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Book C.

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BOOK 2233

JAN 25 1911

Accepted, Letter E.
July 19 - 1912

FIELD NOTES

OF THE SURVEY OF THE

Subdivision lines of Tp. 5 S. Rg. 8 W.

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Of the Gila and Salt River Meridian,

Territory of Arizona

AS SURVEYED BY

John F. Hesse

Transitman

, United States Deputy Surveyor,

Under his ~~Contract~~ ^{Group} No. 1, dated August 25, 1910

Survey commenced December 14, 1910, 19

Survey completed December 15, 1910, 19

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BOOK 2233

NAMES AND DUTIES OF ASSISTANTS.

A. N. Oliver Chainman

A. E. Lyon Chainman

J. H. Bates Moundman

A. E. Beaumont Axman

R. A. Coombs Flagman

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BOOK 2233

INDEX DIAGRAM.

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BOOK 2233

PRELIMINARY OATHS OF ASSISTANTS.

WE, A. N. Oliver and A. E. Lyon
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 the subdivision lines of Tp. 5 S. Rg. 8 W.

A. N. Oliver, Chainman.
A. E. Lyon, Chainman.

Subscribed and sworn to before me this 2nd.
day of December, 1910., 19



John P. Hesse
U. S. Transitman

WE, J. H. Bates 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 the subdivision lines of Tp. 5 S. Rg. 8 W.

J. H. Bates, Moundman.
J. H. Bates, Moundman.

Subscribed and sworn to before me this 2nd.
day of December, 1910., 19



John P. Hesse
U. S. Transitman

WE, I, A. E. Beaumont 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 my skill and ability, in the survey of the subdivision lines of Tp. 5 S. Rg. 8 W.

A. E. Beaumont, Axman.
A. E. Beaumont, Axman.

Subscribed and sworn to before me this 5th.
day of December, 1910., 19



John P. Hesse
U. S. Transitman

I, R. A. Coombs, 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 the subdivision lines of Tp. 5 S. Rg. 8 W.

R. A. Coombs, Flagman.

Subscribed and sworn to before me this 2nd.
day of December, 1910., 19



John P. Hesse
U. S. Transitman

Subdivision of Tp. 5 S. Rg. 8 W.

Chains

Survey commenced December 14, 1910 and executed with an A. Lietz Co. light mountain transit, No. 5631, with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined and approved by the Supervising Surveyor for Arizona.

I examine the adjustments of the transit and find them correct; 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 my camp which is located about 2 chs. N. W. of the cor. of secs. 3, 4, 33 and 34, Tps. 4 and 5 S. Rg. 8 W. latitude 33° 01' 41" N.; longitude 113° 22' 57" W. At 8h. 00m. a.m., l.m.t., I set up my transit at the south end of the meridian established by observations on Polaris December 8 and set off 33° 01½' N. on the lat. arc; 23° 08½' S. on the decl. arc; and mark a point in the meridian determined with the solar, by a cross on the stone set December 8, 5 chs. N. of my station; this mark falls 0.2 ins. east of the meridian established by the Polaris observation.

At 4h. 00m. p.m., l.m.t., I set off 33° 01½' N. on the lat. arc; 23° 09½' 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 0.2 ins. west of the meridian established by the Polaris observation.

The solar apparatus, by p.m. and a.m. observations, defines positions for meridians, respectively about 0' 10" east and 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 the cor. of secs. 1, 6, 7 and 12, at 8h. 50m. a.m. is N. 14° 30' W.; the angle thus determined gives the magnetic decl. 14° 30' E.

The cor. of secs. 1, 6, 7 and 12 Tp. 5 S. Rgs. 8 and 9 W. has been washed away by the Gila River I find a bearing tree marked TVSPIXWSIBT dead and with top broken off, and run S. 15° E. 34 lks. to true point for cor. and as the cor. if re-established here would be washed away again I run N. bet. secs. 1 and 6 and at

16.00

Set an iron post, filled with cement, 3 ft. long, 3 ins. diam., with brass cap on top, 24 ins. in the ground for witness cor. to cor. of secs. 1, 6, 7 and 12, marked on cap with a dot and WC in center, with a cross S. of dot marked T58 on N. with

R8W56 on N. E.

S7 on S. E.

