

Resurvey

3rd GUIDE MEET.

E. TPS 21-22

23-24 S. RS

17 + 18 E.

1552

PH. CONTZEN
U. S. DEP. SUR.

1552

BOOK 1552

1.
SPECIAL INSTRUCTIONS
DATED DEC. 19, 1902

4-671

FIELD NOTES
GENERAL LAND OFFICE.

Field Notes
 of the survey of the
 Third Tropic Meridian East.
 Through
 Townships Nos. 21, 22, 23 and 24 South.
 Between Ranges Nos 17 and 18 East
 of the
 Gila and Salt River Basins Meridian
 in the
 Territory of Arizona
 as surveyed by
 Philip Cortzen
 U.S. Deputy Surveyor

Under special instructions
 Dated December 19, 1902.

Survey commenced February 18, 1903.
 Survey completed February 23, 1903.

Index

Third Guide Meridian
Through.

T 21	South	4
T 22	"	20
T 23	"	42

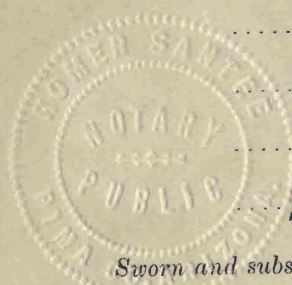
71

Preliminary Oaths of Assistants.

We, *John M. Trayer, George A. Hawley*
 and *Chas. M. Cogue, Ramon Sinohui*
 do solemnly swear that we will well and faithfully execute
 the duties of Chain Carriers; 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 distance 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 *329* Guide...

Meridian East through
Tops 21-22-23-24 South
Ranges 17 and 18 East

of the Gila and Salt River Base and Meridian, in the Ter-
 ritory of Arizona.



John M. Trayer Chainman.
G. A. Hawley Chainman.
Chas. M. Cogue Chainman.
Ramon Sinohui Chainman.

Sworn and subscribed before me, this *18th*
 day of *February* 190*9*

Homer Sauter
 Notary Public.

[SEAL.]
corrected Jan. 17/07.

We, Tom Lounce and 3

J. Canute

do solemnly swear that we will well and truly perform the

duties of flagman and axeman

in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the

349 Guide Meridian East through Tps 21-22-23-24 South Ranges 17 and 18 East

of the Gila and Salt River Base and Meridian, in the Territory of Arizona.

Tom Lounce Flagman.

J. Canute Axeman.

Axeman.

Axeman.

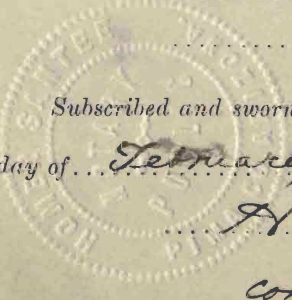
Subscribed and sworn to before me this 18th

day of February 1903

Homer Canute

Notary Public.

com. exp. 1/17/07.



Index
for

BOOK 1552
BOOK 1553

13

13 7 18

T 21 S
R 17 E

24 10 19

T 21 S
R 18 E

25 13 30

36 17 31

1 20 6

12 24 7

T 22 S
R 17 E

13 27 18

T 22 S
R 18 E

24 32 19

25 35 30

36 39 31

1 42 6

12 46 7

T 23 S
R 17 E

13 49 18

T 23 S
R 18 E

24 52 19

25 55 30

36 58 31

1 60 6

T 24 S
R 17 E

12 62 7

T 24 S
R 18 E

13 66 14

International 24 69 19

Boundary Line

3rd Grade Meridian E.

Recovery of the 3rd Guide Meridian East, Chavis

Survey commenced February 18, 1903, and executed with a Young and Sons light mountain transit No. 5607, 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.

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

Through Sps 21 S, between Rs 17 and 18 E.
 Champs

Observations on Polaris, I proceed as follows.

At the cor. of sres 7, 12, 13 and 18 Sps 21 S, Rs 17 and 18 E, which is a strong maypole and witnessed as described by the surveyor general, latitude $31^{\circ} 39' N$; longitude $110^{\circ} 36' W$; I set off $31^{\circ} 39' N$ on the lat arc, $11^{\circ} 46' S$ on the decl arc, and at 2^h 30^m p. m. I m't determine with the solar a true meridian and mark a point thereof, on a stone firmly set in the ground, 5 chs N. of the cor.

At 7^h 27^m p. m. by my watch, which is correct, I observe Polaris at western elongation, in accordance with Manual of Instructions, and mark a point in the line thus determined on a plug driven in the ground, 5 chs. N. of my station!

Resurvey of the 3rd Guide Meridian East
Chambers

February 18, 1903.

February 19: At 7^h 30^m a. m. l. m. t. I lay off the azimuth of Polaris $1^{\circ} 25'$ to the East and mark the meridian thus determined, by cutting a small groove in the stone set February 18, in which the meridian falls 0.3 ins east of the mark determined by the solar

At 8^h 30^m a. m. l. m. t. I set off $31^{\circ} 39'$ on the lat arc, $11^{\circ} 31' S$ on the decl arc and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs N. of my station; this mark falls 0.4 ins West of the meridian established by the Polaris observation.

