

ORIGINAL

203

U. S. DEPARTMENT OF AGRICULTURE

FOREST SERVICE

JAN 20 1919

NOV 29 1919

MAR 23 1920

FIELD NOTES

OF

HOMESTEAD ENTRY SURVEY NO. 389

SITUATED IN THE COCONINO NATIONAL FOREST

ADMINISTRATIVE DISTRICT NO. 3

In Section 16 , unsurveyed, Township 14 N., Range 9 E.
In Section 17 , unsurveyed, Township 14 N., Range 9 E.
In Section 20 , unsurveyed, Township 14 N., Range 9 E.
In Section 21 , unsurveyed, Township 14 N., Range 9 E.
And Establishment of U. S. L. M. No. 389 H. E. S.

of the

Gila and Salt River Base and Meridian.

State of

ARIZONA

Applicant^s for listing Guy H. Kehl and Irvin H. Walker,

Residence Pine, Arizona

Application No. 120 , dated July 3 , 1909

List No. 3-1238 , dated April 28 , 1911

Applicant for survey Irvin H. Walker,

Residence Pine, Arizona

H. E. No. 020095 , dated November 26 , 1912

Office
Land District Phoenix, Arizona

Survey executed by R. P. A. Johnson, Surveyor - Draftsman
[Forest Service Title.]

Under special instructions dated July 9 , 1915

Survey commenced May 30 , 1916

Survey completed May 30 , 1916

Under Acts of June 11, 1906 and March 4, 1915

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OATH OF ASSISTANTS

We hereby certify that we assisted R. L. Johnson in surveying all those parts or portions of Homestead Entry Survey No. 389, 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.

Nelson H. Newman, Chainman
Orin Childers, Chainman

Subscribed and sworn to before me this sixth day of July, 1916.
R. L. Johnson
Surveyor Draftsman

OATH OF SURVEYOR

I, R. L. Johnson, Surveyor Draftsman
[Forest Service Title.]

do solemnly swear that, in strict conformity with the special instructions of the United States Surveyor General for Arizona, dated July 9, 1915, and the laws of the United States, I have well, faithfully, and truly, in my own proper person, surveyed a tract of land entraced in List 3-1238 dated April 28, 1911, and a tract of land upon the application of Irvin H. Walker,

Application Patent, No. 120, dated July 3, 1909, for Listing and the same to be known as Homestead Entry Survey No. 389, situated within the Cocorino National Forest, in 1/4 surveyed Section 16, Township 14 N., Range 9 E, and 1/4 surveyed Section 17, Township 14 N., Range 9 E, un surveyed Section 20, Township 14 N., Range 9 E, un surveyed Section 21, Township 14 N., Range 9 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.

R. L. Johnson
Surveyor Draftsman
[Forest Service Title.]

Subscribed and sworn to before me this 23rd day of January, 1917.

Sylvester L. Mc Laurin
NOTARY PUBLIC, B. G.



Commission expires June 20, 1918.

8-2349

COCONINO NATIONAL FOREST

STATE OF ARIZONA.

Chains Applicant for listing Guy H. Kehl; Application No. 120, dated July 3, 1909; List No. 3-1238, dated April 28, 1911; H. E. 020095, made in the Phoenix Land Office on November 26, 1912 by Irvin H. Walker.

Also a tract of unlisted land adjoining claimant's entry was included in this survey; the land is agricultural in character, was desired by entryman and will be listed as a basis for amendment of his entry. This is therefore a composite survey.

Surveyed under special instructions from the Surveyor General for Arizona, dated July 9, 1915 and designated as Homestead Entry Survey No. 389.

Situated in what will probably be when surveyed Secs. 16, 17, 20 and 21, T. 14 N., R. 9 E., Gila and Salt River Base and Meridian, Coconino National Forest, Arizona.

Surveyed under the Acts of June 11, 1906 and March 4, 1915.

Survey commenced May 30, 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 steel tape. The slope angles were determined with a clinometer.

May 30, 1916, a.m.

I observe the altitude of the sun for azimuth at cor. No. 1 of this survey, hereinafter described. The reading on the reference object is set at zero and the sun was observed in the lower left and upper right quadrants of the field. My watch is set for local mean time. Lat. $34^{\circ} 36' N.$, Long., $111^{\circ} 24' 50'' W.$, from special instructions from the Surveyor General and later verified.

