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BOOK 2164

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(1)

Book J.

Accepted letter E. May 4-1910

FIELD NOTES

OF THE SURVEY OF THE

Frac. West and South Boundaries

2164

2164

of

T. 21 S. R. 19 E.

2164

Of the Gila & Salt River Base & Meridian,
Arizona.

AS SURVEYED BY

Jesse B. Wright, United States Deputy Surveyor,

Under his Contract No. 154, dated February 9, 1909

Survey commenced May 15, 1909

Survey completed May 16, 1909

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(A)

NAMES AND DUTIES OF ASSISTANTS.

Walter Percival, Chairman

Rullin Brown "

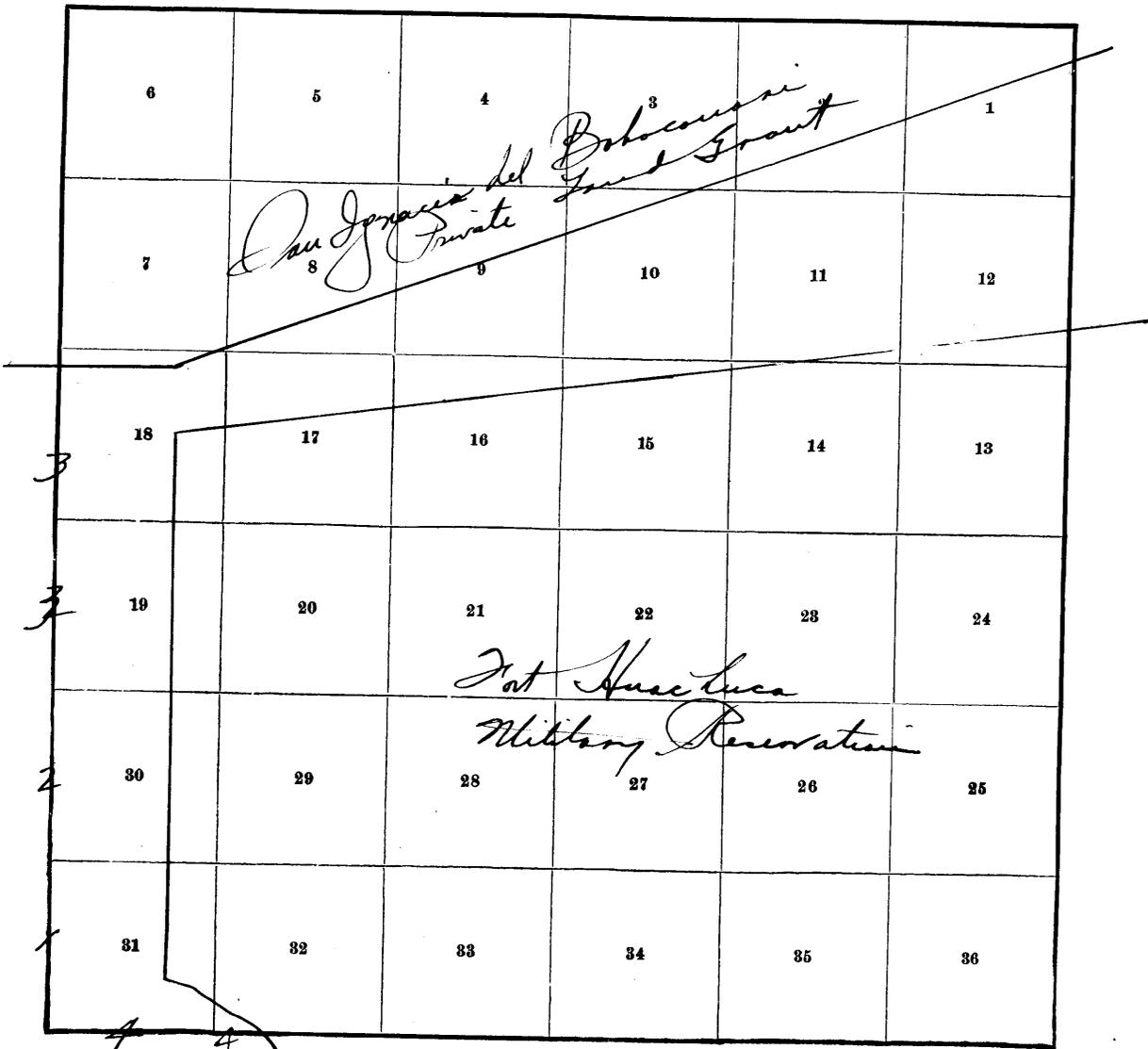
Geo. L. Triley Treasurer

Arthur W. Anderson Secretary

BOOK 2164

INDEX DIAGRAM.

Township 21 S., Range 19 E.



Meanders Page _____

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PRELIMINARY OATHS OF ASSISTANTS.

WE, Walter Percival and Rollin Brown
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 Loc. W. T. S. Bays of T. 21 S. R. 19 E.

Walter Percival, Chainman.
Rollin Brown, Chainman.

Subscribed and sworn to before me this 15th
day of May, 1909

 Joseph B. Wright
U. S. Dep. Surveyor

WE, Geo. L. Trimley 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 Loc. W. T. S. Bays of T. 21 S. R. 19 E.

Geo. L. Trimley, Moundman.
_____, Moundman.

Subscribed and sworn to before me this 15th
day of May, 1909

 Joseph B. Wright
U. S. Dep. 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 _____, 190_____



I, Aubrey W. 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 Loc. W. T. S. Bays of T. 21 S. R. 19 E.

Aubrey W. Anderson, Flagman.

Subscribed and sworn to before me this 15th
day of May, 1909

 Joseph B. Wright
U. S. Dep. Surveyor

Frac. West Boundary of T. 21 S. R. 19 E.

(10)

Chains

