Book A.

Accepted, B.L.O., letter E
July 20, 1912

FIELD NOTES

RE
OF THE SURVEY OF THE

South and East Boundries of Township 1 South, Range 3 East

Of the Gila & Salt River Base and *Meridian,*

Territory of Arizona

AS SURVEYED BY

William W Shanks, *United States Deputy Surveyor,*

Under his Contract No. 164, *dated* June 10, 1910

Survey commenced August 17th, 1910

Survey completed August 22nd, 1910

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BOOK 2239

NAMES AND DUTIES OF ASSISTANTS.

J. M. Heath	chainman
E. C. Halbeisen	Chainman
W. H. Easterwood	moundman
H. N. Blair	axman
Delos J. Dean	Flagman.

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BOOK 2239

INDEX DIAGRAM.

Township 1 South, Range 3 East.

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BOOK 2239

PRELIMINARY OATHS OF ASSISTANTS.

WE, J. M. Heath and E. C. Halbeisen 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~~ Resurvey of the South + East Boundries of Township 1 South, Range 3 East

J. M. Heath, Chainman.

E. C. Halbeisen, Chainman.

Subscribed and sworn to before me this 16 day of August, 1910

SEAL

E. K. Hickey
Notary Public.

My Com. expires Dec. 7-1911

WE, W. H. Easterwood 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 Resurvey of the South + East Boundries of Township 1 South, Range 3 East

W. H. Easterwood, Moundman.

, Moundman.

Subscribed and sworn to before me this 16 day of August, 1910

SEAL

E. K. Hickey
Notary Public.

My Com. expires Dec. 7-1911

WE, H. N. Blair 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~~ Resurvey of the South + East Boundries of Township 1 South, Range 3 East

H. N. Blair, Axman.

, Axman.

Subscribed and sworn to before me this 16 day of August, 1910

SEAL

E. K. Hickey
Notary Public.

My Com. expires Dec. 7-1911

I, Delos J. Dean, 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 Resurvey of the South + East Boundries of Township 1 South, Range 3 East.

Delos J. Dean, Flagman.

Subscribed and sworn to before me this 16 day of August, 1910

SEAL

E. K. Hickey
Notary Public.

My Com. expires Dec. 7-1911

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BOOK 2239

Resurvey of the S. Bdy. of Township 1 South, Range 3 East.

chains.

Survey commenced August 17, 1910, and excuted with a Young and Sons light mountain transit No. 7532, with solar attachment. The horizontal limb is provided with two double veriners placed opposite to each other and reading to single minutes of arc, which is also the least count of the arcs of the latitude and declinations arcs.

The instrument was examined, tested on the true meridian at Phoenix, found correct and approved by the Surveyor General for Arizona.

I examine the adjustments of the transit and find them correct; then to test the solar appratus, by comparing indications resulting from solar observat ons made during a.m. and p.m. hours, with a meridian established by observations on polaris, I proceed as follows:

At the cor. of Tps. 1 and 2 S., Rgs. 3 & 4 E., latitude 33°17'20"N., longitude 111°59'44" W.; I set off 33°17½' N. on the lat.arc; 13°29½'N. on the decl.arc; and at 4h 30m p.m., l.m.t., determine a meridian with the solar and mark a point thereof on a stone firmly set 5 chs. N. of my station.

At 9h 50m p.m., l.m.t., I observe polaris at eastern elongation, in accordance with the Manual of Instructions and mark a point in the line thus determined on a peg driven in the ground 5chs. N. of my station.

August 17, 1910.

August 18; At 6 a.m., l.m.t., I lay off the azimuth of polaris, 1°24' to the west, and mark the meridian thus determined by a small cross on the stone already set August 17, on which the meridian coincides with the mark determined with the solar.

At 6h 30m a.m., l.m.t., I set off 33°17½'N. on the lat.arc. 13°19'N. on the decl.arc; and mark a point in the meridian determined with the solar by a groove on the stone already set 5 chs. N. of my station; this mark coincides with the meridian established by polaris observation.

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

The magnetic bearing of the true meridian, at 7h 00m., a.m., is N 13°45'W.; the angle thus determined gives the mag, decl. 13°45'E.

