

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

236 - old
~~239~~
240 add

236-240-15

FIELD NOTES

OF

HOMESTEAD ENTRY SURVEY NO. 231

SITUATED IN THE

APACHE NATIONAL FOREST

ADMINISTRATIVE DISTRICT NO. 3

in

Section 4, un surveyed, Township 1 S., Range 30 E.

of the

Gila and Salt River Base and Meridian.

ARIZONA

Survey executed by C. A. Long, Surveyor - Forest Service

Under special instructions dated August 6, 1914

Survey commenced November 21, 1914

Survey completed November 23, 1914

Under Acts of June 11, 1906 and June 30, 1914

Applicant for listing George W. Burns,

Residence Clifton, Arizona

Application No. 57, dated March 23, 1908

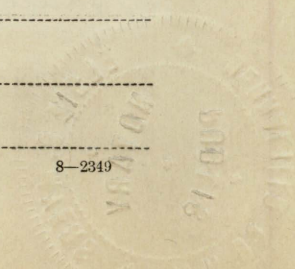
List No. 3-2705, dated July 31, 1913

Applicant for survey George W. Burns,

Residence Clifton, Arizona

H. E. No. 024515, dated April 25, 1914

Land district Phoenix, Arizona



OATH OF ASSISTANTS

We hereby certify that we assisted C. A. Long,
Surveyor - Forest Service in surveying all those
parts or portions of Homestead Entry Survey No. 231, in
unsurveyed Section 4, Township 1 S., Range 30 E.,
surveyed Section, Township , Range ,
of the G. & S.R.B. & meridian, State of Arizona, which
are represented in the following field notes as having been
surveyed by him and under his direction; and that said sur-
vey 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 fur-
nished by the United States Surveyor General for Arizona.

Note: It would have been
very expensive and incon-
venient to appear before
an officer to administer
the oaths to the Assistants;
hence, they were taken
by the Surveyor.

Wm. Swann Chairman.
Fred Turley Chairman.

Subscribed and sworn to before me this 24th day of
November, 1914.

C. A. Long
Surveyor - Forest Service

OATH OF SURVEYOR

I, C. A. Long, Surveyor - Forest Service, do solemnly swear
that, in strict conformity with the special instructions of
the United States Surveyor General for Arizona, dated
August 6, 1914, and the laws of the United States, I have
well, faithfully, and truly, in my own proper person, sur-
veyed a tract of land ~~upon the application of~~ embraced in
List, No. 3-2705, dated July 31, 1913, for
Patent, under the Act of June 11, 1906,
the same to be known as Homestead Entry Survey No. 231,
situated within the APACHE National Forest, in
un surveyed Section 4, Township 1 S., Range 30 E., and
surveyed Section, Township , Range ,
of the G. & S.R.B. & meridian, Arizona, and the
related retracements and resurveys and section subdivisions,
which are represented in the following field notes as having
been surveyed by me; and I further solemnly swear that all
the corners of said survey have been established and perpet-
uated in strict accordance with the stated special instruc-
tions, and in the specific manner described in the field
notes, and that the following are the original field notes
of such survey.

C. A. Long
Surveyor - Forest Service

Subscribed and sworn to before me this 11th day of
January, 1915.

Elsie C. Myers
Notary Public



APACHE NATIONAL FOREST

STATE OF ARIZONA

Chains

Applicant for listing, George W. Burns. Application No. 57, dated March 23, 1908; List No. 3-2705, dated July 31, 1913. H. E. No. 024515 made at Phoenix, Arizona, April 25, 1914.

Surveyed under Special instructions from the Surveyor General for Arizona, dated August 6, 1914, and designated as Homestead Entry Survey No. 231.

Situated in what will probably be, when surveyed, Sec. 4, T. 1 S., R. 30 E., Gila and Salt River Base and Meridian, Apache National Forest, Arizona.

Surveyed under the Acts of June 11, 1906 and June 30, 1914.

Survey commenced November 21, 1914 and executed with a

W. and L. E. Gurley light mountain transit No. 11920 provided with a full vertical circle and a horizontal limb having two double verniers placed opposite each other, and reading to single minutes of arc, which is also the least count of the vertical circle readings.

I test the adjustments of the transit and make necessary corrections.

All measurements were made directly on the slopes with a 500 link Lufkin steel tape, and the slope angles determined with a clinometer, the horizontal distances alone appearing in these notes.

