Land extremely mountainous, and covered with loose rock. Soil, 4th rate, stone. No grass. Scattering undergrowth, greasewood and cactus. Mountainous land, covered with loose rock and boulders, and exceptionally difficult to survey, 80.05 chs.
-
- Thence I run, N. $0^{\circ}04'$ W., between secs. 23 and 24. Over extremely mountainous land, covered with boulders and loose rock.
Ascend.
2.65 High ridge, NE. and SW.; descend.
7.20 Ascend.
11.90 Spur W.; descend.
13.00 Ascend.
17.90 High ridge, bearings NW. and SE.; descend.
22.00 Ascend.
29.50 Spur, E. from high rock butte; descend.
40.00 Porphyry rock in place, $10 \times 5 \times 3$ ft. above ground, marked X at the exact point for the $\frac{1}{4}$ sec. cor. of secs. 23 and 24, and $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
60.00 Gulch, wash 20 lks. wide, course NW.; ascend.
69.00 Top of high rock ridge, bearings NW. and SE.; descend.
79.50 Wash, 150 lks. wide, course SW.
80.00 Cor. pt. falls in wash, impracticable to establish, so I proceed to
81.00 Set a porphyry stone $8 \times 12 \times 18$ ins., 12 ins. in the ground for a witness corner to the corner of secs. 13, 14, 23 and 24, marked with 1 notch on the E. edge, and 3 notches on the S. edge, and W. C. on the NE. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
Land, extremely mountainous, and covered with loose sliding rock.
Soil, 4th rate, stoney
No grass.
Scattering undergrowth of greasewood and cactus.
Mountainous land, covered with loose rock, and exceptionally difficult to survey, 81.00 chs.
December 4, 1911.
-
- December 5, 1911.
From the true point for the corner of secs. 13, 14, 23 and 24, I run
N. $89^{\circ}57'$ E. on a random line between secs. 13 and 24.
40.00 Set temp. $\frac{1}{4}$ sec. cor.
79.90 Intersect the 5th. Guide Meridian West at a point 7 lks. N. of the cor. of secs. 13, 18, 19 and 24, a granite stone 5 ins. above ground, marked and witnessed as described by the Surveyor-General.
Thence I run,
West on a true line, between secs. 13 and 24.
Over extremely mountainous land, covered with loose sliding rock.
Ascend steep high mountain.
16.50 Top, elevation approximately 1000 feet above cor. of secs. 13, 14, 23 and 24, highest point about 5 chs. S.
Descend precipitous cliffs and slides.
39.95 Point for $\frac{1}{4}$ sec. cor. falls on cliff impracticable to

4. Subdivision of Township 17 North, Range 19 West.

Chains.

- perpetuate.
- 45.00 Set a quartz porphyry stone 8x12x18 ins., 12 ins. in the ground for the witness cor. to $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the N.face, W.C on the NE.side, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N.of cor. Pits impracticable.
- 50.70 Rocky gorge, course NNW.
- 54.50 Same gorge course SWW.; ascend.
- 60.00 Descend.
- 79.50 Wash, 150 lks.wide, course SW.
- 79.90 True point for cor.of secs. 13,14,23 and 24 falls in above wash.
- Land, extremely mountainous, and covered with loose sliding rock.
- Scattering undergrowth of greasewood, cactus.
- Soil, 4th rate, rocky.
- No grass.
- Mountainous land, covered with loose rock, and exceptionally difficult to survey, 79.90 chs.
-
- At 9h.Om. a.m., 1.m.t., I set off $34^{\circ} 51\frac{1}{2}'$ N.on the lat. arc; $22^{\circ} 15\frac{1}{2}'$ S. on the decl.arc, and determine a meridian with the solar at the true point for the cor.of secs. 13,14,23 and 24.
- Thence I run,
N. $0^{\circ} 04'$ W., between secs.13 and 14.
Over extremely mountainous land.
Ascend.
- 1.00 Witness corner previously described.
- 4.00 Descend.
- 8.00 Wash, 30 lks.wide, course SWW. Ascend steep slope covered with loose rock.
- 37.09 Top of sharp rock ridge, bears E.and W.; descend.
- 40.00 Set a malpais stone 7x10x15 ins., 10 ins. in the ground for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the W.face, and raise a mound of stone 3 ft.base, $1\frac{1}{2}$ ft. high, W.of cor. Pits impracticable.
- 50.00 Deep canyon, wash 25 lks.wide, course W.; ascend.
- 72.00 Top of rock ridge, bears SE.and NW.; descend.
- 80.00 Set a malpais stone 6x8x14 ins., 10 ins. in the ground for the cor. of secs. 11,12,13 and 14, marked with 1 notch on the E.and 4 notches on the S.edges, and raise a mound of stones 3 ft.base, $1\frac{1}{2}$ ft. high, W.of cor. Pits impracticable.
- Land, extremely mountainous, and covered with loose rock.
- Soil, 4th rate, rocky.
- Scattering cactus and greasewood brush.
- No grass.
- Mountainous land, covered with loose rock, and exceptionally difficult to survey, 80.00 chs.
-
- Thence I run,
East, on a random line, between secs.12 and 13.
- 40.00 Set temp. $\frac{1}{4}$ sec.cor.
- 80.05 Intersect the 5th.Guide Meridian West, at the cor.to secs. 7,12,13 and 18, a lava stone in mound of stones, marked and witnessed as described by the Surveyor-General.
- Thence I run,
West on a true line, between secs.12 and 13.
Over extremely mountainous land, covered with loose rock.
Ascend.
- 3.00 Top of high black mountain.
Descend 40° slope.
- 18.00 Ascend.
- 22.00 Ridge, bears NW.and SE.; descend steep slope.
- 40.02 Set a malpais stone 8x12x16 ins., 12 ins. in the ground

Subdivision of Township 17 North, Range 19 West.

5.

Chains.	
	for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the N.face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N.of cor. Pits impracticable.
56.50	Main E.fork of Warm Springs Canyon, 100 lks.wide, course NW. Ascend.
80.05	The cor.of secs. 11, 12, 13 and 14, heretofore described. Land extremely mountainous, and covered with loose malpais boulders. Soil, 4th rate, rocky. A small amount of grass. Scattering greasewood and cactus undergrowth. Mountainous land, covered with loose rock and exceptionally difficult to survey, 80.05 chs.

	At noon, . . . , at the above cor., I set off $22^{\circ} 17\frac{1}{2}' S.$ on the decl. arc, and observe the sun on the meridian. The resulting lat. reading is $34^{\circ} 52' N.$ Thence I run, $N.0^{\circ} 04' W.$ on a true line, bet. secs. 11 and 12. Over extremely mountainous land covered with loose rock. Descend.
11.20	Main E.fork of Warm Springs Canon, wash, 100 lks.wide, course NW.; ascend.
19.00	Ridge, bears E. and W.
25.00	Canyon, wash 30 lks.wide, course NW.; ascend.
40.00	Set a malpais stone $10 \times 12 \times 20$ ins., 15 ins. in the ground for $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the W.face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W.of cor. Pits impracticable. Descend.
45.00	Canyon, wash 30 lks.wide, course NW. Ascend.
67.00	High rocky ridge, bears NW. Descend.
80.00	Set a malpais stone $7 \times 12 \times 24$ ins., 18 ins. in the ground for the cor.of secs 1, 2, 11 and 12, marked with 1 notch on the E. and 5, notches on the S. edges, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W.of cor. Pits impracticable. Land, extremely mountainous, covered with loose rock. Soil, 4th rate, stony. Scattering grass. Scattering greasewood and cactus undergrowth. Mountainous land, covered with loose rock and exceptionally difficult to survey, 80.00 chs. December 5, 1911.

	December 6, 1911. Thence I run, East on a random line, between secs. 1 and 12.
40.00	Set temp. $\frac{1}{4}$ sec.cor.
80.00	Intersect the 5th. Guide Meridian West, at a point 5 lks. S. of the cor. of secs. 1, 6, 7, and 12, recently ^{re} established and described by me. Thence I run, $S.89^{\circ} 58' W.$ on a true line between secs. 1 and 12. Over extremely mountainous land, covered with boulders. Descend.
28.00	Canyon, wash, 30 lks.wide, course NW.; ascend.
40.00	A malpais stone $14 \times 24 \times 28$ ins. above ground in place, marked with X at the exact corner, $\frac{1}{4}$ on the N.face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
49.00	Top of high ridge, bears NW. and SE. Descend.
80.00	The cor.of secs. 1, 2, 11 and 12, hereinbefore described. Land, extremely mountainous, and covered with boulders. Soil 4th rate, rocky. Small amount of grass. Scattering undergrowth of greasewood and cactus. Mountainous land covered with boulders, and exceptionally difficult to survey, 80.00 chs.

	At 9h. Am., a.m., 1.m.t., I set off $34^{\circ} 53' N.$ on the lat. arc; $22^{\circ} 23\frac{1}{2}' S.$ on the decl. arc; and determine a meri-

6. Subdivision of Township 17 North, Range 19 West

Chains.

