

Book A.

JAN 25 1911

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BOOK 2231

Accepted Letter E.  
Jan. 19-1912

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# FIELD NOTES

OF THE SURVEY OF THE

The North boundary of Tp. 5 S. Rg. 8 W. and

Fracl. West boundary of Tp. 4 S. Rg. 8 W.

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Of the Gila and Salt River Meridian,

Territory of Arizona

AS SURVEYED BY

John F. Hesse, United States Deputy Surveyor,  
Transitman

Under his Contract No. 1, dated August 25, 1910

Survey commenced December 2, 1910, 1910

Survey completed December 13, 1910, 1910

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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

Book No. 2231

# INDEX DIAGRAM.

Township 4 South, Range 8 West.

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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 north boundary of Tp. 5 S. Rg. 8 W. and the fracl. west boundary of Tp. 4 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, I, 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 north boundary of Tp. 5 S. Rg. 8 W. and the fracl. west boundary of Tp. 4 S. Rg. 8 W.

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 our skill and ability, in the survey of the north boundary of Tp. 5 S. Rg. 8 W. and the fracl. west boundary of Tp. 4 S. Rg. 8 W.

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 north boundary of Tp. 5 S. Rg. 8 W. and the fracl. west boundary of Tp. 4 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



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## North boundary of Tps. 5 S. Rgs. 8 W.

Chains. Survey commenced December 2, 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 correct 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 my camp which is located about 2 miles north and 1 mile west of the cor. of Tps. 4 and 5 S. Rgs. 7 and 8 W. latitude  $33^{\circ} 03' 25''$  N., longitude  $113^{\circ} 20' 53''$  W.; I set off  $33^{\circ} 03\frac{1}{2}'$  N. on the lat. arc;  $31^{\circ} 54'$  S. on the decl. arc; and, at 4h. 00m. 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 my station.

December 2, 1910.

December 3: At 2h. 40m. a.m. by my watch, which has correct l.m.t., 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.

At 7 a.m., l.m.t., I lay off the azimuth of Polaris,  $1^{\circ} 23\frac{1}{2}'$  to the east, and mark the meridian thus determined by cutting a small groove in the stone set December 2, on which the meridian falls 0.2 ins. east of the mark determined by the solar.

At 8h. 00m., a.m., l.m.t., I set off  $33^{\circ} 03\frac{1}{2}'$  N. on the lat. arc;  $31^{\circ} 59\frac{1}{2}'$  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. east 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" west and east 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 8h. 15m a.m., is N.  $14^{\circ} 30'$  W.; the angle thus determined gives the mag. decl.  $14^{\circ} 30'$  E.

The cor. of Tps. 4 and 5 S. Rgs. 7 and 8 W. is a mesquite post, in a mound of earth and stone, badly rotted and with part of the marking obliterated.

I reestablish this cor. in the same place as follows: Set an iron post, filled with cement, 3 ft. long 3 ins. diam. with brass cap on top, 2 ft. in the ground for cor. of Tps. 4 and 5 S. Rgs. 7 and 8 W., marked on cap with T4S on N. and T5S on S. halves, and

S31R7W on N. E.

S6 R7W on S. E.

S1 R8W on S. W. and

S36 R8W on N. W. quadrants; and raise a mound of stone 2 ft. base  $1\frac{1}{2}$  ft. high, S. of cor. Pits impracticable. No trees in limits.

At 2 h. 00m. p.m., l.m.t., I set off  $33^{\circ} 01\frac{1}{2}'$  N. on the lat. arc;  $32^{\circ} 03\frac{1}{2}'$  S. on the decl. arc; and determine a meridian with the solar at the cor. of Tps. 4 and 5 S. Rgs. 7 and 8 W.

Thence I Run

North boundary of Tr. 5 S. Rg. 8 W.

Chains. West on a random line along N. bdy. of Tr. 5 S. Rg. 8 W. bet. secs. 1 and 36 setting temp.  $\frac{1}{4}$  sec. and sec. cors. at intervals of 40.00 chs.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.00 Set temp. sec. cor.