November 21, 1914.

At Cor. No. 1 of this survey, I observe the altitude of the sun for azimuth. The sun is to left of reference mark. My watch is set for local mean time. The sun was observed in the upper left, lower right, upper right and lower left quadrants of the field. Longitude by account from Land office map is $109^{\circ} 16' 30''$ W.

APACHE NATIONAL FOREST

STATE OF ARIZONA

Chains

Latitude from observation on sun $33^{\circ} 21' 55''$ N.
(1)

| Telescope | l.m.t. | Vertical Angle | Horizontal Angle |
|-----------|--------|----------------|------------------|
|-----------|--------|----------------|------------------|

| | | | |
|--------|---------------|-----------------------|-----------------------|
| Direct | 8h. 50m. 50s. | $22^{\circ} 53' 00''$ | $91^{\circ} 41' 00''$ |
|--------|---------------|-----------------------|-----------------------|

| | | | |
|----------|----------------------|---|---|
| Reversed | <u>8h. 52m. 28s.</u> | <u>$22^{\circ} 34' 30''$</u> | <u>$91^{\circ} 57' 30''$</u> |
|----------|----------------------|---|---|

| | | | |
|-------|---------------|-----------------------|-----------------------|
| Means | 8h. 51m. 39s. | $22^{\circ} 43' 45''$ | $91^{\circ} 49' 15''$ |
|-------|---------------|-----------------------|-----------------------|

(2)

| | | | |
|--------|---------------|-----------------------|-----------------------|
| Direct | 8h. 54m. 00s. | $23^{\circ} 20' 00''$ | $91^{\circ} 38' 30''$ |
|--------|---------------|-----------------------|-----------------------|

| | | | |
|----------|----------------------|---|---|
| Reversed | <u>8h. 55m. 49s.</u> | <u>$23^{\circ} 02' 20''$</u> | <u>$90^{\circ} 41' 30''$</u> |
|----------|----------------------|---|---|

| | | | |
|-------|---------------|-----------------------|-----------------------|
| Means | 8h. 54m. 54s. | $23^{\circ} 11' 10''$ | $91^{\circ} 10' 00''$ |
|-------|---------------|-----------------------|-----------------------|

Bearing of reference mark by (1) S. $47^{\circ} 31' 52''$ W.

Bearing of reference mark by (2) S. $47^{\circ} 30' 45''$ W.

Mean S. $47^{\circ} 31' 19''$ W.

November 22, 1914.

At Cor. No. 1 of this survey, I place the telescope of my instrument in the meridian and observe the time and altitude of the passage of the sun's lower and west, upper and east, limbs across the vertical cross wires for time and latitude.

| Telescope | Watch Time | Vert. Ang. |
|-----------|------------|------------|
|-----------|------------|------------|

| | | |
|-------------------|-----------------------|------------------|
| Lower and W. limb | Direct 11h. 43m. 15s. | $36^{\circ} 50'$ |
|-------------------|-----------------------|------------------|

| | | |
|-------------------|-------------------------|------------------------------------|
| Upper and E. limb | Reversed 11h. 45m. 35s. | <u>$36^{\circ} 18'$</u> |
|-------------------|-------------------------|------------------------------------|

| | | |
|-------|----------------|------------------|
| Means | 11h. 44m. 25s. | $36^{\circ} 34'$ |
|-------|----------------|------------------|

From this observation, I calculate the Latitude to be $33^{\circ} 21' 55''$ N. and my watch is 1 m. 39s. slow on l.m.t.

November 22, 1914.

I begin at list cor. No. 1, which is a malpais stone 12 x 12 x 10 ins. in a mound of stone, marked and witnessed as described by the Forest Service. I destroy the list cor. and witnesses thereto and set a malpais stone 26 x 18 x 12 ins. in a mound of stone for cor. No. 1 of this survey, marked 1-HES231 on SE. face and

APACHE NATIONAL FOREST

STATE OF ARIZONA

Chains . . . cross (+) on top, and raise a mound of stone 4 ft. base,
2 ft. high, 3-1/2 ft. dist. within the claim. Pits
impracticable (Impossible to set cor. stone in ground),
whence,

W 100 A juniper 8 ins. dia. bears S. 33° 41' W.

64 lks. dist.

T 8 A juniper 20 ins. dia. bears N. 89° 10' W.,

137 lks. dist.