- dian with the solar, at the cor. of secs. 1, 2, 11 and 12, heretofore described.
- Thence I run,
N. $0^{\circ} 04'$ W. on a random line, between secs. 1 and 2.
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 80.05 Corner of secs. 1, 2, 35 and 36 on the N. bdy. of the Tp., recently established and described by me, brs. W. 2 lks.
- Thence I run,
S. $0^{\circ} 05'$ E., on a true line, between secs. 1 and 2.
Over extremely mountainous land, covered with boulders and loose rock.
Descend a SE. slope.
- 35.20 Wash, 15 lks. wide, course SW.; ascend.
- 40.05 Set a malpais stone 9x12x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
- Descend.
- 44.40 Wash, 30 lks. wide, course W.; ascend.
- 70.50 High spur, NWW.; descend.
- 80.05 The cor. of secs. 1, 2, 11 and 12, heretofore described. Land, extremely mountainous, and covered with loose rock. Soil, 4th rate, stony.
Some grass.
Scattering undergrowth of greasewood, cactus.
Mountainous land, covered with boulders and loose rock, and exceptionally difficult to survey, 80.05 chs.
-
- Then I proceed to the cor. of secs. 34 and 35 on the S. bdy. of the township. This is the Standard cor. of secs. 34 and 35, 4th. Standard Parallel North, on S. bdy. of T. 17 N., R. 19 W., a lava stone 7 ins. above ground, marked and witnessed as described by the Surveyor General.
- At 12. At noon, at this cor., I set off $22^{\circ} 25'$ S. on the decl. arc, and observe the sun on the meridian. The resulting lat. reading is $34^{\circ} 49'$ N.
- Thence I run,
N. $0^{\circ} 04'$ W., on a true line, between secs. 34 and 35.
Over mountainous land, covered with boulders.
Ascend.
- 22.00 High, rocky ridge, bears E. and W. Descend.
- 40.00 Set a malpais stone 8x12x16 ins., 11 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
- Ascend.
- 44.70 Spur W.; descend.
- 47.50 Gulch, 10 lks. wide, course W.; ascend.
- 50.00 Ridge, bears E. and W.; descend.
- 64.00 Wash, 12 lks. wide, course W.
- 78.00 Wash, 15 lks. wide, course SW.; ascend.
- 80.00 Set a malpais stone 10x12x18 ins., 12 ins. in the ground for the cor. of secs. 26, 27, 34 and 35, marked with 2 notches on the E. and 1 notch on the S. edges, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
Land, mountainous, and covered with boulders and loose rock. Soil, 4th rate, rocky.
Some grass.
Scattering undergrowth of greasewood and cactus.
Mountainous land, covered with boulders and exceptionally difficult to survey, 80.00 chs.
-
- Thence I run E. on a random line between secs. 26 and 35.
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 80.00 Cor. of secs. 25, 26, 35 and 36 hereinbefore described, brs. N. 5 lks.
Thence I run,

Subdivision of Township 17 North, Range 19 West.

7.

Chains.	<p>S.89°58'W., on a true line, bet.secs.26 and 35. Over mountainous land, covered with boulders. Descending along S.side of mountain.</p> <p>4.00 Ascend.</p> <p>12.00 Spur SW.; descend steep SW.slope of mountain.</p> <p>40.00 Set a malpais stone 6x8x20 ins., 15 ins. in the ground for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the N.face, and raise a mound of stones 3 ft.base, 1$\frac{1}{2}$ ft. high,N.of cor. Pits impracticable. Continue descent.</p> <p>77.00 Wash, 15 lks.wide, course SW.; ascend.</p> <p>80.00 The cor.of secs.26,27,34 and 35 hereinbefore described. Land, extremely mountainous and covered with boulders. Soil, 4th rate, stony. Very little grass. Scattering undergrowth of greasewood and cactus. Mountainous land, covered with boulders, and exceptionally difficult to survey,80.00 chs. December 6, 1911.</p> <hr/> <p>December 7, 1911. Thence I run, N.0°04' W. between secs. 26 and 27. Over sharply rolling land, covered with black malpais boulders. Descend.</p> <p>10.00 Wash, 20 lks., course SW.; ascend.</p> <p>21.00 Top of hill; descend.</p> <p>24.00 Gulch, 20 lks.wide, course W.; ascend.</p> <p>27.00 Spur W.; descend.</p> <p>40.00 Set a malpais stone 10x13x19 ins., 15 ins. in the ground, for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the W.face, and raise a mound of stones 3 ft. base, 1$\frac{1}{2}$ ft. high,W.of cor. Pits impracticable.</p> <p>42.00 Wash, 50 lks.wide, course SW.; ascend.</p> <p>75.00 Spur SW.; descend.</p> <p>80.00 Set a malpais stone 6x6x18 ins., 12 ins. in the ground for the cor. of secs. 22,23,26 and 27, marked with 2 notches on the S. and E.edges, and raise a mound of stones 3 ft. base, 1$\frac{1}{2}$ ft. high,W.of cor. Pits impracticable. Land, sharply rolling, covered with boulders. Soil, 4th rate, rocky. A small amount of dry grass. Scattering undergrowth of greasewood and cactus. Sharply rolling land, covered with boulders and exceptionally difficult to survey,80.00 chs.</p> <hr/> <p>Thence I run, N.89° 58'E., on a random line between secs.23 and 26.</p> <p>40.00 Set temp.$\frac{1}{4}$ sec.cor.</p> <p>79.96 Cor.to secs. 23,24,25 and 26 heretofore described, brs.S. 9 lks.</p> <p>Thence I run, N,89°58'W. on a true line between secs. 23 and 26. Over mountainous land, covered with loose rock. Descend</p> <p>37.40 Wash, 8 lks.wide, course SW.; ascend.</p> <p>39.98 Set a porphyry stone 8x15x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the W.face, and raise a mound of stones, 3 ft. base, 1$\frac{1}{2}$ ft. high,N.of cor. Pits impracticable.</p> <p>Descend.</p> <p>48.00 Wash,10 lks.wide, course SW.; ascend.</p> <p>55.00 Ridge, bears NE. and SW.; descend.</p> <p>79.96 Cor.of secs. 22,23,26 and 27, heretofore described. Land, mountainous, covered with boulders and loose rock. Soil, 4th rate, stony. No grass.</p>
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8. Subdivision of Township 17 North, Range 19 West.

Chains.

Scattering greasewood and cactus brush.
Mountainous land, covered with boulders and loose rock and
exceptionally difficult to survey, 79.96 chs.

At noon, at the above cor., I set off $22^{\circ} 32' S.$
on the decl. arc and observe the sun on the meridian.
The resulting lat. reading is $34^{\circ} 50\frac{1}{2}' N.$

Thence I run,
 $N. 0^{\circ} 04' W.$, between secs. 22 and 23.
Over mountainous land, covered with rocks.
Descend.

- 4.00 Draw, course SW.
14.10 Wash, 10 lks. wide, course SW.
Ascend.
18.00 Ridge, SW. and NE.
Descend.
39.50 Set witness cor. to $\frac{1}{4}$ sec. cor., a malpais stone $5 \times 8 \times 18$ ins.,
12 ins. in the ground, marked $\frac{1}{4}$ on the W. face; WC on
the NE. side, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$
ft. high, W. of cor. Pits impracticable.
40.00 Point for $\frac{1}{4}$ sec. cor., falls in sand of wash 20 lks. wide,
course SW.; ascend.
58.00 Wash, 100 lks. wide, course SW.; ascend over loose rock.
80.00 Set a quartzite stone $8 \times 12 \times 20$ ins., 15 ins. in the ground
for the cor. of secs. 14, 15, 22 and 23, marked with 2
notches on the E. and 3 notches on the S. edges, and
raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high W. of
cor. Pits impracticable.
Land, extremely mountainous and covered with loose rock.
Soil, 4th rate, stony.
Scattering undergrowth of greasewood and cactus.
No grass.
Mountainous land, covered with loose rock and exception-
ally difficult to survey 80.00 chs.

Thence I run,
 $S. 89^{\circ} 58' E.$, on a random line, between secs. 14 and 23.

- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
79.98 True ~~point~~ cor. of secs. 13, 14, 23 and 24 in wash, brs.
N. 7 lks.

Thence I run,
 $S. 89^{\circ} 59' W.$ on a true line, between secs. 14 and 23.
Over mountainous land, covered with loose rock.
Ascend.

- 2.00 Descend.
28.00 Wash, 300 lks. wide, course SW.; ascend.
31.00 Descend.
34.20 Wash, 50 lks. wide, course SW.; ascend.
39.99 Set a porphyry stone $8 \times 8 \times 16$ ins., 10 ins. in the ground
for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the N. face, and raise a
mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits
impracticable.
47.00 Spur, S. Descend.
66.00 Gulch, wash 30 lks. wide, course S.; ascend.
67.50 Spur S.; descend.
69.00 Gulch, 10 lks. wide, course S.; ascend.
72.00 Ridge, bears N. and S.; descend.
76.25 Gulch, wash 10 lks. wide, course S.; ascend.
79.98 The cor. of secs. 14, 15, 22 and 23, heretofore described.
Land, extremely mountainous, and covered with loose rock.
Soil, 4th rate, rocky.
Scattering undergrowth of greasewood and cactus.
Very little grass.
Mountainous land, covered with loose rock, and exception-
ally difficult to survey, 79.98 chs.

Chains.

Thence I run,
N. 0° 04' W., between secs. 14 and 15.
Over extremely mountainous land, covered with loose quartzite rock.

Ascend.

18.00 Top of high ridge, bears E. and W.; descend.

39.00 Wash, 100 lks. wide, course NWW.; ascend.

40.00 Set a malpais stone 8x12x20 ins., 15 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Ascend very steep slope, covered with loose rock.

55.00 Spur, SW.; descend.

58.50 Rocky gorge course SW.; ascend.

80.00 Point for the cor. of secs. 10, 11, 14 and 15 falls on steep southerly slope of high rocky ridge, course NWW. and SEE., impracticable to establish the cor. on account of sliding rock. So I proceed to

87.60 Establish a witness cor. to cor. of secs. 10, 11, 14 and 15 on rock in place, approximately 6x8x5 ft. above ground, on which I mark a X at the exact point for the cor. 2 notches on the E. side and 4 notches on S. side, and WC. on the NE., and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Land, extremely mountainous and, covered with loose rock. Soil, 4th rate, stony.

Scattering greasewood and cactus brush.

No grass.

Mountainous land, covered with loose rock and exceptionally difficult to survey 87.60 chs.

At 4h. 0m. p.m., 1.m.t., at the above cor. I set off 22° 31' S. on the decl. arc; 34° 52 $\frac{1}{2}$ ' N. on the lat. arc, and determine a meridian with the solar.

December 7, 1911.

December 8, 1911.

From the true point for the cor. of secs. 10, 11, 14 and 15, I run,

N. 89° 59' E., on a random line, between secs. 11 and 14.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.00 Cor. of secs. 13, 14, 11 and 12 hereinbefore described, brs. 3.5 lks.

Thence I run,

N. 89° 59' W., on a true line, bet. secs. 11 and 14.

Over extremely mountainous land, covered with boulders and loose rock.

