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Jan. 15 1878

1877
Book "B"
FIELD NOTES

BOOK 1877

OF THE SURVEY OF THE

4th Standard Par. N.
through Rys. 19, 20 and 21 W.

1877

1877

Of the Gila & Salt River Meridian,
Territory of Arizona

AS SURVEYED BY

John J. Fisher, United States Deputy Surveyor,

Under his Contract No. 126, dated March 14th, 1905

Survey commenced March 30 - 1905

Survey completed April 11, 1905

NAMES AND DUTIES OF ASSISTANTS.

George Cassidy Surveyor
 A. N. Olive Surveyor
 Bernard Edmunds Surveyor
 Irving Angus Surveyor
 L. D. Sanders Woodman
 E. O. Hemenway Flyman.

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

T 17 N. R 19 W

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| <u>31</u> | <u>32</u> | <u>33</u> | <u>34</u> | <u>35</u> | <u>36</u> |
| 20 | 19 | 19 | 18 | 18 | 17 |

4th Standard Parallel N.

T 17 N. R 20 W

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| <u>31</u> | <u>32</u> | <u>33</u> | <u>34</u> | <u>35</u> | <u>36</u> |
| 23 | 23 | 22 | 22 | 21 | 21 |

4th Standard Parallel N.

T 17 N R 21 W

| | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|
| <u>31</u> | <u>32</u> | <u>33</u> | <u>34</u> | <u>35</u> | <u>36</u> |
| 27 | 26 | 26 | 25 | 25 | 24 |

4th Standard Parallel N.

BOOK 1877
INDEX DIAGRAM.

Township _____, Range _____

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| 6 | 5 | 4 | 3 | 2 | 1 |
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| 19 | 20 | 21 | 22 | 23 | 24 |
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| 31 | 32 | 33 | 34 | 35 | 36 |

Meanders Page _____

PRELIMINARY OATHS OF ASSISTANTS.

16 1 80

BOOK 1877

WE, George Cassidy and A. N. Oliver

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

4th Standard Pev. N. through Rgs. 19, 20 and 21 W.

George Cassidy, Chainman.

A. N. Oliver, Chainman.

Subscribed and sworn to before me this 18th day of March, 1905



My commission expires May 19, 1908

J. J. Fisher
Notary Public

WE, Reginald Edmunds and Irving Auger

do solemnly swear that we will well and truly perform the duties of ~~measurers~~ ^{chainmen} in the establishment of ~~corners~~, according to the instructions given us, to the best of our skill and ability, in the survey of

4th Standard Pev. N. through Rgs. 19, 20 and 21 W.

Reginald Edmunds, ~~Chainman~~ ^{Chainman}

Irving Auger, ~~Chainman~~ ^{Chainman}

Subscribed and sworn to before me this 18th day of March, 1905



My commission expires May 19, 1908

J. J. Fisher
Notary Public

WE, J. D. Sanders and

do solemnly swear that we will well and truly perform the duties of ~~measurers~~ ^{measurers} in the establishment of corners and other duties, according to instructions given ^{me} ~~us~~ to the best of ^{my} ~~our~~ skill and ability, in the survey of

4th Standard Pev. N. through Rgs. 19, 20, + 21 W.

J. D. Sanders, ~~Chainman~~ ^{Chainman}

~~Chainman~~ ^{Chainman}

Subscribed and sworn to before me this 18th day of March, 1905



My commission expires May 19, 1908

J. J. Fisher
Notary Public

I, E. C. Hemenway, 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

4th Standard Pev. N. through Rgs. 19, 20 + 21 W.

E. C. Hemenway, Flagman.

Subscribed and sworn to before me this 18th day of March, 1905



My commission expires May 19, 1908

J. J. Fisher
Notary Public

4TH STANDARD PARALLEL NORTH, through Range 19 West

Chains

Survey commenced March 30th, 1905, and executed with a W. and L. E. Gurley Light Mountain Transit, not numbered, with a Smith 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 lat and decl arcs.

The instrument was examined, tested on the true meridian at Phoenix, found correct and was approved by the Surveyor General for Arizona, March 15th, 1905

I examined 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 true meridian determined by observation on Polaris, I proceed as follows:

March 30th. At the Standard cor of Tps 17 N, Rs 18 and 19 W and lat $34^{\circ}44'31.2''$ N, long $114^{\circ}7'10''$ W, I set off $34^{\circ}44'$ N on the lat arc, $3^{\circ}50'$ on the Decl arc and at 4h 30m p.m.l.m.t., determined with the Solar a true meridian and marked a point thereof on a stone set firmly in the ground 5 chs N of my cor.

~~At 6h 49m~~ At 5h 53m p.m.l.m.t., I observed Polaris at Western elongation in accordance with Manual of Instructions and mark a point on the line thus determined on a plug driven in the ground 5 chs N of my station.

March 30th, 1905

March 31st, 1905

At 7h 15m. a.m.l.m.t., I lay off the azimuth of Polaris $1^{\circ}28'$ to the E and mark the true meridian thus determined by cutting a small groove in the stone set March 30th, on which the true meridian falls 0.3 ins W of mark determined by the Solar.