A juniper 20 ins. dia. bears S. 120° 22' E.,

176 lks. dist.

Each blazed and marked 1 H E V S 231 B T.

Boundary Post No. 16 on the G. & S. R. Base line

which is an iron post with brass cap marked

and witnessed as described by the Surveyor

General bears N. 26° 21' W. 29.63 chs. dist.

by traverse.

The observed magnetic declination at this cor.

at 11:00 A. M. is N. 15° 45' E. corrected for

diurnal change is 15° 46' E.

Thence N. 89° 41' E.

Descend gentle rocky slope through scattering juniper.

19.08 Bottom of descent, 65 ft. below cor.

20.50 Ascend rocky slope, 105 ft.

39.98 To Cor. No. 2.

Set a malpais stone 24 x 20 x 18 ins. in a mound of

stone for cor. No. 2 of this survey, marked 2-HES231

on side facing claim and across (+) on top and raise

a mound of stone 4 ft. base, 2 ft. high, 3-1/2 ft.

dist. within claim (impossible to set cor. stone in

ground) whence,

APACHE NATIONAL FOREST

STATE OF ARIZONA

Chains 4 A juniper 26 ins. dia. bears S. (08° 54' E.,

8 lks. dist. 3-1/2 ft. high

A juniper 30 ins. dia. bears S. 46° 01' W.

108 lks. dist. whence

A juniper 30 ins. dia. bears S. 84° 00' W.

196 lks. dist.

Each blazed and marked 2 H E S 231 B T.

List cor. No. 4, which is a malpais stone 9 x

14 x 16 ins. in a mound of stone marked and wit-

nessed as described by the Forest Service bears

N. 07° 19' W., 37 lks. which I destroy and wit-

nesses thereto.

which is an iron post with brass cap marked

Thence S. 0° 26' E. and witnessed as described

Descend rocky slope through scattering juniper.

18.60 Bottom of draw, 70 ft. below cor. vert

19.00 Ascend rocky slope. The observed magnetic

37.00 Top of ridge, 95 ft. above point of ascent. Continue

along West slope of ridge.

40.00 To Cor. No. 3.

Set a malpais stone 34 x 24 x 20 ins. in a mound of stone for cor. No. 3 of this survey marked 3-HES231

on NW. face and cross (+) on top. Raise a mound of

stone 4 ft. base, 2 ft. high, 3-1/2 ft. dist. within

claim. Pits impracticable. (Impossible to set cor.

stone in ground) whence

A live oak 8 ins. dia. bears S. 89° 03' W.

79 lks. dist. on side facing claim and release

A live oak 12 ins. dia. bears S. 46° 36' W.,

40 lks. dist. within claim

Each blazed and marked 3 H E S 231 B T.

APACHE NATIONAL FOREST

STATE OF ARIZONA

| Chains | |
|--------|---|
| | List cor. No. 3, which is a malpais stone 12 x 14 x 12 ins. in a mound of stone, marked and witnessed as described by the Forest Service bears N. 49° 09' W. 37 lks. dist. I destroy same and witnesses thereto. |
| | November 23, 1914. |
| | Thence S. 89° 34' W. |
| | Descend 180 ft. through scattering juniper and scrub oak. Slopes covered with large rock. |
| 17.85 | Wash, 20 lks. wide, banks 3 ft. high, course NW. |
| 19.05 | Ascend 145 ft. leave rocky slope. |
| 27.50 | Top of ridge, continue along N. slope. |
| 29.65 | Descend steep rock slope 116 ft. |
| 33.25 | Wash, with a trace of water, 20 lks. wide, course SW. |
| 33.45 | Ascend rock slope 160 ft. |
| 39.95 | To Cor. No. 4. |
| | Identical with cor. No. 2 of list, which is a malpais stone 18 x 18 x 12 ins. in a mound of stone marked and witnessed as described by the Forest Service. I destroy same and witnesses thereto and set a malpais stone 25 x 16 x 12 ins. in a mound of stone for cor. No. 4 of this survey, marked 4-HES231 on NE. face and a cross (+) on top. Pits impracticable. Raise a mound of stone 4 ft. base, 2 ft. high, 3-1/2 ft. dist. within claim. (Impossible to set cor. stone in ground), whence, |
| | A juniper 4 ins. dia. bears N. 42° 41' W. 40 lks. dist. |
| | A juniper 18 ins. dia. bears N. 33° 23' E. 84 lks. dist. |
| | Each blazed and marked 4 H. E. S. 231, B. T. |