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Chains	Telescope	Time	Horizontal Angle	Vertical Angle
	Direct	8h. 37m. 07s.	86° 58' 00"	44° 45' 00"
	Reversed	8h. 38m. 03s.	87° 32' 30"	44° 23' 30"
Bearing of reference object N. 0° 05' 21" W.				

May 30, 1916, p.m.

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

Telescope	Time	Horizontal Angle	Vertical Angle
Direct	3h. 41m. 15s.	88° 47' 00"	39° 32' 00"
Reversed	3h. 42m. 24s.	89° 17' 30"	39° 47' 30"

Bearing of reference object N. 0° 05' 35" W.

The mean of these two observations is N. 0° 05' 28" W. and to the corresponding meridian all the courses of this survey are referred.

RETRACEMENTS

May 30, 1916.

Beginning at the 1/4 sec. cor. bet. secs. 33 and 4, T. 14 and 15 N. R. 9 E., which is a lava stone 8 x 4 x 10 ins. above ground, mkd. 1/4 on N. face, witnessed as described by the Surveyor General. (This 1/4 cor. was restored by me on May 29, 1916 in connection with the survey of H.E.S. 387).

Thence West,

Retracing line bet. secs. 4 and 33 W/2.

40.04 Fall 20 lks. S. of cor. to secs. 4, 5, 32 and 33, Ts. 14, and 15 N., R. 9 E., which is a lava stone 10 x 5 x 8 ins. above ground mkd. 2 notches on W. and 4 notches on E. edges, witnessed as described by the Surveyor General. (This sec. cor. was restored by me on May 28 in connection with H. E. S. 388.)

True line is N. 89° 43' W. 40.04 chs.

ESTABLISHMENT OF U. S. L. M. NO. 389 H. E. S.

There being no cor. of the Public Land Survey or U. S. Location Monument within two miles, I establish U. S. L.M.

COCONINO NATIONAL FOREST

STATE OF ARIZONA.

Chains

No. 389 H.E.S. on the West edge of large open park, on large mesa. Elevation 7000 ft. Deposit a lava stone 8 x 4 x 2 ins. marked with a +, 20 ins. in the ground, over which set a lava stone 36 x 12 x 10 ins., chiseled + for the point and U.S L M '389 H E S on SW. face; raise a mound of stone 6 ft. base, 4 ft. high alongside of cor., whence:

A yellow pine 14 ins. dia. bears N. 34° 02' W. 164 lks. dist., scribed U S L M No 389 H E S + B T.

A yellow pine 26 ins. dia., bears N. 69° 37' W., 269 lks. dist., scribed U S L M No 389 H E S + B T

NE. cor. of I.H. Walker's house bears S. 37° 41' W., approximately 30.45 chs. dist.

NE. cor. of I.H. Walker's barn bears S. 43° 30' W., approximately 27.50 chs. dist.

Maxwell Butte bears S. 43° 36' W., approximately 1-1/2 miles dist.

1/4 sec. cor. bet. secs. 33 and 4, Ts. 14 and 15 N., R. 9 E., heretofore described, bears N. 8° 49' 50" E., 207.08 chs. dist., by traverse which appears at the end of these notes.

Cor. for secs. 4, 5, 32 and 33, Ts. 14 and 15 N., R. 9 E., heretofore described, bears N. 2° 18' 23" W., 205.00 chs. dist., by traverse which appears at the end of these notes.

Cor. No. 3 of H. E. S. 388, which is a lava stone 12 x 9 x 10 ins. above ground, marked 3 H E S 388 on SW. face, bears N. 19° 39' 41" E., 85.98 chs. dist., by traverse which appears at the end of these notes.

