

BOOK 1493

1 No. 1

Completed

See Index

Field Notes

1493

OF THE SURVEY OF

Second Standard Parallel
S. through Ranges 19,
20, 25, 26 and part
of 32 East of

BOOK 1493

The

Gila and Salt River Base and Meridian

ARIZONA.

By J. B. McLaughlin D.S.

Under contract dated June 18th 1883.

Survey commenced Apr. 10 1884

Survey completed Apr. 2

1493

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Second Stan. Per. S. through
 R's 19 & 20 E. pp. 1 to 18 incl.
 R's 25 & 26 E. " 19 to 39 "
 R. 32 (free) " 40 to 45 "

For description of instrument
 and preliminary notes
 see Book "No 1."

Bet. Ps. 10 and 11 S.

31	32	R. 33	19	34	E. 35	36
9	10	11	12	14	15	
6	5	R. 4	20	3	2	1
31	32	33	34	35	36	
Triangulated pages 1 to 8.						
6	5	R. 4	25	3	2	1
31	32	33	34	35	36	
37	35	34	32	31	29	
6	5	4	3	2	1	
31	32	R. 33	26	34	E. 35	36
27	26	24	22	21	20	
6	5	4	3	2	1	
31	32	R. 33	32	34	E. 35	36
40	41	43	44	New Mexico.		
6	5	4	3	2	1	

Second Standard Par. South 1493

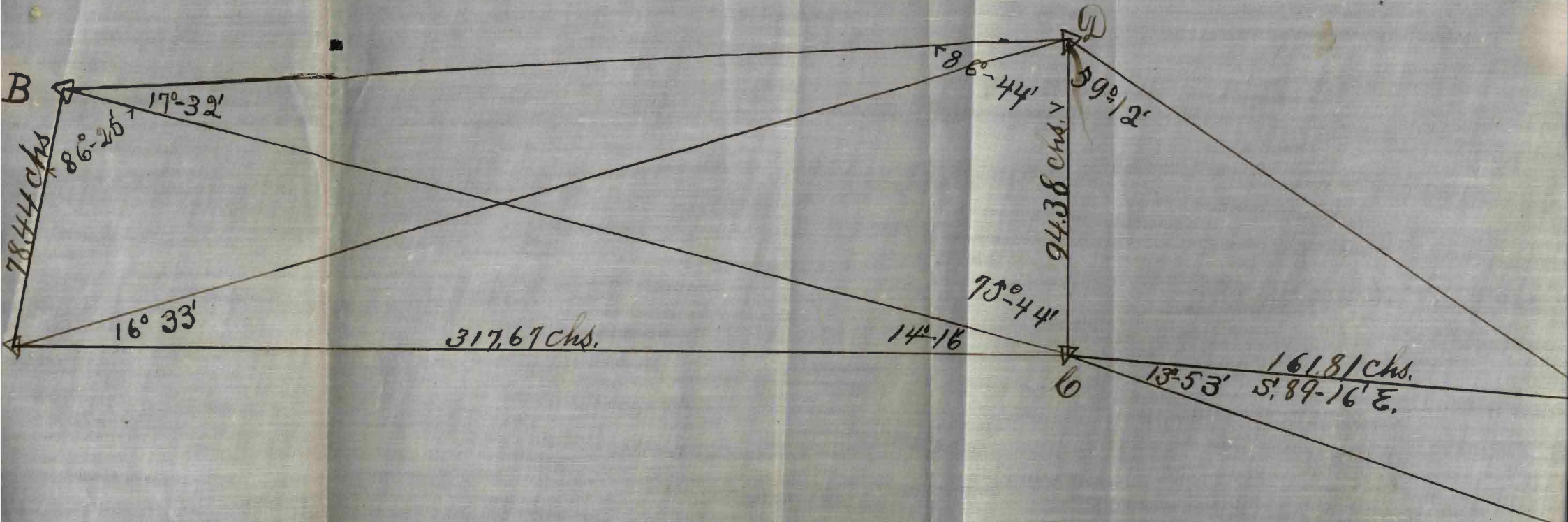
From the Stan^d cor.
to Ips. 10 S. R's. 18th & 19 E.
which is a granite stone
firmly set in the ground
marked with 6 notches
on N. E. & W with pits and
mound of earth alongside,
I run east on a Standard
line. At 5 miles 71.30 chs
reach a point a little
beyond the summit of
first mountain ridge, I
find the rest of the line
so broken by deep box
canons and high perpen-
dicular bluffs that the
closing on Ips. 10 S., R's 20th &
21 E can only be made
by extending the line
by triangulation
which I do in the

2A

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through Ranges 19 & 20 E.

following manner,
 reference being made to the
 accompanying diagram.
 At the 5th N. 20 ch. point
 on random line I set a
 stake firmly in a mound
 of stone for Sta. A and
 at a point due east
 on the summit of second
 and main mountain
 ridge Sta. C is established
 in a similar manner.

