

1860

Book "B"

BOOK 1860

# FIELD NOTES

OF THE SURVEY OF THE

① Eighth Standard Parallel North Thro. Rs. 9, 10,  
11 and 12 E.

1860

1860

Of the Gila and Salt River Base and Meridian,

AS SURVEYED BY

Philip Contzen, United States Deputy Surveyor,

Under his Contract No. 124, dated Dec. 12, 1905, 189

Survey commenced April 13th, 1905, 189

Survey completed April 18th, 1905, 189

William Kengla,	chairman
Fred Tagles,	chairman
George A. Hawley,	chairman
J. J. Kerrick,	chairman
Arthur Pogue	moundman
Manuel Salazar	axeman
James B. Boley	flagman

T. 33 N., R. 9					R. 10 E					R. 11 E					R. 12 E.									
31	32	33	34	35	36	31	32	33	34	35	36	31	32	33	34	35	36	31	32	33	34	35	36	
1	2	3	3	4	5	5	6	6	7	7	7	8	8	9	9	10	10	11	11	11	11	12	12	13

EIGHTH STANDARD PARALLEL NORTH.

*Meanders Page*.....

WE, William S. Kengla, Fred Tagles, George A. Hawley and J. J. Kerriell do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of the 8th Standard Parallel N. Rs. 9-10-11-12 E

W. S. Kengla, Chainman.  
Fred Tagles, Chainman.  
George A. Hawley, Chainman.  
J. J. Kerriell, Chainman.  
H. G. Power

Subscribed and sworn to before me this 20th day of March, 1895



WE, Arthur Pogue and do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of 8th Standard Parallel N, Rs 9-10-11 + 12 E

Arthur Pogue, Moundman.  
Moundman.

Subscribed and sworn to before me this 20th day of March, 1895



WE, Manuel Salazar and do solemnly swear that we will well and truly perform the duties of 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 8th Standard Parallel N, Rs. 9-10-11-12 E

Manuel Salazar, Axman.  
Axman.

Subscribed and sworn to before me this 20th day of March, 1895



I, James B. Baley, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of 8th Standard Parallel N, Rs 9-10-11-12 E

James B. Baley, Flagman.

Subscribed and sworn to before me this 20th day of March, 1895



H. G. Power

(1)

The Eighth Standard Parallel N. Thro. Rs. 9, 10, 11 & 12.  
Through R. 9 E.

Chs,

Survey commenced April 13th, 1905, and executed with a Young and Son's Light Mountain transit No. 5607 with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined, tested on the true meridian and duly approved by the Surveyor-General at Phoenix, Arizona.

I examine the adjustments of the instrument, and correct the level and collimation errors; then to test the Solar apparatus, by comparing its indications resulting from solar observations made during a. m., and p. m., hours, with a meridian determined by an observation on Polaris, I proceed as follows-

At the closing corner for Tp. 32 N., Rs. 8 and 9 E., just established by me this day, I set off  $36^{\circ} 13'$  N., on the lat. arc;  $9^{\circ} 04\frac{1}{2}'$  N., on the decl. arc, and at 3 hours, 32 minutes, p. m., l. m. t., by my watch which has correct l. m., t., determine with the Solar a meridian, and mark a point thereof on a stone firmly set in the ground 5 chs., N. of my station.

At 5 hours, 55 minutes, p. m., l. m. t., I observe Polaris at western elongation, in accordance with the instructions contained in the Manual and mark a point in the line thus determined, on a plug driven in the ground, 5 chs., N. of my station.

NOTE- The latitude  $36^{\circ} 13'$  N., set off above, was determined by setting off, at 12 O'clock noon, at the above closing corner on the parallel,  $9^{\circ} 04\frac{1}{2}'$  N., on the decl. arc and observing the sun on the meridian. The above latitude compares favorably with the calculated latitude for this station.

April 13th, 1905.

April 14th, 1905, at 6. 45' 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 cutting a small groove in the stone set April 13th, on which the meridian falls 0.45 ins., east of the mark determined by the solar.

At 7. 20 a. m., l. m. t., I set off  $36^{\circ} 13'$  N., on the Lat. arc;  $9^{\circ} 04\frac{1}{2}'$  N., on the Decl. arc, and mark a point in the true meridian determined with the solar, by a cross on the stone already set 5 chs., N. of my station; this mark falls 0.2 ins., east of the meridian established by the polaris observation.

