4—679.

"Book T"

-1820-

FIELD NOTES

OF THE SURVEY OF THE

BOOK 1820

East Boundary (Partial Resurvey)

of

T. 18 N., R. 5 E.

-1820-

1820

Of the Gila and Salt River Base and Meridian,

In the Territory of Arizona

AS SURVEYED BY

Edgar C. Dietrich, United States Deputy Surveyor,

Under his Contract No. 123, dated September 15, 1904

Survey commenced March 3, 1905

Survey completed March 6, 1905

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1A

BOOK 1820

NAMES AND DUTIES OF ASSISTANTS.

John M. Dreyer, chainman

Frank Dietrich, chainman

Charles Payne, rodman

William M. Ware, Axman

Ira Ormsby, Axman

Walter Percival, Flagman

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1B

BOOK 1820

INDEX DIAGRAM.

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PRELIMINARY OATHS OF ASSISTANTS.

WE, John M Evans and Frank Dietrich 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

Ely'n East boundary of T. 18 N., R. 5 E.

John M Evans, Chainman.

Frank Dietrich, Chainman.

Subscribed and sworn to before me this Third day of March, 1905.

SEAL

Edgar C. Dietrich
U. S. Deputy Surveyor

I WE, Charles Payne 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

Ely'n East boundary of T. 18 N. R. 5 E.

Charles Payne, Moundman.

, Moundman.

Subscribed and sworn to before me this Third day of March, 1905.

SEAL

Edgar C. Dietrich
U. S. Deputy Surveyor

WE, William M. Ware and Ira Owenby 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

Ely'n East boundary of T. 18 N. R. 5 E.

Wm M Ware, Axman.

Ira Owenby, Axman.

Subscribed and sworn to before me this Third day of March, 1905.

SEAL

Edgar C. Dietrich
U. S. Deputy Surveyor

I, Walter Percival, 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 Ely'n East boundary of T. 18 N., R. 5 E.

Walter Percival, Flagman.

Subscribed and sworn to before me this Third day of March, 1905.

SEAL

Edgar C. Dietrich
U. S. Deputy Surveyor

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No notary public available

6 chains

Survey commenced March 3, 1905, and executed with a Gurley & W. Queen and Co. light mountain transit, No. 4607, with solar attachment. The horizontal limb is provided with two double verniers reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs. The latitude arc reads 3' in excess being an index error.

The instrument was examined, tested on the true meridian at Phoenix, found correct, and was approved by the surveyor general for Arizona, December 22, 1904.

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 observations on Polaris, I proceed as follows:

At a point 7 chs. S. of the cor. of Ts. 17 and 18 N., Rs. 5 and 6 E., which is a sandstone, set in a mound of stone, marked and witnessed as described by the surveyor general, latitude ~~34° 05' N.~~ 34° 54' 23" N., longitude ~~111° 46' W.~~ 111° 45' 15" W.; I set off 34° 05' N., on the lat. arc, 2° 25' S. on the decl. arc; and at 3h 50m p. m., l. m. t., determine with the solar a meridian and mark a point thereof, on a stone firmly set in the ground, 5 chs. N. of point (7 chs. S. of cor.).

At 5h 36m p. m., l. m. t. by my watch, which is correct, I observe Polaris at western elongation, in accordance with Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground 5 chs. N. of my station.

March 3, 1905.

March 4: At 8h 30m a. m., l. m. t., I lay off the azimuth of Polaris, 1° 28' to the East, and mark the meridian thus determined, by cutting a small groove in the stone set March 3, on which the meridian falls 0.2 ins. west of the mark determined by the solar.

At 8.50 a. m., l. m. t., I set off 34° 05' on the lat. arc; 2° 29' S. on the decl. arc, and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of my station. This mark falls 0.4 ins. west of the meridian established by

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East boundary of T. 18 N., R. 5 E.

