U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

FIELD NOTES

OF
HOMESTEAD ENTRY SURVEY NO. 421

SITUATED IN THE
Tonto NATIONAL FOREST

ADMINISTRATIVE DISTRICT NO. 3.

In Section 28, unsurveyed, Township 11 N., Range 11 E.

of the
Gila and Salt River Base and Meridian,

State of
ARIZONA

Applicant for listing
A. J. Franklin,

Residence
Payson, Arizona

Application No. 213, dated
February 10, 1910

List No. 3-631, dated
August 17, 1910

Applicant for survey
A. J. Franklin,

Residence
Payson, Arizona

H. E. No. 014464, dated
May 29, 1911

Office
Phoenix, Arizona

Survey executed by R. P. A. Johnson, Surveyor - Draftsman (Forest Service Title)

Under special instructions dated
September 23, 1915

Survey commenced
April 25, 1916

Survey completed
April 27, 1916

OATH OF ASSISTANTS

We hereby certify that we assisted John B. Johnson in surveying all those parts or portions of Homestead Entry Survey No. 121, in the State of Arizona which are represented in the following 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.

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

Subscribed and sworn to before me this twenty-fourth day of May, 1916.

[Signature]

Chairman

OATH OF SURVEYOR

I, John B. Johnson, Surveyor Draftsman, do solemnly swear that, in strict conformity with the special instructions of the United States Surveyor General for Arizona, dated November 24, 1915, and the laws of the United States, I have well, faithfully, and truly, in my own proper person, surveyed a tract of land, namely:

patent No. 2-131, dated August 10, 1910, for

situated within the

National Forest, in

surveyed Section 28, Township 11N, Range 16E, and

of the 9th principal 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 perpetuated in strict accordance with the stated special instructions, and in the specific manner described in the field notes, and that the following are the original field notes of such survey.

DISTRICT OF COLUMBIA

CITY OF WASHINGTON

Subscribed and sworn to before me this second day of January, 1917.

[Signature]

Notary Public, D.C.
Applicant for listing, A. J. Franklin; Application No. 213, dated February 10, 1910; List No. 3-631, dated August 17, 1910; H. R. 014464, made in the Phoenix Land Office on May 29, 1911 by A. J. Franklin.

List 3-631 in this case was made by legal subdivisions in a Township which was never legally surveyed. No attempt was made to locate original list lines on ground. This survey is in the nature of a cooperative survey and will be used as a basis for amending listing and entry.

Township 11 N., R. 11 E., was surveyed under Contract No. 116 by U. S. Deputy Surveyors, Campbell and Cakes, dated April 18, 1904. The East boundary and subdivisions were finally rejected on January 8, 1909.

The retracement of portions of South and West boundaries under this contract were accepted on same date.

Surveyed under special instructions from the Surveyor General for Arizona, dated September 23, 1915 and designated as Homestead Entry Survey No. 421.

Situated in what will probably be, when surveyed, Sec. 28, T. 11 N., R. 11 E., Gila and Salt River Base and Meridian, Tonto National Forest, Arizona.


Survey commenced April 25, 1916 and executed with a Buff and Buff transit, equipped with Smith solar attachment.

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

All distances are horizontal and were reduced from measurements made directly on the slope with a 500 link
link steel tape. The slope angles were determined with a clinometer.

April 26, 1916.

At 8h. 30m. a.m., l.m.t., I set off 34° 16' on Lat. arc, 13° 54' N. on decl. arc, and determine a meridian with the solar at cor. No. 8, hereinafter described.

I observe the altitude of the sun for azimuth at cor. No. 8 of this survey, hereinafter described. The reading on the meridian determined with solar is set at zero and sun was observed in the lower left and upper right quadrants of the field. My watch is set for local mean time. Lat. 34° 16' N.; Long. 111° 13' 11" W., from special instructions from the Surveyor General and later verified.

