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Book N.

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BOOK 2324

# FIELD NOTES

OF THE SURVEY OF THE

Subdivision Lines of Tp. 2 N. Rg. 12 E.

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Of the Gila and Salt River Meridian,  
Territory of Arizona.

AS SURVEYED BY

John F. Hesse, United States Deputy Surveyor,

Under his Contract No. 158, dated June 4, 1909, 190

Survey commenced June 9, 1911, 190

Survey completed June 13, 1911, 190

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BOOK 2324

INDEX DIAGRAM.

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BOOK 2324

PRELIMINARY OATHS OF ASSISTANTS.

WE, A. N. Oliver and R. A. Coombs

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. 2 N. Rg. 12 E.

A. N. Oliver, Chainman.

R. A. Coombs, Chainman.

Subscribed and sworn to before me this 2nd. day of June, 1911., 190



John P. Hesse

U.S. Deputy Surveyor

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 \_\_\_\_\_, 190



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, R. L. Bates, 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. 2 N. Rg. 12 E.

R. L. Bates, Flagman.

Subscribed and sworn to before me this 2nd. day of June, 1911, 190



John P. Hesse

U.S. Deputy Surveyor

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Subdivision of Tp. 2 N. Rg. 12 E.

Survey commenced June 9, 1911, and executed with an A. Lietz Co. light mountain transit, NO. 7351, 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, tested on the true meridian at Phoenix, found correct and was approved by the surveyor general 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 the cor. of secs. 5, 6, 31 and 32, on the S. bdy. of the township; latitude  $33^{\circ} 27' 46''$  N. longitude  $111^{\circ} 08' 54''$  W.; I set off  $33^{\circ} 28'$  N. on the lat. arc;  $22^{\circ} 55\frac{1}{2}'$  N. on the decl. arc; and at 5h. 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 the cor.

June 9, 1911.

June 10: At 2h 21m. a.m., by my watch, which has correct l.m.t., I observe Polaris at eastern 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 6h. a.m., l.m.t., I lay off the azimuth of Polaris,  $1^{\circ} 24'$  to the west, and mark the meridian thus determined by cutting a small groove in the stone set June 9, on which the meridian coincides with the mark determined by the solar.

At 7h. 00m. a.m., l.m.t., I set off  $33^{\circ} 28'$  N. on the lat. arc;  $22^{\circ} 58\frac{1}{2}'$  N. 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 coincides with the meridian established by the Polaris observation.

The solar apparatus, by p.m. and a.m. observations, defines positions for meridians, respectively which coincide with the meridian established by the Polaris observation; therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 7h. 15m. a.m., is N.  $14^{\circ} 30'$  W.; the angle thus determined gives the mag. decl.  $14^{\circ} 30'$  E.

From the cor. of secs. 5, 6, 31 and 32 on the S. bdy. of the township I now run N.  $0^{\circ} 03'$  W. bet. secs. 31 and 32

Ascending through dense brush

8.50  
27.60  
40.00

Ridge bears N. E. and S. W.

Cross drain 5 lks. wide course N. E.

Set a granite stone 18 x 10 x 6 ins. 12 ins. in the ground for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  on W. face; from which

An oak 4 ins. diam., bears N.  $22\frac{1}{2}^{\circ}$  E. 11 lks. dist., marked  $\frac{1}{4}$ S32BT

An oak 4 ins. diam., bears N.  $61\frac{1}{2}^{\circ}$  W. 13 lks. dist., marked  $\frac{1}{4}$ S31BT

70.20  
80.00

Ridge bears N. E. and S. W. and descend.

Set a granite stone 18 x 8 x 6 ins. 12 ins. in the ground for cor. of secs. 29, 30, 31 and 32, marked with 1 notch on S. and 5 notches on E. edges; from which

A pine 24 ins. diam., bears N.  $43\frac{1}{2}^{\circ}$  E. 56 lks. dist., marked T2NR12ES29BT.

An oak 6 ins. diam., bears S.  $78\frac{1}{4}^{\circ}$  E. 50 lks. dist., marked T2NR12ES32BT.

## Subdivision of Tp. 2 N. Rg. 12 E.

Chains.

An oak 10 ins. diam., bears S.  $26\frac{1}{2}^{\circ}$  W. 101 lks.  
dist., marked T2NR12ES31BT  
An oak 5 ins. diam., bears N.  $75\frac{3}{4}^{\circ}$  W. 32 lks.  
dist., marked T2NR12ES30BT.

