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# ORIGINAL

167

U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

DEC-8 1919

MAY 13 1920

## FIELD NOTES

OF

HOMESTEAD ENTRY SURVEY NO. 591

SITUATED IN THE TONTO NATIONAL FOREST

ADMINISTRATIVE DISTRICT NO. 3.

In Section 19 , un surveyed, Township 10 N., Range 14 E.  
In Section 20 , un surveyed, Township 10 N., Range 14 E.

and

ESTABLISHMENT OF U.S.L.M. NO. 591 H.E.S.

of the

GILA AND SALT RIVER BASE & Meridian.

State of

ARIZONA

Applicant for listing	Henry Mott,
Residence	Young, Arizona.
Application No. 583	, dated August 12, 19 15
List No. 3-3894	, dated September 30, 1916.

Applicant for survey	Robert J. Cook,
Residence	Young, Arizona.
H. E. No. 036200	, dated September 1 , 19 17
Land Office	Phoenix, Arizona.

Survey executed by	Frank D. Yost, Surveyor - Forest Service,
	<small>[Forest Service Title.]</small>
Under special instructions dated	March 12 , 19 19
Survey commenced	June 6 , 19 19
Survey completed	June 6 , 19 19
Under Acts of	June 11, 1906, and October 1, 1918.



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. **591**, 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*

Chainman.

*H. H. Sang-fillors*

Chainman.

Subscribed and sworn to before me this **sixth** day of

**August**, 19**19**.

*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  
**March 12**, 19**19**, and the laws of the United States, I have  
well, faithfully, and truly, in my own proper person, surveyed a tract  
of land embraced in

List No. **3-3894**, dated **September 30, 1916**, for  
Patent, under the Act of **June 11, 1906**,  
the same to be known as Homestead Entry Survey No. **591**,  
situated within the **TONTO** National Forest, in  
unsurveyed Section **19**, Township **10 N.**, Range **14 E.**, and  
unsurveyed Section **20**, Township **10 N.**, Range **14 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.

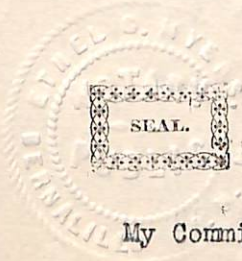
*Frank D. Yost*

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**.



## TONTON NATIONAL FOREST

## STATE OF ARIZONA

## Chains

Applicant for listing, Henry Mott; Application No. 583, dated August 12, 1915, List No. 3-3894, dated September 30, 1916; H. E. 036200 made in the Phoenix Land Office on September 1, 1917, by Robert J. Cook.

Surveyed under special instructions from the Surveyor General for Arizona, dated March 12, 1919, and designated as Homestead Entry Survey No. 591.

Situated in what will probably be when surveyed, Secs. 19 and 20, T. 10 N., R. 14 E., Gila and Salt River Base and Meridian, Tonto National Forest, Arizona.

Surveyed under the Acts of June 11, 1906 and October 1, 1918.

Survey commenced June 6, 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.

June 6, 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 zero and the sun was observed in the upper right and lower left quadrants of the field. My watch is set for local mean time.

Lat.  $34^{\circ} 11' 29''$  N., Long.  $110^{\circ} 56' 15''$  W., from

Special Instructions from the Surveyor General and later verified.



Chains	Telescope	Pos.	l.m.t.	Horizontal Angle	Vertical Angle
	sun		p.m.		
Direct	+	5h 23m 30s		103° 39' 30"	20° 07' 30"
Reversed	+	5h 24m 15s		104° 09' 00"	19° 27' 56"

Bearing of Reference Mark is N. 28° 23' 43" E.

At the same station I again observe the altitude of the sun for azimuth. The reading on the reference mark is set at zero and the sun was observed in the upper left and lower right quadrants of the field.

Telescope	Pos.	l.m.t.	Horizontal Angle	Vertical Angle
	sun		p.m.	
Direct	+	5h 24m 50s	103° 29' 00"	19° 52' 04"
Reversed	+	5h 25m 30s	103° 58' 30"	19° 13' 00"

The bearing of reference mark is N. 28° 22' 30" E.