Survey begun, May 15, 1909 and executed with a Young & Son's light mountain transit No. 6492, with Smith patent solar attachment on side. The horizontal limb of the instrument is provided with two double verniers each reading to 1' of arc, which is also the least reading of the latitude and vertical arcs and declination arc. I begin at the cor. of Tps. 21 & 22 S. Rs. 18 & 19 E., which is a limestone 7x10x6 ins. above ground, marked & witnessed as described by Surveyor Gen. I examine, and test the levels, line of collimation and standards of the instrument.

I also examine and test the latitude and declination arcs and hour circle of the solar and find same correct.

Then to test the solar apparatus by comparing the results of observations for meridian made during p.m., & a.m. hours with a true meridian established by Polaris observations, I proceed as follows.

at the above described cor. lat. $31^{\circ}32'50''$ N.,

long. $110^{\circ}28'26''$ W., at 4h p.m., l.m.t., I set off

$18^{\circ}54'$ N. on the decl. arc and $31^{\circ}33'$ N. on the lat. arc

and determine a meridian with the solar and mark a

point in the meridian thus determined by a tack in a stake driven firmly in the ground 10 chs. N. of my sta.

May 16, 1909, at 4h ^{3m 45s} a.m., l.m.t., I observe

Polaris at E. Elong. in accordance with instructions in the "Manual" and mark the line thus determined by a cross on a fixed stone 10 chs. N. of my station.

At 8h a.m., l.m.t., I set off the azimuth of Polaris $1^{\circ}23'$ to the W. and mark the true meridian thus determined by a tack in the stake 10 chs. N. of my station., which point is 0.35 ins. E. of the line as given by the solar on preceding evening.

Then I set off $19^{\circ}3'30''$ N. on the decl. arc and $31^{\circ}33'$ N. on the lat. arc and determine a meridian with the solar and mark a point in the meridian thus determined by a tack in the stake 10 chs. N. of my station, which point is 0.25 ins. E. of the meridian determined by Polaris observations.

