Retracements and Re-establishments

S. and E. Boundaries, T. 19, N., R. 6, E.
S Bdy. T. 8, N., R. 1, W.
Caudle.

4–671

FIELD NOTES

GENERAL LAND OFFICE.

No. 1423

Field Notes

of the Survey of the

retracements & reestablishments of

South, East & North bdys, T 19 N. R 6 E,

& reestablishment & resurvey of

South bdy T. 8 N., R. 1 W.

of the

Gila & Salt River Base & Meridian

in the

Territory of Arizona.

as surveyed by

Carl R. Candle,

a Deputy Surveyor.

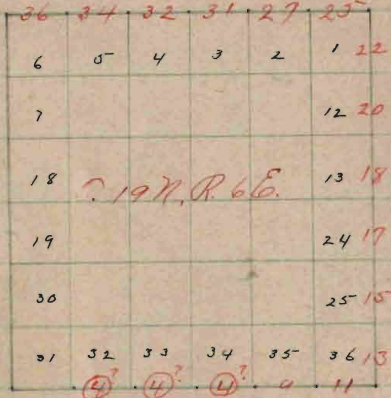
under his Contract No. 67.

dated May 22-1900:

Survey commenced Dec 10-1900.

Survey completed Dec. 18-1900.

BOOK 1423


36 34 32 31 29 25
6 5 4 3 2 1 22
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18 T. 19 N., R. 6 E. 13 18
19 24 17
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4 4 4 0 11
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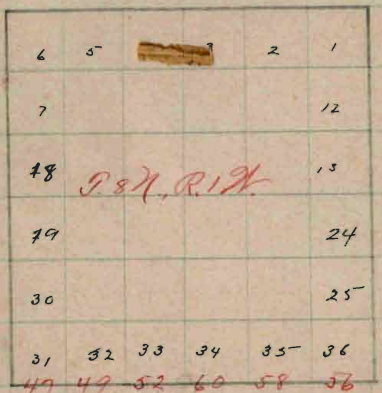
6 5 2 1
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49 49 52 60 58 36

Preliminary Oaths of Assistants.

1423

We, Marvin Caudle

and E. B. Hamilton

do solemnly swear that we will well and faithfully execute the duties of Chain Carriers; 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 distance 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 retracement and reestablishment of the South, East, and North bdrs. of T. 19 N. R. 6 E. and the reestablishment and resurvey of the south boundary of T. 5 N. R. 1 W.

of the Gila and Salt River Base and Meridian in the Territory of Arizona.

Marvin Caudle *Chainman.*

E. B. Hamilton *Chainman.*

Chainman.

Chainman.

Subscribed and sworn before me, this 10th *day of* December *189* 1900,

Carl R. Caudle *Notary Public.*

U. S. Deputy Surveyor.

[SEAL.]

We, R. C. Jones and James R. Vance

and G. S. Purtymun

do solemnly swear that we will well and truly perform the duties of Axmen and flagman

in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the retracements and reestablishements of the South, East, & North bdrys. of T. 19 N. R. 6 E. and the reestablishment & resurvey of the South Bdy. of T. 8 N. R. 1 W.

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

R. C. Jones

James R. Vance

G. S. Purtymun

Subscribed and sworn to before me this 10th day of December ~~189~~ 1900.

Carl R. Caudle

~~Notary Public.~~ U. S. Deputy Surveyor

Retracement of S. Bdy. T. 19 N. R. 6 E.

Survey commenced Dec. 10th 1900, and executed with a W. & L. E. Gurley light mountain transit (not numbered) with solar attachment, and Jones Patent Let. on. For complete description and test of instrument, see Book A. of this series.

I begin at the Cor. of secs. 33 & 34 on the S. bdy. of the Tp. which I established Dec. 8th, 1900.

Dec. 10; at 8h A.M. mst., I set off 22° 51' S. on the decl. arc, 34° 56' N. on the lat. arc, and established a true meridian with the solar.

Thence I run

N. 89° 49' E.

Along the S. bdy. of sec. 34.

Over Bnts. land through heavy Pine

S. Bdy. T. 19 N. R 6 E.

Ascend from cor. bears N.E. 75 ft.

9.85 W. Rim of Oak Creek Canyon about 100 ft. above cor. bears N. & S.

As it is impossible to chain further on account of perpendicular walls from 20 ft. to 300 ft. high, I set a flag on the east Rim of canyon on line, and then as no suitable base can be obtained on the W. Rim, I set a large flag at this point. Then I go to the flag on the E. Rim, and measure a base N. 12° E. 35.00 chs. to a point from which the flag on W. Rim of canyon bears S. 67° 50' W.; therefore the angles in the order of measurement are; 102° 11'

55° 50'

21° 59'

180° 00'

S. Bdy. T. 19 N. R. 6 E.

$\frac{\text{Sin. } 55°50' \times 35.00}{\text{Sin. } 21°59'} = \text{dist. to flag.}$

a. c. Log. sin. 21°59' 0.426737
Log. sin. 55°50' 9.917719
Log. 35.00 1.544068
Log. 77.36 11.888524

Therefore the dist. to the flag on E. Rim of canyon is 9.85 + 77.36 =
87.21 E. Rim of Oak Creek canyon, about 2000 ft. above the bottom, bears N. & S. ascend gradually.
111.78 Fall 20 lks. N. of the cor. of secs. 3, 4, 33 & 34, which is a Malapais 15 x 15 x 4 ins, marked as described by the surveyor general.
True bearing and length of this line is S. 89° 34' E. 111.78 chs.
as the cor. is in good repair I reestablish it at the same point as follows:—

S. Bdy. T. 19 N. R. 6 E.

Set a Malapais 18 x 15 x 4 ins., 12 ins. in the ground for cor. of secs. 3 & 4 Tp. 18 N. R. 6 E., marked with 3 notches on E. & W. edges; and raised a mound of stone 2 ft. base, 1½ ft. high. S. of cor. Pits unpracticable, from which

A Pine 7 ins. diam., bears S. 10° 07' E. 111 lks. dist., marked T. 18 N. R. 6 E. S. 3 B. T.

A Pine 10 ins. diam., bears S. 7° 40' W. 101 lks. dist., marked T. 18 N. R. 6 E. S. 4 B. T.

Land, Mtns. 111. 78 chs.

Soil, stony, 4th Rate.

Timber, Pine, 111. 78 chs.

Dec. 10th 1900.