December 3, 1910

December 5; At 8h. 00m. a.m., l.m.t., I set off  $33^{\circ} 01\frac{1}{2}'$  N. on the lat. arc;  $22^{\circ} 16'$  S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 1, 2, 35 and 36

Thence I run

West on a random line bet. secs. 2 and 35  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.00 Set temp. sec. cor.

West on a random line bet. secs. 3 and 34  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.00 Set temp. sec. cor.

December 5: At this cor. I set off  $22^{\circ} 19\frac{1}{2}'$  S. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is  $33^{\circ} 01\frac{1}{2}'$  N.

West on a random line bet. secs. 4 and 33  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.00 Set temp. sec. cor.

West on a random line bet. secs. 5 and 32  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.00 Set temp. sec. cor.

December 5, 1910.

December 6: At 8h. 30m. a.m., l.m.t., I set off  $33^{\circ} 01\frac{1}{2}'$  N. on the lat. arc;  $22^{\circ} 25'$  S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 5, 6, 31 and 32

Thence I run

West on a random line bet. secs. 6 and 31  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 83.70 Intersect E. bdy. of Tr. 5 S. Rg. 9 W. 16.00 chs. S. of the cor. of Trs. 4 and 5 S. Rgs. 8 and 9 W. which is a post, with part of the marks obliterated, 4 ins. sq. 18 ins. above ground.

As this falling is without limits I now return to the cor. of Trs 4 and 5 S. Rgs. 7 and 8 W. re-established Dec. 3rd. and run west bet. secs. 1 and 36, marking and blazing true line.

Descending over rolling W. slope through scattering brush.

35.00 Over level land through dense mesquite brush.  
 40.00 Set and iron post, filled with cement, 3 ft. long, 1 in. diam, with brass cap on top, 36 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked on cap  $\frac{1}{4}$  S36 on N. and S1 on S. halves; from which

An ironwood 7 ins. diam., bears S.  $5^{\circ}$  W. 129 lks. dist., marked  $\frac{1}{4}$  SLPT.

No other tree available. Dig pits 18 x 18 x 12 ins. E. and W. of cor., 3 ft. dist., and raise a mound of earth  $3\frac{1}{2}$  ft. base  $1\frac{1}{2}$  ft. high, N. of cor.

45.60 Cross road bears N. W. and S. E.

North boundary of Tr. 5 S. Rg. 8 W

Chains.  
80.00

Set an iron post, filled with cement, 3 ft. long, 3 ins. diam. with brass cap on top, 24 ins. in the ground, for cor. of secs. 1, 2, 35 and 36, marked on cap with  
 R8W on N. half  
 S36 on N. E.  
 S1 on S. E.  
 S2T5S on S. W. and  
 T4SS35 on N. W. quadrants, and raise a mound of stone 2 ft. base  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
 No bearings available.  
 Land, mountainous and level.  
 Soil, sandy loam and rocky; 1st. and 4th. rate.  
 E. 35.00 chs. rolling W. slope of Painted Rock Mts. soil stony, no grass. W. 45.00 chs. rich dry sandy loam depth unknown, no grass.  
 No timber.  
 Undergrowth, mesquite, ironwood.  
 Mountainous land and land covered with dense undergrowth  
 80.00 chs.

West bet secs. 2 and 35

Over level land, through dense chico and scattering mesquite brush.

28.00

Top of malpais ridge bears N. and S. 4 chs. wide.

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  $\frac{1}{4}$  sec. cor., marked on cap S35 $\frac{1}{2}$  on N. and S2 on S. halves; 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.

40.15

Cross road bears N. and S.

80.00

Set an iron post, filled with cement, 3 ft. long, 3 ins. diam., with brass cap on top, 24 ins. in the ground, for cor. of secs. 2, 3, 34 and 35, marked on cap with

R8W on N. half

S35 on N. E.

S2 on S. E.

S3T5S on S. W. and

T4SS34 on N. W. quadrants; from which

A mesquite 5 ins. diam., bears N.  $81\frac{1}{2}^{\circ}$  E. 218 lks. dist., marked T4SR8WS35BT

A mesquite 4 ins. diam., bears S.  $26\frac{1}{2}^{\circ}$  E. 168 lks. dist., marked T5SR8WS2BT.

A mesquite 8 ins. diam., bears N.  $43^{\circ}$  W. 168 lks. dist., marked T4SR8WS34BT.