The solar apparatus, by a.m. & p.m. observations defines positions for meridians respectively, about 6" E. and 9" W. of the meridian determined by polaris observation; these errors being not more than the ordinary errors of observation, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8h a.m., l.m.t., is N. $13^{\circ}50'$ W.

The angle thus determined gives the magnetic declination as $13^{\circ}50'$ E.

From the Cor. above described, I run,

As per instructions,

North, on Range line,

bet. Secs. 31 & 36,

Over mts. land desc. grad.

- 1.00 Road, brs. E. & W. Fort Huachuca to Canille, Arizona.
- 3.45 Wire fence, brs. E. & W., enter field of Henry Pyeatt.
- 12.40 Wire fence, brs. E. & W. leave field asc.
- 14.00 Gap of flat ridge, brs. E. & W. desc. through scatter'g oak.
- 18.50 Head of gulch, 20 lks. wide, course NW.
Thence over very broken W. slope.
- 26.75 Gulch 30 lks. wide, course NW. asc.
- 29.00 Point of spur, brs. NW. & SE. desc.
- 32.80 Gulch 40 lks. wide, course NW. asc.
- 39.00 Spur, brs. NW. & SE. desc.
- 40.00 Set a quartzite stone 24x12x12 ins. 18 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. No bearings available.
- 41.90 Gulch 20 lks. wide, course NW., near head.

Frac. West Boundary of T. 21 S. R. 19 E.

Chains

45.00 Spur, brs. NW. & SE. desc.

50.40 Gulch 20 lks. wide, course NW. asc.

55.50 Main ridge, brs. NW. & SE. desc. steep.

68.30 Gulch 60 lks. wide, course NW.

68.37 Wire fence, brs. NE. & SW. Leave pasture of Henry Pyeatt.

69.90 Main gulch 80 lks. wide, course NW. asc.

75.00 Point of low ridge, brs. NW. & SE. desc.

79.00 Gulch 50 lks. wide, course NW. asc.

80.00 Set a granite stone 24x10x10 ins. 18 ins. in the ground for Cor. of secs. 30, 31, 25 & 36, marked with 1 notch on S. & 5 notches on N. edges, and raise a mound of stone 2 ft. base 1 1/2 ft. high W. of cor. from which,

A mesquite tree 6 ins. diam. brs. S. 38 1/2° E. 215 lks. dist., marked T. 21 S. R. 19 E. S. 31 B.T.

A mesquite tree 6 ins. diam. brs. S. 63 3/4° W. 100 lks. dist., marked T. 21 S. R. 18 E. S. 36 B.T.

No other bearings available.

Land mts. Last 1/2 mile, very rough & broken.

Soil, 2nd & 3rd rate, gravelly, stony.

Timber, scattering oak, mesquite.

Undergrowth, scattering oak, mesquite, palmeo.

Mountainous land, ----- 40.00 chs.

Mountainous land, very rough and broken, and exceptionally difficult to survey, --40.00 chs.

North, bet. secs. 25 & 30,

Over mts. land desc.

9.80 Gulch 25 lks. wide, course NW.

16.50 Gulch 30 lks. wide, course NW. asc.

24.00 Ridge, brs. NW. & SE. desc.

24.90 Road, brs. NW. & SE. on ridge.

32.00 Rocky gulch, course NW. asc.

40.00 Set a granite stone 20x10x10 ins. 15 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. No bearings available.

41.00 Top of ridge, brs. NW. & SE.

41.50 Head of gulch, course NW. asc.

42.50 Main spur, brs. NW. & SE. desc. steep.

52.45 Wash 20 lks. wide, course NW. asc. W. slope.

68.80 Gulch 20 lks. wide, course NW.

75.00 Gulch 20 lks. wide, course NW. asc. steep.

80.00 Set a porphyry stone 20x12x10 ins. 15 ins. in the ground for Cor. of secs. 19, 24, 25 & 30, marked with 2 notches on S. & 4 notches on N. edges, and raise a mound of stone 2 ft. base 1 1/2 ft. high W. of cor. No bearings available.