At the point for the cor. of Tps. 1& 2 S., Rs. 3 & 4 E., I find part of old post in ground and traces of the old pits and mound. I reset as follows: Set an iron-wood post 3ft long, 7ins.sq., with marked stone, 24ins. in the ground, for cor. of Tps. 1 & 2 S., Rs 3 & 4 E., marked

T 1 S S 31 on NE.,
R 4 E S 6 on SE.,
T 2 S S 1 on SW., and
R 3 E S 36 on NW. face, with 6 notches on each edge; from which

A mesquite 6ins. in diam., bears N 12°W., 49 lks. dist., marked T 1 S R 3 E S 36 BT
A U.S. Gelogical Survey B.M., Elevation 1168 bears N 45°W. 33 lks. dist.

and dig pits 24X24X12ins., on each line N.E. and W., 4ft. and S. of post 8ft. dist.; and raise a mound of earth 5ft. base, 2½ ft. high, S. of cor.

From this cor. old ¼ sec. cor. bet. secs. 2 and 35, bears S 89°55'W. a distance of 120.18 chs.

Resurvey of the S. Bdy. of Tp. 1 S Rg. 3 East.

chains.	
	Thence I run S 89°55'W. on true line bet.secs. 1 and 36. Over level land thru dense underbrush.
10.00	Road,bears N. and S.
22.40	Wash,10 lks.wide,course S.
40.06	Set an ironwood post,3ft.long,3ins.sq.,with marked stone,24ins.in the ground,for ¼ sec.cor., marked ¼ S 36 on N.face and 1 on S.face; dig pits,18X18X12ins.,E.and W. of post,3ft.dist.; and raise a mound of earth,3½ ft. base,1½ ft.high,N. of cor. No trees available.
49.70	Old road,bears NE.and SW.
64.75	Wash,10 lks.wide,course S.
79.90	Old road,bears NE.and SW.
80.12	Set a malpais stone,15X8X6ins.,10ins.in the ground, for cor. of secs.1,2,35 and 36,marked with 5 notches on W. and 1 notch on E. edge; from which An ironwood,8ins.diam.,bears N 45½° E. 322 lks.dist.; marked T 1 S R 3 E S 36 BT dig pits,18X18X12ins.,in each sec.5½ ft.dist.; and raise a mound of earth,4ft.base,2ft high W. of cor. No other trees available. Land,level. Soil,sandy loam,1st rate. Timber,paloverde and ironwood. Underbrush,greasewood.

	Thence I run S 89°55'W. on true line bet.secs. 2 and 35. Over level land thru dense underbrush.
9.45	Wash,10 lks.wide,course S.
19.70	Wash,20 lks.wide,course S.
40.06	Old ¼ sec.cor.,marked and witnessed as described by Surveyor General. I reset as follows. Set an ironwood post,3ft.long,3ins.sq.,with marked stone,24ins.in the ground,for ¼ sec.cor.,marked ¼ S 35 on N.face,and 2 on S. face; dig pits,18X18X12ins.,E.and W. of post,3ft.dist. and raise a mound of earth, 3½ ft.base,1½ ft.high,N. of cor From this cor. the cor. of secs.3,4,33 and 34,bears N 89°59'W. 119.85 chs. dist. Therefore I run N 89°59'W. on true line bet.secs. 2 and 35
67.70	Wash,10 lks.wide,course S.
80.01	Set an ironwood post,3ft.long,5ins.sq.,with marked stone,24ins.in the ground,for cor. of secs.2,3,34 and 35,marked T 1 S S 35 on NE., R 3 E S 2 on SE., T 2 S S 3 on SW.,and S 34 on NW.face; with 2 notches on E.,and 4 notches on W. edge; from which A mesquite 7ins.diam,bears S 72°W. 255 lks.dist., marked T 2 S R 3 E S 3 BT A mesquite 6ins.diam. bears S 4°E., 375 lks.dist., marked T 2 S R 3 E S 2 BT and dig pits,18X18X12ins.,NE.and NW. of post,5½ ft.dist, and raise a mound of earth,4 ft.base,2ft.high W. of cor. Land,level. Soil,sandy loam,1st and 2nd rate. Timber,mesquite,ironwood and paloverde. Underbrush,greasewood. At this cor. I set off 13°13'N. on the decl.arc and observe the sun on the meridian at noon; the resulting latitude is 33°17½'N.

