

2404

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FEB 13 1911

Book B.

BOOK 2404

FIELD NOTES

OF THE SURVEY OF THE

East Boundary T1N R15 1/2 E

North Boundary T1N R15 1/2 E

North Boundary T1N R16 E

Of the G. S. B. B. + Meridian,

Arizona

AS SURVEYED BY

Peace C. Ham, United States Deputy Surveyor,

Under his Contract No. 162, dated January 5, 1910

Survey commenced November 16, 1910

Survey completed November 22, 1910

NAMES AND DUTIES OF ASSISTANTS.

Arthur M. Pogue Chairman

Percy Bell Chairman

Jose Ortega Chairman

Philip Bell Flagman

BOOK 2404

INDEX DIAGRAM.

Township 1 N, Range S 15 1/2 + 16 E

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PRELIMINARY OATHS OF ASSISTANTS.

WE, Percy Bell and Arthur M. Bogue do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain upon even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of T. N. R. 15 1/2 + 16 E

Percy Bell, Chainman.
Arthur M. Bogue, Chainman.

Subscribed and sworn to before me this 16 day of November, 1910



Wesley A. Kern
U.S. Deputy Surveyor

WE, Joe Ortega and _____ do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of T. N. R. 15 1/2 + 16 E

Joe Ortega, Moundman.
_____, Moundman.

Subscribed and sworn to before me this 16 day of November, 1910



Wesley A. Kern
U.S. Deputy Surveyor

WE, _____ and _____ do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of _____

_____, Axman.
_____, Axman.

Subscribed and sworn to before me this _____ day of _____, 19____



I, Philip Bell, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me; to the best of my skill and ability, in the survey of T. N. R. 15 1/2 + 16 E

Philip Bell, Flagman.

Subscribed and sworn to before me this 16 day of November, 1910



Wesley A. Kern
U.S. Deputy Surveyor

East Boundary of Township 1 North, Range 15½ East.

1 D

Chains	
	Survey commenced November 16, 1910, and executed with a Young & Sons light mountain transit, No. 5609, equipped with a Smith solar attachment, the horizontal limb being provided with two opposite verniers reading to 1' of arc, which is also the least count of the verniers of the latitude and declination arcs.
	At the standard corner of township 1 north, ranges 15 and 15½ east, I tested the instrument and found it to be in satisfactory adjustment on November 10, 1910.
	November 16, 1910, I set 18°37'5" on the decl. arc; 33°23' on the lat. arc, at the standard cor. of Tps. 1 N., R. 15½ & 16 E., which I established November 12, 1910
	Thence I run
	N. bet. secs. 31 and 36
	Over mountainous land
3.00	Top, ridge, descend; brs. E., and W.
6.00	Bottom, gulch, 50 lks. wide, 50 ft. below ridge, brs. N.E.; ascend
11.00	Top, ridge, 45 ft. above gulch, brs. N.E. and S.W.; descend over rough ground
18.00	Bottom, gulch, 45 lks. wide, brs. E., 60 ft. below ridge; ascend
22.00	Top, ridge, brs. E., 40 ft. above gulch; descend
28.00	Bottom, wash, 25 lks. wide, brs. S.E., 30 ft. below ridge; ascend
32.00	Top, ridge, 40 ft. above gulch, brs. S.E.; descend
33.50	Bottom, gulch, 10 lks. wide, brs. N.E., 20 ft. below ridge; ascend
38.00	Top ridge, brs. E., 25 ft. above gulch; descend
40.00	Set a granite stone 18x6x6 ins., 14 ins. in the ground, for ¼ sec. cor., marked ¼ on W. face. Raise mound of stone 2 ft. base 1½ ft. high W. of cor.; from which
	A palo cristo 4 ins. diam., brs. N. 21°40' W., 1.78 chs. dist marked ¼ S 36 B T
	No other tree available.
41.00	Bottom, gulch, 20 lks. wide, brs. S.E.; ascend
42.50	Top ridge, 30 ft. above gulch, brs. S.E. & N.W.; descend
43.00	Gulch, 20 lks. wide, brs. N.E., 40 ft. below ridge; ascend
44.00	Top ridge, brs. E. & W., 30 ft. above gulch; descend
45.00	Gulch, 40 lks. wide, brs. E., 15 ft. below ridge; ascend
50.00	Top ridge, brs. E and W., 50 ft. above gulch; descend
52.50	Gulch, 10 lks. wide, brs. E., 20 ft. below ridge; ascend
53.00	Top ridge, brs. E and W., 10 ft. above gulch; descend
55.73	Gulch, 10 lks. wide, brs. NE, 25 ft. below ridge; ascend
56.30	Top ridge, brs. E. and W., 20 ft. above gulch; descend
63.00	Bottom, gulch, 25 lks. wide, brs. E., 50 ft. below ridge; ascend
64.70	Top ridge, brs. E and W., 20 ft. above gulch; descend
69.00	Steep descent to wash
72.44	Bottom wash, 50 lks. wide, brs. N.E., 75 ft. below ridge; descend along bed of wash, through dense mesquite and catclaw
74.00	Leave dense mesquite and catclaw.
74.83	Wagon road, Globe to Cutter, brs NE and SW
75.10	Wash, 10 lks. wide, brs. NW.
77.47	Same wash, brs. SE; ascend.
80.00	Top of ascent, ridge brs. E and W., 75 ft. above wash
	Set a porphyry, 18x8x6 ins., 14 ins. in the ground for cor. secs. 25, 30, 31 and 36, marked 1 notch on S. edge, 5 notches on N. edge. Raise mound of stone 2 ft. base 1½ ft. high W. of cor.; from which
	A Palo Cristo, 4 ins. diam., brs. N. 22° W., 54 lks. dist., marked T 1 N. R 15½ E S 25 B T
	No other trees available.
	Land, mountainous.
	Soil, stony and gravelly; 3rd and 4th rate.
	Timber, none.
	Undergrowth, scattered, bear grass, Spanish bayonet, sotol, catclaw and palo verde
	Mountainous land, exceptionally difficult to survey, 80 chs.