Chains	
	by the Polaris observation. The solar apparatus, by p. m. and a. m. observations, defines positions for meridians, respectively about 11" east and 11" west of the meridian established by the Polaris observations; therefore I conclude that the adjustments of the instrument are satisfactory. The magnetic bearing of the true meridian at 5 hours a. m., is N. 14° 34' W.; the angle thus determined gives the mag. dec. 14° 34' E.
	From the S. E. cor., which stands at the foot of a red sandstone bluff, 300 ft. high, I offset as follows: East, 7 chs.; then on the offset line: North, 34.00 chs.; then
34.00	West, 7 chs., to the true line. Bearings & runs North, bet. secs. 31 and 36. Over mountainous land, descending through heavy timber and dense undergrowth.
40.00	Crossed from S. E. cor. Set a sandstone, 18 x 12 x 4 ins., in a mound of stone, for 1/4 sec. cor. marked 1/4 on W. face; from which A pinon, 6 ins. diam., bears N. 53 1/4° E., 53 lks. dist., marked 1/4 S 31 B S. A pine, 7 ins. diam., bears S. 59° W., 28 lks. dist., marked 1/4 S 36 B S.
44.90	Gulch, 20 lks. wide, course E.; heavy timber; ascend.
63.00	Top of mesa, bears E. and W.; heavy dense undergrowth.
80.00	Set a sandstone, 18 x 8 x 5 ins., in a mound of stone, for cor. of secs. 25, 30, 31 and 36, marked with 1 notch on S. and 5 notches on N. edge, from which A pinon, 6 ins. diam., bears N. 29° E., 129 lks. dist., marked S 18 N R 6 E S 30 B S. A pine, 24 ins. diam., bears N. 19 1/2° W., 89 lks. dist., marked S 18 N R 5 E S 25 B S.; on which tree within limit, and raised a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable. Land, mountainous and level. Soil, stony and rocky; 4th rate. Timber, pine, pinon and cedar; undergrowth, manzanita, yew and algerita.
	Mountainous, heavily timbered land, covered with

Chains	
	dense undergrowth, 63.00 chs.
	North, bet. secs. 25 and 30.
	Over level land, through heavy pine timber and dense brush.
6.00	Begin descent from mesa, bears E. N. E. and W. S. W.
9.30	Descend over sandstone ledges.
12.25	Reach gulch, 40 lks. wide, course W.; ascend.
16.00	Top ridge, over gently rolling land.
34.00	Descend abruptly 60 ft.
35.40	Gulch, 40 lks. wide, course W. N. W.; ascend.
36.80	Top ridge.
40.00	Set a sandstone, 18 x 10 x 5 ins., in a mound of stone, for 1/4 sec. cor. marked 1/4 on W. face; from which A pine, 8 ins. diam., bears N. 62° E., 22 lks. dist., marked 1/4 S 30 B T. A pine, 6 ins. diam., bears N. 29° W., 9 lks. dist., marked 1/4 S 25 B T.
51.00	Cross heavy timber; begin steep ascent bears E. and W.
57.00	Top of rocky spur, extending W. from Wilson mountain; descend.
72.00	Gulch, 15 lks. wide, course N. W.; enter cove, extending E. into Wilson mountain.
80.00	Rocks on a malpais stone in place, 3 x 3 x 2 ft. above ground, on which Set a cross (X) at the the exact cor. point for cor. of secs. 19, 24, 25 and 30, marked with 2 notches on S. and 4 notches on N. side of cross; and raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor. Pits impracticable. All the timber in the vicinity of this cor. is dead. Land, mountainous, gently rolling, broken and level. Soil, stony and rocky. No water. Timber, pine, pinon and scattering cedar; undergrowth, algarrobo, pine and manzanita. Mountainous, heavily timbered or land covered with dense undergrowth, 80.00 chs. March 4. At this cor. I set off 6° 27' E. in the declination, and, at 12h 4m p. m. t., observed the sun on the meridian, the resulting lat. is 34° 52½' N. or within 0'.4 of the proper lat.
	North, bet. secs. 19 and 24. Over broken ground, through dense brush.

Chains	
.20	Small gulch, course W.
5.00	Enter scattering timber, bears E. and W.
7.80	Gulch, 20 lks. wide, course S.W.; begin steep ascent of Wilson mountain.
23.15	Foot of bluff, 1200 ft. high, bears E. and W. Cut a cross (x) on S. face of sandstone terrace for witness cor. to 1/4 sec. cor. marked W 6 1/4 on W. side of cross; from which A yew, 13 ins. diam., bears S. 65½° W., 28 lks. dist., marked W 6 1/4 S 24 B.S.; no other tree within limit, and raise ~~as bluffs & ledges cut and effect it is impossible to place mound west of cor.~~ a mound of stone, 2 ft. base, 1½ ft. high, 10 lks. S. of cor. Pits impracticable. Point for 1/4 sec. cor. inaccessible. From this point I return to sec. cor., send flag around to top of mountain on line and triangulate distance ~~which is as follows: Run Base East 15.00 Ch. thence flag bears N. 14° 15' W. Tan. 75 33/4 = 3.884 — 3.884 x 15 = 58.26~~
58.26	Top of Wilson mountain, 1200 ft. above cor. of secs. 19, 24, 25 and 30, bears E. and W.; thence over top of mountain.
63.63	Edge of bluff 800 ft. high, bears N.N.W. and S.S.E. Send flag around to ft. of bluff and triangulate distance, which is 17.74 ~~chs. Run base line 3 chs. East from which flag bears N. 9°-30' W. Tan. 80-30' = 5.912 x 3 = 17.736~~ 17.74 + 63.63 = 81.37
81.37	From this point I run S. 1.57 chs. and establish cor. of secs. 13, 18, 19 and 24, as follows: On E. face of sandstone ledge, 4 ft. above ground, cut a cross (x) at exact cor. point for sec. cor. ~~as ledge extends N and S it is impossible to place mound west of corner~~ marked with 3 notches on S. and N. sides of cross, and raise a mound of stone, 3 ft. base, 2 ft. high, 8 lks. E. of cor. Pits impracticable.
	Land mountainous and broken.
	Soil stony and rocky; 4th rate.
	Timber, scattering piñon, yew, cedar and pine; undergrowth, manzanita, algarrita and yew.
	Mountainous or land covered with dense undergrowth.
	80.00 chs.
	March 4, 1905.