Resurvey of the S. Bdy. of Tp. 1 S.,Rg. 3 E.

chains.	
	Thence I run
	N 89° 59'W. on true line bet.secs. 3 and 34.
	Over level land thru dense underbrush.
24.00	Wash,10 lks.wide,course S.
24.90	Road,bears NE.and SW.
27.70	Ascend over loose rocks.
30.00	Top of ridge,bears N. ad S. Desc.over loose rocks.
32.00	Over rolling land covered with loose rocks.
34.00	Wash,20 lks.wide,course S.
38.00	Ascend over loose rocks.
39.95	Set a malpais stone,20X10X8ins.,15ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face; from which
	A paloVerde,5ins.dism.,bears N 9°W.,100 lks.dist., marked ¼ S 34 BT.
	and raise a mound of stone,2½ ft.base,1½ ft.high,N. of cor. Pits impraticable.
40.85	Top of ridge,bears N. and S. Desc. over loose rocks.
44.00	Over rolling land
79.90	Old cor.of secs. 3,4,33 and 34,which is a stone in scattering mound of stone. I reset a malpais stone,18X 12X8ins.,12ins.in he ground,for cor. of secs.3,4,33 and 34,marked with 3 notches on E.and W. edges; from which
	An ironwood,7ins.diam.,bears N 77°45'E. 250 lks.dist., marked T I S R 3 E S 34 BT
	A palo verde,12ins.diam.,bears S 40°W. 440 lks.dist., marked T 2 S R 3 E S 4 BT
	dig pits,18X18X12ins.,SE.and NW. of stone,5½ ft.dist., and raise a mound of earth,4ft.base 2ft.high,W. of cor.
	Land,mountainous and rolling.
	Soil,rocky; 2nd and 3rd rate.
	Timber,ironwood and palo verde.
	Underbrush,greasewood and cacti.
	August 18,1910.

August 19; At 6h 30m. a.m.,l.m.t.,I set off 33°17½'N. on the lat.arc; 13°00'N. on the decl.arc and determine a meridian with the solar at the cor. of secs.3,4,33 and 34.

The old ¼ sec.cor. bet.sess 4 and 33 bears N 89 55'W. a distance of 39.80 chs.

Therefore I run

N 89° 55'W. on true line bet.secs.4 and 33.

Over rolling land thru dense underbrush.

18.00	Wash,15 lks.wide,course S.
21.00	Asc.steep rocky slope.
25.50	Top of ridge,bears N.and S. Desc.steep rocky slope.
30.00	Over rolling land covered with loose rocks.
39.80	Old ¼ sec.cor.which is a stone in scattering mound of stone. I reset a malpais stone,18X8X6ins.,12ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; from which
	A palo verde 5ins.diam.,bears S 12½°W. 66 lks.dist., marked ¼ S 4 BT
	A palo verde 5ins.diam.,bears N 57°W. 92 lks.dist., marked ¼ S 33 BT
	From this cor. the ¼ sec.cor. bet.secs. 5 and 32,bears S 89°52'W. a distance of 80.20 chs.
	Thence I run
	S 89°52'W. on true line bet.secs.4 and 33.
40.10	Wash,20 lks.wide,course S.
56.00	Wash,50 lks.wide,course S.
76.00	Wash,20 lks.wide,course S. Ascend steep rocky slope.
79.90	Set a malpais stone,20X6X6ins.,15ins.in the ground, for cor. of secs.4,5,32 and 33,marked with 4 notches on E. and 2 notches on W. edge; from which
	A plao verde,5ins.diam.,bears N 6°45'E. 75 lks.dist., marked T 1 S R 3 E S 33 BT
	A palo verde 5ins.diam.,bears S 27½° E. 145 lks.dist., marked T 2 S R 3 E S 4 BT

Resurvey of the S. Bdy. of Tp. 1 S., Rg 3 E.

chains.	
	A palo verde 4ins.diam.,bears S 20½° W. 182 lks.dist., marked T 2 S R 3 E S 5 BT
	A palo verde 5ins.diam.,bears N 37° W. 244 lks.dist., marked T 1 S R 3 E S 32 BT
	Land,mountainous and rolling.
	Soil,rocky; 3rd rate.
	Timber,paloverde,and ironwood.
	Underbrush,greasewood and cacti.

