

2408

Ordered filed S. L. O. letter "E" Sept. 6, 1913.
4-679.

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MAY 24 1911

Book I

BOOK 2408

FIELD NOTES

OF THE SURVEY OF THE

West Boundary, East Boundary and
North Boundary T21N R11W.

Of the G. S. & B. Co. Meridian,

Arizona

AS SURVEYED BY

Roscoe H. Sam

, United States Deputy Surveyor,

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

Survey commenced Feb 21, 1911

Survey completed Mar 2, 1911

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BOOK 2408

NAMES AND DUTIES OF ASSISTANTS.

<u>Arthur D. Taylor</u>	<u>Secretary</u>
<u>Elmer Yarny</u>	<u>Chairman</u>
<u>Alfred Murphy</u>	<u>President</u>
<u>E. B. Green</u>	<u>Assessor</u>
<u>W. H. Weston</u>	<u>Recorder</u>
<u>W. E. Conroy</u>	<u>Agent</u>

BOOK 2408

INDEX DIAGRAM.

Township 21N, Range 11W

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PRELIMINARY OATHS OF ASSISTANTS.

WE, Arthur M. Pogue and Elmer Young
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
12 N. Hill

Arthur M. Pogue, Chainman.
Elmer Young, Chainman.

Subscribed and sworn to before me this 19
day of February, 1911



Roswell Horn
U.S. Deputy Surveyor

WE, Albert Murphy and R. J. Martin
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
12 N. Hill

Albert Murphy, Moundman.
R. J. Martin, Moundman.

Subscribed and sworn to before me this 19
day of Feb, 1911



Roswell Horn
U.S. Deputy Surveyor

WE, N. B. Tyree 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
12 N. Hill

N. B. Tyree, Axman.
N. B. Tyree, Axman.

Subscribed and sworn to before me this 7
day of Feb, 1911



I, W. E. Anderson, 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
12 N. Hill

W. E. Anderson, Flagman.

Subscribed and sworn to before me this 19
day of Feb, 1911



Roswell Horn
U.S. Deputy Surveyor

Chains.	<p>Survey commenced February 21, 1911, and executed with a Young & Sons light mountain transit, No. 5609, the horizontal limb being provided with two opposite verniers reading to single minutes of arc, equipped with a Smith solar attachment.</p> <p>The adjustment of the instrument being satisfactory from the solar and Polaris observations determined at the $\frac{1}{4}$ Std. Cor. of Sec. 31, Tp. 21 N., R. 10 W., February 19 and 20, 1911, therefore at the Std. cor. of Tps. 21 N., Rs. 10 & 11 W previously describ. at 8 a.m., l.m.t., I set off $10^{\circ} 46' S$ on the decl. arc; $35^{\circ} 10' N$ on the lat. arc; and determine a meridian with the solar.</p> <p>Thence I run</p> <p>North, bet. secs. 31 and 36</p> <p>Over mountainous land, descending 700 ft.</p> <p>22.00 Leave steep descent; descend gradually through dense scrub oak and cedar along bottom of ravine.</p> <p>37.00 Wash, 20 lks. wide, course NE.</p> <p>39.50 Leave dense undergrowth; wash 20 lks. wide, course W.</p> <p>40.00 Set a granite stone, 20x10x6 ins. 15 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which</p> <p style="padding-left: 2em;">A cedar, 36 ins. diam., brs. S. $74^{\circ} 45' W.$, 263 lks. dist., marked $\frac{1}{4}$ S 36 B T</p> <p style="padding-left: 2em;">A cedar, 12 ins. diam., brs. N. $35^{\circ} 36' E.$, 218 lks. dist., marked $\frac{1}{4}$ S 31 B T</p> <p style="padding-left: 4em;">Variation, N. $15^{\circ} E.$</p> <p>44.00 Leave bottom, ascend over granite boulders.</p> <p>47.40 Top of granite ridge, brs. E and W; descend through dense oak brush.</p> <p>58.00 Top of spur on W. slope; descend</p> <p>63.00 Bottom of ravine, 20 lks. wide, course NE; ascend</p> <p>65.00 Top of E. slope of ridge; descend along E. slope of granite ridge covered with boulders.</p> <p>76.00 Bottom of ravine, 30 lks. wide, course NE; ascend</p> <p>80.00 Set a granite stone, 18x8x6 ins., 12 ins. in the ground for cor. of secs. 25, 30, 31 and 36, marked with 1 notch on S. edge; 5 notches on N. edge; from which</p> <p style="padding-left: 2em;">A cedar, 5 ins. in diam., brs. S. $41^{\circ} 03' E.$, 117 lks. dist., marked T 21 N R 10 W S 31 B T</p> <p style="padding-left: 2em;">A cedar, 6 ins. diam., brs. S. $28^{\circ} 00' W.$, 65 lks. dist., marked T 21 N R 11 W S 36 B T</p> <p style="padding-left: 2em;">A cedar, 9 ins. diam., brs. N. $17^{\circ} 16' W.$, 32 lks. dist., marked T 21 N R 11 W S 25 B T</p> <p style="padding-left: 2em;">A cedar, 24 ins. diam., brs. N. $61^{\circ} 35' E.$, 128 lks. dist., marked T 21 N R 10 W S 30 B T</p> <p>Land, mountainous.</p> <p>Soil, rocky; 3rd and 4th rate.</p> <p>Timber, cedar.</p> <p>Undergrowth, scrub oak.</p> <p>Mountainous land, steep ascents and descents, covered with boulders and rocks or land covered with dense undergrowth, and exceptionally difficult to survey, 80.00 chs.</p> <hr style="border-top: 1px dashed black;"/> <p>North, bet. secs. 25 and 30.</p> <p>Over mountainous land, ascending through dense cedar and heavy scrub oak.</p> <p>3.00 Top of spur, brs. E and W; descend</p> <p>13.00 Enter bottom; ravine, 20 lks. wide, course E.</p> <p>23.00 Leave bottom, ascend over large granite boulders with great difficulty.</p> <p>34.00 Top of ridge, 150 ft. above ravine, brs. E and W; descend</p>
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East Boundary of T. 21 N., R. 11 W.

