Book "L"
2789 4—679. C

BOOK 2789
FEB 13 1912

99

FIELD NOTES

OF THE SURVEY OF THE

North Bdy T 17 N R 12 E

Of the Gila and Salt River Base and Meridian,

Arizona

AS SURVEYED BY

Pascoe C Hamm, United States Deputy Surveyor,

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

Survey commenced Dec 8th, 1910

Survey completed Dec 9th, 1911

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BOOK 2789

NAMES AND DUTIES OF ASSISTANTS.

Bob Johnson	Chainman
W D Schaaner	"
Wm Larsen	Rodman
Cliff Nelson	Axeman
Peter French	Flagman

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BOOK 2789

INDEX DIAGRAM.

Township 17 N, Range 12 E

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_____ Notes in this book.

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(1C)

PRELIMINARY OATHS OF ASSISTANTS.

WE, Bob Johnson and W D Schnoover 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 N Boby T 17 N R 12 E.

Bob Johnson, Chainman.

W. D. Schnoover, Chainman.

Subscribed and sworn to before me this 4th day of Dec, 19 11

Roscoe Gam
U S Deputy Surveyor

SEAL

WE, Wm Larkin 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 N Boby T 17 N R 12 E.

Wm. Larkin, Moundman.

, Moundman.

Subscribed and sworn to before me this 4th day of Dec, 19 11

Roscoe Gam
U S Deputy Surveyor

SEAL

WE, Lester French 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 N Boby T 17 N R 12 E

Lester French, Flagman

, Axman.

Subscribed and sworn to before me this 4th day of Dec, 19 11

Roscoe Gam
U S Deputy Surveyor

SEAL

I, Cliff Wilson, 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 N Boby T 17 N R 12 E

Cliff Wilson, Chainman ~~Flagman~~.

Subscribed and sworn to before me this 4th day of Dec, 19 11

Roscoe Gam
U S Deputy Surveyor

SEAL

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North Boundary of Township 17 North, Range 12 East. 10

Chains	
	Survey commenced Dec. 8, 1911, and executed with a Young & Sons light mountain transit, No. 7984, equipped with the 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 lat. and decl. arcs.
	The instrument was examined, tested on the true meridian at Phoenix, found correct, and approved by the Surveyor General at Phoenix.
	I examined the adjustments of the transit, and corrected the level and collimation errors, then to test the solar apparatus by comparing its indications resulting from solar observations made during a.m. and p.m. hours with a meridian determined by observation on Polaris, I proceed as follows:
	Dec. 8, 1911, at the true meridian established by me at my camp, by observation on Polaris, I set off 22° 37½' S., on the decl. arc; 34° 56' N., on the lat. arc, and at 4:00 p.m., l.m.t., I determine a meridian with the solar, and mark a point in this meridian, 5.00 chs. N. of my station, which point, is 0.3 ins. E. of a cross (X) position of which was determined by observation on Polaris.
	Dec. 9, 1911, at my station, I set off 22° 43' S., on the decl. arc; 34° 56' N., on the lat. arc, and at 8:30 a.m., l.m.t., determine a meridian with the solar, and mark a point in same, 5.00 chs. N. of my station, which point is 0.2 ins. W. of true meridian established by Polaris. I judge the adjustments of my instrument to be correct.
	At the cor. of Ts. 17 and 18 N., Rs. 12 and 12½ E., previously described, I set off 22° 44' S., on the decl. arc; 34° 54' 30" N., on the lat arc, and at 9:30 a.m., l.m.t., determine the meridian with the solar.
	Thence I run, W. on a random line on the N. bdy. of T. 17 N., R. 12 E., setting temporary corners every 40.00 and 80.00 chains.
477.13	Intersect E. bdy. of T. 18 N., R. 11 E., 11.16 chs. N. of the cor. of Ts. 17 and 18 N., Rs. 11 and 12 E., which is a limestone 18 x 10 x 5 ins., 6 ins. above the ground, marked and witnessed as described by the Surveyor General, therefore, I set a limestone 18 x 12 x 6 ins., 12 ins. in the ground, for closing cor. of Ts. 17 and 18 N., R. 12 E., marked C C on E. face, 6 grooves on N. S. and E. faces, from which:
	A cedar 6 ins. in diam., brs. N. 28° 43' E., 52 lks. dist., marked T 18 N R 12 E S 31 B T.
	A cedar 8 ins. in diam., brs. S. 75° E., 55 lks. dist., marked T 17 N R 12 E S 6 B T.
	Thence I run, E. on a true line, bet. secs. 6 and 31, descending through dense cedars.
37.13	Set a limestone 18 x 12 x 4 ins., 12 ins. in the ground, for ¼ sec. cor. of secs. 6 and 31, marked ¼ on N. face, raise a mound of stone 2 ft. base, 1½ ft. high, N. of cor., from which:
	A cedar 12 ins. in diam., brs. N. 66° 20' W., 27 lks. dist., marked ¼ S 31 B T. No other tree available.
	Pits impracticable. Magnetic declination 14° 20' E.
43.00	Leave dense cedars.
47.13	Draw brs. N., ascend. Enter dense cedars.
61.00	Leave dense cedars.
77.13	Set a limestone 28 x 10 x 12 ins., 18 ins. in the ground, for cor. of secs. 5, 6, 31 and 32, marked 1 notch on W. edge; 5 notches on E. edge, and raise a mound of stone 2 ft. base, 1½ ft. high, W. of cor. No trees near. Pits impracticable.
	Magnetic declination N. 14° 20' E.
	Land rolling. Soil sandy and gravelly.
	No timber, 20.00 chains; Dense timber 57.00 chains.
	Undergrowth, scrub cedar, white sage brush, and broom weed.
	Rolling land, covered with dense brush, 59.00 chs.
	Rolling land, 18.13 chains.