Cor. No. 1 of H. E. S. 387, which is a lava stone 12 x 8 x 10 ins. above ground, marked 1 H E S 387 on S. face, bears N. 18° 35' 53" E., 149.91 chs. dist., by traverse which appears at the end of

Chains	these notes.
	<u>BOUNDARIES OF CLAIM</u>
	Beginning at Cor. No. 1.
	Deposit a lava stone 4 x 3 x 3 ins. marked with a +, 14 ins. in the ground, over which set a lava stone 24 x 12 x 5 ins. chiseled + for the point and 1 H E S 389 on SSE. face; and raise a mound of stone 3 ft. base, 2 ft. high SSE. of cor., whence:
	A yellow pine 8 ins. dia., bears N. 73° 04' W., 179 lks. dist., scribed 1 H E S 389 + B T.
	A yellow pine 28 ins. dia., bears N. 31° 34' E., 180 lks. dist., scribed 1 H E S 389 + B T.
	U. S. L. M. No. 389 H. E. S., heretofore described bears N. 80° 22' E., 3.51 chs. dist. Lat. 34° 36' N., Long. 111° 24' 50" W., from special instructions from the Surveyor General.
	Mag. decl. at 9:00 a.m., 14° 30' E. Mean mag. decl., 14° 27' E.
	Thence S. 88° 38' E.,
	Over unlisted open level land.
25.49	To Cor. No. 2.
	Deposit a lava stone 6 x 2 x 2 ins. marked with a +, 14 ins. in the ground, over which set a lava stone 24 x 8 x 8 ins., chiseled + for the point and 2 H E S 389 on SW. face; raise a mound of stone 3 ft. base 2 ft. high SW. of cor., whence:
	A yellow pine 18 ins. dia. bears N. 3° 39' E., 265 lks. dist., scribed 2 H E S 389 + B T.
	A yellow pine 26 ins. dia. bears N. 67° 10' E. 295 lks. dist., scribed 2 H E S 389 + B T.
	Thence S. 22° 43' W.
	Across open draw. Over level land.
12.00	Enter scattered timber.
20.00	Leave scattered timber.

COCONINO NATIONAL FOREST

STATE OF ARIZONA.

Chains

24.76 To Cor. No. 3., at cor. of fence, fence bears NW. and SW.,
 Identical with Cor. H-1 of the list survey, which is
 a pine post 5 x 5 x 10 ins. above ground, marked and
 witnessed as described by the Forest Service. I de-
 stroy all trace of this list cor. Deposit a lava stone
 5 x 4 x 2 ins. marked with a +, 14 ins. in the ground,
 over which set a lava stone 24 x 6 x 6 ins., chiseled
 + for the point and 3 H E S 389 on SW face; raise a
 mound of stone 3 ft. base 2 ft. high SW. of cor., whence:
 A yellow pine 10 ins. dia., bears N. 32°
 16' E., 455 lks. dist., scribed 3 H E S 389 +
 B T.
 A yellow pine 18 ins. dia., bears N. 1° 41' W.,
 552 lks. dist., scribed 3 H E S 389 + B T.

Thence S. 35° 41' W.

Over unlisted level land, in edge of timber.

21.56 Fence bears NW. and SE.

33.40 Road bears NW. and SE.

34.39 To Cor. No. 4.

Deposit a lava stone 4 x 3 x 2 ins. marked with a +, 14
 ins. in the ground, over which set a lava stone 24 x 10
 x 4 ins., chiseled + for the point and 4 H E S 389 on
 W. face; and raise a mound of stone 3 ft. base, 2 ft.
 high W. of cor., whence:

A yellow pine 10 ins. dia., bears S. 74° 24' W.,

33 lks. dist., scribed 4 H E S 389 + B T.

A yellow pine 38 ins. dia., bears S. 24° 09' W.,

149 lks. dist., scribed 4 H E S 389 + B T.

Cor. H-6 of the list survey, which is a pine

post 4 x 4 x 12 ins. above ground, marked and

witnessed as described by the Forest Service,

bears N. 70° W., 1.78 chs. dist. I destroy

all trace of this list cor.