One north of Sta. C on
 the same Mt. ridge Sta.
 D is similarly established
 and flags placed on them.
 From Sta. A I measure
 a base AB along the east
 slope of 1st Mt. ridge
 and near the top as
 follows - Course $71^{\circ} 41' E$.

E'
E

A

Second Sta. Parallel South

to Sta B which is estob-
lished by cutting a pine
6 in diameter leaving
a stump 2 ft high for
Sta. B. The distance
AB is carefully measured,
twice with a Surveyors
chain in good condition
and once with a Chestermans
steel Tape and the mean
of the measurements,
regarding the Tape meas-
urement of equal value
with the two chain meas-
urements - thus

1 st Ch. meas.	78.44 Chs
2 ^d " "	78.438 "
Mean " "	78.439 "
Tape "	78.441 "
Tape & Ch. mean	= 78.44 "
which I regard as	

through Ranges 19 and 20 E.

the true length.

The following angles are then measured.

$$\angle A B C = 79^{\circ} 19', \angle C A D = 16^{\circ} 33'$$

$$\angle D B C = 17^{\circ} 32', \angle C B A = 86^{\circ} 25'$$

$$\angle B C A = 14^{\circ} 16', \angle B D C = 86^{\circ} 44'$$

AC and DC are the required sides.

In triangle ABC

$$AC = \frac{BC \sin \angle A B C}{\sin \angle A C B}$$

then by logs. -

$$\log BC = 1.894538$$

$$\log \sin \angle A B C = 9.999150$$

$$\text{a.c. } \log \sin \angle A C B = 0.608297$$

$$\log AC = 2.501985$$

$$\therefore AC = 317.67 \text{ chs.}$$

DC is independently computed from a formula deduced from the triangle

Second Stand Parallel South

about the given and
required sides - thus:

$$DC = \frac{AB \cdot \sin A \cdot \sin B}{\sin B \sin C + \sin A \sin C}$$

Then by logs.

$$\log AB = 1.894538$$

$$\log \sin A = 9.992406$$

$$\log \sin B = 9.478942$$

$$\text{a.c. } \log \sin C = .608297$$

$$\log \sin C = .000706$$

$$\log DC = 1.974889$$

$$\therefore DC = 94.38 + \text{ch}$$

Apr. 10th 11th & 12th 1884

From Stations D and C
a signal flag is easily
seen on the Standard
Cor. to Tps 10 S., R. 20 and
21 E. & therefore set a
flag on the cor. E and

through Ranges 19^{and} 20 E.

measure a line E, F at right angles to C E, a distance of 40 chs. in the same manner as AB as a check on the work. The following angles are then taken viz:

$\angle C, E = 90^{\circ} - 44'$, $\angle D, E = 59^{\circ} - 12'$ and $\angle E, C, F = 13^{\circ} - 53'$
The bearing of C E is S. $89^{\circ} - 16'$ E.

April 14th 1884

In triangle C D E
 $C E = \frac{DC \sin D}{\sin E}$

∴ $\log DC = 1.974886$
∴ $\log \sin D = 9.933973$
∴ $\log \sin E = 300156$
 $\log C E = 2.209015$
∴ $C E = 161.81$ chs

Second Stand Parallel South

and in triangle CEF
 $CE = \frac{EF}{\tan \angle CEF}$

$$\log EF = 1.602060$$

$$\log \tan \angle CEF = 9.392989$$

$$\log CE = 2.209071$$

$$CE = 161.81 + \text{chs.}$$

As the bearing of CE is $S 89^{\circ} 16' E$ the falling of the East line will be north of the standard cor. at Sta E , and equal to $CE \sin 44'$

$$\log CE = 2.209006$$

$$\log \sin 44' = 8.107167$$

$$\log \text{falling} = 3.16173$$

and a true line east from sta C to intersect line bet. R's. 20 & 21 E
 $= 2.07 \text{ chs} \div \tan 44'$
 $= 161.80 \text{ chs}$

through Ranges 19 and 20 E.