Chains.	
40.00	Foot of N. slope of ridge, 175 ft. below ridge, among granite boulders. Set a granite stone, 30x15x4 ins., 22 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which A cedar, 10 ins. diam., brs. N. 15° 47' W., 265 lks. dist., marked $\frac{1}{4}$ S 25 B T A cross (X) on a granite boulder, 12x10x15 ft. high, brs. N. 59° 14' E., 47 lks. dist., marked $\frac{1}{4}$ S 30 B O Variation N. 15° E. February 21: At this $\frac{1}{4}$ sec. cor., I set off 10° 44' S on the decl. arc; and at 12h 14m p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 35° 11' N
46.00	Enter bottom, brs. NE and SW
67.55	36 in. cedar on line.
68.00	Leave bottom; ascend
70.50	Two large granite boulders on line; descend
76.00	Enter bottom; leave dense cedar and scrub oak.
80.00	Set a granite stone, 18x8x6 ins., 12 ins. in the ground for cor. of secs. 24, 25, 19 and 30, marked with 2 notches on S. and 4 notches on N. edges; dig pits 18x18x12 ins., in each sec. $5\frac{1}{2}$ ft. dist; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Variation, N. 15° E. Land, mountainous. Soil, gravelly and rocky; 2nd, 3rd and 4th rate. Timber, cedar and pine. Undergrowth, scrub oak. Mountainous land, steep ascents and descents, covered with loose rocks and large boulders or land covered with dense timber and undergrowth and exceptionally difficult to survey, 80.00 chs.

	North, bet. secs. 19 and 24. Over flat, ascending.
15.50	Trail to Miller ranch, brs. NW and SE.
16.60	Leave bottom; ascend with difficulty over large granite boulders and through dense scrub oak.
30.68	Top of ridge of granite boulder on E. slope, brs. E and W. 300 ft. above bottom; descend over granite boulders.
34.00	Small saddle; ascend
36.20	Granite boulder, 30x14x12 ft. on line; top of rise, descend
40.00	On N. slope. Set a granite stone, 18x8x5 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which A cross (X) on a granite boulder, 6x4x3 ft. above ground, brs. N. 79° 10' W., 40 lks. dist., marked $\frac{1}{4}$ S 24 B O No other bearings available. Raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Variation, N. 15° E.
55.88	Wagon road, brs. SW to Kingman, NE to Prescott.
64.66	Trail to Lookout spring and Miller ranch, brs. NW and SE.
67.25	Wash, 50 lks. wide, course NW; ascend
70.50	Granite boulder, 60x50x45 ft. on line.
74.60	Top of granite boulder ridge, brs E and W, 300 ft. above wash.
80.00	Set a granite stone, 20x12x6 ins., 15 ins. in the ground for cor. of secs. 13, 18, 19 and 24, marked with 3 notches on N. and 3 notches on S. edges; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Land, mountainous. Soil, rocky and gravelly; 2nd, 3rd and 4th rate. Timber, cedar; undergrowth, scrub oak. Mountainous land, steep ascents covered with rocks and boulders or land covered with dense undergrowth and exceptionally difficult to survey, 80.00 chs. February 21, 1911.

East Boundary of T. 21 N., R. 11 W.

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Chains.	February 22, 1911: At 8 a.m., l.m.t., I set off 10°24'S on the decl. arc; 35°12' on the lat. arc; and determine a meridian with the solar at the cor. of secs. 13, 18, 19, and 24.
	Thence I run North, bet. secs. 13 and 18.
	Ascending over mountainous land, on W. slope of granite butte.
7.30	Top of W. slope butte, brs. E and W, 100 ft. above cor.; descend with difficulty over granite boulders.
13.00	Ravine, 25 lks. wide, course SW; ascend on S. slope of ridge.
24.40	Top of ridge, brs. E and W, 150 ft. above ravine; descend
28.00	Bottom of descent; ravine, 20 lks. wide, course W; asc.
32.50	Top of ridge, brs. E and W, 200 ft. above ravine; desc.
40.00	Set a granite stone, 18x10x6 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which A cedar, 30 ins. diam., brs. N. 60°00' W., 34 lks. dist., marked $\frac{1}{4}$ S 13 B T A cedar, 24 ins. diam., brs. S. 80°35' E., 71 lks. dist., marked $\frac{1}{4}$ S 18 B T Variation, N. 15½° E.
44.00	Enter rolling bottom; descend
54.90	Cattle trail, brs. SW and NE
70.50	Wash, 40 lks. wide, course NE; leave bottom, ascend.
80.00	Near pile of granite boulders. Set a granite stone, 20x12x8 ins., 15 ins. in the ground for cor. of secs. 7, 12, 13 and 18, marked with 4 notches on S and 2 notches on N. edges; from which A cedar, 4 ins. diam., brs. N. 4°03' E., 335 lks. dist., marked T 21 N R 10 W S 7 B T A cedar, 30 ins. diam., brs. N. 85°06' W., 113 lks. dist., marked T 21 N R 11 W S 12 B T A cedar, 24 ins. diam., brs. S. 11°02' W., 289 lks. dist., marked T 21 N R 11 W S 13 B T A cross (X) on a granite boulder, 15x8x12 ft. above ground, brs. S. 39°45' E., 11 lks. dist., marked S 18 B O Variation, N. 16° E.
	Land, mountainous. Soil, rocky and gravelly; 2nd, 3rd and 4th rate. Timber, cedar. Undergrowth, scrub oak. Mountainous land, steep ascents and descents covered with rocks and boulders and exceptionally difficult to survey, 80.00 chs.