The two obsns. give a mean bearing of reference mark as N. 28° 23' 07" E. I accept bearing of reference mark as N. 28° 23' E. and to the corresponding meridian all the courses of this survey were referred by sustained angulation.

Note: The lines of this survey were run on an assumed azimuth which was subsequently corrected to the meridian as above determined.

ESTABLISHMENT OF U.S.L.M. 591 H.E.S.

June 6, 1919.

There being no public land corner or U. S. Location Monument within two miles of this claim, I therefore establish U. S. L. M. 591 H. E. S. as follows:

On an open South slope forming the first rise of the Mogollon rim, I select a limestone boulder in place showing 6 x 5 x 3 ft. above ground, which is plainly visible from East, South and West. I chisel boulder + on top for the point and U S L M 591 H E S 2 lks. N. of the + on sloping N. face; raise a mound of stone 6 ft. base, 5 ft. high, N. of U. S. L. M., whence:



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A juniper 40 ins. dia., brs. N. 85° 09' W.,

521 lks. dist.

An oak 12 ins. dia., brs. N. 14° 07' W.,

377 lks. dist.

Each blazed and scribed U S L M 591 H E S

and 1 H.E.S 591 + B T

No other bearing trees available.

NE. cor. of Robert J. Cook's house brs. S. 62° 02' W.,

313 lks. dist.

Brown's Peak brs. S. 31° 46' W.

Mazatzal Peak brs. S. 72° 43' W.

North Peak brs. S. 84° 01' W.

Cor. to Secs. 4, 5, 32 and 33, Ts. 9 and 10 N.,

R. 14 E., a granite porphyry stone 10 x 8 x 8

ins. above ground, marked and witnessed as

described by the Surveyor General, brs.

S. 14° 41' 30" E., 230.27 chs. distant by

traverse which appears at the end of these

notes.

Note: U. S. L. M. No. 591 H. E. S. is also Cor. No. 1

of this survey, as is hereinafter described.

BOUNDARIES OF CLAIM

June 6, 1919.

Beginning at Cor. No. 1, which is also U. S. L. M. 591

H. E. S. previously described.

Identical with Cor. H-1 of the list survey, which is

a sandstone 14 x 6 x 6 ins. set on top of the lime-

stone boulder in place showing 6 x 5 x 3 ft above ground,

marked and witnessed as described by the Forest Service.

I destroy all trace of this list cor. The + chiseled

on top of the limestone boulder for U. S. L. M. 591

H. E. S. is also point for Cor. No. 1, of this survey,



HOMESTEAD ENTRY SURVEY NO. 591

TONTO NATIONAL FOREST

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Chains and on the sloping SW. face of the boulder 2 lks. SW. of + I chisel 1 H E S 591; raise a mound of stone 3 ft. base, 2 ft. high, SW. of cor., whence:

A juniper 40 ins. dia., brs. N. 85° 09' W.,  
521 lks. dist.

An oak 12 ins. dia., brs. N. 14° 07' W.,  
.377 lks. dist.

Each blazed and scribed 1 H E S 591 and  
U S L M 591 H E S + B T  
Lat. 34° 11' 53" N., Long. 110° 56' 15" W., from  
Special Instructions from the Surveyor General and  
later verified.

Magnetic declination at 8 a.m. 14° 30' E. Mean  
Magnetic declination, 14° 26' E.  
Thence S. 2° 16' W.  
Descend 40 ft. over open S. slope.

26.21 Enter heavy brush, Descend 20 ft. over steep E. slope.

39.89 To Cor. No. 2.  
Identical with Cor. H-2 of the list survey, which is  
a sandstone 24 x 10 x 8 ins. above ground, marked and  
witnessed as described by the Forest Service. I  
destroy all trace of this list cor.  
Deposit a sandstone 3 x 2 x 2 ins. marked with a + 20  
ins. in the ground, over which set a sandstone 34 x 12  
x 6 ins. chiseled + for the point and 2 H E S 591 on  
NW. face; raise a mound of stone 3 ft. base, 2 ft. high,  
NW. of cor., whence:

An oak 10 ins. dia., brs. S. 32° 00' W.,  
4 lks. dist.