The closing will be
Random line = 471.20 chs.

AC = 317.67 "

CE = 161.80 "

at the dist. of 950.67 chs.

Therefore at 11 miles
70.67 chs reach a
point 207 chs North
of Stand. Cor to Tps.
10 S., Rs. 20 & 21 E.

This discrepancy 9.3 chs.
is thrown on the west
end of the line and
the true line is run
S. 89° 53' E as follows.
I return to the Stand.
Cor to Tps. 10 S., Rs. 18
and 19 E. previously
described and
run — — — — —

Second Stand, Parallel South
Chains

S. $89^{\circ}-53'$ E. on a true
line on S. by Sec 31
Va $14^{\circ}-00'$ E.

6.9X Dry Wash Course - N.W. 15 lks.
wide

8.10 Same " S.W. 15 lks.
wide

30.67 Set a Limestone $12 \times 8 \times 7$ ins
8 ins in the ground for Stand
 $\frac{1}{4}$ Sec. Cor. marked S.C. $\frac{1}{4}$ on
N. face and raised a
mound of stone alongside
file impracticable.

59.00 Enter dry wash 60 lks. wide
Course S.W.

67.00 Leave same - Source N.E.

70.67 Set a Malpais stone
 $14 \times 12 \times 8$ ins., 10 ins. in the
ground for Stand. Cor.
to Sect. 31 & 32 marked
S.C. with 1 notch on N.

70
 Through Range 19 East
 Chains

and 5 notches on E. edges,
 a raised mound of
 stone alongside. pits
 impracticable - Alt. 3500 ft
 Surface - Rolling -
 Soil 2^d rate
 1st rate grass -
 Dense catclaw and greasewood brush -

S. 89° 53' E. on true line on
 South by Sec. 32 -
 Va 14° 00' E.

- 40.00 Set a Volcanic stone 16x
 12x10 ins. 10 ins. in the ground
 for Stand. $\frac{1}{4}$ sec. cor. marked
 S.C. $\frac{1}{4}$ on N. face and raised
 a mound of stone alongside.
 pits impracticable -
- 80.00 Set a Sand stone 18x12x5 ins.
 12 ins. in the ground for

Second Sta. Parallel South
Chain

Sta. Con. to Secs 32^a & 33
marked S.E. with 2 notches
on W. and 4 notches on E.
edges and raised a mound
of stone along side - pits
impracticable. Alt. 3750 ft.

Surface - Rolling -
Soil - 2^d rate.

Good Grass -

Dense catclaw and Palo Verde
brush

S. $89^{\circ} 53' E.$ on true line on
South bdy. Sec. 33.

Va $14^{\circ} 00' E.$

Begin ascent toward
Mts.

27.00 Dry Wash 15 fts wide, Course
S.W.

40.00 Set a Limestone $16 \times 12 \times 5$ ins
10 ins in the ground for

through Range 19 East
 chains

8000 Stand. 4 sec. cor. marked
 S.C. 4 on N. face and
 raised a mound of stone
 alongside. pits impracticable
 Set a Malpais stone 14x12
 x 4 ins. 10 ins. in the ground
 for the Stand. Cor. to Sec.
 33rd and 34 marked with
 3 notches on E. and W.
 edges, and raised a
 mound of stone along
 side. pits impracticable.
 Altitude 4000 ft.
 Surface - Rolling
 Soil 2nd rate
 Good grass
 Dense outwash brush

N. 89° 53' E. on a true line
 on S. bdy Sec. 34
 Va. 14° - 00' E.

Second Stand. Parallel South
chains

- Ascending
- 32.00 Dry Wash 20 lks. wide,
Course S.W.
- 40.00 Set a Mochois stone 16 X 8
X 7 ins. 10 ins. in the ground
for Stand. $\frac{1}{4}$ Sec. Cor.
marked S.C. $\frac{1}{4}$ on N.
face and raised a mound
of stone alongside. pits
impracticable -
- 80.00 Set a Granite stone 17
X 13 X 7 ins 12 ins. in the
ground for Stand. Cor.
to Secs 34^{and} 35 marked
S.C. with 4 notches on N.
and 2 notches on E. edges
pits impracticable - Alt. 4450 ft.
Surface Rolling
Soil 2^d rate
Good grass -
Pine catclaw brush -

through Range 19 East
chains

S. $89^{\circ}-53'E$. on a true line
on S. bdy. Sec. 35
Va. $14^{\circ}-00'E$.

Ascend foot hills of
Galivuro Mts.