For solar apparatus, by a. m. and p. m. observations, defines positions for meridians with sufficient accuracy, therefore I

through the 21 S. between the 17 and 18 E.
 chains

conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8^h 59^m a. m., is $N 12^{\circ} 31' W$, the angle thus determined gives the mag. decl. $12^{\circ} 28'$ East.

X Turner Turn from above described on South bet. Secs 13 and 18.

Over level land, in valley.

2.30 Leave level land and begin steep ascent through oak timber.

5.20 Top of steep ascent bears N. Easterly and S. Westerly. Turners ascend gradually along N. N. slope small.

11 14.00 Leave oak timber bears Easterly and Westerly.

20.00 Top of small bears N. Easterly and S. Westerly

33.00 Descend.

35.00 Foot bears Easterly and Westerly; ascend.

Boundary of the 3rd Guide Meridian East Chain

37.25 Top of small bars N. Easterly and S. Westerly, and descend.

39.00 Post, bars Easterly and Westerly, used
Differenced between measurements of 40.00
chs. by two sets of chains is 6 lbs, po-
sition of middle point

By 1st set 39.97 chs

By 2nd set 40.03 chs, the mean of which is

40.00 Set a limestone 18x10x8 ins, 12 ins in the
ground for $\frac{1}{4}$ sec cor, marked $\frac{1}{4}$ on W
face and raise a mound of stone 2 ft
base, 1 $\frac{1}{2}$ ft high, W of cor. Sets im-
practicable.

From this point, the old $\frac{1}{4}$ sec cor bars
S. 78° E, 50 lbs dist. & destroy all
traces of the same.

42.50 Top of small bars N. Easterly and S.
Westerly. begin gradual descent

51.80 Road to Babecomari bars N. Easterly

through Apr 22, Saturn Re 17 and 18 E
Cham

and S. Westerly.

59.05 Draw, 1 ch wide, course N. Easterly;
ascend.

64.50 Top of small bars N. Easterly and S.
Westerly; descend gradually.

73.00 Day creek, 40 chs wide, course N.
Easterly.

74.50 River bars N. Easterly and S.
Westerly.

Difference between measurements of 8000
chs by two sets of chainmen is 8 chs.
position of middle point.

By 1st set 79.96 chs,

By 2nd set 80.04 chs the mean of which is

8000 Set a limestone 20 x 10 x 6 ins, 14 ins in the
ground for one of sizes 13, 18, 19 and 24
marked with 3 notches on N and S
edges, from which

An oak, 17 ins diam, bears S. 54° E, 171 chs

Courseway of the 3rd Guide Meridian East,
Chain

dist marked S 21 S R 18 E S 19 B D

An oak 16 ins diam bars S 22³/₄° W 152 lbs

dist marked S 21 S R 17 E S 24 B D

No other bars within limit and raise a
mound of stone 2 ft base 1¹/₂ ft high
W of ev. Pits impracticable.

Old ev bars S 7¹/₂° E, 1 ch dist. & destroy
all traces of old ev.

hand rolling and level.

Soil sandy loam and gravelly; 2nd
and 3rd rats.

Timber, scattering oak.

South, bet sres 19 and 24.

Over gradually rising ground, through
heavy oak timber.

6.95 Dry wash 10 lbs wide course W. W.

8.00 Old Poughkeepsie bars 3 chs W.

13.00 Loose heavy oak timber and other dense

through Apr 21 S, return Rs 17 and 18 E.

Chamini

oak undergrowth, bears N. Easterly and
S. Westerly

24.70 Same wash, 20 lbs midl course N Easterly
has dense undergrowth and is erod
stripes

39.00 Top of spur of swell, extending N.
Westerly, timber as erod along W. slope.
Difference between measurements of
4000 chs. by two sets of Chamini is 10
lbs, position of middle point.

By 1st set 40.05 chs

By 2nd set 39.95 chs, the mean of which is

40.00 Set a granite stone 18 x 8 x 6 ins, 12 ins in
the ground for $\frac{1}{4}$ sec ev, marked $\frac{1}{4}$ on W
face, from which

An oak 12 ins diam, bears N. $69^{\circ}\frac{3}{4}$ E.

127 lbs dist, marked $\frac{1}{4}$ S14 B B.

An oak, 18 ins diam, bears S $31^{\circ}\frac{1}{4}$ W, 145
lbs dist, marked $\frac{1}{4}$ S24 B B.

Resurvey of the 3rd Guide Meridian East
Chain

- 41.50 Old cor bars 2 chs E. & destroy all
tracers of same.
- 53.80 New single bars N. Easterly and S. Westerly.
bars oak timber, bars Easterly and Westerly.
- 67.00 Top of small, bars N. Easterly and S.
Westerly.
- 73.00 Remoter oak timber, by in desert, bars
N. Easterly and S. Westerly.
- 78.60 Foot bars N. Easterly and S. Westerly.
as usual.

Difference between measurements of 8000
chs by two sets of chainmen is 8 chs.
position of middle point.

