

U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

MAR. 18. 1916

MAY 13- 1915

**FIELD NOTES**

OF

HOMESTEAD ENTRY SURVEY NO. 158

SITUATED IN THE

CROOK NATIONAL FOREST

ADMINISTRATIVE DISTRICT NO. \_\_\_\_\_

in

Section 13, unsurveyed, Township 1 S., Range 15 E.

Section 14, unsurveyed, Township 1 S. Range 15 E.

Section 23, unsurveyed, Township 1 S. Range 15 E.

of the

Gila and Salt River Base and Meridian.

ARIZONA

Survey executed by Walter G. Turley, Surveyor-Forest Service.

Under special instructions dated December 4, 1913.

Survey commenced October 15, 1914

Survey completed October 16, 1914

Under Acts of June 11, 1906 and June 30, 1914.

Applicant for listing Charles E. Rubottom

Residence Globe, Arizona.

Application No. 156, dated June 22, 1910

List No. 3-1537, dated November 2, 1911

Applicant for survey Charles E. Rubottom

Residence Globe, Arizona

H. E. No. 021677, dated March 18, 1913

Land district Phoenix, Arizona.

OATH OF ASSISTANTS

We hereby certify that we assisted Walter G. Turley  
Surveyor-Forest Service in surveying all those  
 parts or portions of Homestead Entry Survey No. 158, in  
unsurveyed Section 13, Township 1 S., Range 15 E.,  
unsurveyed Section 14, Township 1 S., Range 15 E.,  
unsurveyed Section 23, Township 1 S. Range 15 E.  
 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 inconvenient and expensive to appear before an officer to administer the oaths to Assistants; hence they were taken by the Surveyor.

Charles D. Hudson Chainman  
Edward Anderson Chainman

Subscribed and sworn to before me this 18<sup>th</sup> day of  
October, 1914.

Walter G. Turley  
Surveyor-Forest Service

OATH OF SURVEYOR

I, Walter G. Turley, Surveyor-Forest Service, do solemnly swear that, in strict conformity with the special instructions of the United States Surveyor General for Arizona, dated December 4, 1913, 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~~ embraced in  
List, No. 3-1537 dated Nov. 2, 1911, for  
Patent, under the Act of June 11, 1906, the same to be known as Homestead Entry Survey No. 158, situated within the CROOK National Forest, in unsurveyed Section 13, Township 1 S., Range 15 E., and unsurveyed Section 14, Township 1 S., Range 15 E., unsurveyed Section 23, Township 1 S., Range 15 E.

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 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.

Walter G. Turley  
Surveyor-Forest Service

Subscribed and sworn to before me this 23<sup>rd</sup> day of  
February, 1915.

Elsie C. Myers  
Notary Public



CROOK NATIONAL FOREST

STATE OF ARIZONA

Chains Applicant for listing Charles E. Rubottom; Application No. 156, dated June 22, 1910; List No. 3-1537, dated November 2, 1911; H. E. 021677 made by Charles E. Rubottom at Phoenix Arizona, March 18, 1913. Surveyed under Special Instructions from the Surveyor General of Arizona, dated December 4, 1913 and designated as Homestead Entry Survey No. 158. Situated in the Crook National Forest, in unsurveyed T. 18 S., R. 15 E., G. & S. R. B. and Meridian, in what will probably be when surveyed in Secs. 13, 14 and 23. Surveyed under the Acts of June 11, 1906 and June 30, 1914.

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Survey commenced October 15, 1914 and executed with a W. and L. E. Gurley light mountain transit No. 12953, with vertical circle and Burt solar attachment; the horizontal limb having two double verniers placed opposite and reading to single minutes of arc, which is also the least graduation of the verniers of the latitude and declination arcs.

The instrument was examined, tested, and all necessary adjustments made to the levels, line of collimation, stadia interval and solar attachment.

The distances were measured on the slope and reduced to the horizontal, with a 200 link steel tape and a Philadelphia stadia rod with double targets, the rod being graduated to read in feet and hundredths and the target verniers to thousandths.

Preliminary to the survey the stadia interval was tested and adjusted to read 1:132.

Chains October 15, 1914.