From the above results, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8. 30 a. m., is  $14^{\circ} 41'$  E properly reduced as per instructions.

From the closing township corner to Tp. 32 N., Rs. 8 and 9 E., previously described in book of field notes of survey of the 2nd. Guide Mer. E. through Tp. 32 N., I run due EAST, and at 16.86 chs., I establish the Standard Corner to Tps. 33 N., Rs. 8 and 9 E., as follows-

Set a limestone, 20 x 8 x 5 ins., 15 ins., in the ground, marked

ST 33 N on the N

R 9 E on E and

R 8 E on W faces; with 6 grooves on

the N. E. and W. faces; dig pits, 30 x 24 x 12 ins., crosswise on each line, E. and W., 4 ft. and N. of stone 8 ft. dist., and raise a mound of earth 5 ft. base  $2\frac{1}{2}$  ft. high, N. of the corner.

Chs.	Thence I run, East, on the South boundary of Sec. 31. Over rolling land. Through dense canotillo brush.
24.00	Begin steep descent. Difference between measurements of 40. chs., by two sets of chainmen is 8 lks., position of middle point By 1st set, 39.96 <sup>v</sup> chs., By 2nd set, 40.04 <sup>v</sup> chs., the mean of which is
40.00	Set a limestone, 18 x 6 x 5 ins., 12 <sup>v</sup> ins., in the ground for standard 1/4 sec. cor. marked S. C. 1/4 on the N. face, and raise a mound of stones, 2 ft. base, 1 1/2 ft. high, N. of the corner. Pits impracticable.
58.50	Foot dry wash, 50 lks. wide, course easterly and ascend.
61.50	Top of ridge bears north-westerly and south-easterly and descend.
71.80	Foot.
76.00	Dry wash, 80 lks. wide, course S. easterly and ascend over sand-stone boulders and leave dense brush. Difference between measurements of 80. chs., by two sets of chainmen is 10 lks., position of middle point By 1st set, 79.95 <sup>v</sup> chs., By 2nd set, 80.05 <sup>v</sup> chs., the mean of which is
80.00	Set a limestone, 18 x 7 x 4 1/2 ins., 12 <sup>v</sup> ins., in the ground for the standard corner to secs. 31 and 32, marked with S. C. on the N.; with 1 groove on the W., and 5 grooves on the E. faces; and raise a mound of stones, 2 ft. base, 1 1/2 ft. high, N. of the cor. Pits impracticable. Land rolling and mountainous. Soil sandy and rocky; 3rd and 4th rate. No timber. Undergrowth canotillo brush. Mountainous or land covered with dense undergrowth 80.00 chs.
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	EAST, on the South boundary of Sec. 32. Over mountainous land. Ascending over sandstone boulders.
2.00	Top, bears north-westerly and south-easterly and des.
5.70	Foot.
12.00	Leave boulders and ascend steeper, through dense canotillo brush.
20.00	Top of ridge bears northerly and southerly and descend.
29.60	Trail bears N. W. and S. E. Difference between measurements of 40. chs., by two sets of chainmen is 10 lks., position of middle point By 1st set, 39.95 <sup>v</sup> chs., By 2nd set, 40.05 <sup>v</sup> chs., the mean of which is
40.00	Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for 1/4 sec. cor. marked 1/4 S. C on the N. face; raised a mound of stones, 2 ft. base, 1 1/2 ft. high, N. of the corner. Pits impracticable.
41.00	Descend steeply.
43.80	Foot, dry wash, 30 lks. wide, course southerly and ascend.
45.00	Top.
46.00	Descend.
48.00	Foot, and ascend.
49.00	Top, bears northerly and southerly and descend.
50.00	Foot and ascend.
55.13	Top bears northerly and southerly and descend.
61.00	Foot and ascend.
66.50	Top, bears northerly and southerly and descend.
70.00	Foot, thence over gently rolling land. Difference between measurements of 80. chs., by two sets of chainmen is 16 lks., position of middle point