At 7h 30m. a.m.l.m.t., I set off $34^{\circ}44'$ N on the lat arc, $4^{\circ}5'$ N of the decl arc and mark a point in the true meridian determined with the Solar by a cross on the stone already set 5 chs N of my station. This mark falls 0.25 ins W of the true meridian established by Polaris observation.

The Solar Apparatus by p.m. and a.m. observations defines position for true meridian respectively $0'16''$ E and $0'13''$ W of the meridian established by Polaris observation. Therefore, I conclude the adjustments of instruments are satisfactory.

The magnetic bearing of the true meridian is $15^{\circ}0'$ W, which gives a magnetic decl of $15^{\circ}0'$ E.

From the Standard cor above described, I run W on South boundary of Sec 36

15.50 Descend
Cross gulch, 30 lks wide, course S

20.00 Ascend
Cross ridge, course N and S

24.00 Descend
Cross gulch, 50 lks wide, course S

28.00 Ascend
Cross ridge, course N and S

33.00 Descend
Cross gulch, 40 lks wide, course S

35.00 Cross gulch, 20 lks wide, course SE

Ascend
Difference of measurements of 40 chs by two set of chainmen is 8 lks, position of middle point

By 1st set, 39.96 chs

By 2nd set, 40.04 chs, the mean of which is

BOOK 1877

Chains
 40.00 Set a lava stone 18 x 10 x 8 ins, ¹²~~14~~ ins in ground for Standard $\frac{1}{4}$ sec cor, stone marked SC $\frac{1}{4}$ on N face. Raised monument of stones 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor. No trees, pits impracticable.
 68.20 To top of mountain ridge, course N and S
 Descend
 Difference of measurements of 80 chs by two set of chainmen, is 14 lks, position of middle point
 By 1st set, 80.07 chs
 By 2nd set, 79.93 chs, the mean of which is
 80.00 Set a granite stone, 20 x 10 x 6 ins, in a monument of stone for Standard cor secs 35 and 36, stone marked SC on N, 1 groove on E and 5 grooves on W faces. Raised a mound of stones, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor. No trees, pits impracticable. Soil, rocky, granite formation, fourth rate. Land, mountainous, covered with fair growth of grass.
 Mountainous land, 80.00 chs.

 Thence I run
 West on S boundary of Sec 35
 Descend over rough mountainous country.
 The difference between measurements of 40 chs by two set of chainmen, is 10 lks, position of middle point
 By 1st set, 39.95 chs
 By 2nd set, 40.05 chs, the mean of which is
 40.00 Set a granite stone 24 x 8 x 8 ins, in mound of stones for Standard $\frac{1}{4}$ Sec cor, stone marked SC $\frac{1}{4}$ on N face. Raised a mound of stones, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor. No trees, pits impracticable.
 Ascend
 48.00 To top of ridge, course N and S
 Descend
 54.00 Cross gulch, 30 lks wide, course S
 Ascend
 65.00 Cross ridge, course N and S
 Descend
 73.30 Cross gulch, 30 lks wide, course SE
 Ascend
 76.00 Cross ridge, course NE-SW
 Descend
 79.95 Cross wash, 20 lks wide, course SE
 Difference of measurements of 80 chs by two set of chainmen, is 18 lks, position of middle point
 By 1st set, 80.09 chs
 By 2nd set, 79.91 chs, the mean of which is
 80.00 Set a lava stone 28 x 8 x 7 ins, ~~24~~ ins in ground for Standard cor of secs 34 and 35, stone marked SC on N face, 2 grooves on E and 4 grooves on W edges. Raised mound of stone, 2ft base, 1 $\frac{1}{2}$ ft high, N of cor. No trees, pits impracticable. Soil, rocky, fourth rate. Land, mountainous, covered with fairly good growth of grass.
 Mountainous land, 80.00 chs.

March 31st, 1905

 April 1st, 1905.
 At 7h a.m.l.m.t., I set off 34° 44' N on the lat arc, 4° 28' N on the decl arc, and determined the true meridian with the Solar at the cor of secs 34 and 35.
 Thence I run
 West on S boundary of sec 34
 Ascend
 8.00 Top of ridge, course NW-SE
 Descend
 20.00 Foot of ridge
 Ascend
 37.00 Cross ridge, course NE-SW
 Difference of measurements of 40 chs by two set of chainmen, is 8 lks, position of middle point
 By 1st set, 40.04 chs
 By 2nd set, 39.96 chs, the mean of which is

4TH STANDARD PARALLEL NORTH, through RANGE 19 WEST.

| | |
|--------|---|
| chains | |
| 40.00 | Set a lava stone 18 x 14 x 8 ins in monument of stone for Standard $\frac{1}{4}$ sec cor, stone marked SC $\frac{1}{4}$ on N face. Raised a monument of stones 2 ft base, 1 $\frac{1}{2}$ ft high, N of corner. No trees, pits impracticable. |
| | Descend |
| 53.00 | Foot of ridge |
| | Ascend |
| 64.00 | Cross summit of ridge, course N and S |
| | Descend |
| 75.00 | Cross canon, 75 lks wide, course SW |
| | Ascend |
| | Difference of measurements of 80 chs by two set of chainmen is 20 lks, position of middle point |
| | By 1st set, 80.10 chs |
| | By 2nd set, 79.90 chs, the mean of which is |
| 80.00 | Set a lava stone 30 x 18 x 12 ins, 10 ins in ground and surrounded by a monument of stones, for Standard cor of secs 33 and 34, stone marked SC on N and 3 grooves on E and W faces. Raised mound of stone, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor. No trees, pits impracticable. |
| | Soil, Rocky, lava formation, fourth rate. |
| | Land, mountainous. Very little vegetation. |
| | Mountainous land, 80.00 chs. |

April 1st, 1905.