I observe the altitude of the sun for azimuth at cor. No. 1 of the list survey, which is a red sandstone 16 x 7 x 10 ins. above ground marked and witnessed as described by the Forest Service. The reading on the reference object was set at zero and the sun was observed in the upper left and lower right quadrants of the field in both observations. My watch is set for local mean time. Latitude 33° 20' 33" N. and Longitude 110° 44' 35" W., deduced from values given in the Special Instructions of the Surveyor General.

Telescope	Horizontal Angle	Vertical Angle	.l.m.t.
Direct	61° 05' 00"	23° 59' 30"	3h. 20m. 00s.

Reversed	60° 57' 00"	23° 56' 00"	3h. 22m. 30s.
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Second observation.

Direct	62° 19' 30"	22° 44' 30"	3h. 26m. 45s.
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Reversed	62° 05' 00"	22° 46' 30"	3h. 28m. 45s.
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Bearing of object by first observation S. 0° 01' 38" E.

Bearing of object by second observation S. 0° 01' 58" E.

The mean of these is S. 0° 01' 48" E. and from the corresponding meridian all the courses of this survey were deflected.

Thence by continuous angulation, to cor. No. 2 of the list survey, which is an imbedded quartzite stone 35 x 18 x 10 ins. above ground marked and witnessed as described by the Forest Service.

Thence N. 20° 11' W.

On a random line for a tie.

## CROOK NATIONAL FOREST

STATE OF ARIZONA

Chains  
35.25 U. S. L. M. No. 110, H. E. S.

Which is a conglomerate stone 20 x 10 x 12 ins.  
above ground marked U S L M No 110 H E S on N. face,  
with conical mound of stone 6 ft. base, 4 ft. high  
alongside to South, marked stone being in perimeter  
of base of mound. This U. S. L. M. is located on  
a prominent hill approximately in center of unsurveyed  
Sec. 14, T. 1 S., R. 15 E., 2 miles 15.30 chs. S. of  
the base line.

The N. gable of the Pinal Ranger Station bears  
S. 39° 38' W., 1 mile 32.00 chs. dist.  
Smelter Smokestack at Old Dominion in Globe  
bears N. 3° 15' W. 4 miles.  
Webster Peak bears N. 37° 18' W., 9 miles.  
Forest Service Watch Tower on Pinal Peak bears  
S. 38° 08' W., 5 miles.  
Water Tank on A. E. Ry. in Cutler bears N. 85°  
41' E., 7 miles.

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Thence S. 20° 11' E.

On a true line.

35.25 Cor. No. 1.

Identical with cor. H-2 of the list survey, heretofore  
described. I destroy all trace of this list cor.  
and mark a cross on the apex and 1-HES158 on the S.  
face of the same stone for cor. No. 1 and raise a  
mound of stone 2 ft. base, 1-1/2 ft. high, S. of cor.,  
from which:

A catsclaw 4 ins. dia., bears S. 22° 07' E.

120 lks. dist. marked 1 H E S 158 B T.

Chains

A catsclaw 4 ins. dia., bears S. 72° 29' E.

64 lks. dist., marked 1 H E S 158 B T.

I observe the magnetic declination at cor. No. 1 to be

14° 33' E. at 4h. 00m. p.m., l.m.t., which reduced

by Table "G", Manual 1894 Diurnal Variations in Mag-

netic Declination, gives a mean magnetic declination

of 14° 34' E. Lat. 30° 20' 17" N., Long. 110° 45' 10"

W., from special instructions of the Surveyor General.

Thence N. 60° 42' E.

Descend S. slope 20 ft. to ravine.

15.02 Ravine, course SE. Ascend S. slope to ridge.

37.10 Ridge, bears NW. and SE. Descend 55 ft. to ravine.

42.60 Ravine, course SE. Ascend 50 ft. to ridge.

48.50 Ridge, bears NW. and SE. Descend 30 ft. to cor.

50.63 To cor. No. 2.

Identical with cor. H-1 of the list survey, hereto-  
fore described. I destroy all trace of the list

cor. and mark 2-HES158 for cor. No. 2 of this sur-  
vey on the SW. face of the quartzite boulder 16 x 10

x 16 ins. above ground which I previously marked

1-HES110 on SE. face for cor. No. 1, H. E. S. No.

110, with mound stone 2 ft. base, 1-1/2 ft. high,

SE. of cor., from which:

+ on an imbedded schist stone 48 x 36 x 12 ins.

above ground, marked 1 H E S 110 2 H E S 158

B R, bears S. 78° E., 67 lks.