2 North Boundary of Township 17 North, Range 12 East.

Chains	
	E. bet. secs. 5 and 32, over rolling land.
40.00	Set a limestone 18 x 6 x 4 ins., 12 ins. in the ground, for ¼ sec. cor. of secs. 5 and 32, marked ¼ on N. face, from which: A cedar 6 ins. diam., brs. N. 12° 30' W., 35 lks. dist., marked ¼ S 32 B T. A cedar 9 ins. in diam., brs. S. 20° 30' W., 31 lks. dist., marked ¼ S 5 B T. Magnetic declination N. 14° 20' E.
60.00	Draw 2.00 chs. S. of line, brs. E.
80.00	On W. slope of 75 ft. ascent, set a limestone 20 x 8 x 6 ins., 15 ins. in the ground, for cor. of secs. 4, 5, 32 and 33, marked with 2 notches on the W. edge, and 4 notches on the E. edge, and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. No trees near. Pits impracticable. Magnetic declination N. 14° 20' E. Land rolling. Soil, sandy and rocky; 2nd and 3rd rate. No timber. Undergrowth, scattered cedars, white sage brush, and broom weed. Rolling land, 80.00 chs.

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At the cor. of secs. 4, 5, 32 and 33, I set off 22° 45' 30" S., on the decl. arc, at 12 h. M., apparent time, observe the sun on the meridian, and obtain on the lat. arc, the reading 34° 54' 30" N., which agrees with other data.

Thence I run E. bet. secs. 4 and 33. Ascending over rolling land, through scattering timber.