4500 Set a Malpais stone 28×16
 $\times 7$ ins 21 ins in the ground
for Stand. 4 sec. cor. marked
S.C. 4 on N. face and raised
a mound of stone alongside
pit's impracticable.

8000 Set a Malpais stone $16 \times 12 \times 8$ ins
10 ins. in the ground for the Stand.
Cor. to Secs. 35 & 36 marked S.C.
with 5 notches on N. and 1
notch on E. edges and raised
a mound of stone along
side. pit's impracticable.
Alt. 4900 ft.

Surface, broken & Mountainous
Sole 25 row.

Second Stand, Parallel South.

Good grass
 scattering catclaw, palo-
 verde and mesquite brush-

S. $89^{\circ}-53'E.$ on a true line
 on S. bdy Sec. 36-

Na $1^{\circ}-00^{\circ} E.$

3.00 Dry Wash 100 yds wide - Course
 G. R.

4.00 Begin ascent of main
 mountain of Galivero range

40.00 Set a volcanic rock 15×9
 $\times 6$ ins, 10 ins, in the ground
 for Stand $\frac{1}{4}$ sec. cor. marked
 S.C. $\frac{1}{4}$ on N. face and raised
 a mound of stone alongside.
 from which a pine 4 ins
 diam. bno. $7.58^{\circ} N. 8$ lbs. dist.
 marked $\frac{1}{4}$ S.C. B.T.

70.20 Top of first range of the
 Galivero Mts. bno. N. and S.

through Range 19 East

71.20

and descend - Alt. 6500 ft.
 A point on edge of bluff
 1.03 Chs. S. of sta. A on the
 random line beyond which
 it is impossible to establish
 the line, I therefore set a
 Granite ^{stone} 16x17x10 ins. 10 ins
 in the ground for witness
 cor. to Twp 10 S. R. 19 and 20 E.
 marked W. C. S. C. with 6
 notches on N. E. & W. edges
 and raised a mound of
 stone alongside -
 Surface Mountainous
 Soil 25 & 35 ran
 Grass 35 ran
 Oak brush - dense -
 Scattering pinon and
 cedar.
 April 16th 1884.

Second Stand Parallel South

General Description
This line begins in the heavy rolling country east of the San Pedro River and extends across the Galieno Mts. to Sulphur Spring valley. That portion of the line west of the Mountains goes through a country well adapted for grazing purposes as there is plenty of water on both sides in the San Pedro river on the W. and the creeks draining the west slope of the Galieno Mts. on the East. The mountains are well watered. About midway between Stas. A and C there is a swift flowing

Creek from 40 to 80 lbs.
wide, running south into
the San Pedro river and
draining that portion of
the mountains between
the ridges on which are
Stas. A and C. East of
Sta. C the drainage is into
the Sulphur Spring valley.
There is but little timber
of any value and that
on the East. slope.

Southwest of Sta. C about
a mile there is a small
mining camp - one, silver-

Second Stand. Parallel South

From the Stand cor. to
Tps. 10 S., R's. 24 and 25 E. which
is a post properly marked
set in a mound of stone,
I run east on a random
line. At 11 miles 77.9 Chs.
reach a point due north,
9.37 Chs, of the Standard
Cor. to Tps. 10 S. R's. 26 and 27
East, which is a granite
stone firmly set in the ground
properly marked with pits
E. W. & N. and mound of
earth alongside.

My correction will therefore
be 2.06 Chs N. per mile and
78 lbs. South per mile
and my return course
will be $71^{\circ} 89' - 27'$ N. on a
true line

OVER

through Range 26 East

N^{89°-27'} W. on true line
on N. bdy Sec 36

Va N^{13°-15'} E.

40.00 Set a Granite stone 16
x 11 x 5 ins. 10 ins in the ground
for Standard $\frac{1}{4}$ sec. cor.
marked S.C. $\frac{1}{4}$ on N. face,
dug pits 18x18x12 ins. E. & W.
of stone 5 $\frac{1}{2}$ ft. dist and
raised a mound of earth
1 $\frac{1}{2}$ ft. high 3 $\frac{1}{2}$ ft base
along side

80.00 Set a Granite stone 18x10
x 7 ins. 10 ins. in the ground for
Stand. cor. to Secs. 35 and
36 marked S.C. with 1 notch
on E. and 5 notches on W.
edges, dug pits 18x18x12
ins. E. & W. and N. of stone
5 $\frac{1}{2}$ ft. dist and raised
a mound of earth 2 ft.

