

AA

BOOK "A" Exterior

4-679

2571

2450

BOOK 2450

FEB 4- 1914

FIELD NOTES

OF THE SURVEY OF THE

FIRST STANDARD PARALLEL NORTH, through RGS. 20, 21 and 22 W.

and the

SECOND STANDARD PARALLEL NORTH, through RGS. 19, 20 and 21 W.

Within the Colorado River Indian Reservation

Of the Gila and Salt River Base and Meridian,

In the State of Arizona

EXECUTED BY

GUY P. HARRINGTON

In the capacity of U. S. Surveyor, under instructions dated Nov. 23, 1910, Commissioner of the General Land Office to A. F. Dunnington issued by the ~~United States Surveyor General to govern surveys included in~~ Topographer in Charge

~~Group No.~~ ..., which were approved by the Commissioner of the General Land Office, 1911, pursuant to authority contained in the Act of Congress dated 1911

Survey commenced November 8, 1911

Survey completed December 4, 1911

First Standard Parallel North, through R.20 W.

Chains

Survey commenced Nov. 8, 1911, by Guy P. Harrington, U. S. Surveyor, and executed with Young & Sons light mountain transits, Nos. 8388 and 8394, with solar attachments. The horizontal limb is provided with two double verniers placed opposite each other reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The iron posts used in this survey are 3 ft. long and are set 26 ins. in the ground. The posts at section and 1/4 sec. cors. are 1 inch in diameter, and at township cors. 3 inches in diameter. Posts at section and 1/4 sec. cors. are pointed and driven, and those at township cors. are flanged and spread about 8 inches. All posts are filled with cement and fitted with brass caps.

on S.bdy. of T.5 N., R.20 W.

From the S.C. of secs. 32 and 33, on 1st Standard Parallel

N., which is a granite stone, 8x8x4 ins., above ground, mkd. S.C. on N., 4 notches on E., and 2 notches on W. faces, and witnessed by a mound of stone 3 ft. base, 2 ft. high, N., of cor., I run

West along the S. bdy. of sec. 32.

Over rolling, broken land.

Difference bet. measurements to the standard 1/4 sec. cor.

of sec. 32, by two sets of chainmen, is 2 lks.; position of cor.

By 1st set, 39.99 chs.

By 2nd set, 40.01 chs.; the mean of which is

40.00 Intersect the standard 1/4 sec. cor. of sec. 32, which is a granite stone, 10x8x6 ins., above ground, mkd. S.C. 1/4 on N. face, witnessed by a mound of stone to N.

40.90 Small wash, course N.

43.76 Intersect the old C.C. on the N. bdy. of the Colorado River Indian Reservation, which is a granite stone 8x6x6 ins. above ground, mkd. C.C. 20 W. on E. face,

First Standard Parallel North, through R.20 W.

Chains

S.C. 5 N., 6 notches on N. face, C.R.I.R. on W. face, and witnessed by a mound of stone to E. I destroy this cor.

44.12 Intersect the reservation bdy., as established by me, Feb. 12, 1912.

35.91 chs. N. 6° 36' E., of the 17 Mile Post.

Set an iron post 3 ft. long, 3 ins. dia., 26 ins. in the ground, for C.C. of sec. 32, with brass cap stamped

C C P L in E. half
S C T 5 N R 20 W S 32 in NW. quadrant
T 4 N 1912 in SW. quadrant
C R I R in W.
6 notches on N. and S. edges

Build a mound of stone 3 ft. base, 2 ft. high, E. of cor.

(See note bottom of page).

Thence in the Colorado River Indian Reservation.

56.00 Enter arroyo, course N. 40° W.

68.50 Leave arroyo, course N. 45° W.

75.00 Enter arroyo, course N. 45° W.

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 80.02 chs.
By 2nd set, 79.98 chs.; the mean of which is

80.00 Set an iron post for S.C. of secs. 31 and 32, with brass cap stamped

S C in N.
T 5 N S 32 in NE. quadrant
R 20 W S 31 in NW. quadrant
1911 in S.
5 notches on E. and 1 notch on W. edge,

from which

A palo verde 8 ins. dia. brs. N. 35° 45' W., 71 lks. dist.
Mkd. T 5 N R 20 W S 31 S C B T.

A palo fierro 8 ins. dia. brs. N. 62° 30' E., 128 lks. dist.
Mkd. T 5 N R 20 W S 32 S C B T.

Build a mound of stone 2 ft. base, 1½ ft. high, N. of cor.

Land, rolling, - barren.

Soil, stony, 3rd rate.

Scattered palo verde and palo fierro timber in arroyos.

Note: The C.C. on the Reservation bdy. was established by me on Feb. 12, 1912, since the reservation bdy. had not been established on Nov. 8, 1911, when the Standard Parallel was run by me.

Nov. 8, 1911.

First Standard Parallel North, through R. 20 W.

Chains

Nov. 8, 1911, At 9h 00m a.m., l.m.t., I set off 33° 43' on the lat. arc, 16° 22' S. on the decl. arc, and determine a meridian with the solar, at the S.C. of secs. 31 and 32, on the S. bdy. T. 5 N., R. 20 W., on 1st Standard Parallel N.

Thence I run

West along the S. bdy. of sec. 31.

Over rolling, broken land, continuing through arroyo.

2.00 Leave arroyo, course N. 45° W.

9.00 Enter arroyo, course N. 45° W.

25.75 Leave arroyo, course N. 15° W.

36.00 Small wash, course N.

38.00 Small wash, course N.

39.60 Small wash, course N.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 39.99 chs.

By 2nd set, 40.01 chs., the mean of which is

40.00 Set an iron post for the standard 1/4 sec. cor. of sec. 31, with brass cap stamped

S C 1/4 S 31 in N. half
1911 in S. half

Build a mound of stone 2 ft. base, 1 1/2 ft. high, N. of cor.

60.00 Small wash, course N.

65.00 Small wash, course N.

68.00 Small wash, course N.

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 79.98 chs.

By 2nd set, 80.02 chs.; the mean of which is

80.00 Set an iron post 3 ft. long, 3 ins. dia., 26 ins. in the ground, for S.C. of Tps. 5 N., Rgs. 20 and 21 W., with brass cap stamped

S C in N.
T 5 N R 20 W S 31 in NE. quadrant
R 21 W S 36 in NW. quadrant
1911 in S.
6 notches on N., E., and W. edges

First Standard Parallel North, through R. 20 W.

Chains

Dig pits 30x24x12 ins., crosswise on each line, E. and W., 4 ft., and N. of post, 8 ft. dist., and raise a mound of earth 5 ft. base, 2½ ft. high, N. of cor.

Land, rolling and broken, - barren.
Soil, stony, 3rd rate.
Timber, scattered palo verde and palo fierro in arroyo.

First Standard Parallel North, through R. 21 W.