Land mountainous, broken.

Soil, 2nd & 3rd rate, gravelly, stony.

Timber, few oak and mesquite in canyons.

Undergrowth, scrub oak, mesquite, palmeo. good grass.

Mountainous land, ----- 80.00 chs.

At this cor. at noon, I set off 19° 5' 30" N. on the declination arc and observe the sun on the meridian.

The resulting lat. is 31° 34' 30" N. ✓

Frac. West Boundary of T. 21 S. R. 19 E.

Chains

North, bet. secs. 19 & 24.
 Over mts. land asc.
 12.00 Top of main spur, brs. NW. & SE. desc.
 18.50 Wire fence, brs. NE. & SW.
 24.00 Point of small spur, brs. NW. & SE. desc. steep.
 35.00 Desc. abrupt 50 ft. enter dense sacaton, bluff NE. & SW.
 40.00 Set a granite stone 24x12x8 ins. 18 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.
 from which,
 A sycamore tree 10 ins. diam. brs. S. 75° W. 73 lks. dist.,
 marked 1/4 S. 24 B.T.
 No other bearings available.
 40.00 Desc. abrupt 8 ft. into Sacaton Wash, course NE.
 44.00 Leave wash,
 47.00 Wire fence, brs. ENE. & WSW., Leave valley & dense sacaton,
 and ascend.
 55.43 Cor. of wire fence, runs, NE. & SE. from cor.
 Asc. over very broken E. slope.
 58.65 Wash 20 lks. wide, course E.
 76.50 Gulch 30 lks. wide, course E.
 80.00 Set a limestone 24x10x10 ins. 18 ins. in the ground for
 Cor. of Secs. 18, 19, 13 & 24, marked with 3 notches on N.
 & S. edges, and
 raise a mound of stone 2 ft. base 1 1/2 ft. high W. of cor.
 No bearings available.
 Land mountainous, broken, & rolling.
 Soil, 2nd rate, sandy, loamy, gravelly.
 Timber, few oak, sycamore, cottonwood mesquite, in draws.
 Undergrowth, mesquite, sacaton, good grass in places.
 Mountainous land or land covered with dense undergrowth
 80.00 chs.

North, bet. secs. 18 & 13.
 Over very broken ground with great difficulty, along
 E. edge of mesa.
 1.00 Gulch 50 lks. wide, course E.
 40.00 Cor. point for 1/4 sec. cor. falls in Gulch 30 lks. wide,
 course, SE. asc. steep.
 43.00 Top of bank,
 Set a sandstone 24x18x8 ins. 18 ins. in the ground for
 Witness Cor. to 1/4 sec. cor., marked
 W.C. 1/4 on W. face, and
 raise a mound of stone 2 ft. base 1 1/2 ft. high W. of cor.
 No bearings available.
 50.00 Top of mesa, brs. NNE. & SSW.
 Thence over smooth and level mesa.
 66.18 Road, brs. NE. & SW.
 74.24 Intersect South Boundary of San Ignacio del Babocomori
 Grant, whence 12 mile cor. of Grant brs. S. 88° 07' E. 11.31 chs.
 Set a sandstone 36x24x18 ins. 10 ins. in ground to
 bedrock in mound of stone for closing cor. of secs.
 13 & 18, marked,
 C.C.T. 21 S. on S.,
 R. 19 E. S. 18 on E.,
 R18E. S13 on west and
 S.I.D.B. on N. faces. Md, stone 2 ft, base 1 1/2 ft, high * of Cor,
 No bearings available.
 Land mountainous, broken, level.
 Soil, 2nd & 3rd rate, sandy, gravelly.
 No timber.
 Undergrowth, scattering mesquite.
 Mountainous and broken land exceptionally
 difficult to survey, 50.00 chs.
 Level land, -----, 24.24 chs.

