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# ORIGINAL

U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

171  
DEC-8-1919  
APR 11 1920

## FIELD NOTES

OF

HOMESTEAD ENTRY SURVEY NO. 552

SITUATED IN THE SITGREAVES NATIONAL FOREST

ADMINISTRATIVE DISTRICT NO. 3

In Section 16 , unsurveyed, Township 12 N., Range 17 E.  
in Section 21 , unsurveyed, Township, 12 N., Range 17 E.

and

Establishment of U.S.L.M. No. 552, H.E.S.

of the

GILA AND SALT RIVER BASE AND Meridian.

State of

ARIZONA

Applicant for listing	S. C. Bunger,
Residence	Heber, Arizona.
Application No. 704	, dated May 12 , 19 17
List No.	, dated , 19

Applicant for survey	S. C. Bunger,
Residence	Heber, Arizona.
H. E. No.	, dated , 19
Land <del>xxxxxxx</del> Office,	, Phoenix, Arizona.

Survey executed by	Frank D. Yost, Surveyor - Forest Service,
Under special instructions dated	February 15 , 19 18
Survey commenced	July 21 , 19 19
Survey completed	July 21 , 19 19
Under Acts of	June 11, 1906, and July 24 , 1919.

OATH OF ASSISTANTS

We hereby certify that we assisted **Frank D. Yost,**  
**Surveyor - Forest Service,** in surveying all those  
[Forest Service Title.]

parts or portions of Homestead Entry Survey No. **552**, 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 estab-  
lished, according to the instructions furnished 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 oaths  
to Assistants; hence, they  
were taken by the Surveyor.

*H. E. Brandebury*  
-----  
Chairman.

*H. H. Longfellow*  
-----  
Chairman.

Subscribed and sworn to before me this **Sixth** day of  
**August**, 1919.

*Frank D. Yost*  
-----  
Surveyor - Forest Service,

OATH OF SURVEYOR

I, **Frank D. Yost,** **Surveyor - Forest Service,**  
[Forest Service Title.]

do solemnly swear that, in strict conformity with the special instruc-  
tions of the United States Surveyor General for **ARIZONA**, dated  
**February 15,** 19 **18,** and the laws of the United States, I have  
well, faithfully, and truly, in my own proper person, surveyed a tract  
of land upon the application of **S. C. Bungler,**

Application No. **704**, dated **May 12**, 19 **17**, for Listing  
and Patent, under the Act of **June 11**, 19 **06**,  
the same to be known as Homestead Entry Survey No. **552**,  
situated within the **SITGREAVES** National Forest, in  
un surveyed Section **16**, Township **12 N.**, Range **17 E.**, and  
un surveyed Section **21**, Township **12 N.**, Range **17 E.**,

of the **GILA AND SALT RIVER BASE &** 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.

*Frank D. Yost*  
-----  
**Surveyor - Forest Service,**  
[Forest Service Title.]

Subscribed and sworn to before me this **Fifth** day of  
**November**, 19 **19.**

*Echel G. Myers*  
-----  
Notary Public.



8-2349

My commission expires **March 17, 1921.**

SITGREAVES NATIONAL FOREST

STATE OF ARIZONA

Chains

Applicant for listing, S. C. Bunger; Application No. 704, dated May 12, 1917;

Surveyed under Special Instructions from the Surveyor General for Arizona, dated February 15, 1918, and designated as Homestead Entry Survey No. 552.

Situated in what will probably be when surveyed Secs. 16 and 21, T. 12 N., R. 17 E., Gila and Salt River Base and Meridian, Sitgreaves National Forest, Arizona.

Surveyed under the Acts of June 11, 1906 and July 24, 1919, under the cooperative plan.

Survey commenced July 21, 1919, and executed with a Buff and Buff transit No. 10019, 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 steel tape. The slope angles were determined with a clinometer.

July 21, 1919.

At Cor. No. 2 of this survey hereinafter described, I observe the altitude of the sun for azimuth. The reading on the reference mark was set at 155° 27' 00" and the sun was observed in all four quadrants of the field. My watch was set for local mean time.

Lat. 34° 26' 00" N., Long. 110° 33' 30" W., from Special Instructions from the Surveyor General and later verified.

HOMESTEAD ENTRY SURVEY NO. 552

SITGREAVES NATIONAL FOREST

STATE OF ARIZONA

Chains

Telescope	Pos. sun	l.m.t. a.m.	Horizontal Angle	Vertical Angle
Direct	+°	7h 27m 00s	262° 24' 30"	27° 40' 30"
Reversed	+°	7h 29m 10s	262° 05' 00"	27° 35' 30"
Direct	+°	7h 27m 50s	261° 55' 30"	27° 50' 30"
Reversed	+°	7h 28m 35s	262° 36' 00"	27° 28' 30"

The bearing of reference mark is N. 23° 52' 14" W.