S12 on S. W. and

R9W51 on N. W. quadrants; Fig. pits 18 x 18 x 12 ins. N. E. S. E., S. W. and N. W. of post 5½ ft. dist., and raise a mound of earth 4 ft. base 2 ft. high, W. of cor. No bearings available.

From the true point for cor. of secs. 1, 6, 7 and 12

I now run

East bet. secs. 6 and 7

Over level bed of Gila River, dry, through dense arrow and water mote brush.

9.70
43.77

Cross small stream of water 30 lks. wide 7 ins. deep, co. SW.

Point for ¼ sec. cor. falls in bed of river and as the witness cor. cannot be established on line E. or W. of the true point within 20.00 chs. I therefore Run south 12.74 chs. from true point for ¼ sec. cor. and set an

iron post, filled with cement, 3 ft. long, 1 in. diam., with brass cap on top, 26 ins. in the ground for witness

Subdivision of Tp. 5 S. Rg. 8 W.

Chains. $\frac{1}{4}$ sec. cor., marked on cap with a dot and WC $\frac{1}{4}$ in center and S6 on N. and S7 on S. halves; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high W. of cor. Pits impracticable. No bearings available.

82.25 Left bank of Gila River

83.77 Set an iron post, filled with cement, 3 ft. long, 2 ins. diam., with brass cap on top, 34 ins. in the ground for cor. of secs. 5, 6, 7 and 8, marked on cap with R8WS5 on N. E.
S8 on S. E.
S7 on S. W. and
T5SS6 on N. W. quadrants; from which
A mesquite 6 ins. diam., bears N. $41\frac{1}{2}^{\circ}$ W. 30
lks. dist., marked T5SR8WSCPT.

Dig pits 18 x 18 x 12 ins. in each sec. N. E., S. E. and S. W. of post, $5\frac{1}{2}$ ft. dist. and raise a mound of earth 4 ft base 2 ft. high, W. of cor. No other bearings available.

Land, level.
Soil, sand; 4th. rate.
W. 82.27 chs. level river bed; soil sand; no grass; E. 1.50 chs. level valley land, soil, rich sandy loam, over 2 ft. deep, fine texture, dry; no grass
No timber.
Undergrowth, arrow, water note and mesquite brush.

40.00 N. $0^{\circ} 03'$ W. on a random line bet. secs. 5 and 6
Set temp. $\frac{1}{4}$ sec. cor.

64.04 Intersect N. bdy. of Tp. at the cor. of secs. 5, 6, 31, and 32
Thence I run
S. $0^{\circ} 03'$ E. on a true line bet. secs. 5 and 6
Over level land through dense arrow brush.
Point for $\frac{1}{4}$ sec. cor. will fall in bed of Gila River so at

21.00 Set an iron post, filled with cement, 3 ft. long, 1 in. diam., with brass cap on top, 36 ins. in the ground for witness $\frac{1}{4}$ sec. cor., marked on cap with a dot and WC $\frac{1}{4}$ in center with T5SR8WS6 on W. and S5 on E. halves: dig pits 18 x 18 x 12 ins. N. and S. of post, 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base $1\frac{1}{2}$ ft. high, W. of cor. No bearings available.

21.30 Right bank of Gila River and over dry bed of river through dense arrow and water note brush.

31.00 Cross small stream of running water 18 lks. wide 6 ins. deep, course S. W.

39.60 Left bank of Gila River and over level land through dense mesquite and chico brush.

64.04 The cor. of secs. 5, 6, 7 and 8.
Land, level.
Soil, sandy loam and sand; 1st. and 4th. rate.
N. 21.30 chs. level, bottom land; soil rich sandy loam, over 2 ft. deep, mixed with humus, fine texture, dry:
next 12.50 chs. dry river bed: soil sand; no grass: S.
24.44 chs. level valley land; soil rich sandy loam, over 2 ft. deep, fine texture, dry; no grass.
No timber.
Undergrowth, mesquite, chico, arrow and water note brush
December 14: At this cor. I set off $23^{\circ} 11'$ S. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is $33^{\circ} 01'$ N. ✓

Subdivision of Tp. 5 S. Rg. 8 W.