Frac. South Boundary of T. 21 S. R. 19 E.

Chains	<p>From the Cor. of Tps. 21 & 22 S. Rs. 18 & 19 E. as heretofore described, I run, as per instructions, East, on a true line bet. secs. 31 & 6. Over broken mts. land asc. with great difficulty over rocky N. slope. Through scattering oak.</p> <p>20.00 Water tank of Henry Pyeatt, brs. N. 4 chs. 22.00 Point of stony limestone spur Brs. N. & S. House of Henry Pyeatt at foot of main slope, brs. N. 4 chs. Descend.</p> <p>27.50 Gulch 30 lks. wide, course NE. asc. 30.00 Point of spur, brs. N. desc. very steep. 33.40 Gulch 20 lks. wide, course N. asc. steep. 37.00 Point of spur, brs. N. & S. desc. 39.50 Gulch 20 lks. wide, course N. asc. 40.00 Set a limestone 24x15x6 ins. 18 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. from which, An oak tree 6 ins. diam. brs. S. 9° W. 29 lks. dist., marked $\frac{1}{4}$ S. 6 B.T. An oak tree 6 ins. diam. brs. N. 21° 25' W. 35 lks. dist., marked $\frac{1}{4}$ S. 31 B.T.</p> <p>Ascend steep over very rough limestone dykes, N. & S. 44.10 Top of spur, brs. N. & S. desc. 49.35 Canyon 60 lks. wide, course N. asc. steep. 55.73 Top of rocky ridge, course N. & S. desc. steep. 63.35 Old road, brs. NE. & SW. 67.90 Main canyon 80 lks. wide, course N. asc. precipitous. 50 ft. 69.94 S.W. Cor. of engine house of Manilla Mining Co. on line, 74.50 Point of spur, brs. N. & S. desc. 80.00 Set a pine post 3 ft. long, 4x6 ins. 2 ft. in ground for Cor. of Secs. 31, 32, 5 & 6, marked, T. 21 S. S. 32 on NE., R. 19 E. S. 5 on SE., T. 22 S. S. 6 on SW., and R. 19 E. S. 31 on NW. faces, and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high W. of cor. from which, An oak tree 6 ins. diam. brs. S. 30$\frac{1}{4}$° E. 157 lks. dist., marked T. 22 S. R. 19 E. S. 5 B.T. An oak tree 12 ins. diam. brs. S. 63$\frac{1}{4}$° W. 253 lks. dist., marked T. 22 S. R. 19 E. S. 6 B.T. No other trees available. Cor. No. 1 of Fort Huachuca Military Reservation, brs. N. 44° 05' W. 33.70 chs. Land, mountainous, very rough & broken. Soil, 3rd rate, stony. Timber, oak, mesquite. Undergrowth, scrub oak, mesquite, ocotillo, paloverde. Mountainous land exceptionally difficult to survey, 80.00 chs.</p> <hr/> <p>East, bet. secs. 32 & 5. Over very rough mts. land with great difficulty, desc. 2.73 Canyon 50 lks. wide, course NNE. asc. precipitous W. slope. 27.00 Top of high rocky spur, brs. NW. & SE. Intersect W. bdy. of Fort Huachuca Military Reservation, at point No. 3, a flag left on the line by me on May 13. Set a porphyry stone 36x18x10 ins. on bedrock in md. of stone for closing cor., marked C.C. T. 21 S. on W., F.H.M.R. on E. faces, and raise a mound of stone 4 ft. base 3 ft. high W. of cor. from which, An oak tree 12 ins. diam. brs. N. 75° W. 23 lks. dist., marked T. 21 S. R. 19 E. S. 32 C.C. B.T. An oak tree 12 ins. diam. brs. S. 19° W. 48 lks. dist., marked T. 22 S. R. 19 E. S. 5 C.C. B.T. Land, mts. very rough. Soil, 3rd rate, stony. Timber, Oak, mesquite. Undergrowth, oak, mesquite, paloverde. Mts. land exceptionally difficult to survey, 27.00 chs. May 16, 1909.</p>
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Boundaries of T. 21 S. R. 19 E.