March 5. At 6h 45m a.m. L.m.t. I set off 34°51' on the lat. arc, 2°05' S. on the decl. arc and at a point 30 lks. N. of the cor. of secs. 13, 18, 19 and 24, determine a true meridian with the solar.

Thence from sec. cor. I run

North bet. secs. 13 and 18.

Along E. slope of [illegible]

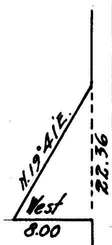
Chains	
2.45	Point of bluff, 400 ft. high, bears E. and W. Chm offset as follows:
	East, 7.00 chs.; chm on the offset line.
	North, 12.00 chs.; chm
14.45	West, 7.00 chs. to the true line.
	Descending, through scattering timber.
25.80	Creek, bears E. and W.
26.00	East fork of Dry creek, 400 ft. below ore. cor, crosses W. water channel (now undergrowth.
33.00	Gulch, 20 lks. wide, crosses S. W.; ascend.
37.40	Point of bluff, 200 ft. high, bears E. and W.
	Set a sandstone, 18 x 8 x 5 ins., in a mound of stone for witness cor. to ¼ sec. cor. marked W. 6 ¼ on W. face, from which
	A pine, 8 ins. diam., bears S. 81° E., 55 lks. dist., marked W 6 ¼ S 18 B. T.; an other tree within limit, and raised a mound of stone 2 ft. base, 1½ ft. high, W. of cor. Pits impracticable. The point for ¼ sec. cor. falls on bluff.
	From witness cor. S offset
	East, 4.00 chs.; chm, on the offset line.
	North, 7.00 chs.; chm
44.40	West 4.00 chs. back to true line
	Descending.
51.30	Gulch, 20 lks. wide, crosses S. E.; thence S.; ascend.
60.00	Top of W. slope of mountain; ascend.
67.80	Edge of deep gulch. Offset as follows:
	West, 12.00 chs.; chm, on the offset line.
	North 12.50 chs.; chm
80.00	East, 12.00 to the true line
	The point for sec. cor. falls in gulch 80 lks. wide, crosses W.
84.00	On a sandstone ledge, bearing N. and S.
	Cut a cross (X) for witness cor. to cor. of secs. 7, 12, 13 and 18, marked with 4 notches on S. and 2 notches on N. sides of cross, and raised a mound of stone 3 ft. base, 2 ft. high, W. of cor. Pits impracticable.
	Land, mountainous.
	Soil, stony and rocky; 4th rate.
	Timber, scattering yew, pinon, cedar and pine; undergrowth, yew, chamisito and sagebrush.
	Mountainous, or land covered with dense undergrowth,

Chains

80.00 chs.

March, 5: At this cor. I set off 6°04' S. on the decl. arc, and at 12h 3m l. m. t. observe the sun on the meridian, the resulting lat. is 34°53' N., or within 0°4' of the proper lat.

North bet. secs. 7 and 12.
From cor. point in gulch.
Ascending steep, rocky bank.
4.00 Witness cor.
6.50 Top of sharp spur, extending W. and edge of gulch 400 ft. deep, course S. W. It being impracticable to chain across the gulch, I send the flag around to top of mountain on line and triangulate the distance ~~which~~ is as follows: Run base W. 8.00 chs. whence flag bears N 19°41' E. Nat. Tan. 70°19' = 2.795 and 8 x 2.795 = 22.36



28.86 Top of W. slope of mountain, 1000 ft. above gulch, thence along foot of rim of the Mogollon mountain.
40.00 Set a malpais stone, 18 x 10 x 8 ins., 12 ins. in the ground, for 1/4 sec. cor. marked 1/4 on W. face, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.
80.00 Falls on a malpais stone in place, 3 x 5 x 2 ft. above ground, on which
I cut a cross (x) at the exact cor point for cor. of secs. 1, 6, 7 and 12, marked with 5 notches on S. and 1 notch on N. edge, and raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor. Pits impracticable. This cor. stands 1 ch. W. of and 40 ft below the rim.
Land, mountainous.
Soil, stony and rocky; 4th rate.
Timber, scattering pine and pinon; undergrowth, manzanita and algarita.
Mountainous land, 80.00 chs.