Chs.	By 1st set, 79.92 chs.,
80.00	By 2nd set, 80.08 chs., the mean of which is Set a limestone, 18 x 7 x 5 ins., 12 ins., in the ground for the standard corner to secs. 32 and 33, marked S C on the N. with 2 grooves on the W., and 4 grooves on the E. faces; dig pits, 24 x 18 x 12 ins., crosswise on each line, E. and W. 3 ft. dist., and N. of stone, 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of the cor. Land mountainous and gently rolling. Soil, gravelly and rocky; 4th rate. No timber; undergrowth, canotillo brush. Mountainous, or land covered with dense undergrowth, 80.00 chs.,
	----- o -----
	EAST, on a true line on the south boundary of Sec. 33. Over gently rolling land. Through dense canotillo brush.
.20	Trail to Willow Springs, brs. north-westerly and south-easterly.
5.00	Descend gradually.
26.00	Leave dense brush, bears N. and S. and begin steep descent over large sand-stone boulders.
31.00	Foot and enter Badawa Canon, course easterly; thence along the S. bank of canon over rocks and boulders. Difference between measurements of 40. chs., by two sets of chainmen is 18 lks., position of middle point
	By 1st set, 39.91 chs.,
40.00	By 2nd set, 40.09 chs., the mean of which is Set a limestone, 17 x 6 x 5 ins., 11 1/2 ins., in the ground for the standard 1/4 sec. cor., marked S. C. 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist. and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the corner.
53.60	Dry creek, 60 lks. wide, course south-easterly and cross to the N. side of the canon.
72.00	Dry wash, 1 chain wide, course southerly. Difference between measurements of 80. chs., by two sets of chainmen is 14 lks., position of middle point
	By 1st set, 79.93 chs.,
80.00	By 2nd set, 80.07 chs., the mean of which is Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to secs. 33 and 34, marked with S C on the N. and 3 grooves on the E. and W. faces, raised a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of the corner. Pits impracticable. Land mountainous and gently rolling. Soil gravelly and rocky; 3rd and 4th rate. No timber; undergrowth canotillo brush. Mountainous or land covered with dense undergrowth, 80.00 chs.
	----- o -----
	EAST, on a true line on the south boundary of Sec. 34. In canon bed, over broken ground.
6.00	Leave canon and begin steep ascent of N. wall.
9.57	Top, bears north-westerly and south-easterly.
18.00	Descend.
22.00	Foot and ascend.
24.00	Top, bears N. W. and S. E. and descend.
27.00	Foot.
30.00	Ascend.
32.00	Top, bears N. W. and S. E. and descend. Difference between measurements of 40. chs., by two sets of chainmen is 16 lks., position of middle point
	By 1st set, 39.92 chs.,
	By 2nd set, 40.08 chs., the mean of which is

The Eighth Standard Parallel North, Through R. 8 E.  
 (Continued).

Chs.	
40.00	Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for Standard 1/4 sec. cor. marked S C 1/4 on the N., face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the cor.
41.00	Begin steep descend.
44.00	Foot, dry wash, 1 chain wide, course S. E.
51.00	Top, bears north-westerly and south-easterly.
60.00	Descend.
69.00	Foot, ascend.
75.00	Top bears north-westerly and south-easterly.
76.00	Descend.
	Difference between measurements of 80. chs., by two sets of chainmen is 14 lks., position of middle point By 1st set, 79.93 chs., By 2nd set, 80.07 chs., the mean of which is
80.00	Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to secs. 34 and 35, marked S C on the N., with 4 grooves on the W., and 2 grooves on the E. faces; raised a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of the cor. Pits impract. Land mountainous and broken. Soil gravelly and rocky; 4th rate. No timber. Mountainous land 70.00 chs.
	April 14th, 1905.
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	April 15th, 1905, at the above previously described corner, at 7 hours, 28 minutes, a. m., l. m. t., I set off 9° 41' N., on the decl. arc; 36° 13' N., on the lat. arc and determine a meridian with the solar; Thence I run, EAST, on a true line on the south boundary of Sec. 35. Over mountainous land.
5.60	Descending over large sand-stone boulders. Foot, deep gulch, 20 lks. wide, course north-easterly and ascent vertical 60 ft.; thence along S. bank.
15.00	Foot and enter canon, course easterly.
18.00	Begin steep ascent of N. wall of canon.
20.00	Top, bears north-westerly and south-easterly. Descend.
	Difference between measurements of 40. chs., by two sets of chainmen is 12 lks., position of middle point By 1st set, 39.94 chs., By 2nd set, 40.06 chs., the mean of which is
40.00	Set a limestone 17 1/2 x 6 1/2 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor., marked S. C. 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the corner.
41.50	Foot, and begin ascent of blue clay ridge.
45.50	Top bears north-westerly and south-easterly and des.
48.00	Foot and enter Willow Springs Valley, bears northerly and southerly.
56.00	Willow Creek (dry), 2 chs., wide, course southerly.
60.00	Road, from Willow's Springs to Lee's Ferry, brs., northerly and southerly.
62.00	Leave valley and ascend.
63.90	Trail bears N. and S.
66.00	Begin steep ascent.
68.30	Top bears N. and S. and descend.
75.00	Foot, branch, 10 lks. wide, clear water, course south-westerly and ascend.
79.00	Ascend sand-stone bluff, vertical 40 ft. Difference between measurements of 80. chs., by two sets of chainmen is 18 lks. position of middle point



