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U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

OCT 26 1917

1000-15

**FIELD NOTES**

OF

HOMESTEAD ENTRY SURVEY NO. 229

SITUATED IN THE

APACHE NATIONAL FOREST

ADMINISTRATIVE DISTRICT NO. 3

in

Approximately  
Section 4, un surveyed, Township 2 S., Range 30 E.

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of the

Gila and Salt River Base and Meridian.

ARIZONA

Survey executed by C. A. Long, Surveyor-Forest Service  
Under special instructions dated August 6, 1914  
Survey commenced November 28, 1914  
Survey completed November 28, 1914  
Under Acts of June 11, 1906 and June 30, 1914.

Applicant for listing J. Allen Chitty,

Residence Clifton, Arizona.

Application No. 60, dated May 16, 1908

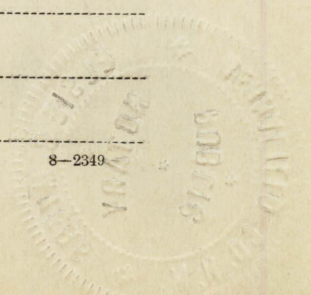
List No. 3-223, dated June 29, 1909

Applicant for survey J. Allen Chitty,

Residence Clifton, Arizona.

H. E. No. 07594, dated December 2, 1909

Office  
Land district Phoenix, Arizona.





OATH OF ASSISTANTS

We hereby certify that we assisted C. A. Long,  
Surveyor-Forest Service in surveying all those  
parts or portions of Homestead Entry Survey No. 229, in  
unsurveyed Section 4, Township 2 S., Range 30 E.,  
--- surveyed Section ---, Township ---, Range ---,  
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of the G. & S.R.B. & meridian, State of Arizona, which  
are represented in the following field notes as having been  
surveyed by him and under his direction; and that said sur-  
vey 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 fur-  
nished 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 Sur-  
veyor.

Wm. Wanner, Chairman  
Fred Furley, Chairman  
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Subscribed and sworn to before me this 28th day of  
November, 1914.

C. A. Long  
-----  
Surveyor-Forest Service.

OATH OF SURVEYOR

I, C. A. Long, Surveyor-Forest Service, do solemnly swear  
that, in strict conformity with the special instructions of  
the United States Surveyor General for Arizona, dated  
August 6, 1914, and the laws of the United States, I have  
well, faithfully, and truly, in my own proper person, sur-  
veyed a tract of land ~~upon the application of~~ embraced in  
List, No. 3-223, dated June 29, 1909, for  
Patent, under the Act of June 11, 1906,  
the same to be known as Homestead Entry Survey No. 229,  
situated within the APACHE National Forest, in  
unsurveyed Section 4, Township 2 S., Range 30 E., and  
--- surveyed Section ---, Township ---, Range ---,  
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of the G. & S.R.B. & 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 perpet-  
uated in strict accordance with the stated special instruc-  
tions, and in the specific manner described in the field  
notes, and that the following are the original field notes  
of such survey.

Surveyor-Forest Service

Subscribed and sworn to before me this 23rd day of  
April, 1915.

Elsie C. Meyer  
-----  
Notary Public





## APACHE NATIONAL FOREST

STATE OF ARIZONA

Chains Applicant for listing, J. Allen Chitty; Application No. 60, dated May 16, 1908; List No. 3-223, dated June 29, 1909; H. E. No. 07594, made at Phoenix, Arizona, on December 2, 1909.

Surveyed under special instructions from the Surveyor General for Arizona, dated August 6, 1914, and designated as Homestead Entry Survey No. 229.

Situated in what will probably be, when surveyed, Section 4, T. 2 S., R. 30 E., Gila and Salt River Base and Meridian, Apache National Forest, Arizona.

Surveyed under the Acts of June 11, 1906 and June 30, 1914.

Survey commenced November 28, 1914 and executed with a W. and L. E. Gurley light mountain transit No. 11920, provided with a full vertical circle and a horizontal limb having two double verniers placed opposite each other and reading to single minutes of arc, which is also the least count of the vernier on the vertical circle.