Chains	
	Thence S. 26° 20' W. Over unlisted level land in edge of timber.
18.94	Cor. H-5 of the list survey, which is a pine post 4 x 2 x 12 ins. above ground, marked and witnessed as described by the Forest Service. I destroy all trace of this list cor. Enter unlisted land.
19.06	Fence Cor., fence bears N. 21° 30' E. and N. 65° W.
20.39	To cor. No. 5. Deposit a lava stone 6 x 6 x 2 ins. marked with a +, 18 ins. in the ground, over which set a lava stone 28 x 14 x 8 ins., chiseled + for the point and 5 H E S 389 on NW. face; and raise a mound of stone 3 ft. base, 2 ft. high NW. of cor., whence: A yellow pine 16 ins. dia., bears S. 38° 11' E., 28 lks. dist., scribed 5 H E S 389 + B T. A yellow pine 40 ins. dia., bears S. 36° 32' W., 51 lks. dist., scribed 5 H E S 389 + B T.
	Thence S. 78° 14' W. Over unlisted land, across open level draw.
1.92	Leave unlisted and enter listed land.
4.00	To Cor. No. 6. Deposit a lava stone 5 x 3 x 2 ins. marked with a +, 14 ins. in the ground, over which set a lava stone 24 x 14 x 6 ins. chiseled + for the point and 6 H E S 389 on NE. face; and raise a mound of stone 3 ft. base 2 ft. high NE. of cor., whence: A yellow pine 24 ins. dia., bears S. 4° 37' E., 111 lks. dist., scribed 6 H E S 389 + B T. A yellow pine 20 ins. dia., bears N. 89° 51' W.,

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Chains	91 lks. dist., scribed 6 H ES 389 + B T. Cor. H-4, of the list survey, which is a pine post 4 x 4 x 12 ins. above ground, marked and witnessed as described by the Forest Service, bears S. 14° W., 116 lks. dist. I destroy all trace of this list cor.
	Thence N. 14° 00' E. Over level listed land, along edge of timber.
3.55	Fence cor., fence bears S. 65° E. and along line.
19.96	Top cor. No. 7. Identical with cor. H-3, of the list survey, which is a pine post 5 x 2 x 14 ins. above ground, marked and witnessed as described by the Forest Service. I destroy all trace of this list cor. Deposit a lava stone 8 x 6 x 3 ins. marked with a +, 10 ins. in the ground, over which set a lava stone 20 x 8 x 4 ins. (no longer stone available), chiseled + for the point and 7 - H E S 389 on E. face; and raise a mound of stone 3 ft. base, 2 ft. high E. of cor., whence: A yellow pine, 40 ins. dia., bears S. 37° 30' W., 50 lks. dist., scribed 7 H E S 389 + B T. A yellow pine, 22 ins. dia., bears N. 55° W., 116 lks. dist., scribed 7 H ES 389 + B T.
	Thence N. 8° 42' W.
	Over listed level open land. Fence on line.
18.00	Fence cor., fence bears N. 80° E. and along line.
30.00	Road bears E. and W.
32.00	Cor. fence, fence bears ESE. and along line.
33.20	Cor. H-2 of the list survey, which is a pine post 5 x 4 x 10 ins. above ground, marked and witnessed as described by the Forest Service. I destroy all trace of this list cor.

Chains Leave listed and enter unlisted land. Cor. fence, fence bears ESE. and along line.

38.72 To cor. No. 8.

Deposit a lava stone 4 x 4 x 2 ins. marked with a +, 14 ins. in the ground, over which set a lava stone 24 x 8 x 8 ins., chiseled + for the point and 8 - H E S 389 on SE. face; and raise a mound of stone 3 ft. base, 2 ft.

high SE. of cor., whence:

A yellow pine, 26 ins. dia., bears S. 13° 02' W.,

187 lks. dist., scribed 8 H E S 389 + B T.

A yellow pine, 30 ins. dia., bears N. 87° 32' W.,

229 lks. dist., scribed 8 H E S 389 + B T.

Thence N. 54° 44' E.

Over unlisted level land, along edge of timber.

22.19 To cor. No. 1, the place of beginning.

AREA

Listed Area - - - - - 71.27 acres

Unlisted Area - - - - - 74.39 acres

Total Area - - - - - 145.66 acres
(Listed area is 71.27 and not 66.03 as reported in the list survey).

IMPROVEMENTS

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

A log house, 30 x 20 ft., the long side of which bears E. and W. and the NW. cor. of which bears S. 12° 55' E., 10.97 chs. dist., from cor. No. 8.

Value ----- \$350.00

A log barn, 30 x 20 ft., the long side of which bears N. and S., and the NW. cor. of which bears S. 20° 50' E., 7.27 chs. dist. from cor. No. 8.

Value ----- \$300.00

There are approximately 2 miles of wire fence.

COCONINO NATIONAL FOREST

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Chains Value -----: \$250.00

DESCRIPTION

This claim is situated on a large mesa and consists of Southern portion of a large open park.

