

2046

BOOK 2046

SEP. 26 1906

FIELD NOTES

OF THE SURVEY OF THE

PORTION OF THE NORTH BOUNDARY,

PORTION OF EAST BOUNDARY,

SOUTH BOUNDARY

PORTION OF WEST BOUNDARY

OF

TOWNSHIP 23 SOUTH,

RANGE 20 EAST.

2046

2046

2046

Of the GILA & SALT RIVER BASE AND Meridian,

Arizona.

AS SURVEYED BY

Philip Contzen, United States Deputy Surveyor,

Under his Contract No. 138, dated April 12, 1906, 190

Survey commenced July 8, 1906, 190

Survey completed July 14, 1906, 190

2046

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BOOK 2046

NAMES AND DUTIES OF ASSISTANTS.

Arthur Pogue, Chairman,

Harry Mallory, Chairman,

Louis Renand, Groundman,

L. C. Miller, Organizer,

H. B. Milliken, Flagman.

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BOOK 2046

INDEX DIAGRAM.

Township 23 South, Range 20 East.

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PRELIMINARY OATHS OF ASSISTANTS.

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BOOK 2046

WE, Arthur Pogue and Harry Mallory
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 portion of N. and E. boundaries and South and West boundaries of T. 23 S. R. 20 E

Arthur Pogue, Chainman.
Harry Mallory, Chainman.

Subscribed and sworn to before me this 6th
day of July, 1906



H. G. Power
Notary Public, Lincoln Territory
My Commission Expires July 24th, 1908

WE, Louis Renaud 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 ^{me} to the best of ^{my} skill and ability, in the survey of portion of N. and E. boundaries and South and West boundaries of T. 23 S. R. 20 E

Louis Renaud, Moundman.

Subscribed and sworn to before me this 6th
day of July, 1906



H. G. Power
Notary Public, Lincoln Territory
My Commission Expires July 24th, 1908

WE, L. C. Millar 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 ^{me} to the best of ^{my} skill and ability, in the survey of portion of N. and E. boundaries and South and West boundaries of T. 23 S. R. 20 E

L. C. Millar, Axman.

Subscribed and sworn to before me this 6th
day of July, 1906



H. G. Power
Notary Public, Lincoln Territory
My Commission Expires July 24th, 1908

I, L. B. Milliken, 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 portion of N. and E. boundaries and South and West boundaries of T. 23 S. R. 20 E

L. B. Milliken, Flagman.

Subscribed and sworn to before me this 6th
day of July, 1906



H. G. Power
Notary Public, Lincoln Territory
My Commission Expires July 24th, 1908

Exterior Boundaries of T. 23 S., R. 20 E.

Survey commenced July 8, 1906, and executed with a Young & Sons light mountain transit, with Smith's Solar Attachment No. 5609. 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 approved by the Surveyor general of Arizona, July 1, 1906.

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:

In my camp in the SE $\frac{1}{4}$, Sec. 34, T. 22 S., R. 20 E., Gila and Salt River Base and Meridian in Latitude 31° 28' N., approximately longitude 110° 17' W., I test my instrument on the true meridian established by me in the night of July 5-6, all the points of which I find intact, for which see Book B. of this contract, I set off 31° 28' N. on the lat. arc; 22° 32' N. on the decl. arc; and at 4 h 50 m., p.m., l.m.t., determine with the solar a meridian which falls 0.3 ins. east of the mark established by Polaris observation.

July 8, 1906.

July 9: At 6 h 30 m., a.m., l.m.t., I set off 31° 28' N. on the lat. arc; 22° 28' N. on the decl. arc, and determine with the solar a meridian which falls 0.3 ins. east of the mark established by Polaris observation. These p.m. and a.m. meridians so nearly coincide with those established on July 5-6, that I consider my instrument in adjustment.

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North Boundary of Tp. 23 S., R. 20 E.

chains

From 1/4 sec. cor. bet. secs. 3 and 34, on the North bdy. of the tp., which is a cross (x) on a granite rock in place 3 1/2 X 2 X 3 ft., above ground, marked and witnessed as described by the Surveyor General

I run West bet. secs. 3 and 34.

Over mountainous land ascending through scattering oak timber.

- .80 Gulch, 18 lks. wide, course N.E.
- 8.35 Gulch, 10 lks. wide, course N.E.
- 14.30 Top of N. slope of spur; extends N., begin steep descent.
- 35.50 Browns' Canyon, 2.00 chs. wide, course N.E.; ascend.
- 35.70 Road brs. N.E. and S.W.
- 36.05 Pipe line, brs. N.E. and S.W.
- 40.00 Top of S. slope of rocky ridge.