	November 16, 1910; At 11h 45m a.m., 1.m.t., I set 18°39'30" on the decl. arc, I observe the sun on the meridian, and obtain on the lat. arc, the reading 32°24' N. which agrees with the other data.

S.

Chains, N. bet. secs. 25 and 30

- Over mountainous land
- 3.90 Bottom wash, 40 lks. wide, brs. NE, 65 ft. below ridge; ascend
- 7.55 Top ridge, brs. SE, 75 ft. above wash; descend
- 10.00 Bottom gulch, 10 lks. wide, brs. SE, 56 ft. below ridge; ascend
- 13.00 Top ridge, brs. SE, 35 ft. above gulch; descend
- 15.20 Bottom gulch, 10 lks. wide, brs. E., 25 ft. below ridge; ascend
- 18.00 Top ridge, brs. E and W., 20 ft. above wash; descend
- 21.50 Bottom gulch, 20 lks. wide, brs. E., 25 ft. below ridge; descend
- 23.00 Wash, 30 lks. wide, brs. S.E.; descend through dense mesquite and catclaw.
- 27.00 Leave dense mesquite and catclaw. Enter valley.
- 27.26 Road, Globe to Copper Hill, brs. N. 35°W and S. 35°E.
- 28.40 Main channel wash, 40 lks. wide, brs. S. 35°E.
- 31.50 North channel, same wash, brs. SE.
- 33.00 Corral, 5 chs. W.
- 35.00 Begin steep ascent.
- 38.00 Top of N. bank, 75 ft. above wash; ascend
- 40.00 Set a porphyry stone 18x8x6 ins., 14 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face. Raise mound of stone 2 ft. base $1\frac{1}{2}$ ft. high W. of cor.
Magnetic declination N. 14° 15' E.
- 48.50 Top of ascent, 50 ft. above $\frac{1}{4}$ cor.; descend
- 55.00 Bottom; ascend
- 70.00 Top; descend through dense Palo Cristo and mesquite.
- 75.00 Leave dense Palo Cristo and mesquite.
- 80.00 Set a schist stone 18x10x6 ins., 14 ins. in the ground, marked, 2 notches on S. edge, 4 notches on N. edge, for cor. secs. 19, 24, 25 and 30; and raise mound of stone 2 ft. base, Land, mountainous. ($1\frac{1}{2}$ ft. high, W. of cor.
Soil, gravelly, sandy and rocky; 2nd, 3rd and 4th rate.
Timber, none.
Undergrowth, scattered bear grass, Spanish bayonet, scrub mesquite and Palo Cristo.
Mountainous land, exceptionally difficult to survey, 40 chs
Mountainous land, 40 "
Magnetic ~~variation~~ declination N. 14° 15' E.