	North, bet. secs. 7 and 12.
	Over granite boulders, ascending
11.00	Top of ridge, brs. NW and SE; descend through dense scrub oak and cedar.
15.00	Bottom of descent; ravine, 30 lks. wide, course SE; asc.
18.00	Top of ridge, brs. SW and NE; descend
34.00	Ravine, 20 lks. wide, course SE; ascend
40.00	Set a granite stone, 18x8x6 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which A cedar, 30 ins. diam., brs. N. 20°00' E., 154 lks. dist., marked $\frac{1}{4}$ S 7 B T A cedar, 24 ins. diam., brs. N. 85°00' W., 103 lks. dist., marked $\frac{1}{4}$ S 12 B T Variation, N. 16° E.
	February 22: At this $\frac{1}{4}$ sec. cor. I set off 10°22'S on the decl. arc; and at 12h 14m p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 35° 13' N.
54.00	Top of bunch of granite boulders 40 ft. high; descend
55.00	Ravine, course E; ascend
68.00	4 in. cedar on line.
71.00	Top of ridge, brs. E and W, on E. slope 300 ft. above bottom; descend through dense cedar along E. slope.

East Boundary of T. 21 N., R. 11 West

Chains,
80.00

Set a tufa stone, 18x12x6 ins., 12 ins. in the ground for cor. of secs. 1, 6, 7 and 12, marked with 1 notch on N. and 5 notches on S. edges; from which

- A cedar, 12 ins. diam., brs. N. 6°35'W., 17 lks. dist., marked T 21 N R 11 W S 1 B T
- A cedar, 14 ins. diam., brs. N. 54°15'E., 55 lks. dist., marked T 21 N R 10 W S 6 B T
- A cedar, 9 ins. diam., brs. S. 5°11'W., 76 lks. dist., marked T 21 N R 11 W S 12 B T
- A cedar, 9 ins. diam., brs. S. 51°10'E., 88 lks. dist., marked T 21 N R 10 W S 7 B T

Variation, N. 16° E.

Land, mountainous.
Soil, gravelly and rocky; 3rd and 4th rate.
Timber, cedar.
Undergrowth, scrub oak.
Mountainous land, very steep ascents and descents covered with rocks and boulders or land covered with dense timber or undergrowth and exceptionally difficult to survey, 80.00 chs.

North, bet. secs. 1 and 6.
Over mountainous land, descending over E. slope over loose porphyry rocks.

7.76 Gully, 15 lks. wide, course SE; 150 ft. below ridge; asc.
11.00 Top of east slope of ridge, brs. SE and NW; descend
18.00 Wash, 40 lks. wide, course SE; ascend
34.00 Top of malapai ridge, brs. NW and SE; descend
39.25 Gully, 15 lks. wide, course SE; ascend
40.00 A cross (X) on a malapai boulder in place, 4x3x2 ft. above ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which

- A cedar, 16 ins. diam., brs. N. 84°15'E., 60 lks. dist., marked $\frac{1}{4}$ S 6 B T
- A cedar, 30 ins. diam., brs. N. 16°18'W., 40 lks. dist., marked $\frac{1}{4}$ S 1 B T

Variation, N. 16 $\frac{1}{2}$ ° E.

63.00 Top of ridge, brs. NW and SE; descend over rocky slope
65.65 A porphyry dyke brs. E and W.
72.00 Ravine, 20 lks. wide, course E; ascend
80.00 Set a malapai stone, 20x12x10 ins., 15 ins. in the ground for cor. of Tps. 21 and 22 N., Rs. 10 and 11 W., marked with 6 notches on each edge; from which

- A cedar, 9 ins. diam., brs. S. 20°26'W., 27 lks. dist., marked T 21 N R 11 W S 1 B T
- A cedar, 15 ins. diam., brs. S. 85°40'E., 22 lks. dist., marked T 21 N R 10 W S 6 B T
- A cedar, 12 ins. diam., brs. N. 50°55'E., 175 lks. dist., marked T 22 N R 10 W S 31 B T

A cedar, 9 ins. diam., brs. N. 44°02'W., 100 lks. dist., marked T 22 N R 11 W S 36 B T

This cor. falls on SE slope of ridge amongst dense cedar.
Land, mountainous.
Soil, rocky; 4th and 5th rate.
Timber, cedar.
Undergrowth, scrub oak.
Mountainous land, steep slopes, ascents and descents, covered with loose rocks and boulders or land covered with dense timber or dense undergrowth and exceptionally difficult to survey, 80.00 chs.

February 22, 1911.

West Boundary of T. 21 N. R. 11 West.

Chains.	February 26, 1911: At 8h 13m a.m., l.m.t., I set off 8°56'S on the decl. arc; 35°09' on the lat. arc; and determine a meridian with the solar at the Cor. of Tps. 20 and 21 N., Rs. 11 and 12 W. Thence I run North, bet. secs. 31 and 36 Over mountainous land, ascending over granite boulders and through dense cedar timber, with great difficulty. 11.00 Top of ascent, brs. NE and SW; descend 20.00 Ravine, 40 lks. wide, course NE; ascend 30.00 Wash, 40 lks. wide, course E; ascend 37.00 Top of summit, brs. NW and SE; descend 40.00 On E. slope of ridge Set a granite stone, 30x12x6 ins., 22' ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which A cedar, 12 ins. diam., brs. S. 34°00' E., 27 lks. dist., marked $\frac{1}{4}$ S 31 B T A cedar, 6 ins. diam., brs. S. 23°35' W., 43 lks. dist., marked $\frac{1}{4}$ S 36 B T Variation, N. 16° E. Thence descend along E. slope. 49.50 Wash, 30 lks. wide, course NE; ascend 55.40 Top of E. slope of spur, brs. E and W, 200 ft. above wash; descend 65.50 Ravine, 1 ch. wide, course NW. 70.00 Contact porphyry and granite; ascend on W. slope of ridge 71.00 Top of saddle, brs. NW and SE; descend 80.00 Set a granite stone, 18x10x8 ins., 12 ins. in the ground for cor. of secs. 25, 30, 31 and 36, marked with 5 notches on N. and 1 notch on S. edges; from which A cedar, 20 ins. diam., brs. N. 35°20' W., 38 lks. dist., marked T 21 N R 12 W S 25 B T A cedar, 4 ins. diam., brs. S. 5°13' W., 75 lks. dist., marked T 21 N R 12 W S 36 B T A cedar, 15 ins. diam., brs. S. 25°43' E., 102 lks. dist., marked T 21 N R 11 W S 31 B T No other trees available. Raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Variation, N. 15 $\frac{1}{2}$ ° E. Land, mountainous. Soil, rocky; 4th and 5th rate. Timber, cedar and pinon. Undergrowth, scrub oak. Very mountainous land, steep slopes covered with granite boulders and loose rocks, steep ascents and descents, or land covered with dense cedar timber or dense undergrowth and exceptionally difficult to survey, 80.00 chs.