Ascend.

5.00 Spur, N. Descend.

10.00 Ascend.

22.00 Ridge, NW. and SE.; descend.

40.00 Set a malpais stone 8x10x28 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the N. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Pits impracticable.

55.00 Rocky gorge, course SW.; ascend.

70.00 Spur, S.; descend.

80.00 True point for the cor. of secs. 10, 11, 14 and 15.

Land extremely mountainous, and covered with boulders and loose rock.

Soil, 4th rate, rocky.

No grass.

Scattering greasewood and cactus brush.

Mountainous land, covered with boulders, and exceptionally difficult to survey, 80.00 chs.

From the true point for cor. of secs. 10, 11, 14 and 15, I run,

N. 0° 04' W. on a line bet. secs. 10 and 11.

Over extremely mountainous land, covered with boulders

10. Subdivision of Township 17 North, Range 19 West.

Chains.	
	and loose rock, Ascend.
7.60	Witness corner, previously described.
25.00	High mountain ridge, bearing NW. and SE. Descend.
40.00	Set a porphyry stone, 8x14x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the W.face, and raise a mound of stones 3 ft.base, 1 $\frac{1}{2}$ ft. high, W.of cor. Pits impracticable. Continue descent,
52.00	Descend bluff.
72.00	Gulch, 30 lks.wide, course NW.; ascend.
75.00	Descend.
80.00	But for coming gorge, wash 30 lks.wide, course NW, impracticable to set sec.cor., I return to
79.50	Set a witness corner, a sandstone 7x13x20 ins., 15 ins. in the ground for the witness corner to cor. of secs. 2, 3, 10 and 11, marked with 5 notches on the S. and 2 notches on the E. edges, and W C on the NE.face, and raise a mound of stones 3 ft. base, 1 $\frac{1}{2}$ ft. high, W.of cor. Pits impracticable. Land, extremely mountainous, and covered with loose rock. Soil, 4th rate, stony. No grass. Scattering greasewood and cactus brush. Mountainous land, covered with loose rock and exceptionally difficult to survey, 80.00 chs.

	From the true point for the cor.of secs. 2, 3, 10 and 11, I run, S.89°59'E., on a random line, between secs.2 and 11. Over extremely mountainous land, covered with boulders. Ascend.
40.00	Set temp. $\frac{1}{4}$ sec.cor.
80.02	Cor.to secs. 1,2,11 and 12, hereinbefore described, brs. N.2 lks. Thence I run, West, on a true line, between secs.2 and 11. Over extremely mountainous land, covered with boulders. Descend.
0.20	Wash, 20 lks.wide, course NW.; ascend.
16.00	High divide, bearing NW. and SE.; descend.
32.00	Gulch, 10 lks.wide, course S.; ascend.
40.01	Set a granite stone 5x14x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the N.face, and raise a mound of stones 3 ft.base, 1 $\frac{1}{2}$ ft. high, N.of cor. Pits impracticable.
46.50	Rock ridge, bearing NW.and SE.; descend.
80.02	Cor. point of secs. 2, 3, 10 and 11, in wash; witness cor. 50 lks.S.0°4'E., previously described. Land extremely mountainous, and covered with boulders. Soil, 4th rate, stony. Scattering greasewood and cactus brush. A small amount of dry grass. Mountainous land, covered with boulders and exceptionally difficult to survey, 80.02 chs.

	At noon, I set off 22°39' S.on the decl.arc, and observe the sun on the meridian, at the true point for the cor.of secs. 2, 3, 10 and 11; the resulting lat.reading is 34° 53'N. Thence I run, N.0°04' W. on a random line between secs. 2 and 3.
40.00	Set temp. $\frac{1}{4}$ sec.cor.
80.00	Intersect the N.bdy, of the Tp. at a point 5 lks.W.of the cor.of secs. 2, 3, 34 and 35, recently established and described by me. Thence I run,

Subdivision of Township 17 North, Range 19 West.

11.

Chains.

- S. $0^{\circ}02'$ E. on a true line, bet. secs. 2 and 3.
Over extremely mountainous land, covered with loose rock;
descend.
- 3.50 Prominent wash, 40 lks. wide, course S. 75° W.
Ascend.
- 19.00 Spur, SWW.; descend.
- 30.00 Wash, 100 lks. wide, course W.; ascend.
- 40.00 Set a malpais stone, 8x10x20 ins., 15 ins. in the ground
for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face and raise
a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits
impracticable.
- Continue ascent.
- 49.00 Spur W. Prominent rock butte brs. E. about 400 lks. dist.
Descend.
- 80.00 Cor. point of secs. 2, 3, 10 and 11, falls in E. fork of Warm
Springs Canyon, witness corner established 50 lks. S.
 $0^{\circ}4'E.$, previously described.
- Land, extremely mountainous, and covered with loose rock.
Soil, 4th rate, stony.
Scattering greasewood and cactus brush,
Some grass.
Mountainous land covered with loose rock, and exception-
ally difficult to survey, 80.00 chs.
December 8, 1911.

December 9, 1911.

Commence at the Standard Corner of sections 33 and 34, on
the 4th. Standard Parallel North, on the S. bdy. of T. 17
N., R. 19 W. which is a lava stone in mound of stones,
marked and witnessed as described by the Surveyor Gen-
eral.

Thence I run,

N. $0^{\circ}05'$ W., between secs. 33 and 34.

Over mountainous land, covered with boulders.

Descend.

- 3.40 Wash, 15 lks. wide, course SWW.; ascend.
- 6.00 Ridge, abears SWW.; descend.
- 13.00 Wash, 20 lks. wide, course SWW.; ascend.
- 40.00 Set a malpais stone 12x12x20 ins., 15 ins. in the ground
for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise
a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
Pits impracticable.
- Continue ascent.
- 41.00 Top ridge, E. and W.; descend.
- 70.50 Wash, 100 lks. wide, course SWW.; ascend.
- 80.00 Set a malpais stone 12x14x18 ins., 12 ins. in the ground
for the cor. of secs. 27, 28, 33 and 34, marked with 3
notches on the E. and 1 notch on the S. edges, and
raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of
cor. Pits impracticable.
- Land, mountainous and covered with boulders.
Soil, 4th rate, stony.
Scattering greasewood and cactus brush,
Some dried grass.
Mountainous land, covered with boulders and exceptionally
difficult to survey, 80.00 chs.

At 9h. On a.m., 1.m.t., at the above cor., I set off 34°
 $49\frac{1}{2}'$ N. on the lat. arc; $22^{\circ}44'$ S. on the decl. arc, and de-
termine a meridian with the solar.

Thence I run,

East on a random line, between secs. 27 and 34.

- 40.00 Set temp. $\frac{1}{4}$ sec. cor.

- 80.02 Cor. of secs. 26, 27, 34 and 35 heretofore described, brs. S.
2 lks.

Thence I run,

N. $89^{\circ}59'$ W., on a true line between secs. 27 and 34.

Over mountainous land, covered with boulders.

Descend.

Chains.
 11.50 Wash, 100 lks.wide, course SSW.; ascend.
 16.00 Descend.
 20.80 Wash, 12 lks.wide, course S.; ascend.
 29.00 Spur, SE.; descend.
 32.00 Ascend.
 35.00 Spur, S.; descend.
 36.50 Ascend.
 37.50 Spur SW.; descend.
 40.02 Set a malpais stone, 11x12x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the N.face, and raise a mound of stones 3 ft.base, $1\frac{1}{2}$ ft. high, N.of cor.Pits impracticable.
 56.00 Wash, 100 lks.wide, course SWW.; ascend.
 80.02 The cor.of secs.27,28,33 and 34, hereinbefore described. Land, mountainous, and covered with boulders. Soil, 4th rate, stony. Scattering greasewood and cactus brush. No grass. Mountainous land, covered with boulders, and exceptionally difficult to survey, 80.02 chs.

 Thence I run,
 N. 05° W., between secs.27 and 28.
 Over sharply rolling land, covered with malpais stones;
 ascend.

10.00 Ridge, E.and W.; descend.
 18.00 Gully, course W.; ascend.
 25.50 Ridge, E.and W.; descend.
 35.10 Wash, 20 lks.wide, course SWW.; ascend.
 40.00 Set a malpais stone 8x10x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the W.face, and raise a mound of stones 3 ft.base, $1\frac{1}{2}$ ft. high, W.of cor. Pits impracticable.
 64.40 Descend.
 70.30 Wash, 20 lks.wide, course SW.; ascend.
 80.00 Set a malpais stone 9x10x18 ins., 12 ins. in the ground for the cor.of secs. 21,22, 27 and 28, marked with 3 notches on the E. and 2 notches on the S.edges, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W.of cor. Pits impracticable.
 Land, sharply rolling and covered with malpais stones. Soil, 4th rate, stony. Scattering greasewood and cactus brush. Sharply rolling land, covered with malpais stones and exceptionally difficult to survey, 80.00 chs.

 Thence I run,
 S. $89^{\circ} 59'$ E. on a random line, between secs.22 and 27.
 40.00 Set temp. $\frac{1}{4}$ sec.cor.
 79.98 Cor.of secs. 22,23,26 and 27 hereinbefore described, brs,S. 5 lks.
 Thence I run,
 N. $89^{\circ} 57'$ W. on a true line, between secs.22 and 27.
 Over mountainous land, covered with malpais boulders.
 Descend.
 0.90 Small draw, course SW. asc.
 30.00 Wash, 15 lks. wide, course SWW.; ascend.
 32.60 Spur, SSW.; descend.
 37.00 Wash, 60 lks.wide, course SW.; ascend.
 39.99 Set a malpais stone 7x10x16 ins., 11 ins. in the ground for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the N.face, and raise a mound of stones 3 ft.base, $1\frac{1}{2}$ ft. high, N.of cor.Pits impracticable.
 50.00 Top of broad spur, SW.; descend.
 63.00 Wash, 30 lks.wide, course SW.; descend.
 67.50 Spur, SW.; descend.
 70.60 Wash, 10 lks.wide, course SW.; ascend.
 79.98 The cor.of secs.21,22, 27 and 28, hereinbefore described. Land, mountainous and covered with boulders.