N. bet. secs. 19 and 24

- 3.00 Top of ascent, 30 ft. above sec. cor.; descend
- 6.00 Gulch, 20 lks. wide, brs. SE, 30 ft. below top; ascend
- 22.00 Top of ascent, S. rim of rolling mesa; ascend
- 40.00 Set a porphyry stone 18x8x6 ins., 14 ins. in the ground, marked $\frac{1}{4}$ on W. face. Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor.
Magnetic declination N. 14° 15' E.
- 45.45 N. rim of mesa; descend
- 49.40 Bottom gulch, 20 lks. wide, brs. SE, 40 ft. below rim; ascend
- 52.00 Top ridge, brs. SE and NW 25 ft. above gulch; descend
- 72.20 Gulch, 10 lks. wide, brs. E., 75 ft. below ridge; ascend
- 80.00 Set a quartz stone 18x10x6 ins., 14 ins. in the ground, for cor. secs. 13, 18, 19 and 24, marked with 3 notches on N. edge, 3 notches on S. edge, 1 N on NE face, $15\frac{1}{2}$ E on SW face. Raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high W. of cor. Magnetic declination N. 14° 15' E.
- Land, mountainous and rolling.
Soil, gravelly and adobe clay.
Timber, none.
Undergrowth, scattered palo verde and catclaw,
Mountainous land, 56.55 chs.

November 16, 1910.

- N. bet. secs. 13 and 18. Ascending over rolling mesa
- 40.00 Set a quartz stone, 18x12x10 ins.; 14 ins. in the ground, marked $\frac{1}{4}$ on W. face. Raise mound of stone 2 ft. base $1\frac{1}{2}$ ft. high. Magnetic declination N. 14° 15' E.
N. 60° W., 6 chs. to frame shack, unoccupied.

East Boundary of Township 1 North, Range 15¹/₂ East 3

Chains.	November 17, 1910: at 9h 10m a.m., l.m.t., I set $18^{\circ}52'S$. the decl. arc; $33^{\circ}26'$ on the lat. arc, and run N. from $\frac{1}{4}$ cor. ascending over rolling mesa
78.00	N. rim of mesa, brs. NW and SE; descend to wash
80.00	Set a quartz stone 24x12x6 ins., 18 ins. in the ground, for cor. secs. 7, 12, 13 and 18, marked 4 notches on S. edge, 2 notches on N. edge 1 N on NE face, $15\frac{1}{2}$ E on SW face. Raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high W. of cor. Magnetic declination N. $14^{\circ}15'$ E. Land, rolling. Soil, clay and gravel; 2nd and 3rd rate. Timber, none.

8.00	N. bet. secs. 7 and 12; descending to wash Bottom W. bank of wash, 60 ft. below sec. cor.; gradually ascend along wash through dense mesquite, catsclaw and broom weeds and willow
8.65	Open cut 30 lks. W. of line.
12.00	Center of W. channel of wash, brs. SE, 1.50 lks. wide
15.25	Cross same channel, brs. SW. Descend along W. bank of wash
29.00	Leave W. bank of wash. Ascend E. slope
31.40	Open cut, 6x10 ft. on line.
31.50	Open cut, 6x10 ft., 20 lks. W. of line.
37.67	Wagon road, brs. N. $44^{\circ}E$ and S. $44^{\circ}W$. Leave dense undergrowth Descend
40.00	Set a quartz stone 15x10x6 ins., 12 ins. in the ground, for $\frac{1}{4}$ Sec. cor. marked $\frac{1}{4}$ on W. face. Raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high W. of cor. November 17, 1910: I set off $18^{\circ}54'$ on the decl. arc; and at 11h 45m a.m., l.m.t., observe the sun on the meridian, and obtain on the lat. arc, the reading $33^{\circ}27'N$, which agrees with other data.
40.20	Bottom gulch, 20 lks. wide, course E.
51.50	Gulch, 30 lks. wide, brs. E. Ascend
52.30	Top ridge, brs. SE and NW. Descend
53.50	Bottom W. bank of wash, brs. S. Ascend along wash through dense catsclaw and willow broom.
58.00	Main channel of wash, brs. SE
68.00	E. channel of wash, 40 lks. wide, brs. SW
76.00	W. channel of wash, 40 lks. wide, brs. S.
79.90	Wagon road, brs. NW and SE
80.00	Point for cor. secs. 1, 6, 7 and 12 falls in main channel of wash.
82.50	Set a quartz stone, 15x8x8 ins., 12 ins. in the ground, marked 5 notches on S. edge, 1 notch on N. edge. WC 1 N on SW face $15\frac{1}{2}$ E on SE face. Raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high W. of cor. For wit. cor. secs. 1, 6, 7 and 12 Magnetic declination N. $14^{\circ}15'$ E. Land, rolling Soil, gravelly and rocky; 2nd, 3rd and 4th rate Timber, none. Undergrowth, dense mesquite, catsclaw, Willow broom in washes Land exceptionally difficult to survey. 57.15 chs.