<table>
<thead>
<tr>
<th>Telescope</th>
<th>Time</th>
<th>Horizontal Angle</th>
<th>Vertical Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>8h. 33m. 56s.</td>
<td>77° 41' 30&quot;</td>
<td>40° 38' 30&quot;</td>
</tr>
<tr>
<td>Reverse</td>
<td>8h. 33m. 56s.</td>
<td>76° 01' 00&quot;</td>
<td>40° 30' 00&quot;</td>
</tr>
<tr>
<td>Difference in meridians</td>
<td>0° 01' 47&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I again observe the altitude of the sun for azimuth at cor. No. 8. The reading on the meridian determined with the solar is set at zero and the sun was observed in the lower left and upper right quadrants of the field.

<table>
<thead>
<tr>
<th>Telescope</th>
<th>Time</th>
<th>Horizontal Angle</th>
<th>Vertical Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>8h. 43m. 26s.</td>
<td>76° 30' 30&quot;</td>
<td>41° 58' 00&quot;</td>
</tr>
<tr>
<td>Reverse</td>
<td>8h. 44m. 53s.</td>
<td>76° 57' 00&quot;</td>
<td>41° 43' 00&quot;</td>
</tr>
<tr>
<td>Difference in meridians</td>
<td>0° 01' 21&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

April 25, 1916.

At 8h. 10m. a.m., l.m.t., I set off 34° 16' on Lat. arc,
<table>
<thead>
<tr>
<th>Chains</th>
<th>13° 14-1/2' N. on decl. arc, and determine a meridian with the solar at cor. No. 2 H. E. S. 419 which is a granite stone 12 x 5 x 10 ins. above ground, marked 2 - H E S 419 on NE. face, with pits 24 x 24 x 12 ins. crosswise on claim lines E. and N. of cor., 3-1/2 ft. dist. and mound of earth 4 ft. base, 2 ft. high NE. of cor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thence North.</td>
<td>On a random line along line 2-3 of H. E. S. 419.</td>
</tr>
<tr>
<td>19.90</td>
<td>Cor. No. 3 H. E. S. 419.</td>
</tr>
<tr>
<td></td>
<td>A granite stone 9 x 6 x 10 ins. above ground, marked 3 - H. E. S 419 on SE. face.</td>
</tr>
<tr>
<td></td>
<td>True line is North, 19.90 chs.</td>
</tr>
<tr>
<td>Thence East.</td>
<td>On a random line along line 3-4 H. E. S. 419.</td>
</tr>
<tr>
<td>19.98</td>
<td>Fall 2 lks. N. of cor. No. 4 H. E. S. 419, a sandstone 6 x 6 x 10 ins. above ground, marked 4- H E S 419 on SE. face, with mound of stone 2 ft. base, 1-1/2 ft. high SE. of cor.</td>
</tr>
<tr>
<td></td>
<td>True line is N. 89° 56' W., 19.98 chs.</td>
</tr>
<tr>
<td>At this cor. I set off 13° 17' N. on decl. arc, and at 12h. 02m. 03s. l.m.t. observe the sun on the meridian. The resulting Lat. is 34° 16'.</td>
<td></td>
</tr>
</tbody>
</table>

**TIE**

April 27, 1916.
Chains

At 2h. 10m. p.m., I m.t., I set off 34° 16' on Lat. arc, 13° 57' N. on decl. arc, and determine a merid-
iun with the solar at cor. No. 1, hereinafter de-
scribed.

Thence South.

On random line for a tie.

Fall 9 lks. West of 1/4 sec. cor. bet. secs. 28 and 33
of rejected survey of T. 11 N., R. 11 E. In accord-
ance with special instructions from the Surveyor
General, I destroy all trace of this rejected cor.

1/4 sec. cor. of accepted survey bet. secs. 33 and 4,
Ts. 10 and 11 N., R. 11 E., which is a granite stone
8 x 5 x 6 ins. above ground, marked and witnessed as
described by the Surveyor General.

Return course North, 110.34 chs. dist.

BOUNDARIES OF CLAIM

April 26, 1916.

Beginning at cor. No. 1.