Chains.

Soil, 4th rate, stony.
Scattering greasewood and cactus.
Very little dry grass.
Mountainous land, covered with boulders and exceptionally difficult to survey, 79.98 chs.

At noon, I set off $22^{\circ}45'S.$, on the decl. arc, and observe the sun on the meridian at the above course. The resulting lat. reading is $34^{\circ}50' N.$

Thence I run,
 $N.0^{\circ}05' W.$, between secs. 21 and 22.
Over rolling land, covered with dense greasewood and cactus undergrowth and malpais boulders.
Ascending.

23.00 Descend.

32.00 Wash, 60 lks. wide, course SW.; ascend.

40.00 Set a malpais stone $6 \times 6 \times 18$ ins., 12 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

80.00 Set a malpais stone $8 \times 8 \times 12$ ins., 8 ins. in the ground for the cor. of secs. 15, 16, 21 and 22, marked with 3 notches on the E. and S. edges; 17 N on the NE., and 19 W on the SE. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Pits impracticable.

Land, rolling, covered with malpais boulders and dense undergrowth of greasewood and cactus.

Soil, 3rd and 4th rate, stony.

No grass.

Rolling land, covered with dense undergrowth and boulders, and exceptionally difficult to survey, 80.00 chs.

Thence I run,

$S.89^{\circ}57'E.$, on a random line, between secs. 15 and 22.

40.00 Set a temp. $\frac{1}{4}$ sec. cor.

79.98 The cor. of secs. 14, 15, 22 and 23, hereinbefore described, brs. N. 7 lks.

Thence I run,

West, on a true line, bet. secs. 15 and 22.

Over extremely mountainous land, covered with loose rock. Ascend; scattering greasewood and cactus brush.

5.00 Rock ridge, bears N. and S.; descend.

14.25 Draw, course NW.; ascend.

20.00 Spur N.; descend.

33.75 Wash, 50 lks. wide, course SW.; ascend.

35.00 Descend.

39.00 Wash, 100 lks. wide, course SW.; ascend.

39.99 Set a malpais stone $6 \times 8 \times 18$ ins., 12 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the N. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Pits impracticable.

Descend; enter dense greasewood and cactus brush.

45.00 Wash, 75 lks. wide, course SW.; ascend.

79.98 The cor. of secs. 15, 16, 21 and 22, hereinbefore described.

Land, mountainous, and covered with boulders or loose rock.

Soil, 4th rate, stony.

Dense undergrowth of greasewood and cactus brush.

No grass.

Mountainous land, covered with loose rock or boulders, or dense undergrowth and exceptionally difficult to survey, 79.98 chs.

December 9, 1911.

December 10, 1911.

Thence I run,

14. Subdivision of Township 17 North, Range 19 West.

Chains.	N. 0° 05' W., between secs. 15 and 16. Over extremely mountainous land, covered with loose rock. Dense undergrowth of greasewood and cactus. Descend.
10.00	Wash, 50 lks. wide, course SW. Ascend. Enter scattering undergrowth of greasewood and cactus.
40.00	Set a porphyry stone at top of rock ridge, bears E. and W. for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face. Dimensions of the stone are 6x10x14 ins., 10 ins. in the ground, and raise a mound of stones 3 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Descend steep slope, covered with sliding rock.
44.50	Canyon, wash 10 lks. wide, course W.; ascend.
55.00	Rock ridge, bears E. and W.; descend.
62.70	Canyon, wash, 10 lks. wide, course W.; ascend.
70.60	High rock ridge, bears E. and W.; descend.
77.00	Canyon, wash 30 lks. wide, course W.; ascend.
80.00	Set a malpais stone 8x10x14 ins., 10 ins. in the ground for the cor. of secs. 9, 10, 15 and 16, marked with 3 notches on the E. and 4 notches on the S. edges, and raise a mound of stones 3 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Land, extremely mountainous. Covered with loose quartzite and malpais stones. Soil, 4th rate, rocky. Dense undergrowth of greasewood and cactus, 10.00 chs. Scattering undergrowth of greasewood and cactus, 70.00 chs. No grass. Mountainous land, covered with loose rock and malpais boulders and exceptionally difficult to survey, 80.00 chs.

	At 9h. Am. a.m., l.m.t., at the above cor., I set off 22° 49 $\frac{1}{2}$ ' S. on the decl. arc; 34° 50' N. on the lat. arc, and determine a meridian with the solar. Thence I run, East, on a random line, between secs. 10 and 15.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
79.96	The true point for cor. of secs. 10, 11, 14 and 15, which was perpetuated by a witness corner located 760 lks. N. 0° 4' W, brs. 7 lks. N. Thence from the true point for the cor. I run, S. 89° 57' W., on a true line, between secs. 10 and 15. Over extremely mountainous land, covered with loose rock. Descending steep SW. slope.
18.00	Descend bluffs; NW. and SE.
28.00	Rocky gorge course SW. Ascend.
35.00	Descend.
39.98	Set a malpais stone 6x10x14 ins., 10 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the N. face, and raise a mound of stones 3 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
41.00	Wash, 15 lks. wide, course SW.; ascend.
45.00	Ridge, bears N. and S.; descend.
65.75	Wash, 50 lks. wide, course SW.; ascend.
67.00	Ridge, bears NE. and SW.; descend.
70.30	Wash, 10 lks. wide, course SW.; ascend.
74.50	Descend.
77.20	Gulch, 10 lks. wide, course S.; ascend.
79.96	The cor. of secs. 9, 10, 15 and 16, hereinbefore described. Land, extremely mountainous, and covered with loose rock. Soil, 4th rate, stony. Scattering greasewood and cactus brush. No grass. Mountainous land, covered with loose rock and exceptionally difficult to survey, 79.96 chs.

Chains.

- Thence I run,
N.0°05' W., between secs.9 and 10.
Over extremely mountainous land, covered with loose rock.
Ascend
- 19.00 Prominent quartz ledge outcrop, bears E.and W.
Continue ascent.
- 21.50 Prominent thimble-shaped butte brs.E. about 400 lks.dist.
Descend.
- 32.00 Rocky gorge, wash 15 lks.wide, course SW. Ascend.
- 40.00 Set a malpais stone, 6x8x16 ins., 11 ins. in the ground
for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the W.face, and raise
a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high,W.of cor.
Pits impracticable.
Continue steep ascent.
- 56.40 High rock ridge, bears E.and W.; descend.
- 62.00 Canyon, wash 10 lks.wide, course W.; ascend.
- 76.00 Ridge W. from mountain. Descend.
- 77.00 Ascend.
- 78.00 Spur, W.; descend.
- 80.00 Set a malpais stone 7x16x30 ins., 23 ins. in the ground
for the cor.of secs. 3,4,9 and 10, marked with 3
notches on the E. and 5 notches on the S.edges, and
raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high,W.of
cor. Pits impracticable.
Land, extremely mountainous, and covered with loose rock.
Soil, 4th rate, rocky
Scattering greasewood and cactus brush.
No grass.
Mountainous land, covered with loose rock, and exception-
ally difficult to survey,80.00 chs.

At noon, , at the above cor., I set off 22° 51' S .
on the decl.arc, and observe the sun on the meridian.
The resulting latitude reading is 34° 53' N.

- Thence I run,
N.89°57' E. on a random line, between secs.3 and 10.
- 40.00 Set temp. $\frac{1}{4}$ sec.cor.
- 79.98 The true point for the cor.of secs. 2,3,10 and 11, brs.
S.12 lks.
Thence I run,
N.89°58' W., on a true line, between secs.3 and 10.
Over extremely mountainous land, covered with loose rock.
Ascend.
- 7.00 Descend.
- 8.00 Gulch, wash 10 lks.wide, course N.; ascend.
- 14.00 Descend.
- 16.10 Gulch, 10 lks.wide, course NE.; ascend.
- 39.99 Set a malpais stone 9x12x18 ins., 12 ins. in the ground
for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the N.face, and raise
a mound of stones 3 ft.base, $1\frac{1}{2}$ ft. high,N.of cor.Pits
impracticable.
- 44.00 Descend.
- 46.00 Gully, course NE.; ascend.
- 55.00 Spur, NE.; descend.
- 60.00 Gorge, rocky, course NE.; ascend steep mountain slope.
- 72.00 High rock spur about 10 chs. N.of highest point of moun-
tain. Descend cliffs and rock slides.
- 79.98 The cor.of secs.3,4,9 and 10, hereinbefore described.
Land, extremely mountainous, and covered with loose rock.
Soil, 4th rate, rocky.
Scattering greasewood and cactus brush.
Very little grass.
Mountainous land, covered with loose rock and exception-
ally difficult to survey, 79.98 chs.

-
- Thence I run,
N.0°05' W., on a random line between secs.3 and 4.
- 40.00 Set temp. $\frac{1}{4}$ sec.cor.

16. Subdivision of Township 17 North, Range 19 West.

Chains.

79.95 Intersect N.bdy. of the Tp. at a point 9 lks. W. of the cor. of secs. 3, 4, 33 and 34, recently established and described by me.

Thence I run,

S. 0° 01' E., on a true line, between secs. 3 and 4.

Over extremely mountainous land, covered with malpais boulders, Descend.

20.00 Small spring E., 5 chs. dist. in wash of E. fork of Warm Springs Canyon, width 60 lks., course W.; ascend.

28.00 Spur NW.; descend.

30.50 Gully course NW.; ascend.

69.95 Set a porphyry stone 6x7x16 ins., 11 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

45.20 Spur W.; descend.

48.20 Gully, course W.; ascend.

57.00 Spur, W.; descend.

62.00 Gulch, course W.; ascend.

67.00 Spur, W.; descend.

73.00 Ascend.

79.95 Cor. of secs. 3, 4, 9 and 10, hereinbefore described.

Land extremely mountainous, and covered with malpais boulders.

Soil, 4th rate, rocky.

Scattering greasewood, cactus, and some catsclaw brush.

Some dry grass.

Mountainous land, covered with boulders and exceptionally difficult to survey, 79.95 chs.