Set a limestone, 18 X 8 X 6 ins., 12 ins. in the ground, for cor. of secs. 3, 4, 33 and 34, marked with 3 notches on the E. and W. edges, from which

An oak, 6 ins. diam., brs. N. 49 1/2° E., 116 lks. dist., marked T 22 S R 20 E S 34 B T;

An oak, 6 ins. diam., brs. S. 77° E., 133 lks. dist., marked T 23 S R 20 E S 3 B T;

An oak, 8 ins. diam., brs. S. 16° W., 123 lks. dist., marked T 23 S R 20 E S 4 B T;

An oak, 6 ins. diam., brs. N. 61 1/2° W., 170 lks., dist., marked T 22 S R 20 E S 33 B T.

Raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.

Land, mountainous.

Soil, gravelly, stony and rocky; 3rd and 4th rate.

Timber, oak, undergrowth, oak and manzanito.

Mountainous land, heavily timbered or covered with dense undergrowth, exceptionally difficult to survey, 40.00 chs.

July 9; At 12 h 5 m., p.m., l.m.t., I set off 22° 25' N. on the decl. arc; and observe the sun on the meridian; the resulting lat. is 31° 27' 43" N.

West bet. secs. 4 and 33.

Over mountainous land, through scattering oak timber and dense brush.

- 7.30 Cut, 4 X 20 ft., brs. N. 50 lks. dist.
- 7.70 Gulch, 20 lks. wide, course S.; ascend.
- 23.00 Ridge, 450 feet above sec. cor; brs. N.E. and S.W.
- 23.26 Intersect the S. bdy. of the Ft. Huachuca Military Reservation at a point from which Cor. No. 13 brs. S. 67° W., 34 lks. dist.

Set a quartzite stone, 18 X 10 X 10 ins., 12 ins. in the ground, for the closing corner of secs. 4 and 33, marked C C on E., P H M R on W, S 4 on S, and S 33 on N, with 6 grooves on N and 6 grooves on S faces, and raise a mound of stones, 2 ft. base, 1 1/2 ft. high, E. of cor. Pits impracticable.

Land, mountainous.

Soil, stony and rocky; 4th rate.

Timber, oak; undergrowth, oak, mezcal and cacti.

Mountainous land, covered with dense undergrowth, exceptionally difficult to survey, 23.26 chs.

July 9, 1906.

July 10: At 7 a.m., l.m.t., I set off 22° 20' N., on the decl. arc and 31° 24' N. on the lat. arc, and determine a true meridian with the solar at the 1/4 sec. cor. bet. secs. 25 and 30 on the E. bdy. of tp. which is a sandstone, 8 X 6 X 5 ins., above ground, marked as

chains

described by the Surveyor General; thence I run South bet. secs. 25 and 30. Over rolling land, ascending gradually through scattering oak, timber and dense brush.

3.30 Gulch, 20 lks. wide, course E.; ascend steeper slope.

4.40 Spring brs. 4.00 chs. East.

13.00 Enter gulch, course N.N.W.

20.30 Leave gulch, course N.

28.20 Same gulch, course N.N.E.

32.20 Spur, 600 ft. above $\frac{1}{4}$ sec. cor., extends E., leave oak timber, thence along E. slope of ridge.

39.60 Small gulch, course E.

40.00 Falls on a blanket ledge of limestone, marked with X for point of cor. of secs. 25, 30, 31 and 36, with 1 notch on S., and 5 notches on N., from which

An oak, 6 ins. diam., brs. N. 38° E., 133 lks. dist., marked T 23 S R 21 E S 30 B T,

An oak, 6 ins. diam., brs. N. 34° W., 85 lks. dist., marked T 23 S R 20 E S 25 B T. No other trees within limits. Raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.

Land mountainous,
Soil, gravelly, stony and rocky; 3rd and 4th rate.
Timber, scattering oak and madrono; undergrowth, laurel, manzanite and mescal.
Mountainous land, covered with dense undergrowth, exceptionally difficult to survey, 40.00 chs.

July 10: At 12 h 5 m., p.m., l.m.t., I set off 23° 18' N. on the decl. arc and observe the sun on the meridian; the resulting lat. is 31° 24' N.

S. bet. secs. 31 and 36.

Along N. slope of ridge, through scattering pinon and laurel and dense brush.

