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# POOR QUALITY

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89  
May 26, 1940  
Aug. 14

U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

**FIELD NOTES**

OF

**EXCHANGE**  
~~XXXXXXXXXXXX~~ SURVEY NO. 667

SITUATED IN THE **TONTO** NATIONAL FOREST

ADMINISTRATIVE DISTRICT NO.

In Section **34**, ~~XXXXXXXXXX~~, Township **10 N.**, Range **4 E.**

Unapproved survey

of the

**Gila and Salt River Base and Meridian.**

State of

**Arizona**

Applicant for **Exchange** ~~XXXXXXXXXX~~ **Sawyer-Otondo Sheep Company**

Residence

Application No. , dated , 19

List No. , dated , 19

Applicant for survey

Residence

H. E. No. , dated , 19

Land Office

Survey executed by **Edwin R. Sievers, Associate C.E., In Charge of Surveys**  
(Forest Service Title.)

Under special instructions dated **June 25** , 19 **40**

Survey commenced **April 21** , 19 **41**

Survey completed **April 23** , 19 **41**

Under Acts of **March 20, 1922 and June 30, 1940.**

90

OATH OF ASSISTANTS

We hereby certify that we assisted **Edwin R. Sievers**  
**Associate, Civil Engineer, In Charge of Surveys** in surveying all those  
[Forest Service Title.]  
parts or portions of ~~Homestead Entry~~ <sup>Exchange</sup> Survey No. **667**, 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

**NOTE: It would have been very  
expensive and inconvenient for  
assistants to appear before an  
officer for oath. Hence, the  
Associate C.E., In charge of  
Surveys administered the oath.**

*Aaron F. Jones*  
AARON F. JONES  
Jr. Engr. Aid.

*Alma Hunt*  
ALMA HUNT

Subscribed and sworn to before me this **23rd** day of  
**April**, 19**41**

*Edwin R. Sievers*  
EDWIN R. SIEVERS  
Associate C.E., In Charge of Surveys

OATH OF SURVEYOR

I, **Edwin R. Sievers, Associate C.E., In Charge of Surveys,**  
[Forest Service Title.]

do solemnly swear that, in strict conformity with the special instruc-  
tions of the ~~United States Surveyor General~~ <sup>Office of Public Surveys</sup> for **Arizona**, dated  
**June 25**, 19**40**, and the laws of the United States, I have  
well, faithfully, and truly, in my own proper person, surveyed a tract  
of land

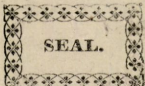
, No. , dated , 19 , for  
the same to be known as ~~Homestead Entry~~ <sup>Exchange</sup> Survey No. **667**,  
situated within the ~~Section~~ <sup>Tonto</sup> National Forest, in  
~~Section 34~~ , Township **10 N.** , Range **4 E.** , ~~XXX~~  
~~XXXXXXXXXXXXXXXXXXXX~~ , ~~XXXXXX~~ , ~~XXXXXX~~  
(unapproved survey)

of the **Gila & 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.

*Edwin R. Sievers*  
EDWIN R. SIEVERS  
Associate C.E., In Charge of Surveys  
[Forest Service Title.] U. S. Forest Service

Subscribed and sworn to before me this **21st** day of  
**May**, 19**41**.

*Edwin S. French*  
E. S. FRENCH  
Notary Public



My Commission expires August 6, 1942

EXCHANGE  
HOMESTEAD/ENTRY SURVEY NO. 667

91

1.

TONTO NATIONAL FOREST  
STATE OF ARIZONA

Chains

The tract of land embraced in this survey is in Government ownership and was surveyed for exchange by the United States under the Acts of March 20, 1922 and June 30, 1940.

Applicant for Exchange, Sawyer-Otondo Sheep Company.

Situated in ~~xxxxxxx~~ Section 34, T. 10 N., R. 4 E. of the Gila and Salt River Base and Meridian, Tonto National Forest, Arizona.

Surveyed under special instructions from the Public Survey Office for Arizona, dated June 25, 1940, and designated as Exchange Survey No. 667.

Survey commenced April 21, 1941 and was executed with a Gurley transit No. 12731 graduated to read direct to 1. minute of arc.

The adjustments of the transit were tested and necessary adjustments made before commencing the survey.

All distances are horizontal and were reduced from measurements made directly on the slope with a 400 link steel tape. The slope angles were determined with a clinometer.

April 21, 1941.

At Cor. No. 1 of Exchange Survey No. 667 hereinafter described in Latitude  $34^{\circ} 12' 30''$  N. and Longitude  $111^{\circ} 56'$  W. as determined by interpolation from a Forest Service Base Map, I observe Polaris as follows. Star is East of Mark.