A juniper 24 ins. dia., brs. S. 66° 02' E.,  
.68 lks. dist.

Each blazed and scribed 2 H E S 591 + B T



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STATE OF ARIZONA

Chains

Cor. No. 3 of H.E.S. 590, a sandstone 14 x 5 x 4 ins. above ground, marked + on top, and 3 H E S 590 on SE. face, set in a mound of stone 4 ft. base, 2 ft. high, brs. S. 41° 18' 40" E., 45.17 chs. dist. by traverse which appears at the end of these notes.

A dry wash 50 lks. wide, 3 ft. deep, course S. 10° W., passes 50 lks. to the E. of this corner.

Thence S. 89° 47' W.

Ascend 40 ft. over steep rocky east slope, thru heavy brush.

3.81 Top of ascent, thence along open grassy south slope, thru scattering juniper.

39.23 To: Cor. No. 3.

Identical with Cor. H-3 of the list survey, which is a sandstone 9 x 6 x 2 ins. above ground, marked and witnessed as described by the Forest Service. I destroy all trace of this list cor.

Deposit a sandstone 2 x 2 x 1 ins. marked with a + 26 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 3 H E S 591 in NE. quadrant; raise a mound of stone 3 ft. base, 2 ft. high, NE. of cor., whence:

A juniper 38 ins. dia., brs. S. 44° 00' E., 154 lks. dist.

A juniper 10 ins. dia., brs. S. 58° 02' W., 83 lks. dist.

Each blazed and scribed 3 H E S 591 + B T

Thence N. 0° 07' E.

Descend 30 ft., over steep rocky NW. slope, thru heavy



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brush.

3.91 Wash, 40 lks. wide, banks 3 ft. high, (dry) course SW.

Ascend 35 ft., over steep rocky SE. slope, thru heavy brush.

8.41 Top of steep ascent; thence ascend 50 ft., over gradual South slope, thru scattering juniper and oak.

39.98 To Cor. No. 4.

Identical with Cor. H-4 of the list survey, which is a sandstone 9 x 5 x 3 ins. above ground, marked and witnessed as described by the Forest Service. I destroy all trace of this list cor.

Deposit a sandstone 4 x 3 x 2 ins. marked with a + 26 ins. in the ground, over which set an iron post 36 ins. long, 2 ins. dia., with brass cap marked 1919 on S. rim, and 4 H E S 591 in SE. quadrant; raise a mound of stone 3 ft. base, 2 ft. high, SE. of cor., whence:

A juniper 15 ins. dia., brs. S. 31° 58' E.,

22 lks. dist.

A juniper 36 ins. dia., brs. S. 71° 55' W.,

210 lks. dist.

Each blazed and scribed 4 H E S 591 + B T

Thence N. 89° 49' E.,

Along gentle south slope, thru scattering juniper and oak.

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

AREA

Area, - - - - - 159.55 Acres.



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IMPROVEMENTS

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

A frame house 14 x 20 ft., the long sides extending E. and W., and the NE. cor. of which bears S. 62° 02' W., 3.13 chs. dist. from Cor. No. 1.

Value - - - - - \$ 200.00

Approximately 1 mile of wire fence,

Value - - - - - \$ 175.00

DESCRIPTION

This claim consists mainly of a wide flat grassy ridge, with a southern exposure. The soil is a good deep loam, usually gravelly on the surface but free of rock beneath.

Approximately 85 percent of the area is suitable for farming, of which 15 acres were under cultivation at the time of survey.

The rainfall is depended upon to grow crops.

Water for domestic use is obtained from a spring about 1/4 mile NE. of the house.

There is no timber of commercial value on the claim.

I saw no indications of mineral on the claim.