By 1st set 79.96 chs

By 2nd set 8004 chs, the mean of which is

8000 Set a granite stone $24 \times 8 \times 8$ ins, 18 ins in
the ground, for the cor of srs 19, 24, 25
and 30, marked with 4 notches on N
2 notches on S. edge, from which

through Sps 21 S between Rs 17 and 18 E
Chains

An oak, 24 ins diam, bears N. 26° E, 113 lbs
dist, marked S 21 S R 18 E, S 19 B S

An oak, 8 ins diam S 72½° E, 25 lbs dist.
marked S 21 S R 18 E, S 30 B S

An oak, 10 ins diam, bears S 76½° W, 45 lbs
dist, marked S 21, S R 17 E S 25 B S

An oak, 8 ins diam, bears N. 18¼° W, 77 lbs
dist, marked S 21 S R 17 E S 24 B S.

Old syc ev bears S 75° E. 219 lbs dist.
To destroy all traces of old ev.

Land rolling

Soil, sandy loam and gravelly; 2nd
and 3rd rate.

Timber, oak; undergrowth, oak.

Heavily timbered or land covered with
dense undergrowth, 24.70 lbs

South, bet sees 25 and 30.

Over rolling land, ascending through

Re-survey of the 3rd Guide Meridian East
Chain

- oak timber.
- 3.00 Level oak timber, bars Easterly and
Westerly.
- 4.00 Top of snell, bars Easterly and
Westerly; descend.
- 5.10 Road to Vanhook, bars N. Westerly and
S. Easterly.
- 6.25 Post-rod to Elgin, bars N. Westerly
and S. Easterly, ascend.
- 7.25 Fork of roads, bars 1 ch E.
- 15.00 Top of snell, bars Easterly and Westerly;
ascend.
- 17.00 Miscal patch, bars 2 chs W.
- 31.80 Dry wash, 10 chs wide, course Easterly;
ascend.
- 34.80 Trail, bars Easterly and Westerly.
- 37.00 Top of snell, bars Easterly and Westerly;
begin gradual descent.
- Differences between measurements of 4.00

through Spr 2, S between Rs 17 and 18 E.

Chain

chs by two sets of chainmen is 8 chs,
position of middle point.

By 1st set 39.96 chs,

By 2nd set 40.04 chs, the mean of which is
40.00

Set a limestone $24 \times 8 \times 6$ ins, 18 ins in the
ground, for $\frac{1}{4}$ sec ev, marked $\frac{1}{4}$ on W
face. dig pits $18 \times 18 \times 12$ ins N. and
S of stone, 3 ft dist, and raise a mound
of earth $3\frac{1}{2}$ ft base, $1\frac{1}{2}$ ft high, N of ev.
Old ev bars S 74° E, 248 chs dist. &
destroy all traces of old ev.

43.00 Set, bars Easterly and Westerly; thence
over level land.

52.30 Do as end.

55.50 Dry creek, 60 chs wide, course N. Easterly
and as end.

56.00 Enter oak timber bars N. Easterly
and S. Westerly.

59.00 Enter dense oak undergrowth, bars
N. Easterly and S. Westerly

Resurvey of the 3rd Guidal Meridian East
Chain

65.00 brass chain undergrowth, brass
Easterly and Westerly.

76.00 Top of small, brass Easterly and
Westerly.

Difference between measurements of 8000
chs by two sets of chainman 6 chs,
position of middle point.

By 1st set 80.03 chs

By 2nd set 79.97 chs, the mean of
which is

8000 Set a granite stand 24 x 12 x 10 ins 18
ins in the ground, for cor of sides 25
30, 31 and 36, marked with 5 notches
on N and 1 notch on S. edges, from
which

An oak, 18 ins, chain, brass N. $87^{\circ} E$, 122
lbs. dist. marked B 21 S B 18 E S 30 B 5

An oak 10 ins chain, brass S. $80^{\circ} \frac{1}{2} E$, 145 lbs
dist. marked B 21 S B 18 E S 31 B 5.

through Sps 21 S, between Rs 17 and 18 E.

Chains

An oak 14 ins diam, bears S $66^{\circ} \frac{3}{4}$ W, 104 lbs
dist, marked S 21 S R 17 E S 25 B 3.

An oak 10 ins diam, bears N. 17° W, 49 lbs
dist marked S 21 S R 17 E S 25 B 3.

Old ore bears S $75^{\circ} 2'$ E, 300 lbs dist.

Land rolling and level.

Soil, gravelly; 2nd and 3rd rate.

Timber, oak, undergrowth oak.

Land upward with dense undergrowth,
6.00 oaks.

X South, bet sps 31 and 36.

Down gently rolling land, through
oak timber.

26.00 Begin descent.

34.00 Enter heavy oak timber, bears Easterly
and Westerly.

37.25 Dry wash, ^{20 lbs spide} coarse Easterly; ascend.

Difference between measurements of 4.00

Bearing of the 3rd Guide Meridian East,
Chain

- chs. by two sets of chainmen, is a true
position of middle point.
- By 1st set 4004 chs
- By 2nd set 3996 chs; the mean of which is
4000
- Set a granite stone 18x10x8 ins, 12 ins
in the ground, for $\frac{1}{4}$ sec cor, marked
 $\frac{1}{4}$ on W face, from which
- An oak, 12 ins diam bears $S 76^{\circ} E$, 65 lbs
dist marked $\frac{1}{4}$ Sec B P.
- An oak, 8 ins diam bears $N. 21^{\circ} W$, 56 lbs
dist marked $\frac{1}{4}$ Sec B P.
- Old $\frac{1}{4}$ cor bears $S 77^{\circ} E$, 340 lbs dist.
- Destroy all traces of old cor.
- 45.30 Dry wash, 10 lbs wide, course N. Easterly.
- 59.60 Dry wash, 10 lbs wide, course N. Easterly;
ascend steeply.
- 71.00 Top of ridge 60 ft above creek bears N.
Easterly and S. Westerly; descend.
- 75.50 Gulch, 15 lbs wide, course N. Easterly.

through Sps 21 S, between Rs 17 and 18 E
Chamir

as end.