Watch Time Telescope Angle from Mark to Star

10:50-P.M. Direct  $24^{\circ} 30' 30''$

10:54-P.M. Reversed  $24^{\circ} 32'$

Mean 10:52-P.M.  $24^{\circ} 31' 15''$

- 28 Corr. to l.m.t.

10:24-P.M. l.m.t. obs.

Set my watch with Western Union Time today and made it to read correct for 105th Meridian Standard Time, which by difference of longitude at this point is 28.0 m. fast on l.m.t.

Greenwich M.T. U.C. April 21, 1941 11:46.0-A.M.

Correction for longitude 1.2

l.m.t. U.C. Polaris April 21, 1941 11:44.8-A.M.

EXCHANGE  
HOME/STEAD/ENTRY SURVEY NO. 667

TONTON NATIONAL FOREST

STATE OF ARIZONA

Chains 1. m. t. obsv. April 21, 1941 at 10:24 P.M.  
 Hour angle 10:39.2  
 Azimuth of Polaris 0° 24' 41" West.  
 Bearing of Reference Mark S. 24° 55' 43" E.  
 Watch Time 10:58.30 P.M. Telescope Direct Angle from Mark to Star 24° 33' 00"  
 11:00.00 P.M. Reversed 24° 33' 30"  
 Mean 10:59.15 24° 33' 15"  
 - 0:28 Corr. to l. m. t.

10:31.15 l. m. t. obsv. April 21, 1941 at 11:44 S.-A.M.  
 l. m. t. obsv. April 21, 1941 at 10:31.25 P.M.  
 Hour angle 10:46.45  
 Azimuth of Polaris 0° 22' 30" West.  
 Bearing of Reference Mark S. 24° 55' 45" E.  
 The bearing of the Reference Mark from the mean of the two obsv. is  
 S. 24° 55' 44" E. I accept bearing of Reference Mark as S. 24° 56'  
 E. and from corresponding meridian all courses of this survey were  
 deflected by sustained angulation.

U. S. Location Monument No. 84 being within a distance of two miles  
 from Cor. No. 1 of this survey, I make a transit traverse to that  
 point and find it bears N. 84° 13' 12" E., 155.12 chains (details of  
 traverse appear at end of notes). U.S.L.M. No. 84 is a malpais  
 boulder in place showing 3' x 4' x 3' above the ground + on top and  
 U.S.L.M. No. 84 H.E.S. on West face and witnessed as described by  
 the Public Survey Office.

Beg. at Cor. No. 1 of Exchange Survey No. 667 which is an iron post,  
 1 in. in diameter, 3 ft. long, set 12 in. above the ground, with  
 brass cap marked: AP 1 ES 667: Raised a mound of rock around the post.  
 ES 667:  
 1941:  
 Whence from corner a Juniper 18 in. in diameter bears S. 42° 41' E.,  
 258 links. Blazed and scribed AP 1 ES 667 B.T. No other bearing

TONTON NATIONAL FOREST  
STATE OF ARIZONA

Chains	trees available.
	Thence S. 20° 59' E.
	over broken rolling country, thru thick oak brush, scattering manzanita and juniper.
2.37	NW bank of Shirttail Can., 23 links wide, Course SW.
4.00	Beg. ascent over N. slope of hill.
6.40	NE bank of Wash, 23 links wide, Course NW.
20.00	To Cor. No. 2 which is an iron post, 1 in. in diameter, 3 ft. long, set in rock ledge, 30 in. above ground with brass cap marked: AP 2 : ES 667: 1941
	Raised mound of rock, 4 ft. base and 2½ ft. high around post.
	Whence from corner a mountain Mahogany 4 in. in diameter bears S. 83° 01' W., 67 links. Blazed and scribed AP 2 ES 667 B.T. No other bearing trees available.
	Thence S. 68° 52' 20" W.
	across rough ground thru thick oak brush and scattering manzanita.
	Ascending East slope.
3.09	Top of hill - begin descending West slope of high hill.
23.57	Bottom of high hill.
23.87	Wash, 23 links wide, Course NW - bottom of slope. Begin ascent over East slope
28.88	Top of ridge bearing NW and SE - descending West slope.
30.06	To Cor. No. 3 which is an iron post, 1 in. in diameter, 3 ft. long, and 12 in. above ground, with brass cap marked: AP 3 ES 667 1941
	Raised mound of rock around post.
	Whence from corner a Juniper 6 in. in diameter bears S. 81° W., 79 links. Blazed and scribed AP 3 ES 667 B.T.
	Thence N. 20° 59' W.
4.60	Wash, 30 links wide, Course NW - bottom of slope. Ascending S. slope of ridge.
10.68	Top of ridge - descending N. slope of ridge which bears NE and SW.
19.45	Bottom of slope.