At the same station I again observe the altitude of the sun for azimuth. The reading on the reference mark was set at 155° 27' 00" and the sun was observed in all four quadrants of the field.

Telescope	Pos. sun	l.m.t. a.m.	Horizontal Angle	Vertical Angle
Direct	+°	7h 31m 30s	262° 59' 00"	28° 37' 30"
Reversed	+°	7h 33m 20s	262° 36' 30"	28° 29' 00"
Direct	+°	7h 32m 00s	262° 36' 30"	28° 43' 30"
Reversed	+°	7h 32m 50s	263° 07' 30"	28° 22' 00"

The bearing of reference mark is N. 23° 52' 45" W.

The two obsns. give a mean bearing of reference mark as N. 23° 52' 29" W. I accept bearing of reference mark as N. 23° 52' W. and from the corresponding meridian all the courses of this survey were deflected by sustained angulation.

ESTABLISHMENT OF U.S.L.M. 552 H.E.S.

There being no accepted corner of the public land survey or U.S.L.M. within the prescribed limits, I establish U.S.L.M. 552 H.E.S. as follows:

Located on the East side of a small shallow draw, which is a tributary to Long Draw about 12 chains Southeast-erly of the Heber to Holbrook road. I chisel + for the point and U S L M 552 H E S on top of a flat lime-stone outcrop showing 5 x 2 x 1 ft. above ground, and

## SITGREAVES NATIONAL FOREST

STATE OF ARIZONA

Chains

raise a mound of stone 6 ft. base, 6 ft. high, West of the U. S. L. M., whence:

A pine 14 ins. dia., brs. S. 30° 32' E.,  
14 lks. dist.

A pine 20 ins. dia., brs. S. 75° 56' W.,  
294 lks. dist.

A pinon 5 ins. dia., brs. N. 9° 52' E.,  
109 lks. dist.

A pinon 14 ins. dia., brs. N. 88° 49' E.,  
166 lks. dist.

Each blazed and scribed U S L M 552 H E S + B T

Note: This section of the country is a high mesa, heavily covered with timber, and it was impracticable to secure bearings to topographic objects from any point in this vicinity.

## BOUNDARIES OF CLAIM

July 21, 1919.

Beginning at Cor. No. 1,

I chisel + for the point and 1 H E S 552 on the flat top of a limestone outcrop, showing 24 x 18 x 18 ins. above ground, for Cor. No. 1 of this survey, and raise a mound of stone 3 ft. base, 2 ft. high, S. of cor., whence:

A pine 24 ins. dia., brs. S. 88° 21' W.,  
458 lks. dist.

A pinon 12 ins. dia., brs. N. 3° 48' E.,  
49 lks. dist.

Each blazed and scribed 1 H E S 552 + B T

U. S. L. M. 552 H. E. S. heretofore described,  
brs. N. 4° 55' W., 5.17 chs. dist. by  
direct measurement.

Lat. 34° 26' 28" N., Long. 110° 34' 02" W., from

Chains Special Instructions from the Surveyor General and later verified.

Mag. decl. at 8 a.m., 14° 30' E., Mean

Mag. decl., 14° 26' E.

Thence S. 35° 13' E.

Along rolling rocky SW. slope, thru heavy oak brush.

57.66 To Cor. No. 2.

Deposit a limestone 5 x 4 x 2 ins. marked with a + 24 ins. in the ground, over which set an iron post 36 ins. long, 2 ins. dia., with brass cap mkd. 1919 on the S. rim and 2 H E S 552 in portion of circle facing the claim; raise a mound of stone 3 ft. base, 2 ft. high, NW. of cor., whence:

A pinon 16 ins. dia., brs. S. 52° 10' W., 333 lks. dist.

A pinon 12 ins. dia., brs. S. 19° 57' E., 308 lks. dist.

Each blazed and scribed 2 H E S 552 + B T

Thence S. 68° 24' W.

Over rolling NW. slope, thru oak brush, pinon and pine.

45.39 To Cor. No. 3.

I chisel a + for the point and 3 H E S 552 on the flat top of an embedded limestone boulder showing 36 x 14 x 4 ins. above ground, for Cor. No. 3 of this survey; and raise a mound of stone 3 ft. base, 2 ft. high, NE. of cor., whence:

A pine 24 ins. dia., brs. S. 74° 34' W., 236 lks. dist.

A pine 24 ins. dia., brs. N. 4° 30' W., 104 lks. dist.