There is no timber on the claim with the exception of a few scattered yellow pine along the SE. and W. boundary lines.

The soil is clayey loam of good depth and is free from outcrops but has scattered surface rock.

There is no water for irrigation or domestic use. Water for domestic use is hauled from a tank one mile distant.

I saw no indications of mineral upon the claim.

There are approximately 18 acres in cultivation.

CONFLICTS AND ADJOINING CLAIMS

There are no conflicts or adjoining claims. H. E. S.

388 of Giles Goswick is approximately 1 mile to NE.

H. E. S. 387 is approximately 1-3/4 miles to NE.

Flagstaff, Arizona, the nearest railroad point is 60 miles to the N. and Pine, Arizona, the nearest post office is 25 miles to the S.

TRAVERSE

Cor.	Course	Dist.	N	S	E	W	
1-2	S. 88° 38' E.	25.49		0.61	25.48		
2-3	S. 22° 43' W.	24.76		22.84		9.56	
3-4	S. 35° 41' W.	34.39		27.93		20.06	
4-5	S. 26° 20' W.	20.39		18.27		9.04	
5-6	S. 78° 14' W.	4.00		0.82		3.92	
6-7	N. 14° 00' E.	19.96	19.37		4.83		
7-8	N. 8° 42' W.	38.72	38.27			5.86	
8-1	N. 54° 44' E.	22.19	12.81		18.12		
			189.90	70.45	70.47	48.43	48.44
					70.45		48.43
Error in Lat. and Dep.				.02		.01	

Closing Error, 1:8493.

Survey completed May 30, 1916.

Chains Note: Claimant was present at the time of survey and was satisfied with the lines as marked upon the ground.

DESCRIPTION

This claim is situated on a large mesa and consists of a large open park. There is no timber on the claim with the exception of a few scattered yellow pine along the S.E. and W. boundary. There are approximately 18 acres in cultivation. I saw no indications of minerals upon the claim. For domestic use is hauled from a tank one mile distant. There is no water for irrigation or domestic use. Water outcrop but has scattered surface rock. Surveyor - Draftsman

A. P. Johnson

CONFLICTS AND ADJOINING CLAIMS

There are no conflicts or adjoining claims. H. E. 388 of Giles Goswick is approximately 1 mile to the N. H. E. 387 is approximately 1-3/4 miles to the N. Flagstaff, Arizona, the nearest railroad point is 60 miles to the N. and Pine, Arizona, the nearest post office is 25 miles to the S.

TRAVELER

Cor.	Course	Dist.	N	S	E	W
1-2	S. 89° 35' E.	25.43		0.61	25.48	
2-3	S. 23° 43' W.	24.76		22.84		9.33
3-4	S. 23° 41' W.	24.39		27.93		20.06
4-5	S. 23° 20' W.	20.39		18.27		9.04
5-6	S. 78° 14' W.	4.00		0.82		2.92
6-7	N. 14° 00' E.	19.96	19.27		4.83	
7-8	N. 8° 42' W.	28.72	28.27			2.86
8-1	N. 24° 44' E.	22.19	12.81	18.12		
		182.90	70.45	70.47	48.42	48.44
			70.45			48.43
				70.01		

Error in lat. and dep. Closing Error, 1:8422. Survey completed May 30, 1916.

TEHOCOCONINO NATIONAL FOREST

STATE OF ARIZONA

Chains

Direct Solar, May 30, 1916, at Cor. No. 1. entered

Lat. 34° 36' N., Long. 111° 24' 50" W., Elev. 7000 ft.

Telescope	Time	Horizontal Angle	Vertical Angle
Direct	8h. 37m. 07s.	86° 58' 00"	44° 45' 00"
Reversed	8h. 38m. 03s.	87° 32' 30"	44° 23' 30"
Mean	8h. 37m. 35s.	87° 15' 15"	44° 34' 15"
			45" ref.
			44° 33' 30"

Decl. 21° 47' 30" N.

$$\text{Cos. Q.} = \frac{\sin. 21^\circ 47' 30'' \text{ N.}}{\cos. 34^\circ 36' \times \cos. 44^\circ 43' 30''}$$

$$\tan. 34^\circ 36' \times \tan. 44^\circ 43' 30''$$

log. sin. 21° 47' 30" =	+ 9.569646	
log. cos. 34° 36' 00" =	- 9.915472	
log. cos. 44° 33' 30" =	- 9.852807	
	9.801367 = log.	.63295
log. tan. 34° 36' 00" =	+ 9.838757	
log. tan. 44° 33' 30" =	+ 9.993304	
	9.832061 = log.	.67930
	Cos. Q. =	.04635
	Q. =	87° 20' 36"

Bearing of reference object, N. 0° 05' 21" W.