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

Land level.

Soil, sandy loam, and rocky; 1st. and 4th. rate.

The soil of the 4 chs. over malpais ridge at 28.00 chs. on this mile consists of loose volcanic rocks and is worthless, this ridge extends about 6 chs. N. and S. from the line and is about 30 ft. high.; the soil on the rest of the mile is a rich warm sandy loam, depth unknown but over 2 ft., no grass.

No timber.

Undergrowth, mesquite ironwood and chico.

December 6, 1910.

December 7: At 8h. 30m. a.m., l.m.t., I set off  $33^{\circ}$   $01\frac{1}{2}'$  N. on the lat. arc;  $22^{\circ}$   $32'$  S. on the decl. arc; and determine a meridian with the solar at the cor. of secs.

## North boundary of Tp. 5 S. Rg. 8 W.

Chains. 2, 3, 34 and 35  
Thence I run  
West bet. secs. 3 and 34  
40.00 Over level land through dense Chico and mesquite 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  
¼ sec. cor., marked on cap S34½ on N. and S3 on S.  
halves; from which  
A mesquite 9 ins. diam., bears S. 70¾° E. 171  
lks. dist., marked ¼S3BT  
A mesquite 12 ins. diam., bears N. 59½° W. 103  
lks. dist., marked ¼S34BT.  
80.00 Set an iron post, filled with cement, 3 ft. long, 3 ins.  
diam., with brass cap on top, 24 ins. in the ground for  
cor. of secs. 3, 4, 33 and 34, marked on cap with  
R8W on N. half  
S34 on N. E.  
S3 on S. E.  
S4T5S on S. W. and  
T4SS33 on N. W. quadrants; from which  
A mesquite 6 ins. diam., bears S. 64¾° W. 346  
lks. dist., marked T5SR8WS4BT.  
A mesquite 5 ins. diam., bears N. 13° W. 253  
lks. dist., marked T4SR8WS33BT.  
No other bearings available. Dig pits 18 x 18 x 12 ins.  
N. E. and S. E. secs. 5½ ft. dist. and raise a mound of  
earth 4 ft. base 2 ft. high, W. of cor.  
Land, level.  
Soil, sandy loam; 1st. rate.  
Soil along the whole mile is a rich, dry sandy loam,  
depth unknown, over 2 ft. level valley land, no grass,  
dense growth of mesquite and chico brush.  
Undergrowth, mesquite and chico  
No timber.

40.00 West bet. secs. 4 and 33  
Over level land through dense chico and mesquite 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  
¼ sec. cor., marked on cap S33½ on N. and S4 on S.  
halves; dig pits 18 x 18 x 12 ins. E. and W. of post,  
3 ft. dist., and raise a mound of earth 3½ ft. base 1½  
ft. high, N. of cor. No bearings available.  
80.00 Set an iron post, filled with cement, 3 ft. long, 3 ins.  
diam., with brass cap on top, 24 ins. in the ground for  
cor. of secs. 4, 5, 32 and 33, marked on cap with  
R8W on N. half  
S33 on N. E.  
S4 on S. E.  
S5T5S on S. W. and  
T4SS32 on N. W. quadrants; from which  
A mesquite 2 ins. diam., bears N. 68½° E. 264  
lks. dist., marked T4SR8WS33BT.  
A mesquite 6 ins. diam., bears S. 47¾° E. 319  
lks. dist., marked T5SR8WS4BT.  
A mesquite 8 ins. diam., bears S. 72° W. 215  
lks. dist., marked T5SR8WS5BT.  
A mesquite 6 ins. diam., bears N. 30¼° W. 82  
lks. dist., marked T4SR8WS32BT.  
Land, level.  
Soil, sandy loam; 1st. rate.  
Soil along whole mile is a rich dry sandy loam, depth  
unknown, over 2 ft., level valley land, no grass, dense  
growth of mesquite and chico brush.  
No timber.  
Undergrowth, mesquite and chico.  
December 7: At this cor I set off 22° 34' S. on the decl.