3.40 Gulch, 20 lks. wide, course E.; ascend.

10.40 Rocky spur, extends E., leave dense brush; descend steep slope.

24.30 Gulch, 20 lks. wide, course S.E.; enter oak timber.

32.60 Horsethief Canyon, 60 lks. wide, course E., 800 ft. below sec. cor.; ascend steep slope through dense oak brush.

40.00 Set a limestone, 18 X 8 X 6 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor. bet. secs. 31 and 36, marked with $\frac{1}{4}$ on W. face, from which

An oak, 12 ins. diam., brs. N. 68° 45' E., 92 lks. dist., marked T 23 S R 21 E S 31 B T,

An oak, 7 ins. diam., brs. N. 72° W., 25 lks. dist., marked T 23 S R 20 E S 26 B T,

56.50 Ridge 800 ft. above canyon, extends E.N.E., descend steep slope.

79.60 Gulch, 500 lks. below ridge, 20 lks. wide, course S.E.

80.00 Set a limestone, 18 X 10 X 5 ins., 12 ins. in the ground, for cor. of tps. 23 and 24 S., Rs. 20 and 21 E., marked with 6 notches on each edge, from which

An oak, 8 ins. diam., brs. N. 72° E., 178 lks. dist., marked T 23 S R 20 E S 31 B T,

An oak, 8 ins. diam., brs. S. 38° 45' E., 142 lks. dist., marked T 24 S R 21 E S 6 B T,

An oak, 9 ins. diam., brs. S. 86° W., 139 lks. dist., marked T 24 S R 20 E S 1 B T,

An oak, 7 ins. diam., brs. N. 20° W., 162 lks. dist., marked T 23 S R 20 E S 26 B T.

Raise a mound of stone, 2 ft. base, 1 1/2 ft. high, S. of cor. Pits impracticable.

Land, mountainous.
Soil, gravelly, stony and rocky; 3rd and 4th rate.

East Bdy. of T. 23 S., R. 20 E.

chains Timber, oak, and scattering pinon, madrono and juniper. Undergrowth, oak, laurel, mezcal and cacti. Mountainous land, covered with dense undergrowth, exceptionally difficult to survey, 80.00 chs. From this cor. Ash Canyon lies 10.00 chs. S. There is a road in this canyon; a high ridge, bearing E. and W. about 3-4 mile S.

South Bdy. of T. 23 S., R. 20 E.

West bet. secs. 2 and 36.

Over mountainous land, ascending through scattering oak timber and dense brush.

- 1.50 Gulch, 20 lks. wide, course S.S.E.
- 15.00 Enter dense brush, brs. N.E. and S.W.
- 18.00 Top, brs. N. and S., Thence along S. slope of ridge, overlimestone ledges.
- 22.40 Gulch, 20 lks. wide, course S.E.
- 25.00 Tunnel, 25 chs. S.
- 39.00 Tunnel, 15 chs. S.
- 40.00 Falls on limestone in place, 30 X 8 X 15 in s. above ground, marked with cross and $\frac{1}{4}$ for exact cor. point, from which
 - An oak, 12 ins. diam., brs. S. $31\frac{1}{2}^{\circ}$ E., 9 lks. dist., marked $\frac{1}{4}$ S 1 B T
 - An oak, 6 ins. diam., brs. N. 47° W., 57 lks. dist., marked $\frac{1}{4}$ S 36 B T.

- 43.00 Old cabin brs. S. 10 chs. dist.
- 44.40 Gulch, 20 lks. wide, course S.
- 52.00 Descend; brs. N. and S.
- 57.80 Deep gulch, 20 lks. wide, course S.
- 65.30 Gulch, 30 lks. wide, course S.
- 68.00 Gulch, 20 lks. wide, course S. Ascend.
- 77.00 Spur, extends S., leave heavy oak timber.
- 80.00 Set a porphyry stone, 21 X 8 X 5 ins., 16 ins. in the ground, for cor. of secs. 1, 2, 35 and 36, marked with 1 notch on E., and 5 notches on W. edge, from which
 - An oak, 7 ins. diam., brs. N. 48° E., 26 lks. dist., marked T. 23 S R 20 E S 36 B T,
 - A madrono, 8 ins. diam., brs. S. $84^{\circ} 45'$ E., 80 lks. dist., marked T T 24 S R 20 E S 1 B T,
 - A pine, 16 ins. diam., brs. S. 11° W., 3 lks. dist., marked T 24 S R 20 E S 2 B T,
 - An oak, 6 ins. diam., brs. N. $64^{\circ} 45'$ W., 25 lks. dist., marked T 23 S R 20 E S 35 B T.

