

Book J
CONTRACT 97

6th
Standard
R.S.E.

RETRACEMENT

6TH STANDARD PARALLEL NORTH
THRO'

RANGE 3 EAST

BOOK 1233

No. 1233

BOOK 1233

4-671

FIELD NOTES

GENERAL LAND OFFICE.

1233



No. 1233

BOOK 1233

Field Notes
of the survey of the
Sixth Standard Parallel North
through
Range No. 9 East
of the
Gila and Salt River Base and Meridian
in the
Territory of Arizona
As Surveyed By
Marvin Bandle and
Carl R. Bandle
Under their Contract No. 97
Dated June 30, 1902

Survey commenced Nov. 1, 1902.
Survey completed Nov. 3, 1902.

PRELIMINARY OATHS OF ASSISTANTS.

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We, Ellery Knowles and R. S. Scott
and O. F. Webber and Roy S. Scott
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 distance to all notable objects, and the true length
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
Fifth Standard Parallel through
ranges five, eight, and nine
East, and the Sixth Standard
Parallel through range three
East.

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

Ellery Knowles, Chainman.
O. F. Webber, Chainman.
O. F. Webber, Chainman.
Roy S. Scott, Chainman.

Subscribed and sworn to before me this 19th day
of September, 1902

[SEAL.] -

Carl Raudle
Notary Public.
U. S. Deputy Surveyor.
Morrow Raudle
U. S. Deputy Surveyor

We, Willis E. Owen

and Philip King and A. H. Marshall

do solemnly swear that we will well and truly perform the duties of
flagman and axmen, in the establishment of corners and other duties,
according to instructions given us, to the best of our skill and ability, in

the survey of the Fifth Standard Parallel

through ranges five, eight, and
nine east, and the Sixth Standard
Parallel through range three
east.

BOOK 1283

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

Willis E. Owen, Flagman.

Philip King, Axman.

A. H. Marshall, Axman.

_____, Axman.

Subscribed and sworn to before me this 19th day
of September, 1902

Carl R. Gaudle

~~Notary Public.~~
U. S. Deputy Surveyor,
Marion Gaudle
U. S. Deputy Surveyor

Survey commenced Nov 1, 1902
and executed with a W. and L. G.
Sury light mountain transit
(not numbered.) with solar attach-
ment. The horizontal limb is
provided with two double verniers
placed opposite to each other, reading
to single minutes of arc. The least
count of the latitude and decli-
nation arcs reading to 30" of arc.

The instrument was examined,
tested on the true meridian at
Phoenix and was approved by the
surveyor general of Arizona, ^{Sept. 19, 1902.}

I examine the adjustments of the in-
strument and correct the level and
collimation errors, then to test the
solar apparatus, by comparing its
indication resulting from solar

Retracement 6 ch. St. Pat. through R. 3 E.

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observations made during A.M. and P.M. hours. with a meridian determined by observations on Polaris I proceed as follows.

At the cor to Tps 24 and 25 N R. 2 and 3 E. latitude $35^{\circ} 28' 01.6''$ longitude $112^{\circ} 06' 17.02''$ W.

~~$112^{\circ} 17' 14''$ W.~~ I set off $35^{\circ} 28' 14''$ on lat. arc $14^{\circ} 20'$ and a 4 P.M.

^{S. on decl. arc}
I. m. t. with the solar determine a true meridian, and mark a point there of on a plug set in the ground 5 chs N. of the cor.

Nov 2 at 4^h 36' A.M. I observe Polaris at Western Elongation in accordance with instructions in the 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

At 6 A.M. l. m. t. I lay off
the azimuth of Polaris
 $1^{\circ}29'$ to the East and mark the
meridian thus determined by a
plug on which the meridian
fall 0.4 ^{inches} west of the point deter-
mined by the solar

At 8 A.M. l. m. t. I set off $35^{\circ}28'$
N. on decl arc $14^{\circ}33'$ on decl arc
and with the solar determine
a true meridian in which I
mark a point on the plug set
5 chs N. of my station.

This point falls .3 in west of the
meridian established by the Polaris
observation.

The solar apparatus by P.M. and

Retracement 6th St. Por. through R. 3 E.

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a.m. observations defines positions for meridians respectively $21''$ W and $16''$ east of the meridian established by the Polaris observation. Therefore I conclude the adjustments of the instrument are satisfactory.