CONFLICTS AND ADJOINING CLAIMS

There are no conflicts or adjoining claims.

H. E. S. No. 590 lies about 1/2 mile distant in a South-easterly direction.

Young, Arizona, the nearest settlement and postoffice, lies about 8 miles distant in a southerly direction.



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TRAVERSES

Course	Dist.	N.	S.	E.	W.
S. 2° 16' W.	39.89		39.86		1.58
S. 89° 47' W.	39.23		.15		39.23
N. 0° 07' E.	39.98	39.98		.08	
N. 89° 49' E.	40.71	.13		40.71	
	159.81	40.11	40.01	40.79	40.81
		40.01			40.79
Error in Lat. and Dep.		.10			.02
Closing Error, 1:1567					

TIE FROM U. S. L. M. 591 H. E. S. TO COR. TO SECS. 4, 5, 32 and 33, Ts. 9 and 10 N., R. 14 E.

Course	Dist.	N.	S.	E.	W.
S. 2° 16' W.	39.89		39.86		1.58
N. 82° 16' W.	9.67	1.30			9.58
S. 6° 01' W.	7.97		7.93		.84
S. 3° 08' W.	20.11		20.08		1.10
S. 16° 53' E.	4.28		4.10	1.24	
S. 85° 33' E.	40.22		3.12	40.10	
S. 0° 39' W.	24.93		24.93		.28
N. 87° 56' E.	20.69	.75		20.68	
S. 0° 12' E.	24.68		24.68	.09	
S. 89° 38' E.	40.02		.26	40.02	
S. 0° 52' W.	20.74		20.74		.31
N. 18° 10' E.	.77	.73		.24	
S. 65° 00' W.	3.14		1.33		2.85
S. 37° 00' E.	18.75		14.97	11.28	
S. 0° 41' E.	64.54		64.54	.77	
S. 88° 01' W.	17.37		.60		17.36
S. 85° 39' W.	10.05		.76		10.02
N. 78° 53' W.	12.33	2.38			12.10
		5.16	227.90	114.42	56.02
			5.16	56.02	
			222.74	58.40	

Resultant Course, S. 14° 41' 30" E., 230.27 chs.

TIE LINE FROM COR. NO. 2, H.E.S. 591 to COR. NO. 3, H. E. S. 590.

Course	Dist.	N.	S.	E.	W.
N. 82° 16' W.	9.67	1.30			9.58
S. 6° 01' W.	7.97		7.93		.84
S. 3° 08' W.	20.11		20.08		1.10
S. 16° 53' E.	4.28		4.10	1.24	
S. 85° 33' E.	40.22		3.12	40.10	
		1.30	35.23	41.34	11.52
			1.30	11.52	
			33.93	29.82	

Resultant course, S. 41° 18' 40" E., 45.17 chs.

Survey completed June 6, 1919.

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



TONTO NATIONAL FOREST

STATE OF ARIZONA

Chains

June 6, 1919.  
Direct Solar Obsn. at Cor. No. 2 of H. E. S. 591.  
Lat.  $34^{\circ} 11' 29''$  N., Long.  $110^{\circ} 56' 15''$  W., from  
Special Instructions from the Surveyor General and  
later verified. Elevation approximately 6200 ft.

Telescope Pos.	I.m.t.	Horizontal Angle	Vertical Angle
sun	p.m.		
Direct	$+^{\circ}$ 5h 23m 30s	$103^{\circ} 39' 30''$	$20^{\circ} 07' 30''$
Reversed	$\mp$ 5h 24m 15s	$104^{\circ} 09' 00''$	$19^{\circ} 27' 56''$
Means	5h 23m 52s	$103^{\circ} 54' 15''$	$19^{\circ} 47' 43''$
	Corr. for refr.		$2' 02''$
			$19^{\circ} 45' 41''$

Decl.  $22^{\circ} 37' 51''$  N.  
Cos. Q. =  $\frac{\text{Sin. } 22^{\circ} 37' 51'' \text{ N.}}{\text{Cos. } 34^{\circ} 11' 29''} \times \text{Cos. } 19^{\circ} 45' 41''$  - tan.  $34^{\circ} 11' 29''$