Difference between measurements of
80.00 lbs by two sets of chamir is 10
lbs, position of middle point.

By 1st set 79.95 lbs.

By 2nd set 80.05 lbs, the mean of
which is

80.00 Set a limestone 24 x 8 x 6 ins, 18 ins in
the ground, for the cor of Sps 21
and 22 S, Rs 17 and 18 E, marked
with 6 notches on each edge, from
which

An oak, 30 ins diam, bears N $36\frac{1}{2}^{\circ}$ E, 42 lbs
dist, marked S 21 S R 18 E S 31 B S.

An oak, 20 ins diam, bears S $46\frac{3}{4}^{\circ}$ E, 120
lbs dist, marked S 22 S R 18 E S 6 B S.

An oak 18 ins diam, bears S 48° W, 15 lbs
dist, marked S 22 S R 17 E S 1 B S.

An oak, 20 ins diam, bears N $49\frac{3}{4}^{\circ}$ W, 92

Recovery of the 3rd Guide Meridian East,
Chama

the dist. marked S 21 S R 17 E S 36 B S.

From this point old Sp cor base
S 48° E, 370 the dist.

Land rolling and mountainous.

Soil gravelly and stony; end, 3rd and
4th water.

Timber, oak and a few cedars; under-
growth, oak.

Mountainous or heavily timbered land
46.00 chs.

February 19, 1903.

X

February 20: At 7^h 50^m a. m. l. m. t., I
set off 31° 35' N. on the lat arc, 11° 11' S
on the decl arc, and determine a true
meridian with the solar at the cor of
Sp's 21 and 22 S, R's 17 and 18 E.

Shower 8 am

South lat sres 1 and 6.

through Spa 22 S between Ro 17 and 18 E
Chamie

Very mountainous land ascending
through heavy oak timber and some
oak undergrowth.

8.00 Gulch, 15 lbs wide, course N. Easterly
and begin ascent N. slope of Laurel
Hills.

29.00 Top of ridge, 600 ft above gulch, bare
N. Westerly and S. Easterly; have heavy
oak timber and begin steep descent.

37.00 Rocky gulch, 200 ft below top of ridge,
course Easterly; ascend

Differer datum measurements of
40.00 chs by two sets of chammie is
14 lbs position of middle point.

By 1st set 40.07 chs

By 2nd set 39.93 chs, the mean of
which is

40.00 Set a line iron 24 x 8 x 6 ins 18 ins in
the ground, for $\frac{1}{4}$ sec ev, marked $\frac{1}{4}$ on

Resurvey of the 3rd Guide Meridian East
Chain

N. face, and raise a mound of stone 2 ft
base, 1 1/2 ft high W. of cor. Pits in-
practicable.

Old cor bears S. 68° E, 480 lbs dist, &
destroy all traces of old cor.

49.60 Top of E. slope of mountain, 200 ft
above gulch; top of mountain, bears
2 chs W.; descend.

55.00 Port, bears easterly and westerly;
ascend.

62.50 Top of mountain, 100 ft above foot,
bears N. westerly and S. easterly; descend
along top.

67.00 Port of ascent, 60 ft below descent and
ascend along top of ridge.

71.00 Top of ascent, and begin steep descent
S. E. slope.

73.50 Gold Hill mine, bears 50 lbs E.
Difference between measurements of 800

through Sp 22 S. between Rs 14 and 18 E.
Chamie

chs by two sets of chamman, is 20 chs
position of middle point.

By 1st set 80.10 chs

By 2nd set 79.90 chs, the mean of
which is

8000 Set a limestone 24x10x6 ins, 18' dia in
the ground, for the cor of sec 1, 6, 7
and 12 marked with 1 notch ^{in N.} and 5
notches on S. edge, from which
A cedar, 30 ins diam, bears S. 59° W, 350
chs dist, marked S 22 S R 17 E S 12 B S.
An oak, 18 ins diam, bears N. 59° W 90 chs
dist marked S 22 S R 17 E S 1 B S; no
other trees within limit and raise a
mound of stones 2 ft base 1½ ft high
N. of cor. Pits impracticable
Old cor bears S 50° E, 5.00 chs dist. &
destroy all traces of same.
Lund mummans.

Resurvey of the 3rd Guide Meridian East,
 Grants

Soil gravelly and stony; 3rd and 4th
 rats.

Timber, oak and scattering cedar,
 undergrowth, oak, manzanita, baccharis
 and yucca.

Mountainous, heavily timbered or land
 covered with dense undergrowth, seroche.

South to sec 7 and 10.