Land, mountainous.

Soil, stony and rocky, 4th rate.

Timber, oak, and scattering pine, pinon and madrono.

Undergrowth, oak, scattering buck brush, manzanito, mezcal, locust and cacti.

Mountainous land, Heavily timbered and covered with dense undergrowth, exceptionally difficult to survey, 80.00 chs.

July 10, 1906.

July 11: At 7 a.m., l.m.t., I set off $22^{\circ} 13'$ N on the decl. arc. and $31^{\circ} 23'$ N on the lat. arc, and determine a true meridian with the solar at the cor. of secs. 2, 3, 34 and 35.

Thence I run

West bet. secs. 2 and 35.

Over mountainous land, along S. slope of spur, through heavy timber and dense brush.

- 6.00 Gulch, 30 lks. wide, course S.
- 8.00 Descend; brs. N. and S.
- 11.00 Gulch, 20 lks. wide, course S., ascend.
- 14.00 Spur, extends S., descend.
- 16.70 Gulch, 20 lks. wide, course S. ascend.
- 18.50 Spur, extends S., descend.
- 22.00 Enter N. fork of Ash Canyon, course S.E.
- 25.90 Road, brs. N.W. and S.E. leave canyon and heavy timber. Ascend.
- 40.00 Falls on granite rock in place, 4 X 3 X 4 ft. above

South Bdy. of T. 23 S. R. 20 E.

chains

ground, marked with cross and $\frac{1}{4}$ for exact cor. point, from which
 An oak, 8 ins. diam., brs. N. 77 $\frac{1}{2}$ ° E., 54 lks. dist., marked $\frac{1}{4}$ S 35 B T,
 An oak, 18 ins. diam., brs. S. 5° W., 39 lks. dist., marked $\frac{1}{4}$ S 2 B T.
 42.00 Gulch, 20 lks. wide, course N.E., reenter heavy timber.
 53.00 Leave heavy timber, brs. N.E. and S.W.
 62.83 Post in mound of stone, brs. 8 lks. N., marked No. 4 M L on N., 11 H I on S.
 80.00 Top of Huachuca Mountains, 2300 ft. above canyon, brs. N. and S.
 Cor. point falls on limestone ledge, brs. N. and S., marked with cross for exact cor. of secs. 2, 3, 34 and 35, 2 notches on the E., and 4 notches on the W. edge, from which
 A fir, 18 ins. diam., brs. N. 16° E., 200 lks. dist., marked T 23 S R 20 E S 35 B T,
 A pine, 18 ins. diam., brs. S. 10° E., 224 lks. dist., marked T 24 S R 20 E S 2 B T,
 A pine, 20 ins. diam., brs. S. 67° W., 170 lks. dist., marked T 24 S R 20 E S 3 B T,
 A pine, 18 ins. diam., brs. N. 31° W., 172 lks. dist., marked T 23 S R 20 E S 34 B T.
 Raise mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high, S. of cor. Pits impracticable.
 Land, mountainous.
 Soil, gravelly, stony and rocky; 3rd and 4th rate.
 Timber, oak, pine, fir, juniper, madrono, spruce and pinon.
 Undergrowth, oak, laurel, manzanito, locust, mezcal and cacti.
 Mountainous land, heavily timbered or covered with dense undergrowth, exceptionally difficult to survey, 80.00 chs.
 July 11: At 12 h 5 m., p.m., l.m.t., I set off 22° 10' N. on the decl. arc, and observe the sun on the meridian; the resulting lat. is 31° 23' N.