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

All measurements were made directly on the slopes with a 500 link steel tape, and the slope angles determined with a clinometer, the horizontal distances alone appearing in these notes.

November 28, 1914.

At cor. No. 1 of this survey I observe the altitude of the sun for azimuth, the sun is to the left of reference mark. The sun was observed in the upper left, lower right, upper right and lower left quadrants of the field. My watch is set for local mean



Chains time. Longitude, by account from a Land Office map is 109° 15' W. Latitude, from observation, is 33° 18' 09" N.

(1)

Telescope	l.m.t.	Vertical Angle	Horizontal Angle
Direct	9h. 06m. 27s.	23° 41' 30"	155° 21' 20"
Reversed	9h. 08m. 44s.	23° 28' 00"	155° 29' 00"
Means	9h. 07m. 35s.	23° 34' 45"	155° 25' 10"

(2)

Direct	9h. 10m. 21s.	24° 13' 20"	155° 09' 00"
Reversed	9h. 12m. 30s.	23° 58' 20"	154° 06' 30"
Means	9h. 11m. 25s.	24° 05' 50"	154° 37' 45"

Bearing of reference mark by (1) N. 65° 10' 44" W.

Bearing of reference mark by (2) N. 65° 10' 15" W.

The mean is N. 65° 10' 30" W.

and to the corresponding meridian all the courses of this survey are referred.

November 28, 1914.

At cor. No. 1 of this survey, at apparent noon, I observe the altitude of the sun's upper limb to be 35°

43', from this observation I compute the Latitude.

Observed vert. ang. sun's upper limb = 35° 43' 00"

Semi-diameter 16' 14.8"

Refraction 01' 21.0"

35° 25' 24.2"

Parallax + 07

True alt. of sun's center, 35° 25' 31.2"

Sun's declination, + 21° 16' 19.4"

Co. Lat. = 56° 41' 50.6"

90° 00' 00.0"

Latitude = 33° 18' 09.4"



APACHE NATIONAL FOREST

STATE OF ARIZONA

Chains . There being no public land survey or U. S. Location Monument within the prescribed limits, I establish U. S. L. M. 229 H. E. S. on a bald limestone peak 20 ft. in diameter at the apex and about 50 ft. above cor. No. 1 as follows: At the center of the peak, I drill a hole in the solid rock and set an iron rod 3/4 in. dia., 10 ins. long, 6 ins. in the rock and chisel U. S. L. M. 229 H. E. S. around the point.

No stone available for mound, whence:

A pinon 9 ins. dia., bears N. 73° 30' W., 76 lks. dist.

A pinon 10 ins. dia., bears S. 46° 23' W., 54 lks. dist.

Each blazed and marked U S L M 229 H E S B T.

Maple Peak bears N. 63° 10' E., about 9 miles dist.

Bullard's Peak bears N. 79° 03' E., about 10 miles dist.

November 28, 1914.

Beginning at cor. No. 1.

Identical with list cor. No. 2, which is a sandstone

12 x 12 x 14 ins. above ground, marked and witnessed

as described by the Forest Service. I destroy same

and witnesses thereto and set a shale stone 26 x 14 x

8 ins. over a 3/4 in. iron rod 8 ins. long, set 6 ins.

in the solid rock to mark the exact point for cor.

No. 1 of this survey, marked 1-HES229 on side facing

claim and raise a mound of stone around corner.

(Pits impracticable.) Whence:

A juniper 16 ins. dia., bears S. 58° 06' W.,

110 lks. dist.

A pinon 5 ins. dia., bears S. 12° 50' W.,

156 lks. dist.



Chains Each blazed and marked 1 H E S 229 B T.  
 U. S. L. M. 229 H. E. S., heretofore described,  
 bears S. 24° 57' E., 2.31 chs. dist.  
 The magnetic bearing of the true meridian at 4:30 p.m.  
 is N. 12° 15' W., and the mean magnetic declination  
 is 12° 15' E.