1,886 29

S. Bdy. T. 19 N. R. 6 E.

Dec. 11th. at 8h A.M., Inst., I set off 22°56' S. on the ded. arc, 34°56' N. on the lat. arc; and determine a true meridian with the solar at the cor. of secs. 3 & 4, T. 18 N. R. 6 E. Var. 14°55' E.

Thence I run

N. 89°49' E.

along the S. bdy. of sec. 34.

Over Mts., [illegible] through heavy Pine

40.22 Fall 48 lks. N. of the ¼ sec. cor. which is a malapais 6 x 6 x 8 ins. above ground, marked as witness as described by the surveyor general.

Thence from ¼ cor. N. 89°49' E. Var. 12°05' E.

40.20 Fall 43 lks. N. of the cor. of secs. 2, 3, 34 & 35, which is a malapais 12 x 10 x 8 ins., set loosely in a mound of stone as witness

marked & witnessed as described by the Surveyor General. & reestablish the cor. by setting the stone firmly in the ground.

True bearing and length of this mile is S. 89° 32' E. 80. 42 chs.

Land, Mts. 80.42 chs.

Soil, stony, 4th Rate.

Timber, Pine 80.42 chs.

Note. – Clouds at noon prevent taking lat.

N. 89° 49' E.

Lat. 2 miles. 2 + 35.

Over Mts. Cant through heavy Pine

30.00 Rocky Ridge bears N. & S.

40.22 Fall 13 chs. S. of the 1/4 sec. cor. which is a malapais 16 x 10 x 6 ins., lying in a loose mound of stone,

[illegible] 89° 32'

S. Bdy. T. 19 N. R. 6 E.

marked & witnessed, as described by the surveyor general. I reestablish the cor. by setting the stone firmly in the ground. Thence from cor. N 89° 49' E.

40.21 Fall 46 lks. S. of the cor. of secs. 1, 2, 35 & 36. Which is a malapais 15 x 9 x 6 ins. lying in a loose mound of stone, marked & witnessed as described by the Surveyor General, I reestablish the cor. by setting the stone firmly in the ground.

True bearing and length of this mile is N. 89° 24' E. 80.43 chs.

Land. Brks. 80.43 chs.

Soil. stony, 4th Rate.

Timber. Pine, 80.43 chs

Dec. 11th, 1900.

Dec. 12; at 8h a.m., l.m.t., I set off 23°01' S. on the decl. arc; 34°56' N. on the lat. arc; and determine a true meridian with the solar.

Thence I run

N. 89°49' E.

bet. secs. 1 & 36.

Over Mts. land, through heavy Pine.

Var. 14° 20' E.

30.00 Ridge, bears N. & S. Descend

36.00 Foot of Ridge 100 ft. bears N. & S.

40.10 Fall 15 lks. N. of the 1/4 sec. cor. which is a malapais 5 x 10 x 5 ins., above ground, marked & witnessed as described by the Surveyor General.

Thence from 1/4 cor. Var. 15°17' E

N. 89°49' E

9.85 Road to Flagstaff bears N. & S.

14.00 Dry creek, course S.

39.00 Spur 100 ft. above creek, bears N. 70° W. & S. 80° E.

S. Bdy. T. 19 N. R. 6 E

40, 15 Fall 2 2 lks. N. of the cor. of
Tps. 18 & 19 N. Rs. 6 & 7 E., which is
a Malapai 8 x 10 x 6 ins. above grd.
marked and witnessed as
described by the Surveyor General.
True bearing and length of this
rule is S. 89° 55' E. 80.25 chs.
Land Mts. 80.25 chs.
Soil, stony, ~~Sandy~~. 3rd & 4th Rate
Timber, Pine. 80.25 chs.
Note, - It being cloudy at noon
no Lat. obs. could be taken.

From the cor. of Tps. 18 & 19 N. Rs. 6 & 7 E. previously described.

I run

N. 13° 08' W.

bet. secs. 31 & 36,

Over Mts. land, through Pine, along W. slope of rocky mtn. Ridge.

1.50 Ravine, 4 ft. deep, course W.

8.00 Spur, bears E. & W.

19.00 Var. 15° 7' E.

40.00 Fall 3 lks. W. of the 1/4 sec. cor., which is a Malapais 16 x 14 x 6 ins. lying in a loose mound of stone and the bearing trees have been burned. I reestablish the cor. at the same point as follows.

Set a Malapais 16 x 14 x 6 ins. 10 ins. in the ground for 1/4 sec. cor. marked 1/4 on W. face, from which

E. Bdy. T. 19 N. R. 6 E.

An Oak 3 ins. diam., bears N. 57° E. 32 lks. dist., marked 1/4 S. 31 B.T.

An Oak 5 ins. diam., bears S. 79° W. 23 lks. dist., marked 1/4 S 36 B.T.

True course of line N. 13° 05' W. 40.00 chs.

Thence from 1/4 cor. Var. 15° E.

N 13° 08' W.

5.00 Var. 12° 10' E.

26.00 Var. 16° 07' E.

35.00 Var. 12° 35' E.

40.00 From this point the cor. to secs. 25, 30, 31 & 36, bears N. 60° 22' E. 6.51 chs. dist., which is a mala pais 12 x 7 x 7 ins., above ground, firmly set marked & witnessed as described by the surveyor General.

True bearing & length of this line is N. 4° 39' W. 42.31 chs.

Land, Pnts. 42.31 chs

Soil, stony, & Rock.

E. Bdy. T. 19 N. R. 6 E.

Timber, Price, 82.31 chs.

Dec. 12, 1900.

Sec. 13th, at 7h 48m a.m., Lat.,
I set off 23°05' S. on the ded.
arc; 34°57' N. on the dat. arc;
and determine a true meridian
with the sun,

Thence I run
N. 13°08' W.
bet. secs. 25 & 30.
Over Mts. and through heavy Pine.

10.00 Var. 14°15' E

16.00 Second, bears E. var.

29.00 Foot descent of 100 ft. bears E. var.

35.00 Leave heavy timber bears E. var.

40.02 Fall 113 lks. N. 76°52' E. of the 1/4
sec. cor. which is a post nearly
rotted down. Therefore I reestablish

E. Bdy. T. 19 N. R. 6 E.

the cor. at the same point as follows:
Set a malapais 14 x 10 x 5 ins. 10 ins.
in the ground for ¼ sec. cor.
marked ¼ on W. face; dig pits
18 x 18 x 12 ins., N. & S. of stone
3 ft. dist.; and raise a mound
of earth 8½ ft. base 1½ ft.
high W. of cor.
Thence from ¼ cor. N. 13° 08' W.
23.00 South end of Reservoir of water
about 4 chs. wide E. & W. & 20 ch.
long, extends N. 10 E. water 1 ft. deep
28.00 Road, bears N. & S. & easterly bearing Point
42.17 Fall to 3 lks. N. 76° 52' E. of cor. of
secs. 19, 24, 25, & 30, which is a
malapais 10 x 5 x 7 ins. above ground
marked and witnessed as described
by the Surveyor General.
True bearing & length of this mile is
N. 14° 40' W. 82.22 chs.