From the S.C. of Tps. 5 N., Rgs. 20 and 21 W., I run West along the S. bdy. of sec. 36.

Over rolling, broken land.

6.00 Small wash, course N. 45° W.

10.00 Enter arroyo, course N.

26.00 Leave arroyo, course N.

31.75 Small wash, course N. 45° W.

39.00 Small wash, course N. 45° W.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 40.01 chs.

By 2nd set, 39.99 chs., the mean of which is

40.00 Set an iron post for standard ¼ sec. cor. of sec. 36, with brass cap stamped

S C ¼ S 36 in N. half
1911 in S. half

Dig pits 18x18x12 ins. E. and W. of post, and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.

44.50 Small wash, course N. 45° W.

53.75 Small wash, course N. 45° W.

59.50 Enter arroyo, course N. 45° W.

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 3 lks.; position of middle point

By 1st set, 80.01½ chs.

By 2nd set, 79.98½ chs., the mean of which is

80.00 Set an iron post for the S.C. of secs. 35 and 36, with brass cap stamped

First Standard Parallel North, through R. 21 W.

Chains

S C in N.
T 5 N S 36 in NE. quadrant
R 21 W S 35 in NW. quadrant
1911 in S.
1 notch on E. and 5 notches on W. edge,

from which

A palo verde 10 ins. dia. brs. N. 47° 15' W., 2.17 chs. dist.
Mkd. T 5 N R 21 W S 35 S C B T.
A palo fierro 8 ins. dia. brs. N. 82° E., 1.11 chs. dist.
Mkd. T 5 N R 21 W S 36 S C B T.

Dig pits 24x18x12 ins., crosswise on each line, E. and W., 3 ft., and N. of post 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of cor.

Land, rolling, - barren.
Soil, sandy and stony, 3rd rate.
Timber, scattered palo verde and palo fierro, and cactus.

Nov. 8, 1911. At the S.C. of secs. 35 and 36, I set off 16° 24½' S. on the decl. arc, and at 11h 43m 46s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 43', the proper lat.

Thence I run
West along the S. bdy. of sec. 35.
Over rolling, broken land.

1.00 Leave arroyo, course N. 45° W.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point
By 1st set, 39.99 chs.
By 2nd set, 40.01 chs., the mean of which is

40.00 Set an iron post for standard ¼ sec. cor. of sec. 35, with brass cap stamped

S C ¼ S 35 in N. half
1911 in S. half

Dig pits 18x18x12 ins. E. and W., 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point
By 1st set, 79.99 chs.
By 2nd set, 80.01 chs., the mean of which is

80.00 Set an iron post for the S.C. of secs. 34 and 35, with

First Standard Parallel North, through R. 21 W.

Chains

brass cap stamped

S C in N.
T 5 N S 35 in NW. quadrant
R 21 W S 34 in NW. quadrant
1911 in S.
2 notches on E. and 4 notches on W. edge

Dig pits 24x18x12 ins., crosswise on each line, E. and W., 3 ft., and N. of post 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of cor.

Land, rolling, - barren.
Soil, sandy and stony, 3rd rate.
Scattered palo verde and greasewood timber.

Nov. 9, 1911. At 9 a.m., l.m.t., I set off 33° 43' on the lat. arc, 16° 39½' S. on the decl. arc, and determine a meridian with the solar, at the S.C. of secs. 34 and 35.

Thence I run

West along the S. bdy. of sec. 34.

Over rolling, broken land.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 39.99 chs.
By 2nd set, 40.01 chs., the mean of which is

40.00 Set an iron post for standard ¼ sec. cor. of sec. 34, with brass cap stamped

S C ¼ S 34 in N. half
1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor, 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 80.01 chs.
By 2nd set, 79.99 chs.; the mean of which is

80.00 Set an iron post for S.C. of secs. 33 and 34, with brass cap stamped

First Standard Parallel North, through R. 21 W.

Chains

S C in N.
T 5 N S 34 in NE. quadrant
R 21 W S 33 in NW. quadrant
1911 in S.
3 notches on E. and W. edges

Dig pits 24x18x12 ins., crosswise on each line, E. and W., 3 ft., and N. of post 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of cor.

Land, rolling, - barren.
Soil, sandy and stony, 3rd rate.
Scattered oatilla, full distance.

From the S.C. of secs. 33 and 34, I run West along the S. bdy. of sec. 33. Over rolling land.

21.00 Leave mesa, brs. N. and S. Begin descent into bottom land.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 40.02 chs.
By 2nd set, 39.98 chs., the mean of which is

40.00 Set an iron post for standard $\frac{1}{4}$ sec. cor. of sec. 33, with brass cap stamped

S C $\frac{1}{4}$ S 33 in N. half
1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 79.98 chs.
By 2nd set, 80.02 chs., the mean of which is

80.00 Set an iron post for S.C. of secs. 32 and 33, with brass cap stamped

S C in N.
T 5 N S 33 in NE. quadrant
R 21 W S 32 in NW. quadrant
1911 in S.
4 notches on E. and 2 notches on W. edge

Dig pits 24x18x12 ins., crosswise on each line, E. and

First Standard Parallel North, through R. 21 W.

Chains

W., 3 ft., and N. of post 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of cor.

Land, rolling and broken, - barren.
Soil, sandy and stony, 2nd rate.
Scattered mesquite, 21.00 chs.

From the S.C. of secs. 32 and 33, I run West along the S. bdy. of sec. 32.

4.00 Foot of descent, enter rolling bottom land, brs. N. and S.
7.50 Road, brs. N. 45° W. and S. 45° E.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 39.99 chs.
By 2nd set, 40.01 chs., the mean of which is

40.00 Set an iron post for standard 1/4 sec. cor. of sec. 32, with brass cap stamped

S C 1/4 S 32 in N. half
1911 in S. half

Dig pits 18x18x12 ins. E. and W. of post, 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.

U.S.G.S. B.M., marked 286 ft., brs. S.21°10'W., 23.66 chs. dist.

43.40 Road, brs. N. and S.

44.00 Enter thick brush of arrow weed, and scattered mesquite.

48.00 Open slough of stagnant water, 50 lks. wide, brs. N. and S.

50.00 Open slough of stagnant water, 30 lks. wide, brs. N. and S.

74.25 Wire fence, brs. N. 50° W. and S. 50° E.

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 79.98 chs.
By 2nd set, 80.02 chs., the mean of which is

80.00 Set an iron post for S.C. of secs. 31 and 32, with brass cap stamped

First Standard Parallel North, through R. 21 W.

Chains

S C in N.
T 5 N S 32 in NE. quadrant
R 21 W S 31 in NW. quadrant
1911 in S.
5 notches on E. and 1 notch on W. edge

Dig pits 24x18x12 ins., crosswise on each line, E. and W., 3 ft., and N. of post, 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of cor.