December 10, 1911.

December 11, 1911.

Commence at the Standard cor. of sections 32 and 33, 4th. Standard Parallel North, on the S. bdy. of T. 17 N., R. 19 W., which is a lava stone 6 ins. above ground, marked and witnessed as described by the Surveyor-General.

Thence I run,

N. 0° 05' W., between secs. 32 and 33.

Over rolling land, covered with dense undergrowth of greasewood, cactus and catsclaw, and malpais boulders.

24.50 Wash, 50 lks. wide, course WSW.; ascend.

40.00 Set a malpais stone 6x14x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face; and raise a mound of stone 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. This $\frac{1}{4}$ sec. cor. is situated on the W. slope of black malpais mountain, high point of which is about 800 lks. E.

Ascend.

55.00 Spur W.; descend.

74.80 Wash, 40 lks. wide, course W.

77.50 Wash, 25 lks. wide, course W.; ascend.

80.00 Set a malpais stone 10x16x20 ins., 15 ins. in the ground for the cor. of secs. 28, 29, 32 and 33, marked with 4 notches on the E. and 1 notch on the S. edges, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Land, rolling and mountainous, and covered with dense undergrowth of greasewood, cactus and catsclaw.

Covered with malpais boulders.

Soil, 4th rate, rocky.

Scattering dry grass.

Rolling land, covered with boulders and dense undergrowth, and exceptionally difficult to survey, 80.00 chs.

At 9 $\frac{1}{2}$ O.m. a.m., 1 m.t., at the above cor., I set off 34°

Chains.

- 49½' N. on the lat. arc; 22°55'S. on the decl. arc, and determine a meridian with the solar.
- Thence I run,
East, on a random line between secs. 28 and 33.
- 40.00 Set a temp. ¼ sec. cor.
- 80.04 Cor. of secs. 27, 28, 33 and 34 hereinbefore described, brs. N. 2 lks.
- Thence I run,
S. 89°59' W. on a true line, between secs. 28 and 33.
Over rolling land, covered with boulders (malpais).
Dense undergrowth of greasewood, cactus and catsclaw.
- 13.00 Descend.
- 21.00 Gulch, 10 lks. wide, course SW.; ascend.
- 29.50 Ridge, course SW.; descend.
- 33.00 Thence over rolling land.
- 39.20 Set a malpais stone 12x12x18 ins., 12 ins. in the ground for a witness corner to ¼ sec. cor. between secs. 28 and 33, marked ¼ on the N. face, WC on the NE. side, and raise a mound of stones 3 ft. base, 1½ ft. high, N. of cor. Pits impracticable.
- 40.02 Point for the ¼ sec. cor. falls in wash 10 lks. wide, course SW. Impracticable to perpetuate.
- 60.00 Wash, 10 lks. wide, course SW.
- 80.04 Cor. of secs. 28, 29, 32 and 33, hereinbefore described.
Land, rolling and covered with malpais boulders.
Soil, 4th rate, rocky and sandy.
Dense undergrowth of greasewood, cactus and catsclaw.
Scattering dry grass.
Rolling land, covered with dense undergrowth and malpais rocks, and exceptionally difficult to survey, 80.04 chs.

- Thence I run,
N. 0°05' W. between secs. 28 and 29.
Over sharply rolling land, covered with boulders.
Dense undergrowth of greasewood, cactus and catsclaw.
- 3.00 Wash, 30 lks. wide, course W.
Ascend abruptly 30 ft.
- 5.00 Descend.
- 6.50 Wash, 15 lks. wide, course W.; ascend.
- 15.00 Descend.
- 25.00 Ascend.
- 30.00 Descend.
- 40.00 Set a malpais stone 6x7x15 ins., 10 ins. in the ground for the ¼ sec. cor., marked ¼ on the W. face, and raise a mound of stones 3 ft. base, 1½ ft. high, W. of cor. Pits impracticable.
- 41.80 Wash, 15 lks. wide, course SW.; ascend.
- 78.00 Descend.
- 80.00 Set a malpais stone 8x9x18 ins., 12 ins. in the ground for the cor. of secs. 20, 21, 28 and 29, marked ¼ notches on the E. and 2 notches on the S. edges, and raise a mound of stones 3 ft. base, 1½ ft. high, W. of cor. Pits impracticable.
Land, sharply rolling, and covered with malpais stones.
Soil, 3rd and 4th rate, stony.
Dense undergrowth of greasewood, cactus and catsclaw.
Scattering dry grass.
Sharply rolling land, covered with boulders and dense undergrowth, and exceptionally difficult to survey, 80.00 chs.

- At noon, l.m.t., at the above cor., I set off 22° 56½'S. on the decl. arc, and observe the sun on the meridian.
The resulting latitude reading is 34° 50½' N.
- Thence I run,
N. 89° 59' E., between secs. 21 and 28 on a random line.
- 40.00 Set temp. ¼ sec. cor.
- 80.02 The cor. of secs. 21, 22, 27 and 28, hereinbefore described,

18. Subdivision of Township 17 North, Range 19 West.

Chains.	
	<p>brs. S.3 lks. Thence I run, West on a true line, between secs.21 and 28. Over rolling land, covered with dense greasewood and cactus brush. Over malpais boulders.</p>
40.01	<p>Set a malpais stone 9x9x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on N.face, and raise a mound of stones 3 ft. base, 1$\frac{1}{2}$ ft. high, N.of cor. Pits impracticable.</p>
50.00	Wash, 10 lks.wide, course SW.
70.00	Gully SWW.
75.00	Same gully course NNW.
80.02	<p>The cor.of secs. 20, 21,28 and 29, hereinbefore described. Land, rolling. Covered with dense undergrowth of greasewood and cactus. Covered with malpais boulders. Soil, 3rd and 4th rate, stony. Scattering dry grass. Rolling land, covered with malpais boulders, and dense and exceptionally difficult to survey, 80.02 chs.</p>

	<p>Thence I run, N.0°05'W., between secs. 20 and 21. Over sharply rolling land, covered with malpais boulders and dense undergrowth of greasewood and cactus. Descending.</p>
10.00	Wash, 100 lks.wide, course W.; ascend.
12.00	Low ridge, obsear: E.and W.; descend.
20.60	Wash, 10 lks.wide, course W.; ascend.
30.00	Descend.
37.50	Draw, course SWW.; ascend.
40.00	<p>Set a malpais stone 8x15x16 ins., 11 ins. in the ground, for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the W.face, and raise a mound of stones 3 ft. base, 1$\frac{1}{2}$ ft. high,W.of cor. Pits impracticable.</p>
	Descend.
47.80	Wash, 30 lks.wide, course SW. Ascend steep slope.
55.00	Descend.
63.00	Wash, 20 lks.wide, course SW. Ascend steep slope.
80.00	<p>Set a malpais stone 8x12x24 ins., 18 ins. in the ground for the cor.of secs.16,17, 20 and 21, marked with 4 notches on the E. and 3 notches on the S.edges, and raise a mound of stones 3 ft. base, 1$\frac{1}{2}$ ft. high,W.of cor. Pits impracticable.</p> <p>Land, sharply rolling. Soil, 4th rate, stony. Dense undergrowth of greasewood and cactus. Land, covered with malpais boulders. Very little dry grass. Sharply rolling land, covered with boulders and dense undergrowth, and exceptionally difficult to survey, 80.00 chs.</p>

	<p>Thence I run, East, on a random line, between secs.16 and 21.</p>
40.00	Set a temp. $\frac{1}{4}$ sec.cor.
80.04	<p>Cor.of secs. 15,16,21 and 22, hereinbefore described, brs. S.4 lks. Thence I run, N.89°58'W. on a true line, between secs.16 and 21. Descend over rolling land, covered with dense greasewood and cactus undergrowth and with malpais boulders.</p>
40.02	<p>Set a malpais stone 8x8x18 ins., 12 ins. in the ground, for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the N.face, and raise a mound of stones 3 ft.base, 1$\frac{1}{2}$ ft. high,N.of cor. Pits impracticable.</p>
	Ascend.

Subdivision of Township 17 North, Range 19 West. 19.

Chsibs.
 42.00 Narrow ridge, bears SW, and NE.; descend.
 56.00 Prominent wash 100 lks. wide, course SW.
 70.00 Wash, 10 lks. wide, course S.; ascend.
 72.50 Spur, S.; descend.
 78.50 Gully, course S.; ascend.
 80.04 The cor. of secs. 16, 17, 20 and 21, hereinbefore described.
 Land, sharply rolling.
 Soil, 4th rate, stony.
 Dense undergrowth of greasewood, and cactus.
 Land, covered with malpais boulders.
 Sharply rolling land, covered with dense undergrowth and boulders, and exceptionally difficult to survey, 80.04 chs.
 December 11, 1911.

December 12, 1911.

Thence I run,
 N. 0° 05' W., between secs. 16 and 17.
 Over rolling land, covered with boulders.
 Dense undergrowth of greasewood and cactus.
 Ascending.
 40.00 Set a malpais stone 10x12x16 ins., 11 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 49.00 Broad low ridge, NE. and SW. Descend.
 51.00 Ascend.
 54.00 Ledger of large black boulders, bears E. and W. Descend.
 60.00 Wash, 10 lks. wide, course SW. Ascend.
 74.20 Spur SW.; descend.
 80.00 Set a malpais stone 7x9x18 ins., 12 ins. in the ground for the cor. of secs. 8, 9, 16 and 17, marked with 4 notches on the S. and E. edges, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 Land, rolling.
 Soil, 4th rate, stony.
 Dense undergrowth of greasewood and cactus.
 Surface covered with malpais boulders.
 Rolling land, covered with malpais boulders and dense greasewood and cactus brush, and exceptionally difficult to survey, 80.00 chs.