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Thence S. 20° 27' W.  
 Ascend 35 ft. along NW. slope, denuded of soil.  
 1.00 Top of ascent. Continue along NW. slope over badly  
 eroded land.  
 12.46 To cor. No. 2.  
 Identical with list cor. No. 1, which is a sandstone  
 12 x 12 x 18 ins. above ground, marked and witnessed  
 as described by the Forest Service. I destroy it  
 and F. S. M. and witnesses thereto and set an iron  
 rod 3/4 in. dia., 8 ins. long, 5 ins. in the solid  
 rock for cor. No. 2 of this survey, marked 2-HES229  
 on side facing claim; and raise a mound of stone over  
 corner point. (Pits impracticable.) Whence:  
 A juniper 12 ins. dia., bears N. 19° 33' E.,  
 120 lks. dist.  
 A juniper 8 ins. dia., bears S. 43° 16' E.,  
 95 lks. dist.  
 Each blazed and scribed 2 H E S 229 B T.

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Thence N. 71° 09' W.  
 Descend 15 ft. over bare rock slope.  
 1.60 Descend abrupt slope 60 ft.  
 2.07 Bottom of slope. Enter creek bottom and scattering  
 sycamore.  
 3.57 Turkey Creek, 25 lks. wide, 1 ft. deep, course S. 15°  
 00' E.



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STATE OF ARIZONA

Chains	Witnessed as described by the Forest Service
5.60	Leave timber and creek bottom. Ascend.
6.20	top of rock bluff 30 ft. above creek. Continue over rolling land and badly eroded slopes. Scant soil covering and scattering oak brush.
27.69	Trail to Eagle Creek, bears NE. and SW.
30.00	Ascend 250 ft. over terraced rock. No soil.
39.57	To cor. No. 3.
	Identical with list cor. No. 4, which is a malpais boulder 12 x 14 x 16 ins. above ground, marked and witnessed as described by the Forest Service. I destroy same and witnesses thereto, and set a sandstone 30 x 18 x 8 ins. in a mound of stone over a 3/4 in. iron rod, 8 ins. long, set 4 ins. in the solid rock to mark the exact point for cor. No. 3 of this survey, marked 3-HES229 on side facing claim. Pits and mounds impracticable; whence: A pinon 8 ins. dia., bears N. 23° 40' W., 51 lks. dist. A pinon 10 ins. dia., bears N. 52° 39' E., 66 lks. dist. A pinon 8 ins. dia., bears S. 24° 34' E., 77 lks. dist. Each blazed and marked 3 H E S 229 'B.T.
	Thence N. 18° 52' E. Continue to top of ascent. Descend 90 ft. on terraced sandstone. No soil.
8.00	Descend steep rock bluff, .75 ft. Bottom of draw.
10.00	Bottom of descend. Enter creek bottom and scattering sycamore, cedar and scrub oak. Continue on level bottom land.
12.54	To cor. No. 4. Identical with cor. of list No. 3, which is a malpais boulder 14 x 14 x 16 ins. above ground, marked and



Chains

witnessed as described by the Forest Service. I  
 destroy same and witnesses thereto and set a wash  
 boulder 26 x 18 x 12 ins., 10 ins. in the ground,  
 over a stone marked with a cross (+) for cor. No. 4  
 of this survey, (unable to set stone deeper on ac-  
 count of rock) marked 4-HES229 on side facing claim  
 and a cross (+) on top. Dig pits 24 x 24 x 12 ins.  
 crosswise on this and the succeeding course 7 ft.  
 dist.; and raise a mound of stone 4 ft. base, 2 ft.  
 high, 3-1/2 ft. dist. within the claim, whence:  
 A live oak 8 ins. dia., bears S. 46° 33' E.,  
 86 lks. dist.  
 A sycamore 10 ins. dia., bears S. 86° 39' W.,  
 33 lks. dist.  
 A juniper 24 ins. dia., bears N. 57° 54' W.,  
 29 lks. dist.  
 Each blazed and scribed 4 H E S 229 B T.

Thence S. 71° 07' E.,

Over level creek bottom, through scattering sycamore,  
 juniper and scrub oak.

5.00 Turkey Creek, 25 lks. wide, 1 ft. deep, course S. 54°

Each blazed and marked 4 H E S 229 B T.

