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Book I

BOOK 2282

FIELD NOTES

OF THE SURVEY OF THE

North Boundary T12 R13 E

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Of the *G. S. P. B. A.* Meridian,
Arizona

AS SURVEYED BY

Hugh J. DuVal, United States Deputy Surveyor,

Under his Contract No. *163*, dated *May 16*, 19*10*

Survey commenced *January 16*, 19*11*

Survey completed *January 17*, 19*11*

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NAMES AND DUTIES OF ASSISTANTS.

See Book A

Blank lined area for recording names and duties of assistants.

BOOK 2282

INDEX DIAGRAM.

Township 17D, Range 13E

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30	29	28	27	26	25
31	32	33	34	35	36

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PRELIMINARY OATHS OF ASSISTANTS.

BOOK 2282

See Book A

WE, _____ and _____

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 _____

_____, *Chainman.*

_____, *Chainman.*

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



WE, _____ 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 _____

_____, *Moundman.*

_____, *Moundman.*

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



WE, _____ and _____

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

_____, *Axman.*

_____, *Axman.*

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



I, _____, 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 _____

_____, *Flagman.*

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



North Boundary of T. 12 S., R. 13 E.

Chains.

Survey commenced Jan. 16th, 1911, and executed with a Bleunt & CO., light engineering transit, No. 601, described in the exterior lines of T. 9 S., R. 31 E.

I examine the adjustments of the transit, and correct the level and colimation 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 obs. on Polaris, I proceed as follows:-

At 9h.0m. a.m., l.m.t.,

At the cor. of Tps. 11 and 12 S., Rs. 13 and 14 E., (a granite stone, 10x12x10 ins. above ground, properly marked and witnessed as described by the Surveyor General) latitude $32^{\circ}25'10''$ N, long. $110^{\circ}57'25''$ W, I set off $57^{\circ}35'$ on the co-lat. arc, $21^{\circ}2'5''$ on the decl. arc, and determine a mer. with the solar and mark a point in the line thereof on a stone, firmly set, 5 chs. N. of my station.

At 3h. p.m., l. m. t., I set off $57^{\circ}35'$ on the co-lat. arc, and $2059''$ S. on the decl. arc, and determine a mer. with the solar and mark a point in the line thereof on the stone, 5 chs. N. of my station, by a small groove; this point falls 0.2 ins. E. of the point determined by the a. m. solar.

At 11h. 42m. P. M., l. m. t., by my watch, I obs. Polaris at Western Elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined by a peg driven in the ground, 5 chs. N. of my station.

Jan. 16th, 1911.

Jan. 17th:- At 7 h, a. m., I lay off the azimuth of Polaris, $1^{\circ}23'$ to the east, and mark a point in the meridian thus determined by a small groove on the stone already set, Jan. 16th, on which the meridian falls or rather co-incides with the a. m. meridian.

The solar apparatus by p. m. and a. m. observations, defines positions for meridians, respectively $0'11''$ E. and $0'0''$ W. of the meridian as determined by the Polaris obs., hence I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 8h, p. m., is $N.13^{\circ}25'W.$; the angle thus determined gives the mag. decl. $13^{\circ}25'E.$

From the township corner already described, I run West on a random line, along the North boundary of Tp. 12 S., R. 13 E., setting temp. $\frac{1}{4}$ sec. and sec. cors. at intervals of 40 chs.; and at 478.48 chs. intersect the Santa Cruz Guide Meridian at a 480 lks. S. of the cor. of Tps. 11 and 12 S., Rs. 12 and 13 E., which cor. is a granite stone 8x14x12 ins. above ground, properly marked and witnessed as described by the Surveyor General. As this is in excess of allowable limits, I therefore make my random line a true line.

From the cor. of Tps. 11 and 12 S., Rs. 13 and 14 E., previously described, I run West on a true line bet. secs. 1 and 36.

40.00

Set a quartzite stone, 16x9x8 ins., 10 ins. in the ground. for the $\frac{1}{4}$ sec. cor., mkd. $\frac{1}{4}$ on N. face, and

Chains.

86.00 raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.
 Set a quartzite stone, 15x8x8 ins., 10 ins. in the ground, for the cor. of secs. 1, 2, 35 and 36, mkd. with 1 notch on the E. and 5 notches on the W. edge, and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
 Land rolling. Soil 3rd rate. Pale verde and cactus undergrowth. Difficult to chain.

 West bet. secs. 2 and 35.

.30 Arroyo, 20 lks. wide, course S.
 40.00 Set a quartzite stone, 16x9x8 ins., 10 ins. in the ground for the ¼ sec. cor., mkd. ¼ on N. face, and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.

79.65 Arroyo 25 lks. wide, course SW.
 80.00 Set a granite stone, 16x9x8 ins., 10 ins. in the ground for the cor. of secs. 2, 3, 34 and 35, mkd. with 2 notches on the N. and 4 notches on the W. edge, and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Land rolling. Soil 3rd rate. Pale verde and cactus undergrowth? Difficult to chain.

 West bet. secs. 3 and 34.