Open mountainous land descending.

9.70 Gulch 500 ft below Gold Hill mine,
 15 lbs wide, course N. Easterly; begin
 steep ascent through scattering oak
 timber.

14.00 Top of ridge 60 ft above gulch, bears
 Easterly and Westerly; descend.

17.50 Gulch 50 ft below top of ridge 10 lbs
 wide, course Easterly; begin ascent
 along E. slope ridge.

through Dip 22 S between Rs 17 and 18 E

Chamnis

25.00

Top of slope, 60 ft above gulch, descend

27.00

Enter dense oak undergrowth, bears N. Easterly and S. Westerly.

29.61

Rocky gulch, 100 ft below top of slope, 20 lbs wide, course N. Easterly; ascend.

Difference between measurements of 4000 chs by two sets of chamnis is 12 lbs 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 limestone 28 x 8 x 8 ins, 21 ins in the ground for $\frac{1}{4}$ sec or marked $\frac{1}{4}$ on N. face, from which

An oak, 20 ins diam, bears N. 76° E, 33 lbs dist marked $\frac{1}{4}$ S 7 B P

An oak, 10 ins diam, bears N. 14° W, 34 lbs dist marked $\frac{1}{4}$ S 2 B P.

49.00

Top of N. W. slope of mountain

Continuation of the 3rd Guide Meridian East,
Chumie

- 350 ft a bar gulch
- 51.00 Top of mountain bars 2 chs E; begin steep descent of S. W. slope.
- 67.50 Dry wash, 500 ft below top of slope, 10 chs wide, course S. Easterly; have almost undergrowth and a scrub.
- 73.50 Top of spur, extending S. Easterly; thence along E slope of ridge.
- 74.00 Enter dense oak and buckeye undergrowth. Differenced between measurements of 8000 chs by two sets of chainmen is 14 chs, position of middle point.
- By 1st set 8007 chs
By 2nd set 7993 chs. The mean of which is
- 8000 Set a limestone 24x8x4 ins, 18 ins in the ground, for the cor of sres 7, 12, 13 and 15, marked with 2 notches on N. and 4 notches on S. edges, from which
- An oak, 10 ins diam, bears N. 21° E, 48 chs

through Sps 22 S between Nos 17 and 18 E.
Chama

dist, marked P 22 S R 18 E S 7 B S.

An oak, 10 ins diam, bears S. $21\frac{1}{2}^{\circ}$ E, 12 lbs

dist marked P 22 S R 18 E S 18 B S.

An oak, 8 ins diam, bears S 7° W 9, lbs

dist marked P 22 S R 17 E S 13 B S.

An oak, 10 ins diam, bears N. $23\frac{1}{4}^{\circ}$ W 70

lbs dist marked P 22 S R 17 E S 12 B S.

From this point old sec cov bears S $53\frac{3}{4}^{\circ}$ E.

6.00 chs dist.

Land, mountainous.

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

Timber scattering oak and junipers,
undergrowth, oak and Pachata.

Mountainous or land covered with dense
undergrowth, 8.00 chs.

South bet secs 13 and 18.

Over mountainous land, a long E slope

Recovery of the 3rd Guide Meridian East,
Chains

- of ridge, through scattering oak timber
and dense undergrowth.
- 12.00 Descend.
- 13.00 Foot bars Easterly and Westerly; ascend
- 14.00 Top ridge, bars N. Westerly and S. Easterly.
- 17.00 Begin descent s. w. slope.
- 2000 Cross dense undergrowth bars N.
Westerly and S. Easterly.
- 36.50 Rejoin, 100 ft below top of descent,
40 lbs wide course S. Easterly; begin
steep ascent.
- 37.30 Top of bank, 50 ft above ravine.
- 38.00 Descend over limestone rocks.
- Difference between measurements of 4000
chs by two sets of chainmen is 10 chs,
position of middle point.
- By 1st set 4005 chs
- By 2nd set 39.95 chs the mean of which is
- 4000 The point for $\frac{1}{4}$ sec ev' full on limestone

through Sps 22 S, between Rs 14 and 18 E
Chains

rock in place, 5 x 2 ft, 18 ins above
ground on which
cut a cross (x) at the exact cor point for
 $\frac{1}{4}$ ore cor marked $\frac{1}{4}$ on W side of cross
from which

An oak 18 ins diam bars N. 57° E, 153
lbs dist, marked $\frac{1}{4}$ S18B P.

An oak 24 ins diam bars N 85 $\frac{1}{4}$ ° W,
144 lbs dist, marked $\frac{1}{4}$ S13B P, and
raise a mound of stone 2 ft base, 1 $\frac{1}{2}$ ft
high N of cor.

Old cor bars S. 55° E, 5.60 lbs dist. &
destroy all traces of old cor.

42.70 Gully, 40 ft below top of descent, course
Easterly; ascend.

43.60 Top of spur, 40 ft above gully, extending
Easterly; descend.

45.90 Ravine, 50 ft below top of spur, 20 lbs
wide, course Easterly. ascend.

Re-survey of the 3rd Guide Meridian East,
Chains

49.00 Top of spur, 50 ft above ravine, extending
Easterly; descend.

52.00 Dry creek 60 ft below top of spur,
20 lbs wide, course Easterly; begin ascent
through heavy oak timber.

63.50 Top of ridge, bears W. N. Westerly and
E. S. Easterly; descend.

70.00 Gully, 5 lbs wide, course S. Easterly

73.55 Ascend

75.68 Trail bears N. Easterly and S. Westerly.

Difference between measurements of 3000
chs by two sets of chainmen, is 8 lbs
position of middle point.