10.00 Leave Creek bottom and timber. Ascend 55 ft.

14.00 Top of ascent. Continue along South slope.

18.10 Descend 40 ft.

23.30 Bottom of draw, ascend.

24.50 Top of ascent, 30 ft. above point of ascent. Continue

level over level land.

25.00 Descend 35 ft.

28.00 Bottom of draw, ascend 15 ft.

31.50 Top of ascent. Continue over broken rock land, scant

soil.



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Chains

- 34.90 Wire fence, bears N. 50° 00' E. and S. 50° 00' W.
- 35.00 Ascend 25 ft.
- 40.00 To cor. No. 1, the place of beginning.

AREA

Area - - - - - 49.72 acres.

CONFLICTS AND ADJOINING CLAIMS.

There are no conflicts or adjoining claims.

IMPROVEMENTS

The improvements on the claim, and belonging to the claimant herein, consist of the following:

- A two room log house, 18 x 40 ft., course of long sides N. and S., the SE. cor. of which bears from cor. No. 2 N. 30° 00' W., 8.70 chs. dist.

Value ----- \$200.00

- Log store house 10 x 10 ft., course of sides N. and S. the SE. cor. of which bears from cor. No. 2 N. 29° 30' W., 9.45 chs. dist.

Value ----- \$ 25.00

- Log chicken house 6 x 6 ft., course of sides N. and S., the SE. cor. of which bears from cor. No. 2, N. 26° 08' W., 10.00 chs. dist.

Value ----- \$ 10.00

- 1/2 mile of pole and barbed wire fencing.

Value ----- \$ 40.00

Total value of improvements ----- \$275.00

DESCRIPTION

This claim is located along Turkey Creek and the rocky barren hillsides draining into it. A narrow strip averaging 1-1/2 chains in width along the creek bottom will be suitable for cultivation when cleared of brush



Chains

and scattering timber. The hillsides are steep and rocky, the greater portion being badly eroded and having little soil or growth of any kind. About 3-1/2 acres have been cultivated heretofore. The soil

along the creek bottom is a light sandy loam of first quality. There is no evidence of precious minerals on the claim.

A scattering stand of sycamore, ash, juniper and black walnut is found along the creek bottom. Turkey Creek is a perennial stream of pure clear water and capable of supplying ample water for all purposes.

Clifton, the county seat of Greenlee County, on the A. & N. M. R. R. is the nearest postoffice and trading center. It is about 25 miles distant in a southerly direction and is reached by rough mountain trail.

Survey completed November 28, 1914.

TRAVERSE

Cor.	Course	Dist.	N	S	E	W
1-2	S. 20° 27' W.	12.46		11.67		4.35
2-3	N. 71° 09' W.	39.57	12.78			37.45
3-4	N. 18° 52' E.	12.54	11.87		4.05	
4-1	S. 71° 07' E.	40.00		12.95	37.85	
		104.57	24.65	24.62	41.90	41.80
			24.62		41.80	
Error in Lat. and Dep.			.03		.10	

Error of closure = 1:1002.

*Calong*

Surveyor - Forest Service.

A narrow strip of brush will be suitable for cultivation when cleared of brush averaging 1-1/2 chains in width along the creek bottom.



APACHE NATIONAL FOREST

STATE OF ARIZONA

Chains

Detailed Computation.

Azimuth Computation.

(1)

Date of obsn., November 28, 1914.

Longitude 109° 15' W., by account from Land Office map.

Latitude 33° 18' 09" N.

L.M.T. of obs. = 9h. 07m. 35s.

Apparent time of obs. = 9h. 19m. 45s.