Thence I run,
 S. 89° 58' E. on a random line, between secs. 9 and 16.
 40.00 Set a temp. $\frac{1}{4}$ sec. cor.
 80.02 The cor. of secs. 9, 10, 15 and 16 hereinbefore described, bears 2 lks. N.
 Thence I run,
 N. 89° 59' W. on a true line, bet. secs. 9 and 16.
 Over mountainous land, covered with malpais boulders.
 Dense undergrowth of greasewood and cactus.
 Descend.
 4.25 Gulch, wash 10 lks. wide, course S.; ascend.
 7.00 Spur, S.; descend.
 10.00 Gulch, wash, 20 lks. wide, course S.; ascend.
 15.00 ~~DESCEND.~~
 40.01 Set a malpais stone, 6x6x15 ins., 10 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the N. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
 65.00 Wash, 50 lks. wide, course SW.; ascend.
 75.00 Top of malpais ridge, course N. and S.; descend.
 80.02 The cor. of secs. 8, 9, 16 and 17, hereinbefore described.
 Land, mountainous, covered with malpais boulders.
 Soil, 4th rate, rocky.
 Dense undergrowth of greasewood and cactus.
 Small amount of dry grass.
 Mountainous land, covered with boulders and dense under-

20. Subdivision of Township 17 North, Range 19 West.

Chains.

growth and exceptionally difficult to survey, 80.02 chs.

Thence I run,
N. 0° 05' W. between secs. 8 and 9.
Over mountainous land, covered with boulders.
Dense undergrowth of greasewood and cactus.
Descend.

25.00 Wash, 8 lks. wide, course SW.; ascend.

38.50 Descend.

40.00 Set a malpais stone 8x9x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

57.00 Ascend.

65.00 Spur, NWW.; descend.

69.00 Wash, 40 lks. wide, course NWW.; ascend.

72.00 Low ridge, course E. and W. Descend into Warm Springs Canyon.

80.00 Cor. pits in Warm Springs Canyon wash, 200 lks. wide, course SW. It is impracticable to perpetuate the corner here; therefore, I proceed North'w. to

82.50 Set a malpais stone 7x14x18 ins., 12 ins. in the ground for the witness corner to corner of secs. 4, 5, 8 and 9, marked with 4 notches on the E. and 5 notches on the S. edges, and W. C. on the NE. side, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Land, mountainous and covered with boulders and dense undergrowth of greasewood and cactus.

Soil, 4th rate, stony. Scattering grass.

Mountainous land, covered with dense undergrowth and malpais boulders and exceptionally difficult to survey, 82.50 chs.

At noon, I set off $23^{\circ} 01\frac{1}{2}' S.$ on the decl. arc, and observe the sun on the meridian; the resulting latitude reading is $34^{\circ} 53' N.$ at the true point for the cor. of secs. 4, 5, 8 and 9.

Thence I run,

S. $89^{\circ} 59' E.$, on a random line between secs. 4 and 9.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.02 The cor. of secs. 3, 4, 9 and 10, hereinbefore described, brs. N. 2 lks.

Thence I run,

West, on a true line, between secs. 4 and 9.

Over extremely mountainous land, covered with loose rock, and scattering greasewood and cactus brush.

Descend.

18.00 Rocky gulch, course SW.; ascend.

26.00 Spur, S.; descend.

29.00 Gulch, wash, 10 lks. wide, course S.; ascend.

37.00 Top ridge, NE. and SW.; descend.

40.02 Set a malpais stone 8x13x20 ins., 15 ins. in the ground, for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the N. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Pits impracticable.

Descend.

51.00 Descend bench, NE. and SW. course.

57.00 Descend second bench, between NE. and SW.; continue descent.

80.02 The true point for the cor. of secs. 4, 5, 8 and 9.

Land, extremely mountainous.

Covered with boulders.

Scattering greasewood and cactus brush.

Soil, 4th rate, stony.

Small amount of dry grass.

Mountainous land, covered with boulders and exceptionally difficult to survey, 80.02 chs.

Subdivision of Township 17 North, Range 19 West. 21.

Chains.

Thence I run,
 N. 0° 05' W. on a random line, between secs. 4 and 5.
 36.60 Set temp. W.C. $\frac{1}{4}$ sec. cor., offset 400 lks. E. to avoid butte.
 79.90 Intersect the N. bdy. of the Tp., at a point 389 lks. E. of
 the cor. of sections 4, 5, 32 and 33, recently estab-
 lished and described by me.
 Thence I run, from a point 400 lks. E. of corner,
 South on offset line between secs. 4 and 5.
 Over mountainous land, covered with loose rock, E. base of
 cliffs.
 Scattering greasewood and cactus brush.
 The exact section line passes over a succession of cliffs
 with general course NNW. and SSE., and is unsurveyable.
 24.00 Wash, 10 lks. wide, course E.
 39.90 Impracticable to return to section line and establish $\frac{1}{4}$
 sec. cor. because the same falls on side of cliff.
 43.30 Run 400 lks. W. to true line, and establish W.C. for $\frac{1}{4}$ sec.
 cor. between secs. 4 and 5, as follows:
 Set a granite stone 5x15x18 ins., 12 ins. in the ground
 for witness corner to $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W.
 face, WC on NE. side, and raise a mound of stones 3 ft.
 base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. This
 W.C. is situated on S. slope of prominent rock butte.
 Descend.
 77.40 Witness corner for cor. of secs. 4, 5, 8 and 9, hereinbefore
 described.
 Descend into Warm Springs Canyon,
 79.90 Corner point of secs. 4, 5, 8 and 9 falls in wash, as pre-
 viously described.
 Land, extremely mountainous; covered with loose rock.
 Scattering undergrowth of greasewood and cactus.
 Soil, 4th rate, rocky.
 No grass.
 Mountainous land, covered with loose rock and exceptionally
 difficult to survey, 79.90 chs.

December 12, 1911.

December 13, 1911.
 Commence at the Standard section corner of sections 31
 and 32 on the S. bdy. of Tp. 17 N., R. 19 W., which is a
 granite stone, 6 ins. above ground, on the 4th Standard
 Parallel North, marked and witnessed as described by
 the Surveyor General.
 Thence I run,
 N. 0° 06' W., between secs. 31 and 32.
 Over rolling land, covered with dense undergrowth of
 greasewood and cactus.
 Covered with malpais boulders; descend.
 13.70 Prominent wash 30 lks. wide is about 100 lks. W. of this
 line, and from this point takes a course of SW.
 17.60 Small draw, course W.
 36.00 Small draw, course W.
 40.00 Set a malpais stone 11x11x18 ins., 12 ins. in the ground
 for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise
 a mound of stones 3 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
 Pits impracticable.
 47.50 Prominent wash 30 lks. wide, course SW.; ascend.
 80.00 Set a malpais stone 9x11x18 ins., 12 ins. in the ground
 for the cor. of secs. 29, 30, 31 and 32, marked with 5
 notches on the E. and 1 notch on the S. edges, and
 raise a mound of stones 3 ft. base, 1 $\frac{1}{2}$ ft. high, W. of
 cor. Pits impracticable.
 Land, rolling.
 Soil, 3rd and 4th rate, stony.
 Dense undergrowth of greasewood and cactus.
 Some dry grass.
 Surface covered with malpais boulders.
 Rolling land, covered with dense undergrowth and boulders
 and exceptionally difficult to survey, 80.00 chs.

22. Subdivision of Township 17 North, Range 19 West.

Chains.

At 9h. On., a.m., l.m.t., at the above cor., I set off 23° 04½'S. on the decl. arc; 34°49½'N. on the lat. arc, and determine a meridian with the solar.

Thence I run,
East, on a random line, between secs. 29 and 32.

40.00 Set temp. ¼ sec. cor.
80.00 Cor. of secs. 28, 29, 32 and 33 on line hereinbefore described.

Thence I run,
West, on a true line, between secs. 29 and 32.
Descend over rolling land, covered with boulders and with dense undergrowth of greasewood and cactus.

3.85 Wash, 50 lks. wide, course SW.; ascend.
5.80 Spur, SW.; descend.
11.00 Wash, 10 lks. wide, course SW.
Ascend.
25.00 Spur, SW.; descend.
35.30 Wash, 20 lks. wide, course SW.; ascend.
40.00 Set a malpais stone 6x12x16 ins., 11 ins. in the ground for the ¼ sec. cor., marked ¼ on the N. face; and raise a mound of stones 3 ft. base, 1½ ft. high, N. of cor.
Pits impracticable.
Descend.

55.00 Wash, 15 lks. wide, course S.; ascend.
60.00 Spur, SW.; descend.
80.00 The cor. of secs. 29, 30, 31 and 32, hereinbefore described.
Land, rolling.
Soil, 3rd rate, stony.
Dense undergrowth of greasewood and cactus.
Surface covered with malpais boulders.
No grass except occasional patches of dry growth.
Rolling land, covered with dense undergrowth and boulders, and exceptionally difficult to survey, 80.00 chs.

Thence I run West on a random line, between secs. 30 and 31.

40.00 Set temp. ¼ sec. cor.
79.94 Intersect the W. bdy. of the Township at a point 4 lks. S. of the cor. of secs. 25, 30, 31 and 36, recently established and described by me.

Thence I run;
3.89° 58'E., on a true line, between secs. 30 and 31.
Over sharply rolling land, covered with large malpais boulders.

Dense undergrowth of greasewood and cactus.

10.00 Descend steep, canyon bank, SW.
15.50 Rocky gorge about 10 lks. wide at the wash course S.; ascend.
21.00 Spur, S.; descend.
39.94 Set a malpais stone 16x24x24 ins., 18 ins. in the ground for the ¼ sec. cor., marked ¼ on the N. face, and raise a mound of stones 3 ft. base, 1½ ft. high, N. of cor.
Pits impracticable.

45.00 Wash, 20 lks. wide, course SW.; ascend.
79.94 Cor. of secs. 29, 30, 31 and 32, hereinbefore described.
Land, sharply rolling, cut by deep washes.
Soil, 4th rate, stony.
Dense undergrowth of greasewood and cactus. A little grass.
Surface covered with large malpais boulders. Sharply rolling land covered with boulders & dense undergrowth and exceptionally difficult to survey, 79.94 chs.

Thence I run,
N. 0° 06' W., between secs. 29 and 30.
Over mountainous land, covered with dense undergrowth of greasewood and cactus.
Surface covered with malpais boulders.
Descend.