28 a.m. L.M.T.

Nov 3 1902. I set off $35^{\circ} 28'$ on
 lat arc. $14^{\circ} 51'$ on decl arc and
 with the solar determine a
 true meridian

Thence I run

East on S. bldg of sec 31 from the
^{sec. 31}
 T. 25 N R. 2 and 3 E which is
 a malpais rock. $24 \times 10 \times 12$ ins
 set in mound of stone. marked
 as described by surveyor general
 from which

A pinon ^{71°} 14 ins in diam
 bears N. ⁷¹ 72° 20' E. 72 lks. dist
 mkd. T. 25 N R 3 E S 31 B T.

A pinon ⁶ 5 ins in diam.,
 bears S 49° 30' E. ⁶⁶ 65 lks dist.
 mkd T ^{247.} ~~25~~ N R 3 E S 6 B T.

I mark another as follows

~~A pinon ⁴ 5 ins in diam~~
 bears N. ^{3° 30'} 40° W. ⁷² 71 lks. dist.,
 mkd S C T 25 N R ^{2 E.} ~~3 E~~ S 36 B T.

Des. E. slope through dense
 cedar and pinon.

1215: Road bears N. and S. foot of 50
 ft des. thence over nearly level
 land.

Difference between measure-
 ments of 39.82 chs by two sets
 of chain men is 4 lks.
 position of middle point

Retracement 6 th. St. Pat. through R.3 E.

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by first set 39.94 chs
 by second set 39.90 chs.
 mean of which is

39.92 Standard $\frac{1}{4}$ sec ^{cor.} bears S. 48 lks
 dist., which makes the true
 bearing of this line $S 89^{\circ} 19' E$.

I find a malpais 12 X 8 X 6 ins
 set in mound of stone
 mkd $\frac{1}{4}$ SC on N. face from which
 a pinon 8 ins in diam
 bears N. $71^{\circ} 8' E$ 47 lks dist
 mkd as described by surveyor
 general.

I mark another as follows

A pinon 6 ins in diam
 bears N. $72^{\circ} W$ 89 lks dist.,
 mkd SC $\frac{1}{4}$ S 31 B. T.

x Hence east ^{from} for cor.

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- 7.40 Small ^{drawn} course N. ascend gradually
- 12.00 Low ridge bears N and S. There
over nearly level land.
- 20.00 Enters scattering cedar and pines
Difference between measure-
ments of 39.87 chs by two sets
of chainmen is 2 lks
position of middle point
by first 39.86. chs
by second set 39.88 chs.
mean of which
- 39.87 S.C. to nos 31 and 32 bears S
43 lks. dist, which makes
the true bearing of this line
S. 89° 24' E.
- I find a malpais rock 14 X 10 X 6
ins above ground formerly set
marked as described by
surveyor general from which

Retracement 6th. St. Per. through R. 3 E.

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A pinon 6 ins in diam
 bears N. $34^{\circ} 30' E$. 88 lks dist
 mked as described by surveyor general.
 I mark another as follows.

A cedar 4 ins in diam.
 bears N. $22^{\circ} W$. 57 lks dist
 mked SC T25 N R3 E S 31 B T

Land rolling

Soil stony 3 rd and 4 ch rate

Timber dense cedar and pinon
 60 chs.

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East on S. bdy of sec 32
Over rolling land through dense
cedar and pinon

24.50 Flat drain course N.

27.35 Road bears N.W. and S. E.

29.60 Drain, course S. E.

Difference between measure-
ments of 40.29 chs by two sets
of chain men is 4 lks.

position of middle point
by first set 40.27 chs
by second set 40.31 chs.

mean of which is

40.29 Standard & sec. cor. bears N.

9 lks. dist. which makes the
true bearing of this line ~~N. 89° 54' E.~~
N. 89° 52' E.

I find a sand stone 10x8x6 ins
above ground firmly set marked
and witnessed as described by sur. gen.

Retracement 6th. St. Par. through R. 3 E.

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Hence east from cor.

37.00 Enter dense cedar and pines

Difference between measurements of 40.37 chs by two sets of chainmen is 6 lbs position of middle point by first set 40.34 chs by second set 40.40 chs mean of which is

40.37 S.C. to sec 32 and 33 bears

S. 121 lbs. dist which makes the true bearing of this line

S. $88^{\circ} \frac{12}{100}$ E. I find ¹² ₁₀₀ ^{of a foot} rotted off.

I reset at both at exact point as follows

Set malapais 20 X 10 X 4 ins

15 ins in the ground for

S.C. to sec 32 and 33 marked

S.C. on N. 2 grooves on W.