Land, rolling (agricultural if irrigated).
Soil, sandy and adobe, 1st rate.
Brush, scattered mesquite and sage, full distance; dense arrow weed, 36.00 chs.

Nov. 9, 1911. At the S.C. of secs. 31 and 32, I set off 16° 42' S. on the decl. arc, and at 11h 43m 49s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 43', which is the proper lat.

Thence I run

West along the S. bdy. of sec. 31.

Over rolling land, through brush.

8.00 Open slough of stagnant water, 1.00 ch. wide, brs. N. and S. Enter overflow land.

17.25 Open slough of stagnant water, 60 lks. wide, brs. N. and S.

25.00 Open slough of stagnant water, 20 lks. wide, brs. N.10°E. and S.10°W.

32.00 Open slough of stagnant water, 50 lks. wide, brs. N. 75° E. and S. 75° W.

Difference bet. measurements of 39.18 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 39.20 chs.
By 2nd set, 39.16 chs., the mean of which is

39.18 Set an iron post 3 ins. in diam., for C.C. of Tps. 4 N., Rgs. 21 and 22 W., with brass cap stamped

C C 1911 in S.
T 4 N R 22 W S 1 in SW. quadrant
R 21 W S 6 in SE. quadrant
6 notches on S., E. and W. edges

Dig pits 30x24x12 ins., crosswise on each line, E. and

First Standard Parallel North, through R. 21 W.

Chains

W., 4 ft., and S. of post 8 ft. dist., and raise a mound of earth 5 ft. base, 2½ ft. high, S. of cor.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 40.02 chs.

By 2nd set, 39.98 chs., the mean of which is

40.00 Set an iron post for standard ¼ sec. cor. of sec. 31, with brass cap stamped

S C ¼ S 31 in N. half
1911 in S.

Dig pits 18x18x12 ins. N. and W. of post, 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.

45.50 Enter open slough of stagnant water, brs. N. and S.

48.00 Leave slough, brs. N. and S.

54.50 Enter slough of stagnant water, brs. N. 20° E. and S. 20° W.

57.00 Leave slough, brs. N. 20° E. and S. 20° W.

75.00 Open slough of stagnant water, 50 lks. wide, brs. N. and S.

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 80.03 chs.

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

80.00 Set an iron post 3 ins. dia., for S.C. of Tps. 5 N., Rgs. 21 and 22 W., with brass cap stamped

S C in N.
T 5 N R 21 W S 31 in NE. quadrant
R 22 W S 36 in NW. quadrant
1911 in S.

6 notches on N., E., and W. edges, from which

A willow 8 ins. dia. brs. N. 15° 20' W., 1.49 chs. dist.

Mkd. T 5 N R 22 W S 36 S C B T.

A willow 14 ins. dia. brs. N. 53° 45' W., 1.49 chs. dist.

Mkd. T 5 N R 22 W S 36 S C B T.

A willow 16 ins. dia. ~~brs.~~ brs. N. 88° 45' E., 3.21 chs. dist.

Mkd. T 5 N R 21 W S 31 S C B T.

A willow 12 ins. dia. brs. S. 53° 30' W., 2.14 chs. dist.

Mkd. S C B T.

Note: Additional B.T.s taken since the entire area in the vicinity of this cor., is subject to overflow.

Dig pits, 30x24x12 ins., crosswise on each line, E. and W., 4 ft., and N. of post, 8 ft. dist., and raise a mound of earth 5 ft. base, 2½ ft. high, N. of cor.

- 11 -

First Standard Parallel North, through R. 21 W.

Chains

Land, level, - grazing.
Soil, adobe, 2nd rate.
Timber, scattered mesquite and willow.
Brush, dense arrow weed.

First Standard Parallel North, through R. 22 W.

From the S.C. of Tps. 5 N., Rgs. 21 and 22 W., I run
West along the S. bdy. of sec. 36.

Over level land, through brush.

27.00 Enter open slough of stagnant water, brs. N. and S.

31.00 Leave slough, brs. N. and S.

Difference bet. measurements of 40.00 chs. by two sets of
chainmen is 2 lks.; position of middle point

By 1st set, 40.01 chs.

By 2nd set, 39.99 chs., the mean of which is

40.00 Set an iron post for standard $\frac{1}{4}$ sec. cor. of sec. 36,
with brass cap stamped

S C $\frac{1}{4}$ S 36 in N. half
1911 in S. half, from which

A willow 8 ins. dia. brs. N. 10° W., 0.47 chs. dist.

Mkd. S C $\frac{1}{4}$ S 36 B T.

A willow 8 ins. dia. brs. N. 48° W., 0.69 chs. dist.

Mkd. S C $\frac{1}{4}$ S 36 B T.

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,

and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high,

N. of cor.

Difference bet. measurements of 65.25 chs. by two sets
of chainmen is 2 lks.; position of middle point

By 1st set, 65.24 chs.

By 2nd set, 65.26 chs., the mean of which is

65.25 Set an iron post for standard M.C. of sec. 36, with
brass cap stamped

M C in W.

S C T 2 N R 22 W S 36 in N.

1911 in S.

6 notches on N. edge, from which

A willow 12 ins. dia. brs. N. 89° E., 87 lks. dist.

Mkd. T 2 N R 22 W S 36 S C M C B T.

Dig a pit 36x36x12 ins. 8 ft. E. of post, and raise a

mound of earth 4 ft. base, 2 ft. high, E. of cor.

- 12 -

First Standard Parallel North, through R. 22 W.

Land, level, - grazing. (Subject to overflow).
Soil, sandy and adobe, 2nd rate.
Timber, scattered mesquite, willow and cottonwood.
Brush, dense arrow weed.

Nov. 9, 1911.

Guy P. Harrington,
U. S. Surveyor.

- 13 -

Second Standard Parallel North, through R. 20 W.

Chains

Survey commenced Nov. 23, 1911, by Guy P. Harrington, U. S. Surveyor, and executed with a Young & Sons light mountain transit^{No. 8388} with solar attachment. The horizontal limb is provided with two double verniers placed opposite each other reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The iron posts used in this survey are 3 ft. long and are set 26 ins. in the ground. The posts at section and $\frac{1}{4}$ sec. cors. are 1 inch in diameter, and at township cors. 3 inches in diameter. Posts at section and $\frac{1}{4}$ sec. cors. are pointed and driven, and those at township cors. are flanged and spread about 8 inches. All posts are filled with cement and fitted with brass caps.

Nov. 28, 1911.

From the C.C. of T. 8 N., Rgs. 20 and 21 W., established this day when running the W. bdy. of T. 8 N., R. 20 W., and described in field notes of same, I run

West on a true line along the S. bdy. of sec. 31, turning 90° to the W. from the line brought up from the S.

There is no difference in the measurement of 39.20 chs. by two sets of chainmen; therefore at the theoretical distance

39.20 Set an iron post for the S.C. of T. 9 N., Rgs. 20 and 21 W., with brass cap stamped

S C in N.