April 3rd, 1905

At 7h 30m.a.m.l.m.t., I set off 34° 44' N on the lat arc, 5° 14' N on the decl arc and determined a true meridian at the cor of secs 33 and 34.

Thence I run W over high mountainous country West on S boundary of sec 33

Descend

| | |
|-------|--|
| 7.00 | Cross dry creek, 75 lks wide, course SW |
| | Ascend |
| 10.00 | Cross ridge, course NE-SW |
| | Descend |
| 12.00 | Cross dry creek, 40 lks wide, course SW |
| | Ascend |
| | Difference of measurements of 40 chs by two set of chainmen, is 14 lks, position of middle point |
| | By 1st set, 39.93 chs |
| | By 2nd set, 39.67 chs, the mean of which is |
| 40.00 | Set a lava stone 30 x 15 x 8 ins, in monument of stone for Standard $\frac{1}{4}$ sec cor, stone marked SC $\frac{1}{4}$ on N face. Raised mound of stone, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor. No trees, pits impracticable. |
| | Descend |
| 55.75 | Cross gulch, 20 lks wide, course SW. Ascend |
| 64.00 | Cross ridge, course NE-SW |
| | Descend |
| 70.00 | Cross gulch, 60 lks wide, course SW |
| | Ascend |
| | Difference of measurements of 80 chs by two set of chainmen, is 18 lks, position of middle point |
| | By 1st set, 80.09 chs |
| | By 2nd set, 79.91 chs, the mean of which is |
| 80.00 | Set a lava stone 24 x 8 x 8 ins, 18 ins in ground for Standard cor of secs 32 and 33, stone marked SC on N 4 grooves on E and 2 grooves on W faces. Raised mound of stone, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor. |
| | No trees, pits impracticable. |
| | Soil, rocky, lava formation, fourth rate. |
| | Land, mountainous. Very slight growth of grass. |
| | Mountainous land, 80.00 chs. |

April 3rd

At 12h m. l.m.t., I set off 5° 17' N on the decl arc and observed the sun on the meridian. The resulting lat is 34° 44' N.

Thence I run West over rough mountainous country on S boundary of sec 32.

Descend

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chains
3.75
15.00
27.50
40.00
59.00
67.00
79.80
80.00
9.50
40.00
50.00
71.50
80.00

Cross dry wash, 10 lks wide, course SE
Ascend

Cross ridge, course N and S
Descend

Cross dry creek, 60 lks wide, course S
Ascend
Difference of measurements of 40 chs by two set of chainmen, is 12 lks, position of middle point
By 1st set, 40.06 chs
By 2nd set, 39.94 chs, the mean of which is

Set a lava stone 20 x 8 x 6 ins, ~~6~~ 16 ins in ground for Standard $\frac{1}{4}$ sec cor, stone marked SC $\frac{1}{4}$ on N face. Raised mound of stone, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor.
No trees, pits impracticable.
Descend

Cross dry creek, 60 lks wide, course S
Ascend

Cross ridge, course N and S
Descend

Cross dry creek, 20 lks wide, course S.
Ascend
Difference of measurements of 80 chs by two set of chainmen, is 20 lks, position of middle point
By 1st set, 79.90 chs
By 2nd set, ~~40.10~~ 40.10 chs, the mean of which is

Set a granite stone 18 x 10 x 5 ins, ~~14~~ 14 ins in ground for Standard cor of secs 31 and 32, stone marked SC on N, 5 grooves on E and 1 groove on W faces. Raised mound of stone, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor.
No trees, pits impracticable.
Soil, rocky, fourth rate.
Land, mountainous, covered with slack growth of grass.
Mountainous land, 80.00 chs.

April 3rd, 1905

April 4th, 1905.

At 7h 30m.l.m.t., I set off 34° 44' N on the lat arc, 5° 37' N on the decl arc and determined a true meridian at the cor of secs 31 and 32.

Thence I run West on S boundary of sec 31 over rough mountainous country.
Descend

Cross dry wash, 50 lks wide, course S
Ascend
Difference of measurements of 40 chs by two set of chainmen, is 18 lks, position of middle point
By 1st set, 39.91 chs
By 2nd set, 40.09 chs, the mean of which is

Set a lava stone 20 x 12 x 10 ins, ~~16~~ 16 ins in ground for Standard $\frac{1}{4}$ sec cor, stone marked S. C. $\frac{1}{4}$ on N face. Raised mound of stones 2 ft base, 1 $\frac{1}{2}$ ft high N of cor.
No trees, pits impracticable.