(5)

The Eighth Standard Parallel N., Through R. 9 E.  
(Concluded).

Chs.	By 1st set, 79.91 chs.,
80.00	By 2nd set, 80.09 chs., the mean of which is Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to sections 35 and 36 marked S C on the N., with 5 grooves on the W., and 1 groove on the E. faces; and raised a mound of stones, 2 ft. base, 1 1/2 ft. high, N. of the cor. Pits impract. Land mountainous and level. Soil, gravelly and rocky; 3rd and 4th rate. No timber. Mountainous land 66.00 chs. ----- o -----
1.30	EAST, on a true line on the south boundary of sec. 36. Over mountainous land ascending. Ascend sandstone cliff (vertical) 70 ft., bears N. and S.
2.50	Descend.
5.00	Foot and begin steep ascent of sandstone cliffs.
19.14	Bench, 1 chain wide.
25.14	Top, bears northerly and southerly.
26.00	Begin descent through dense canotillo brush. Difference between measurements of 40. chs., by two sets of chainmen is 20 lks; position of middle point By 1st set, 39.90 chs., By 2nd set, 40.10 chs., the mean of which is
40.00	Set a limestone, 18 x 7 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor. marked S C 1/4 on the N face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of the corner. 46.00 Foot of descent, bears northerly and southerly. 47.00 Ascend sand ridge. 50.50 Top and descend. 59.00 Foot, leave dense brush, bears E. and W., thence over solid rolling sandstone. Difference between measurements of 80. chs., by two sets of chainmen is 14 lks., position of middle point By 1st set, 80.07 chs., By 2nd set, 79.93 chs., the mean of which is
80.00	Set a limestone 20 x 8 x 4 1/2 ins., 15 ins., in the ground, for standard township corner, marked S C T 33 N on N R 10 E on E R 9 E on W faces; with 6 grooves on the N., E. and W., faces; and raised a mound of stones, 2 ft. base, 1 1/2 ft. high, N. of the corner. Pits impract. Land mountainous. Soil, sandy and rocky; 4th rate. Mountainous, or land covered with dense undergrowth, 80.00 chains. ----- o -----

The Eighth Standard Parallel N., Through R. 10 E.

40.00	From the corner to Tps. 32 N., Rs. 9 and 10 E., just established and previously described, I run EAST, on a true line on the south boundary of sec. 31. Ascending over rolling sandstone. Difference between measurements of 40. chs., by two sets of chainmen is 12 lks., position of middle point, By 1st set, 39.94 chs., By 2nd set, 40.06 chs., the mean of which is Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor., marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W., 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2
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(6) The Eighth Standard Parallel North; Thro. R. 10 E.  
( continued ).