	From true point for cor. of secs. 1, 6, 7 and 12. N. bet. secs. 1 and 6.
2.50	Leave main channel of wash, brs. SE. and Witness cor.
12.00	Cross main channel of wash, 50 lks. wide, brs. SW.
35.00	Center of main channel of wash, 50 lks. wide, brs. SE.
40.00	Set a quartz stone 15x6x6 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face. Raise mound of stone 2 ft. base $1\frac{1}{2}$ ft. high. W. of cor.
47.00	Main channel wash, 50 lks. wide, brs. SW.
55.00	Main channel wash, 50 lks. wide, brs. SE.
65.80	Leave wash. Ascend. Leave dense undergrowth
76.00	Top ridge, brs. W., 50 ft. above wash; Descend.
77.00	Gulch, 40 lks. wide, brs. SW., 25 ft. below ridge. Ascend along SW. slope.

East Boundary of Township 1 North, Range 15 1/2 East

4

Chains
80.00

Set a quartz stone, 24x12x6 ins., 18 ins. in the ground, for township corner, Tps. 1 and 2 N., Rs. 15 1/2 and 16 E.; mark 6 notches on N., S., E. and W. edges 2 N on NE face, 16 E on SE face, 1 N on SW face, 15 1/2 E on NW face. Raise a mound of stone 2 ft. base 1 1/2 ft. high S. of cor.

Magnetic variation N. 14° 15' E.

Land, rolling and mountainous
Soil, sandy, gravelly and rocky; 2nd, 3rd and 4th rate.
Timber, none.

Undergrowth, mesquite, catclaw and broom willow in washes

Land exceptionally difficult 65.80 chs.
Land mountainous 14.20 "

November 17, 1910.

North Boundary of Township 1 North, Range 15 1/2 East.

November, 18, 1910: At 9h a.m., l.m.t., I set off 19°07'S on the decl. arc, 33°28'N on the lat. arc, and determine a true meridian with a solar at the cor. of Tps. 1 and 2 N., Rs. 15 1/2 and 16 E.

Thence I run

West on a random line along the N. bdy. of Tp. 1 N., R. 15 1/2 E. setting temporary 1/4 sec. cors. at intervals of 40 chs.; and at 239.67 chs. intersect Tp. bdy. 3.92 chs. N. of cor. of Tps. 1 and 2 N., Rs. 15 and 16 E., which is a granite rock 6x14x14 ins., 14 ins. in the ground above ground, marked and witnessed as described by the Surveyor General. The falling being greater than the allowable limits for closing therefore

Set a quartz porphyry rock 24x12x12 ins., 18 ins. in the ground, for closing cor. Tps. 1 and 2 N., R. 15 1/2 East, marked C C 15 1/2 E. on E. face, 2 N. on N. face, 1 N. on the S. face, 6 grooves on the N., E. and S. faces. Raise a mound of stone 2 ft. base 1 1/2 ft. high E. of cor.

I change the cors. of Tps. 1 and 2 N., Rs. 15 and 16 E., to refer to Tps. 1 and 2 N., R. 15 E.

November 18, 1910.

November 19, 1910: At 9h a.m., l.m.t., I set off 19°21'S on the decl. arc, 33°28'N on the lat. arc; and determine a true meridian with the solar at the closing cor. of Tps. 1 and 2 N., R. 15 1/2 E., recently established by me.

Thence I run

E. on a true line bet. secs. 3 and 34

Over mountainous land, descending

8.17 Bottom gulch, 40 lks. wide, brs. N.E., 100 ft. below closing cor
Ascend

11.67 Top slope. Descend

17.60 Saddle on N. slope. Ascend

33.00 Top ridge, brs. E. and W., 100 ft. above saddle. Descend

39.67 Set a quartz stone, 15x12x10, 10 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face. Raise mound of stone 2 ft. base 1 1/2 ft. high N. of cor.