E. Bdy. T. 19 N. R. 6 E. 17

Land, Mts. and Level.
Soil, stony & black loam,
2nd & 4th Rate.
Timber, Pine.
Mts. land covered with Pine 49, 17 ch.

N. 13° 08' W.
bet. secs. 19 & 24
Over Mts. land through heavy Pine.
Var. 14° E.

1.85 Road, bears NE. & SW.
12.00 Var. 12° 55' E.
31.00 Var. 12° 15' E.
41.11 Fall 148 lks. N. 76° 52' E. of 1/4 sec. cor., which is a malapais 10x8x6 ins., above ground marked & witnessed as described by the Surveyor General.
Thence from 1/4 cor. N. 13° 08' W.
Note:- Cloudy at noon prevents lat. obs.

E. Bdy. T. 19 N. R. 6 E.

6.00 Var. 13° 35' E.

14.00 Var. 12° 33' E.

26.00 Var. 13° 35' E.

31.00 Var. 14° E.

38.00 Var. 12° 35' E.

41.02 Fall 136 lks. N. 76° 52' E. of the cor. of secs. 13, 18, 19, & 24, which is a mala pais 6 x 5 x 5 mis. above ground, marked and witnessed as described by the Surveyor General. True bearing & length of this mile is N. 15° 09' W. 82.17 chs.

Land. Mtns. 82.17 chs.

Soil, stony & Rocky.

Timber, heavy Pine. 82.17 chs.

N. 13° 08' W.

bet. secs. 13 & 18.

Over Mtn. land through heavy Pine.

Var. 10° 55' E.

7.00 Var. 13° E.

13.00 Var. 10° 40' E.

23.00 Var. 16° 27' E.

30.00 Var. 13° 17' E.

41.11 Fall 134 lks. N. 76° 52' E. of 1/4 sec. cor. which is a malapais 6 x 6 x 6 ins. above ground, marked & witnessed as described by the Surveyor General.

Var. 14° 15' E.

True course of line N. 15° W. 41.13 chs.

Thence from cor. N. 13° 08' W.

17.50 Var. 15° 36' E.

21.00 Head of Canyon, course W. Var. 14° E.

24.00 Second N. Slope.

40.87 Fall 64 lks. E. of the cor. of secs 7/12, 13 & 18, which is a malapais 16 x 10 x 6 ins. above ground, marked & witnessed as described by the Surveyor General.

True bearing & length of this line is

N. 14° 01' W. 40.87 chs

E. Bdy. T. 19 N. R. 6 E.

Land. Mts. 82.00 chs.
Soil, stony, 4th Rate.
Timber, Pine.

Dec. 13, 1900.

Dec. 14: at 8h 47m a.m. last set off 23° 01' S. on the decl. arc, 34° 59' N. on the lat. arc, and determine a true meridian with the solar.

Thence Run
N. 13° 08' W.
bet. secs. 7 & 12,
Over Mts. land, through heavy Pine.

13.00 Road, bears E. & W.
14.00 Ridge, bears NW. & SE. Var. 15° 48' E.
38.00 Canyon 8 ft. deep, course E. to W.
40.06 Fall 10 lks. N. 76° 52' E. of 1/4 sec. cor. which is a Malapais 10 x 8 x 6 ins.

E. Bdy. T. 19 N. R. 6 E.

marked and witnessed as described by the Surveyor General

True course & length of line N. 13 ¾ W. 40.06

Thence from cor. 15/4 N 13° 08' W.

2.00 Canyon 300 ft. deep Course N.W.

20.25 Top N. side of canyon 30 ft. above bottom bears N, N, W & S.E.

24.00 Ridge, bears N.W. & S.E.

41.40 Fall 16 4 lks. N. 76° 52' E. of the cor. of secs 1, 6, 7 & 12, which is a Mala pais 8 x 6 x 6 ins, marked and witnessed as described by the Surveyor General.

True bearing and length of the ~~line~~ line

N. 15° 24 W 41.43 chs

Land, Mtn. 1.49 chs.

Soil, stony, 4th Rate.

Timber, pine, 81.49 chs.

Dec. 14° at this cor. I set off 5

E. Bdy. T. 19 N. R. 6 E.

23° 12½' S. on the decl. arc; and at 11h 55m A.M., Dec., observe the sun on the meridian; the resulting lat. is 33° 00'.

N. 13° 08' W.

bet. secs. 1 & 6.

Over Mts. land, through heavy Pine

2.50 Canyon, 150 ft. deep, course S.W.

17.00 Ridge, 200 ft. high, bears E. & W.

32.00 Log fence, bears N.W. & S.E.

38.00 Ravine, course E.

40.25 Fall 36 lks. N. 76° 52' E. of the ¼ sec. cor. which is a limestone, 12 x 10 x 6 ins. above ground, marked & witnessed as described by the Surveyor General. True course and length of line N. 13° 38' W. 40.25 chs.

Thence from cor. N. 13° 08' W.

7.00 Ridge, bears N.W. & S.E.

E. Bdy. T. 19 N. R. 6 E

15.00 Descend, bears E. by S.

21.00 Canyon 200ft. deep, course N.W.

25.93 Fall 21.5 lks. N. 76° 52' E. of the cor. of Tps. 19 & 20 N. Rs. 6 & 7 E, which is a post 4 ins. sq. firmly set in a mound of stone marked as described by the Surveyor General. From which

A Pine 36 ins. diam., bears N. 76° E. 27 lks. dist., properly marked

A Pine 30 ins. diam., bears S. 23° E. 15 lks. dist., properly marked.

A Pine 20 ins. diam., bears S. 26° W. 13 lks. dist., properly marked.

A Pine 12 ins. diam., bears N. 8° W. 68 lks. dist., properly marked.

True Bearing & length of this line is N. 17° 51' W. 25.76 chs.

Land Area, 66.01 chs.

E. Bdy. T. 19 N. R. 6 E.

Soil, stony, 4th Rate.