3.40 Ascend.

Chains.	
12.00	Descend steep bank, bears SW.
14.90	Prominent wash, 100 lks. course SW.; ascend.
23.00	Broad low spur SW.; descend.
30.60	Wash, 20 lks wide, course SW.; ascend.
36.60	Ascend abruptly.
38.00	Thence over gradual ascent.
40.00	Set a malpais stone 10x10x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
52.00	Descend.
57.00	Ascend.
80.00	Set a malpais stone 12x12x18 ins., 12 ins. in the ground for the cor. of secs. 19, 20, 29 and 30, marked with 5 notches on the E. and 2 notches on the S. edges, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
	Land, sharply rolling, and mountainous. Soils 4th rate, stony; covered with malpais boulders. Dense undergrowth of greasewood and cactus. A very small amount of grass. Sharply rolling land, covered with boulders and dense undergrowth, and exceptionally difficult to survey, 80.00 chs.

	At noon, the sun is obscured by clouds. No latitude observation.
	East, on a random line between secs. 20 and 29.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
79.98	The cor. of secs. 20, 21, 28 and 29, hereinbefore described, bears N. 7 lks.
	Thence I run, S. 89° 57' W. on a true line, between secs. 20 and 29. Over sharply rolling land, covered with malpais boulders. Dense undergrowth of greasewood and cactus. Descend.
37.50	Prominent wash, 200 lks. wide, course SW.; ascend.
39.99	Set a malpais stone 8x8x20 ins., 15 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the N. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
46.00	Broad spur, SW. Descend.
64.00	Wash, 80 lks. wide, course S.; ascend.
79.98	The cor. of secs. 19, 20, 29 and 30 hereinbefore described. Land, sharply rolling, covered with malpais boulders. Dense undergrowth of greasewood and cactus. Soil, 4th rate, stony. No grass. Sharply rolling land, covered with boulders and dense undergrowth and exceptionally difficult to survey, 79.98 chs.
	December 13, 1911.

	December 14, 1911.
	Thence N. 89° 58' W., on a random line, between secs. 19 and 30.
40.00	Set a temp. $\frac{1}{4}$ sec. cor.
79.82	Intersect the W. bdy. of the Tp. at a point 5 lks N. of the cor. of secs. 19, 24, 25 and 30, recently established and described by me.
	Thence I run, East on a true line between secs. 19 and 30. Over gently rolling land. Through dense undergrowth of greasewood and cactus. Surface covered with malpais boulders.
39.82	Set a malpais stone 8x10x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the N. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
	Descend.

24. Subdivision of Township 17 North, Range 19 West.

Chains.

49.30 Wash, 20 lks.wide, course S.; ascend.
 79.82 The cor.of secs.19,20,29 and 30, hereinbefore described.
 Land, gently rolling.
 Soil, 4th rate, stony.
 Dense undergrowth of greasewood and cactus.
 Surface covered with malpais boulders.
 Land, covered with dense undergrowth and boulders, and
 exceptionally difficult to survey, 79.82 chs.

 At 9h. Cm. a.m., 1.m.t., at the above cor., I set off
 34°51'N. on the lat. arc; 23°09'S. on the decl. arc,
 and determine a meridian with the solar.
 Thence I run,
 N.0°06'W., between secs.19 and 20.
 Ascend; over rolling land, covered with boulders.
 Dense undergrowth of greasewood and cactus.
 26.00 Descend.
 40.00 Wash, 50 lks.wide comes from the NE., and at this point
 turns to the SE., Impracticable to establish $\frac{1}{4}$ sec.
 cor. at this point.
 Therefore I proceed to
 44.00 Set a malpais stone 12x16x20 ins., 15 ins. in the ground
 for witness corner to $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the W.
 face, W C on the NE. side, and raise a mound of stones
 3 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 Ascend.
 60.00 Descend.
 68.00 Draw, Wash 10 lks.wide, course SWW. Ascend.
 80.00 Set a malpais stone 12x12x22 ins., 15 ins. in the ground
 for the cor.of secs. 17,18,19 and 20, marked with 5
 notches on the E. and 3 notches on the S. edges, and
 raise a mound of stones 3 ft. base, 1 $\frac{1}{2}$ ft. high, W. of
 cor. Pits impracticable.
 Land, rolling and covered with malpais boulders.
 Soil, 4th rate, stony.
 Dense undergrowth of greasewood and cactus.
 No grass.
 Land, covered with boulders and dense undergrowth and
 exceptionally difficult to survey, 80.00 chs.

 Thence I run,
 N.89°57'E; on a random line, bet. secs.17 and 20.
 40.00 Set a temp. $\frac{1}{4}$ sec.cor.
 80.00 Cor.of secs.16,17, 20 and 21, hereinbefore described, brs.
 2 lks.S.
 Thence I run
 S.89°58'W., on a true line, between secs.17 and 20.
 Over sharply rolling land, covered with boulders.
 Dense undergrowth of greasewood and cactus.
 Ascend.
 35.00 Point of long spur, SW. Descend.
 40.00 Set a malpais stone 7x9x18 ins., 12 ins. in the ground
 for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the E. face; and raise
 a mound of stones 3 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
 Pits impracticable.
 Ascend.
 45.00 Descend.
 49.60 Wash, 30 lks.wide, course SW.; ascend.
 61.50 Descend.
 75.00 Draw, course S.; ascend.
 80.00 The cor.of secs.17,18,19 and 20 hereinbefore described.
 Land, sharply rolling, covered with malpais boulders.
 Soil, 4th rate, stony.
 Dense undergrowth of greasewood and cactus.
 No grass.
 Sharply rolling land, covered with boulders and dense
 undergrowth and exceptionally difficult to survey,
 80.00 chs.

Subdivision of Township 17 North, Range 19 West. 25.

Chains.

At noon m., l.m.t., at the above cor., I set off $23^{\circ}10'S$. on the decl. arc, and observe the sun on the meridian. The resulting latitude reading is $34^{\circ}51\frac{1}{2}'N$.

Thence I run,

West, on a random line, between secs. 18 and 19.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.70 Intersect the W. bdy. of the Tp. at a point 2 lks. N. of the cor. of secs. 13, 18, 19 and 24, recently established and described by me.

Thence I run,

N. $89^{\circ}59'E$. on a true line, between secs. 18 and 19.

Over gently rolling land, covered thickly with malpais boulders.

Dense undergrowth of greasewood and cactus.

39.70 Set a malpais stone $6 \times 6 \times 14$ ins., 10 ins. in the ground, for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the N. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

79.70 The cor. of secs. 17, 18, 19 and 20, hereinbefore described.

Land, gently rolling.

Soil, 4th rate, stony.

Dense undergrowth of greasewood and cactus.

Surface covered with malpais boulders.

No grass.

Rolling land, covered with dense undergrowth and boulders and exceptionally difficult to survey, 79.70 chs.

Thence I run,

N. $0^{\circ}08'W$., between secs. 17 and 18.

Over gently rolling land, covered with greasewood and cactus brush, dense.

Surface thick with malpais boulders.

40.00 Set a malpais stone $10 \times 11 \times 18$ ins., 12 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor, Pits impracticable.

Descend.

62.00 Draw, course SW.; ascend.

69.00 Descend.

80.00 Set a malpais stone $7 \times 9 \times 17$ ins., 11 ins. in the ground for the cor. of secs. 7, 8, 17 and 18, marked with 5 notches on the E. and 4 notches on the S. edges, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Land, gently rolling.

Soil, 4th rate, stony; covered thickly with malpais boulders.

Dense undergrowth of greasewood and cactus.

No grass.

Rolling land, covered with boulders and dense undergrowth and exceptionally difficult to survey, 80.00 chs.

December 14, 1911.

December 15, 1911.

Thence I run,

N. $89^{\circ}58'E$., on a random line, bet. secs. 8 and 17.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

80.04 The cor. of secs. 8, 9, 16 and 17 hereinbefore described, brs. 3.4 lks.

Thence I run,

West, on a true line, between secs. 8 and 17.

Over sharply rolling land.

Covered with dense undergrowth of greasewood and cactus.

Thickly strewn with malpais boulders.

Descend.

12.00 Wash, 10 lks. wide, course SW.; ascend.

16.00 Descend.

26. Subdivision of Township 17 North, Range 19 West.

Chains.

40.02 Set a malpais stone 7x10x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec.cor., marked $\frac{1}{4}$ on the N. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

66.00 Descend terrace.

70.50 Foot of terrace, N. and S.

80.04 The cor. of secs. 7, 8, 17 and 18, hereinbefore described. Land, sharply rolling. Dense undergrowth of greasewood and cactus. Soil, 4th rate, stony. Surface covered with malpais boulders. No grass. Sharply rolling land, covered with dense undergrowth and boulders, and exceptionally difficult to survey, 80.04 chs.

At 9h.0m., a.m., 1 m.t. at the above cor., I set off $23^{\circ} 12\frac{1}{2}'$ S. on the decl. arc; $34^{\circ} 52' N.$ on the lat. arc, and determine a meridian with the solar.

Thence I run, $S. 89^{\circ} 59' W.$, on a random line, between secs. 7 and 18. Over mountainous land, covered with malpais boulders. Dense undergrowth.

40.00 Set temp. $\frac{1}{4}$ sec. cor.

79.57 Intersect the W. bdy. of the Tp., at a point 14 lks. S. of the cor. of secs. 7, 12, 13 and 18, recently established and described by me.

Thence I run, $S. 89^{\circ} 55' E.$, on a true line, between secs. 7 and 18. Over mountainous land; covered with dense undergrowth of greasewood and some catsclaw.

Surface thick with malpais boulders. Descend into canyon.

6.00 Canyon, wash 30 lks. wide, course S.; ascend.

12.00 Descend.

17.45 Canyon, wash, 200 lks. wide, course S.; ascend.

19.00 Descend.

22.00 Wash, 200 lks. wide, course S.; ascend.

30.00 Descend.

35.00 Wash in gorge, 30 lks. wide, course S.; ascend.

39.57 Set a malpais stone 6x10x14 ins., 10 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the NN. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

45.00 Descend.

61.25 Warm Springs canyon wash 300 lks. wide, course SW.

Ascend.