Chs. 73.50	ft. high, N. of the corner. Top of ascent bears N. and S., and begin steep descent over sandstone ridges and boulders. Difference between measurements of 80 chs., by two sets of chainmen is 16 lks., position of middle point By 1st set, 79.92 chs., By 2nd set, 80.08 chs., the mean of which is
80.00	Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to sections 31 and 32, marked S C on the N., with 1 groove on the W., and 5 grooves on the E. faces; and raise a mound of stones, 2 ft. base, 1 1/2 ft. high, N. of the cor. Pits impracticable. Land mountainous. Soil sandy and rocky; 4th rate. No timber. Mountainous land 80. chs.
	----- 0 -----
20.00	EAST, on a true line, on the south bdy. of sec. 32. Over mountainous land. Descending. Foot, bears north-erly and southerly; thence over rolling sandstone and sand ridges. Difference between measurements of 40. chs., by two sets of chainmen is 10 lks., position of middle point By 1st set, 40.05 chs., By 2nd set, 39.95 chs., the mean of which is
40.00	Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor., marked S C <del>1/4</del> on the N. face; dig pits, 18 x 18 x 12 ins.; E. and W. of stone, 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the cor. Difference between measurements of 80. chs., by two sets of chainmen is 12 lks., position of middle point By 1st set, 80.06 chs., By 2nd set, 79.94 chs., the mean of which is
80.00	Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to sections 32 and 33, marked S C on the N., with 2 grooves on the W., and 4 grooves on the E. faces; whence A cedar tree, 14 ins., in diam. brs. N. 43° E., 340 lks. dist. mkd. T 33 N R 10 E S 33° B T A cedar tree, 24 ins., in diam. brs. N. 8° W., 175 lks. dist., mkd. T 33 N R 10 E, S 32° B T No other trees within limits. Land rolling and mountainous. Soil sandy and rocky; 4th rate. Timber scattering cedar. Mountainous land 20. chs.
	April 15th, 1905.
	----- 0 -----
40.00	April 16th, 1905, at the corner just previously established and described by me, at 8 hours, 3 minutes, a. m., 1. m. t., I set off 36° 13' N., on the lat. arc; 10° 03' N., on the decl. arc, and determine a meridian with the solar. Thence I run, EAST, on a true line on the south bdy. of sec. 33. Over sand ridges; through scattering cedars. Difference between measurements of 40. chs., by two sets of chainmen is 8 lks., position of middle point By 1st set, 39.96 chs., By 2nd set, 40.04 chs., the mean of which is Set a limestone, 18 x 7 x 4 1/2 ins., 12 ins., in the ground for standard 1/4 sec. cor., marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the corner.

(7) The Eighth Standard Parallel North; Thro. R. 10 E.  
( Continued ).

<p>Chs.  80.00 80.00</p>	<p>Difference between measurements of 80. chs., by two sets of chainmen is 10 lks., position of middle point By 1st set, 39.95 chs., By 2nd set, 40.05 chs., the mean of which is Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to secs., 33 and 34, marked S C on the N., with 3 grooves on the E. and W. faces; dig pits, 24 x 18 x 12 ins., crosswise, on each line, E. and W., 3 ft. dist. and N. of stone 7 ft. dist; and raise a mound of earth, 4 ft. base, 2 ft. high, N. of the cor. Land gently rolling. Soil, sandy; 4th rate. Timber, scattering cedars.</p>	
<p>40.00</p>	<p>EAST, on a true line on the South boundary of Sec. 34. Over gently rolling sand dunes. Difference between measurements of 40. chs., by two sets of chainmen is 10 lks., position of middle point By 1st set, 39.95 chs., By 2nd set, 40.05 chs., the mean of which is Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor. marked S C 1/4 on the N. face; and raise a mound of stones, 2 ft. base, 1 1/2 ft. high, N. of the cor. Pits impracticable.</p>	
<p>80.00</p>	<p>Difference between measurements of 80. chs., by two sets of chainmen is 3 lks., position of middle point By 1st set, 80.04 chs., By 2nd set, 79.96 chs., the mean of which is Set a limestone, 20 x 8 x 5 ins., 15 ins., in the ground for standard section corner, marked S C on the N., with 4 grooves on the W., and 2 grooves on the E. faces; dig pits, 24 x 18 x 12 ins., crosswise on each line, E. and W., 3 ft. and N. of stone, 7 ft. dist. and raise a mound of earth, 4 ft. base, 2 ft. high, N. of the cor. Land rolling. Soil sandy; 4th rate. No timber.</p>	
<p>40.00</p>	<p>EAST, on a true line on the South boundary of Sec. 35. Over rolling land. Through dense canotillo brush. Difference between measurements of 40. chs., by two sets of chainmen is 8 lks., position of middle point By 1st set, 39.93 chs., By 2nd set, 40.04 chs., the mean of which is Set a limestone, 17 x 6 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor. marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W., 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the cor.</p>	
<p>80.00</p>	<p>Difference between measurements of 80. chs., by two sets of chainmen is 10 lks., position of middle point By 1st set, 79.95 chs., By 2nd set, 80.05 chs., the mean of which is Set a limestone, 18 x 7 x 6 ins., 12 ins., in the ground for standard corner to secs. 35 and 36, mkd. S C on the N. with 5 grooves on the W. and 1 groove on the E. faces; dig pits, 24 x 18 x 12 ins., crosswise on each line, E. and W., 3 ft. dist., and N. of stone 7 ft. dist. and raise a mound of earth 4 ft. base, 2 ft. high, W. of the corner. <i>Land rolling. Soil sandy 4th rate. No timber - dense undergrowth 20.00 chs.</i></p>	
<p>3.00 35.00</p>	<p>EAST, on a true line on the South boundary of Sec. 36. Over rolling sand dunes. Through dense canotillo brush. Wood road bears N. W. and S. E. Leave dense undergrowth bears easterly and south-westerly;</p>	