Also cor. No. 1, N. E. S. 422.

Deposit broken glass 14 ins. in the ground, over
which set a conglomerate stone 24 x 8 x 5 ins.,
chiseled + for the point and 1 - H E S 421 on NE.
face and 1 - H E S 422 on NW. face; and raise a
mound of stone 3 ft. base, 2 ft. high NE. of cor.,
whence:

A juniper, 34 ins. dia., bears N. 82° 40' E.,
42 lks. dist., scribed 1 H E S 421 + B T.
A juniper, 6 ins. dia., bears N. 6° W., 160
lks. dist., scribed 1 H E S 421 + B T.
A juniper, 14 ins. dia., bears S. 4° 30' E.,
65 lks. dist., scribed 1 H E S 422 + B T.
A juniper, 8 ins. dia., bears N. 65° 45' W.,
**Homestead Entry Survey No. 421**

**Tonto National Forest**

**State of Arizona**

<table>
<thead>
<tr>
<th>Chains</th>
<th>5.5 Lbs. dist., scribed 1° E. E. S. 422 + B T.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lat. 34° 15' 53&quot; N., Long. 111° 13' 43&quot; W.,</td>
<td>from special instructions from the Surveyor General and later verified.</td>
</tr>
<tr>
<td>Mag. Var. at 8:00 a.m., 14° 20' E., Mean Mag. Var. 14° 17'.</td>
<td></td>
</tr>
</tbody>
</table>

At 7th. 40m. a.m., I, set off 34° 16' on Lat. arc, 13° 33' N. on decl. arc, and determine a meridian with the solar st. cor. No. 1, Thence North.

Descend 5 ft. to arroyo, in open.

<table>
<thead>
<tr>
<th>Distance</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>Forest Service telephone line, bears NW. and SE.</td>
</tr>
<tr>
<td>0.86</td>
<td>Road, bears NW. and SE.</td>
</tr>
<tr>
<td>1.90</td>
<td>Arroyo, 20 lks. wide, 3 ft. deep, course SE.</td>
</tr>
<tr>
<td>2.96</td>
<td>Ascend 20 ft. to cor. in brush.</td>
</tr>
<tr>
<td>10.00</td>
<td>Fence, bears E. and W.</td>
</tr>
<tr>
<td></td>
<td>Also cor. No. 12 H. E. S. 422.</td>
</tr>
<tr>
<td></td>
<td>Deposit broken glass 10 ins. in the ground over which set a granite stone 20 x 12 x 6 ins. (no longer stone available) chiseled for the point, 2 - H E S 421 on SE. face and 12 - H E S 422 on NW. face; dig pits 24 x 24 x 12 ins. crosswise on claim lines 7 ft. dist. and raise a mound of earth 4 ft. base, 2 ft. high, 3-1/2 ft. dist. SE. of cor., whence:</td>
</tr>
<tr>
<td></td>
<td>An oak, 6 ins. dia., bears N. 12° 15' E.,</td>
</tr>
<tr>
<td></td>
<td>47 lks. dist., scribed 2 H E S 421 + B T.</td>
</tr>
<tr>
<td></td>
<td>A juniper, 6 ins. dia., bears N. 83° 50' E.,</td>
</tr>
<tr>
<td></td>
<td>42 lks. dist., scribed 2 H E S 421 + B T.</td>
</tr>
<tr>
<td></td>
<td>An oak, 5 ins. dia., bears N. 60° 15' W.,</td>
</tr>
<tr>
<td></td>
<td>53 lks. dist., scribed 12 H E S 422 + B T.</td>
</tr>
<tr>
<td></td>
<td>An oak, 8 ins. dia., bears N. 11° W., 46 lks. dist., scribed 12 H E S 422 + B T.</td>
</tr>
<tr>
<td>Chains</td>
<td>Thence S. 89° 57' E.</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td>Over level land in brush.</td>
</tr>
<tr>
<td>5.00</td>
<td>Arroyo, 20 Ibs. wide, 10 ft. deep, course S.</td>
</tr>
<tr>
<td>12.40</td>
<td>Road, bears S. and NE.</td>
</tr>
<tr>
<td>12.85</td>
<td>Fence, bears N. and S.</td>
</tr>
<tr>
<td>12.91</td>
<td>To cor. No. 2.</td>
</tr>
<tr>
<td></td>
<td>Also cor. No. 11 H. E. S. 422.</td>
</tr>
</tbody>
</table>