T 9 N R 20 W S 31 in NE. quadrant

R 21 W S 36 in NW. quadrant

1911 in S.

6 notches on N., E., and W. edges, from which

A mesquite 10 ins dia. brs. N. 47° 30' E., 150 lks. dist.

Mkd. T 9 N R 20 W S 31 S C B T.

A mesquite 12 ins dia. brs. N. 79° 30' W., 345 lks. dist.

Mkd. T 9 N R 21 W S 36 S C B T.

Dig pits 30x24x12 ins. crosswise on each line, E. and

W., 4 ft., and N. of post, 8 ft. dist., and raise a

mound of earth 5 ft. base, 2 $\frac{1}{2}$ ft. high, N. of cor.

Land, gently rolling (agricultural if irrigated.)

Soil, sandy and adobe, 1st rate.

Timber, scattered mesquite.

Second Standard Parallel North, through R. 21 W.

Chains

Nov. 29, 1911. At a point 2.33 ft. South of the S.C. of T. 9 N., Rgs. 20 and 21 W., Lat. $34^{\circ} 04\frac{1}{2}'$ N., Long. $114^{\circ} 23'$ W., at 5h 42.5m p.m., l.m.t., I observe Polaris in position, and mark the line of sight on the ground, where I set a lath firmly in place.

U. C. Polaris, Nov. 29, 8h 57.6m p.m., l.m.t.

Time of observation 5h 42.5m p.m., l.m.t.

Hour Angle 3h 15.1m

Table VII of the Manual gives the corresponding azimuth $1^{\circ} 04.6'$ East.

Dec. 1, 1911. At 8.30 a.m., l.m.t., I turn off $1^{\circ} 04.6'$ to the West, and establish a meridian by setting a lath firmly in the ground. By test I find my line to be correct in bearing.

At this station (i.e., the point 2.33 ft. S. of the Standard Tp. cor.) I turn off from the meridian, an angle of $89^{\circ} 58.2'$ to the West, and run

N. $89^{\circ} 58'$ W. on the secant, S. of sec. 36.

Over gently rolling land, through scattered mesquite and arrowweed.

13.30 Dry slough, 25 lks. wide, brs. N. and S.

14.60 Road, brs. N. 40° W. and S. 40° E.

35.95 Dry drain, course S.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 40.02 chs.

By 2nd set, 39.98 " ; the mean of which is

40.00 N., 1.01 ft. from the secant,

Set an iron post for the standard $\frac{1}{4}$ sec. cor. of sec. 36, with brass cap stamped

S C $\frac{1}{4}$ S 36 in N. half
1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Second Standard Parallel North, through R. 21 W.

Chains

59.90 Dry wash, course S.

Difference in measurement of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 80.03 chs.

By 2nd set, 79.97 " ; the mean of which is

80.00 Set an iron post for the S.C. of secs. 35 and 36, with brass cap stamped

S C in N.

T 9 N S 36 in NE. quadrant

R 21 W S 35 in NW. quadrant

1911 in S.

1 notch on E. and 5 notches on W. edges

Dig pits 24x18x12 ins. crosswise on each line, E. and

W., 3 ft., and N. of cor. 7 ft. dist., and raise a mound

of earth 4 ft. base, 2 ft. high, N. of post.

Land, gently rolling. (Agricultural if irrigated.)

Soil, sandy and adobe, 1st rate.

Mesquite and arrow weed brush, 80.00 chs.

From the S.C. of secs. 35 and 36, I run

N. 89° 59' W. on the secant, through sec. 35.

Over gently rolling land, through scattered mesquite timber, and arrow weed brush.

27.05 Wash, course S.

29.60 Wash, course S.

34.82 Wash, course S.

Wire fence, brs. N. 45° W. and S. 45° E.

Difference in measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 39.99 chs.

By 2nd set, 40.01 " the mean of which is

40.00 0.79 ft. S. from the secant,

Set an iron post for the standard $\frac{1}{4}$ sec. cor. of sec. 35, with brass cap stamped

S C $\frac{1}{4}$ S 35 in N. half

1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,

and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high,

N. of cor.

- 16 -

Second Standard Parallel North, through R. 21 W.

Chains

53.15 Road, brs. N. 10° E. and S. 10° W.

76.20 Enter dense cottonwood timber.

Difference in measurements of 80.00 chs. by two sets of
chainmen is 4 lks.; position of middle point

By 1st set, 79.98 chs.

By 2nd set, 80.02 chs.; the mean of which is

80.00 S. 1.35 ft. from the secant,

Set an iron post for the S.C. of secs. 34 and 35, with
brass cap stamped

S C in N.

T 9 N S 35 in NE. quadrant

R 21 W S 34 in NW. quadrant

1911 in S.

2 notches on E. and 4 notches on W. edge,

from which

A cottonwood 12 ins. dia. brs. N. 28° 05' W., 29 lks. dist.

Mkd. T 9 N R 21 W S 34 S O B T.

A cottonwood 14 ins. dia. brs. N. 43° 15' E., 30 lks. dist.

Mkd. T 9 N R 21 W S 35 M O B T.

Dig pits 24x18x12 ins. crosswise on each line E. and

W., 3 ft., and N. of cor. 7 ft. dist., and raise a

mound of earth 4 ft. base, 2 ft. high, N. of cor.

Land, gently rolling. (Agricultural if irrigated).

Soil, sandy and adobe, 1st rate.

Timber, mesquite and cottonwood.

Brush, arrow weed.

From the S.C. of secs. 34 and 35, I run

N. 89° 59' W. on the secant through sec. 34.

Over gently rolling land, through dense cottonwood tim-

ber and arrow weed brush.

14.75 Wash, course S.

Difference in measurements of 40.00 chs. by two sets of
chainmen is 2 lks.; position of middle point

By 1st set, 40.01 chs.

By 2nd set, 39.99 " the mean of which is

40.00 S. 1.69 ft. from the secant,

Set an iron post for the standard $\frac{1}{4}$ sec. cor. of sec. 34,

with brass cap stamped

Second Standard Parallel North, through R. 21 W.

Chains

S C $\frac{1}{2}$ S 34 in N. half
1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,
and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
N. of cor.

I set up over the corner and continue my line with the
solar. The brush is so dense that difficulty is expe-
rienced in running a back and foresight line.

56.22 Left bank of Colorado River, course SW.

Set an iron post for Standard M.C. of sec. 34, with
brass cap stamped

S C M C in W.
T 9 N R 21 W S 34 in N.
1911 in S., from which

A cottonwood 14 ins. dia. brs. N. $77\frac{1}{2}^{\circ}$ E., 74 lks. dist.
Mkd. T 9 N R 21 W S 34 S C M C B T.