APACHE NATIONAL FOREST

STATE OF ARIZONA

| | |
|--------|--|
| Chains | Thence N. 0° 26' W. which |
| | Descend 85 ft. over rocky land through scattering juniper and scrub oak. |
| 15.00 | Wash, 10 lks. wide, banks 3 ft. high, course S. 70° 00' E. |
| 16.50 | Ascend gentle rocky slope. |
| 31.00 | Wash, 5 lks. wide, banks 2 ft. high, course SE. |
| 40.00 | To Cor. No. 1, the place of beginning. |

AREA

Area H. E. S. No. 231 159.89 acres

CONFLICTS OR ADJOINING CLAIMS.

There are no conflicts or adjoining claims.

IMPROVEMENTS

The improvements made upon and for the benefit of the claim and belonging to the claimant, consist of the following:

A two room, mixed log and adobe house, 16 x 30 ft. course of long sides E. and W., the NW. cor. of which bears from cor. No. 1, S. 26° 00' E., 24.90 chs. dist.

Value \$150.00

Frame granary, 6 x 9 ft., course of long sides E. and W. the NW. cor. of which bears from Cor. No. 1 S. 27° 03' E. 25.00 chs. dist.

Value \$25.00

Pole barn, 16 x 34 ft., course of long sides E. and W., the NE. cor. of which bears from Cor. No. 1, S. 26° 36' E. 23.07 chs. dist.

Value \$50.00

Pole cattle shed, 14 x 33 ft., course of long sides N. and S., the NE. cor. of which bears from Cor. No. 1 S. 27° 30' E. 21.90 chs. dist.

Value \$50.00

APACHE NATIONAL FOREST

STATE OF ARIZONA

Chains

A rock and earth reservoir, center bears S. 19° 45' E.,
22.40 chs. from cor. No. 1.

Value \$75.00

1/2 mile of brush and barbed wire fencing.
Value \$50.00

Total value of improvements. \$400.00

DESCRIPTION

This claim is situated on a plateau having an elevation
of 6,200 ft. above sea level. The land slopes to the
south and is covered with a scattering growth of juni-
per and scrub oak.

The only water available is surface, which is caught in
an earth reservoir, having storage capacity sufficient
for watering cattle and all domestic purposes the
entire year.

Excepting a small area around the houses, the whole claim
is covered with large boulders, and unfit for agricul-
ture. About 15 acres can be brought under cultivation,
5 acres have been cultivated heretofore, producing
good crops of corn, oats, potatoes and vegetables.
The soil is a light, brown sandy loam. No evidence
of mineral on the claim.

Clifton, the county seat of Greenlee County and nearest
postoffice and trading center on the A. & N. M. R. R.
lies 40 miles distant in a southerly direction, and
is reached by a fair mountain trail.

HOMESTEAD ENTRY SURVEY NO. 231

APACHE NATIONAL FOREST

STATE OF ARIZONA

Chains

Traverses from Cor. No. 1 to Boundary Post No. 16 on G. & S. R. B. line.

| Course | Dist. | N. | S. | E. | W. |
|---------------|--------------|-------|----|----|--------------|
| N. 33° 18' W. | 3.62 | 3.03 | | | 1.99 |
| N. 15° 54' W. | 17.47 | 16.80 | | | 4.79 |
| N. 43° 28' W. | 9.27 | 6.73 | | | 6.37 |
| Totals | 26.56 | | | | 13.15 |

Resulting course N. 26° 21' W. 29.63 chs.

Traverses, Boundaries H.E.S. No. 231.

| Cor. | Course | Dist. | N. | S. | E. | W. |
|------|---------------|--------|-------|-------|-------|-------|
| 1-2 | N. 89° 41' E. | 39.98 | 0.22 | | 39.98 | |
| 2-3 | S. 0° 26' E. | 40.00 | | 40.00 | 0.30 | |
| 3-4 | S. 89° 34' W. | 39.95 | | 0.30 | | 39.95 |
| 4-1 | N. 0° 26' W. | 40.00 | 40.00 | | | 0.30 |
| | | 159.93 | 40.22 | 40.30 | 40.28 | 40.25 |
| | | | 40.22 | 40.25 | | |

Error in Lat. and Dep. .08 .03

Error of closure 1:1898.

Survey completed November 23, 1914.