+ on an imbedded schist stone 36 x 36 x 6 ins.

above ground, marked 1 H E S 110 2 H E S 158

B R, bears S. 26° 02' E., 56 lks. dist.

Thence S. 21° 00' E.

Along line 1-7 of H. E. S. No. 110, Joe Wilkins.

## TAMHO CROOK NATIONAL FOREST

STATE OF ARIZONA

Chains Descend S. slope 50 ft. to Creek.

7.94 Road, bears NE. and SW.

8.94 Sixshooter Creek, 45 lks. wide, banks 2 ft. high,  
course E. Ascend N. slope 50 ft. to cor.

13.75 To cor. No. 3.  
Identical with cor. No. 6 of the list survey, which  
is a granite stone 14 x 6 x 14 ins. above ground  
marked and witnessed as described by the Forest Ser-  
vice, also cor. No. 7, H. E. S. 110. I destroy all  
trace of this list cor. and mark 3-HES158 for cor.  
No. 3 of this survey on the NW. face of the schist  
stone 10 x 8 x 10 ins. above ground which I previously  
set and marked for cor. No. 7, H. E. S. 110, with  
mound of stone 2 ft. base, 1-1/2 ft. high, NE. of  
cor., from which:

- + on a conical gray granite stone, 4 ft. base,  
4 ft. high, marked 7 H E S 110 3 H E S 158  
B R, bears N. 46° 35' E., 120 lks. dist.
- + on an imbedded schist stone, 60 x 36 x 24 ins.  
above ground, marked 7 H E S 110 3 H E S 158  
B R, bears N. 23° 52' W., 17 lks. dist.

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Thence S. 68° 30' W.

Ascend along N. slope in undergrowth, 10 ft. to cor.

48.66 To cor. No. 4.  
Identical with cor. H-5 of the list survey, which is  
an imbedded gray granite boulder 8 x 8 x 6 ft. above  
ground marked and witnessed as described by the For-  
est Service. I destroy all trace of this list cor.  
and mark a cross at the apex of the same stone and  
4-HES158 on the NW. face for cor. No. 4 of this sur-  
vey; and raise a mound of stone 2 ft. base, 1-1/2  
ft. high, S. of cor., from which:

Chains

+ on an imbedded granite boulder 48 x 36 x 48

ins. above ground, marked 4 H E S 158 B R,

bears N. 42° 16' E., 101 lks. dist.

No other bearings available. It was impracticable  
to place the mound in any other position.

October 15, 1914.

October 16, 1914.

Thence S. 32° 38' W.

Along NW. slope in undergrowth to cor.

29.04 To cor. No. 5.

Identical with cor. H-4 of the list survey, which is

a granite stone 14 x 6 x 10 ins. above ground marked

and witnessed as described by the Forest Service. I

destroy all trace of this list cor. and at this point

I set a granite stone 24 x 12 x 6 ins., 14 ins. in the

ground over a small stone marked with a cross for cor.

No. 5 of this survey, marked 5-HES158 on the N. face

and raise a mound of stone 2 ft. base, 1-1/2 ft. high,

N. of cor., from which:

A hackberry 10 ins. dia., bears N. 26° 28' E.,

119 lks. dist., marked 5 H E S 158 B T.

A mesquite 6 ins. dia., bears N. 13° 22' W.

188 lks. dist., marked 5 H E S 158 B T.

Thence N. 38° 21' W.

Descend NW. slope 5 ft. to Creek.

4.25 Sixshooter Creek, 50 lks. wide, banks 1 ft. high, course

NE. Ascend SE. slope 30 ft. to cor.

7.26 To cor. No. 6.

Identical with cor. H-3 of the list survey, which is

a granite stone in place 8 x 14 x 6 ins. above ground

marked and witnessed as described by the Forest Ser-



TRENTON CROOK NATIONAL FOREST

STATE OF ARIZONA

Chains vice. I destroy all trace of this list cor. and at this point I set a porphyry stone 24 x 10 x 6 ins., 14 ins. in the ground over a small stone marked with a cross for cor. No. 6 of this survey, marked 6-HES158 on the E. face and raise a mound of stone 2 ft. base, 1-1/2 ft. high, E. of cor., from which:

- An oak 4 ins. dia., bears N. 37° 27' E. 196 lks. dist., marked 6 H E S 158 B T.
- An oak 4 ins. dia., bears S. 53° E., 82 lks. dist. marked 6 H E S 158 B T.