## North boundary of Tr. 5 S. Rg. 8 W.

Chains.	arc; and observe the sun on the meridian at noon; the resulting lat. is $33^{\circ} 01\frac{1}{2}'$ N.
	-----
	West bet. secs. 5 and 32
10.35.	Over level land through dense chico and mesquite brush. Left bank of Gila River, leave mesquite and chico brush and over dry bed of Gila River, through very dense arrow brush.
40.00	Point for $\frac{1}{4}$ sec. cor. falls in bed of Gila River where it would be washed away if set.
45.24	E. edge of running water 6 inches deep.
45.60	W. edge of water.
52.90	Right bank of Gila river, and over bottom land.
54.00	Set an iron post, filled with cement, 3 ft. long, 1 in. diam, with brass cap on top, 26 ins. in the ground for witness $\frac{1}{4}$ sec. cor., marked on cap WC $\frac{1}{4}$ with S32 on N. and S5 on S. halves; from which A cottonwood 8 ins. diam., bears S. $75\frac{1}{2}^{\circ}$ W. 336 lks. dist., marked WC $\frac{1}{4}$ S5BT.
	No other bearings available. Dig pits 18 x 18 x 12 ins. E. and W. of post 2 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base $1\frac{1}{2}$ ft. high, N. of cor.
80.00	Set an iron post, filled with cement, 3 ft. long, 3 ins. diam., with brass cap on top, 24 ins. in the ground for cor. of secs. 5, 6, 31 and 32, marked on cap with R8W on N. half S32 ON N. E. S5 on S. F. S6T5S on S. W. and T4SS31 on N. W. quadrants; from which a mesquite 10 ins. diam., bears S. $21\frac{1}{2}^{\circ}$ E. 231 lks. dist., marked T5SR8WS5BT.
	No other bearings available. Dig pits 18 x 18 x 12 ins. in each sec. N. E., S. W. and N. W. of post, $5\frac{1}{2}$ Ft. dist. and raise a mound of earth 4 ft. base 2 ft. high, W. of cor.
	Land, level. Soil, sand and sandy loam. E. 10.35 chs. level valley land, soil rich dry sandy loam, over 2 ft. deep, no grass, dense chico and mesquite brush; next 42.55 chs. level dry bed of Gila River, soil sand, no grass, dense growth of arrow and water mote brush; next 27.10 chs. level, low bottom land, soil, sandy loam, mixed with humus, 6 to 8 ins. deep, on sub soil of sand, no grass, dense growth of arrow and water mote brush. No timber. Undergrowth, mesquite, chico, arrow and water mote brush.
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38.00	West bet. secs. 6 and 31 Over bottom land through dense arrow brush. Leave bottom land and over level land through dense mesquite and chico brush.
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 $\frac{1}{4}$ sec. cor., marked on cap S31 $\frac{1}{4}$ on N. and S6 on S. halves; 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.
83.70	Intersect E. bdy. of Tr. 5 S. Rg. 9 W. 16.00 chs. S. of the old cor. of Trs. 4 and 5 S. Rgs. 8 and 9 W. and set an iron post, filled with cement, 3 ft. long, 3 ins. diam., with brass cap on top, 24 ins. in the ground for closing cor. of Trs. 4 and 5 S. Rg. 8 W. marked on cap with a dot and line extending N. and S. from dot and a line extending E. from dot, and on the line extending N.

North boundary of Tr. 5 S. Rg. 8 W.

Chains. from dot about  $\frac{1}{2}$  inch, a line extending W. with  
CC on E. of dot  
T4SR8WS31 on N. E.  
S6TASR8W on S. E. of dot with  
T4SR9WS36 on N. of line in W. half and  
T5SR9WS1 on S. of line in W. half; dig pits 30 x 24 x 12  
ins., crosswise on each line, N. and S. 4 ft. and E. of  
post 8 ft. dist., and raise a mound of earth 5 ft. base  
 $2\frac{1}{2}$  ft. high, E. of cor.  
As the old cor. of Tps. 4 and 5 S. Rgs. 8 and 9 W. is  
in poor condition I destroy the old cor. and reestablish  
it in the same place as follows;  
Set an iron post, filled with cement, 3 ft. long, 3 ins.  
diam., with brass cap on top, 24 ins. in the ground for  
cor. of Tps. 4 and 5 S. Rg. 9 W., marked on cap with  
a dot and line N. and  
T4SR9WS36 on N. of line in W. half  
T5SR9WS1 on S. of line in W. half  
T4SR8WS31 on N. of line in E. half  
T5SR8WS6 on S. of line in E. half: dig pits 30 x 24 x 12  
ins. on each line N. and S. of post 4 ft. and W. of post  
8 ft. dist., and raise a mound of earth 5 ft. base  $2\frac{1}{2}$  ft  
high, W. of cor. No bearings available.  
Land level.  
Soil, sandy loam; 1st. rate.  
E. 38.00 chs. level bottom land; soil, rich sandy loam,  
mixed with humus, over 2 ft. deep, fine texture, moist;  
no grass; W. 45.70 chs. level valley land; soil, rich  
sandy loam, over 2 ft. deep, fine texture, dry; no grass.