52.60 Bottom wash, 15 lks. wide, brs. SW, 125 ft. below ridge

56.00 Ascend.

63.00 Top of ascent on S. slope, 90 ft. above wash. Descend

67.70 Gulch, 30 lks. wide, brs. SW, 50 ft. below ridge. Ascend along S. slope

79.67 Set a quartz stone 18x6x6 ins., 14 ins. in the ground, marked for cor. secs. 2, 3, 34 and 35, marked with 2 notches on E. edge; 4 notches on W. edge. Raise mound of stone 2 ft. base 1 1/2 ft. high W. of cor.

Magnetic declination N. 14° 15' E.

Land, mountainous.
Soil, rocky and gravelly; 4th and 5th rate.
Timber, none.

Undergrowth, scrub oak and mesquite.

Mountainous land exceptional difficulties, 79.67 chs.

Chains.

E. bet. secs. 2 and 35.
 Over mountainous land, descending
 9.90 Wagon road, brs. NE and SW
 12.00 Bottom gulch, 30 lks. wide, brs. N and S, 200 ft. below sec. cor.
 Ascend
 17.00 Top small ridge, brs. N and S, 100 ft. above gulch. Descend
 19.00 Gulch, 20 lks. wide, brs. SW, 40 ft. below ridge. Ascend along
 SW slope of Mt. Fame.
 40.00 Set a quartz stone 18x8x6 ins., 14 ins. in the ground, for
 ¼ sec. cor., marked ¼ on N. face. Raise mound of stone
 2 ft. base 1½ ft. high N. of cor.
 0.00 Magnetic declination N14° 15' E.
 42.60 Small gulch, 10 lks. wide, brs. SW.
 49.75 Gulch, 25 lks. wide, brs. SW
 58.50 Shaft, 8x6x4 ft. 30 lks. N. of line
 62.00 Top of saddle in S. ridge of Mt. Fame, 800 ft. above ¼ cor.
 Descend
 73.50 Gulch, 40 lks. wide, brs. SE
 80.00 Set a limestone rock 15x8x8 ins., 10 ins. in the ground,
 for sec. cor. secs. 1, 2, 35 and 36, marked 1 notch on E. edge;
 5 notches on W. edge; 2 N. on NE face; 15½ E on SE face;
 1 N on SW face. Raise mound of stone 2 ft. base 1½ ft.
 high W. of cor.
 Magnetic declination N. 14° 15' E.
 Land, mountainous
 Soil, rocky; 5th rate
 No timber.
 No underbrush.
 Mountainous land, exceptional difficulties, 80 chs.

November 19, 1910: I set off 19° 23' S on the decl. arc; and at
 11A. 46m. a.m., l.m.t., observe the sun on the meridian, and
 obtain on the lat. arc, the reading 33° 28' N., which agrees
 with other data.

Thence I run

E. bet. secs. 1 and 36
 Over mountainous land, ascending
 2.50 Wagon road, Fame mine to Globe, brs. N and S
 7.00 Top ridge, brs. NW and SE, 300 ft. above sec. cor. Descend
 26.00 Sandstone bluff, 25 ft. high.
 29.00 Foot of Mt. fame, 900 ft. below top of ridge.
 30.00 Center of canyon, 4 chs. wide, brs. SW. Ascend
 32.00 Bluff, 40 ft. high
 40.00 Set a quartz stone 15x8x8 ins. 10 ins. in the ground, for
 ¼ sec. cor., marked ¼ on N. face. Raise mound of stone
 2 ft. base 1½ ft. high N. of cor. 300 ft. above canyon.
 Magnetic declination N14° 15' E.
 44.00 Top of ridge, brs. NE and SW, 100 ft. above ¼ cor. Descend
 53.00 Gulch, 40 lks. wide, brs. SW, 150 ft. below ridge. Ascend
 64.50 Top ridge, brs. NE and SW, 175 ft. above gulch. Descend
 73.00 Bottom wash, brs. SW, 100 ft. below ridge
 73.30 Wire fence, brs. Ne and SW
 73.60 Wagon road, brs. Ne and SW
 76.40 Main channel wash, 40 lks. wide, brs. SW. Ascend
 80.00 The cor. of Tps. 1 and 2 N., Rs. 15½ and 16 E., previously described
 Land, mountainous.
 Soil, rocky; 4th and 5th rate
 Timber, none.
 Undergrowth, scattered scrub oak and mesquite.
 Mountainous land, exceptional difficulties, 80 chs.
 November 19, 1910.