$\times \text{tan. } 19^{\circ} 45' 41''$   
sin.  $22^{\circ} 37' 51'' = 9.5852262$   
Cos.  $34^{\circ} 11' 29'' = 9.9175921$   
cos.  $19^{\circ} 45' 41'' = 9.9736398$   
 $9.6939943 = \text{log. } 1.49430$   
tan.  $34^{\circ} 11' 29'' = 9.8321125$   
tan.  $19^{\circ} 45' 41'' = 9.5554102$   
 $9.3875227 = \text{log. } .24407$   
Cos. Q. = .25023

Q. =  $75^{\circ} 30' 32''$   
Bearing of Reference mark, N.  $28^{\circ} 23' 43''$  E.



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Chains

Direct Solar Obsn. at Cor. No. 2, H. E. S. 591.

June 6, 1919.

Telescope Pos.	l.m.t.	Horizontal Angle	Vertical Angle
sun	p.m.		
Direct	5h 24m 50s ✓	103° 29' 00" ✓	19° 52' 04" ✓
Reversed	5h 25m 30s ✓	103° 58' 30" ✓	19° 13' 00" ✓
Means	5h 25m 10s ✓	103° 43' 45" ✓	19° 32' 32" ✓
	Corr. for refr.		2' 03" ✓
			19° 30' 29" ✓

Decl. 22° 37' 52" N.

$$\text{Cos. } Q. = \frac{\sin. 22^\circ 37' 52'' - \tan. 34^\circ 11' 29'' \times \text{Cos. } 19^\circ 30' 29''}{\text{Cos. } 34^\circ 11' 29'' \times \tan. 19^\circ 30' 29''}$$

sin. 22° 37' 52" = 9.5852312 ✓

cos. 34° 11' 29" = 9.9175921 ✓

cos. 19° 30' 29" = 9.9743249 ✓

9.6933142 = log 3.49353 ✓

tan. 34° 11' 29" = 9.8321125 ✓

tan. 19° 30' 29" = 9.5493427 ✓

9.3814552 = log 2.24069 ✓

Cos. Q. = .25284 ✓

Q. = 75° 21' 15" ✓

Bearing of Reference Mark, N. 28° 22' 30" E.



- 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. 591, STATE OF ARIZONA

S-2340

CORNERS.	BEARING.	DISTANCE.	LATITUDES.		DEPARTURES.		DOUBLE M. D.		N. AREAS.		S. AREAS.	
			NORTH.	SOUTH.	EAST.	WEST.						
1 - 2	S. 2-16 W.	39.89		39 88		1 58	80 04				3192 00	
2 - 3	S. 89-47 W.	39.23		15		39 23	39 23				6 67	
3 - 4	N. 0-07 E.	39.98	39 98		09	08	09		3 60			
4 - 1	N. 89-49 E.	40.71	13		40 71	72	40 90		4 09			
		159.81	40 11	40 01	40 79	40 81			7 69		3198 67	
			40 01	40 05	40 81	40 81					7 69	
	Error in Lat. and Dep.		.10			.02					20/3190 98	
	Closing Error, 1:1567										159.55	Acres.

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APPROVAL

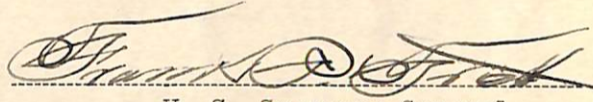
Office of the United States Surveyor General,

**Phoenix, Arizona**, *May 18*, 1920

The foregoing field notes of Homestead Entry Survey No.

591

executed by *Frank D. Yost, Surveyor* [Forest Service Title.]  
under his special instructions, dated *March 12*, 1919, having  
been critically examined, and the necessary corrections 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 the State of **Arizona**, has been  
correctly copied from the original notes on file in this office.

**FRANK P. TROTT**

U. S. Surveyor General.