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and 4 grooves on E₁ face.,
from which,

A pinon 10 ins. in diam
bears S. $64^{\circ}50'E$ 75 lks dist
mkd as described by sur-
veyor general.

I mark two others as follows

A pinon 9 ins in diam
bears N. $38^{\circ}35'E$ 150 lks dist
mkd S C T 25 N R 3 E S 33 B T.

A pinon 10 ins in diam
bears N. $58^{\circ}35'W$. 170 lks dist.,
mkd S C T 25 N R 3 E S 32 B T.

Land rolling

Soil stony 3 rd and 4th rate.

Timber cedar and pinon.

- East on S. hdy of sec. 33
Over rolling land through
dense cedar and pinon
- 26.00 Gradually descend E. slope.
- 32.00 Leave timber, enter chico and
buck brush, bears N. and S.
Difference between measure-
ments of 40.08 chs by two
sets of chain men as 4 lks.
position of middle point
by first set 40.10 chs
by second set 40.06 chs
mean of which is
- 40.08 Stand and $\frac{1}{4}$ sec. cor. bears S.
105 lks. dist. which makes
the true bearing of this line
S. $88^{\circ} 3' 0''$ E.
- I find a stone set in mound
of stone not marked.

Set a malapois 18X10X6 ins
at exact point. set 12 ins
in the ground for B standard
 $\frac{3}{4}$ sucor. mkd DC $\frac{7}{8}$ on V for
dig pits 18X18X12 ins E, and
W. of cor 3 ft dist and raise
a mound of earth 4 ft base
1 $\frac{1}{2}$ ft high N. of cor.

No trees suitable for bearing
trees in limits.

Thence E. from cor.

- 12.00 Gradually ascend
14.70 Enter dense cedar and pinon
25.00 Top of 100 ft. asc. bears NW and
SE. Thence over top of ridge.
Difference between measure-
ments of 40.18 chs by two sets
of chain men is 4 lks.
position of middle point.

Retraiment 6th St. Por. through R. 3 E.

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by first set 40.20 chs
 by second set 40.16 chs
 mean of which is

4018

S.C. to nos 33 and 34 bears
 N. 66 lks dist. which
 makes the true bearing of this
 line ~~N. 89° 03' E.~~
~~N. 89° 06' E.~~

I find a malpais rock 20 x
 14 x 10 ins set in mound
 of stone marked as described
 by surveyor general.
 from which

A pinon 10 ins in diam.
 bears N. 15° 08' E 78 lks dist
 mkd. S C T 25 N R 3 E S 34 B T.

A pinon 8 ins in diam
 bears S 33° E 40 lks dist
 mkd as described by
 surveyor general.

I mark another as follows.

A pinon 5 ins in diam
 bears N. 64° 10' W. 191 lks dist
 mkd SCT 25 N R 3 E S 33 B T.

Land rolling.

Soil stony; 3rd. and 4th. rate.

Timber, dense cedar and
 pinon 60 chs.

Land covered with dense cedar.

pinon or buck and chiro

bush 80.26 chs

East on S. bdy of sec. 34.

Over rolling land through
dense cedar and pinon

Difference between measure-
ments of 40.28 chs by two
sets of chain men is nothing

40.28 Standard $\frac{1}{4}$ sec. cor bears S.
77 lks. dist which makes
the true bearing of this line
S. $88^{\circ} 54' E$.

I find a malpais stone
18X8X6 ins set in mound
of stone mkd $\frac{1}{4}$ SE on N face
from which

A pinon 10 ins in diam.,
bears N. $35^{\circ} 37' W$. 47 lks dist
mkd as described by surveyor
general.

I mark another as follows.

A pinon 16 ins in diam
 bears N. $31^{\circ}35'E$. 110 lks dist
 mkd S C & S B T

Thence east from cor.

Difference between measure-
 ments of 40.26 chs by two
 sets of chain men is 2 lks
 position of middle point
 by first set 40.24 chs
 by second set 40.28 chs
 mean of which is

40.26

S. C. to sec 34 and 35 bears
 N. 48 lks dist which makes
 the true bearing of this line
 N. $89^{\circ}19'E$.

I find a malpais 16 x 12 x 6
 ins above ground from by set
 mkd as described by
 surveyor general

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Retirement 6th. St. Par. through R. 3 E.