Latitudes, departures and closing errors:

Line Designated	True Bearing	Dist	Latitudes		Departures	
			N.	S.	E.	W.
		Chs.	Chs.	Chs.	Chs.	Chs.
Base Line	West	240.00	.....	.....	.....	240.00
W.Bdy.T.1 N						
R. 15 $\frac{1}{2}$ E.	N.0° 4'E	39.95	39.95	.....	0.05	.....
"	N.0° 5'E	39.97	39.97	.....	0.06	.....
"	North	40.02	40.02	.....	.....	.....
"	North	40.00	40.00	.....	.....	.....
"	N.0° 2'E	39.53	39.53	.....	0.02	.....
"	N.0° 3'E	39.47	39.47	.....	0.03	.....
"	N.0° 13'W	38.87	38.87	.....	.....	0.15
"	N.0° 5'E	39.91	39.91	.....	0.06	.....
"	N.0° 3'W	40.00	40.00	.....	.....	0.03
"	North	40.00	40.00	.....	.....	.....
"	N.0° 5'E	39.95	39.95	.....	0.06	.....
"	N.0° 5'W	39.28	39.28	.....	.....	0.06
N.Bdy.T.1 N						
R. 15 $\frac{1}{2}$ E.	East	239.67	.....	.....	239.67	.....
E.Bdy.T.1 N						
R. 15 $\frac{1}{2}$ E.	South	480.00	.....	480.00	.....	.....
Convergency	.....	.....	.....	.....	0.24	.....
Totals	.....	.....	480.87	480.00	240.19	240.24
			480.00	.....	.....	240.19
Error in Lat.			0.87	Error in Dep.	0.05	

GENERAL DESCRIPTION.

The township is rough and mountainous. High peaks on the west and north, cut by high ridges on south and interior sections. Drainage in northern part is southeast and southwest; in southern portion northeast and southeast. Two small areas of mesa land along west boundary. Water in large wash running southeast through center of township is derived from neighboring mines. No timber. Soil along big wash is fertile.

Russell Ham

U.S. Deputy Surveyor

November 19, 1910.

North Boundary of Township 1 North, Range 16 East.

7

Chains. Survey commenced November 22, 1910, and executed with a Young & Sons light mountain transit, No. 5609, equipped with a Smith solar attachment, the horizontal limb being provided with two opposite verniers reading to 1' of arc, which is also the least count of the verniers of the latitude and declination arcs.

I examine the adjustments of the transit, and correct the level and collimation errors.

November 20, 1910, at the standard corner of township 1 North, ranges 15 and 15½ East, I tested the instrument, and found it to be in satisfactory adjustment.

November 22, 1910, I set off 20°01½' on the decl. arc; 33°28' N. on the lat. arc; and at 9h a.m., l.m.t., determined a true meridian with the solar at the cor. of Tps. 1 and 2 N., Rs. 15½ and 16 E.

Thence I run

E. on a true line, bet. secs. 6 and 31.

Ascending over mountainous land.

3.90 Gulch, 30 lks. wide, brs. SW. Ascend

11.50 Top ridge, brs. NE and SW, 300 ft. above Tp. cor. Descend

18.75 Gulch, 20 lks. wide, brs. SW, 200 ft. below ridge. Ascend

26.30 Gulch, 10 lks. wide, brs. SW. Ascend

36.00 Top ridge, brs. NW and SE, 400 ft. above gulch. Ascend

40.00 Cross (X) on top of limestone ledge in place, 18x18 ins. x 12 ft. long, for ¼ sec. cor, marked ¼ on N. face; and raise a mound of stone 2 ft. base 1½ ft. high N. of cor.

Magnetic declination, N. 14° 15' E.

46.50 Top ridge, brs. NE and SW. Descend along SE slope

58.10 Bottom, wash, 40 lks. wide, brs. SW, 700 ft. below ridge. Ascend

76.00 Top N. slope, 600 ft. above gulch. Descend

80.00 On E. slope, 150 ft. below top, set a porphyry stone, 18x6x6 ins., 14 ins. in the ground for cor. secs. 5, 6, 31 and 32, marked 1 notch on W. edge; 5 notches on E. edge; 2 N on NE face; 1 N on SE face; 16 E on SW face; and raise a mound of stone 2 ft. base 1½ ft. high W. of cor.