By hot set 79.96 chs

By end set 80.04 chs, the mean of which is

80.00 Set a limestone 24 x 10 x 8 ins, 18 ins in
the ground for W. of sec 13, 18, 19 and 24,
marked with 3 notches on N. and S. edges,
from which

through Spruce S, between Rs 17 and 18 E.

Chunice

An oak, 12 ins diam, bars N. $46\frac{1}{2}^{\circ}$ E, 118 lbs dist, marked S 22 S R 18 E S 19 B S.

An oak, 14 ins diam, bars S $64\frac{1}{2}^{\circ}$ E, 52 lbs dist, marked S 22 S R 18 E S 19 B S.

An oak, 14 ins diam, bars S $35\frac{3}{4}^{\circ}$ W, 115 lbs dist, marked S 22 S R 17 E S 24 B S.

An oak, 12 ins diam, bars N. 70° W, 71 lbs dist, marked S 22 S R 17 E S 13 B S.

Old ev bars S 58° E, 5.60 lbs dist. Destroy all traces of old ev.

Land mountainous.

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

Timber, oak, undergrowth, baccharis and oak.

Mountainous, heavily timbered or land covered with dense undergrowth, 8 ev chi.

February 20, 1903.

Crossing of the 3rd Guide Meridian East,
Chaminé

- South, bet sees 19 and 24.
Over mountainous land; ascending
through heavy oak timber.
- 5.00 Top of ridge, bears N. Easterly and S.
Westerly; ascend.
- 14.15 Dry wash, 60 ft below top of ridge, 10 lbs
wide, course Easterly; ascend.
- 16.50 Dry wash, 10 lbs wide, course N. Easterly;
enter dense oak undergrowth; ascend.
- 25.00 Top of ridge, 60 ft above wash,
bears N. Easterly and S. Westerly; leave
dense undergrowth and descend.
- 28.80 Foot, 40 ft below top of ridge, bears E.
and W. ascend N. E. slope of spur.
Difference between measurements of 4000
chs by two sets of chaminé is 10 lbs,
position of middle point.
By 1st set 40.05 chs
By 2nd set 39.95 chs, the mean of which is

through Apr 22 S. between Rs 17 and 18 E.

chain

- 4.00 Set a limestone 24x6x6 ins, 18 ins in the ground, for $\frac{1}{4}$ sec ev, marked $\frac{1}{4}$ on W. face, from which
 a gypifer, 14 ins diam, bears N $78^{\circ} \frac{3}{4}$ E, 90
 The dist marked $\frac{1}{4}$ S 19 B S.
 An oak, 10 ins diam, bears S $42^{\circ} \frac{1}{4}$ W, 67
 The dist marked $\frac{1}{4}$ S 24 B S.
 Old ev bears S 58° E, 6.77 chs. dist. &
 destroy all traces of old ev.
- 40.50 Top of spur, 60 ft above reach, extending
 N. Easterly; descend.
- 54.50 Ravine, 750 ft below top of spur, 20 lbs
 wide course N. Easterly, enter dense
 oak undergrowth and begin ascent of
 N. E slope of mountain
- 72.00 Top of divide between San Pedro and
 Santa Cruz rivers, 400 ft above ravine
 bears N. Westerly and S. Easterly; have
 heavy timber and dense undergrowth

Boundary of the 3rd Guide Meridian East,
chains

and begin descent s.w. slope Canale
Hills.

73.00 Common's pass bars C, 8.00 chs dist.
Difference between measurements of 8000
chs by two sets of chainmen is 16 lbs,
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 sandstone 24 x 10 x 6 ins, 18 ins in
the ground for the end of size 19, 24,
25 and 30, marked with 4 notches on
N. and 2 notches on S. edge, from
which

An oak 10 ins diam bars N. 19° E, 24 lbs
dist, marked S 22 S R, 18 E S 19 B S.

An oak, 18 ins diam, bars S 56° E, 145
lbs dist, marked S 22 S R, 18 E S 30 B S.

An oak 18 ins diam, bars S. $16\frac{3}{4}^{\circ}$ W, 84
lbs dist, marked S 22 S R, 17 E S 25 B S.

through Sps 22 S, between Rs 17 and 18 E
Chain

An oak, 14 ins diam bars N. 75° W, 36
lbs dist marked S 22 S R 17 E S 24 R 8.
and raised mound of stones 2 ft base,
1 1/2 ft high, R of cor.

Old cor bars ^{S.} 60° E 7.80 lbs dist. I destroy
all traces of same.

Land mountainous.

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

Timber, oak and juniper; undergrowth
oak and buckata.

Mountainous, brailly timbered or land
eroded with dense undergrowth, 8000 lbs.

South bet spcs 25 and 30.

Over mountainous land; descending
through oak timber.