March, 5, 1905.

March 6: At 8h 54m a.m. l. m. t., I set off 34°55' on the lat. arc, 5°43' S. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 1, 6, 7 and 12.
Thence I run
North, bet. secs. 1 and 6.

Chains	
	Over mountainous land, ascending.
4.70	Ascend 40 ft. 25
5.00	Top of ridge, bears N. N. W. and S. S. E.; thence over level land, through heavy timber.
12.00	Begin gradual ascent up the ground sloping W.
40.00	Set W. mal/pais stone, 18 x 8 x 6 ins., 12 ins. in the ground, for 1/4 sec. cor. marked 1/4 on W. face. from which A pine, 30 ins. diam., bears N. 20 1/4° E., 214 lks. dist., marked 1/4 S 2 B S. A pine, 30 ins. diam., bears S. 53 1/4° W., 55 lks. dist., marked 1/4 S 1 B S.
47.00	Top of W. slope of ridge; descend.
47.00	Pinot, bears N. W. and S. E.
82.00	Descend.
94.85	Gulch, 30 lks. wide; cross N. W.; ascend.
97.00	Spur, extending W.; descend.
99.50	Set a sandstone, 18 x 10 x 8 ins., in a mound of stone, for Witness cor. to closing cor. of Sps. 18 N., Rs. 5 and 6 E., marked W 6 on top, 6 6 on S. with 6 grooves on S. E. and W. faces, from which A pine, 18 ins. diam., bears S. 73° E., 72 lks. dist., marked W 6 S 18 N R 5 & 6 E B S. A pine, 24 ins. diam., bears S. 23 1/4° W., 38 lks. dist., marked W 6 S 18 N R 5 E S 1 B S
	The point for intersection with S. bdy. of T. 19 N., R. 6 E., lies in a deep gulch, course N. E. which is inaccessible Land, mountainous and level. Soil, stony and rocky; 4th rate. Timber, pine, pinon and cedar. Mountainous & heavily timbered land, 99.50 chs. March 6, 1915.
	Note: I have destroyed all cors. established on this line by Deputy John C. Smith, except the 1/4 sec. cor. of secs. 1 and 6, and the cor. of Sps. 18 N., Rs. 5 and 6 E., at the intersection of Deputy Smith's line with the S. bdy. of Sp. 19 N., R. 6 E. After due and diligent search for these lost cors. I was compelled to abandon the survey owing to deep snow, which was four feet deep on the level. I also found and destroyed all the closing sec.

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East boundary of T. 18 N., R. 5 E.

6 chains

cors. established by Deputy Herbert B. Maxson on Deputy Smith's line.

General Description.

This line runs over mountainous land. T. 18 N., R. 6 E. is very mountainous and broken.

Edgar C. Dietrich
U. S. Deputy Surveyor.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

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BOOK 1820 9

LIST OF NAMES.

A list of the names of the individuals employed by Edgar L. Dietrich, 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 the East boundary of T. 18 N., R. 5 E.

showing the respective capacities in which they acted:

John M. Drayer, Chainman.
Frank Dietrich, Chainman.
Charles Payne, Moundman.
, Moundman.
William M. Ward, Axman.
Ira Owenby, Axman.
Walter Percival, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Edgar L. Dietrich, United States Deputy Surveyor, in surveying all those parts or portions of the East boundary of T. 18 N., R. 5 E.

of the Gila and Salt River Base & meridian, 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

John M. Drayer, Chainman.
F. A. Dietrich, Chainman.
Charles Payne, Moundman.
, Moundman.
Wm. Ward, Axman.
Ira Owenby, Axman.
Walter Percival, Flagman.

Subscribed and sworn to before me this Sixth day of March, 1905

Edgar L. Dietrich
U. S. Deputy Surveyor

SEAL

No notary public available

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10 BOOK 1820

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Edgar C. Dietrich, 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 15 day of September, 1904, 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

the East boundary of T. 18 N., R. 5 E.

of the Gila and Salt River Base & 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.

Edgar C. Dietrich
United States Deputy Surveyor.

Subscribed by said Edgar C. Dietrich, and sworn to before me this 11th day of July, 1905

Frank S. Ingalls
U. S. Surveyor General
~~Notary Public Maricopa Co. Arizona~~

SEAL

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, A. T., July 25th, 1905

The foregoing field notes of the survey of the East Bdy of T. 18 N., R. 5 E., of the Gila and Salt River Base and Meridian in the territory of Arizona

executed by Edgar C. Dietrich U. S. D. S. under his contract No. 120, dated September 15th, 1904, 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.~~

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