	Thence I run S 89°52'W. on true line bet. secs. 5 and 32.
	Descend steep rocky slope thru dense underbrush.
7.00	Over broken land covered with loose rocks.
9.00	Wash,30 lks.wide,course S. Asc.steep rocky slope.
16.00	Top of ridge,bears NW.and SE. Desc,steep rocky slope.
20.00	Wash,30 lks.wide,course S. Over broken land covered with loose rocks.
34.00	Wash,25 lks.wide,course S. Asc.steep rocky slope.
38.00	Top of ridge,bears NW.and SE. Desc.steep rocky slope.
40.10	Old ¼ sec.cor.,which is a stone in mound of stone. I reset a malpais stone,24X8X8ins.,18ins.in the ground, for ¼ sec.cor.,marked ¼ on N.face; from which
	A palo verde 4ins,diam.,bears S 21° W.108 lks.dist., marked ¼ S 5 BT
	A palo verde 4ins,diam.,bears N 20¼° W. 75 lks.dist., marked ¼ S 32 BT.
	From this cor. the ¼ sor. bet.secs. 6 and 31,bears S 89 53'W.,79.96 chs. dist.
	Thence I run
	S 89 53'W. on true line bet.sess. 5 and 32.
44.25	Wash,15 lks.wide,course SE. Asc.over loose rocks.
47.70	Top of ridge,bears SE. and NW. Desc.over loose rocks.
50.00	Over broken land.
59.40	Wash,30 lks.wide,course S.
65.20	Old road,bears N.and S.
78.20	Wash,25 lks.wide,course S.
80.08	Set a malpais stone,28X8X8ins.,21ins.in the ground, for cor. of secs.,5,6,31 and 32,marked with 5 notches on E. and 1 notch on W. edge; from which
	An ironwood 5ins.diam.,bears N 69° E. 142 lks.dist., marked T 1 S R 3 E S 32 BT
	An ironwood,6ins.diam.,bears S 71½° E. 132 lks.dist., marked T 2 S R 3 E S 5 BT
	A palo verde 6ins.diam.,bears S 10½° W.564 lks.dist., marked T 2 S R 3 E S 6 BT
	A palo verde 4ins.diam.,bears N 21° W. 268 lks.dist., marked T 1 S R 3 E S 31 BT
	Land,mountainous and broken.
	Soil,rocky; 3rd rate.
	Timber,palo verde and ironwood.
	Underbrush,greasewood and cacti.
	AT this cor. I set off 12°53½'N. on the decl.arc and observe the sun on the meridian at noon; the resulting latitude is 33°17½'N.

	Thence I run
	S 89°53'W. bet.secs.6 and 31.
	Over broken land covered with loose rocks thru dense underbrush and scattering timber.
31.00	Ascend steep rocky slope.
36.00	Top of ridge,bears N. and S. Desc.steep rocky slope.
39.20	Wash,20 lks.wide,course SW. Over broken land covered with loose rocks.
39.98	Old ¼ sec.cor.,which I destroy and in the same place set a malpais stone,20X6X6ins.,15ins.in the ground,for ¼ sec.cor.,marked ¼ on N.face; from which

Resurvey of the S. Bdy. of Tp.1 S.,Rg.3 E.

chains.

An ironwood,5ins.diam.,bears S 1°40'E. 90 lks.dist., marked ¼ S 6 BT.
An ironwood,5ins.dism.,bears N 24°E. 77 lks.dist., marked ¼ S 31 BT
From this cor. the cor. of Tps. 1 & 2 S.,Rs. 2 & 3 E., bears S 89°55'W. 37.99 chs.dist.
Thence I run
S 89°55'W. bet.secs.6 and 31.

77.97 The old cor. of Tps. I&2 S.,Rs. 2 & 3 E.,which I destroy and in the same place set a malpais stone,24X8X8ins., 18ins.in the ground,for cor. of Tps. 1 & 2 S.,Rs. 2 & 3 E.,marked
1 S on NE.,
3 E on SE.,
2 S on SW.,and
2 E on NW face; with 6 notches on each edge; from which
An ironwood,4ins.diam.,bears N 57¼°E. 151 lks.dist., marked T 1 S R 3 E S 31 BT
A palo verde 5ins.diam.,bears S 45°E. 436 lks.diat., marked T 2 S R 3 E S 6 BT
An ironwood,5ins.diam.,bears S 44°W.,194 lks.diat., marked T 2 S R 2 E S 1 BT
A palo verde 8ins.diam.,bears N 39¼°W. 440 lks.dist., marked T I S R 2 E S 36 BT
Land,broken and rolling.
Soil,rocky; 3rd rate.
Timber,ironwood and palo verde.
Underbrush,greasewood and cacti.