Land, mountainous.

Soil, rocky; 4th. rate.

Scattering oak, pine and juniper.

Undergrowth, manzanita and oak brush.

June 10: At this cor. I set off  $22^{\circ} 59'$  N. on the decl.  
arc; and observe the sun on the meridian at noon; the  
resulting lat. is  $33^{\circ} 28\frac{1}{2}'$  N.

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East bet. secs. 29 and 32

Ascending through dense brush

8.00 Ridge bears N. and S. descend.

17.55 Cross wash 30 lks. wide course N. W. ascend.

32.50 Ridge bears N. and S.

40.00 Set a granite stone 20 x 12 x 8 ins. 15 ins. in the  
ground for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; from whichAn oak 6 ins. diam., bears N.  $70\frac{1}{4}^{\circ}$  W. 35 lks.  
dist., marked  $\frac{1}{4}$ S29BTAn oak 5 ins. diam., bears S.  $36\frac{3}{4}^{\circ}$  W. 48 lks.  
dist., marked  $\frac{1}{4}$ S32BT.

45.80 Cross drain 5 lks. wide course N. W.

64.00 Ridge bears N. W. and S. E.

72.00 Cross drain 6 lks. wide course N. W.

80.00 Set a granite stone 18 x 8 x 8 ins. 12 ins. in the  
ground for cor. of secs. 28, 29, 32 and 33, marked with  
1 notch on S. and 4 notches on E. edges; from whichA pinon 8 ins. diam., bears N.  $67^{\circ}$  W. 14 lks.  
dist., marked T2NR12ES29BTA juniper 10 ins. diam., bears N.  $25\frac{3}{4}^{\circ}$  E. 82 lks.  
dist., marked T2NR12ES28BT.No other trees available. Raise a mound of stone 2 ft.  
base  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.

Land, mountainous.

Soil, rocky; 4th. rate.

Timber, Scattering oak, pine and juniper.

Undergrowth, manzanita and oak brush.

June 10, 1911.

June 11: At 7h. 00m. a.m., l.m.t., I set off  $33^{\circ} 28\frac{1}{2}'$  N.  
on the lat. arc;  $23^{\circ} 03\frac{1}{2}'$  N. on the decl. arc; and  
determine a meridian with the solar at the cor. of secs.  
28, 29, 32 and 33

Thence I run

N.  $0^{\circ} 02'$  W. bet. secs. 28 and 29

Ascending through dense brush.

7.50 Ridge bears N. W. and S. E.

36.30 Cross drain 10 lks. wide course N. W.

40.00 Set a granite stone 18 x 10 x 6 ins. 12 ins. in the  
ground for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; from whichAn oak 12 ins. diam., bears N.  $61\frac{1}{4}^{\circ}$  E. 37 lks.  
dist., marked  $\frac{1}{4}$ S28BTAn oak 6 ins. diam., bears N.  $86\frac{1}{4}^{\circ}$  W. 77 lks.  
dist., marked  $\frac{1}{4}$ S29BT

47.00 Ridge bears N. E. and S. W.

65.50 Edge of mesa and over top of mesa.

80.00 Mark a cross on granite stone in place 20 x 16 x 12  
ins. above ground, for exact point for cor. of secs.  
20, 21, 28 and 29, with 2 grooves on S. and 4 grooves  
on E. of cross; from whichA juniper 24 ins. diam., bears N.  $61\frac{3}{4}^{\circ}$  W. 194 lks  
dist., marked T2NR12ES20BTA pinon 8 ins. diam., bears S.  $55\frac{3}{4}^{\circ}$  E. 170 lks.

## Subdivision of Tp. 2 N. Rg. 12 E.

Chains.

dist, marked T2NR12ES28BT  
 A juniper 7 ins. diam., bears S.  $41\frac{1}{4}^{\circ}$  W. 238 lks.  
 dist., marked T2NR12ES32BT  
 No other tree available. Raise a mound of stone 2 ft.  
 base  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
 Land, mountainous.  
 Soil, rocky; 4th. rate.  
 Timber, scattering pine, juniper and oak.  
 Undergrowth, manzanita and oak brush.