December 7, 1910.

## GENERAL DESCRIPTION.

This line runs through a level valley where the hills  
drop back from the Gila River. The land is level except  
ing the E. 25.00 chs. The soil is fine sandy loam. The  
land is watered by the Gila River.

*John P. Hesse*  
U.S. Transitman.

East boundary of T<sub>4</sub> S. R<sub>9</sub> W.

Chains. December 13: At 8h. 00m. a.m., l.m.t., I set off  $33^{\circ} 01\frac{1}{2}'$  N. on the lat. arc;  $23^{\circ} 04\frac{1}{2}'$  S. on the decl. arc; and determine a meridian with the solar at the cor. of T<sub>4</sub> and 5 S. R<sub>9</sub> W., previously described

Thence I run

North bet. secs. 31 and 36.  
Over level land through dense brush.

0.63  
40.00 Cross road bears E. and W.  
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 S36 $\frac{1}{4}$  on W. and S31 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.

43.50 Cross wash 15 lks. wide course S. E. and ascend steep rough S. slope of mesa

70.37 Rim of mesa and over rough top of mesa.

80.00 Set an iron post, filled with cement, 3 ft. long, 3 ins. diam., with brass cap on top, 24 ins. in the ground for cor. of secs. 25 and 36, marked on cap with T4S on N. half  
R9WS25 on N. W. and  
S36 on S. W. quadrants; and raise a mound of stone 3 ft. base  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
No bearings available.  
Land, level and mountainous.  
Soil, sandy loam and rocky; 1st. and 4th. rate.  
S. 10.00 chs. level, valley land, soil, rich sandy loam over 2 ft. deep, fine texture, dry; no grass; middle  
33.50 chs. rolling land at foot of mesa, soil, sandy loam over 2 ft. deep covered with gravel and rocks; no grass; N. 36.50 chs. Steep rocky S. slope and rough top of mesa; soil loam mixed with volcanic rock; about 6 ins deep; subsoil, caliche, no grass;  
No timber.  
Undergrowth, chico, mesquite and greasewood.  
Punning north from this cor. this line ascends over rough mountains and as there is no agricultural land on either side of the line north of this point in T<sub>4</sub> S. I therefore discontinue the survey of this line north of this cor.

December 13, 1910.

*John P. Nessel*  
U.S. Transitman.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by John F. Hesse

Transitman Deputy Surveyor, 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 north boundary of Tp. 5 S. Rg. 8 W. and the fracl. west boundary of Tp. 4 S. Rg. 8 W. showing the respective capacities in which they acted:

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

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted John F. Hesse

Transitman Deputy Surveyor, United States Deputy Surveyor, in surveying all those parts or portions of the the north boundary of Tp. 5 S. Rg. 8 W. and the fracl. west boundary of Tp. 4 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, Axman.
R. A. Coombs, Flagman.

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

John F. Hesse U. S. Transitman



9.50

BOOK 2231 FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, John F. Hesse, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from United States Surveyor General for Arizona, bearing date of the 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 north boundary of Tp. 5 S. Rg. 8 W. and the frac. west boundary of Tp. 4 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

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



Manuel S. Ingalls
United States Surveyor General

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Received April 17, 1911

The foregoing field notes of the survey of the North Boundary of Tp. 5 S. Rg. 8 W.; and the frac West Boundary of Tp. 4 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.
Manuel 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.