Excepting a small area around the houses, the whole claim is covered with large boulders, and unfit for agriculture. A few crops can be brought under cultivation, producing good crops of corn, oats, potatoes and vegetables. The soil is a light, brown sandy loam. No evidence of mineral on the claim.

Clifton, the county seat of Greenlee County and nearest postoffice and trading center on the A. & M. R. R. lies 40 miles distant in a southerly direction, and is reached by a fair mountain trail.

[Signature]
Surveyor - Forest Service.

Chains

Latitude Computation

Date of Observation, November 22, 1914.

Longitude by account from Land Office map 109° 16' 30" W.

Telescope placed in the meridian.

| | Telescope | Watch Time | Vert. Ang. |
|-------------------|-----------|-----------------------|----------------|
| Lower and W. limb | Direct | 11h. 43m. 15s. | 36° 50' |
| Upper and E. limb | Reversed | <u>11h. 45m. 35s.</u> | <u>36° 18'</u> |
| Mean | | 11h. 44m. 25s. | 36° 34' |

Observed Vert. Ang. = 36° 34' 00"

Refraction - 1' 17"
36° 32' 43"

Parallax +07
36° 32' 50"

Sun's Declination + 20° 05' 15"
56° 38' 05" = co. Lat.

90° 00' 00"
33° 21' 55" = Latitude.

Time Computation

Watch time of Meridian passage = 11h. 44m. 25s.

Equation of Time +13m. 56s.
11h. 58m. 21s.

Apparent Noon = 12h. 00m. 00s.
Watch slow on l.m.t. 1m. 39s.

app. noon
- 12 13 06
11 46 4
11 44 2 - watch
1m 39

Azimuth Computation

Date of Observation, November 21, 1914.

Lat. and Long. previously stated.

(1)

| | |
|----------------------------------|---------------|
| l.m.t. of obsn. | 8h. 51m. 39s. |
| Apparent time of obsn. | 9h. 05m. 51s. |
| Observed Vert. Ang. | 22° 43' 45" |
| Reduced " " | 22° 41' 28" |
| Sun's Declination | 19° 50' 26" |
| Hor. Ang. from the sun to right. | 91° 49' 15" |

TSEROFALONATL TIONAL FOREST

STATE OF ARIZONA

| | | |
|--------|---|--------|
| Chains | Latitude Computation | Chains |
| | <p>Date of Observation, November 22, 1914.</p> <p>Longitude by account from Land Office map 109° 16' 30" W.</p> <p>Telescope placed in the meridian.</p> <p>Telescope Watch Time Vert. Ang. 36° 50'</p> <p>Direct 11h. 43m. 15s.</p> <p>Reversed 11h. 45m. 35s. 36° 18'</p> <p>Mean 11h. 44m. 25s. 36° 34'</p> <p>Observed Vert. Ang. = 36° 34' 00"</p> <p>Refraction $\frac{36° 32' 43'' - 1' 17''}{36° 32' 43''}$</p> <p>Parallax $\frac{36° 32' 50'' + 07''}{36° 32' 50''}$</p> <p>Sun's Declination + $\frac{30° 05' 15''}{36° 38' 05''} = \text{co. Lat.}$</p> <p>$\frac{90° 00' 00''}{33° 21' 55''} = \text{Latitude.}$</p> | |
| | Time Computation | |
| | <p>Watch time of Meridian passage = 11h. 44m. 25s.</p> <p>Duration of Time $\frac{11h. 38m. 21s. + 13m. 55s.}{11h. 38m. 21s.}$</p> <p>Apparent Noon = $\frac{12h. 00m. 00s.}{11h. 38s.}$</p> <p>Watch slow on I.M.T.</p> | |
| | Azimuth Computation | |
| | <p>Date of Observation, November 21, 1914.</p> <p>Lat. and Long. previously stated.</p> <p>(1)</p> <p>I.M.T. of obsn. 8h. 51m. 39s.</p> <p>Apparent time of obsn. 9h. 05m. 51s.</p> <p>Observed Vert. Ang. 32° 43' 45"</p> <p>Reduced " " 32° 41' 28"</p> <p>Sun's Declination 19° 50' 26"</p> <p>Hor. Ang. from the sun to right. 91° 49' 15"</p> | |