Dig a pit 36x36x12 ins. S ft. E. of cor., and raise a
mound of earth 4 ft. base, 2 ft. high, N. of post.

Land, level, - grazing.
Soil, sandy and adobe, 2nd rate.
Dense brush of arrow weed.

Second Standard Parallel North, through R. 20 W.

Dec. 2, 1911. At the S.C. of T. 9 N., Rgs. 20 and 21 W.,
I set off $21^{\circ} 52\frac{1}{2}'$ S. on the decl. arc, and at 11h 49m
12s a.m., l.m.t., observe the sun on the meridian; the
resulting lat. is $34^{\circ} 04\frac{1}{2}'$, the proper lat.

Thence I run

East on a true line along the S. bdy. of sec. 31.

Over gently rolling land, through scattered mesquite tim-
ber and arrow weed brush.

16.80 Wash, course S.

Difference in measurements of 20.00 chs. by two sets of
chainmen is 2 lks.; position of middle point

By 1st set, 19.99 chs.
By 2nd set, 20.01 chs.; the mean of which is

Second Standard Parallel North, through R. 20 W.

Chains	
20.00	<p>Set an iron post for Standard 1/16 sec. cor. No. 2, on S. bdy. of sec. 31 (W. 1/2) with brass cap stamped</p> <p style="text-align: center;">S C 1/16 S 35 in N. half No 2 1911 in S. half</p> <p>Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.</p>
21.85	Road, brs. N. 70° E. and S. 70° W.
28.50	Road, brs. N. 65° E. and S. 65° W.
32.15	Wash, course S. 65° W.
39.20	The C.O. of T. 8 N., R. 20 and 21 W.,
39.75	Road, brs. N. 75° E. and S. 75° W.
	<p>Difference in measurement of 40.00 chs. by 2 sets of chainmen is 4 lks.; position of middle point</p> <p style="text-align: center;">By 1st set, 39.98 chs. By 2nd set, 40.02 " ; the mean of which is</p>
40.00	<p>Set an iron post for the standard 1/4 sec. cor. of sec. 31, with brass cap stamped</p> <p style="text-align: center;">S C 1/4 S 31 in N. half 1911 in S. half</p> <p>Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.</p>
46.00	Road, brs. N. 40° E. and S. 40° W.
	<p>Difference in measurement of 60.00 chs. by two sets of chainmen is 4 lks.; position of middle point</p> <p style="text-align: center;">By 1st set, 59.98 chs. By 2nd set, 60.02 chs.; the mean of which is</p>
60.00	<p>Set an iron post for the standard 1/16 sec. cor. No. 1, on S. bdy. of sec. 31 (E. 1/2) with brass cap stamped</p> <p style="text-align: center;">S C 1/16 S 31 in N. half No 1 1911 in S. half</p> <p>Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.</p>
78.50	Wash, course S. 75° W.
	<p>Difference in measurement of 80.00 chs. by two sets of</p>

Second Standard Parallel North, through R. 20 W.

Chains

chainmen is 4 lks.; position of middle point

By 1st set, 79.98 chs.

By 2nd set, 80.02 chs.; the mean of which is

80.00 Set an iron post for the S.C. of secs. 31 and 32, with
brass cap stamped

S C in N.

T 9 N S 32 in NE. quadrant

R 20 W S 31 in NW. quadrant

1911 in S.

5 notches on N. and 1 notch on W. edge

Dig pits 24x18x12 ins. crosswise on each line E. and W.
3 ft., and N. of cor. 7 ft. dist., and raise a mound of
earth 4 ft. base, 2 ft. high, N. of cor.

Land, gently rolling. (agricultural if irrigated.)

Soil, sandy and adobe, 1st rate.

Scattered mesquite timber and arrow weed brush.

From the S.C. of secs. 31 and 32, I run

East on a true line along the S. bdy. of sec. 32.

Over gently rolling land, through scattered mesquite and
arrow weed brush.

Difference in measurement of 20.00 chs. by two sets of
chainmen is 0 lks., therefore at
standard

20.00 Set an iron post for $\frac{1}{16}$ sec. cor. No. 2, on S. bdy. of
sec. 32 (W. $\frac{1}{4}$) with brass cap stamped

S C $\frac{1}{16}$ S 32 in N. half

No 2 1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,
and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
N. of cor.

Difference in measurement of 40.00 chs. by 2 sets of
chainmen is 2 lks.; position of middle point

By 1st set, 40.01 chs.

By 2nd set, 39.99 chs.; the mean of which is

40.00 Set an iron post for standard $\frac{1}{4}$ sec. cor. of sec. 32,
with brass cap stamped

S C $\frac{1}{4}$ S 32 in N. half

1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,

Second Standard Parallel North, through R. 20 W.

Chains

and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.

50.00 Road, brs. N. 15° W. and S. 15° E.

Difference in measurement of 60.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 60.01 chs.
By 2nd set, 59.99 chs.; the mean of which is

60.00 Set an iron post for standard 1/16 sec. cor. No. 1, on S. bdy. of sec. 32 (E. 1/2) with brass cap stamped

S C 1/16 S 32 in N. half
No 1 1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.

Road, brs. N. 10° E. and S. 10° W.
Difference in measurement of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 80.01 chs.
By 2nd set, 79.99 chs.; the mean of which is

80.00 Set an iron post for S.C. of secs. 32 and 33, with brass cap stamped

S C in N.
T 9 N S 33 in NE. quadrant
R 20 W S 32 in NW. quadrant
1911 in S.
4 notches on E. and 2 notches on W. edge,

from which

A mesquite 10 ins. dia. brs. N. 53° 05' W., 168 lks. dist.
Mkd. T 9 N R 20 W S 32 S C B T.

Dig pits 24x18x12 ins. crosswise on each line E. and W. 3 ft., and N. of cor. 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of cor.

Land, level (agricultural if irrigated).
Soil, sandy and adobe, 1st rate.
Scattered brush of sage, mesquite and arrow weed, 80.00 chs.

From the S.C. of secs. 32 and 33, I run
East on a true line along the S. bdy. of sec. 33.
Over nearly level land, through scattered brush.

Second Standard Parallel North, through R. 20 W.

Chains

Difference in measurement of 20.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 19.99 chs.

By 2nd set, 20.01 chs.; the mean of which is

20.00 Set an iron post for Standard $1/16$ sec. cor. No. 2, on S. bdy. of sec. 33 ($W. \frac{1}{2}$) with brass cap stamped

S C $1/16$ S 33 in N. half
No 2 1911 in S. half

Dig pits $18 \times 18 \times 12$ ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth $3 \frac{1}{2}$ ft. base, $1 \frac{1}{2}$ ft. high, N. of cor.

27.00 Telephone line, brs. N. 40° E. and S. 40° W.

32.60 Slough of clear standing water brs. N., 50 lks. dist.

Difference in measurement of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 39.99 chs.