	North, bet. secs. 25 and 30. Over steep, rocky slope, descend on NE. slope toward Willow creek. 11.00 Ravine, 20 lks. wide, course NW., 150 ft. below corner; descend 25.55 Ravine, 30 lks. wide, course NE. 29.50 Quartz ledge, brs. NE and SW (mineral) 36.60 Wash, 50 lks. wide, course Nw; ascend 50 ft. 40.00 On W. slope, near top of ridge. Set a sandstone, 18x10x6 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable Variation, N/ 15°25' E. Ascend 41.00 Top of W. slope, course NE and SW; descend 50.00 S. bank of Willow Creek, 1 ch. wide, running water, course SW, 500 ft. below sec. cor. 51.50 Rocky bluff, 70 ft. high; ascend 60.45 Wash, 30 lks. wide, course SE; ascend over boulders.

Chains.	
70.00	Top of boulder ridge, brs. NW and SE., 200 ft. above Willow Creek; descend
75.00	Wash, 30 lks. wide, course SE; ascend
80.00	On S. slope. Set a porphyry stone, 18x10x8 ins., 12 ins. in the ground for cor. of secs. 19, 24, 25 and 30, marked with 2 notches on S. and 4 notches on N. edges; from which A cedar, 12 ins. diam., brs. S. 61°46'E., 26 lks. dist., marked T 21 N R 11 W S 30 B T A cedar, 20 ins. diam., brs. S. 36°30'W., 164 lks. dist., marked T 21 N R 12 W S 25 B T A cedar, 8 ins. diam., brs. N. 50°28'E., 160 lks. dist., marked T 21 N R 11 W S 19 B T A cedar, 12 ins. diam., brs. N. 24°10'W., 105 lks. dist., marked T 21 N R 12 W S 24 B T Variation, N. 15°45'E.
	Land, mountainous. Soil, rocky; 3rd and 4th rate. Timber, cedar. Undergrowth, scrub oak. Very mountainous land, steep ascents and descents, steep slopes covered with loose rocks and boulders and exceptionally difficult to survey, 80.00 chs. February 26: At this cor. I set off 8°54'S on the decl. arc; and, at 12h 13m p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 35° 11'N.

	North, bet. secs. 19 and 24. Over mountainous land covered with boulders, ascending Wagon road, Kingman to Prescott, brs. NW and SE.
7.90	Top of summit, brs. NW and SE; descend
16.00	Wash, 40 lks. wide; course SE; ascend
20.70	Top of ridge on E. slope, brs. NW and SE; descend
29.00	Ravine, 1 ch. wide; course SE; ascend
37.00	On E. slope, about 5 chs. E. from steep porphyry cliff and about 10 chs. W. of wash parallel to line. Set a tufa stone, 18x8x6 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which A cedar, 12 ins. diam., brs. N. 77°45'W., 78 lks. dist., marked $\frac{1}{4}$ S 24 B T A cedar, 10 ins. diam., brs. N. 56°18'E., 14 lks. dist., marked $\frac{1}{4}$ S 19 B T Variation, N. 15 $\frac{1}{2}$ ° E.
40.00	Thence ascend over loose rock over top of E. slope of mountain.
55.00	Top of E. slope; XXXXXXXXXXXX brs. NW and SE; desc
69.40	Spur; descend
79.50	Wash, 40 lks. wide, course SE; ascend
80.00	Set a porphyry stone; 24x12x6 ins., 18 ins. in the ground for cor. of secs. 13, 18, 19 and 24, marked with 3 notches on N and S edges; from which A cedar, 12 ins. diam., brs. S. 30°05'W., 69 lks. dist., marked T 21 N R 12 W S 24 B T A cedar, 8 ins. diam., brs. S. 64°11'E., 15 lks. dist., marked T 21 N R 11 W S 19 B T A cedar, 12 ins. diam., brs. N. 74°17'W., 127 lks. dist., marked T 21 N R 12 W S 13 B T A cedar, 24 ins. diam., brs. N. 63°15'E., 244 lks. dist., marked T 21 N R 11 W S 18 B T Variation, N. 15°20'E.
	Land, mountainous. Soil, rocky; 3rd and 4th rate. Timber, cedar; undergrowth, scrub oak. Very mountainous land, covered with loose rocks and boulders, steep ascents and descents and steep slopes covered with loose rocks and boulders and exceptionally difficult to survey, 80.00 chs.
	February 26, 1911.

West Boundary of T. 21 N., R. 11 West.