Chains. East bet. secs. 5 and 8.
 Over level land through dense mesquite and chico brush.
 1.00 Ascend steep rocky N. W. slope on to mesa.
 3.50 Rim of mesa and over level top of mesa covered with
 loose volcanic rock, through greasewood brush.
 36.80 Descend steep N. E. slope
 40.00 Set an iron post, filled with cement, 3 ft. long, 1 in.
 diam., with brass cap on top, 26 ins. in the ground for
 1/4 sec. cor., marked S5 1/4 on N. and S8 1/4 on S. halves; and
 raise a mound of stone 3 ft. base 1 1/2 ft. high, N. of
 cor. Pits impracticable, no bearings available.
 43.00 Ascend steep N. W. slope
 52.50 Rim of mesa and over level top of mesa.
 80.00 Set an iron post, filled with cement, 3 ft. long, 2 ins.
 diam., with brass cap on top, 24 ins. in the ground for
 cor. of secs. 4, 5, 8 and 9, marked on cap with
 R8WS4 on N. E.,
 S9 on S. E.
 S8 on S. W. and
 T5SS5 on N. W. quadrants; dig pits 18 x 18 x 12 ins. in
 each sec. 5 1/2 ft. dist.; and raise a mound of stone 4 ft.
 base 1 1/2 ft. high, E. of cor. No bearings available.
 Land, level and mountainous.
 Soil, rocky and sandy loam; 1st. and 4th. rate.
 W. 1.00 chn. level, valley land; soil, rich sandy loam;
 over 2 ft. deep; fine texture, dry; no grass; E. 79.00
 chs. level top of mesa and steep slopes of mesa; soil,
 volcanic rock and gravel mixed with sandy soil; 6 ins.
 deep; coarse and dry; subsoil, caliche; no grass.
 Undergrowth mesquite, chico and greasewood brush.
 No timber.

N. 0° 02' W. on a random line bet. secs. 4 and 5

40.00 Set temp. 1/4 sec. cor.
 64.02 Intersect N. bdy. of Tr. 4 lks. W. of the cor. of secs.
 4, 5, 32 and 33
 Thence I run
 South on a true line bet. secs. 4 and 5
 Over level land, through dense mesquite and chico brush.
 24.02 Set an iron post, filled with cement, 3 ft. long, 1 in.
 diam., with brass cap on top, 26 ins. in the ground for
 1/4 sec. cor., marked S5 1/4 on W. and S4 on E. halves on
 cap; from which
 A mesquite 6 ins. diam., bears S. 86 1/2° E. 188
 lks. dist., marked 1/4 S4BT.
 A mesquite 8 ins. diam., bears S. 60 3/4° W. 245
 lks. dist., marked 1/4 S5BT.

39.00 Ascend steep rocky N. slope
 41.35 Rim of mesa and over level mesa through greasewood brush
 64.02 The cor. of secs. 4, 5, 8 and 9.
 Land level.
 Soil, sandy loam and rocky; 1st. and 4th. rate.
 N. 39.00 chs. level, valley land; soil rich sandy loam,
 over 2 ft. deep; fine texture, dry; no grass; E. 25.02
 chs. level top of mesa and N. slope; soil volcanic rock
 and gravel mixed with sandy soil; 6 ins. deep; coarse
 texture, dry; no grass; subsoil, caliche.
 No timber.
 Undergrowth, mesquite, chico and greasewood brush.

December 14, 1910.

Subdivision of Tp. 5 S. Rg. 8 W.

Chains. December 15: At 8h. com. a.m., l.m.t., I set off 33° 01' N. on the lat. arc; 23° 12' S on the decl. arc; and determine a meridian with the solar at the cor. of secs. 4, 5, 8 and 9

Thence I run
 East bet. secs. 4 and 9
 Over level mesa covered with loose rocks, through grease wood brush.

12.50 Descend into canyon.
 15.00 Cross wash 25 lks. wide course N. and ascend.
 18.40 Rim and over level mesa.
 40.00 Set an iron post, filled with cement, 3 ft. long, 1 in. diam., with brass cap on top, 26 ins. in the ground for 1/4 sec. cor., marked on cap S4 1/4 on N. and S9 on S. halves and raise a mound of stone 2 ft. base 1 1/2 ft. high, N. of cor. Pits impracticable. No bearings available.