Telescope	Time	Horizontal Angle	Vertical Angle
Direct	3h. 41m. 15s.	88° 47' 00"	39° 32' 00"
Reversed	3h. 42m. 24s.	89° 17' 30"	39° 47' 30"
Mean	3h. 41m. 49s.	89° 02' 15"	39° 39' 45"
			55" ref.
			39° 38' 50"

Decl., 21° 50' 08" N.

$$\text{Cos. Q.} = \frac{\sin. 21^\circ 50' 08''}{\cos. 34^\circ 36' \times \cos. 39^\circ 38' 50''}$$

$$\tan. 34^\circ 36' \times \tan. 39^\circ 38' 50''$$

log. sin. 21° 50' 08" =	9.570477	
log. cos. 34° 36' 00" =	9.915472	
log. cos. 39° 38' 50" =	9.886484	
	9.768521 = log.	.58684
log. tan. 34° 36' 00" =	9.838757	
log. tan. 39° 38' 50" =	9.918377	
	9.757134 = log.	.57166
	Cos. Q. =	.01518
	Q. =	89° 07' 50"

Bearing of reference object, N. 0° 05' 35" W.

NATIONAL FOREST

STATE OF

Chains Direct Solar, May 30, 1916, at Cor. No. 1.

Lat. 34° 38' N., Long. 111° 24' 50" W., Elev. 1000 ft.

Telescope	Time	Horizontal Angle	Vertical Angle
Direct	8h. 37m. 07s.	87° 58' 00"	44° 48' 00"
Reversed	8h. 38m. 02s.	87° 58' 30"	44° 48' 30"
Mean	8h. 37m. 54s.	87° 58' 15"	44° 48' 15"

Decl. 61° 47' 50" N.

$$\cos. \delta = \frac{\cos. \phi \times \cos. \alpha \pm \tan. \phi \times \tan. \alpha}{\cos. \delta}$$

$$\cos. \delta = \frac{\cos. 34^{\circ} 38' \times \cos. 44^{\circ} 48' 30'' \pm \tan. 34^{\circ} 38' \times \tan. 44^{\circ} 48' 30''}{\cos. \delta}$$

$$\log. \sin. 31^{\circ} 47' 30'' = + 9.52244$$

$$\log. \cos. 34^{\circ} 38' 00'' = - 9.91472$$

$$\log. \cos. 44^{\circ} 48' 30'' = - 9.85287$$

$$\log. \tan. 34^{\circ} 38' 00'' = + 9.83877$$

$$\log. \tan. 44^{\circ} 48' 30'' = + 9.93204$$

$$\log. \delta = 87^{\circ} 58' 30''$$

Bearing of reference object, N. 05° 31' W.

Telescope	Time	Horizontal Angle	Vertical Angle
Direct	8h. 41m. 15s.	88° 47' 00"	32° 32' 00"
Reversed	8h. 42m. 24s.	88° 47' 30"	32° 32' 30"
Mean	8h. 41m. 49s.	88° 47' 15"	32° 32' 15"

Decl., 21° 50' 08" N.

$$\cos. \delta = \frac{\cos. \phi \times \cos. \alpha \pm \tan. \phi \times \tan. \alpha}{\cos. \delta}$$

$$\cos. \delta = \frac{\cos. 34^{\circ} 38' \times \cos. 32^{\circ} 32' 15'' \pm \tan. 34^{\circ} 38' \times \tan. 32^{\circ} 32' 15''}{\cos. \delta}$$

$$\log. \sin. 21^{\circ} 50' 08'' = 9.57077$$

$$\log. \cos. 34^{\circ} 38' 00'' = 9.91472$$

$$\log. \cos. 32^{\circ} 32' 15'' = 9.82284$$

$$\log. \tan. 34^{\circ} 38' 00'' = 9.83877$$

$$\log. \tan. 32^{\circ} 32' 15'' = 9.91877$$

$$\log. \delta = 82^{\circ} 07' 50''$$

Bearing of reference object, N. 05° 38' W.