West bet. secs. 3 and 34
 9.40 Over mountainous land, descending through dense oak brush. Gulch, 20 lks. wide, course S.W., thence along S. slope of spur.
 16.00 Mining camp (tents) br. 10 chs. S.
 18.00 Tunnel, 14, chs. S.
 23.10 Gulch, 20 lks. wide, course S.
 26.00 Descend through scattering timber.
 32.20 Gulch, 20 lks. wide, course S., ascend.
 40.00 Set a silicate stone, 21 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, 24 ins. diam., brs. N. 28° 45' W., 169 lks. dist., marked $\frac{1}{4}$ S 34 B T,
 An oak, 30 ins. diam., brs. S. 44 $\frac{1}{2}$ ° E., 180 lks. dist., marked $\frac{1}{4}$ S 3 B T.
 Top of Spur, extends S. This cor. stands 800 ft. below sec. cor. Thence along S. slope of spur.
 47.00 Descend.
 52.00 Head of gulch, course S., ascend steep grade.
 58.20 Cut, 4 X 20 ft., brs. N. 15 lks. E.
 59.20 Top of rocky ridge, extends N E. Begin steep descent along N. slope.
 72.00 Descend steeper, over granite ledges.
 80.00 Set a quartzite stone, 21 X 8 X 6 ins., in mound of stone, ground too rocky to set stone in, for cor. of secs. 3, 4, 33 and 34, marked with 3 notches on the E. and W. edges, from which
 An oak, 18 ins. diam., brs. S. 62° E., 150 lks. dist., marked T 24 S R 20 E S 3 B T,
 A pine, 18 ins. diam., brs. N. 53° W., 74 lks. dist., marked T 23 S R 20 E S 33 B T. No other trees within limits. Raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 This cor. stands 800 ft. below top of ridge.

South Bdy. of T. 23 S. R 20 E.

chains

Land, mountainous.
 Soil, gravelly, stony and rocky; 3rd and 4th rate.
 Timber, pine, juniper, spruce, oak, pinon and madrono.
 Undergrowth, oak, buok brush, locust, mezoal, lechequilla,
 and caoti.
 Mountainous land, covered with dense undergrowth, except-
 ionally difficult to survey, 80.00 chs.
 July 11, 1906.

July 12: At 7 a.m., l.m.t., I set off 22° 5' N. on the
 decl. arc; and 31° 23' N on the lat. arc, and determine
 a true meridian with the solar at the cor. of secs. 3,
 4, 33 and 34.

Thence I run

West bet. secs. 4 and 33.

Over mountainous land, along N. slope of ridge; descend-
 ing through scattering pine timber and dense oak brush.
 Gulch, 30 lks. wide, course N., ascend through heavy
 timber.

10.20

Spur, extends N., leave heavy timber; descend.

21.60

39.65

Gulch, 30 lks. wide, course N., reenter heavy timber;
ascend.

40.00

Set a limestone, 18 X 7 X 7 ins., 12 ins. in the ground,
for 1/4 sec. cor., marked 1/4 on W. face, from which

An oak, 7 ins. diam., brs. N. 29° 45' E., 44 lks.
dist., marked 1/4 S 33 B T,

An oak, 8 ins. diam., brs. S. 63° E., 37 lks. dist.,
marked 1/4 S 4 B T.

This cor. stands 500 ft. below top of spur.

45.00

Spur, extends N., descend.

54.90

Gulch, 20 lks. wide, course N., ascend.

64.00

Cut, 12 chs. N.

67.00

Three cuts, br. 12 chs. N.

70.00

Spur, extends N., descend.

80.00

Set a quartzite, 18 X 10 X 8 ins., 12 ins. in the ground
for the cor. of secs. 4, 5, 32 and 33., marked with
4 notches on the E and 2 notches on the W. edges, from
which

An oak, 12 ins. diam., brs. N. 35 1/2° E., 97 lks. dist.,
marked T 23 S R 20 E S 33 B T,

An oak, 8 ins. diam., brs. S. 26 1/2° E., 30 lks. dist.,
marked T 24 S R 20 E S 4 B T,

An oak, 8 ins. diam., brs. S. 38 1/2° W., 64 lks. dist.,
marked T 24 S R 20 E S 5 B T,

An oak, 24 ins. diam., brs. N. 40° W., 32 lks. dist.,
marked T 23 S R 20 E S 32 B T.

Land, mountainous.

Soil, gravelly, stony and rocky; 3rd and 4th rate.

Timber, pine, oak, fir, pinon, balsam, maple and ash.

Undergrowth, oak, buok brush and locust.

Mountainous land, heavily timbered and covered with
dense undergrowth, exceptionally difficult to survey,
80.00 chs.

July 12, At 12 h. 5 m., p.m., l.m.t., I set off 22° 2' N.
on the decl. arc, and observe the sun on the meridian;
the resulting lat. is 31° 23' N.

West bet. sec. 5 and 32.

Over mountainous land, descending through oak timber and
dense brush.

18.00

Enter Cave Creek Canyon, course S.W.

24.50

Road, brs. N.N.E. and S.S.W.

26.20

Cave Creek, 30 lks. wide, course S.W.

28.40

Road, brs. N.N.E. and S.S.W.

29.00

Leave canyon, and dense brush, ascend through heavy
oak timber.

30.00

House brs. S. 5.00 chs. dist.