Chains.	February 27, 1911: At 8h 13m a.m., l.m.t., I set off 8°34'S on the decl. arc; 35°12'N on the lat. arc; and determine a meridian with the solar at the cor. of secs. 13, 18, 19 and 24. Thence I run North, bet. secs. 13 and 18 Over mountainous land, descending over E. slope, through dense cedar.
16.70	Wash, 40 lks. wide, course NE; ascend
22.00	Top of E. slope of mountain, brs. NW and SE.; descend
25.50	Ravine, 10 lks. wide, course SE; ascend
31.90	Top of ridge, brs. SE and NW, 300 ft. above ravine; desc.
35.50	Ravine, 15 lks. wide, course SE; ascend
40.00	On S. slope in dense bunch of cedar. Set a porphyry stone, 20x10x10 ins., 15 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which A cedar, 8 ins. diam., brs. S. 81°40'E., 64 lks. dist., marked $\frac{1}{4}$ S 18 B T A cedar, 20 ins. diam., brs. S. 47°30'W., 45 lks. dist., marked $\frac{1}{4}$ S 13 B T
42.50	Thence ascending through dense cedar. Top of ridge, brs. SE and NW; descend
56.20	Wash, 30 lks. wide, course SE; ascend
67.00	Top of ridge, brs. NW and SE., 150 ft. above wash. descend
80.00	Set a porphyry stone, 18x12x6 ins., 12 ins. in the ground for cor. of secs. 7, 12, 13 and 18, marked with 2 notches on N. and 4 notches on S. edges; from which A cedar, 30 ins. diam., brs. N. 69°20'E., 162 lks. dist., marked T 21 N R 11 W S 7 B T A cedar, 5 ins. diam., brs. N. 35°16'W., 210 lks. dist., marked T 21 N R 12 W S 12 B T A cedar, 9 ins. diam., brs. S. 41°38'W., 87 lks. dist., marked T 21 N R 12 W S 13 B T A cedar, 12 ins. diam., brs. S. 39°00'E., 195 lks. dist., marked T 21 N R 11 W S 18 B T Variation, N. 16° E.
	Land, mountainous. Soil, rocky 3rd and 4th rate. Timber, cedar. Undergrowth, scrub oak. Mountainous land, very steep ascents and descents and slopes covered with loose rocks and boulders or land covered with dense timber and exceptionally difficult to survey, 80.00 chs.

	North, bet. secs. 7 and 12. Descending through dense cedar.
4.00	Bottom of descent; ascend
10.00	Top of ascent, brs. NW and SE; descend
15.20	Ravine, 30 lks. wide, course SE; ascend
22.00	Descend over rolling, rocky tufa.
36.50	Ravine, 30 lks. wide, course SE; ascend
40.00	Set a tufa stone, 18x10x6 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which A cedar, 12 ins. diam., brs. N. 36°50'W., 101 lks. dist., marked $\frac{1}{4}$ S 12 B T A cedar, 12 ins. diam., brs. S. 25°07'E., 130 lks. dist., marked $\frac{1}{4}$ S 7 B T Variation, N. 16° E.
	February 27: At this $\frac{1}{4}$ sec. cor. I set off 8°31' on the decl. arc; and at 12h 13m p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 35° 13'
	Thence descending over bare tufa, leaving dense cedar.
41.62	S. rim box canyon 150 ft. deep; descend
46.60	Bottom of box canyon, 40 lks. wide, course SE; ascend
48.33	N. rim of box canyon;
54.70	Top of S. rim of box canyon, 175 ft. deep.; descend

57

Chains.
60.00
66.00
68.00
72.00
80.00

Bottom of wash, 50 lks. wide, course SE; some water; asc.
 Top of spur, brs. NW and SE; descend
 Wash, 100 lks. wide, course SW; ascend
 Same wash, 60 lks. wide, course SE; ascend
 On S. slope.
 Set a porphyry stone, 18x10x6 ins., 12 ins. in the ground for cor. of secs. 1, 6, 7 and 12, marked with 1 notch on N. and 5 notches on S. edges; from which
 A cedar, 9 ins. diam., brs. N. 52° 25' E., 135 lks. dist., marked T 21 N R 11 W S 6 B T
 A cedar, 30 ins. diam., brs. N. 75° 23' W., 130 lks. dist., marked T 21 N R 12 W S 1 B T
 A cedar, 24 ins. diam., brs. S. 35° 56' W., 131 lks. dist., marked T 21 N R 12 W S 12 B T
 A cedar, 9 ins. diam., brs. S. 29° 00' E., 106 lks. dist., marked T 21 N R 11 W S 7 B T
 Variation, N. 16° E.
 Land, mountainous.
 Soil, rocky; 3rd and 4th rate.
 Timber, dense cedar.
 Undergrowth, scrub oak.
 Mountainous land, very steep slopes and ascents and descents covered with loose rocks and boulders or land covered with dense cedar and exceptionally difficult to survey, 80.00 chs.

North, bet. secs. 1 and 6

21.50
32.00
40.00
46.50
53.00
70.00
75.80
76.00
80.00

Over mountainous land, ascending on S. slope of mountain.
 Top of W. slope of ridge, brs. NE and SW, 500 ft. above sec. cor.; descend
 Ravine, 30 lks. wide, course SW; ascend
 On S. slope.
 Set a granite stone, 18x10x6 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; from which
 A cedar, 4 ins. diam., brs. S. 80° 18' E., 81 lks. dist., marked $\frac{1}{4}$ S 6 B T
 A cedar, 8 ins. diam., brs. S. 31° 40' W., 70 lks. dist., marked $\frac{1}{4}$ S 1 B T
 Variation, N. 16° E.
 Ravine, 35 lks. wide, course SW; ascend
 Top of W. slope of ridge, brs. NW and SE; descend along W. slope.
 Ravine, 20 lks. wide, course NW.
 Wash, 40 lks. wide, course NE; ascend
 Top of granite boulder knob
 A cross (X) on a granite boulder in place, 2x2x3 ft. above ground, for cor. of Tps. 21 and 22 N., Rs. 11 and 12 W., marked with 6 notches on N.S.E and W. edges; from which
 A pinon, 6 ins. diam., brs. N. 37° 30' E., 102 lks. dist., marked T 22 N R 11 W S 31 B T
 A pinon, 10 ins. diam., brs. S. 41° 24' E., 16 lks. dist., marked T 21 N R 11 W S 6 B T
 A pinon, 12 ins. diam., brs. N. 80° 10' W., 21 lks. dist., marked T 22 N R 12 W S 36 B T
 A pinon, 8 ins. diam., brs. S. 63° 00' W., 90 lks. dist., marked T 21 N R 12 W S 1 B T
 Land, mountainous.
 Soil, rocky; 3rd and 4th rate.
 Timber, cedar and pinon.
 Undergrowth, scrub oak.
 Mountainous land, steep slopes and ascents and descents covered with loose rocks and boulders or land covered with dense timber and undergrowth and exceptionally difficult to survey, 80.00 chs.