June 11, 1911,

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June 12: At 7h. 00m. a.m., l.m.t., I set off  $33^{\circ} 28\frac{1}{2}'$  N.  
 on the lat. arc;  $23^{\circ} 07\frac{1}{2}'$  N. on the decl. arc; and  
 determine a meridian with the solar at the cor. of secs.  
 29, 30, 31 and 32  
 Thence I run  
 West on a random line bet. secs. 30 and 31  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 79.45 Intersect W. bdy. of Tp. 5 lks. N. of the cor. of secs.  
 25, 30, 31 and 36  
 Thence I run  
 N.  $89^{\circ} 58'$  E. on a true line bet. secs. 30 and 31  
 Ascending through dense brush.  
 7.25 Ridge bears N. and S. descend.  
 39.45 Set a granite stone 18 x 8 x 6 ins. 12 ins. in the  
 ground for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; from which  
 A juniper 10 ins. diam., bears S.  $45\frac{1}{2}^{\circ}$  E. 29 lks.  
 dist., marked  $\frac{1}{4}$ S31BT  
 A juniper 9 ins. diam., bears N.  $52^{\circ}$  W. 46 lks.  
 dist., marked  $\frac{1}{4}$ S30BT  
 57.60 Cross drain 10 lks. wide course N. E.  
 67.60 Cross Reeves Creek 50 lks. wide course N. E. ascend.  
 79.45 The cor. of secs. 29, 30, 31 and 32.  
 Land, mountainous.  
 Soil, rocky; 4th. rate.  
 Timber, scattering oak, juniper and pine.  
 Undergrowth, manzanita and oak brush.  
 July 12; At this cor. I set off  $23^{\circ} 07\frac{1}{2}'$  N. on the decl  
 arc; and observe the sun on the meridian at noon; the  
 resulting lat. is  $33^{\circ} 28\frac{1}{2}'$  N.

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N.  $0^{\circ} 03'$  W. bet. secs. 29 and 30  
 Descending through dense brush  
 8.00 Cross Reeves Creek 50 lks. wide course N. E.  
 24.50 Ridge bears N. W. and S. E.  
 36.00 Cross drain 5 lks. wide course E.  
 40.00 Set a granite stone 18 x 10 x 8 ins. 12 ins. in the  
 ground for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; from which  
 An oak 8 ins. diam., bears N.  $41\frac{1}{4}^{\circ}$  W. 32 lks.  
 dist., marked  $\frac{1}{4}$ S30BT  
 A walnut 4 ins. diam., bears S.  $41\frac{1}{4}^{\circ}$  E. 37 lks.  
 dist., marked  $\frac{1}{4}$ S29BT  
 45.95 Cross fence bears N. W. and S. E.  
 49.86 Cross irrigating ditch course N. W.  
 62.90 J. J. Fraser's house bears E. 260 lks. dist.  
 69.40 Cross fence bears N. W. and S. E.  
 76.15 Cross fence bears E. and W.  
 80.00 Set a granite stone 18 x 8 x 6 ins. 12 ins. in the  
 ground for cor. of secs. 19, 20, 29 and 30, marked with  
 2 notches on S. and 5 notches on E. edges; from which  
 A walnut 18 ins. diam., bears N.  $8\frac{1}{4}^{\circ}$  E. 479 lks.  
 dist., marked T2NR12ES20BT  
 A juniper 8 ins. diam., bears S.  $76^{\circ}$  E. 465 lks.  
 dist., marked T2NR12ES29BT  
 A walnut 12 ins. diam., bears S.  $62\frac{1}{2}^{\circ}$  W. 133 lks.  
 dist., marked T2NR12ES30BT.

Subdivision of Tp. 2 N. Rg. 12 E.

Chains.

An oak 8 ins. diam., bears N.  $76\frac{3}{4}^\circ$  W. 184 lks. dist., marked T2NR12ES19BT.  
 Land, mountainous.  
 Soil, rocky; 4th. rate.  
 Timber, scattering pine, juniper and oak.  
 Undergrowth, manzanita and oak brush.

June 12, 1911.