40.00

Set a quartzite stone, 18 X 8 X 6 ins., 12 ins. in the
ground, for the 1/4 sec. cor., marked 1/4 on N. face, from
which

An oak, 13 ins. diam., brs. S. 45 1/2° W., 62 lks.

chains

51.00
80.00

marked $\frac{1}{4}$ S 5 B T,
 An oak, 6 ins. diam., brs. N. 34° W., 27 lks. dist.,
 marked $\frac{1}{4}$ S 32 B T.

Top of S. slope of mountain; descend.
 Set a granite stone, 18 X 16 X 12 ins., in mound of the
 stone, ground too rocky to set stone in, for cor. of secs.
 5, 6, 31 and 32, marked with 5 notches on the E., and 1
 groove on the W. face, from which

An oak, 10 ins. diam., brs. N. 48 $\frac{1}{2}$ ° E., 89 lks. dist.,
 marked T 23 S R 20 E S 32 B T,
 An oak, 12 ins. diam., brs. S. 10° E., 54 lks. dist.,
 marked T 24 S R 20 E S 5 B T.
 An oak, 14 ins. diam., brs. S. 56 $\frac{1}{2}$ ° W., 36 lks. dist.,
 marked T 25 S R 20 E S 6 B T,
 An oak, 13 ins. diam., brs. N. 47 $\frac{1}{2}$ ° W., 45 lks. dist.,
 marked T 23 S R 20 E S 31 B T.

Land, mountainous.
 Soil, gravelly, stony and rocky; 3rd and 4th rate.
 Timber oak, madrono and sycamore, and ash in canyon.
 Undergrowth, oak, buck brush and mexcal.
 Mountainous land, heavily timbered or covered with dense
 undergrowth, exceptionally difficult to survey, 80.00
 chs.

July 12, 1906.

11.00
24.50
30.60
31.70
40.00

July 13, 1906. At 7 a.m., l.m.t., I set off 21° 56' N.
 on the decl. arc; and 31° 23' N. on the lat. arc; and
 determine a true meridian with the solar at the cor. of
 secs. 5, 6, 31 and 32.
 Thence I run
 West bet. secs. 31 and 6.
 Over mountainous land, descending through heavy oak timber,
 Gulch, 30 lks. wide, course S., foot of steep descent,
 thence over rolling land.

Gulch, 25 lks. wide, course S.S.W.
 Gulch, 25 lks. wide, course S.W.
 Gulch, 30 lks. wide, course S.S.E.

Set a granite stone, 18 X 14 X 12 ins., in mound of
 stone, ground too rocky to set stone in, for $\frac{1}{4}$ sec. cor.,
 marked $\frac{1}{4}$ on W. face, and m which

An oak, 18 ins. diam., brs. N. 21° E., 33 lks. dist.,
 marked $\frac{1}{4}$ S 31 B T,
 An oak, 9 ins. diam., brs. S. 11° 45' W., 38 lks.
 dist., marked $\frac{1}{4}$ S 6 B T.

54.00
79.55

Gulch, 60 lks. wide, course S.W.
 Set a porphyrite stone, 18 X 10 X 10 ins., in mound of
 stone, ground too rocky to set stone in, for cor. of
 townships 23 and 24, ranges 19 and 20 East, marked with 6
 notches on each edge, from which

An oak, 12 ins. diam., brs. N. 44 $\frac{1}{2}$ ° E., 93 lks. dist.,
 marked T 23 S R 20 E S 31 B T,
 An oak, 12 ins. diam., brs. S. 31 $\frac{1}{2}$ ° E., 125 lks. dist.,
 marked T 24 S R 20 E S 6 B T,
 An oak, 14 ins. diam., brs. S. 75° W., 86 lks. dist.,
 marked T 22 S R 19 E S 1 B T,
 An oak, 7 ins. diam., brs. N. 21 $\frac{1}{2}$ ° W., 30 lks. dist.,
 marked T 23 S R 19 E S 36 B T.

Land, mountainous and rolling.
 Soil, gravelly and stony; 3rd and 4th rate.
 Timber, oak, juniper and ash; undergrowth, oak, buck brush.
 Mountainous land, heavily timbered, exceptionally
 difficult to survey, 79.55 chs.

July 13: At 12 h 5 m., p.m., l.m.t., I set off 21° 55' N.
 on the decl. arc; and observe the sun at the meridian;
 the resulting lat. is 31° 23' N.