HOMESTEAD ENTRY SURVEY NO. 231

APACHE NATIONAL FOREST

STATE OF ARIZONA

Chains

$$\text{Cos. A.} = \frac{\text{Sin. } 19^{\circ} 50' 26''}{\text{Cos. } 33^{\circ} 21' 55'' \times \text{Cos. } 22^{\circ} 41' 28''} - (\text{Tan. } 33^{\circ} 21' 55'' \times \text{Tan. } 22^{\circ} 41' 28'')$$

$$\begin{aligned} \text{Log. Sin. } 19^{\circ} 50' 26'' &= 9.5307167 \\ &\quad \underline{9.8866731} \\ &= 9.6439236 = \text{Log. } -.44048 \end{aligned}$$

$$\begin{aligned} \text{Log. Cos. } 33^{\circ} 21' 55'' &= 9.9217807 \\ \text{'' '' } 22^{\circ} 41' 28'' &= \underline{9.9650124} \\ &= 9.8867931 \end{aligned}$$

$$\begin{aligned} \text{Log. Tan. } 33^{\circ} 21' 55'' &= 9.8185620 \\ \text{'' '' } 22^{\circ} 41' 28'' &= \underline{9.6213090} \\ &= 9.4398710 = \text{Log. } -.27534 \end{aligned}$$

-.44048 -.27534 = -.71582 = Nat. Cos. S. 44° 17' 23" E.
 the bearing of sun and the bearing of reference mark is
 S. 47° 31' 52" W.

(2)

l.m.t. of obsn. = 8h. 54m. 54s.

Apparent time of obsn. 9h. 09m. 06s.

Observed Vert. Ang. 23° 11' 10"

Corrected Vert. Ang. 23° 08' 56"

Sun's Declination 19° 50' 28"

Hor. Ang. from sun to right 91° 10' 00"

$$\begin{aligned} \text{Log. Sin. } 19^{\circ} 50' 28'' &= 9.5307284 \\ &\quad \underline{9.8853260} \\ &= 9.6454024 = \text{Log. } -.44198 \end{aligned}$$

$$\begin{aligned} \text{Log. Cos. } 33^{\circ} 21' 55'' &= 9.9217807 \\ \text{'' '' } 23^{\circ} 08' 56'' &= \underline{9.9635453} \\ &= 9.8853260 \end{aligned}$$

$$\begin{aligned} \text{Log. Tan. } 33^{\circ} 21' 55'' &= 9.8185620 \\ \text{'' '' } 23^{\circ} 08' 56'' &= \underline{9.6309819} \\ &= 9.4495439 = \text{Log. } -.28154 \end{aligned}$$

-.44198 -.28154 = -.72352 = Nat. Cos. of S. 43° 39' 15"
 E., the bearing of sun, and the bearing of reference mark
 is S. 47° 30' 45" W. and the mean of these observations
 is S. 47° 31' 19" W.

T.A.

Chains
(T.M.)

Chains

| | |
|---|-------------------------|
| is 2. 47° 31' 19" W. | |
| is 2. 47° 30' 45" W. and the mean of these observations | |
| E., the bearing of sun and the bearing of reference mark | |
| --.44198 --.28154 = -.72352 = Nat. Cos. of 2. 43° 39' 15" | |
| Log. Tan. 33° 08' 56" = 9.8309819 | 9.4432739 = Log. .28154 |
| Log. Tan. 33° 21' 52" = 9.8185230 | |
| Log. Cos. 33° 08' 56" = 9.9232453 | |
| Log. Cos. 33° 21' 52" = 9.9217807 | |
| 9.8823260 | |
| 9.8823260 | |
| 9.849024 = Log. .44198 | |
| Log. Sin. 19° 50' 28" = 9.3307284 | |
| 9.8823260 | |
| 9.849024 = Log. .44198 | |
| Hor. Ang. from sun to right | 31° 10' 00" |
| Sun's Declination | 19° 50' 28" |
| Corrected Vert. Ang. | 33° 08' 56" |
| Observed Vert. Ang. | 33° 11' 10" |
| Apparent time of obsn. | 31. 09m. 06s. |
| L.m.t. of obsn. | 31. 54m. 24s. |
| (2) | |
| 2. 47° 31' 52" W. | |
| the bearing of sun and the bearing of reference mark is | |
| --.44048 --.27534 = -.71582 = Nat. Cos. 2. 44° 17' 25" R. | |
| 9.4328710 = Log. .27534 | |
| Log. Tan. 33° 21' 52" = 9.8185230 | |
| Log. Tan. 33° 41' 28" = 9.8212020 | |
| 9.8827231 | |
| 9.8827231 | |
| 9.8232453 = Log. .44048 | |
| Log. Cos. 33° 21' 52" = 9.9217807 | |
| Log. Cos. 33° 41' 28" = 9.9232453 | |
| 9.8827231 | |
| 9.8827231 | |
| 9.8432230 = Log. .44048 | |
| Log. Sin. 19° 50' 28" = 9.3307284 | |
| 9.8827231 | |
| 9.8432230 = Log. .44048 | |
| Log. A. = Sin. 19° 50' 28" = 9.3307284 | |
| Log. C. = Sin. 31' 52" X Tan. 33° 41' 28" = 9.3307284 | |