Cross summit of ridge, course, N and S
Descend

Cross dry creek, 50 lks wide, course SW
Difference of measurements of 80 chs by two set of chainmen, is 16 lks, position of middle point
By 1st set, 80.08 chs
By 2nd set, 79.92 chs, the mean of which is

Set a lava stone, 18 x 12 x 12 ins, ~~14~~ 14 ins in ground for Standard cor Tps 17 N, Rs 19 and 20 W, stone marked SC 17 N on N, 19 W on E, and 20 W on W faces, with 6 grooves on N, E and W faces. Raised mound of stones 4 ft base, 2 $\frac{1}{2}$ ft high, N of cor. No trees, pits impracticable.
Soil, rocky, lava formation, fourth rate.
Land, mountainous, cut up by deep gulches. Very little vegetation.
Mountainous land, 80.00 chs.

| chains | |
|--------|--|
| | April 4th |
| | At 12h m. l.m.t., I set off 5° 40' N on the decl arc and observed the sun on the meridian. The resulting lat is 34° 44' N, at the Standard cor of Tps 17 N Rs 19 and 20 W. |
| | Thence I run <i>on S. bdy Sec 36.</i> |
| | West over rolling mountainous country |
| | Descend |
| 2.50 | Cross dry wash, 40 lks wide, course SW |
| | Ascend |
| 12.00 | Cross ridge, course NE-SW |
| | Descend |
| 22.00 | Foot of ridge |
| | Ascend |
| | Difference of measurements of 40 chs by two set of chainmen, is 10 lks, position of middle point |
| | By 1st set, 39.95 chs |
| | By 2nd set, 40.05 chs, the mean of which is |
| 40.00 | Set a lava stone 16 x 12 x 5 ins, // 12 ins in ground for Standard $\frac{1}{4}$ sec cor, stone marked SC $\frac{1}{4}$ on N face. Raised mound of stones, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor. |
| | No trees, pits impracticable. |
| | Descend |
| 55.00 | Foot of ridge. |
| | Ascend |
| 68.00 | Cross top of ridge, course NE-SW |
| | Descend |
| 75.50 | Cross dry wash, 40 lks wide, course SW |
| | Ascend |
| | Difference of measurements of 80 chs by two set of chainmen, is 14 lks, position of middle point |
| | By 1st set, 80.07 chs |
| | By 2nd set, 79.93 chs, the mean of which is |
| 80.00 | Set a lava stone 24 x 8 x 8 ins, 18 ins in ground for Standard cor of secs 35 and 36, stone marked SC on N face, 1 groove on E and 5 grooves on W faces. Raised a mound of stones, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor. |
| | No trees, pits impracticable. |
| | Soil, rocky, lava formation, fourth rate. |
| | Land, rough, broken, mountainous. Very little vegetation. |
| | Mountainous land, 80.00 chs. |
| | April 4th, 1905. |

 April 5th, 1905.

At 7h 30m. a.m.l.m.t., I set off 34° 44' N on the lat arc, 6° 0' N on the decl arc, and determined the meridian with the Solar at the Standard cor of secs 35 and 36.

Thence I run

West on S-boundary of sec 35 over rough, broken, mountainous country.

Descend

15.30 Cross dry wash, 30 lks wide, course SW

Ascend

17.00 Cross ridge, course NE-SW

Descend

20.00 Cross dry wash, 30 lks wide, course SW

Ascend

Difference of measurements of 40 chs by two set of chainmen, is 8 lks, position of middle point

By 1st set, 40.04 chs

By 2nd set, 39.96 chs, the mean of which is

40.00 Set a lava stone 20 x 10 x 4 ins, in monument of stones for Standard $\frac{1}{4}$ sec cor, stone marked SC $\frac{1}{4}$ on N face.

Raised a mound of stones 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor

No trees, pits impracticable.