10.00	Top of ascent, descend.
30.00	Draw brs. N.E., ascend.
40.00	Set a limestone 14 x 12 x 8 ins., 9 ins. in the ground, for ¼ sec. cor. of secs. 4 and 33, marked ¼ on N. face, from which: A cedar 12 ins. in diam., brs. N. 54° 46' W., 72 lks. dist., marked ¼ S 33 B T. A cedar 6 ins. in diam., brs. S. 43° 26' W., 322 lks. dist., marked ¼ S 4 B T. Magnetic declination N. 14° E.
80.00	Set a limestone 15 x 10 x 8 ins., 10 ins. in the ground for cor. of secs. 3, 4, 33 and 34, marked with 3 notches on E. and W. edges, from which: A cedar 10 ins. in diam., brs. N. 52° E., 260 lks. dist., marked T 18 N R 12 E S 34 B T. A cedar 10 ins. in diam., brs. S. 77° 14' E., 475 lks. dist., marked T 17 N R 12 E S 3 B T. A cedar 4 ins. in diam., brs. S. 75° W., 181 lks. dist., marked T 17 N R 12 E S 4 B T. No other tree available. Dig pits 18 x 18 x 12 ins. in each sec. 5½ ft. dist. and raise a mound of earth 4 ft. base, 2 ft. high, W. of cor. Magnetic declination N. 14° 20' E. Land rolling. Soil sandy and gravelly, 2nd and 3rd rate. Scattering timber. Undergrowth: white sage brush, and broom weed. Land rolling: 80.00 chains.

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Thence E. bet. secs. 3 and 34, over rolling land.

40.00	Set a limestone 15 x 10 x 8 ins., 10 ins. in the ground, for ¼ sec. cor. of secs. 3 and 34, marked ¼ on N. face, dig pits 18 x 18x 12 ins. E. and W. of stone, 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor. No trees near. Magnetic declination N. 14° 20' E. December 9, 1911.

Feb. 25, 1913: From the above cor. I run E. bet. secs. 3 and 34.

Chains	
40.00	Set a limestone, 16 x 12 x 10 ins., 11 ins. in the ground, for cor. of secs. 2, 3, 34 and 35, marked with 2 notches on E. edge, 4 notches on W. edge, 18 N on N.E. face, 12 E on S.E. face; and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
	Magnetic declination N. 14° 12' E.
	Land rolling. Soil, sandy and gravelly; 2nd and 3rd rate.
	No timber. Undergrowth: scrub cedar, and white sage-brush and broom weed.
	Rolling land, 80.00 chains.
	- -
	East, bet. secs. 2 and 35.
2.00	Top of W. bank, Canyon Diablo; steep 200 ft. slope. Impossible to chain. To determine the distance across the canyon, I set a flag on line on E. bank, then measure a base line, S. 7.00 chains, to a point from which the flag brs. N. 57° 28' E.; therefore, tan. 57° 28' x the base, or 1.567 x 7.00 = 10.97 chs., the dist. across which, added to 2.00 chs., makes
12.97	Top of E. bank of Canyon Diablo; brs. N., ascend.
40.00	Set a limestone, 18 x 12 x 6 ins., 12 ins. in the ground, for ¼ cor. secs. 2 and 35, marked ¼ on N. face; dig pits, 18 x 18 x 12 ins., E. and W. of cor., 3 ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, N. of cor.
	Magnetic declination N. 14° 20' E.
57.00	Road, brs. N.E. and S.W.
80.00	Set a limestone, 15 x 12 x 10 ins., 10 ins. in the ground, for cor. of secs. 1, 2, 35 and 36, marked with 1 notch on E. edge, 5 notches on W. edge; 18 N on N.E. face, 17 N on S.W. face, 12 E on S.E. face; dig pits, 18 x 18 x 12 ins. in each sec., 5½ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.
	Magnetic declination N. 14° 20' E.
	Land rolling and mountainous.
	Soil: sandy and rocky, 2nd, 3rd and 4th rate.
	No timber. Undergrowth: scattered scrub cedar, white sage brush and broom weed.
	Mountainous land, steep slopes, covered with loose rock, and exceptionally difficult to survey, 11.00 chs.
	Rolling land, 69.00 chs.
	- -
	E. bet. secs. 1 and 36.
	Ascending over rolling land.
23.00	Road, Winslow to Camp Verde, brs. N.E. and S.W.
40.00	Set a limestone, 18 x 8 x 6 ins., 12 ins. in the ground for ¼ cor. of secs. 1 and 36, marked ¼ on N. face; from which
	A cedar 12 ins. in diam., brs. S. 29½° E., 25 lks., dist., marked ¼ S 1 B T.
	A cedar 12 ins. in diam., brs. N. 59° E., 119 lks. dist., marked ¼ S 36 B T.
	Magnetic declination N. 14° 20' E.
50.00	Enter dense cedars.
80.00	The true point for cor. of Ts. 17 and 18 N., Rs. 12 and 12½ E., witnessed as described in Book "K".
	Land rolling. Soil: sandy, 2nd and 3rd rate.
	No timber, 48.00 chs.; Dense timber 32.00 chs.
	Undergrowth: Dense scrub cedars, white sage brush and broom weed.
	Rolling land, covered with dense cedar brush 32.00 chs.
	Rolling land, 48.00 chs. February 25, 1913.
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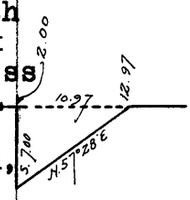