EXCHANGE  
HOMESTEAD/ENTRY SURVEY NO. 667

TONTO NATIONAL FOREST

STATE OF ARIZONA

Chains	
19.60	S. bank of Shirttail Can., Course SW.
19.92	N. bank of Shirttail Can., Course SW.
20.00	To Cor. No. 4 which is an iron post, 1 in. in diameter, 3 ft. long, 12 in. above ground, with brass cap marked: :AP 4 :ES 667 Raised mound of rock around the post. 1941
	Whence from corner a Cedar 6 in. in diameter bears N. 52° E., 179 links. Blazed and scribed AP 4 ES 667 B.T.
	A Cedar 5 in. in diameter bears S. 34° W., 80 links. Blazed and scribed AP 4 ES 667 B.T.
-----	
	Thence N. 69° 01' E.
	Over rolling country, thru scattering oak brush, manzanita and Juniper.
-----	
0.06	N. bank of Shirttail Can., Course SW.
0.24	S. bank of Shirttail Can., Course SW.
5.10	Small wash, Course NW.
12.17	S. bank of Shirttail Can., Course SW.
13.13	Center of Shirttail Canyon, Course SW.
14.10	N. bank of Shirttail Can. is 91 links East of line.
18.06	N. bank of Shirttail Can. is 30 links East of line.
21.35	N. bank of Shirttail Can., 30 links wide, Course SW.
28.02	Small Wash, Course SE.
30.00	To Cor. No. 1, heretofore described.
-----	
	Total Area 60.03 acres

Survey completed April 23, 1941.

George R. SIEVERS,  
Associate Civil Engineer  
In Charge of Surveys



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.

EXCHANGE

TABLING AND CALCULATIONS OF ~~HOMESTEAD / TRACT~~ SURVEY NO. 667, STATE OF ARIZONA

8-2349

CORNERS.	BEARING.	DISTANCE. Chains	LATITUDES.		DEPARTURES.		DOUBLE M. D.	N. AREAS.		S. AREAS.	
			NORTH.	SOUTH.	EAST.	WEST.					
1 - 2	S. 20° 59' E.	20.00		18 67 <sup>5</sup>	7 16		7 16			133 53	
2 - 3	S. 68° 52' 20" W.	30.06		10 83 <sup>0</sup>		28 04 <sup>2</sup>	Begin 28 02			302 62	
3 - 4	N. 20° 59' W.	20.00	18 67 <sup>9</sup>			7 16	63 20	1181 21			
4 - 1	N. 69° 01' E.	30.00	10 74 <sup>6</sup>		28 01 <sup>2</sup>		42 34	455 58			
		100.06	29 41 <sup>09</sup>	29 50	35 17 <sup>03</sup>	35 20		1636 79		436 15	
	Error		45	45	18	18		436 15			
								20/1200 64			
								60 03 acres			
	Closing error	1/1053									ET

95

CROATIA 1/1021

1. 00e 011 E\* 20.00  
 2. 50e 241 E\* 50.00  
 3. 80e 515 E\* 40.00  
 4. 50e 241 E\* 50.00

change

50 HT  
 10 HT  
 10 HT

50 20  
 10 83  
 10 65

32 11  
 58 07

29 50  
 1 10  
 52 04

45 34  
 21 50  
 50 05  
 1 10

CO OR VALUE

50/500 67

410 12

1020 10

1020 28

1181 51

205 85

133 23

11111111111111111111  
 EXCHANGE

100

100

100

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100

100

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.

EXCHANGE

TABLING AND CALCULATIONS OF ~~HOMESTEAD/ENTIRE~~ SURVEY NO. 667, STATE OF ARIZONA (Traverse to U.S.L.M. No. 84, H.E.S.)