Deposit broken glass 14 ins. in the ground, over which set a granite stone 24 x 8 x 8 ins., chiseled + for the point and 3 - H E S 421 on SE. face and 11 - H E S 422 on NW. face; and raise a mound of stone 2 ft. base, 1-1/2 ft. high SE. of cor., whence:

- A juniper, 22 ins. dia., bears N. 55° 15' W.,
- 105 Ibs. dist., scribed 3 H E S 421 + B T.
- A juniper, 10 ins. dia., bears N. 1° 45' E.,
- 122 Ibs. dist., scribed 3 H E S 421 + B T.
- A juniper, 18 ins. dia., bears N. 48° 45' W.,
- 96 Ibs. dist., scribed 11 H E S 422 + B T.
- A juniper, 8 ins. dia., bears N. 31° 15' E.,
- 228 Ibs. dist., scribed 11 H E S 422 + B T.

Thence North.

| 0.28 | Fence, bears NE. and SW. |
|      |                       |
| 0.57 | Road, bears NE. and SW. Descend 30 ft. to arroyo, in brush. |
| 3.00 | Arroyo, 10 Ibs. wide, 1 ft. deep, course SW. Ascend 30 ft. in brush to cor. |
| 10.00| Cor No. 4. |

Also cor. No. 10 H. E. S. 422.

Deposit broken glass 14 ins. in the ground, over which set a granite stone 24 x 8 x 8 ins., chiseled + for the point and 4 - H E S 421 on SE. face and 10 - H E S 422 on NW. face; and raise a mound of stone 2 ft. base.
Chains 1-1/2 ft. high SE. of cor., whence:
A juniper, 6 ins. dia., bears S. 50° W., 100 lbs. dist., scribed 4 H E S 421 + B T.
An oak, 12 ins. dia., bears S. 32° 30' E., 44 lbs. dist., scribed 4 H E S 421 + B T.
A juniper, 24 ins. dia., bears N. 4° 15' E., 74 lbs. dist., scribed 10 H E S 422 + B T.
A pinon, 14 ins. dia., bears N. 61° 45' W., 162 lbs. dist., scribed 10 H E S 422 + B T.

Thence East.
Descend 30 ft. in brush to arroyo.
3.10 Arroyo, 10 lbs. wide, 1 ft. deep, course SW. Ascend 20 ft. to cor.
5.25 Road, bears NE. and SW.
6.00 Fence, bears NE. and SW. Enter field.
7.00 To cor. No. 5.

Also cor. No. 9 H E S 482.
Deposit broken glass 14 ins. in the ground, over which set a granite stone 24 x 12 x 6 ins., chiseled + for the point, 5 - H E S 421 on SE. face and 9 - H E S 422 on NW. face; and raise a mound of stone 2 ft. base, 1-1/2 ft. high SE. of cor., whence:
A juniper, 8 ins. dia., bears N. 38° W., 55 lbs. dist., scribed 9 H E S 422 - 5 H E S 421 + B T.

No other witness available. Fits impracticable.
April 26, 1916.

April 27, 1916.
At 7h. 40m. a.m., l.m.t., I set off 24° 16' on Lat. arc, 13° 52-1/2' N. on decl. arc and determine a meridian with the solar at cor. No. 5.
Chains
0.50 Fence, bears NE. and SW. Leave field.
1.10 Road, bears NE. and SW. Descend 40 ft. in brush to arroyo.
5.90 Arroyo, 10 lks. wide, 1 ft. deep, course SW. Ascend 40 ft. in brush to cor.
11.50 To cor. No. 6.