February 27, 1911.

North Boundary of T. 21 N., R. 11 West.

Chains.	<p>February 28, 1911: At 8 a.m., l.m.t., I set off 8° 11' 5 on the decl. arc; 33° 15' Non the lat. arc; and determine a true meridian with the solar at the cor. of Tps. 21 and 22 N., Rs. 10 and 11 W.</p> <p>Thence I run West on a random line, along the N. bdy. of Tp. 21 N., R. 11 W., setting temp. $\frac{1}{4}$ sec. and sec. cors. at intervals of 40.00 chs.; and at 478.72 chs., intersect the W. Tp. bdy., heretofore established by me, 20 lks. N. of the cor. of Tps. 21 and 22 N., Rs. 11 and 12 W. The falling answers to a correction of 0° 01' or 2 lks. S. per mile, counting from the NE. cor. of the Tp.; therefore I run N. 89° 59' E., bet. secs. 6 and 31, marking and blazing true line</p> <p style="text-align: right;">February 28, 1911.</p> <hr/> <p>March 1, 1911: At 8 a.m., l.m.t., I set off 7° 49' 5 on the decl. arc; 35° 15' Non the lat. arc; and determine a true meridian with the solar:</p> <p>Thence I run N. 89° 59' E., bet. secs. 6 and 31.</p> <p>Over mountainous land, descending through dense scrub oak.</p> <p>2.00 Wash, 40 lks. wide, course SE.</p> <p>3.25 Same wash, course NE</p> <p>4.00 Same wash, course SE; ascend</p> <p>12.00 Wash, 30 lks. wide, course NW; ascend</p> <p>20.00 Top of ridge, 150 ft. above wash, brs. NE and SW; descend through dense manzanita and scrub oak</p> <p>29.00 Wash, 30 lks. wide, course SE; ascend</p> <p>33.00 Top of granite boulder knob, brs. NW and SE; descend along S. slope of granite ridge.</p> <p>37.00 Top of granite knob; descend</p> <p>38.72 A cross (X) on a granite boulder in place, 5x5x20 ft. above ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; from which</p> <p style="padding-left: 40px;">A pine, 8 ins. diam., brs. S. 69° 32' E., 110 lks. dist., marked $\frac{1}{4}$ S 6 B T</p> <p style="padding-left: 40px;">A pine, 9 ins. diam., brs. N. 47° 03' E., 102 lks. dist., marked $\frac{1}{4}$ S 31 B T</p> <p style="padding-left: 80px;">Variation, N. 15$\frac{1}{2}$° E.</p> <p>40.50 Bottom; ascend</p> <p>46.77 Top of granite ridge, brs. SE and NW; leave dense undergrowth; descend</p> <p>60.00 Wash, 200 ft. below top, 20 lks. wide, course SE; ascend</p> <p>64.77 Top of S. slope of ridge 150 ft. above wash, brs. SE and NW; descend</p> <p>78.72 Set a granite stone, 20x12x8 ins., 15 ins. in the ground for cor. of secs. 5, 6, 31 and 32, marked with 1 notch on W. and 5 notches on E. edges; and raise a mound of stone, 2 ft. base, 1$\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.</p> <p style="padding-left: 80px;">Variation, N. 15$\frac{1}{2}$° E.</p> <p>Land, mountainous.</p> <p>Soil, rocky; 3rd and 4th rate.</p> <p>Timber, cedar.</p> <p>Undergrowth, scrub oak.</p> <p>Very mountainous land, steep ascents and descents and steep slopes covered with loose rocks and boulders or land covered with dense timber or undergrowth and exceptionally difficult to survey, 78.72 chs.</p> <hr/> <p>N. 89° 59' E., bet. secs. 5 and 32.</p> <p>Over mountainous land, descending through dense scrub oak.</p> <p>15.10 Ravine, 15 lks. wide, course SE; ascend</p> <p>18.70 Gulch, 15 lks. wide, course SE; ascend</p> <p>28.20 Ridge, brs. N and S, 250 ft. above ravine; descend</p>
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Chains.	
31.70	Ravine, 20 lks. wide, course S; ascend
34.70	Top of knob, 150 ft. above ravine; descend
40.00	Set a granite stone, 20x10x6 ins., 15 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable Variation, N. $15\frac{1}{2}^{\circ}$ E. Leave dense scrub oak. March 1: At this $\frac{1}{4}$ sec. cor., I set off $7^{\circ}46'S$ on the decl. arc; and at 12h 13m p.m., l.m.t., observe the sun on the meridian; the resulting lat. is $35^{\circ}15'N$. Thence descending
48.20	Saddle 150 ft. below ridge; descend
54.70	Bottom of descent; enter wash.
55.80	Main channel Willow Creek, 50 lks. wide, course SE.
56.40	Wagon road, brs. N and S.
58.65	Leave bottom; ascend
80.00	On W. slope. Set a malapai stone, 18x18x6 ins., 12 ins. in the ground for cor. of secs. 4, 5, 32 and 33, marked with 2 notches on W. and 4 notches on E. edges; from which A cedar, 20 ins. diam., brs. S. $63^{\circ}31'E$., 117 lks. dist., marked T 21 N R 11 W S 4 B T A cedar, 12 ins. diam., brs. N. $71^{\circ}37'E$., 123 lks. dist., marked T 22 N R 11 W S 33 B T A cedar, 12 ins. diam., brs. N. $2^{\circ}00'W$., 39 lks. dist., marked T 22 N R 11 W S 32 B T A cedar, 15 ins. diam., brs. S. $72^{\circ}27'W$., 100 lks. dist., marked T 21 N R 11 W S 5 B T Variation, N. $14\frac{1}{2}^{\circ}$ E. Land, mountainous. Soil, rocky; 3rd and 4th rate. Timber, cedar. Undergrowth, scrub oak and manzanita. Mountainous land, steep ascents and descents and steep slopes covered with loose rocks and boulders or land covered with dense timber or undergrowth and exceptionally difficult to survey, 80.00 chs.