| | |
|-----------------|---|
| chains 57.00 | Cross ridge, course NE-SW Descend Difference of measurement of 80 chs by two set of chainmen is 16 lks, position of middle point By 1st set, 79.92 chs By 2nd set, 80.08 chs, the mean of which is |
| 80.00 | Set a lava stone 20 x 12 x 10 ins, 16 ins in ground for Standard cor of secs 34 and 35, stone marked SC on N face, 2 grooves on E and 4 grooves on W edges. Raised a mound of stones, 2 ft base, 1½ ft high, N of cor. No trees, pits impracticable. Soil, rocky, fourth rate. Land, rough, mountainous, general slope of which is to the S and W. Very little vegetation. Mountainous land, 80.00 chs. |
| 10.00 | Thence I run West on S boundary of sec 34. Descend Foot of ridge. |
| 30.00 | Ascend Top of ridge, course NE-SW. Descend Difference of measurement of 40 chs by two set of chainmen, is 12 lks, position of middle point By 1st set, 39.94 chs By 2nd set, 40.06 chs, the mean of which is |
| 40.00 | Set a lava stone, 24 x 10 x 10 ins, in monument of stone, for Standard ¼ sec cor, stone marked SC¼ on N face. Raise a mound of stone 2 ft base, 1½ ft high, N of cor. No trees, pits impracticable. |
| 44.70 | Enter canon |
| 49.00 | Cross dry bed of canon, course SW Ascend |
| 53.00 | Leave canon |
| 58.00 | Cross ridge, course NE-SW Descend |
| 64.00 | Cross gulch, 30 lks wide, course SW Ascend |
| 69.00 | Cross ridge, course NE-SW Descend |
| 74.50 | Cross gulch, 20 lks wide, course SW Ascend Difference of measurements of 80 chs by two set of chainmen, is 20 lks, position of middle point By 1st set, 80.10 chs By 2nd set, 79.90 chs, the mean of which is |
| 80.00 | Set a lava stone 24 x 14 x 12 ins, in monument of stone for Standard cor of secs 33 and 34, stone marked SC on N face, 3 grooves on E and W edges. Raised a mound of stone 2 ft base, 1½ ft high, N of cor. No trees, pits impracticable. Soil, rocky, lava formation, fourth rate. Land, rough, mountainous. Very little vegetation. Mountainous land, 80.00 chs. |
| | April 5th, 1905. |
| | April 6th, 1905. At 7h. 30. a.m.l.m.t., I set off 34° 44' N on the lat arc, 6° 22' N on the decl arc and at the Standard cor of secs 33 and 34, I determined a true meridian with the Solar. Thence I run West on S boundary of sec 33 over rough, mountainous country. Descend |
| 20.00 | Foot of ridge Ascend Difference of measurement of 40 chs by two set of chainmen, is 10 lks, position of middle point |

4TH STANDARD PARALLEL NORTH, through RANGE 20 WEST.

| | |
|--------|--|
| chains | |
| 40.00 | <p>By 1st set, 39.95 chs By 2nd set, 40.05 chs, the mean of which is Set a lava stone 22 x 14 x 14 ins, 7 1/8 ins in ground for Standard 1/4 sec cor, stone marked SC 1/4 on N face. Raised a mound of stone, 2 ft base, 1 1/2 ft high, N of cor. No trees, pits impracticable.</p> |
| 42.00 | <p>Summit of ridge, course NE-SW Descend</p> |
| 68.25 | <p>Cross canon, 20 lks wide, course SW Ascend Difference of measurements of 80 chs by two set of chainmen, is 16 lks, position of middle point By 1st set, 80.08 chs By 2nd set, 79.92 chs, the mean of which is</p> |
| 80.00 | <p>Set a lava stone 28 x 12 x 8 ins, in monument of stones for Standard cor of secs 32 and 33, stone marked SC on N face, 4 grooves on E and 2 grooves on W edges. Raised mound of stones, 2 ft base, 1 1/2 ft high, N of cor. No trees, pits impracticable. Soil, rocky, lave formation, fourth rate. Land, rough, mountainous, being on the W slope of the Black or River Range of Mountains. General slope being to the S and W. Mountainous land, 80.00 chs.</p> |
| ----- | |
| | <p>April 6th. At 12h.m.l.m.t., I set off 6° 26' N on the decl arc and observed the sun on the meridian. The resulting lat is 34° 44' N. Thence I run West on S boundary of sec 32. Descend</p> |
| 22.00 | <p>Cross canon, 30 lks wide, course SW Ascend Difference of measurements of 40 chs by two set of chainmen, is 6 lks, position of middle point By 1st set, 39.97 chs, By 2nd set, 40.03 chs, the mean of which is</p> |
| 40.00 | <p>Set a lava stone, 26 x 18 x 10 ins, in monument of stones for Standard 1/4 sec cor, stone marked SC 1/4 on N face. Raised a mound of stone, 2 ft base, 1 1/2 ft high, N of cor. No trees, pits impracticable. Descend</p> |
| 60.00 | <p>Foot of descent Ascend Difference of measurements of 80 chs by two set of chainmen, is 14 lks, position of middle point By 1st set, 80.07 chs By 2nd set, 79.93 chs, the mean of which is</p> |
| 80.00 | <p>Set a lava stone 24 x 14 x 8 ins, 8 3/4 ins in ground for Standard cor of secs 31 and 32, stone marked SC on N face 5 grooves on E and 1 groove on W edges. Raised mound of stone 2 ft base, 1 1/2 ft high, N of cor. No trees, pits impracticable. Soil, rocky, lava formation, fourth rate. Land, rough, mountainous. Very little vegetation. Mountainous land, 80.00 chs.</p> |
| ----- | |
| | <p>April 6th, 1905.</p> |
| | <p>April 7th, 1905. At 7h.30m.l.m.t., I set off 34° 44' N on the lat arc, 6° 45' N on the decl arc, and determined a true meridian at the St cor of secs 31 and 32. Thence I run West on S bdy of sec 31 over rough, mountainous country. Descend</p> |
| 5.25 | <p>Cross gulch, 30 lks wide, course SW Ascend</p> |
| 18.00 | <p>summit of ridge, course NE-SW Descend Difference of measurements of 40 chs by two set of chainmen, is 10 lks, position of middle point</p> |