No other bearings available. Pits impracticable.

Thence N. 33° 33' E.

Descend SE. slope 30 ft. to cor.

5.50 Arroyo, 10 lks. wide, course SE.

29.55 To cor. No. 1 of this survey, the place of beginning.

October 16, 1914.

AREA

Area of Homestead Entry Survey No. 158 -- 70.63 acres.

IMPROVEMENTS.

The improvements made upon and for the benefit of this Homestead Entry and belonging to Charles E. Rubottom, the claimant herein, consist of the following:

A frame stable 12 x 16 ft. the long side of which bears N. and S. and the SE. cor. of which bears N. 64° W. 7.55 chs. dist. from cor. No. 3 of this survey.

Value ----- \$ 25.00

A well 4 x 4 x 30 ft. deep and the center of which bears N. 65° W. 6.76 chs. dist. from cor. No. 3 of this survey.

Value ----- \$150.00

Chains A frame dwelling 12 x 40 ft. the long side of which bears E. and W. and the SE. cor. of which bears N. 70° 30' W. 6.26 chs. dist. from cor. No. 3 of this survey.  
Value ----- \$400.00

A shed 12 x 15 ft. the long side of which bears N. and S. and the SE. cor. of which bears N. 76° 30' W. 6.67 chs. dist. from cor. No. 3 of this survey.  
Value ----- \$ 25.00

GENERAL DESCRIPTION.

This Homestead Entry is on Sixshooter Creek at an elevation of approximately 3,900 feet and is chiefly valuable for grazing and intensive farming. The soil is a sandy loam and no mineral appears upon this claim. Globe Postoffice and A. E. Ry. Station is 4 miles in a northerly direction.

CONFLICTS AND ADJOINING CLAIMS.

This claim is joined on the Northeast by H. E. S. No. 110, Joe Wilkins.

TRAVERSE.

Bearing	Dist.	N	S	E	W
N. 60° 42' E.	50.63	24.78		44.15	
S. 21° 00' E.	13.75		12.84	4.93	
S. 68° 30' W.	48.66		17.83		45.27
S. 32° 38' W.	29.04		24.46		15.66
N. 38° 21' W.	7.26	5.69			4.50
N. 35° 33' E.	29.55	24.63		16.33	
	178.89	55.10	55.13	65.41	65.43
			55.10		65.41
Error in Lat. and Dep.			.03		.02

Closing Error 1:4962.

*Walter G. Purley*  
Surveyor, Forest Service.

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 G. L. O.

4. Only three copies of this tabulation are necessary, for the District Office, the Surveyor General, and the Commissioner.

TABLE AND CALCULATIONS OF HOMESTEAD ENTRY SURVEY NO. 158, STATE OF ARIZONA, Crook-Chas. F. Rubottom

CORNERS.	BEARING.	DISTANCE.	LATITUDES.		DEPARTURES.		DOUBLE M. D.	N. AREAS.	S. AREAS.
			NORTH.	SOUTH.	EAST.	WEST.			
1-2	N. 60° 42' E.	50.63	24.78		44.15		76.82		
2-3	S. 21° 00' E.	13.75		12.84	4.93		125.91	1616.68	
3-4	S. 68° 30' W.	48.66		17.83		45.27	85.58	1525.04	
4-5	S. 32° 38' W.	29.04		24.46		15.66	24.66	603.18	
5-6	N. 38° 21' W.	7.26	5.69			4.50	4.50		
6-1	N. 33° 33' E.	29.55	24.63		16.33		16.33		
		178.89	55.10	55.13	65.41	65.43	2332.35	3744.90	
			55.12	55.12	65.42	65.42	Area	2332.35	
								1412.55	
								70.63	
Closing error 1:4962									T.R.



CROOK NATIONAL FOREST

STATE OF ARIZONA

Chains

Observations of October 15, 1914.