Deposit broken glass 14 ins. in the ground, over which set a sandstone 24 x 10 x 8 ins., chiseled + for the point and 6 - H E S 421 on SE. face; dig pits 24 x 24 x 12 ins. crosswise on claim lines 7 ft. dist. and raise a mound of earth 4 ft. base, 2 ft. high SE. of cor., whence:

A juniper, 4 ins. dia., bears N. 26° 29' E., 39 lks. dist., scribed 6 H E S 421 + B T.
A juniper, 6 ins. dia., bears S. 75° 07' E., 43 lks. dist., scribed 6 H E S 421 + B T.
Cor. No. 8; H. E. S. 422; a granite stone 12 x 6 x 10 ins. above ground, marked + on top and 8 - H E S 422 on SW. face, with mound of stone 2 ft. base, 1-1/2 ft. high, SW. of cor. bears North, 8.50 chs. dist. by direct measurement.

Thence East.

Descend 40 ft. to arroyo in brush.
4.80 Fence, bears N. and S.
6.05 Fence, bears NW. and SE.
10.00 Arroyo, 10 lks. wide, 1 ft. deep, course SW. Ascend 40 ft. in brush to cor.
16.80 Fence, bears NE. and SW.
19.80 Road, bears ENE. and WSW.
20.02 To Cor. No. 7.
Chains

On line 4-5 of H. E. S. 419.
Deposit a broken glass 14 ins. in the ground, over which set a granite stone 28 x 10 x 6 ins., chiselled + for the point and 7 - H E S 421 on SW. face; and raise a mound of stone 2 ft. base, 2 ft. high SW. of cor., whence:

A juniper, 16 ins. dia., bears S. 37° 30' E., 40 lks. dist., scribed 7 H E S 421 + B T.

A pinon, 7 ins. dia., bears 5. 62° 45' W., 81 lks. dist., scribed 7 H E S 421 + B T.

Cor. No. 5 H. E. S. 419, heretofore described, bears North, 18.36 chs.

Thence South.

Along line 5-4 of H. E. S. 419, over level land in brush.

13.40 Leave brush, bears NW. and SE. Enter open flat.

21.50 To cor. No. 6.

Identical with cor. No. 4 of H. E. S. 419, which is a sandstone 3 x 6 x 10 ins. above ground, marked and witnessed as heretofore described. I mark same stone 6 - H E S 421 on NW. face for cor. No. 6 of this survey, whence:

A juniper, 16 ins. dia., bears N. 56° 50' E., 157 lks. dist., scribed 8 H E S 421 - 4 H E S 419 + B T.

A juniper, 16 ins. dia., bears N. 67° 30' W., 234 lks. dist., scribed 8 H E S 421 - 4 H E S 419 + B T.

Thence N. 69° 56' W.

Along line 4-3 of H. E. S. 419, over level open land.

1.50 Enter brush.
Chains

<table>
<thead>
<tr>
<th>Distance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.30</td>
<td>Wire fence, bears N. and S. Leave brush.</td>
</tr>
<tr>
<td>9.30</td>
<td>Enter cultivated field.</td>
</tr>
<tr>
<td>19.98</td>
<td>To cor. No. 9.</td>
</tr>
</tbody>
</table>

Identical with cor. No. 2 of H. E. S. 419, which is a granite stone 9 x 6 x 10 ins. above ground, marked and witnessed as heretofore described. I mark same stone 9 - H E S 421 on NW. face. No witnesses available, therefore dig pits 24 x 24 x 12 ins., crosswise on claim lines 3 ft. dist. and raise a mound of earth 4 ft. base, 2 ft. high, 3-1/2 ft. dist. NW. of cor.

Thence South.

Along line 3-2 of H. E. S. 419, over level cultivated land.

10.00  To cor. No. 10.

On line 3-2 of H. E. S. 419.

