

CONT. 104
BOOK "E"
SUBDIVISIONS
T. 14. S., R. 10, E.

BOOK 798

No. 798

4-671

FIELD NOTES
GENERAL LAND OFFICE.

798

No. 798

Field Notes
 of the survey of the
 Auxiliary Base Line
 of
 Township No 14 South
 Range No 10 East
 of the
 Gila and Salt River Basins and Maricopa
 in the
 Territory of Arizona
 as surveyed by
 Philip Cortzen
 U S Deputy Surveyor

Under his contract no 104
 dated November 15, 1902.

Survey commenced March 31, 1903
 Survey completed April 1, 1903.

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Auxiliary Base Line

S 14 S, R 10 E

$\begin{array}{c} 27 \\ + \\ 12 \\ \hline 34 \end{array}$	$\begin{array}{c} 26 \\ + \\ 9 \\ \hline 35 \end{array}$	$\begin{array}{c} 25 \\ + \\ 7 \\ \hline 36 \end{array}$
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End of M Co

Auxiliary Base Line of P 14 S, R 10 E
Chains

Survey commenced March 31, 1903 and
executed with a Young and Sons light
mountain transit No 5687, 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, March 2, 1903.

Examined the adjustments of the tran-
sit, and correct the level and collima-
tion errors. Then to test the solar ap-
paratus by comparing its indications,
resulting from solar observations made

Auxiliary Base Line of S 14 S, B 10 E
Chain

during a wind for hours, with a meridian determined by observations on Polaris, & proceed as follows:

At the cor of sres 25, 30, 31 and 36, Sps 14 S, Bs 10 and 11 E, latitude $32^{\circ}10'N$, longitude $111^{\circ}15'55'' W$; which is a

post, marked and witnessed as described by the survey journal. I set off $32^{\circ}10'N$ on the lat arc, $4^{\circ}00'N$ on the decl arc, and at $3^h 39^m$ p.m. lmt determined with the solar a meridian and mark a point thereof on a stone firmly set in the ground 5 chs N of the cor. At $6^h 46^m$ p.m. lmt observe Polaris at her true elongation, in accordance with Manual of Observations and mark a point in the line thus determined, on a peg in the ground, 5 chs N of my station

March 31, 1903.

April 1: At 7.50 a.m. lmt, I lay off the azimuth of Polaris $1^{\circ}26'$ to the

Auxiliary Base Line of S 14 S. R 10 E
 Chains

East, and mark the meridian thus determined, by cutting a small groove in the stone set March 31, on which the meridian falls 0.3 in east of the mark determined by the solar. At 9^h 20^m a.m. Lmt. S 51^h off 32^h 10' N on the lat. arc. 4° 17' N. on the dial 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 0.3 ins East of the meridian established by the Polaris observation.

The solar apparatus by p.m. and a.m. observations defines positions for meridians, respectively about 0' 16" East and 0' 16" West of the meridian established by the Po-

Auxiliary Base Line of S 14 S, R 10 E

Chains

From observations, therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8^h 30^m a.m. is $113^{\circ}15' W$, the angle thus determined gives the mag. decl. $13^{\circ}15' E$.

From the see or already described

From

West, let sees 25 and 36.

Over level land, through mesquite timber and dense mesquite and broom undergrowth.

- 1.97 Trial bars Northwly and Southwly.
 17.00 Trial bars E. N. Easterly and S. S. Westerly.
 24.70 Road, bars N. Easterly and S. Westerly.
 36.50 Dry arroyo, 15-ls wide, course Northwly.

Auxiliary Base Line of S 14 S, R 10 E
 Chains

40.00 Set a mosquito post, 3 ft long, 4 ins sq,
 24 ins in the ground, for $\frac{1}{4}$ sec cor,
 marked $\frac{1}{4}$ S 25 on N. and 36 on S. face,
 from which

1 mosquito, 7 ins diam, bears S $34\frac{1}{4}^{\circ}$ E,
 33 lbs dist, marked $\frac{1}{4}$ S 36 B S.

1 mosquito, 8 ins diam, bears N. $5^{\circ}50'$ W,
 155 lbs dist, marked $\frac{1}{4}$ S 25 B S.

80.00 Set a mosquito post, 3 ft long, 4 ins sq,
 24 ins in the ground, for cor of secs 25,
 26, 35 and 36, marked

S 14 S S 25 on NE,

R 10 E S 36 on SE,

S 35 on SW and

S 26 on NW face, with 1 notch on S
 and E. edges; from which,

1 mosquito, 7 ins diam, bears N 42° E,

99 lbs dist, marked S 14 S R 10 E S 25 B S

Auxiliary Base Line of S 14 S, R 10 E
 Chasica

A mosquito, 4 ins diam, bears S 57 $\frac{1}{4}$ ° E, 140
 the dist marked S 14 S R 10 E S 36 B S.

A mosquito, 5 ins diam, bears S 58 $\frac{1}{4}$ ° W, 116
 the dist marked S 14 S R 10 E S 35 B S.

A mosquito, 6 ins diam, bears N 49 $\frac{1}{4}$ ° W,
 117 the dist marked S 14 S R 10 E S 26 B S.
 Land, level.

Soil, sandy loam, red and red ratr.