	N. $89^{\circ}59'E$., bet. secs. 4 and 33. Over mountainous land, ascending
5.10	Top of knob, brs. NE and SW; descend
7.60	Ravine, 30 lks. wide, course SW; ascend
15.00	Ravine, 40 lks. wide, course NW; ascend on SW slope of hill.
33.40	Top of saddle of ridge, brs. NW and SE, 80 ft. above Willow Creek; descend
40.00	Set a granite stone, 20x8x6 ins., 15 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; from which A cedar, 8 ins. diam., brs. S. $87^{\circ}55'E$., 62 lks. dist., marked $\frac{1}{4}$ S 4 B T A cedar, 8 ins. diam., brs. N. $53^{\circ}56'E$., 95 lks. dist., marked $\frac{1}{4}$ S 33 B T Thence descending through dense scrub oak and cedar.
69.48	Ravine, 20 lks. wide, course SE; ascend
72.20	Top of knob, brs. NW and SE; descend
78.80	Gulch, 40 lks. wide, course SE.
80.00	Set a porphyry stone, 24, x12x6 ins., 18 ins. in the ground for cor. of secs. 3, 4, 33 and 34, marked with 3 notches on E and 3 notches on W. edges; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high W. of cor. Variation, $15\frac{1}{4}^{\circ}$ E. Land, mountainous. Soil, rocky; 3rd and 4th rate. Timber, cedar; undergrowth, scrub oak. Mountainous land, steep ascents and descents, steep slopes covered with loose rocks and boulders or land covered with dense timber or dense undergrowth and exceptionally difficult to survey, 80.00 chs. March 1, 1911.

North Boundary of T. 21 N., R. 11 West

Chains.	March 2, 1911: At 8 a.m., l.m.t., I set off 7°26'5 on the decl. arc; 35°15' on the lat. arc; and determine a true meridian with the solar at the cor. of secs. 3, 4, 33 & 34
	Thence I run
	N. 89°59'E., bet. secs. 3 and 34
	Over large granite boulders, ascending
5.70	Top of granite knob, brs. NE and SW; descend
7.80	Ravine, 15 lks. wide, course SW; ascend
11.00	Top of granite ridge, brs. NW and SE; descend
16.00	Ravine, 30 lks. wide, course SE; ascend
19.00	Top of granite knob, brs. NW and SE; descend
22.00	Ravine, 5 lks. wide, course SE; ascend
27.70	Top of knob, brs. NW and SE; descend
34.85	Wash, 100 lks. wide, course SE; ascend
40.00	On W. slope of ridge, 250 ft. above wash.
	Set a granite stone, 18x10x8 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
	Variation, N. 15 $\frac{1}{2}$ ° E.
45.50	Top of granite ridge, brs. SE and NW, 350 ft. above wash.
55.00	Gulch, 50 lks. wide, course SE; ascend
60.70	Top of knob, brs. SW and NE; descend
76.00	Wash, 40 lks. wide, course SW; ascend
80.00	Set a porphyry stone, 18x10x6 ins., 12 ins. in the ground for cor. of secs. 2, 3, 34 and 35, marked with 2 notches on E. and 4 notches on W. edge; from which
	A cedar, 6 ins. diam., brs. N. 1°00'W., 120 lks. dist., marked T 22 N R 11 W S 34 B T
	A cedar, 6 ins. diam., brs. N. 67°00'E., 397 lks. dist., marked T 22 N R 11 W S 35 B T
	A cedar, 15 ins. diam., brs. S. 40°05'E., 238 lks. dist., marked T 21 N R 11 W S 2 B T
	A cedar, 18 ins. diam., brs. S. 11°30'W., 185 lks. dist., marked T 21 N R 11 W S 3 B T
	Land, mountainous.
	Soil, rocky; 3rd and 4th rate.
	Timber, cedar.
	Undergrowth, scrub oak
	Mountainous land, steep ascents and descents, steep slopes covered with loose rocks and boulders and exceptionally difficult to survey, 80.00 chs.

	N. 89°59'E., bet. secs. 2 and 35
	Over mountainous land, descending
10.00	Ravine, 20 lks. wide, course SW; ascend
17.24	Top of ridge, brs. NE and SW; cedar tree, 10 ins. diam. on line; 300 ft. above ravine; descend
38.70	Canyon, course SW; ascend
40.00	Set a malapai stone, 18x8x6 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
	Variation, N. 15 $\frac{1}{2}$ ° E.
40.50	Canyon, 20 lks. wide, course NW; ascend
46.40	Top of S. slope, brs. NE and SW, 100 ft. above $\frac{1}{4}$ sec. cor.; descend
48.00	Canyon, 40 lks. wide, course SW; ascend
57.00	Top of N. slope, 200 ft. above canyon, brs. NW and SE.
58.85	Canyon, 30 lks. wide, course NW; ascend parallel with canyon.
65.00	Top of spur on S. slope of ridge 200 ft. above canyon, brs. NW and SE; descend
66.00	Bottom of descent; ascend
71.40	Bluff, 40 ft. high, box canyon.
79.70	Top of ridge, 200 ft. above bottom, brs. NW and SE; descend
80.00	Set a malapai stone, 20x12x10 ins., 15 ins. in the ground for cor. of secs. 1, 2, 35 and 36, marked with 1 notch on E and 5 notches on W. edge; from which

North Boundary of T. 21 N., R. 11 West.