79.57 The cor. of secs. 7, 8, 17 and 18, hereinbefore described.

Land, mountainous.

Soil, 4th rate, stony.

Dense undergrowth of greasewood and cactus.

No grass.

Ground surface, thickly covered with malpais boulders.

Mountainous land, covered with malpais boulders and dense undergrowth, and exceptionally difficult to survey, 79.57 chs.

Thence I run, $N. 0^{\circ} 06' W.$, between secs. 7 and 8.

Over sharply rolling land, covered with boulders and dense undergrowth of greasewood and cactus.

Descend.

15.00 Warm Springs Canyon wash 100 lks. wide, course SW.

27.80 Branch wash 30 lks. wide, course SW.

37.65 Lower wash, 50 lks. wide, course SE.

40.00 Set a porphyry stone 5x10x10 ins., 7 ins. in the ground, for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Subdivision of Township 17 North, Range 19 West.

27.

Chains.

- Pits impracticable.
Ascend.
- 45.00 Descend.
- 47.00 Wash, 15 lks.wide, course SW.; ascend.
- 80.00 Set a porphyry stone 6x8x12 ins., 8 ins. in the ground for the cor.of secs.5,6,7 and 8, marked with 5 notches on the E. and S.edges, and raise a mound of stones 3 ft.base, 1½ ft. high,W.of cor. Pits impracticable. This cor. is situated on the E.slope of small butte. Land, roughly rolling.
Soil, 4th rate, stony.
Surface covered with boulders and loose rock. Dense undergrowth of greasewood and cactus. Roughly rolling land, covered with boulders and loose rock and dense undergrowth, & exceptionally difficult to survey, 80.00 chs.
-
- At noon at the above cor., I set off 23° 13½'S.on the decl.arc, and observe the sun on the meridian. The resulting lat. reading is 34° 53'N.
Thence I run,
East, on a random line, bet. secs.5 and 8.
- 46.00 Set temp. ¼ sec.cor.
- 80.02 The cor.point of secs. 4, 5, 8 and 9, hereinbefore described, brs. N.5 lks.; this was perpetuated by a witness corner previously described.
From the true point for the cor.,
I run S.89° 58'W.on a true line, between secs.5 and 8. Over mountainous land; covered with boulders and dense undergrowth of greasewood and cactus.
- 1.00 Leave Warm Springs Canyon; ascend.
- 24.00 Descend; leave dense undergrowth, enter scattering greasewood and cactus.
- 34.00 Wash, 150 lks.wide, course S.; ascend.
- 40.01 Set a malpais stone 5x7x20 ins., 15 ins. in the ground for the ¼ sec.cor., marked ¼ on the N.face, and raise a mound of stones 3 ft. base, 1½ ft. high,N.of cor. Pits are impracticable.
- ¼ sec. Cor.is situated on a spur S.; descend.
- 47.00 Wash 200 lks.wide, course S.; ascend.
- 50.00 Descend.
- 56.00 Wash in gulch, 10 lks.wide, course S.; ascend.
- 80.02 The cor.of secs. 5,6,7 and 8, hereinbefore described. Land, mountainous.
Soil, 4th rate, rocky.
Medium dense undergrowth of greasewood and cactus.
Ground covered with loose rock.
No grass.
Mountainous land, covered with dense undergrowth or loose rock, and exceptionally difficult to survey, 80.02 chs.
-
- Thence I run,
N.89° 55' W.on a random line, between secs.6 and 7.
- 40.00 Set temp. ¼ sec.cor.
- 79.50 Intersect the W.bdy.of the Tp., at a point 11 lks.N.of the cor.of secs. 1, 6, 7 and 12, recently established and described by me.
Thence I run,
East, on a true line, between secs. 6 and 7. Over extremely mountainous land, covered with loose rock and scattering greasewood and cactus and catclaw brush.
- Ascend.
- 2.60 Spur S.; descend.
- 7.60 Ascend.
- 13.10 High rock ridge, course SSE. and NNW.; descend steep slope.
- 33.00 Rocky gulch, 20 lks.wide, course S.; ascend.
- 35.00 Descend.
- 39.50 Porphyry stone in place, 8x12x12 ins. above ground,

28. Subdivision of Township 17 North, Range 19 West.

Chains.

- marked with a cross (x) at the exact cor. point, and $\frac{1}{4}$ on the N. side thereof, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
- Descend.
- 41.60 Wash, 200 lks. wide, course SEW. Ascend.
- 60.50 Spur, SE.; descend.
- 65.70 Wash, 10 lks. wide, course SE.; ascend.
- 79.50 The cor. of secs. 5, 6, 7 and 8, hereinbefore described. Land, extremely mountainous. Soil, 4th rate, stony. Surface covered with loose rock. Scattering greasewood, cactus and catsclaw brush. No grass. Mountainous land, covered with loose rock and exceptionally difficult to survey, 79.50 chs.
-
- Thence I run, N. $0^{\circ}06'$ W., on a random line, between secs. 5 and 6.
- 40.00 Set temp. $\frac{1}{4}$ sec. cor.
- 80.00 Intersect the N. bdy. of the Tp. at a point 14 lks. W. of the true point for the cor. of secs. 5, 6, 31 and 32, recently established and described by me.
- Thence I run, South, on a true line, between secs. 5 and 6. Over extremely mountainous land along the top of a high rock ridge, course SSE. and NNW., fringed with cliffs and steep rock slides.
- Descend into gorge.
- 7.50 Gorge course SE.; ascend.
- 21.00 Extreme top of high ridge, course NNW. and SSE.; descend.
- 40.00 Set a quartz porphyry stone 6x8x18 ins., 12 ins. in the ground for the $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on the W. face, and raise a mound of stones 3 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Continue descent of SW. slope.
- 55.00 Descend cliffs, course SSEW. and NNW.
- 64.50 Rocky gorge, course SSE.; ascend.
- 69.80 Top of high solid rock butte surrounded with cliffs. Descend.
- 80.00 The cor. of secs. 5, 6, 7 and 8, hereinbefore described. Land extremely mountainous, with cliffs and sliding rock. Soil, 4th rate, stony. Scattering greasewood and cactus brush. No grass. Mountainous land, covered with sliding rock or cliffs, and exceptionally difficult to survey, 80.00 chs.
- December 15, 1911.

GENERAL DESCRIPTION.

This township contains only one variety of land, i. e., worthless, it being stony and mountainous over nearly the entire area. There is not one acre of tillable land within the boundaries of the township, and while there are two springs of water, one being in the NE. $\frac{1}{4}$ of section 4, and yielding about $\frac{1}{4}$ of a miners inch of warm alkali water, and the other being a slow seepage of alkali water in the wash of the E. fork of Warm Springs Canyon in the NW. $\frac{1}{4}$ of section 3; neither would be of practical use on account of the alkali contained. The entire township, in a former geological period, was capped with a lava outpouring, which has since been disintegrated by the air and elements, and washed away, leaving high ridges and mountain peaks, and cutting deep canons and gorges, and leaving a covering of malpais boulders over nearly all the surface. There is practically no grass and no timber, but there is considerable greasewood and cactus brush, particularly in the southwestern half of the township.

Chains.

There are no evidences of animal life except jackasses, of which some thirty or more were seen by the party during the progress of the work. They are very wild and cannot be approached.

The climatic conditions are very irregular, the region being very hot and uninhabitable in the summer and remarkably cold in the winter. The rainfall changes from zero to fourteen inches in depth per annum, and is very irregular and uncertain.

The area is drained by Warm Springs Canon and its tributaries, all of which are dry practically the entire year except at such a time as there may be in progress one of the uncertain torrential rainfalls peculiar to the region.

The elevation ranges from 1250 feet above the sea to about 4000 feet above the sea. There are no settlers within this township.

William P. Alexander

U. S. Deputy Surveyor.

December 15, 1911.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

30

LIST OF NAMES.

A list of the names of the individuals employed by William B

Alexander, 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 Subdivisional lines of T's 17, 18, and 19 N, R19 W, S17, 18, 19, Ariz. showing the respective capacities in which they acted:

David J. Moss, Louis Van Master, Chainman.

Robt. S. Smoot and B.P. Wulffenstein, Chainman.

E. Westover, Moundman.

Laurance Skalon, Moundman.

Chas. Clayton, Axman.

Jack Ray, Axman.

W. J. Nations, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted William B Alexander

United States Deputy Surveyor, in surveying all those parts or portions of the

Subdivisional lines of T17 N R19 W
Subdivisional lines of T18 N R19 W
and Subdivisional lines of T19 N R19 W of the Sila
& Salt River 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, and the corner monuments established, according to the instructions furnished by the United States Surveyor

General for Arizona

Robt. S. Smoot & David J. Moss, Chainman.

B.P. Wulffenstein & Louis Van Master, Chainman.

E. Westover, Moundman.

Laurance Skalon, Moundman.

Chas Clayton, Axman.

Jack Ray, Axman.

, Flagman.

W J Nations

Subscribed and sworn to before me this 12th day of January, 1912

A notary is not available therefore taking these oaths myself to avoid delay & expense
William B Alexander
A. P. Dep. Surveyor

237 (31)
BOOK 2877

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, William B. Alexander, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank Ingalls United States Surveyor General for Arizona, bearing date of the 26th day of May, 1909, 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 for Arizona, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of

all the Subdivisional lines of T 17 N R 19 W
All the Subdivisional lines of T 18 N R 19 W and
all the remaining subdivisional lines of T 19 N R 19 W except the
line between Sections #4 & 5 of the Gila and Salt

River Base and meridian, in the County 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 for Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

William B. Alexander
United States Deputy Surveyor.

Subscribed by said William B. Alexander, and sworn to before me
this 6th day of February, 1913

W. H. McCarty
W. H. McCarty



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona Feb. 26 1913, 19

The foregoing field notes of the survey of

the Subdivision lines in Tp. 17 North, Range 19 West
Gila and Salt River Base and Meridian.

Arizona
executed by William B. Alexander, U.S. Deputy Surveyor
under his contract No. 156, dated May 26, 1909, 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.

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.