Second Standard Parallel South

high $4\frac{1}{2}$ ft base alongside.
 Altitude 4100 ft
 Surface - rolling -
 Soil 1st rate
 Good grass
 Dense mesquite brush

$N. 89^{\circ} - 27' W.$ on a true line
 on S. bdy Sec. 35
 $N. 13^{\circ} - 15' E.$

31.0 Dry Wash 15 lbs. wide -
 Course N.E.

40.00 Set a Granite stone 14×10
 $\times 6$ ins. 10 ins. in the ground
 for standard $\frac{1}{4}$ Sec. cor.
 marked S.C. $\frac{1}{4}$ on N. face
 dug pits $18 \times 18 \times 12$ ins $E.$ and
 $W.$ of stone $0\frac{1}{2}$ ft. dist.
 and raised a mound of
 earth $1\frac{1}{2}$ ft high $3\frac{1}{2}$ ft
 base alongside -

Through Range 26 East
Chairs

- 61.20 Dry Wash 20 lks wide
Course N. E.
- 8000 Set a Granite stone 18x12
x6 ins. 12 ins. in the ground
for Standard Cor. to Secs
34 and 35 marked S. E.
with 2 notch on E. and
4 notches on N. edges and
raised a mound of stone
alongside. Site imprac-
ticable - Alt. 4800 ft.
Sand - Rolling,
Soil - 25 rate,
Good grass -
Dense catclaw brush

789-27' N. on true line
on S. by. Sec 34
Ta 130-15' E.

17x6 Wash 20 lks. wide course
N. E.

Second Stand. Parace South
chains

- 4:00 Set a Granite stone 14x10
x 8 ins. 10 ins in the ground for
Standard 1/2 sec. cor. marked
S.C. 4 on N. face, dug pits
18x18x12 ins E. and W. of stone
5 1/2 ft. dist. and raised a
mound of earth 1 1/2 ft. high
3/4 ft. base along side -
- 67.10 Dry Wash 20 lbs wide - Course
N.E.
- 75.80 Same Wash 25 lbs wide Course
N.E.
- 76:40 Wagon Road - bro. N. 45 S.
- 8:00 Set a Granite stone 16x12
x 8 ins. 10 ins in the ground
for Standard Cor. 1/2 Secs.
33 and 34 marked S.C.
with 3 notches on E. and
W. edges, dug pits 18x18x12
ins. E. N. W. of stone 5 1/2 ft.
dist. and raised a

through Range 26 E.

mound of earth 2 ft.
high 4 1/2 ft base along side.
Surface - rolling
Soil 2 1/2 ft

Dense catclaw & mesquite
brush -
Altitude 5000 ft.

N. 89° 27' N. magnetic line
on S. by Dec. 33
Va. 13° 15' E.

- 26.10 Dry wash 10 lbs. wide Course
South.
- 37.60 Dry wash, 10 lbs. wide, Course S.E.
- 40.00 Set a Granite Stone 14x12
x5 ins. 10 ins. in the ground
for Standard 1/2 Dec. cor.
marked S.C. 1/2 on N. face
and raised a mound of
stone alongside pits
impracticable.

Second Standard Parcel South

9.00 Enter track 15 lks. wide Course
S.E.

11.00 Leave same course S.E. & E

80.00 Set a granite stone 18x10x6
ins. 12 ins in the ground for
the Standard Cor. to Secs.
32 and 33 marked with
4 notches on E. and 1 notch
on W. edges dug pits 18x18
x12 ins E. W. & N. of stone
5 1/2 ft. dist and raised a
mound of earth 2 ft. high
4 1/2 ft. base alongside

Altitude 625 ft.

Surface rough & broken

Soil 20 rods

Grass 30 rods

Dense cattelaw brush

through Range 26 East
chains

N. 89° 27' N. on true line
on South bdy Sec 32.

to Va 13° 15' E.

600 Wash 10 lbs. wide Course N.E.

Ascend Mt ridge

4000 Marked the east face of
Syenite bluff with X and
S.C. 1/4 for Standard 1/4
sec. cor. and raised a
mound of stone on top of
bluff 5 1/2 ft. west of marks.