Timber Pine. 66.01 chs.

Dec. 14, 1900.

N. Bdy. T. 19 N. R. 6 E.

Sec. 15: at 8h 05m a.m., Sept. 8, set off 23° 12' S. on the decl. arc, 35° 01' N. on the lat. arc, and determine a true meridian with the solar at the cor. of Tps. 19 & 20 N. Rs. 6 & 7 E. previously described.

Thence I run West

bet. secs 14 & 15.

Over Mts. cared through heavy Pine timber, along N. side of canyon.

6.00 Canyon runs to S.W. ascend.

37.00 Top of ascent of 200 ft. bears N. & S.

39.70 Fall 15 lks. N. of the 1/4 sec. cor. which is a post badly burned. Therefor I reestablish the cor. at the same point as follows:

Set a flint stone 18 x 10 x 6 ins., 12 ins.

N. Bdy. T. 19 N. R. 6 E.

in the ground for 1/4 sec. cor.
marked 1/4 on N. face; from
which a Pine 30 lks. diam., bears
N. 65° 45' E. 35 lks. dist., marked 1/4 S 36 B.T.
a Pine 30 lks. diam., bears S. 46° 15' W. 170
lks. dist., marked 1/4 S. 1 B.T.
Thence from 1/4 cor. West.
15.00 Canyon, course S.W.
23.00 Descend. bears N.
33.00 Oak Creek Canyon 200 ft. deep
course S.
Top of W. side of canyon
39.77 Fall 18 lks. N. of the cor. of secs. 1. 2.
35 & 36, which is an Oak post 4 ins.
sq. set in a mound of stone, marked
and witnessed as described by
the Surveyor General.
True bearing & length of this mile is
S. 89° 46' W. 79.47 chs.
Land; Mnts. 79.47 chs.

N. Bdy. T. 19 N. R. 6 E.

Soil, stony, & d Rate.
Timber, heavy Pine. 39.47 chs.
Sec. 15. at this cor. I set off 23°15½' S
on the decl. arc, and at 11h 55.6m
a.m., Sept., observed the sun on the
meridian; the resulting lat. is
35°01'; which is correct.

West.

bet. secs. 2 & 35.
Over Mts. land, through heavy Pine.
Var. 15°20' E.

9.70 Second, bears N.W. & S.E.
27.00 Canyon 100 ft. deep, course S.E.
35.00 Top a mt. of 80 ft. bears N.W. & S.E.
39.87 On S. bank of Canyon, bears N.E. & S.W.
Fall 30 lks. S. of the ¼ sec. cor., which
is a post badly rotted and fallen,
originally set in a mound of stone

N. Bdy. T. 19 N. R. 6 E.

Therefore I reestablish the cor. at the same point as follows:
Set a Malapais 15x10x9 ins., 10 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which
A Pine 32 ins. diam., bears N. 2° W. 5 E. 72 lks. dist., marked 1/4 S. 35 B.T.
A Pine 36 ins diam., bears S. 32° W. 55 lks. dist., marked 1/4 S. 2 B.T.
True bearing and length of this 1/2 mile is N. 89° 34' W. 39.87 chs.
Land, Mts. 39.87 chs.
Soil, Stony, 4th Rate.
Timber, heavy Pine. 39.87 chs.
As the line must pass over canyons, gorges, and rough S. spurs extending S.E. from the high Plateau, I set a flag on a spur near the top of the plateau on line,

then from the ¼ cor. bet. secs 2 & 35 - measure a base S. 21° W. 47.00 chs. to a point from which the flag bears N. 48° 46' W., and from the flag the S. End of base bears S. 48° 46' E.; therefore the angles in the order of measurement are;

69° 00'

69° 46'

41° 14' respectively; and the distance to flag is.-

$$\frac{\text{Sin. } 69° 46' \times 47.00}{\text{Sin. } 41° 14'} = \text{dist. to flag.}$$

a.c.	Log. sin. 41° 14'	0.181031
	Log. sin. 69° 46'	9.972338
	Log. 47.00	1.672098
	Log. 66.91	11.825467

Therefore the dist. of flag from ¼ cor. is

N. Bdy. T. 19 N. R. 6 E.

66.91 Flagon Spur. about 800 ft. above
1/4 secs. cor. Thence through dense brush & chaparral bears
79.83 Fall 2 31 lks. N. of the 1/4 cor. bet. secs.
3 & 34, which is a post rotted
off, with a portion still in a small
mound of stone; bearing trees have
been burned. Therefore I reestablish
the cor. at the same point as follows:
Set a Malapais 15 x 10 x 7 ins., 10 ins.
in the ground for 1/4 secs. cor. marked 1/4
on N. face; and raise a mound of stone
2 ft. base, 1 1/2 ft. high, N. of cor. Pits
impracticable.
True bearing and length of this line is
S. 88° 21' W. 79.87 chs.
Land. Mnts. 79.87 chs.
Soil, stony, 4th Rate.
Timber, Pine.

Dec. 15th, 1900.

N. Bdy. T. 19 N. R. 6 E.

Sec. 17, at 8h 47m a.m., l.m.t., I set off 23° 19½' S. on the decl. arc; 35° 01' N. on the lat. arc; and determine a true meridian with the solar. at the ¼ sec. cor. bet. secs. 3 & 34.

Thence I run

West

bet. secs. 3 & 34.

Over Mtn. land through dense oak & chapparal brush.

7.00 Ravine, soft. deep course S.

10.00 Top of Plateau 20 ft above Ravine, bears N. & S. Leave brush & enter heavy timber.

39.79 Fall 13 lks N. of the cor. of secs. 3, 4, 33 & 34, which is a post 4 ins sq. set in a mound of stone, marked & witnessed as described by the Surveyor General.

N. Bdy. T. 19 N. R. 6 E.

True bearing & length of this ½ mile is
S. 89° 49' W. 39.79 chs.
Land, Mnts. 39.79 chs.
Soil, stony, 4th Rate.
Timber Pine 29.79 chs; brush 10.00 chs.

West,
bet. secs 4 & 33.
Over Mtn. land through Pine timber.

4.00 Ridge, bears N.W. & S.E.
18.00 Ravine, course S.E, foot 80 ft. descent
22.00 Ridge, bears N. & S. 100 ft. high.
27.00 Foot of Ridge & descent of 100 ft. bears N. & S.
40.12 Fall 49 lks. N. of the ¼ sec. cor., which is a post 4 ins. sq. set in a mound of stone, marked and witnessed as described by the Surveyor General.