7.40 Road to Babcomari bars N. Easterly
and S. Westerly.

Excursion of the 3rd Guide Meridian East
Chand

16.00 Ravine, 600 ft below top of divide, 30
chs wide, course S. Easterly. ascend along
N. side ravine.

20.00 Enter heavy oak timber, bars Easterly
and Westerly.

24.00 Cross bank ravine.

27.00 Top of ridge, bars N. Westerly and S.
Easterly. ascend through dense oak
undergrowth.

Differences between measurements of 4000
chs by two sets of chainmen is 10 chs
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 limestone $24 \times 12 \times 5$ ins, 18 ins in the
ground, for $\frac{1}{4}$ sec or marked $\frac{1}{4}$ on W
face, from which

An oak, 10 ins diam, bars N. $292^{\circ} E, 74$

Through the 22 S. between No 17 and 18 E
Chain

The dist. marked $\frac{1}{4}$ Sec B P.

|| In oak, 12 in diam bars S $41\frac{1}{4}^{\circ}$ E 23 lbs
dist. marked $\frac{1}{4}$ Sec B P.

Old cor bars S 60° E 5.00 chs dist. P
destroy all traces of old cor.

48.30 Enter draw lower S. westerly.

49.00 Old road, bars N. Easterly and S. Westerly.

49.55 Dry wash, 15 lbs wide, course S. Westerly.

50.60 Bar draw and ascend.

62.00 Top of N slope of ridge, descend

66.25 Dry wash, 60 ft below top of slope, 10 lbs
wide, course S. Westerly ascend

67.00 Top of trees over rolling land.

Differenced between measurements of 8000
chs by two sets of chainmen is 12 chs,
position of middle point.

By 1st set 8006 chs

By 2nd set 79.94 chs, the mean of
which is.

Resurvey of the 3rd Guide Meridian East,
Chambers

- An oak 12 ins diam, bears S 56° E 73 lbs
dist, marked $\frac{1}{4}$ S. B. S.
- An oak 12 ins diam, bears S 82° W, 78
lbs dist, marked $\frac{1}{4}$ S. B. S.
- Old iron bears S 58° E, 5.70 lbs dist.
- 41.50 Crap, draw and ascend.
- 41.00 Pop, throw over level land
59.25 ^{5.75 end}
60.00 - Fort, into draw, course S. Easterly.
- 61.20 Dry creek, 40 lbs wide, course S. Westerly
- 65.80 Crap, draw and ascend
- 66.60 Pop, bears N. Easterly and S. Westerly
throw over level land.
- 70.00 Crap heavy oak timber and dense un-
dergrowth, bears Easterly and Westerly
- 75.00 Better heavy timber, bears Easterly
and Westerly
- Difference between measurements of 800
lbs by two sorts of chamber is 8 lbs,
fraction of middle point

through Sps 22 S, between Rs 17 and 18 E

Channel

By 1st set 79.96 chs

By 2nd set 80.04 chs; the mean of
which is

8000 Set a sandstone 24x10x6 ins, 18 ins in
the ground, for cor of Sps 22 and 23 S,
Rs 17 and 18 E, marked with 6 notches on
each edge, from which

An oak, 12 ins diam, bears N. $57\frac{3}{4}^{\circ}$ E, 30 chs
dist, marked S 22 S R 18 E S 31 B S.

An oak, 12 ins diam, bears S $9\frac{3}{4}^{\circ}$ E, 121 chs
dist, marked S 23 S R 18 E S 6 B S.

An oak 12 ins diam, bears S $82\frac{1}{2}^{\circ}$ W, 87 chs
dist, marked S 23 S R 17 E S 1 B S.

An oak 10 ins diam, bears N $22\frac{1}{2}^{\circ}$ W, 56 chs
dist, marked S 22 S R 17 E S 36 B S.

Old Sp cor bears S 74° E, 12.56 chs dist.

Destroy all traces of old cor.

Level, level and rolling.

Soil, sandy loam and gravelly; and

Resurvey of the 3rd Guide Meridian East,
Chassis

and 3rd rate.

Timber oak, undergrowth oak.

Heavily timbered, a land covered with
dense undergrowth 70.00 chs.

February 21, 1903.

+

February 22: At 7^h 40^m a.m. l m t,
Set off 31° 28' N, on the lat arc,
10° 27' S on the circ arc and de-
termine a true meridian with the solar
at the w of Sps 22 and 23, S, Ps 17
and 18 C.

Shiner 3 min.

South bet sves 1 and 6.

Over level land.

16.00 Enter oak timber, bears N. Easterly and
S. Westerly.

17.00 Descend

20.70 Run in 20 chs wide course S. Westerly;

through Sp 23 S. between Pa 17 and 18 E
 Channel

ascend.