50.90 Top of Mt. ridge, bears
N.W. and S.E. Descend—

70.25 Dry wash 10 lbs wide, Course
S.E. Ascend—

80.50 Set a Granite stone 20
x 10 x 8 ins. 15 ins in the ground
for the standard Cor. to Secs.
31 and 32 marked with
5 notches on E. and 1
notch on W. edges and.

Second Stand Parcel South Chains

raised a mound of stone
alongside pits in prac-
tically N. 6000 ft.
Surface - Mountainous
Soil 3^d rate
Grass 3^d rate
Dense catclaw brush -

N 89° 27' W. on a true line on
South bdy Sec. 31
Va 13° 15' E

Ascending

1.00 Top Mt. ridge bnd W.E. & S.W.
Descend -

21.80 Foot. Dry Wash 15 lbs wide
Course N.W.

23.56 Indian trail bnd. N.W. & S.E.

32.80 Wash 10 lbs. wide, Course North.
and along north slope
of mountain -

40.00 Set a granite stone

through Range 26 East
chains

12 x 10 x 5 ins. 8 ins. in the ground
for Standard $\frac{1}{4}$ sec. cor.
marked S.C. $\frac{1}{4}$ on N. face
and raised a mound of stone
alongside. Pits impracticable.

78.70

Dry Wash 15 lks. wide, Course
North.

80.00

Set a granite stone 14 x 12
x 7 ins. 10 ins. in the ground for
the Standard Cor. to Tps. 10 S.
R's. 25 and 26 E. marked
S.C. with 6 notches on E. N.
and N. edges and raised
a mound of stone along
side, pits impracticable
Altitude 5700 ft.

Surface - Mountainous -
High range south of line
about 1 mile & parallel to the
line +.

Soil 2d rate.

Second Stand Parallel South

chains

Grass 3^d rate -
 Dense oak and catclaw
 brush. I carefully examined the
 adjustments of my solar transit
 today particularly the latitude and
 reversing apparatus and find
 them correct.

April 24th 1884

From the ^{stand} cor to Sp. 10 S. R's. 25
 and 26 E. just established by
 me I run $N 89^{\circ} 27' N$ on a
 true line on the
 South bdy. Sec. 36,
 Va 13'-15' E

Descend

26.75 Wash 20 lks wide, Course $N 10^{\circ} E$.
 Ascend

40.00 Set a granite stone 12x12
 x 6 ins 8 ins in the ground for
 standard $\frac{1}{4}$ sec. cor. marked
 S.C. $\frac{1}{4}$ on N. face and

through Range 25th East
Chains

61.00 raised a mound of stone
alongside. Pit impracticable
Top Mt ridge - brs. N.W.
and S.E. Altitude 6650 ft.

Descend

80.00 Set a Malpais stone
18x10x4 ins 12 ins in the ground
for the stand cor. to Secs. 35
and 36, marked S.E. with
1 notch on E. and 5 holes
on N. edges. and raised
a mound of stone along-
side. Pit impracticable -
Altitude 6300 ft.

Surface - Mountainous

Soil 2nd rate

Grass 3rd rate

Dense oak & cottonwood brush

Second Stand Parallel South chain

N 89° 21' N. on true line on
South bdy. Sec. 35 -
Va 13° - 15' E.
Descending along N.W. qtr.
slope

- 4.60 Creek 3 lks wide Course N. 10° W.
13.00 Creek 4 lks. wide Course N.W.
35.00 Creek 3 lks. wide Course North
40.00 Set a Granite stone 12 X 8
X 8 ins. 8 ins. in the ground
for standard $\frac{1}{4}$ Sec. cor.
marked S.C. $\frac{1}{4}$ on N. face
and raised a mound of
stone alongside. Pits
impracticable.
- 44.85 Creek 3 lks. wide, Course North
57.00 Creek 4 lks. wide Course North
80.00 Set a Granite stone
14 X 14 X 6 ins. 10 ins. in the
ground for the Standard
Cor. to Secs. 34 and 35

through Range 25 East
Chains

marked S.C. with 2 notches
on E. and 4 notches on W.
edges and raised a mound
of stone alongside. Pits
impracticable. Alt. 5900 ft.
Surface - Mountainous.
Soil 3d rate.
Grass 3d rate
Dense oak and catalpa
brush

N. 89° - 27' W. on a tree line
on South bdy. Sec. 3 & 4.
Va. 13° - 15' E.

Descending

- 10.00 Creek 4 lbs. wide Course North
12.00 Creek 5 lbs. wide Course North
24.80 Creek 3 lbs. wide Course North
and ascend
38.00 Top of Mt. ridge - one
N and South and