Observed Vertical Angle = 23° 34' 45"

Reduced Vertical Angle = 23° 32' 33"

Sun's declination, = S. 21° 15' 07"

Horizontal Angle, (Sun is to the left of reference mark) 155° 25' 10"

$$\cos A = \frac{\sin 21^\circ 15' 07''}{\cos 33^\circ 18' 09'' \times \cos 23^\circ 32' 33''}$$

(Tan. 33° 18' 09" x Tan. 23° 32' 33").

$$\begin{aligned} \log \sin, 21^\circ 15' 07'' &= 9.5592717 \\ & \underline{9.8843513} \\ & 9.6749204 = \log. - .47307 \end{aligned}$$

$$\begin{aligned} \log \cos, 33^\circ 18' 09'' &= 9.9220937 \\ \text{" " } 23^\circ 32' 33'' &= \underline{9.9622576} \\ & 9.8843513 \end{aligned}$$

$$\begin{aligned} \log. \tan 33^\circ 18' 09'' &= 9.8175255 \\ \text{" " } 23^\circ 32' 33'' &= \underline{9.6391822} \\ & 9.4567077 = \log. - .28622 \\ & \underline{- .75929} \end{aligned}$$

- .47307 - .28622 = - .75929 = Nat. Cos of S. 40° 35' 54" E., being the bearing of the sun, and the bearing of reference mark is N. 65° 10' 44" W.

(2)

Date of observation, November 28, 1914.

Longitude 109° 15' W., by account from Land Office map.

Latitude 33° 18' 09" N.

Local mean time of obs. 9h. 11m. 25s.

Apparent time of obs. 9h. 23m. 35s.



Chains

Observed Vertical Angle = 24° 05' 50"

Reduced Vertical Angle = 24° 03' 41"

Sun's declination = 21° 15' 09"

Horizontal Angle, (sun is to the left of reference mark) = 154° 37' 45"

$$\cos A = \frac{\sin 21^\circ 15' 09'' \times \cos 24^\circ 03' 41''}{\cos 33^\circ 18' 09'' \times \cos 24^\circ 03' 41''}$$

(Tan 33° 18' 09" x Tan 24° 03' 41")

Log Sin, 21° 15' 09" = 9.5592717

Log Cos 33° 18' 09" = 9.8826164

Log Cos 24° 03' 41" = 9.6766553 = Log. - .47496

Log Tan, 33° 18' 09" = 9.8175255

" " 24° 03' 41" = 9.6498342

Log. - .29333

9.4673597 = Log. - .76829

-.47496 - .29333 = -.76829 = Nat. Cos. of the bearing of sun, S. 39° 48' E. The bearing of reference mark is N. 65° 10' 15" W. and the mean of these two observations is N. 65° 10' 30" W.

-.47307 - .28822 = -.76129 = Nat. Cos. of 54° E., being the bearing of the sun, and the bearing of reference mark is N. 65° 10' 44" W.

(2)

Date of observation, November 28, 1914.

Longitude 109° 15' W., by account from Land Office map.

Latitude 33° 18' 09" N.

Local mean time of obs. 9h. 11m. 33s.

Apparent time of obs. 9h. 23m. 33s.



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.

J. Allen Chitty.

TABLING AND CALCULATIONS OF HOMESTEAD ENTRY SURVEY NO. 229, STATE OF ARIZONA.

CORNERS.	BEARING.	DISTANCE.	LATITUDES.		DEPARTURES.		DOUBLE M. D.		N. AREAS.	S. AREAS.
			NORTH.	SOUTH.	EAST.	WEST.				
1-2	S. 20° 27' W.	12.46	12 76	11 67		4 37 4 35	79 33			925 78
2-3	N. 71° 09' W.	39.57	12 78		17 03 4 05	37 45	37 48	478 24		
3-4	N. 18° 52' E.	12.54	11 87	12 96	37 82 37 85		4 03	47 84		
4-1	S. 71° 07' E.	40.00		12 95			45 88			594 60
		104.57	24 65	24 62	41 90	41 80		526 08		1520 38
			24 63	24 63	41 85	41 85				526 08
										20 ) 994 30
										49 715
										49.72 acres

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APPROVAL


Office of the United States Surveyor General,

Phoenix, Arizona, April 2, 1917 .

The foregoing field notes of Homestead Entry Survey No.

229

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executed by C. A. Long, Surveyor Forest Service  
under his special instructions, dated August 6, 1914,  
having been critically examined, and the necessary correc-  
tions and explanations made, the said field notes, and the  
surveys they describe, are hereby approved.

  
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U. S. Surveyor General.

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

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Frank P. Trott  
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U. S. Surveyor General.