Deposit broken glass 10 ins. in the ground, over which set a granite stone 20 x 8 x 4 ins. (no longer stone available) chiseled + for the point and 10 - H E S 421 on NW. face; and raise a mound of stone 3 ft. base, 2 ft. high NW. of cor., whence:

A juniper, 16 ins. dia., bears S. 85° 34' W.,
164 lks. dist., scribed 10 H E S 421 + B T.

A juniper, 10 ins. dia., bears S. 28° 13' E.,
164 lks. dist., scribed 10 H E S 421 + B T.

Cor. No. 2 H. E. S. 419, heretofore described, bears South, 9.90 chs. dist.

Thence West.

Over level open land.

0.20  Leave cultivated land, bears NNW. and SSE. Enter timber.

0.30  Fence, bears NNW. and SSE.
Chains  
2.50 Leave timber, bears N. and S. Enter open.
10.00 Leave open, enter timber, bears N. and S. Descend 16 ft. to arroyo.
11.63 Fence, bears NW. and SE.
16.10 Fork in road, road bears NW., NE. and SE.
18.15 Arroyo, 10 lks. wide, 1 ft. deep, course SW. Leave timber, bears NE. and SW. Enter open and ascend 5 ft. to cor.
19.20 Telephone line, bears NW. and SE.
20.00 To cor. No. 1, the place of beginning.

AREA

Total Area 70.05 acres.

IMPROVEMENTS

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

An L shaped frame house, 50 x 40 ft., the long sides of which bear NW. and SE. and the SW. cor. of which bears S. 71° 50' W., 11.10 chs. dist. from cor. No. 7.

Value

A frame smoke house, 16 x 12 ft., the long sides of which bear NW. and SE. and the SW. cor. of which bears S. 72° 45' W., 10.45 chs. dist. from cor. No. 7.

Value

A frame barn, 22 x 40 ft., the long side of which bears N. and S. and the NE. cor. of which bears S. 78° 20' W., 7.70 chs. dist. from cor. No. 7.

Value

A frame hen house 12' x 12 ft., sides extending in cardinal directions, the NE. cor. of which bears
HOMESTEAD ENTRY SURVEY NO. 421
TONTONATIONAL FOREST
STATE OF ARIZONA.

Chains
S. 77° 45' W., 9.45 chs. dist. from cor. No. 7.

Value
-$30.00

Approximately 1 mile of wire fence.

Value
-$125.00

There is a frame dwelling 30 x 24 ft., the long sides of which bear N. and S., and the SE. cor. of which bears N. 80° 15' W., 2.40 chs. dist. from cor. No. 10.

This house belongs to Mr. Blake.

Value
-$250.00

DESCRIPTION
This claim lies on the Tonto Creek Watershed at an elevation of approximately 5500 ft. The land is a flat bench cut by small arroyo in western portion. The timber consist of oak, juniper and pinon, a heavy stand of which lies along N. and W. boundaries. It is used for firewood and posts. There is no timber of commercial value on the claim.
The soil is a sandy loam fairly fertile and of good depth. It is producing fair crops without irrigation.

There is no water for irrigation and none is necessary.

Water for domestic use is obtained from a small seep near the house.

There are approximately 30 acres which have been cultivated.

I saw no indications of mineral upon the claim.

CONFLICTS AND ADJOINING CLAIMS
There are no conflicts. This claim is joined on the East by H. E. S. 419 of Rufus Brown and on the West by H. E. S. 422 of Floyd Lockwood.

Payson, Arizona, the nearest post office, is 8 miles
distant, and Globe, Arizona, the nearest railroad point, is 110 miles distant.