Chains

55" ref.

39' 38' 50"

45" ref.

44° 32' 30"

45" ref.

45" ref.

COCONINO NATIONAL FOREST

STATE OF ARIZONA

Chains

TRAVERSE FOR TIE

From U. S. L. M. No. 389 H. E. S. to Cor. No. 3
of H. E. S. 388.

Course	Dist.	N	S	E	W
N. 12° 39' E.	16.09	15.70		3.52	
N. 3° 06' W.	32.77	32.72			1.77
N. 19° 52' E.	24.51	23.05		8.33	
N. 13° 48' E.	7.44	7.23		1.77	
N. 13° 55' E.	14.60	14.17		3.51	
S. 48° 45' E.	18.05		11.90	13.57	
		92.87	11.90	30.70	1.77
		11.90		1.77	
		80.97		28.93	

Tie is N. 19° 39' 41" E., 85.98 chs.

From U. S. L. M. No. 389 H. E. S. to Cor. No. 1
of H. E. S. 387.

Course	Dist.	N	S	E	W
N. 19° 39' 41" E.	85.98	80.97		28.93	
N. 48° 45' W.	18.05	11.90			13.57
N. 0° 41' E.	19.19	19.19		0.23	
N. 9° 55' W.	12.33	12.15			2.12
N. 62° 33' E.	20.00	9.22		17.75	
N. 62° 28' E.	18.71	8.65		16.59	
		142.08	0.00	63.50	15.69
				15.69	
				47.81	

Tie is N. 18° 35' 53" E., 149.91 chs.

From U. S. L. M. No. 389 H. E. S. to 1/4 Sec. Cor.
bet. Secs. 4 and 33, Ts. 14 and 15 N., R. 9 E.

Course	Dist.	N	S	E	W
N. 18° 35' 53" E.	149.91	142.08		47.81	
N. 12° 30' W.	17.91	17.49			3.88
N. 12° 35' W.	20.32	19.83			4.43
N. 14° 40' W.	10.01	9.68			2.53
N. 7° 50' W.	5.02	4.97			0.68
N. 11° 19' W.	9.98	9.79			1.96
N. 72° 46' W.	2.66	0.79			2.54
		204.63	0.00	47.81	16.02
				16.02	
				31.79	

Tie is N. 8° 49' 50" E., 207.08 chs.

From U. S. L. M. No. 389 H. E. S. to Cor. for Secs.
4, 5, 32 and 33.

Course	Dist.	N	S	E	W
N. 8° 49' 50" E.	207.08	204.63		31.79	
N. 89° 43' W.	40.04	0.20			40.04
		204.83	0.00	31.79	40.04
					31.79
					8.25

Tie is N. 2° 18' 23" W., 205.00 chs.

718

NATIONAL FOREST

STATE OF

Chains

TRAVELER FOR THE

Chains

From U. S. L. M. No. 389 H. E. 2. to Cor. No. 3 of H. E. 2. 388.

Course	Dist.	N	S	E	W
N. 12° 39' E.	16.08	15.70		2.38	
N. 12° 08' W.	22.77		22.72		1.77
N. 19° 58' E.	24.81		23.03		8.33
N. 13° 48' E.	7.44		7.23		1.77
N. 13° 58' E.	14.60		14.17		2.61
S. 48° 48' E.	18.03		11.90	12.57	
<hr/>		32.87	11.90	20.70	1.77
<hr/>		11.90		1.77	
<hr/>		30.97		32.33	

The is N. 12° 39' 41" E., 82.98 cha.

From U. S. L. M. No. 389 H. E. 2. to Cor. No. 1 of H. E. 2. 387.

Course	Dist.	N	S	E	W
N. 12° 39' 41" E.	20.97	20.97		38.33	
N. 48° 48' E.	18.03		11.90		13.17
N. 0° 41' E.	12.12		12.12		0.33
N. 9° 58' E.	12.32		12.12		2.12
N. 32° 38' E.	20.00		2.32		17.78
N. 52° 38' E.	18.71		3.68		15.33
<hr/>		142.08	0.00	32.50	12.32
<hr/>				12.32	
<hr/>				17.81	

The is N. 18° 58' 53" E., 142.91 cha.