4TH STANDARD PARALLEL NORTH, through RANGE 20 WEST.

| Chains | |
|--------|--|
| | By 1st set, 40.05 chs By 2nd set, 39.95 chs, the mean of which is |
| 40.00 | Set a lava stone 20 x 10 x 8 ins, in monument of stones for St $\frac{1}{4}$ sec cor, stone marked SC $\frac{1}{4}$ on N face. Raised mound of stones, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor. |
| | Ascend |
| 45.00 | cross ridge, course NW-SE |
| | Descend |
| 54.50 | Cross gulch, 20 lks wide, course NW |
| | Ascend |
| 58.00 | Cross ridge, course NW-SE |
| | Descend |
| 62.00 | Cross gulch, 50 lks wide, course N |
| | Ascend |
| 67.00 | Cross ridge, course N and S |
| | Descend |
| 74.50 | Cross gulch, 40 lks wide, course NW |
| | Ascend |
| | Difference of measurements of 80 chs by two set of chainmen, is 18 lks, position of middle point |
| | By 1st set, 80.09 chs |
| | By 2nd set, 79.91 chs, the mean of which is |
| 80.00 | Set a lava stone 18 x 12 x 12 ins, ²¹⁴ ins in ground for St cor of Tps 17 N, Rs 20 and 21 W, stone marked 17 N S $\frac{1}{4}$ on N, 20 W on E, and 21 W on W faces, with 6 grooves on N, E, and W faces. Raised a monument of stones 4 ft base, 2 $\frac{1}{2}$ ft high, N of cor. |
| | No trees, pits impracticable. |
| | Soil, rocky, lava formation, 4th rate. |
| | Land, rough, mountainous. Very little vegetation. |
| | Mountainous land, 80.00 chs. April 7th, 1905. |

4TH STANDARD PARALLEL NORTH, through RANGE 21 WEST.

April 8th, 1905.

At 7h. 30m. a.m.l.m.t., I set off 34° 44' N on the lat arc, 7° 8' N on the decl arc and at the St cor of Tps 17 N, Rs 20 and 21 W, I determined the true meridian with the Solar.

Thence I run
West on S bdy of Sec 36.

| | |
|-------|---|
| | Descend |
| 3.00 | Cross gulch, 2 chs wide, course SW |
| | Ascend |
| 14.00 | Cross ridge, course NE-SW |
| | Descend |
| 23.50 | Cross wash, 50 lks wide, course SW |
| | Ascend |
| 28.50 | Cross ridge, course N and S |
| | Descend |
| 33.50 | Cross wash, 50 lks wide, course NW |
| | Ascend |
| | Difference of measurements of 40 chs by two set of chainmen, is 14 lks, position of middle point |
| | By 1st set, 39.93 chs, |
| | By 2nd set, 40.07 chs, the mean of which is |
| 40.00 | Set a lava stone 18 x 12 x 12 ins, ²¹⁴ ins in ground for St $\frac{1}{4}$ Sec cor, stone marked SC $\frac{1}{4}$ on N face. Raised mound of stone, 2 ft base, 1 $\frac{1}{2}$ ft high, N of cor. |
| | No trees, pits impracticable. |
| 55.00 | Top of ridge |
| | Descend |
| 70.00 | Cross dry creek, 100 lks wide, course SW |
| | Ascend |
| | Difference of measurements of 80 chs by two set of chainmen, is 16 lks, position of middle point |
| | By 1st set, 80.08 chs |
| | By 2nd set, 79.92 chs, the mean of which is |

4TH STANDARD PARALLEL NORTH, through RANGE 21 WEST

| chains | |
|--------|---|
| 80.00 | Set a lava stone 18 x 10 x 8 ins, ¹² 14 ins in ground for St cor Secs 35 and 36, stone marked SC on N face, 1 groove on E and 5 grooves on W edges. Raised a mound of stone, 2 ft base, 1½ ft high, N of cor. No trees, pits impracticable. Soil, rocky, lava formation, fourth rate. Land, rolling, mountainous. very little vegetation. Mountainous land, 80.00 chs. |
| | ----- |
| | Thence I run West on S bdy of Sec 35 over rough, mountainous country. Descend |
| 14.40 | Cross canon, 30 lks wide, course SW Ascend |
| 22.00 | Cross ridge, course NE-SW Descend |
| 29.00 | Cross canon, 20 lks wide, course S Ascend Difference of measurements of 40 chs by two set of chainmen, is 10 lks, position of middle point By 1st set, 39.95 chs By 2nd set, 40.05 chs, the mean of which is |
| 40.00 | Set a lava stone 18 x 12 x 8 ins, ² 14 ins in ground for St ¼ Sec cor, stone marked SC¼ on N face. Raised mound of stones, 2 ft base, 1½ ft high, N of cor. No trees, pits impracticable. |
| 50.00 | Top of ridge, course NE-SW Descend |
| 64.50 | Cross dry creek, 40 lks wide, course SW Ascend Difference of measurements of 80 chs by two set of chainmen, is 14 lks, position of middle point By 1st set, 80.07 chs By 2nd set, 79.93 chs, the mean of which is |
| 80.00 | Set a lava stone 18 x 10 x 6 ins, ² 14 ins in ground for St cor of Secs 34 and 35, stone marked SC on N face, 2 grooves on E and 4 grooves on W edges. Raised a mound of stone, 2 ft base, 1½ ft high, N of cor. No trees, pits impracticable. Soil, gravelly, third rate. Land, broken, rolling, mountainous. Very little vegetation. Mountainous land, 80.00 chs. |

April 8th, 1905.