True course of line S 89° 18' W. 40.12
Thence from cor. W. Var. 13° 45' E.

4

N. Bdy. T. 19 N. R. 66

Note,- It being cloudy at noon no obs. for lat. could be made.

38.98 Fall 409 lks. N. of the cor. of secs. 4, 5, 32, & 33, which is a post 4 ins. sq., marked & witness trees described by the Surveyor General.

True bearing and length of this mile is

S. 84° 01' W. 39.19 lks.

Land, Mts. 79.31 chs.

Soil, stony, 4th Rate.

Timber, heavy Pine, 79.31 chs.

Dec. 17th, 1900.

Dec. 18: at 8h 3m a.m., Lat. Set off 23° 19½' S. on the decl. arc; 30° 01' N. on the lat. arc; and determined true meridian with the solar at the cor. of secs. 2, 3, 32 & 33, on the N. bdy. of T. 20 N. Var. 7° E.

N. Bdy. T. 19 N., R. 6 E.

Thence N. 89° W.

West,

Set. secs. 5 & 32,

Over Mts. level through heavy

Pine timber.

5.00 Leave timber, bears N. & S.W.

22.00 Water hole just S. of line.

39.00 Enter timber, bears N.W. 75 E.

40.13 Fall 2 lks. N. of 1/4 sec. cor., a Post

rotted off & nearly destroyed.

Therefore I reestablish the cor.

at the same point as follows:

Set a Bnd. 4 pais 12 x 9 x 8 lks., 8 lks. in

the ground for 1/4 sec. cor., marked 1/4

on N. face; from which

A Pine 45 lks. diam., bears S. 62° E.

40 lks. dist., marked 1/4 S. B.T.

A Pine 33 lks. diam., bears N. & W. 100

lks. dist., marked 1/4 S B.T.

N. Bdy. T. 19 N. R. 6 E.

Thence from 1/4 cor. West.

20.00 Leave timber, bears N.

40.12 Fall 5 lks N. of the cor. of secs. 5, 6, 31 & 32 which is a post greatly decayed. Therefore I reestablish the cor. at the same point as follows;

Set a Malafoi's 15 x 10 x 8 ins, 10 ins in the ground for cor. of secs. 5, 6, 31 & 32, marked with 5 notches on S. & 1 notch on W. Edges; and raise a mound of stone 2 ft. base, 1½ ft. high, W. of cor. Pits impracticable;

True bearing & length of this mile is

S. 89° 57' W. 80.25 chs.

Land, Mts. and level.

Soil, stony & black loam, 2nd & 3rd Rate

Timber, Pine.

Mts. or heavily timbered land 26.13 chs.

Sec. 18. at this cor. I set off 23° 22½'

M. P. Bdy. T. 19 N. R. 6 E.

S. on the declinc; and at 11h 56.7m a.m., Lmt., observe the sun on the meridian, the resulting lat. is 35° 01', which is correct.

West.

bet. secs 6 & 31.

Over level land.

9.00 Enter heavy Pine timber, bears N.W. & S.E.

32.00 Leave " " " " N.E. & S.W.

40.05 Fall 1 lk. N. of the 1/4 sec. cor., which is a stone greatly decayed; therefore I reestablish the cor. at the same point as follows:

Set a Amalapais 16 x 8 x 5 ins., 10 ins. in the ground for 1/4 sec. cor. marked 1/4 on N. face; dig pits 18 x 18 x 12 ins., E. & W. of stone 3 ft. dist.; and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft.

N. Bdy. T. 19 N. R. 6 E.

high N. of cor.

Thence from cor. 1/4 West.

30.00 Enter edge of Pine timber bears N.E. & W.

41.20 Intersect cor. of Tps. 19 & 20 N. Rs. 5 & 6 E., previously described.

True bearing and length of this mile is West 81.25 chs.

Land, nearly level.

Soil stony in the timber, black loam in open, 2nd & 4th Rate.

Timber, Pine, 34.20 chs.

Dec. 18, 1900.

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Table Showing
Latitudes. Departures, & Closing Errors.
T. 19 N., R 6 E.

Line designated.	Bearing	Dist.	Latitude. N.	Latitude. S.	Departure E.	Departure W.
W. Bdy.	South	453.97		453.97		
N. Bdy.	Easterly.					
	East.	114.05			114.05	
	N 89°49' E.	39.88	.12		39.88	
	N 89°43' E.	40.17	.20		40.17	
	S. 89°57' E.	45.90		.12	45.90	
	S. 89°34' E.	111.78		.87	111.78	
	S. 89°32' E	80.42		.65	80.42	
	N 89°24' E.	80.43	.81		80.43	
	S. 89°55' E.	80.25		.12	80.25	
E. Bdy.	Northerly.					
	N 13°05' W.	40.00	38.96			9.05
	N 4°39' W.	42.31	42.17			3.45
	N. 14°40' W.	82.22	79.54			20.81
	N 15°09' W.	82.17	79.33			21.48
	N 15°00' W.	41.13	39.73			10.64

No. 1423

Line desig'td.	Bearing.	dist.	Latitude N.	Latitude S.	Departure E.	Departure W.
E. Bdy.	N. 14° 01' W.	40.87	39.69			9.90
	N 13° 16' W.	40.06	38.99			9.19
	N 15° 24' W.	41.43	39.94			11.00
	N 13° 38' W.	40.25	39.12			9.49
	N 17° 51' W.	25.76	24.52			7.90
N. Bdy.	Westerly.					
	S. 89° 46' W.	79.47		.32		79.47
	N. 89° 34' W.	39.87	.30			39.87
	S. 88° 21' W.	79.87		2.30		79.84
	S. 89° 49' W.	39.79		.13		39.79
	S. 89° 18' W.	40.12		.49		40.12
	S. 84° 01' W.	39.19		4.09		38.98
	S 89° 57' W.	80.25		.07		80.25
	West.	81.25				81.25
	Totals		463.22	463.10	592.88	592.31
	Convergency.					.52
						592.98
	Error in Latitude.	.22				592.86
	Error in Departure.					.10

General Description
T. 19 N. R. 6 E.

General Description.

The land in this township is nearly all mountainous and very broken, being cut up by Oak Creek Canyon, & W. Branch of Oak Creek Canyon, and many smaller tributaries. There is very little land suitable for cultivation. The most of it is situated in secs. 5 & 6, 7 & 8, where there are several parks with rich black loam soil. Mrs. Matt Blakely and Mr. Charles S. Howard have their ranches in sec. 6. Mrs. Harding has a house and small garden in the bottom of Oak Creek Canyon, but owing to the exceedingly rough and impassable character of the land in the Southern part of the township, it is impossible

General Description.
T. 19 N. R. 6 E.

to survey the secs., 28 & 33, in which he is located.