Each blazed and scribed 3 H E S 552 + B T

SITGREAVES NATIONAL FOREST

STATE OF ARIZONA

Chains

Thence N. 7° 09' W.

Over rolling NE. slope, thru oak brush, pinon and pine.

37.96

To Cor. No. 4.

Deposit a limestone 6 x 4 x 2 ins. marked with a + 30 ins. in the ground, over which set an iron post 36 ins. long, 2 ins. dia., with brass cap marked 1919 on South rim and 4 H E S 552 in portion of circle facing claim; raise a mound of stone 3 ft. base, 2 ft. high, E. of cor.,.whence:

A cedar 10 ins. dia., brs. N. 88° 52' E.,  
116 lks. dist.

A pinon 14 ins. dia., brs. N. 12° 29' W.,  
142 lks. dist.

Each blazed and scribed 4 H E S 552 + B T

Thence N. 27° 28' E.

Over rolling rocky SE. slope, thru heavy oak brush, juniper, cedar and pine.

29.64

To Cor. No. 1, the place of beginning.

AREA

Total Area - - - - - 159.28 Acres

IMPROVEMENTS

There were no improvements on the claim at the time of survey.

DESCRIPTION

The claim lies at the mouth of a wide shallow draw, near its junction with Long Draw, and consists mainly of flat bottom land.

The soil on the bottom land is a sandy loam 3 to 4 ft. deep, with red clay subsoil, well adapted for agricul-



Chains

tural purposes.

There is no water on the claim and the possibilities of developing water are very meager. If however, all the water that would run during an ordinary year were carefully conserved by means of storage tanks it would possibly be sufficient for all domestic purposes. Approximately 70 percent of the area is suitable for agricultural purposes. None of the area had been under cultivation at the time of survey.

There is no timber of commercial value on the claim. I saw no evidence of mineral on the claim.

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#### CONFLICTS AND ADJOINING CLAIMS

There are no conflicts or adjoining claims. There are no nearby claims. H.E. S. 550 and H.E.S. 464 lie about 2 miles distant in a Southeasterly direction. H.E.S. 180 and 181 lie about 2 miles distant in a Southerly direction. H.E.S. 460 lies about 2 miles distant in a southwesterly direction.

Heber, Arizona, the nearest settlement and postoffice, lies about six miles distant in a Westerly direction. Holbrook, Arizona, the nearest railway point lies about 45 miles distant in a Northeasterly direction and is reached by fair wagon road.

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SITGREAVES NATIONAL FOREST

STATE OF ARIZONA

Chains

TRAVERSES

Course	Dist.	N.	S.	E.	W.
S. 35° 13' E.	57.66		47.11	33.25	
S. 68° 24' W.	45.39		16.71		42.20
N. 7° 09' W.	37.96	37.66			4.72
N. 27° 28' E.	29.64	26.30		13.67	
	170.65	63.96	63.82	46.92	46.92
		63.82		46.92	
Error in Lat.		.14		.00	

Closing Error, 1:1219

Survey completed July 21, 1919.

*Frank J. ...*  
Surveyor - Forest Service,

SITGREAVES NATIONAL FOREST

STATE OF ARIZONA

Chains

Direct Solar computation at Cor. No. 2, H.E.S. 552,  
July 21, 1919.

Lat.  $34^{\circ} 26' 00''$  N., Long.  $110^{\circ} 33' 30''$  W., from  
Special Instructions from the Surveyor General and  
later verified. Elevation approximately 6100 feet.

Telescope	Pos. sun	l.m.t. a.m.	Horizontal Angle	Vertical Angle
Direct	$+^{\circ}$	7h 27m 00s	$262^{\circ} 24' 30''$	$27^{\circ} 40' 30''$
Reversed	$\mp$	7h 29m 10s	$262^{\circ} 05' 00''$	$27^{\circ} 35' 30''$
Direct	$\ominus$	7h 27m 50s	$261^{\circ} 55' 30''$	$27^{\circ} 50' 30''$
Reversed	$\oplus$	7h 28m 35s	$262^{\circ} 36' 00''$	$27^{\circ} 28' 30''$
Means		7h 28m 09s	$262^{\circ} 15' 15''$	$27^{\circ} 38' 45''$
			Corr. for refr.	$\frac{1' 23''}{27^{\circ} 37' 22''}$

Decl.  $20^{\circ} 36' 50''$  N.

$$\text{Cos. Q.} = \frac{\sin. 20^{\circ} 36' 50''}{\cos. 34^{\circ} 26' \times \cos. 27^{\circ} 37' 22''} - \tan. 34^{\circ} 26' \times \tan. 27^{\circ} 37' 22''$$

$\sin. 20^{\circ} 36' 50'' = 9.5466272$

$\cos. 34^{\circ} 26' 00'' = 9.9163406$

$\cos. 27^{\circ} 37' 22'' = 9.9474452$

$9.6828434 = \log. .48177$

$\tan. 34^{\circ} 26' 00'' = 9.8360513$

$\tan. 27^{\circ} 37' 22'' = 9.7187455$

$9.5547968 = \log. .35875$

$\text{Cos. Q.} = .12302$

$Q. = 82^{\circ} 56' 01''$

Bearing of sun. N.  $82^{\circ} 56' 01''$

Angle mark to sun  $106^{\circ} 48' 15''$

Bearing of Reference mark N.  $23^{\circ} 52' 14''$  W.