April 10, 1905. *a.m.*

At 7h.30m. *a.m.*, I set off 34° 44' N on the lat arc and 7° 52' N on the decl arc, and determined a true meridian with the Solar at the St cor of Secs 34 and 35.

| | |
|-------|--|
| | Thence I run West on the S bdy of sec 34 Descend |
| 5.50 | Cross gulch, 30 lks wide, course NW Ascend |
| 10.00 | top of mesa, sloping to the W. Descend Difference of measurements of 40 chs by two set of chainmen, is 8 lks, position of middle point By 1st set, 40.04 chs By 2nd set, 39.96 chs, the mean of which is |
| 40.00 | Set a lava stone 20 x 12 x 10 ins, ¹⁶ 18 ins in ground for St ¼ Sec cor, stone marked SC¼ on N face. Raised a monument of stones, 2 ft base, 1½ ft high, N of cor. No trees, pits impracticable. |
| 60.00 | West edge of mesa, descend abruptly. |
| 61.00 | Enter Mohave Valley |
| 63.00 | Cross road, course N and S, enter heavy mesquite timber and dense undergrowth. Difference of measurements of 80 chs by two set of chainmen, is 10 lks, position of middle point By 1st set, 80.05 chs By 2nd set, 79.95 chs, the mean of which is |

4TH STANDARD PARALLEL NORTH, through RANGE 21 WEST.

chains
80.00

Set a mesquite post, 3 ft long, 4 ins square, 24 ins in ground for St cor of Secs 33 and 34, marked S. C., T 17 N, R 21 W on N face S. 34 on E. S. 33 on W faces, with 3 grooves on E and W faces. Whence a mesquite 10 ins in diameter bears N. 33° E, 81 lks distant, marked T 17 N, R 21 W, S 34 B. T. A mesquite 10 ins in diameter, bears N 32° W, 80 lks dist, marked T 17 N, R 21 W, S 34 B. T. Soil, Sandy loam and gravelly, first and third rate. Land, level and mountainous, 17 chs covered with heavy mesquite timber and dense undergrowth. Mountainous land or land covered with heavy timber or dense undergrowth, 80.00 chs.

10.00

Thence I run West on S bdy of Sec 33 through heavy mesquite timber over level land. Cross slough, water 2 ft deep, course SW, 125 lks wide. The difference of measurements of 40 chs by two set of chainmen, is 4 lks, position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs, the mean of which is

40.00

Set a mesquite post 3 ft long, 4 ins square, 24 ins in ground for St $\frac{1}{2}$ Sec cor, marked SC $\frac{1}{2}$ S³³ on N face, whence A mesquite 4 ins in diam. bears N 30°15' E, 27 lks dist, marked SC $\frac{1}{2}$ S, 33 B. T. A mesquite 4 ins in diam. bears N. 22° W, 43 lks dist, marked S. C. $\frac{1}{2}$ S. 34 B. T.

43.18

East edge of Powell Slough.

46.61

West side of Slough, water about 2 ft deep, course S.

51.87

Cross road, course N. and S.

70.40

Cross slough, 40 lks wide, water 18 ins. deep, course N. and S.

Difference of measurements of 80 chs by two set of chainmen, is 6 lks., position of middle point

By 1st set, 79.97 chs.

By 2nd set, 80.03 chs., the mean of which is

80.00

Set a mesquite post 3 ft long, 4 ins. sq. 24 ins. in ground for St. cor. of Secs. 32 and 33, post marked S. C. T 17 N, R 21 W, on N

S. 33 on E

S. 32 on W faces, with 4 notches on E. and 2 notches on W faces, whence

A mesquite 8 in. diam. bears N. 65° E., 26 lks. dist. marked T. 17 N, R. 21 W., S 33, B. T.

A mesquite 5 ins. diam. bears N 47 $\frac{1}{2}$ ° W., 16 lks. dist., marked T. 17 N., R 21 W. S 32, B. T.

Soil, sandy loam, first rate.

Land, covered with heavy mesquite timber and dense undergrowth, 80.00 chs.

April 10th, 1905.

April 11th, 1905.

At 8h. a.m., 1.m.t., I set off 34° 44' N on the lat arc, 18° 14' N on the decl arc and determined a true meridian by the Solar at the St cor of Secs. 32 and 33.

Thence I run on S. bdy sec 32.