The West Branch of Oak Creek Canyon enters the township about the middle of the W. bdy. and is about 1700, or 1800 ft. deep, with walls and cliffs on either side, which becomes impassable about one half mile in the township.

Oak Creek Canyon is about 200 ft. deep where it enters the Tp. on the North, and rapidly deepens till in a mile from the North bdy. it is about 1000 ft. deep, and from here through the Tp. it is impassable. It is about 2000 ft. deep where it leaves the township.

There are some large Springs in the bottom of the Canyon, which form a stream that has an abundance

General Description
T. 19 N. R. 6 E.

of trout in it.

Nearly the entire township is covered with a heavy growth of large Pine timber which is very valuable.

The many changes in the magnetic declination seems to indicate the presence of iron ore, but I found no large amount of ore on the surface at any place.

Carl R. Gaudle
U. S. Deputy Surveyor.

Survey to Reestablish the South Bdy. T. 8 N. R 1 W. 45

Survey Commenced January 5th 1901. and executed with a 10" & 2.E. Gurley light mountain transit, (not numbered) with solar attachment, and Jones Patent Latitude arc. For complete description and test of instrument see Book "A" of this series.

I begin at the cor. of secs. 3 4, 33 & 34 on the S. bdy. of T. 8 N. R 1 W. which is a Post 4 ins. sq. marked and witnessed as described by the Surveyor General. and at 8 h a.m., Lmt., I set off 22° 35½' S. on the dec. arc, 33° 59' N. on the lat. arc and determine a true meridian with the solar.

Thence I run

West,

S. Bdy. T. 8 N. R. 1 W.

on a random line bet. secs. 4 & 33.

40.00 Can find no trace of 1/4 sec. cor.
It has been completely destroyed by
floods, as it was established in
the bottom of Castle creek Canyon.
Set temp. 1/4 sec. cor.

80.00 Set temp. cor. of secs. 4, 5, 32, & 33.

West

on a random line bet. secs. 4 & 5.

40.00 Set temp. 1/4 sec. cor.

80.00 Can find no trace of the cor. of
secs. 5, 6, 31, & 32;
Set temp. cor. of secs. 5, 6, 31, & 32.

West,

on a random line bet. secs. 6 & 31.

40.00 Can find no trace of 1/4 sec. cor.
Set temp. 1/4 sec. cor.

70.89 Intersect the Range line 2 links
S. of the cor. of Tps. 7 & 8 N. Rs. 1 & 2 W.

S. Bdy. T. 8 N. R. 1 W.

which is a granite stone 24 x 12 x 12 ins. set in a mound of stone, marked & witnessed as described by the Surveyor General. I change the markings of this cor. to refer only to Tps. 7 & 8 N. R. 2 W.

Set a granite stone 16 x 12 x 10 ins., 10 ins. in the ground for closing cor. of Tps. 7 & 8 N. R. 1 W., marked C.C. on E. with 6 grooves on N. E. & S. faces, and raise a mound of stone 2 ft. base, 1½ ft. high E. of cor. Pits impracticable.

Thence Azimuth East,

on a true line bet. secs 6 & 31. Over Mts. Land covered with Palo verde, mezquite, cat claw & bee castus

S. Bdy. T. 8 N. R. 1 W.

Ascend from cor. bears N. & S.

1.00 Ridge 4 oft. above the cor. bears N. & S.

20.00 Spur bears N. & S.

22.00 Drain, course N.

24.00 Ridge, bears N. & S.

30.89 Set a granite stone 16 x 10 x 8 ins. 10 ins. in the ground for ¼ sec. cor., marked ¼ on N. face; and raised a mound of stone 3 ft. base 1½ ft. high N. of cor. Pits impracticable.

From this cor. a small mound of stone with nail marked bears N. 67° E. 7.47 chs. dist. which I completely destroy. This is the only evidence of a cor. that can be found.

59.00 Ravine, course N.

66.50 Ridge, bears N. & S.

70.89 Set a granite stone 18 x 10 x 8 ins., 12 ins. in the ground for cor. of

secs. 5, 6, 31, & 32, marked with
1 notch on W. and 5 notches on E.
edges; and raise a mound of
stone 2 ft. base, 1½ ft. high W. of cor.
Pits impracticable.
Land, Mrte. 70.89 chs.
Soil, stony, 4th Rate.
Mr timber, Palo verde, mezquite
catclaw & true cactus.

January 5, 1901.

Jan. 7: at 8h a.m., Lmt., I set off
2 20 21' S. on the ded. arc; 33° 59' 20" N.
on the lat. arc; and determined a
true meridian with the solar
at the cor. of secs. 5, 6, 31, & 32.

Thence I run
East,
on a blind line bet. secs 5 & 32

S. Bdy. T. 8 N. R. 1 W.

Over Mts. land covered with Palo verde, mezquite, catclaw & tree cactus.

7.00 Ridge bears N. & S.

14.00 Ravine. 75 ft. deep. course S.

19.00 Ravine, course S. ascend.

36.00 Top of high Knoll 700 ft. above canyon bears N. & S.

36.50 Point for witness corner to 1/4 sec. cor. Set a Mala pais 30 x 14 x 12 ins. 20 ins. in the ground for witness 1/4 sec. cor., marked W.C. 1/4 on N. face, and raise a mound of stone 2 ft. base, 1 1/2 ft. high. N. of cor. Pits impracticable.

37.00 Descend steep rocky slope. bears N. & S.

40.00 Point for 1/4 sec. cor. falls on side of loose stones. W.C. 3.50 chs.

S. Bdy. T. 8 N. R. 1 W.

Note, - It being cloudy at noon no lat. obs. could be taken.

45.00	Canyon 200ft. below top, course S.
51.50	Spur, 400ft. high, bears N. & S.
59.00	Crater Canyon 400ft. below Spur, course S.
75.75	Ridge 900ft. above Canyon, bears N.
80.00	About 200ft. below Ridge.

Set a Malapais 20x12x8 ins., 12 ins. in the ground for cor. of secs. 4, 5, 32, & 33, marked with 2 notches on W. & 4 notches on E. edges, and raise a mound of stone 2 ft. base, 1½ ft. high W. of cor. Pits impracticable.