August 19,1910.

Note: The most diligent search along this line failed to reveal any cors. other than those stated.

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Resurvey of the E. Bdy. of Tp. 1 S.,Rg. 3 E.

chains.

August 22,1910; I find the cor. of secs.13,18,19 & 24 which is a post with marks nearly obliterated. I destroy and in the same place set an ironwood post,3ft.long,4ins. sq.,with marked stone 24ins.in the ground,for cor. of secs. 13,18,19 & 24,marked
T 1 S S 18 on NE.,
R 4 E S 19 on SE.,
R 3 E S 24 on SW.,and
S 13 on NW.face,with 3 notches on N. and S. edges; from which
An ironwood 4ins.diam.,bears N 5½° W. 322 lks.dist.; marked T 1 S R 3 E S 13 BT
dig pits,18X18X12ins.,in each sec.,5½ ft.dist., and raise a mound of earth,4ft.base,2ft.high,W. of cor.
From this cor. the cor. of secs.7,12,13 & 18,bears N 0°05'W.,80.16 chs.dist.
Thence I run
N 0°05'W. bet.secs. 13 and 18.
Over level land thru dense underbrush.

40.08 Set a palo verde post,3ft.long,3ins.sq.,marked ¼ S 13 on W.face and 18 on E. face; dig pits,18X18X12ins., N.and S. of post,3ft.dist.; and raise a mound of earth 3½ ft.base,1½ ft.high,W. of cor.No trace of old cor..

80.00 Old road,bears NE.and SW.

80.16 Old cor. of secs.7.12,13 & 18with marks nearly obliterated,so I destroy and in the same place set a granite stone,20X8X8ins.,15ins.in the ground,for cor. of secs. 7,12,13 and 18,marked with 4 notches on S.and 2 notches on N.edge; from which
A palo verde 5ins.diam.,bears N 45¼° E. 120 lks.dist., marked T 1 S R 4 E S 7 BT
A palo verde 5ins diam.,bears S 44½° E. 436 lks.dist., marked T 1 S R 4 E S 18 BT
An ironwood4ins.diam.,bears S 19¼° W. 264 lks.dist., marked T I S R 3 E S 13 BT
An ironwood,4ins.diam.,bears N 5½° W. 340 lks.dist., marked T 1 S R 3 E S 12 BT
Land,level.
Soil,gravelly; 2nd rate.
Timber,ironwood and paloverde.
Underbrush,greasewood and cacti.

August 22,1910

H. H. Shaw
W. L. Dysart

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by William W. Shawk, 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 Resurvey of the South & East Boundries of Township 1 South Range 3 East showing the respective capacities in which they acted:

J. M. Heath, *Chainman.*
E. C. Halbeisen, *Chainman.*
W. H. Easterwood, *Moundman.*
, *Moundman.*
H. N. Blair, *Axman.*
, *Axman.*
Delos J. Dean, *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted William W. Shawk, United States Deputy Surveyor, in surveying all those parts or portions of the Resurvey of the South & East Boundries of Township 1 South, Range 3 East

of the Gila & Salt River Base & 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 Territory of Arizona

J. M. Heath, *Chainman.*
E. C. Halbeisen, *Chainman.*
W. H. Easterwood, *Moundman.*
, *Moundman.*
H. N. Blair, *Axman.*
, *Axman.*
Delos J. Dean, *Flagman.*

Subscribed and sworn to before me this 30 day of August, 1910

SEAL

[signature] Notary Public.

My Com. expires Dec. 7-

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8 BOOK 2239

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, William W. Shank, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank S. Ingalls United States Surveyor General for Territory of Arizona, bearing date of the 10 th day of June, 1910, 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 Resurvey of the South and East Boundaries of Township 1 South Range 3 East

of the Gila & Salt River Base & 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.

William W. Shank
United States Deputy Surveyor.

Subscribed by said William W. Shank, and sworn to before me this 10 th day of September, 1910

Frank S. Ingalls
U.S. Surveyor General

SEAL

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix Ariz July 11, 1911

The foregoing field notes of the survey of the resurvey of the South and fractional East boundary of Tp 1 South Rg 3 East Gila and Salt River Meridian Arizona

executed by William W. Shank

under his contract No. 164, dated June 10 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. 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.

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