By 2nd set, 40.01 chs.; the mean of which is

40.00 Set an iron post for the Standard $\frac{1}{4}$ sec. cor. of sec. 33, with brass cap stamped

S C $\frac{1}{4}$ S 33 in N. half
1911 in S. half, from which

A mesquite 14 ins. dia. brs. N. $46^\circ 45'$ W., 87 lks. dist.
Mkd. S C $\frac{1}{4}$ S 33 B T.

Dig pits $18 \times 18 \times 12$ ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth $3 \frac{1}{2}$ ft. base, $1 \frac{1}{2}$ ft. high, N. of cor.

40.50 Road, brs. N. 25° W. and S. 25° E.

51.15 Road, brs. N. and S.

54.40 Road, brs. N. 15° E. and S. 15° W.

Difference in measurement of 60.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 59.98 chs.

By 2nd set, 60.02 chs.; the mean of which is

60.00 Set an iron post for standard $1/16$ sec. cor. No. 1, on S. bdy. of sec. 33, with brass cap stamped

S C $1/16$ S 33 in N. half
No 1 1911 in S. half, from which

Second Standard Parallel North, through R. 20 W.

Chains.

A mesquite 8 ins. dia. brs. N. 5° 00' E., 71 lks. dist.
Mkd. 1/16 S 33 S O B T.

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,
and raise a mound of earth 3½ ft. base, 1½ ft. high,
N. of cor.

67.00 Wash, course S. 40° W.

77.65 Wash, course S.

Difference in measurement of 80.00 chs. by 2 sets of
chainmen is 4 lks.; position of middle point

By 1st set, 80.02 chs.
By 2nd set, 79.98 chs.; the mean of which is

80.00 Set an iron post for S.C. of secs. 33 and 34, with brass
cap stamped

S O in N.
T 9 N S 34 in NE. quadrant
R 20 W S 33 in NW. quadrant
1911 in S.
3 notches on E. and 3 notches on W. edge,

from which

A mesquite 8 ins. dia. brs. N. 0° 15' W., 104 lks. dist.
Mkd. T 9 N R 20 W S 33 S O B T.

Dig pits 24x18x12 ins. crosswise on each line E. and W.
3 ft., and N. of cor. 7 ft. dist., and raise a mound of
earth 3½ ft. base, 1½ ft. high, N. of post.

Land, nearly level (agricultural if irrigated).
Soil, sandy and adobe, 1st rate.
Scattered mesquite, sage and arrow weed brush, 80.00 chs.
Dec. 2, 1911.

Dec. 4, 1911. At 8 a.m., l.m.t., I set off 34° 04½' on the
lat. arc, 22° 06½' S. on the decl. arc, and determine
a meridian with the solar, at the S.C. of secs. 33 and
34.

Thence I run

East on a true line along the S. bdy. of sec. 34.
Over gently rolling land, through scattered mesquite and
arrow weed.

1.70 Wash, course S.

Difference in measurement of 20.00 chs. by two sets of

Second Standard Parallel North, through R. 20 W.

Chains	
	<p>chainmen is 2 lks.; position of middle point</p> <p style="padding-left: 40px;">By 1st set, 19.99 chs. By 2nd set, 20.01 chs.; the mean of which is</p>
20.00	<p>Set an iron post for Standard 1/16 sec. cor. No. 2, on S. bdy. of sec. 34 (W. 1/4) with brass cap stamped</p> <p style="padding-left: 40px;">S C 1/16 S 34 in N. half No 2 1911 in S. half, from which</p> <p>A mesquite 10 ins. dia. brs. N. 11° 10' E., 50 lks. dist. Mkd. 1/16 S 34 S C B T.</p> <p>Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.</p>
23.65	Wash, course S.
26.35	Wash, course S. 65° W.
37.00	Road, brs. N. 50° E. and S. 50° W.
	<p>Difference in measurement of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point</p> <p style="padding-left: 40px;">By 1st set, 40.02 chs. By 2nd set, 39.98 chs.; the mean of which is</p>
40.00	<p>Set an iron post for standard 1/4 sec. cor. of sec. 34, with brass cap stamped</p> <p style="padding-left: 40px;">S C 1/4 S 34 in N. half 1911 in S. half</p> <p>Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.</p>
43.95	Old irrigation canal, brs. N. and S.
59.95	Road, brs. N. 55° E. and S. 55° W.
	<p>Difference in measurement of 60.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p> <p style="padding-left: 40px;">By 1st set, 59.99 chs. By 2nd set, 60.01 chs.; the mean of which is</p>
60.00	<p>Set an iron post for Standard 1/16 sec. cor. No. 1, on S. bdy. of sec. 34 (E. 1/4) with brass cap stamped</p> <p style="padding-left: 40px;">S C 1/16 S 34 in N. half No 1 1911 in S. half</p> <p>Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.</p>

Second Standard Parallel North, through R. 20 W.

Chains

Difference bet. measurement of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 80.02 chs.

By 2nd set, 79.98 chs.; the mean of which is

80.00 Set an iron post for S.C. of secs. 34 and 35, with brass cap stamped

S C in N.

T 9 N S 35 in NE. quadrant

R 20 W S 34 in NW. quadrant

1911 in S.

2 notches on E. and 4 notches on W. edge

Dig pits 24x18x12 ins. crosswise on each line, E. and W. 3 ft., and N. of cor. 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of post.

Land, gently rolling (agricultural if irrigated).
Soil, sandy and adobe, 1st rate.
Scattered mesquite, arrow weed, sage and alkali weed.

From the S.C. of secs. 34 and 35, I run East on a true line along the S. bdy. of sec. 35. Over gently rolling land, through scattered mesquite timber, and arrow weed and sage brush.

Difference in measurement of 20.00 chs. by two sets of chainmen is 0 lks.; therefore at

20.00 Set an iron post for Standard 1/16 sec. cor. No. 2, on S. bdy. of sec. 35 (W. 1/2) with brass cap stamped

S C 1/16 S 35 in N. half

No 2 1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 40.01 chs.

By 2nd set, 39.99 chs.; the mean of which is

40.00 Set an iron post for the Standard 1/4 sec. cor. of sec. 35, with brass cap stamped

S C 1/4 S 35 in N. half

1911 in S. half

Second Standard Parallel North, through R. 20 W.

Chains

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.

Difference in measurement of 60.00 chs. by 2 sets of chainmen is 4 lks.; position of middle point

By 1st set, 60.02 chs.

By 2nd set, 59.98 chs.; the mean of which is

60.00 Set an iron post for Standard 1/16 sec. cor. No. 1, on S. bdy. of sec. 35 (E.½) with brass cap stamped

S C 1/16 S 35 in N. half

No 1 1911 in S. half, from which

A mesquite 6 ins. dia. brs. N. 30° 30' W., 284 lks. dist.
Mkd. 1/16 S 35 S C B T.