54

West Boundary of T. 23 S. R. 20 E.

chains
80.00

Set a granite stone, 18 X 10 X 8 ins., 12 ins. in the ground, for cor. of secs. 19, 24, 25, 30, marked with 2 notches on S., and 4 notches on N. face; from which

A juniper, 36 ins. diam., brs. N. 62° E., 43 lks. dist., marked T 23 S R 20 E S 19 B T.

A juniper, 6 ins. diam., brs. S. 35° E., 97 lks. dist., marked T 23 S R 20 E S 30 B T.

An oak, 13 ins. diam., brs. S. 31° W., 59 lks. dist., marked T 23 S R 19 E S 25 B T.

An oak, 6 ins. diam., brs. N. 6° W., 15 lks. dist., marked T 23 S R 19 E S 24 B T.

Land, mountainous and gently rolling.

Soil, gravelly stony and rocky; 3rd and 4th rate.
Timber, oak, juniper, ash, sycamore and cottonwood.
Undergrowth, oak, buck brush and mezcal.

Mountainous land, heavily timbered or covered with dense undergrowth, exceptionally difficult to survey, 80.00 chs.

July 14: At 12 h. 6 m., p.m., l.m.t., I set off 21° 45' N. on the decl. arc; and observe the sun on the meridian; the resulting lat. is 31° 24' N.

North bet. secs. 19 and 24.

Over mountainous land, descending along E. slope of ridge, through heavy timber and dense oak brush.

10.30 Enter gulch, course S.E.

12.20 Leave gulch, course S., ascend; leave heavy timber.

25.00 Same gulch, 50 lks. wide, course S.W.

28.00 Gulch, 40 lks. wide, course S.W.

30.20 Same gulch, 40 lks. wide, course S.E.

35.00 Rattlesnake Peak brs. about 40 chs. N.

40.00 Set a limestone, 18 X 10 X 8 ins., in mound of stone, ground too rocky to set stone in, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face, from which

An oak, 8 ins. diam., brs. N. 55° 45' W., 72 lks. dist., marked $\frac{1}{4}$ S 24 B T,

A madrono, 6 ins. diam., brs. S. 70° 45' E., 38 lks. dist., marked $\frac{1}{4}$ S 19 B T.

48.00 Gulch, 20 lks. wide, course S.W.

49.60 A gulch, 30 lks. wide, course S.W.

68.00 Rocky ridge brs. E. and W., top of Huachuca Mountains, 700 ft. above $\frac{1}{4}$ sec. cor., leave dense brush; descend steep through heavy oak timber.

70.40 Trail, brs. E. and W.

73.00 Trail brs. E. and W.

75.00 Gulch, 30 lks. wide, course W., ascend through dense brush, leave timber.

80.00 Falls on limestone ledge, 6 X 2 X 1 ft. above ground, marked with cross for exact cor. point of secs. 13, 18, 19 and 24, with 3 notches on N. and S. of X, from which

A pinon, 10 ins. diam., brs. N. 20° E., 55 lks. dist., marked T 23 S R 20 E S 18 B T,

An oak, 6 ins. diam., brs. S. 211° E., 34 lks. dist., marked T 23 S R 20 E S 19 B T,

An oak, 6 ins. diam., brs. S. 151° W., 47 lks. dist., marked T 23 S R 19 E S 24 B T,

An oak, 6 ins. diam., brs. N. 58° W., 63 lks. dist., marked T 23 S R 19 E., S 13 B T

Land, mountainous.

Soil, stony and rocky; 4th rate.

Timber, oak, pine, fir, balsam, madrono and cedar.

Undergrowth, oak, buck brush, chaparral, mezcal and lechequilla.

Mountainous land, heavily timbered or covered with dense undergrowth, exceptionally difficult to survey, 80.00 chs.

chains.