80.00 Set an iron post, filled with cement, 3 ft. long, 2 ins. diam., with brass cap on top, 34 ins. in the ground for cor. of secs. 3, 4, 9 and 10, marked on cap with R8WS3 on N. E.
 S10 on S. E.
 S9 on S. W. and
 T5SS4 on N. W. quadrants; and raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable. No bearings available.
 Land, level.
 Soil, rocky; 4th. rate.
 Level mesa land and slopes in canyon; soil, volcanic rock and gravel mixed with sandy soil, 6 ins. deep; coarse texture, dry; no grass; subsoil caliche.
 No timber.
 Undergrowth, greasewood.

40.00 N. 0° 02' W. bet. secs. 3 and 4 on a random line.
 63.98 Set temp. 1/4 sec. cor.
 Intersect N. bdy. of Tp. 12 lks. W. of the cor. of secs. 3, 4, 33 and 34
 Thence I run
 S. 0° 03' W. on a true line bet. secs. 3 and 4
 Over level valley land through dense mesquite and chico brush.

20.00 Cross wash 40 lks. wide course W.
 23.98 Set an iron post, filled with cement, 3 ft. long, 1 in. diam., with brass cap on top, 26 ins. in the ground for 1/4 sec. cor., marked on cap S4 1/4 on W. and S3 on E. halves dig pits 18 x 18 x 12 ins. N. and S. of post, 3 ft. dist. and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high, W. of cor. No bearings available.

53.00 Ascend steep N. slope.
 55.90 Rim of mesa and over level mesa through greasewood brush.
 63.98 The cor. of secs. 3, 4, 9 and 10.
 Land, level.
 Soil, sandy loam and rocky; 1st. and 4th. rate.
 N. 53.00 chs. level valley land, soil, rich sandy loam, over 2 ft. deep, fine texture, dry; no grass. S. 10.98 chs. level top of mesa and N. slope of mesa, soil, volcanic rock and gravel mixed with sandy soil, 6 ins. deep; coarse texture, dry; no grass.
 No timber.
 Undergrowth, mesquite, chico and greasewood.

At this cor. I set off 23° 14 1/2' S. on the decl. arc; and observe the sun on the meridian at noon, December 15; the resulting lat. is 33° 01' N.

Subdivision of Tp. 5 S. Rg. 8 W.

Chains.	East bet. secs. 3 and 10 Over level top of mesa through greasewood brush.
3.00	Descend N. E. slope of mesa.
7.50	Over nearly level land through dense mesquite and chico brush.
13.40	Cross wash 25 lks. wide course N. W.
40.00	Set an iron post, 3 ft. long, 1 in. diam., filled with cement, with brass cap on top, 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked S3 $\frac{1}{4}$ on N. and S10 on S. halves of cap dig, pits 18 x 18 x 12 ins. E and W. of post, 3 ft. dist. and raise a mound of earth 3 $\frac{1}{2}$ ft. base 1 $\frac{1}{2}$ ft. high, N. of cor. No bearings available. Over rolling rocky land.
45.95	Cross wash 10 lks. wide course N. W.
57.00	Cross wash 15 lks. wide course N. W.
80.00	Set an iron post, filled with cement, 3 ft. long, 2 ins. diam., with brass cap on top, 24 ins. in the ground for cor. of secs. 2, 3, 10 and 11, marked on cap with R8WS2 on N. E. S11 on S. E. S10 on S. W. and T5SS2 on N. W. quadrants; dig pits 18 x 18 x 12 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. No bearings available. Land, level and rolling. Soil, rocky and gravelly; 4th rate. W. 7.50 chs. level top of mesa and N. E. slope of mesa, soil, volcanic rock and gravel mixed with sandy soil, 6 ins. deep, subsoil caliche, no grass. E. 72.50 chs. level and rolling valley land; soil rocks and gravel mixed with sandy soil; coarse texture, dry; no grass; No timber. Undergrowth, mesquite, chico and greasewood.
40.00	N. 0° 01' W. on a random line bet. secs. 2 and 3 Set temp. $\frac{1}{4}$ sec. cor.,
64.01	Intersect N. bdy. of Tp. 17 lks. W. of the cor. of secs. 2, 3, 34 and 35 Thence I. run
24.01	S. 0° 06' W. on a true line bet. secs. 2 and 3 Over rolling land through dense brush. Set an iron post, filled with cement, 3 ft. long, 1 in. diam., with brass cap on top, 26 ins. in the ground for $\frac{1}{4}$ sec. cor., marked on cap S3 $\frac{1}{4}$ on W. and S2 on E. halves; Dig pits 18 x 18 x 12 ins. N. and S. of post, 2 ft. dist., and raise a mound of earth 3 $\frac{1}{2}$ ft. base 1 $\frac{1}{2}$ ft. high W. of cor. No bearings available.
37.00	Cross wash 20 lks. wide course N. W.
50.00	Cross wash 60 lks. wide course N. W.
64.01	The cor. of secs. 2, 3, 10 and 11. Land, rolling. Soil, gravelly and rocky; 3rd. rate. Rolling land along at foot of W. slope of Painted Rock Mts., soil rocks and gravel mixed with sandy soil, over 2 ft. deep; coarse texture, dry; no grass. No timber. Undergrowth, mesquite chico and greasewood.