Second Standard Parcel South
chains

discoid

- 4.000 Set a granite stone 14
X 12 X 7 ins. 10 ins in the ground
for the Standard 1/4 Sec. cor.
marked S.C. on N. face and
raised a mound of stone
alongside. Pits impracticable
- 6.600 Creek 1/2 k wide Course North
- 7.2.20 Creek 4 lks. wide Course "
- 8.000 Set a granite stone 13 X 10 X 5
ins 5 ins in the ground for the
Stand. Cor to Secs 33 and
34 marked S.C. with
3 notches on E. & W. edges
and raised a mound
of stone alongside.
Pits impracticable
Altitude 5975 ft.
Surface - Mountainous
Soil - 3d rate
Dense oak & cedar brush

through Range 25th East
chain

N. 89°-27' W. on true line
on South bay. Sec. 33

Va 13°-15' E.

2.80

Wash 16 lbs. wide Course N.

24.20

Wash 15 lbs. wide Course N.

40.00

Set a granite stone
12x10x6 ins. 8 ins. in the ground
for the Standard $\frac{1}{4}$ Sec. Cor.
marked S.C. $\frac{1}{4}$ on N. face
and raised a mound of
stone alongside. Pits
impracticable

44.60

Dry Wash 20 lbs wide, Course
N. E. and ascend

8.00

Set a Granite Stone 14x10x6
ins. 10 ins in the ground for
the Standard Cor. to Secs.
32 and 33 marked S.C. with
4 notches on E. and 2 notches
on N. edges and raised
a mound of stone along-

Second Stand, Parallel South
Chains

side Pits impracticable
Altitude 6700 ft.
Surface - Mountainous
Soil 3^d rate.
Grass 3^d rate
Scattering oak -

N 89° 27' W. on a tree line
on the South bdy. Sec. 32
Va. 13° - 15' E.

Ascending

11.50 Top of Main range of
Craham Mts - the divide
between S. M. Simon and
Sulphur Spring valleys -
bny. N. & S. E. Descend
4000 Set a granite stone
20x20x16 ins 16 ins in the
ground for the Standard
by Sec. Cor. Marked
S. C. 4 on N. face

Through Range 25 East

Chains

and raised a mound of
stone alongside. Pits
impracticable.

- 4885 Creek 3 lks. wide. Course S.E.
6200 Creek 5 lks. wide Course S.E.
7790 Creek 4 lks. wide Course S.W.
8000 Set a granite stone 18
x 16 x 7 ins. 12 ins. in the ground
for Standard. Cor. to Secs
31 and 32 marked S.E.
with 5 notches on E.
and 1 notch on W. edge
and raised a mound
of stone alongside.
Pits impracticable.
Altitude 6300 ft.
Surface - Mountainous
Soil - 3^d rde
Grass 3^d rde
Scattering oak & piñon -

Second Standard Parallel South

N 89° 27' W. on a true line
on South side Sec. 31
Va. 13° - 15' E.

Descending -

2,000 Creek 6 ft wide Course South-
ascend

1950 Top of Mt. ridge - hrs N. & S.
descend

4,000 Set a Granite Stone
24 x 12 x 6 ins 16 ins in the
ground for Standard
N. Sec. Cor. marked S. E.
N on N. face and raised
a mound of stone
alongside. Pitts inprac-
ticable

4300 Wash 20 lbs. wide Course S. W.

45.60 Wash 20 lbs. wide Course S. W.

48.00 Wash 15 lbs. wide Course S. 10° W.

Ascend

6500 Top of ridge hrs N. & S.

through Range 25 East
Chains

7794 and descend—
The cor to Sp 10 S. R's.
24 and 25 E. Alt. 6175 ft.
Surface Mountainous
Soil 30 rate
Grass 20 rate
Scattering oak and
piñon trees.

I carefully examined the
adjustments of my solar
transit today particularly
the latitude and reversing
apparatus and find them
correct—

April 25th 1884

J

Genl. Description
The country along this
line is almost wholly
mountainous. There is
an abundance of water
and the facilities for
grazing are good. There is
no timber of value along
the line.

Second Standard Parallel South chains

From the Standard cor.
to Tps 10 S., R & 31st & 32^d E.
which is a Malpais stone
properly marked, firmly
set in the ground with pits
E. N. & W. of stone and
mound of earth alongside,
& rub

East on S. by Sec 31
Va. 13°-00' E.