Magnetic declination, N. 14° 15' E.

Land, mountainous.

Soil, rocky; 4th and 5th rate.

No timber.

Undergrowth, scrub palo verde, mesquite and catclaw.

Mountainous land, exceptional difficulties, 80 chs.

November 22, 1910: I set off 20°03' on the decl. arc; and at 11h 47m a.m., l.m.t., observe the sun on the meridian, and obtain on the lat. arc, the reading 33° 28' N.

Thence I run

E. on a true line, bet. secs. 5 and 32

Descending over mountainous land.

3.22 Bottom, gulch, 15 lks. wide, brs. NW, 300 ft. below sec. cor. Ascend

16.00 Top ridge, brs. N and S, 500 ft. above gulch. Descend

18.82 Intersect W. bdy. of White Mountain Indian Reservation, N. 8°21'E., 2 chs. from 58½ mile cor., which is a limestone, 13x11x6 ins. above ground, marked and witnessed as described by the Surveyor General.

Set a limestone, 18x12x8 ins., 14 ins. in the ground, for closing cor. of Tps. 1 and 2 N., R. 16 E., marked C C 16 E on W. face; W M I R W B on E. face; 1 N on S face; 2 N on N face; and raise a mound of stone 2 ft. base 1½ ft. high W. of cor.

Magnetic declination, N. 14° 15' E.

Land, mountainous.

Soil, rocky; 4th and 5th rate.

No timber.

Undergrowth, scattered scrub mesquite and catclaw, Spanish bayonet and nopal.

Mountainous land, exceptional difficulties, 18.82 chs.

November 22, 1910.

Latitudes, departures and closing errors.

Line Designated	True Bearing	Dist	Latitudes		Departures	
			N.	S.	E.	W.
		Chs.	CHS.	Chs.	Chs.	Chs.
Base Line	West	28.19	.....	.....	.....	28.19
W.Bdy.T.1 N. R. 16 E.	North	480.00	480.00	.....	.....	.....
N.Bdy.T.1 N. R. 16 E.	East	98.82	.....	.....	98.82	.....
W.Bdy.W.M. I. R.	S.8°21'W	484.43	.....	479.29	.....	70.35
Totals.....			480.00	479.29	98.82	98.54
			479.29	.....	98.54	.....
Error in Lat			0.71	in Dep	0/28	

GENERAL DESCRIPTION.

This township is rough and mountainous. There are small areas of mesa lands in central portion. No water. No timber.

Roscoe Klein
U.S. Deputy Surveyor.

November 22, 1910.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by Roscoe Kern, United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of T1N R15 1/2 E showing the respective capacities in which they acted:

- Percy Bell, Chairman.
- Arthur A. Pogue, Chairman.
- José Ortega, Moundman.
- _____ , Moundman.
- _____ , Axman.
- _____ , Axman.
- Phil Bell, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Roscoe Kern, United States Deputy Surveyor, in surveying all those parts or portions of the East boundary T1N R15 1/2 E
N boundary T1N R15 1/2 E
N boundary T1N R16 E of the _____

G+SP R+ meridian, of Arizona, which are represented in the foregoing 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

- Percy Bell, Chairman.
- Arthur A. Pogue, Chairman.
- José Ortega, Moundman.
- _____ , Moundman.
- _____ , Axman.
- _____ , Axman.
- Philip Bell, Flagman.

Subscribed and sworn to before me this 2nd day of December, 1910



Roscoe Kern
U.S. Deputy Surveyor

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Roscoe Ham, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank S. Ingalls United States Surveyor General for Arizona, bearing date of the 5th day of Jan, 1912 I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for Arizona, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of T1N R15 1/2 E 16 E

of the G. & S. R. Meridian meridian, in the Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Roscoe Ham
United States Deputy Surveyor.

Subscribed by said Roscoe Ham, and sworn to before me
this 6 day of December, 1910

W. H. ...
W. H. ...



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz. MAY 14, 1913

The foregoing field notes of the survey of the North Boundary of fractional T1N R15 1/2 E and West and North Boundaries of fractional T1N R16 E. of the Gila and Salt River Base and Meridian, Arizona

executed by Roscoe Ham U.S.D.S.
under his contract No. 162, dated Jan, 1910, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank S. Ingalls
United States Surveyor General.

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

United States Surveyor General.