June 13: At 7h. 00m. a.m., l.m.t., I set off  $33^\circ 29\frac{1}{2}'$  N. on the lat. arc;  $23^\circ 11\frac{1}{2}'$  N. on the decl. arc; and determine a meridian with the solar at the cor. of secs 19, 20, 29 and 30

Thence I run  
 East on a random line bet. secs. 20 and 29  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 79.98 Intersect N. and S. line 21 lks. N. of the cor. of secs. 20, 21, 28 and 29  
 Thence I run  
 N.  $89^\circ 51'$  W. on a true line bet. secs. 20 and 29  
 Over top of mesa through dense brush.  
 20.00 Rim of mesa, descend steep W. slope.  
 39.99 ~~Mark a cross~~ on granite rock in place 28 x 20 x 18 ins. above ground for exact point for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. of cross; from which  
 An oak 4 ins. diam., bears N.  $60^\circ$  E. 14 lks. dist., marked  $\frac{1}{4}$ S20BT  
 An oak 10 ins. diam., bears S.  $11\frac{1}{4}^\circ$  W. 96 lks. dist., marked  $\frac{1}{4}$ S29BT.  
 64.94 Cross fence bears N. W. and S. E.  
 76.00 Cross Reeves Creek 40 lks. wide course N.  
 79.98 The cor. of secs. 19, 20, 29 and 30.  
 Land, mountainous.  
 Soil, rocky; 4th. rate.  
 Timber, scattering, pine, juniper and oak.  
 Undergrowth, manzanita and oak brush.  
 June 13, at this cor. I set off  $23^\circ 11\frac{1}{2}'$  N. on the decl arc; and observe the sun on the meridian at noon; the resulting lat. is  $33^\circ 29\frac{1}{2}'$  N.

S.  $89^\circ 58'$  W. on a random line bet. secs. 19 and 30  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 79.40 Intersect W. bdy. of Tp. 7 lks. N. of the cor. of secs. 19, 24, 25 and 30  
 Thence I run  
 N.  $89^\circ 55'$  E. on a true line bet. secs. 19 and 30  
 Descending through dense brush  
 6.70 Cross drain 6 lks. wide course N. W.  
 16.00 Ridge bears N. and S.  
 23.00 Cross drain 5 lks. wide course N. W.  
 27.00 Ridge bears N. and S.  
 31.30 Cross drain 6 lks. wide course N. W.  
 35.00 Ridge bears N. and S.  
 39.00 Cross drain 10 lks. wide course N. W.  
 39.40 Set a granite stone 18 x 8 x 6 ins. 12 ins. in the ground for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; from which  
 An oak 4 ins. diam., bears N.  $88\frac{1}{2}^\circ$  W. 53 lks. dist., marked  $\frac{1}{4}$ S19BT  
 An oak 8 ins. diam., bears S.  $39\frac{3}{4}^\circ$  W. 60 lks. dist., marked  $\frac{1}{4}$ S30BT.  
 60.00 Ridge bears N. and S. descend.  
 78.10 Fence bears N. and S.  
 79.40 The cor. of secs. 19, 20, 29 and 30.  
 Land, mountainous.  
 Soil, rocky; 4th. rate.  
 Timber, scattering pine, juniper and oak.

## Subdivision of Tp. 2 N. Rg. 12 E.

Chains.

Undergrowth, manzanita and oak brush.

June 13, 1911.

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General Description.

This township is very rough and mountainous and is covered with a dense growth of manzanita and oak brush. There is a scattering growth of juniper, pine and oak all over the township. There is one settler in sec. 29 and as there is no other agricultural land in the township I confine the subdivision to the lines necessary to include his land.

*John A. Hesse*  
U. S. Deputy Surveyor.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

BOOK 2324

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LIST OF NAMES.

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

....., 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. 2 N. Rg. 12 E.

showing the respective capacities in which they acted:

A. N. Oliver....., *Chainman.*

R. A. Coombs....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Arman.*

....., *Arman.*

R. L. Bates....., *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted John F. Hesse

....., United States Deputy Surveyor, in surveying all those parts or portions of the subdivision lines of Tp. 2 N. Rg. 12 E.

..... 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.*

R. A. Coombs....., *Chainman.*

....., *Moundman.*

....., *Moundman.*

....., *Arman.*

....., *Arman.*

R. L. Bates....., *Flagman.*

Subscribed and sworn to before me this 14th. }  
day of June, 1911....., 190

John F. Hesse

U.S. Deputy Surveyor.



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BOOK 2324

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 Frank S. Ingalls United States Surveyor General for Arizona, bearing date of the 4th day of June, 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 the subdivision lines of Tp. 2 N. Rg. 12 E.

..... 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 4th day of June, 1909

Frank S. Ingalls  
SURVEYOR GENERAL OF ARIZONA



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz. March 18, 1912

The foregoing field notes of the survey of a portion of the subdivision lines of Tp. 2 N. Rg. 12 E. of the G. & S. R. B. M. Arizona

executed by John F. Hesse U.S.D. under his contract No. 158, dated June 4, 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.