Over broken rocky
surface

40.00 Set a Malpais stone 18x12
x10 ins. 12 ins. in the ground
for the Standard. W. sec. cor.
marked W.S.C. and raised
of stone alongside. Pits
impracticable

80.00 Set a Malpais stone 12x10
x6 ins. 8 ins. in the ground
for the Standard Cor.

through Range 32 E.

Notes

to Secs 31 and 32, marked
S.C. with 1 notch on W. and
5 notches on E. edges and
raised a mound of stone
alongside. Pits impracticable
Altitude 4800 ft.
Surface - Rough & broken
Soil 3/4 rot rocky
Grass 2/3 rot -
Dense catclaw & quercus
brush -

Cont. bdy. Sec. 32
Va. 13°-00' E.

4000 Set a Malpais stone 16x10
x6 ins, 10 ins in the ground for
standard 1/4 sec. cor. marked
S.C. 1/4 on N. face and
raised a mound of stone
alongside. Pits impracticable
8000 Set a Malpais stone

Second Standard Parcel South Main

18X12X10 ins, 12 ins, in the
 ground for Standard Cor.
 Its Sides 3 & 3 marked
 S.C. with 2 notches on N.
 and 4 notches on E. edges,
 dug pit 18X18X12 ins E.
 W & N. of stone $5\frac{1}{2}$ ft.
 dist. and raised a
 mound of earth 2 ft.
 high $4\frac{1}{2}$ ft. base along
 side alt. $\times 725$ ft
 Surface Broken
 Soil 30 rate
 Grass 20 rate
 Dense Catalpa and
 Greasewood brush.

I carefully examined the adjustments
 of my solar transit today partic-
 ularly the latitude & reversing apparatus
 and find them correct.

through Range 32 East
 21 Miles

East on S. by, Sec. 33
 Va. 13° 00' E.

4000 Set a volcanic stone 12 x 8
 x 6 ins 8 ins in the ground
 for the Standard & P.C. cor.
 marked S.C. 4 on N. face
 and raised a mound of
 stone alongside. Pile's unprac-
 ticable.

8000 Set a Malpais Stone 14
 x 12 x 8 ins. 10 ins in the ground
 for the Standard Cor. to
 Secs 33 and 34 marked
 S.C. with 3 notches on E.
 and W. edges dug pits
 18 x 18 x 12 ins. E. N. W. of stone
 5 1/2 ft. dist. and raised
 a mound of earth 2 ft.
 high 4 1/2 ft. base along
 side.
 Altitude 4675 ft.

Second Standard Parallel South
claims

Surface - nearly level
Soil 2d rate
Good grass -
scattering greasewood
and briar brush -

East on S. by Sec. 34
Va. 13°-00' E.

- 1.36 Intersect the Arizona
and New Mexico boundary
13.78 Chs South of the 309
mile cor which is a stone
firmly set in the ground
marked 309 on N. 32 W. L.,
on S. N. W. on E. & Ariz. on
W. with pits and mound
of earth -
Set a volcanic stone 18x17
x10 ins 12 ins in the ground
for closing cor. of Standard
marked P.C. Ariz on W.

through Range 32 East
Chains

S. C. on N. and N. M. on
East. ^{with 4 or 5 inches on N. and 6 inches on N. M. edge.} dug pits N. S.
and E. of stone 18X18X2 ins
5 1/2 ft. dist and raised
a mound of earth 2 ft.
high 1/2 ft. base along
side.

Surface Level
Soil 25 rats
Good grass
April 29th 1884

General Description -
This line runs through a
rocky malpais formation
entirely destitute of water.
The surface is broken
with level tracts interspersed.
The grazing qualities are
not of special value.

For final notes see
Book "No 4."

U. S. Surveyor General's Office,

Tucson, Arizona, July 21, 1884

The foregoing Field Notes of the Survey of the

Second Standard Parallel S. through
 Ranges 19, 20, 25, 26 + part of 32 East

Of the Gila and Salt River Base and Meridian, Arizona, execu-
 ted by J. B. McLaughlin

Deputy Surveyor, under his contract of the 18th

day of June, 1884, having been

critically examined and the necessary corrections and explana-
 tions made, the said Field Notes and the surveys they describe

are hereby approved

Royal A. Johnson
 Surveyor General.