18.45 Old road bears N. and S.
 34.07 Old road bears N. and S.
 40.00 Set a limestone, 15x7x7 ins., 10 ins. in the ground for the ¼ sec. cor., mkd. ¼ on N. face, and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.

56.61 Old road bears N. and S.
 80.00 Set a quartzite stone, 18x9x7 ins., 12 ins. in the ground, for the cor. of secs. 3, 4, 33 and 34, mkd. with 3 notches on the E. and W. edges.
 A Pale Verde, 5 ins. in diam. bears N.77°E., 89 lks. dist., mkd. T.11S. R.13E S34BT,
 Mesquite, 7 ins. in diam. bears S.55½°E., 45 lks. dist., mkd. T.12S., R.13E S3BT,
 Mesquite, 7 ins. in diam., bears S.61½°W., 57 lks. dist., mkd. T.12S. R.13E S4BT,
 Pale Verde, 9 ins. in diam., bears N.22°30'W., 280 lks. dist., mkd. T.11S., R.13E S33BT.

Land rolling. Soil 2nd rate. Mesquite and Pale verde underbrush.

Jan, 17th:- At this cor. I set off 20°50'S. on the decl. arc, and at 12h10m, p. m., 1. m. t., I obs. the sun on the mer., the resulting lat. is 32°25'.N

 West bet. secs. 4 and 33.

28.75 Old road bears N. and S?
 38.00 Arroyo, 40 lks. wide, course South.
 40.00 Set a quartzite stone, 14x9x6 ins., 10 ins. in the ground for the ¼ sec. cor., mkd. ¼ on N. face, and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.
 A mesquite 10 ins. in diam, bears S.22°E., 44 lks. dist., mkd. ¼ S4 BT. and
 A mesquite 10 ins. in diam., bears N.45°30'E., 57 lks. dist., mkd. ¼ S33BT.
 65.68 Old road bears N. and S.

North Boundary of T. 12 S., R. 13 E.

Chains.

69.42 Old road bears NE. and SW.

80.00 Set a granite stone, 15x7x5 ins., 10 ins. in the ground for the cor. of secs. 4, 5, 32 and 33, mkd. with 2 notches on the W. and 4 notches on the E. edge;

A mesquite tree, 4 ins., in diam., bears N.57°30'E. 95 lks. dist., mkd. T.11SR13ES33BT.

A mesquite, 4 ins. in diam., bears S.83°E., 95 lks. dist., mkd. T. 12SR13ES4BT.

A mesquite, 5 ins. in diam., bears S.56°W., 73 lks. dist., mkd. T. 12 S., R. 13 E. S 5 BT.

A mesquite, 8 ins., in diam., bears N.45°W., 19 lks. dist., mkd. T. 11 S R 13 E S 32 BT.

Land rolling. Soil 3rd rate. Mesquite and cactus underbrush.

West bet. secs. 5 and 32.

.65 Arroyo, 20 lks. wide, course SW.

19.30 Old road bears N. and S.

40.00 Set a granite stone, 18x12x9 ins., 12 ins. in the ground, for the 1/4 sec. cor., mkd. 1/4 on N. face, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

An ironwood, 10 ins. in diam., bears N.72°30' E., 77 lks. dist., mkd. 1/4S32BT.

An iron wood, 9 ins. in diam., bears S.17°W., 45 lks. dist., mkd. 1/4S5BT.

At 3h, p. m., 1. m. t., I set off 20°48'S. on the decl. arc, and 57°35' on the co-lat. arc, and determine a mer. with the solar at this cor.

44.30 Arroyo, 100 lks. wide, course S.

80.00 Set a granite stone, 17x9x8 ins., 12 ins. in the ground, for the cor. of secs. 5, 6, 31 and 32, mkd. with 1 notch on the W. and 5 notches on the E. edge, whence

An ironwood, 10 ins. in diam., bears N.69°E., 19 lks. dist., mkd. T11SR13ES32BT.

An ironwood, 9 ins. in diam., bears N.15°W., 24 lks. dist., mkd. T11SR13ES31BT.

A mesquite, 4 ins., in diam., bears S22°W., 114 lks. dist., mkd. T12SR13ES6BT.

A palo verde, 5 ins. in diam., bears S.17°E., 108 lks. dist., mkd. T12SR13ES5BT.

Land rolling. Soil 3rd rate. Cactus and mesquite iron wood and Palo verde brush.

West bet. secs. 6 and 31.

16.25 Arroyo, 25 lks. wide, course SW.

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

45 J 2

I, BOOK 2282

See Book A

....., United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from United States Surveyor General for, bearing date of the day of, 19, 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, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of

..... of the meridian, in the of, 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 and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

United States Deputy Surveyor.

Subscribed by said, and sworn to before me } this day of, 19



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz. July 13, 1916

The foregoing field notes of the survey of the North Boundary of Sp. 12 & 13 E. of the Gila and Salt River Base and Meridian, Arizona

executed by Hugh D. Dural W.S.D. under his contract No. 163 dated May 16, 1916, 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.