(Reading on reference mark  $155^{\circ} 27' 00''$ )

$.12302 = 9.0899757 \log$   
 $82^{\circ} 56' = \cos 9.0899903$   
 $82^{\circ} 56' 01'' \quad \frac{148}{169.5} = 401'' ?$

SITGREAVES NATIONAL FOREST

STATE OF ARIZONA

Chains

Direct solar computation at Cor. No. 2, H.E.S. 552.

Telescope	Pos. sun	l.m.t. a.m.	Horizontal Angle	Vertical Angle
Direct	+°	7h 31m 30s	262° 59' 00"	28° 37' 30"
Reversed	+°	7h 33m 20s	262° 36' 30"	28° 29' 00"
Direct	+°	7h 32m 00s	262° 36' 30"	28° 43' 30"
Reversed	+°	7h 32m 50s	263° 07' 30"	28° 22' 00"
Means		7h 32m 25s	262° 49' 52"	28° 33' 00"
			Corr. for refr.	1' 19"
				28° 31' 41"

Decl. 20° 36' 48" N.

$$\text{Cos. Q.} = \frac{\sin. 20^\circ 36' 48''}{\cos. 34^\circ 26' \times \cos. 28^\circ 31' 41''} - \tan. 34^\circ 26'$$

$$\times \tan. 28^\circ 31' 41''$$

$$\sin. 20^\circ 36' 48'' = 9.5466160$$

$$\cos. 34^\circ 26' 00'' = 9.9163406$$

$$\cos. 28^\circ 31' 41'' = 9.9437830$$

$$9.6864924 = \log. .48584$$

$$\tan. 34^\circ 26' 00'' = 9.8360513$$

$$\tan. 28^\circ 31' 41'' = 9.7352713$$

$$9.5713226 = \log. .37267$$

$$\text{Cos. Q.} = .11317$$

$$Q. = 83^\circ 30' 07''$$

Azimuth of sun N. 83° 30' 07" E.

Angle mark to sun 107° 22' 52"

Bearing of Reference Mark, N. 23° 52' 45" W.

(Reading on reference mark, 155° 27' 00")

$$.11317 = \log 9.0537313$$

$$83^\circ 30' 10'' = \cos 9.0536739$$

$$83^\circ 30' 10'' - 03'' = 83^\circ 30' 07'' \quad \frac{574}{1849} = -3''$$

HOMESTEAD ENTRY SURVEY NO.

TRANSFERRED NATIONAL FOREST

STATE OF

Chains

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- 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. 552, STATE OF ARIZONA

8-2349

CORNERS.	BEARING.	DISTANCE.	LATITUDES.		DEPARTURES.		DOUBLE M. D.	N. AREAS.	S. AREAS.	
			NORTH.	SOUTH.	EAST.	WEST.				
1 - 2	S. 35-13 E.	57.66		47 11 <sup>16</sup>	33 25		60 59		2857 42	
2 - 3	S. 68-24 W.	45.39		16 71 <sup>75</sup>		42 20	51 64		864 97	
3 - 4	N. 7-09 W.	37.96	37 66 <sup>63</sup>			4 72	4 72	177 61		
4 - 1	N. 27-28 E.	29.64	26 30 <sup>28</sup>		13 67		13 67	359 25		
		170.65	63 96 <sup>91</sup>	63 82 <sup>91</sup>	46 92	46 92		536 86	3722 39	
			63 82		46 92				536 86	
	Error in Departure.		14		00				20/3185 53	
	Closing Error, 1:1219								159 28	Acres.

185

APPROVAL

Office of the United States Surveyor General,

Phoenix, Arizona, April 14, 1910

The foregoing field notes of Homestead Entry Survey No.

552

executed by *Frank D. Goot, Surveyor* [Forest Service Title.]  
under his special instructions, dated *Feb. 15*, 1918, having  
been critically examined, and the necessary corrections and explanations  
made, the said field notes, and the surveys they describe, are hereby  
approved.

*Frank P. Trott*  
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.