From U. S. L. M. No. 389 H. E. 2. to 1/4 Sec. Cor. bet. Secs. 4 and 32, T. 14 and 15 N., R. 2 E.

Course	Dist.	N	S	E	W
N. 18° 58' 53" E.	142.91	142.91		47.81	
N. 12° 30' W.	17.91		17.42		3.88
N. 12° 35' W.	20.32		19.83		4.43
N. 14° 40' W.	10.01		9.58		2.53
N. 7° 30' W.	5.02		4.97		0.68
N. 11° 19' W.	2.98		2.79		1.93
N. 75° 48' W.	2.66		0.72		2.54
<hr/>		204.53	0.00	47.81	12.02
<hr/>				12.02	
<hr/>				21.72	

The is N. 8° 42' 50" E., 207.08 cha.

From U. S. L. M. No. 389 H. E. 2. to Cor. for Secs. 4, 5, 32 and 33.

Course	Dist.	N	S	E	W
N. 8° 42' 50" E.	207.08	207.08		21.72	
N. 82° 43' W.	40.04		0.20		40.04
<hr/>		204.33	0.00	21.72	40.04
<hr/>				21.72	
<hr/>				8.33	

The is N. 2° 18' 23" W., 202.00 cha.

DIRECTIONS.—1. Carry out calculations to two decimals only.
 2. In balancing Latitudes and Departures do not obliterate or change the original figures. Do not change the footing of the original figures, but put below them the corrected footing in red ink. 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.

8-2349 **TABLING AND CALCULATIONS OF HOMESTEAD ENTRY SURVEY NO. 389, STATE OF ARIZONA.**

CORNERS.	BEARING.	DISTANCE.	LATITUDES.		DEPARTURES.		DOUBLE M. D.	N. AREAS.	S. AREAS.		
			NORTH.	SOUTH.	EAST.	WEST.					
1-2	S 88° 38' E	254.9		61	25	48	61	72	37	65	
2-3	S 22° 43' W	247.6	22	84	9	56	77	64	1773	30	
3-4	S 35° 41' W	343.9	27	93	20	06	48	02	1340	72	
4-5	S 26° 20' W	203.9	18	27	9	04	18	92	345	67	
5-6-	S 78° 14' W	400		82	3	92	5	96	4	89	
6-7-	N 14° 00' E	19.96	19	37	4	83	6	87	133	07	
7-8	N 8° 42' W	38.72	38	27	5	86	5	85	233	94	
8-1	N 54° 44' E	22.19	12	81	18	12	18	12	232	12	
		189.90	70	45	48	43			589	13	
			70	46	48	43			589	13	
									20	2913	10
									145	66	
	Closing error 1: 8493										

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F.P.T.

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. 389, STATE OF ARIZONA.

Traverse of Listed Area

CORNERS.	BEARING.	DISTANCE.	LATITUDES.		DEPARTURES.		DOUBLE M. D.	N. AREAS.	S. AREAS.
			NORTH.	SOUTH.	EAST.	WEST.			
H/1-H/6	S. 38° 30' W.	34.91		27 32		21 73	44 69	1220 93	
H/6-H/5	S. 20 -57 W.	18.82		17 58		6 73	16 23	285 32	
H/5-X	S. 56 -09 W.	3.03		1 69		2 52	6 98	11 80	
X-6	S. 78 -14 W.	2.08		42		2 04	2 42	1 02	
6-7	N. 14 -00 E.	19.96	19 37		4 83		5 21		100 92
7-N/2	N. 8 -42 W.	33.20	32 82		" "	5 02	5 02		164 76
H/2-H/1	S. 81 -08 E.	33.61	" "	5 18	33 21		33 21	172 03	
			52 19	52 19	38 04	38 04		1691 10	
								265 68	
								201 425 42	
								71 27 A.	

APPROVAL

Office of the United States Surveyor General,

Phoenix, Arizona, March 11, 1920

The foregoing field notes of Homestead Entry Survey No.

389

executed by *R. P. A. Johnson, Surveyor-Draftsman*
[Forest Service Title.]
under his special instructions, dated *July 9*, 1915, 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.