Roscoe Ellsworth.
U. S. Deputy Surveyor.

Chains

Boundary of Township 17 N., R. 12 E.,
Latitudes, Departures, and Closing errors.

Line Designated	True Bearing	Dist. Chs.	Latitudes N. Chs.	Latitudes S. Chs.	Departures E. Chs.	Departures W. Chs.
	S.77° 13'W	40.44		8.95		39.44
	N.86°00'W	40.62	2.83			40.52
South Bdy.	S.85°33'W	40.26		3.12		40.14
(4th Std.	S.89°48'W	40.07		.14		40.07
Par. N.)	S.89°41'W	80.14		.44		80.14
	S.84°40'W	39.84		3.70		39.67
	N.84°36'W	7.23	.68			7.20
	WEST	191.30				191.30
West boundary	North	491.16	491.16			
North boundary	East	477.13			477.13	
East boundary	South	480.00		480.00		
Convergency					0.50	
Totals			494.67	496.35	477.63	478.48
				494.67		477.63
Error in latitude				1.68		
Error in Departure						0.85

GENERAL DESCRIPTION.

Township 17 N., R. 12 E., consists of rolling mesas, sandy and gravelly soil, no water, ridges covered with dense cedar brush, some grass, white sage brush, and broom weed, both townships cut from N. to S. by Canyon Diablo being precipitous, rocky, winding Canyon, descending abruptly, 200 to 300 ft., below mesa, No water, except what is stored in tanks, during flood season.

Roscoe B. Sears.
U. S. DEPUTY SURVEYOR.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by Pearce Klam, 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 N. Bdy T. 17 N. R. 12 E. showing the respective capacities in which they acted:

Bob Johnson, *Chainman.*
W. D. Schoonover, *Chainman.*
Wm Larkin, *Moundman.*
, *Moundman.*
Cliff Wilson, *Axman.*
, *Axman.*
Lester French, *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Pearce C. Klam, United States Deputy Surveyor, in surveying all those parts or portions of the N. Bdy T. 17 N. R. 12 E.

of the 2nd P.M. meridian, in the Territory 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.

W. D. Schoonover, *Chainman.*
Bob Johnson, *Chainman.*
Wm Larkin, *Moundman.*
, *Moundman.*
Cliff Wilson, *Axman.*
, *Axman.*
Lester French, *Flagman.*

Subscribed and sworn to before me this 17 day of Dec, 19 12

SEAL

Pearce C. Klam
U.S. Deputy Surveyor

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(v)

BOOK 2789

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Roscoe C. Ham, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank D. 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

N Bdy T 17 N R 12 E

of the G & S R. B & M meridian, in the 1st 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 C. Ham.
United States Deputy Surveyor.

Subscribed by said Roscoe C. Ham, and sworn to before me this 31st day of January, 1910

Ray B. Thomson
United States Commissioner
Motion Division of Western District of Missouri

SEAL

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona Nov. 24, 1911

The foregoing field notes of the survey of

the North Bdy of Tp. 17 N. - R 12 E. of the Gila and Salt River Base and Meridian, Arizona.

executed by Roscoe C. Ham, U.S. Deputy Surveyor under his contract No. 162, dated Jan. 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 D. Ingalls
~~United States~~ Surveyor General.
OF ARIZONA.

~~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.~~

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