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from which

A pinon 10 ins. in diam.,
bears $N. 33^{\circ} 39' W.$ 47 lks dist
marked as described by
surveyor general

I mark another as follows.

A pinon 10 ins in diam
bears $N. 85^{\circ} E.$ 37 lks dist.,
mkd SC T25 NR3ES35B E

land rolling

Soil stony; 4th rate.

Timber cedar and pinon
80⁵⁴ 50 chs.

Cloudy at noon no latitude
observation

East on S. bdy of sec. 35
Over rolling land through
dense cedar and pinon

26.00 Ridge bears N and S 50 ft
high Over nearly level land
Difference between meas-
urements of 40.28 by two
sets of chain men is
4 lks. position of middle pt
by first set 40.22 chs
by second set 40.18 chs
mean of which is

40.20 Stand and $\frac{1}{4}$ sec cor. bears N.
73 lks. dist. which makes
the true bearing of this line
~~N. 88° 51' E.~~
N. 89° E.

I find a malpais stone
18X9X10 ins set in mound
of stone marked SC $\frac{1}{4}$ on N face

from which

A pine 6 ins in diam
bears $N. 82^{\circ} E$ 150 lks dist
mkd as described by
survey or general

I mark another as follows

A cedar 6 ins in diam
bears $N. 30^{\circ} 35' W.$ 108 lks dist.
mkd S C $\frac{1}{4}$ S 35 B T.

Thence east from cor.

The difference between measure-
ments of 40 31 chs by two
sets of chain men is 4 lks
position of middle point
by first set 40 29 chs
by second set 40 33 chs
mean of which is

40.31 S.C. to sec 35 and 36 bears
S. 16 lks dist. which

Retrocument 6 ch. St. Par. through R. 3 E.

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X makes the true bearing
of this line ~~S 89° 48' E~~
^{S 89° 46' E.}

I find a malpais stone
18x12x10 ins. above ground
firmly set. mkd as des-
cribed by surveyor general
from which

A pinon 10 ins. in diam.,
bears N. 62° 12' W. 16 lks dist
mkd ~~T 21 A R 3 E S 35 B T~~
^{25 N.}

I mark another as follows

A pinon 8 ins. in diam.,
bears N. 32° 7' E. 118 lks dist.,
mkd ~~S C T 25 N R 3 E S 36 B T.~~

Land rolling

Soil stony 4 ch rate

Timber, cedar and pinon

~~80.50~~
^{80.51} chs.

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- Cast on S. bdy of sec 36
Over broken land through
dense cedar and fir
- 24.00 Des steep NE. slope
- 26.50 Bottom of canyon course
N.W. Foot of 100 ft des. Asc.
S.W. slope
- 30.00 Top of 100 ft asc. bears NW. and
S.E.
- Difference between measure-
ments of 39.65 chs by two
sets of chain men is nothing
- 39.65 Standard $\frac{1}{4}$ sec. cor. bears
S. 43 lks. dist which makes
the true bearing of this line
S $89^{\circ} 23' E.$
x ~~S. $89^{\circ} 24' E.$~~
- I find a malpais stone
20X14X8 ins set in mound
of stone mtd as described

by surveyor general
from which

A pinon 10 ins in diam
bears $N 8^{\circ} 41' W$. 21 lks dist
mkd. SC & SB T.

I mark another as follows.

A pinon 10 ins in diam
bears $N 50^{\circ} 51' E$. 15 lks dist
mkd. SC & S 36 B T.

Thence east from cor.

- 11.00 Low ridge bears N and S .
- 12.00 Desc gradually
- 14.00 Leave timber enter park.
bears N and S .
- 17.00 Foot of 75 ft des bears N and
 S . ascend gradually
- 21.00 Enter cedar and pinon
bears N . and S .
- 27.00 Top of 60 ft. ascent. bears N and S .

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Retraiment 6 ch. st. Par. through R. 3 E.

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30.00 Enter dense chiro leaf timber
 bears N. and S.

~~34.22~~~~35.39~~

C.C. to T 24 N R 3 and 4 E
 bears 5 lks S.