Chains.

- A cedar, 15 ins. diam., brs. S. 40° 31' E., 185 lks. dist., marked T 21 N R 11 W S 1 B T
- A cedar, 9 ins. diam., brs. S. 71° 40' W., 102 lks. dist., marked T 21 N R 11 W S 2 B T
- A cedar, 9 ins. diam., brs. N. 53° 48' E., 175 lks. dist., marked T 22 N R 11 W S 36 B T
- A cedar, 15 ins. diam., brs. N. 71° 46' W., 160 lks. dist., marked T 22 N R 11 W S 35 B T

Variation, N. 15° E.

Land, mountainous.

Soil, rocky; 3rd and 4th rate.

Timber, cedar.

Undergrowth, scrub oak.

Mountainous land, steep ascents and descents, steep slopes covered with loose malapai rocks and boulders and exceptionally difficult to survey, 80.00 chs.

March 2: At this cor. I set off 7° 23' S. On the decl. arc; and, at 12h. 12m. p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 35° 15' N.

N. 89° 59' E., bet. secs. 1 and 6.

Over mountainous land, covered with loose rock, descending.

- 5.25 Ravine, 20 lks. wide, course SW, 150 ft. below sec. cor.; ascend
- 19.00 Top of S. slope, ridge 300 ft. above ravine, brs. NE and SW; descend
- 33.25 Ravine, 30 lks. wide, course SE, 350 ft. below ridge; ascend
- 40.00 On S. slope of ravine. Set a malapai stone, 18x12x10 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; from which
 - A cedar, 15 ins. diam., brs. S. 35° 00' W., 144 lks. dist., marked $\frac{1}{4}$ S 1 B T
 - A cedar, 15 ins. diam., brs. N. 44° 30' W., 181 lks. dist., marked $\frac{1}{4}$ S 36 B T
- Thence descend steep slope covered with loose rocks and dense cedar
- 52.40 Ravine, 25 lks. wide, course SW; ascend
- 68.00 Top of ridge, 500 ft. above ravine, brs. N and S; descend
- 80.00 The cor. of Tps. 21 and 22 N., Rs. 10 and 11 W.

March 2, 1911.

Boundaries of Township 21 N., R. 11 W.
Latitudes, Departures and Closing Errors.

Line Designated	True Bearing	Dist	Latitudes		Departures	
			N.	S.	E.	W.
5th Std. Par. N	West	480.00	Chs	Chs.	Chs	Chs.
W. Bdy. T. 21			.....	.....	.....	480.00
N. R. 11 W.	North	480.00	480.00	.....	.....	.....
N. Bdy. T. 21						
N. R. 11 W	N. 89° 59' E	478.72	0.20	.....	478.72	.....
E. Bdy. T. 21						
N. R. 11 W	South	480.00	.....	480.00	.....	.....
Convergency					0.51	
Totals,			480.20	480.00	479.23	480.00
			480.00	.....	.....	479.23
Error in lat.			0.20	Error in Dep.		0.77

GENERAL DESCRIPTION.

The township is mountainous throughout, with the exception of small areas along Willow Creek, Turkey wash and Hillside wash, which are level and rolling, and have a sandy and clay soil. The soil is rocky, clay and rich loam, mixed with large and small porphyry, lime granite and malapai rocks and boulders, With the exception of small areas of bottom it is covered with a good growth of white cedar timber, and in places with heavy scrub oak undergrowth. A few pinons of medium size are found on higher ground.

Willow Creek and Hillside and Turkey creeks, which run into it, have running water in places from springs. It is a grazing and cattle country, and suitable for raising hogs which thrive on the cedar berries.

Changes in the magnetic declination of the needle were very marked. Along the south boundary, or along the 5th Standard Parallel, running from 12° to 20°

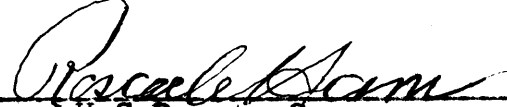
Night Creek ranch is about one mile south of the 5th Standard Parallel at the corner of sections 31 and 32, and is occupied by Bill Efferman. There is a ranch house, spring, corrals, etc.

The northern part of Township 20 N., R. 11 W., is rough and very mountainous. It is suitable for grazing with the exception of small areas along the washes which are suitable for agriculture.

The eastern half of Township 21 N., R. 12 W, is extremely mountainous, very little soil, and is very good for grazing land.

Township 22 N., R. 11 W., is very rough and mountainous in the southern portion, suitable for grazing only. Tuckayou ranch of Efferman is located between 1 and 3 miles N. of N. boundary in sections 33 and 34, in Township 22 N., R. 11 W.

The western half of Township 21 N., R. 10 W., is partly mountainous. Has a level valley from one to three miles wide with a good growth of white gramma grass and might be suitable for dry farming, it has a good, sandy clay loam soil


U.S. Deputy Surveyor.

March 2, 1911.

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Rose C. 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., 1910, 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 North East and West boundaries of T. 21 N. R. 11 W.

6th of the 1st 1st 1st meridian, in the teritory 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.

Rose C. Ham
United States Deputy Surveyor.

Subscribed by said Rose C. Ham, and sworn to before me
this 17 day of March, 1911

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 East and West boundaries of T. 21 N. R. 11 W. of the Salt and Salt River Base and Meridian, Arizona

executed by Rose C. Ham
under his contract No. 162, dated July 5, 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.