21.00 Top, turned along edge of ravine

26.75 Descend.

29.20 Same ravine, course S. S. Westerly; ascend

30.25 Top.

33.75 Descend

34.70 Foot into valley, bears N. easterly and
 S. Westerly.

36.60 Dry creek, 50 lbs wide, course Westerly.

Difference between measurements of 4000
 lbs by two sets of channels is 10 lbs,
 position of middle point

By 1st set 4005 lbs

By 2nd set 3995 lbs, the mean of
 which is

4000 Set a sandstone 24 x 3 x 6 ins, 18 ins in
 the ground, for $\frac{1}{4}$ in, marked $\frac{1}{4}$ on W
 face, from which

An oak, 20 ins diam, bears N 48 $\frac{1}{2}$ ° E 60 lbs

Recovery of the 3rd Guide Meridian East,
Chain

- dist marked $\frac{1}{4}$ S. B. S.
- An oak 24 ins diam, bears N. $56^{\circ} \frac{3}{4}$ W. 123
- the dist, marked $\frac{1}{4}$ S. B. S.
- Old cor bears S 75° E, 13.00 chs dist. &
destroy all traces of old cor.
- 44.00 Cross valley, and ascend.
- 47.50 Pop bears Easterly and Westerly
- 51.50 Descend
- 53.50 Draw 40, lbs wide, course Westerly ascend.
- 55.00 Pop, bears N. Easterly and S. Westerly,
bears oak timber.
- 63.00 Descend
- 69.80 Pop, bears N. Easterly and S. Westerly, ascend.
- 73.00 Pop of spruce, extending S. W. ascend.
- 78.70 Dry wash, 15 lbs wide, course Westerly.
- 79.00 Begin steep ascent through oak timber.
- Difference between measurements of 8000
chs by two sets of chainmen is 12 lbs,
position of middle point.

through Nos 23 S, between Rs 17 and 18 E
Channel

By 1st set 79.94 lbs

By 2nd set 8006 lbs; the mean of which is
8000 lbs a sandstone, 24 x 8 x 6 ins, 18 ins in the
ground, for the cor of sets 1, 6, 7 and 12,
marked with 1 notch on N. and 5 notches on
S. edges; from which

An oak 24 ins diam, bars N. $79\frac{1}{4}^{\circ}$ E, 121 lbs
dist, marked S 23 S R 18 E S 6 B S

An oak 18 ins diam, bars S $53\frac{3}{4}^{\circ}$ E, 41 lbs
dist, marked S 23 S R 18 E S 4 B S.

An oak 20 ins diam, bars S. $68\frac{1}{4}^{\circ}$ W, 124 lbs
dist, marked S 23 S R 17 E S 12 B S.

An oak 10 ins diam, bars N $55\frac{1}{2}^{\circ}$ W, 17
lbs dist, marked S 23 S R 17 E S 1 B S.

From this point old cor bars S. 75° E, 13.20
lbs dist. & destroy all traces of old cor.

Land, level and mountainous.

Soil gravelly; 2nd and 3rd rate
Timber, oak.

Passway of the 3rd Grade Mountain East,
 Chain

Mountainous land, 31.85 ch.

X

Summit bet sees 7 and 12.

Over mountainous land; ascending.

.30 Top, and descend.

1.10 Enter heavy oak timber, bars N. Easterly
 and S. Westerly.

5.50 Descend steeply.

6.10 Enter valley, bars N. Easterly and S.
 Westerly.

8.50 Dry creek, 40 chs wide, course Westerly.

14.10 Cross valley and ascend

15.30 Top of bank, bars N. E. and S. W.; and
 ascend.

25.00 Top, bars N. Easterly and S. Westerly;
 have heavy timber; descend.

29.20 Top of draw, course S. Westerly.

32.00 Cross draw and ascend.

33.00 Top, bars N. Easterly and S. Westerly;

through the 23 S. between the 17 and 18 E

chain

37.00 Descend.

38.00 Enter valley, bear Easterly and Westerly.

Difference between measurements of 4000
chs by two sets of chainmen is 10 chs
position of middle point.

By 1st set 4005 chs

By 2nd set 3995 chs. the mean of which is

4000 Set a granite stone 24 x 10 x 6 ins, 18 ins in
the ground, for $\frac{1}{4}$ sec ev, marked $\frac{1}{4}$ on W.
face, from which

An oak, 36 ins diam, bear N $59\frac{1}{2}^{\circ}$ E, 190 chs
dist, marked $\frac{1}{4}$ S 7 B S.

An oak, 24 ins diam, bear N. $47\frac{1}{2}^{\circ}$ W, 484
chs dist, marked $\frac{1}{4}$ S 2 B S.

Old ev bear S 76° E, 13.70 chs dist. &
destroy all traces of same.

44.00 Ascend

46.20 Top, bear Easterly and Westerly. bear
oak timber, thinned over gently rolling

Boundary of the 3rd and 4th Meridian East
Chain

land.

67.00 Begin ascent N. side of round bare knoll.

69.50 Top. From this point Parkers house bears S. $86\frac{1}{4}^{\circ}$ W. descend.

Difference between measurements of 8000 chs by two sets of chainmen is 12 chs. position of middle point.

By 1st set 79.94 chs

By 2nd set 8006 chs, the mean of which is

8000 Set a sandstone $24 \times 18 \times 16$ ins, 18 ins in the ground for the cor of sags 7, 12, 13 and 18, marked with 2 notches on N. and 4 notches on S. edge; and raise a mound of stone 2 ft base, $1\frac{1}{2}$ ft high W of cor. Site impracticable. Old cor bears S. 74° E, 14.00 chs dist. Destroy all trace of old cor.