West over level land through heavy mesquite timber and dense undergrowth of arrow wood

34.90

Cross road, course NW-SE

Difference of measurements of 40 chs by two set of chainmen, is 4 lks, position of middle point

By 1st set, 40.02 chs

By 2nd set, 39.98 chs, the mean of which is

40.00

Set a mesquite post, 4 ft long, 4 ins sq. 36 ins. in ground for St $\frac{1}{2}$ Sec cor, marked S. C. $\frac{1}{2}$ S. on N face, whence

32

4TH STANDARD PARALLEL NORTH. through RANGE 21 WEST.

chains

✓
 A mesquite, 4 ins. in diam. bears N. $5\frac{1}{2}^{\circ}$ W., 88 lks dist., marked S. C. $\frac{1}{4}$ S, B. T.
 A mesquite, 6 ins. in diam. bears N. $20\frac{1}{4}^{\circ}$ E., 143 lks dist., marked S. C. $\frac{1}{4}$ S, B. T.
 The difference of measurements of 80 chs by two set of chainmen, is 8 lks, position of middle point
 By 1st set, 79.96 chs
 By 2nd set, 80.04 chs, the mean of which is
 80.00 Set a mesquite, 4 ft long, 6 ins. sq., 3 ft in ground
 ✓ for St cor of Secs. 31 and 32, marked
 S. C. T. 17 N, R 21 W, on N.
 S. 32 on E
 S. 31 on W. faces, with 5 grooves on E and 1 groove on W. faces, whence
 A mesquite, 5 ins. in diam. bears N. 60° E., 72 lks dist., Marked T. 17 N, R 21 W., S 32, B. T.
 A mesquite, 8 ins., in diam. bears N $29\frac{1}{2}^{\circ}$ W, 130 lks dist., marked T 17, R 21 W, S 31, B. T.
 Soil, sandy loam, first rate.
 Land, covered with mesquite timber and dense undergrowth of arrow wood, 80.00 chs.

Thence I run
 West on S bdy of Sec 31
 20.00 Cross slough, 6 ins. water, 2 chs wide, course S.
 38.09 Intersect left bank of the Colorado River, banks about 8 ft high. Current of river close in against bank and cutting.
 Difference in measurement of 38.09 chs by two set of chainmen, is 4 lks, position of middle point
 By 1st set, 38.11 chs
 By 2nd set, 38.07 chs, the mean of which is
 38.09 Set a mesquite post 4 ft long, 4 ins. sq., 3 ft in ground for Meander cor, post marked M. C. on W face S. C. T. 17 N, on N face, R. 21 W S 31 on E. Dig pit 36 x 36 x 12 ins, 8 ft E of cor, raised a mound of earth 4 ft base 2 ft high, E of cor. No trees available.
 • Soil, sandy loam, first rate.
 Land, level, covered with scattering mesquite timber and dense undergrowth of arrow wood, 38.09 chs.
 April 11th, 1905.

GENERAL DESCRIPTION

Through Ranges 19 and 20^W and the East half of Range 21^W, this line runs over rough, mountainous ridges, having a Southerly trend and being on the S and W slope of the Black or River Range of Mountains.

There are no living streams of water and no timber. The soil is very rocky and produces but a slight growth of grass.

The West half of Range 21^W enters the Mohave Valley. The soil is good, producing heavy growth of mesquite timber and dense arrow wood. There is an abundance of water in sloughs during low stage of the river. This land is mostly subject to overflow at high stage of river.

John J. Fisher
 U. S. Deputy Surveyor.

LIST OF NAMES.

A list of the names of the individuals employed by

John J. Fisher

, 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

4th Standard

Sec. 11. Township Rgs. 19, 20 + 21 W

showing the respective capacities in which they acted:

George Cassidy

Chainman.

A. H. Oliver

Chainman.

Reginald Edmunds

Chainman
Moundman.

Owing August

Chainman
Moundman.

J. D. Sanders

Moundman
Axman.

E. C. Hemenway

Flagman
Axman.

Flagman.

FINAL OATH OF ASSISTANTS

We hereby certify that we assisted

John J. Fisher

, United States Deputy Surveyor, in surveying all

those parts or portions of the

*4th Standard Sec. 11, Township
Rgs. 19, 20 + 21 W;*

Salt River meridian, *Teritory* 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

George Cassidy

Chainman.

A. H. Oliver

Chainman.

Reginald Edmunds

Chainman
Moundman.

Owing August

Chainman
Moundman.

J. D. Sanders

Moundman
Axman.

Axman.

E. C. Hemenway

Flagman.

Subscribed and sworn to before me this

11th

day of

April

, 1905



My commission expires

May 17, 1908

John J. Fisher

Notary Public

93 29
BOOK 1877

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, John J. Fisher, 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 14th day of March, 1905, 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 4th Standard Par. W. through Rgs. 19, 20 + 21 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 J. Fisher
United States Deputy Surveyor.

Subscribed by said John J. Fisher, and sworn to before me }
this 1st day of February, 1906



Frank S. Ingalls
U.S. Surveyor General
for Arizona

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix A.T. June 29, 1906

The foregoing field notes of the survey of the Fourth Standard Parallel North through Range 19, 20 and 21 W. of the Gila and Salt River Base and Meridian, in the territory of Arizona.

executed by John J. Fisher, U.S. deputy surveyor under his contract No. 126, dated March 14, 1905, 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.