14

DIRECTIONS.—1. Carry out calculations to two decimals only.

2. In balancing Latitudes and Departures do not obliterate or change the original figures.

Put the corrected figure or figures above in red ink. Do not change the footing of the original figures, but put below them the corrected footing in red ink.

The corrections for balancing fallings should be proportional to the lengths of the lines.

3. In calculations of fallings take result to nearest link. In calculations of N. and S. areas drop all after second decimal. Surveyors are required to use the Standard Field Tables issued by the G. L. O.

4. Only three copies of this tabulation are necessary, for the District Office, the Surveyor General, and the Commissioner.

TABLING AND CALCULATIONS OF HOMESTEAD ENTRY SURVEY NO. 231, STATE OF **ARIZONA**, **George W. Burns.**

| CORNERS. | BEARING. | DISTANCE. | LATITUDES. | | DEPARTURES. | | DOUBLE M. D. | N. AREAS. | S. AREAS. |
|----------|---------------|-----------|------------|--------|-------------|-------|--------------|--------------|-----------|
| | | | NORTH. | SOUTH. | EAST. | WEST. | | | |
| 1-2 | N. 89° 41' E. | 39.98 | 22 | 39.96 | 39.97 | 39.97 | 8.79 | | |
| 2-3 | S. 0° 26' E. | 40.00 | | 40.00 | 30. | 80.24 | | 3206.39 | |
| 3-4 | S. 89° 34' W. | 39.95 | 40.04 | 30 | 39.95 | 40.57 | | 12.17 | |
| 4-1 | N. 0° 26' W. | 40.00 | 40.00 | | 30 | | 12.01 | | |
| | | 159.93 | 40.22 | 40.30 | 40.28 | | 20.80 | 3218.56 | |
| | | | 40.26 | 40.26 | 40.27 | | | <u>20.80</u> | |
| | | | | | | | | 20 3197.76 | |
| | | | | | | | | 159.888 | |
| | | | | | | | | 159.89 A. | |