4.60
8.50
13.30
24.60
28.50
40.00
48.70
48.30
58.40
62.30

Over mountainous land, ascending through scattering oak timber and dense brush.
 Spur extends W., descend.
 Gulch, 20 lks. wide; course W.; ascend.
 Top, brs. E. and W., thence along W. slope of ridge.
 Enter heavy timber, leave dense brush; begin steep descent.
 Trail brs. E. and W.
 Set a limestone, 21 X 8 X 8 ins., 16 ins. in the ground for the $\frac{1}{2}$ sec. cor., marked $\frac{1}{2}$ on W. face, from which
 An ash, 18 ins. diam., brs. N. 56° E., 23 lks. dist., marked $\frac{1}{2}$ S 18 B T,
 An oak, 14 ins. diam., brs. S. 15° W., 26 lks. dist., marked $\frac{1}{2}$ S 13 B T,
 Enter canyon, 1000 ft. below below top of spur, course W.
 Leave canyon; ascend.
 Ridge, brs. N.W. and S.E., 300 ft. above canyon, descend.
 Intersect the Ft. Huachuca Military Reservation at a point from which Cor. No. 36 brs. N. 87° 40' E., 51.61 chs. dist.
 Set a limestone, 18 X 10 X 10 ins., in mound of stone, ground too rocky to set stone in, for closing cor. of Secs. 13 and 18. Tps 23 S Rs 21 19 E and 20 E., marked C C on S,
 S 18 on E,
 S 13 on W.,
 F H M R on N., with 6 grooves on E. and W. faces, from which
 A pine, 36 ins. diam., brs. S. 40° E., 68 lks. dist., marked T 23 S R 20 E S 18 B T,
 An oak, 9 ins. diam., br. S. 191° W., 50 lks. dist., marked T 23 S R 29 E S 13 B T.
 Land, mountainous.
 Soil, gravelly, stony and rocky; 3rd and 4th rate.
 Timber, pine, oak fir, balsam, juniper, madrono.
 Undergrowth oak, high brush, locust, mezcal.
 Mountainous land, heavily timbered or covered with dense undergrowth, 62.30 chs.

July 14, 1906.

Boundaries of T. 23 S., R. 20 E.

Latitudes, departures and closing errors.

Line Designated	True Bearing	Distance	Latitudes		Departures	
			N	S	E	W
South Bdy.	West	479.55				479.55
West Bdy.	North	240. ✓	240. ✓			
Subdivision Lines	S. 89° 57' E.	159.32 ✓		✓.14	159.32	
"	N. 0° 2' W.	160. ✓	160. ✓			.09 ✓
"	S. 89° 58' E.	80.10 ✓		.05 ✓	80.10	
"	N. 0° 6' W.	80.06 ✓	80.06 ✓			.14 ✓
North Bdy.	East	240. ✓			240. ✓	
East Bdy.	South	480 ✓		480. ✓		
Convergency					.36 ✓	
			480.06	480.19	479.78	479.78 ✓
				480.06		479.78 ✓
		Error in Lat.		✓.13		

General Description.

This township is bounded on the north by the Huachuca Military Reservation and embraces a portion of the Huachuca Mountain Range. There is an abundance of oak timber and some pine timber is found on top of the Mountain. The township is well watered by a number of springs and running streams. The soil is gravelly and rocky. There are some settlers within the township who have made some substantial improvements. The township is situated in the...

Philip Coutzen
U. S. Deputy Surveyor

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

12 29

BOOK 2046

LIST OF NAMES.

A list of the names of the individuals employed by

Philip Coutzen

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

N. and E. boundaries and South and West boundaries of T. 23 S. R. 20 E

showing the respective capacities in which they acted:

Arthur Pogue, Chainman.

Harry Mallory, Chainman.

Louis Renaud, Moundman.

Moundman.

L. C. Millar, Axman.

Axman.

H. B. Milliken, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted

Philip Coutzen

United States Deputy Surveyor, in surveying all

those parts or portions of the

N. and E. boundaries and South and West boundaries of T. 23 S. R. 20 E

of the *Gila*

and Salt River ^{Base &} ₁ 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*

Arthur Pogue, Chainman. ✓

Harry Mallory, Chainman. ✓

Louis Renaud, Moundman. ✓

Moundman.

L. C. Millar, Axman. ✓

Axman.

H. B. Milliken, Flagman. ✓

Subscribed and sworn to before me this

11th

day of

August

, 1906

H. G. Power



30 13
BOOK 2048
FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Philip Coutzen, 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 12 day of April, 1906, 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 East W. boundaries and S. and W. boundaries of T. 23 S. R. 20 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.

Philip Coutzen
United States Deputy Surveyor.

Subscribed by said Philip Coutzen, and sworn to before me }
this 11th day of August, 1906



Alcant J. J. ...
CLERK U. S. DISTRICT COURT FOR
FIRST JUDICIAL DISTRICT, ARIZONA.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, A. T. June 29th, 1907

The foregoing field notes of the survey of the North East South and West boundaries of T 23 S, R 20 E, of the Gila and Salt River Base and Meridian, in the Territory of Arizona.

executed by Philip Coutzen, D.S.
under his contract No. 138, dated April 12th, 1906, 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.