Latitude of Base line  $33^{\circ} 22' 33''$  N. from Special Instructions.  
 Correction for 160.21 chs.  $2' 00''$   
 $33^{\circ} 20' 33''$  N. lat. of place of observation.  
 Long. at S.C. Secs. 34 and 36, T. 1 N., Rs. 15 and 15-1/2 E.  
 $110^{\circ} 44' 31''$  W. from Special Instructions.  
 Correction for 4.49 chs.  $04''$   
 $110^{\circ} 44' 35''$  W. Long at place of observation

Elevation 3,900 ft. coefficient 0.88

Temperature + 55° F. coefficient 0.99

Telescope	Horizontal Angle	Vertical Angle	Apparent Time	Local Mean Time	Pos. Sun
Direct	$61^{\circ} 05' 00''$	$23^{\circ} 59' 30''$	3h 34m 7s	3h 20m 0s	+
Reversed	$60^{\circ} 57' 00''$	$23^{\circ} 56' 00''$	3h 36m 37s	3h 22m 30s	+
	$122^{\circ} 02' 00''$	$47^{\circ} 55' 30''$	7h 10m 44s		
Mean	$61^{\circ} 01' 00''$	$23^{\circ} 57' 45''$	3h 35m 22s		

$0.88 \times 0.99 \times 2' 09'' = 1' 52''$  correction for temperature and elevation.  
 $23^{\circ} 57' 45'' - 0^{\circ} 1' 52'' = 23^{\circ} 55' 53''$  altitude corrected for refraction

Decl. at Greenwich noon apparent time  $8^{\circ} 18' 13.5''$  S.  
 Difference for 1h 21m  $0^{\circ} 10' 11.4''$   
 Decl. of sun at observation  $8^{\circ} 28' 24.9''$

Lat.  $33^{\circ} 20' 33''$  N.

Alt.  $23^{\circ} 55' 53''$

Decl.  $8^{\circ} 28' 25''$

Log. cos. lat.	-9.921894	log. tan. lat.	= 9.818186
log. cos. alt.	-9.960962	log. tan. alt.	= 9.647182
	9.882856	= log.	9.465368
log. sin. decl.	9.168361	-	2919899
log:	9.285505	=	1929770
	Cos. A. =	-	4849669

A =  $60^{\circ} 59' 22''$  Bearing of object S.  $0^{\circ} 01' 38''$  E.

T.A.

Chains

(2)

October 15, 1914.

Long. place of obsn. 110° 44' 35" W.

Lat. place of obsn. 33° 20' 33" N.

See first observation for detailed computations of lat. long., elevation and temperature.

Telescope	Horizontal Angle	Vertical Angle	Apparent Time	Local Mean Time	Pos. Sun.
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Direct	62° 19' 30"	22° 44' 30"	3h 40m 52s	3h 26m 45s	☉
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Reversed	62° 05' 00"	22° 46' 30"	3h 42m 52s	3h 28m 45s	☉
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0.88 x 0.99 x 2' 17" = 1' 59" correction for temperature and elevation.

22° 45' 30" - 1' 50" = 22° 43' 31" correction (alt.) for refraction.

Decl. at Greenwich noon apparent time 8° 18' 13.5" S.

Correction for 11.0801 h. 10' 16"

Decl. of sun at observation 8° 28' 29.5" S.

lat. 33° 20' 33" N.

alt. 22° 43' 31"

decl. 8° 28' 29.5" S.

Cos. A. =  $\frac{\sin. decl.}{\cos. lat. \cos. alt.}$  - tan. lat. tan. lat.

log. cos. lat. 9.921894

log. cos. alt. 9.964904

9.886798

log. tan. lat. 9.818186

log. sin. decl. 9.168425

9.281627 = -.191261 log. tan. alt. 9.622036

-.275564 = log 9.440222

Cos. A. -.466825

A. 62° 10' 17" Bearing of object S. 0° 01' 58" E.

T.A.

APPROVAL

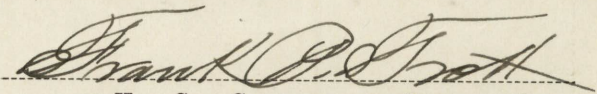
Office of the United States Surveyor General,

Phoenix, Arizona, March 28, 1916 .

The foregoing field notes of Homestead Entry Survey No.

158

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executed by Walter G. Turley, Surveyor-Forest Service  
under his special instructions, dated December 4, 1913,  
having been critically examined, and the necessary correc-  
tions 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 Arizona,  
has been correctly copied from the original notes on file in  
this office.

Frank P. Trott  
U. S. Surveyor General.