8-2349

CORNERS.	BEARING.	DISTANCE. Feet	LATITUDES.		DEPARTURES.		DOUBLE M. D.	N. AREAS.	S. AREAS.
			NORTH.	SOUTH.	EAST.	WEST.			
Cor. #1 E.S. #667	N. 24° 57' W.	672.87	610 08'			283 84'			
Station # 19	N. 61° 44' E.	1036.79	491 00'		913 15'				
18	N. 75° 15' 30" E.	913.84	232 54'		883 76'				
17	S. 58° 35' E.	943.40		491 76'	805 10'				
16	N. 49° 11' 30" E.	342.87	224 08'		259 52'				
15	S. 53° 18' E.	381.88		228 22'	306 18'				
14	S. 72° 49' 30" E.	1570.47		463 74'	1500 43'				
13	N. 74° 48' E.	732.27	191 99'		706 66'				
12	N. 85° 42' 30" E.	241.10	18 04'		240 42'				
11	N. 34° 44' E.	363.20	298 48'		206 94'				
10	N. 13° 50' 30" E.	435.73	423 08'		104 24'				
9	N. 50° 46' 30" E.	373.23	236 02'		289 13'				
8	S. 79° 45' E.	306.17		54 48'	301 28'				
7	S. 76° 17' 30" E.	787.71		186 67'	765 27'				
6	N. 71° 19' 30" E.	428.08	137 07'		405 54'				
5	S. 84° 33' E.	502.85		47 76'	500 58'				
4	S. 67° 42' 30" E.	431.31		163 61'	399 07'				
3	S. 79° 09' 30" E.	952.71		179 20'	935 70'				
2	N. 81° 04' E.	816.09	126 73'		806 19'				
1	S. 44° 35' 30" E.	200.24		142 60'	140 58'				
U.S.L.M. No. 84			2989 11'	1958 04'	10469 74'	283 84'		N. 84° 13' 12" E., 155.12 chains	
			- 1958 04'		- 283 84'				
			1031 07'		10185 90'				

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ET

UNITED STATES DEPARTMENT OF THE ARMY (Continued)

OFFICER	GRADE	STATUS	COMPONENT	ORGANIZATION	DUTY STATION	DATE	PERIOD		REMARKS
							FROM	TO	
1. J. H. ...	LTJG	...	...	...	...	...	...	...	...
2. J. H. ...	LTJG	...	...	...	...	...	...	...	...
3. J. H. ...	LTJG	...	...	...	...	...	...	...	...
4. J. H. ...	LTJG	...	...	...	...	...	...	...	...
5. J. H. ...	LTJG	...	...	...	...	...	...	...	...
6. J. H. ...	LTJG	...	...	...	...	...	...	...	...
7. J. H. ...	LTJG	...	...	...	...	...	...	...	...
8. J. H. ...	LTJG	...	...	...	...	...	...	...	...
9. J. H. ...	LTJG	...	...	...	...	...	...	...	...
10. J. H. ...	LTJG	...	...	...	...	...	...	...	...
11. J. H. ...	LTJG	...	...	...	...	...	...	...	...
12. J. H. ...	LTJG	...	...	...	...	...	...	...	...
13. J. H. ...	LTJG	...	...	...	...	...	...	...	...
14. J. H. ...	LTJG	...	...	...	...	...	...	...	...
15. J. H. ...	LTJG	...	...	...	...	...	...	...	...
16. J. H. ...	LTJG	...	...	...	...	...	...	...	...
17. J. H. ...	LTJG	...	...	...	...	...	...	...	...
18. J. H. ...	LTJG	...	...	...	...	...	...	...	...
19. J. H. ...	LTJG	...	...	...	...	...	...	...	...
20. J. H. ...	LTJG	...	...	...	...	...	...	...	...

UNITED STATES DEPARTMENT OF THE ARMY (Continued)

OFFICER: J. H. ...

GRADE: LTJG

STATUS: ...

COMPONENT: ...

ORGANIZATION: ...

DUTY STATION: ...

DATE: ...

PERIOD: ...

REMARKS: ...

1. J. H. ...

2. J. H. ...

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19. J. H. ...

20. J. H. ...

APPROVAL  
PUBLIC SURVEY OFFICE

~~XX~~

Phoenix, Arizona, September 26 , 1941

The foregoing field notes of ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~

EXCHANGE SURVEY NO. 667

executed by Edwin R. Sievers, Associate C.E., In Charge of Surveys,  
Forest Service, [Forest Service Title.]  
under his special instructions, dated June 25 , 1940, having  
been critically examined, and the necessary corrections and explanations  
made, the said field notes, and the surveys they describe, are hereby  
approved.

*Sherman C. Fiske*  
~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~  
Office Cadastral Engineer

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.

8-2349

*Sherman C. Fiske*  
~~U. S. Surveyor General.~~  
Office Cadastral Engineer

APPROVA  
PUBLIC SERVICE OFFICE  
Office of the United States Marshal for Georgia  
Tucker, Georgia, September 27, 1951

The foregoing field notes of Leonard R. [Name] are

RESEARCH SURVEY NO. 603

submitted to the [Name] in [Location] in [Month] [Year] and  
under his special instructions, dated [Date], and  
been critically examined, and the necessary corrections and explanations  
made. The said field notes, and the surveys they describe, are hereby  
approved.

[Signature]

It is noted that the [Name] of [Location] is the author of the  
above mentioned survey and that the [Name] of [Location]  
correctly copies the original notes on file in the [Location]

U. S. Marshal for Georgia