<table>
<thead>
<tr>
<th>Cor.</th>
<th>Course</th>
<th>Dist.</th>
<th>N</th>
<th>S</th>
<th>E</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>North</td>
<td>10.00</td>
<td>10.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>S.89°57' E.</td>
<td>12.91</td>
<td>0.01</td>
<td>12.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>North</td>
<td>10.00</td>
<td>10.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-5</td>
<td>East</td>
<td>7.00</td>
<td></td>
<td></td>
<td>7.00</td>
<td></td>
</tr>
<tr>
<td>5-6</td>
<td>North</td>
<td>11.60</td>
<td>11.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-7</td>
<td>East</td>
<td>20.02</td>
<td></td>
<td></td>
<td>20.02</td>
<td></td>
</tr>
<tr>
<td>7-8</td>
<td>South</td>
<td>21.50</td>
<td></td>
<td>21.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-9</td>
<td>N.89°56' W.</td>
<td>19.98</td>
<td>0.02</td>
<td></td>
<td>19.98</td>
<td></td>
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Error in Lat. and Dep. | 0.01 | 0.05

Survey completed April 27, 1916.
Direct Solar at cor. No. 8, H. E. S. 421, April 26, 1916.

Latitude 34° 16' N.  Long. 111° 13' 11" W.  Elev. 5500 ft.

Telescope Time Horizontal Vertical Pos.

Direct Sh. 43m. 26s.  76° 30' 30"  41° 58' 41° 53' Sun

Reversed Sh. 44m. 53s.  76° 57' 00"  41° 49' + ref. 41° 50' 50"

Sh. 44m. 03s.  76° 43' 45"  41° 50' 50"

Decl. 13° 33' 14" N.

Cos. Q. = \(\frac{\sin 13^\circ 33' 14"}{\cos 34^\circ 16' \times \cos 41^\circ 58'}\) - \(\tan 34^\circ 16' \times \tan 41^\circ 59' 37"\)

log. sin. = 13° 33' 14" = 0.269853
log. cos. = 34° 16' = 1.527024
log. cos. = 41° 58' = 1.672257
\[\text{log. cos.} = 0.650485 = \log. \quad 0.86056\]

log. tan. = 34° 16'
log. tan. = 41° 59' 37" = 0.955189
\[\text{log. tan.} = 0.755189 = \log. \quad 0.60972\]

\[\cos Q. = \frac{0.22917}{Q. = 76^\circ 45' 06"}\]

Difference from meridian determined by solar attachment

0° 01' 21".

Direct Solar at cor. No. 8, H. E. S. 421, April 26, 1916.

Latitude 34° 16' N.  Long. 111° 13' 11" W.  Elev. 5500 ft.

Telescope Time Horizontal Vertical Pos.

Direct Sh. 32m. 56s.  77° 41' 20"  40° 38' 30" +

Reversed Sh. 33m. 56s.  78° 01'  +

Sh. 33m. 26s.  77° 51' 15"  40° 34' 15"  55'

\[\text{log. tan.} = 34° 16' \quad \text{log. tan.} = 40° 33' 20" = 0.932339 \]

\[\text{log. tan.} = 40° 33' 20" = 0.932339 \quad \text{log. tan.} = 40° 33' 20" = 0.932339\]

\[\text{log. tan.} = 0.766680 = \log. \quad 0.58202\]

\[\cos Q. = \frac{0.20989}{Q. = 77^\circ 53' 02"}\]

Difference in meridian 0° 01' 47"
Form 85.
Sheet No. 3—Revised Feb. 1913.

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

TABLEING AND CALCULATIONS OF HOMESTEAD ENTRY SURVEY NO. 421, STATE OF Arizona.

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<thead>
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<th>CORNERS</th>
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<th>LATITUDES</th>
<th>DEPARTURES</th>
<th>DOUBLE M. D.</th>
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Total:
142.91 | 31.52 | 31.52 | 39.93 | 39.93 | 717.76 | 2116.79 |

70.05 Acres.
APPROVAL

Office of the United States Surveyor General,
Phoenix, Arizona JUL 19 1917

The foregoing field notes of Homestead Entry Survey No. 421

executed by R.P.A. Johnson, Surveyor-Draftsman
under his special instructions, dated September 27, 1917, having
been critically examined, and the necessary corrections and explanations
made, the said field notes, and the surveys they describe, are hereby
approved.

[Signature]
U. S. Surveyor General.

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

FRANK P. TROTT
U. S. Surveyor General.