Timber, mosquito and pale cedar;
 undergrowth, mosquito, tsetse, pale
 wood grasswood and bahata.

Dense undergrowth 8000 chs.

West bet sec 26 and 35.

Very gradually rising ground;
 though mosquito and pale cedar
 timber and dense grasswood, mos-
 quito and pale cedar undergrowth.

Auxiliary Base Line of S 14 S B 10 E
chains

- 22.90 Dry arroyo, 15-lhs wide, course
N. Easterly.
- 23.97 Road, runs Northwly and Southwly.
- 26.80 Trail, runs N. Westerly and S Easterly
- 32.85 Road, runs Northwly and Southwly
- 40.00 Set a mosquito trap, 3 ft long, 4 ins sq,
24 ins in the ground, for $\frac{1}{4}$ sec cov, marked
 $\frac{1}{4}$ S 26 on N and 35 on S fence, from
which
A pale wood 6 ins diam, bears S 4° 40' W,
43 lbs dist, marked $\frac{1}{4}$ S 35 B S.
A pale wood, 6 ins diam, bears N 10° 40' W,
96 lbs dist, marked $\frac{1}{4}$ S 26 B S.
- 48.70 Dry wash, 10 lbs wide, course N. Easterly
- 74.05 Dry wash, 15-lhs wide, course N. Easterly
- 80.00 Set a granite stone 18x12x8 ins, 12 ins
in the ground, for cov of secs 26, 27,
34 and 35, marked with 1 notch

Auxiliary Base Line of S 14 S, R 10 E
on land 2 notches on E edge, from
which

A pale verde, 6 ins diam, bears N 77 $\frac{1}{2}$ ° E 74
lbs dist, marked S 14 S R 10 E S 26 B S.

A pale verde, 8 ins diam, bears S 49 $\frac{1}{4}$ ° E 93
lbs dist, marked S 14 S R 10 E S 35 B S.

A pale verde, 8 ins diam, bears S 4° N, 146
lbs dist, marked S 14 S R 10 E S 34 B S.

A pale verde, 8 ins diam, bears N 76° 15' W,
53 lbs dist, marked S 14 S R 10 E S 27 B S.

and range of mound of stone 2 ft base,
1 $\frac{1}{2}$ ft high, N of cor.

Ground, gently rolling, und level.

Soil, sandy loam, generally und stony,
2nd, 3rd und 4th rate.

Timber, pale verde, mesquite und
vismod. undergrowth, grasswood,
mesquite, toota pale verde und

Arbitrary Base Line of S 14 S, R 10 E
Chains

cacti.

Giant cactus.

Dense undergrowth, 8000 chs.

Worst lot sees 27 and 34.

Over gradually rising ground;
through pale woods and ironwood
timber and dense grasswood and
cacti

34.10 Dry wash, 30 lbs wide, course N. Easterly.

40.00 Set a granite stone, 18x10x6 ins, 12 ins
in the ground, for $\frac{1}{4}$ sec cor, marked
 $\frac{1}{4}$ on N face, from which

A pale woods, 8 ins diam, bears N 58 $\frac{1}{2}$ E,
144 $\frac{1}{2}$ lbs dist, marked $\frac{1}{4}$ S 27 13 S.

A pale woods, 12 ins diam, bears S 39 $\frac{3}{4}$ W,
62 lbs dist, marked $\frac{1}{4}$ S 34 13 S.

59.10 Dry wash, 25 lbs wide, course N. Easterly

Auxiliary Base Line of S 14 S, R 10 E
Chain

80.00 Set a granite stone, 20x10x8 ins, 14 ins
in the ground, for cor. of secs 27, 28,
33 and 34, marked with 1 notch on S
and 2 notches on E edge, from which:

A pale verde, 6 ins diam, bears N 3° 25' E, 130
lbs dist, marked S 14 S R 10 E S 27 B S.

An ironwood, 4 ins diam, bears S 42 1/4° E, 93
lbs dist, marked S 14 S R 10 E S 34 B S.

A pale verde, 10 ins diam, bears S 28 1/2° W,
128 lbs dist, marked S 14 S R 10 E S 33 B S.

An ironwood, 6 ins diam, bears N 39° 50' W,
151 lbs dist, marked S 14 S R 10 E S 28 B S.

Land, gently rolling.

Soil, gravelly and stony, red and
4th rate.

Timber, pale verde and ironwood;
undergrowth, grasswood, pale verde
and cacti.

Auxiliary Base Line of S 14 S, R 10 E
Chain Grant eactns.

Dense undergrowth, saw ch

At this point I discontinued on account
of high and rough mountains over
which it is impracticable to chain.

April 1, 1903.

Philip Coutzen

W.S. Deputy Surveyor

BOOK 798

No. 798

A P P R O V A L .

Office of the
United States Surveyor-General,
Phoenix, Arizona.

March 8-1904

The foregoing field notes of the survey of *the Auxiliary Base line of Twp. 14-S., R. 10-E* of the Gila and Salt River Base and Meridian, in the Territory of Arizona.

Executed by *Philip Bontzen*
United States Deputy Surveyor, under his contract No. 104, dated *Nov. 15 1902*, 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

U. S. Surveyor-General.