Land, very Mtns. & broken and covered with brush. 80.00 chs.

Soil, stony, 4th Rate.

No timber. Palo verde, mezquite, catclaw & tree cactus.

Var. 13° 40' E. January 7th, 1901.

S. Bdy. T. 8 N. R. 1 W.

January 8th.; at 8h 4/8 m A.M., Mst.,
I set off 2 20 14½' S. on the decl. arc,
33° 59' 20" N. on the lat. arc; and
determine a true meridian
with the solar.

Thence I run

East,

on a true line bet. secs. 4 & 33.

Over Mts. land, covered with
Paloverde, mezquite, catclaw & bis cactus.

0.20 Canyon 15 ft. below cor. course S.

10.25 Granite Dike 15 ft. wide on top
about 4 or 5 ft. above cor. bears N. & S.

29.00 Crater Canyon 2 chs. wide course
N.E. about 1000 ft. below cor.

35.00 Spur 100 ft. high bears N. & S.

37.40 Castle Creek Canyon about 5.00 chs.
wide, sandy bottom, course S.E.

40.00 Set a Malapais 22 x 16 x 5 ins.,

S. Bdy. T. 8 N., R. 1 W.

15 lks. in the ground for ¼ sec. cor. marked ¼ on N. face; and raised a mound of stone 2 ft. base 1½ ft high, N. of cor. Pits impracticable. From which

A Cross (+) cut in the face of a wall of rock bears South 15 lks. dist., marked

+ ¼ 4. B. R.

A Cross (+) on a large boulder bears N. 65° 52' E. 20 lks. dist., marked

+ ¼ 33 B. R.

O. d. Ensign's House bears N. 2° W. about 8.00 chs. dist.

41.80 Road to Hot Springs, bears N. & S.

42.25 Leave Castle Creek Canyon & ascend steep rocky side of Mtn.

49.00 Ridge 300 ft. high, bears N. & S.

60.50 Ravine, 200 ft. below ridge, runs S.

73.00 Ridge, bears N. & S.

77.90 Stream of hot water flows S. foot descent of 90 ft. ascend

S. Bdy. T. 8 N. R. 1 W.

80.00 about 100 ft. above bottom.
The cor. of secs. 3, 4, 33 & 34,
Land, Mts, 80.00chs.
Soil, stony, 4th Rate.
Pot timber, Palmetto, magnolia,
cat claw, prickly pear.
Jan 8th 1901.

Jan 9; at 9h 47m a.m., Inst. I
set off 22° 06½' S. on the ded. arc,
33° 59' 20" N. on the lat. arc, and
determine a true meridian
with the solar at the cor. of secs
3, 4, 33 & 34, Thence I run
East,

on a random line bet. secs. 3 & 34

40.00 Can find no trace of ¼ sec. cor.
Set temp. ¼ sec. cor.
80.00 Can find no trace of the cor.

S. Bdy. T. 8 N. R 14 W.

of secs. 2, 3, 34, & 35.
Set temp. cor. for secs 2, 3, 34, & 35
East,

on a random line bet. secs 2 & 35.

40.63 Fall 11 lks. S. of the ¼ sec. cor., which is a Malapais 24 x 10 x 6 ins., firmly set in a mound of stone, marked and witnessed as described by the Surveyor General.
The True bearing and length of this line is N. 89° 57' E. 120.63 ch.
or. 80.42 ch. to the mile.
Thence I continue from ¼ sec. cor.
East,

on a random line bet. secs. 2 & 35.

40.00 Can find no trace of the cor. of secs. 1, 2, 35, & 36.
Set temp. cor. of secs. 1, 2, 35, & 36.
East,

S. Bdy. T. 8 N. R. 1 W.

on a random line bet. secs. 1 & 36.

40.00 Can find no trace of ¼ sec. cor.
Set temp. ¼ sec. cor.

80.66 Fall 12 lks. S. of cor. of Tps.
7 & 8 N. Rs. 1 E. & 1 W. which is
a sandstone 10 x 8 x 8 ins.
above ground firmly set
marked and witnessed as
described by the Surveyor General.
The True bearing and length of
this line is N. 89° 57' E. 120.66 chs.
on. 80.44 chs. to the mile

Thence I run

S. 89° 57' W.

on a true line bet. secs. 1 & 36.
Over Mts. land, covered with Pal-
verde, mezquite, cat claw &
tree cactus

21.00 I run, course S. 60° E. to E.

S. Bdy. T. 8 N. R. 4 E.

40.22 Set a Malapais 20 x 24 x 15 ins., 20 ins. in the ground for 1/4 sec. cor. marked 1/4 on N. face, and raise a mound of stone 2 ft. base, 1½ ft. high N. of cor. Pits impracticable

Note.—It being cloudy at noon no lat. obs. could be made.

41.10 Ridge 75 ft. high. bears N. & S.

42.80 Phoenix & Prescott Toll Road bears N. 20° W. & S. 20° E.

46.50 Telephone Line, bears N. 20° W. & S. 20° E.

54.70 Ridge bears N. & S.

59.70 French Creek dry, 100 lks wide course S. at foot descent of 200 ft.

78.25 Ridge 250 ft. above creek bears N. & S.

80.44 Set a Malapais 16 x 12 x 10 ins., 10 ins. in the ground for cor. of secs. 1, 2, 35, & 36. marked with 1 notch & E

S. Bdy. T. 8 N. R. 1 W.

and 3 notches on W. edges; and sand
a mound of stone 2 ft. base, 1½
ft. high W. of cor. Pits impracticable.
Land, Mtn. 80.44 chs.
Soil, stony 4th Rate.
No timber.
Palo verde, mezquite, cat claw
& cane cactus, 80.44 chs.

Jan 9, 1901.

Jan. 10: at 9h a.m., I mt, & set
off 21° 57½' S. on the decl. arc; 33°
59' 20" N. on the lat. arc; and
determine a true meridian
with the solar at cor. secs.
1, 2, 35, & 36,

Thence I run
S. 89° 57' W.
on a true line bet. secs. 2 & 35.

S. Bdy. T. 8 N. R. 1 W.

Over Mtn. Land covered with Palorende, mezquite, cat claw & toll cactus.

4.00 Ravine, course S.

12.00 Ridge, bears N. & S.

16.50 Canyon 250 ft. deep, course S. 30° E.

30.65 Black Malapai Ridge 300 ft. above canyon, bears N. 20° W. & S. 20° E

39.00 Canyon 250 ft. below Ridge, Course S. 20° E.

40.25 The ¼ sec. cor previously described.

Jan. 10: at this cor I set off 21° 57' S. on the decl. arc, and at 0h 07m P. M. l. m. t. obs. the sun on the meridian; the resulting lat. is 33° 59' 20" which is about correct.