I find a post rotted off
 Set malapais stone
 18 X 12 X 6 ins 12 ins in
 the ground for C.C. to ~~2000~~
 T 24 N R 3 and 4 E.
 mkd. C.C. on S & grooves
 on E.W. and S faces.

40.40 S.C. to secs 31 and 36
 bears S. 6 lks dist which
 makes the true bearing
 of this line S. 89° 55' E.

I find a post rotted off
 witnessed as described
 by surveyor general.
 I set malapais stone

Retrocement 6th. St. Par. through R. 3 E. 29
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18 X 12 X 8 ins. 12 ins in
the ground for cor of T
25 N R 3 and 4 E.

inked SC on N face
& grooves on E. W. and N.
faces;

Land broken.

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

Timber, cedar, pine and dense
chips and buck brush 80.05 chs.

Nov. 3, 1902.

The retrocement of the 6th. Stan -
dard Parallel N. through R. 3 E.
shows the ^{average} bearing to be S. ~~89~~⁸¹ 43' E.
and length to be 481.78. Chs.

Main bundle

U. S. Deputy Surveyor.

Carl R. Gaudin

U. S. Deputy Surveyor.

BOO
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Observation for Latitude on the
6th St. Par. N., through Range
3 East.

Nov. 29, 1902, At the standard
cor. of secs 31 and 32, previously
described, I set off $21^{\circ}24\frac{1}{2}'$ S. on
the decl. arc; and at 11^h 48.3^m
a.m., h. m., observe the sun
on the meridian; the resulting
lat. is $35^{\circ}28'$ which is
correct.

40.

Carl R. Gaudle
U. S. Deputy Surveyor.

LIST OF NAMES. 31

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A list of the names of the individuals employed by

*Earl R.**Caudle & Marvin Caudle*

United States Deputy Surveyors to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the

Fifth Standard Parallel North through ranges five, eight, and nine east, and the sixth Standard Parallel north through range three east,

of the Gila and Salt River Base and Meridian, in the Territory of Arizona, showing the respective capacities in which they acted.

<i>Ellery Knowles</i>	.....	Chainman.
<i>John Gore, Jr.</i>	.....	Chainman.
<i>O. F. Stebbins</i>	.....	Chainman.
<i>Roy S. Scott</i>	.....	Chainman.
<i>Philip Hirz</i>	.....	Axman.
<i>A. H. Marshall</i>	.....	Axman.
<i>Willis E. Owen</i>	.....	Flagman.

32 FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Carl R. E. Marvin Caudle
 United States Deputy Surveyor, in surveying all those parts or portions
 of the Fifth Standard Parallel North through
ranges five, eight and nine East,
and the Sixth Standard Parallel
North through range three east.

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of the Gila and Salt River Base and Meridian, in the Territory of Ari-
 zona, as are represented in the foregoing field notes as having been sur-
 veyed 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 faith-
 fully surveyed, and the corner monuments established according to the
 instructions furnished by the United States Surveyor-General for
 Arizona.

Ellery Knowles Chainman.
W. J. [unclear] Chainman.
[unclear] Chainman.
Roy S. Scott Chainman.
Philip King Axman.
A. H. Marshall Axman.
Willis E. Owen Flagman.

Subscribed and sworn to before me this 6th day
 of December, 1902

Carl R. Caudle

U. S. Deputy ~~Surveyor~~ Notary Public.

Marvin Caudle

U. S. Deputy Surveyor

[SEAL.]

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR

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I, Carl R. Marvin Caudle, United States Deputy Surveyor, do solemnly swear that in pursuance of a contract received from Hugh A. Price, United States

Surveyor-General for Arizona, bearing date of the thirtieth day of June, 1902, 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 the Fifth Standard

Parallel North through range

five, eight, and nine east,

and the Sixth Standard Parallel

North through range three east.

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of the Gila and Salt River Base and Meridian, in the Territory of Arizona, as 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 perpetu-

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ated in strict accordance with the Manual of Surveying Instructions, the special 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 TRUE field notes of such survey; and should any fraud be detected I will suffer the penalty of perjury, under the provisions of an act of Congress approved August 8, 1846.

Carl R. Gaudle
Marvin Gaudle

U. S. Deputy Surveyor.

Subscribed and sworn to before me this 31st day
of December, 1902

J. M. Truston

Chief District Court

490b150-8-02



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