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist., and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.

66.80 Road, brs. N. and S.

Difference bet. measurement of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 79.98 chs.

By 2nd set, 80.02 chs.; the mean of which is

80.00 Set an iron post for S.C. of secs. 35 and 36, with brass cap stamped

S C in N.

T 9 N S 36 in NE. quadrant

R 20 W S 35 in NW. quadrant

1911 in S.

1 notch on N. and 5 notches on W. edges,

from which

A mesquite 16 ins. dia. brs. N. 10° W., 5 lks. dist.
Mkd. T 9 N R 20 W S 35 S C B T.

Dig pits 24x18x12 ins. crosswise on each line E. and W. 3 ft., and N. of cor. 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of cor.

Land, gently rolling (agricultural if irrigated).
Soil, sandy, 2nd rate.
Scattered mesquite, sage and arrow weed, full distance.

From the S.C. of secs. 35 and 36, I run

Second Standard Parallel North, through R. 20 W.

Chains

East on a true line along the S. bdy. of sec. 36,
Over gently rolling land, through scattered mesquite and
sage brush.

Difference in measurement of 20.00 chs. by two sets of
chainmen is 2 lks.; position of middle point

By 1st set, 20.01 chs.

By 2nd set, 19.99 chs.; the mean of which is

20.00 Set an iron post for Standard 1/16 sec. cor. No. 2, on
S. bdy. of sec. 36 (W. $\frac{1}{2}$) with brass cap stamped

S C 1/16 S 36 in N. half
No 2 1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,
and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high,
N. of cor.

25.00 Leave bottom land. Begin ascent to mesa, brs. N. and S.

Difference bet. measurements of 40.00 chs. by two sets of
chainmen is 4 lks.; position of middle point

By 1st set, 39.98 chs.

By 2nd set, 40.02 chs.; the mean of which is

40.00 Set an iron post for Standard $\frac{1}{4}$ sec. cor. of sec. 36,
with brass cap stamped

S C $\frac{1}{4}$ S 36 in N. half
1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,
and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high,
N. of cor.

Difference bet. measurements of 60.00 chs. by two sets of
chainmen is 4 lks.; position of middle point

By 1st set, 60.02 chs.

By 2nd set, 59.98 chs.; the mean of which is

60.00 Set an iron post for Standard 1/16 sec. cor. No. 1, on S.
bdy. of sec. 36 (E. $\frac{1}{2}$) with brass cap stamped

S C 1/16 S 36 in N. half
No 1 1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,
and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high,
N. of cor.

Second Standard Parallel North, through R. 20 W.

Chains

70.00 Leave scattered mesquite timber. Enter level mesa.
 Difference bet. measurements of 80.00 chs. by two sets of
 chainmen is 4 lks.; position of middle point
 By 1st set, 80.02 chs.
 By 2nd set, 79.98 chs.; the mean of which is
 80.00 Set an iron post for S.C. of T. 9 N., Rgs. 19 and 20 W.,
 with brass cap stamped
 S C in N.
 T 9 N R 19 W S 31 in NE. quadrant
 R 20 W S 36 in NW. quadrant
 1911 in S.
 6 notches on N., E., and W. edges
 Dig pits 30x24x12 ins. crosswise on each line, E. and
 W., 4 ft., and N. of cor. 8 ft. dist., and raise a
 mound of earth 5 ft. base, 2½ ft. high, N. of post.
 Land, gently rolling, - grazing.
 Soil, sandy, 2nd rate.
 Scattered sage brush, and mesquite and greasewood timber.

Second Standard Parallel North, through R. 19 W.

Dec. 4, 1911. At the S.C. of T. 9 N., Rgs. 19 and 20 W.,
 I set off 22° 09½' S. on the decl. arc, and at 11h 49m
 58s a.m., l.m.t., observe the sun on the meridian; the
 resulting lat. is 34° 04½', the proper lat.

East on a true line along the S. bdy. of sec. 31.
 Over rolling land.

23.45 Wash, course S. 30° W.
 Difference bet. measurements of 40.00 chs. by two sets of
 chainmen is 4 lks.; position of middle point
 By 1st set, 39.98 chs.
 By 2nd set, 40.02 chs.; the mean of which is
 40.00 Set an iron post for Standard ¼ sec. cor. of sec. 31,
 with brass cap stamped
 S C ¼ S 31 in N. half
 1911 in S. half
 Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,

Second Standard Parallel North, through R. 19 W.

Chains

and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
N. of cor.

Difference bet. measurements of 80.00 chs. by two sets of
chainmen is 6 lks.; position of middle point

By 1st set, 79.97 chs.

By 2nd set, 80.03 chs.; the mean of which is

80.00 Set an iron post for S.C. of secs. 31 and 32, with brass
cap stamped

S C in N.

T 9 N S 32 in NE. quadrant

R 19 W S 31 in NW. quadrant

1911 in S.

5 notches on E. and 1 notch on W. edge

Dig pits 24x18x12 ins. crosswise on each line E. and W.
3 ft., and N. of cor. 7 ft. dist., and raise a mound of
earth 4 ft. base, 2 ft. high, N. of post.

Land, rolling, - barren; (agricultural if irrigated).
Soil, sandy, 2nd rate.
Scattered sage brush and greasewood timber.

From the S.C. of secs. 31 and 32, I run

East on a true line along the S. bdy. of sec. 32.

Over rolling mesa.

16.55 Wash, course N. 15° E.

Difference bet. measurements of 40.00 chs. by two sets of
chainmen is 4 lks.; position of middle point

By 1st set, 39.98 chs.

By 2nd set, 40.02 chs.; the mean of which is

40.00 Set an iron post for Standard $\frac{1}{4}$ sec. cor. of sec. 32, with
brass cap stamped

S C $\frac{1}{4}$ S 32 in N. half

1911 in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft. dist.,
and raise a mound of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
N. of cor.

55.50 A. T. & S. F. Ry. telegraph line, brs. N. $1^{\circ} 45'$ E. and
S. $1^{\circ} 45'$ W.

56.05 Middle of A. T. & S F Ry. track, bears S. $1^{\circ} 45'$ W.,
and N. $1^{\circ} 45'$ E.

Second Standard Parallel North, through R. 19 W.

Chains

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 79.97 chs.

By 2nd set, 80.03 chs.; the mean of which is

80.00 Set an iron post for S.C. of secs. 32 and 33, with brass cap stamped

S C in N.

T 9 N S 33 in NE. quadrant

R 19 W S 32 in NW. quadrant

1911 in S.

4 notches on E. and 2 notches on W. edges

Dig pits 24x18x12 ins. crosswise on each line, E. and

W., 3 ft., and N. of cor. 7 ft. dist., and raise a

mound of earth 4 ft. base, 2 ft. high, N. of cor.

Land, rolling mesa, - barren.