41.50 Spur 6 ft. above cor. bears N. 2° W.

60.00 Canyon 8 ft. deep, course N. E.

80.43 Set a Malapais 24 x 10 x 0 ins., 18 ins.

S. Bdy. T. 8 N. R. 1 W.

in the ground for Cor. of secs. 2, 3, 34 & 35. marked with 2 notches on E. & 4 notches on W. edges; and raised a mound of stone 2 ft. base, 1½ ft. high W. of cor. Pit impracticable.
Land, Mtn. 80.43 chs.
Soil, stony, 4th Rate.
No timber. Palo verde, mezquit, cat claw, & tree cactus.

Jan. 10, 1901.

Jan 11th; at 8h 16m a.m., Sun, I set off 21° 49' S. on the decl. arc; 33° 59' 20" N. on the lat. arc; and determined a true meridian with the solar at the cor. of secs. 2, 3, 34 & 35. Thence run S. 89° 57' W. on a true line bet. Secs. 34 & 35

S Bdy. T. 8 N. R. 1 W.

Over Mtn. land, covered with Palo verde, mezquite, cat claw, & cactus.

3.25 N. edge of Round Knoll about 50 ft. high,

10.75 Second rocky bluff bears N. & S.

12.00 Foot of bluff 100 ft. below top, bears N. & S.

21.00 Trail bears N. 60° E. & S. 60° W.

40.21 Set a Malapais 16 x 10 x 6 ins., 10 ins. in the ground for 1/4 sec. cor. marked 1/4 on N. face, and raised a mound of stone 2 ft. base, 1½ ft. high N. of cor. Pits impracticable.

44.00 Ravine, 30 ft. deep, course S.

49.00 Ravine, 50 ft. deep, course S.

56.00 Canyon, 100 ft. deep, course S.

58.00 Ridge 100 ft high, bears N. & S.

73.00 Ravine, course S.W.

80.42 The cor. of secs. 3, 4, 33 & 34,

Table of Latitudes & Departures & Closing Errors. T. 8 N. R. 1 W.

Land, Mts. & very broken, Soil, stony, 4th Rate. No timber. Palo verde, mezquite, cat claw, & tree cactus. Mts. land corner with Ariz. 80. 42 Ch.

January 11th 1901.

T. 8 N. R. 1 W.

Table showing Latitudes, departures, and Closing Errors.

Line designated	Bearing	Dist	Latitude N	Latitude S	Departure E	Departure W
N. Bdy.	East	471.34			471.34	
E. Bdy.	South	480.00		480.00		
S. Bdy. E. ½	S. 89° 57' W.	241.29		.21		241.29
S. Bdy. W. ½	West	230.89				230.89
W. Bdy.	North	481.27	481.27			
Convergency					.52	
Totals.			481.27	480.21	471.86	472.18
Error in Lat.				1.06		
Error in Dep.					.32	

General Description.
T. 8 N. R. 1 W.

General Description.
T. 8 N. R. 1 W.

The land in this township is rough & mountainous and broken by innumerable canyons & ravines.

The soil is stony, & sandy. and worthless for agricultural purposes.

There is no timber in the township but there is an abundant growth of thorny bushes, such as the Palo verde, Mezquite, Cat claw, and the giant tree cactus.

The only water of any consequence in the township is the hot spring in S.E. ¼ of sec. 33 and some alkali springs in the N.W. ¼ sec. 33.

U.A. Ensign in Sec. 33. is the

only resident in the township. The Hot Springs Hotel is in the N.E. ¼ of sec. 4, T. 7 N. R. 1 W.

Carl R. Gaudle
U. S. Deputy Surveyor.

List of Names, 65

— " —

a list of the names of the Individuals employed by Carl R. Caudle, U.S. Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing Field Notes of the survey of the retracements and reestablishments of the South, East, and North exterior boundaries of T. 19 N. R. 6 E., and the reestablishment and resurvey of the south boundary of T. 8 N. R. 1 W. of the Gila and Salt River Base and Meridian in the Territory of Arizona, showing the respective capacities in which they acted,

Marvin Caudle,	chainman,
E. B. Hamilton,	chainman,
R. C. Jones,	axman,
James R. Hance,	axman,
G. S. Purtymun	flagman.

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Final Oath of Assistants.

We hereby certify that we assisted Carl R. Caudle, U. S. Deputy Surveyor, in surveying all those parts or portions of the retracements and reestablishments of the South, East, and North extension bdrys. of T. 19 N. R. 6 E., and the reestablishment and resurvey of the South boundary of T. 8 N. R. 1 W. of the Gila and Salt River Base & Meridian, in the Territory of Arizona, as 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.

Marvin Caudle chainman.

C. I. Hamilton chainman.

R. C. Jones axman.

James R. Hance axman.

G. S. Purtymun Flagman.

Subscribed and sworn to before me this 15th day of January, 1901.

Carl R. Caudle
U. S. Deputy Surveyor.

Final Oath of U. S. Deputy Surveyor. 61

I, Carl R. Caudle, U. S. Deputy Surveyor, do solemnly swear that in pursuance of a contract received from George Christ, United States Surveyor General for Arizona, bearing date of the 22 nd day of May 1900. 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 the retracements and reestablishments of the South, East, and North boundaries of T. 19 N. R. 6 E. and the retracement of the S. bdy. of T. 19 N. R. 5 W. of the Gila and Salt River Base and Meridian, in the Territory of Arizona, as 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 surveys have been established and perpetuated in strict accordance with the Manual of printed instructions, the

Special 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 true Field Notes of such Survey; and should any fraud be detected I will suffer the penalty of perjury, under the provisions of an act of Congress approved August 8, 1846.

Carl R. Caudle,
U.S. Deputy Surveyor.

Subscribed & sworn to before me this 24th day of January, A.D. 1901.

George Christ,
U. S. Surveyor General for Arizona.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GEN'L

Tucson, Arizona, 190

The foregoing field notes of the survey of Retracements and Re-establishment South-North and East Bdies-T12N.R6E. and South Bdy-T8N.R.1W. Gila & Salt River Meridian,

executed by Carl R. Caudle

under his contract No. 67, dated 5/22/1900

having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Hugh H. Price

U. S. Surveyor General for Arizona.