December 15, 1910.

Subdivision of Tp. 5 S. Rg. 8 W.

Chains.

GENERAL DESCRIPTION

The Painted Rock Mts. are located in the eastern part of this township and the southern part of the township is a high volcanic mesa about 100 ft. above the level of the Gila River, and the four sections surveyed in this township contain all of the land in the township that is of value for agricultural purposes, therefore these sections were the only ones surveyed in the township. The soil of these 4 secs. is generally a rich sandy loam the depth of which is unknown, but is over 15 ft., and is capable of producing abundant crops with irrigation. There is no grass in the township and no timber except a few small patches along the Gila River consisting of cottonwood and willow. There is a dense growth of mesquite over the 4 secs. surveyed. The Gila River runs through secs 5 and 6, a small stream of water which sinks in the sand and rises again all along its course through these secs. The water is very brackish and not good for domestic purposes. There are no settlers in the township.

Line designated	True bearing	Distance	Latitudes.		Departures.	
			N	S	E	W.
N. bdy. Tp. 5 S. Rg. 8 W.	West	323.70				323.70
W. bdy. Tp. 5 S. Rg. 8 W.	South	64.00		64.00		
S. bdy. Secs. 3, 4, 5 & 6	East	323.77			323.77	
E. bdy. Sec. 3.	N 0° 06' E	64.01	64.01		.14	
Convergency						.06
			64.01	64.00	323.94	323.76
			64.00		323.76	
Error in lat.			.01		.15	

John G. Hesse
U.S. Transitman.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

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LIST OF NAMES.

BOOK 2233

A list of the names of the individuals employed by John F. Hesse
Transitman
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
Subdivision lines of Tp. 5 S. Rg. 8 W.
showing the respective capacities in which they acted:

- A. N. Oliver Chainman.
- A. E. Lyon Chainman.
- J. H. Bates Moundman.
- Moundman.
- A. E. Beaumont Axman.
- Axman.
- R. A. Coombs Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted John F. Hesse
Transitman
United States Deputy Surveyor, in surveying all
those parts or portions of the subdivision lines of Tp. 5 S. Rg. 8 W.

..... of the Gila and
Salt River 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

- A. N. Oliver Chainman.
- A. E. Lyon Chainman.
- J. H. Bates Moundman.
- A. E. Beaumont Moundman.
- Axman.
- Axman.
- R. A. Coombs Flagman.

Subscribed and sworn to before me this 15th.
day of December, 1910., 19



John F. Hesse
U. S. Transitman

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

BOOK 2233

I, John F. Hesse, United States Transitman Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from United States Surveyor General for Arizona, bearing date of the 10 day of 1911, 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 subdivision lines of Tp. 5 S. Rg. 8 W.

of the Gila and Salt River 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.

John F. Hesse
United States Deputy Surveyor.
Transitman

Subscribed by said John F. Hesse, and sworn to before me }
this 25th day of January, 1911



Frank S. Lyall
U.S. Surveyor General

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz. April 17, 1911.

The foregoing field notes of the survey of a portion of the subdivision lines of Tp. 5 S. Rg. 8 W., Gila and Salt River Base and Meridian, Arizona

executed by John F. Hesse, U.S. Transitman under his contract No. 1, dated August 25, 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. Lyall
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.