Soil, sandy, 2nd rate.

Scattered brush of sage and greasewood.

From the S.C. of secs. 32 and 33, I run

East on a true line along the S. bdy. of sec. 33.

Over rolling mesa land.

Difference bet. measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 40.01 chs.

By 2nd set, 39.99 chs.; the mean of which is

40.00 Set an iron post for Standard $\frac{1}{4}$ sec. cor., of sec. 33, with brass cap stamped

S C $\frac{1}{4}$ S 33 in N. half

191 $\frac{1}{4}$ in S. half

Dig pits 18x18x12 ins. E. and W. of cor. 3 ft., dist.,

and raise a mound of earth 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high,

N. of cor.

Difference bet. measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 79.99 chs.

By 2nd set, 80.01 chs.; the mean of which is

80.00 Set an iron post for S.C. of secs. 33 and 34, with brass cap stamped

Second Standard Parallel North, through R. 19 W.

Chains

S C in N.
 T 9 N S 34 in NE. quadrant
 R 19 W S 33 in NW. quadrant
 1911 in S.

3 notches on E. and 3 notches on W. edge

Dig pits, 24x18x12 ins., crosswise on each line, E. and W., 3 ft., and N. of post, 7 ft. dist.; and raise a mound of earth 4 ft. base, 2 ft. high, N. of cor.

Land, rolling mesa, - barren.
 Soil, sandy, 2nd rate.

 From the S.C. of secs. 33 and 34, I run

East along the S. bdy. of sec. 34.

Over level mesa.

Difference bet. measurements of 2.41 chs. is 0 lks.

2.41 Intersect the E. bdy. of the Colorado River Indian Reservation 37.03 chs. S. 18° 23' W. of the 43 Mile Post.

Set an iron post for Standard C.C. of sec. 34, with brass cap stamped

S C C C in W.
 T 9 N R 19 W S 34 in N.
 1911 in S.
 6 notches on N. and 6 on S. edge

Dig pits 30x24x12 ins. crosswise on each line, NE. and SW., 4 ft., and W. of post, 8 ft. dist., and raise a mound of earth 5 ft. base, 2½ ft. high, W. of cor.

Land, rolling mesa, - barren.
 Soil, sandy, 2nd rate.

Note: This tie was made on the reservation bdy. on March 20, 1912.

Dec. 4, 1911

Guy P. Harrington,

U. S. Surveyor.

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability,
Guy P. Harrington, U. S. Surveyor, during the periods and in the capacities
 stated opposite our several signatures, in surveying all those parts or portions of **the First Standard Parallel N., through Rgs. 20, 21 and 22 W., and the Second Standard Parallel N., through Rgs. 19, 20, and 21 W., within the Colorado River Indian Reservation**

of the **Gila and Salt River** Meridian, in the State of **Arizona**
 which are represented in the foregoing field notes as having been executed 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 executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
Earl G. Harrington	Nov. 1, 1911	Apr. 1, 1912	Instrumentman
A. O. Stinsen	Nov. 1, 1911	Apr. 1, 1912	Instrumentman
Louis G. Hurst	Nov. 1, 1911	Feb. 27, 1912	Chainman
Wm. Cert	Nov. 1, 1911	Feb. 27, 1912	Chainman
C. A. Simson	Nov. 1, 1911	Apr. 1, 1912	Chainman
R. P. Duffy	Nov. 1, 1911	Apr. 1, 1912	Chainman
E. W. Heagland	Nov. 1, 1911	Apr. 1, 1912	Axeman & Chainman
Chas. Bowman	Nov. 1, 1911	Apr. 1, 1912	Flagman, Chainman and Axeman
J. W. Redgers	Nov. 1, 1911	Apr. 1, 1912	Moundman
Clifford Mc Laughlin	Nov. 1, 1911	Apr. 1, 1912	Moundman
W. E. Rose	Nov. 1, 1911	Apr. 1, 1912	Axeman
Leonard Blodgett	Nov. 1, 1911	Apr. 1, 1912	Axeman & Flagman
Jahn Mc Alpin	Jan. 1, 1912	Apr. 1, 1912	Axeman
R. F. Henderson	Nov. 1, 1911	Jan. 18, 1912	Axeman
P. T. Henderson	Jan. 25, 1912	Apr. 1, 1912	Axeman
Robert Smith	Mar. 1, 1912	Apr. 1, 1912	Axeman
W. J. Walshe	Nov. 1, 1911	Apr. 1, 1911	Flagman
Arnold Emmens	Dec. 1, 1911	Dec. 26, 1911	Axeman

Subscribed and certified to before me on the dates of the final service as shown above.
Guy P. Harrington
 U. S. Surveyor.

3285
BOOK 2450

FINAL OATH OF UNITED STATES SURVEYOR.

I, Guy P. Harrington, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the ~~U. S. Surveyor General for~~ **Commissioner of the General Land Office to A.F. Dunnington, Topographer in Charge** bearing date of the 23rd day of November, 1910, I have well, faithfully, and truly,

in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the Colorado River Indian Reservation

of the Gila & Salt River Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed 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 U. S. Surveyor General for~~ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Guy P. Harrington
U. S. Surveyor.

Subscribed by said Guy P. Harrington, and sworn to before me }
this 9th day of July, 1912.



Fred C. Voight
County Clerk and Ex-Officio
Clerk of the 4th Judicial
District Court of the State
of Nevada, in and for the
County of Elko.

APPROVAL.

Commissioner of the General Land Office
~~OFFICE OF THE UNITED STATES SURVEYOR GENERAL,~~
Washington, D.C., Nov 24, 1913.

The foregoing field notes of the survey of the First Standard Parallel N., through Rgs. 20, 21 and 22 N., and the Second Standard Parallel N., through Rgs. 19, 20, and 21 West, Arizona (within the Colorado River Indian Reservation)

executed by Guy P. Harrington, U.S. Surveyor, under direction of A.F. Dunnington Topographer in Charge under his special instructions dated November 23, 1910, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

(Signed) Gray Tallman
~~U. S. Surveyor General~~
Commissioner of the General Land Office

I certify that the foregoing transcript of the field notes of the above-described surveys in Colorado River Indian Res'n, Ariz, has been correctly copied from the original notes on file in this office.

Gray Tallman
U. S. Surveyor General
Commissioner of the General Land Office

31A

BOOK 2450

Washington, D.C., January 31, 1913.

I hereby certify that the survey of the First Standard Parallel N., through Rgs. 20, 21 and 22 W., and the Second Standard Parallel N., through Rgs. 19, 20 and 21 W., within the Colorado River Indian Reservation, Arizona, was made under my direction and supervision, and to the best of my knowledge and belief the field work was executed in strict accordance with the special instructions given me, dated Nov. 23, 1910, and that these field notes are a correct representation thereof.

A. F. Drummington
Topographer in Charge.