Latitudes, Departures, and Closing errors.

Line Designated	True bearing.	Distance.	Latitudes.		Departures.	
			North.	South.	East.	West.
		Chs.	Chs.	Chs.	Chs.	Chs.
(N.Bdy.Fort (Huachuca (Mil. Resn....	S. 82° 34' W.	417.25	.....	53.99	.....	413.75
W.Bdy. "	S. 2° 6' W.	258.27	.....	258.09	.....	9.46
" "	S. 60° 00' E.	30.00	.....	15.00	25.98	.....
" "	S. 75° 00' E.	20.00	.....	5.18	19.32	.....
" "	S. 52° 30' E.	6.66	.....	4.06	5.28	.....
Frac.S.Bdy. T.21S.R.19 E.)	West,	107.00	.....	.....	.....	107.00
Frac.W.Bdy. T.21S.R.19 E.)	North,	314.24	314.24	.....	.....	.....
S.Bdy.of S.I.D.B.Grant)	S. 88° 07' E.	51.65	.....	1.70	51.67	.....
" "	N. 70° 55' 55" E.	451.66	147.54	.....	426.88.	.....
Frac.E.Bdy. T.21S.R.19 E.)	South,	123.65	.....	123.65	.....	.....
Convergency	.....	.....	.....	.....	44	.....
Totals, .....	.....	.....	461.78	461.67	529.52	530.21.
			461.67			529.52
	Error in Lat. ....	.....	.....	.11	Error in Dep. ....	.....
						2
						.....69

General Description.

The frac. W. & S. Boundaries of T. 21 S. R. 19 E. run over broken, mountainous land, sparsely timbered with oak. The soil is in general stony or gravelly, and dry. There are indication of mineral in the country to the South, but the prospecting has been of a superficial nature, and but little ore developed.

As I employed my assistants in the immediate vicinity of the work and no Notary Public or other officer being available I was compelled to administer the preliminary and final oaths to my assistants.

May 16, 1909.

Jesse B. Wright
U.S. Deputy Surveyor.

In authority for red ink corrections see Deputy letter of Sept. 7-09.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by Jesse Burdick

Jesse Burdick, 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

Sec W. & S. Bds of T. 21 S. R. 19 E.

showing the respective capacities in which they acted:

Walter Percival, Chainman.

Rollin Brown, Chainman.

Joe L. Triley, Moundman.

Moundman.

Axman.

Axman.

Aubrey W Anderson, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Jesse Burdick

Jesse Burdick, United States Deputy Surveyor, in surveying all those parts or portions of the

Sec West & South Boundaries of T. 21 S. R. 19 E.

of the

21st 19th meridian, 2nd 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

Walter Percival, Chainman.

Rollin Brown, Chainman.

Joe L. Triley, Moundman.

Moundman.

Axman.

Axman.

Aubrey W Anderson, Flagman.

Subscribed and sworn to before me this 19th

day of May, 1909



Jesse Burdick
U. S. Dep. Surveyor

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FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I Jose B. Wright, 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 9th day of February, 1909, 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

Sec. West & South Boundaries of T. 21 S. R. 19 E

of the RSR meridian, in the Sec. 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.

Jose B. Wright
United States Deputy Surveyor.

Subscribed by said Jose B. Wright, and sworn to before me) this 4th day of June, 1909

W. Stearns
U.S. Commissioner



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz. July 20, 1910

The foregoing field notes of the survey of the fractional South and West Boundaries of T. 21 S. R. 19 E. Sec. 5, 6 and Salt River Base and Meridian, Arizona

executed by Jose B. Wright U.S. Dep. Sur. under his contract No. 154, dated July 9, 1909, 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.