T. H.

15

• A 08. 031

898. 008

30. 08

30. 08

30. 08

30. 08

30. 08

30. 08

30. 08

30. 08

30. 08

30. 08

30. 08

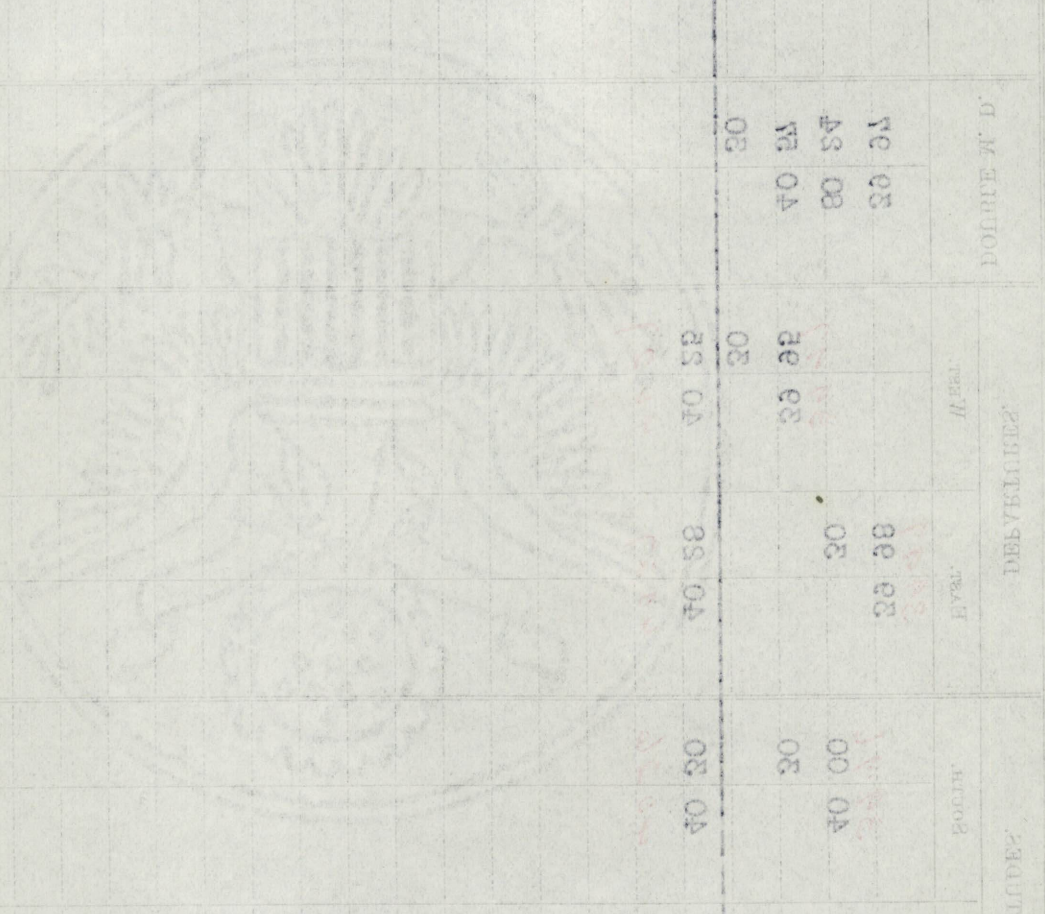
30. 08

30. 08

30. 08

30. 08

30. 08



| CORRECTION | BEARING | DISTANCE | LATITUDE | | | LONGITUDE | | | HEIGHT | MAGNITUDE | DIRECTION | REMARKS |
|------------|---------------|----------|----------|-------|-------|-----------|-------|--------|--------|-----------|-----------|---------|
| | | | North | South | East | West | Feet | Meters | | | | |
| 1-1 | N. 0° 30' W. | 40.00 | 40.00 | 00.00 | 40.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | |
| 2-2 | S. 88° 30' W. | 25.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | |
| 3-3 | S. 0° 30' E. | 40.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | |
| 4-4 | N. 88° 30' E. | 25.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | |

TABLE AND CALCULATIONS OF HORIZONTAL ERROR SURVEY NO. 521 STATE OF VERMONT. GEORGE W. BULLOCK.

1. Only three copies of this report are necessary, for the District Office, the State Survey Office, and the Commission.
 2. In calculations of bearings and distances, the bearings should be reduced to the magnetic bearing, and the distances to the true distance.
 3. In calculations of bearings and distances, the bearings should be reduced to the magnetic bearing, and the distances to the true distance.
 4. The corrections to the bearings and distances should be made in the same direction as the error of the observations.
 5. The bearings and distances should be reduced to the magnetic bearing, and the distances to the true distance.
 6. The bearings and distances should be reduced to the magnetic bearing, and the distances to the true distance.
 7. The bearings and distances should be reduced to the magnetic bearing, and the distances to the true distance.
 8. The bearings and distances should be reduced to the magnetic bearing, and the distances to the true distance.
 9. The bearings and distances should be reduced to the magnetic bearing, and the distances to the true distance.
 10. The bearings and distances should be reduced to the magnetic bearing, and the distances to the true distance.

APPROVAL

Office of the United States Surveyor General,

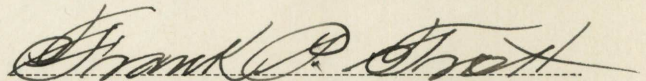
Phoenix, Arizona, April 29, 1916 .

The foregoing field notes of Homestead Entry Survey No.

231

.....
.....
.....
.....
.....

executed by C. A. Long, Surveyor-Forest Service
under his special instructions, dated August 6, 1914,
having been critically examined, and the necessary correc-
tions and explanations made, the said field notes, and the
surveys they describe, are hereby approved.


U. S. Surveyor General.

I certify that the foregoing transcript of the field
notes of the above-described survey in Arizona,
has been correctly copied from the original notes on file in
this office.

Frank P. Trott
U. S. Surveyor General.