(8)

(Concluded).

The Eighth Standard Parallel N., Through R. 10 E.

chs. thence over solid rolling sand dunes.  
 Difference between measurements of 80.00 chs., by two sets of chainmen is 12 lks., position of middle point  
 By 1st set, 39.94 chs.,  
 By 2nd set, 40.06 chs., the mean of which is

40.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor., marked S C 1/4 on the N. face; raised a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of the corner.

60.00 Leave rolling sand-dunes, bears N. W. and S. E.  
 Difference between measurements of 80. chs., by two sets of chainmen is 8 lks., position of middle point  
 By 1st set, 39.96 chs.,  
 By 2nd set, 40.04 chs., the mean of which is

80.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the Standard Corner to Tps. 33 N., Rs. 10 and 11 E., marked  
 S C T 33 N on the N.  
 R 11 E on the E.  
 R 10 E., on the W. faces; with 6 grooves on the N., E., and W. faces; dig pits, 30 x 24 x 12 ins., crosswise of each line, E. and W. 4 ft. and N. of stone 8 ft. dist., and raise a mound of earth 5 ft. base, 2 1/2 ft. high, N. of the corner.  
 Land rolling.  
 Soil sandy and rocky; 4th rate.  
 No timber; undergrowth canotillo brush.  
 Dense undergrowth 35.00 chs.

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The Eighth Standard Parallel North, Through R. 11 E.

40.00 EAST, on a true line on the south boundary of Sec. 31. Over rolling sand dunes.  
 Difference between measurements of 40. chs., by two sets of chainmen is 10 lks., position of middle point  
 By 1st set, 39.95 chs.,  
 By 2nd set, 40.05 chs., the mean of which is

80.00 Set a limestone, 20 x 7 x 5 ins., 15 ins., in the ground for standard 1/4 sec. cor. marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base 1 1/2 ft. high, N. of the corner.  
 Difference between measurements of 80. chs., by two sets of chainmen is 8 lks., position of middle point  
 By 1st set, 39.96 chs.,  
 By 2nd set, 40.04 chs., the mean of which is

80.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to secs. 31 and 32, marked S C on the N. face, with 1 groove on the W., and 5 grooves on the E. faces; dig pits, 24 x 18 x 12 ins., crosswise, on each line, E. and W. 3 ft. dist., and N. of stone, 7 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of the corner.  
 Land rolling.  
 Soil sandy; 4th rate.  
 No timber.

O

40.00 EAST, on a true line on the south boundary of Sec. 32. Over rolling sand-dunes.  
 Difference between measurements of 40. chs., by two sets of chainmen is 10 lks., position of middle point  
 By 1st set, 39.95 chs.,  
 By 2nd set, 40.05 chs., the mean of which is

40.00 Set a limestone, 18 x 12 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor. marked S C 1/4 on the N. face;

(9)

## The Eighth Standard Parallel North, Through R. 11 E.

Chs. dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist. and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the corner.  
 Difference between measurements of 80 chs., by two sets of chainmen is 10 lks., position of middle point  
 By 1st set, 79.95 chs.,  
 By 2nd set, 80.05 chs., the mean of which is  
 80.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the corner to sections 32 and 33; marked S C on the N. face, with 2 grooves on the W., and 4 grooves on the E., edges; dig pits, 24 x 18 x 12 ins., crosswise, on each line, E. and W. 3 ft. dist. and N. of stone, 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of the corner.  
 Land rolling.  
 Soil, sandy; 4th rate.  
 No timber; undergrowth sage and canotillo brush.  
 Dense undergrowth 40.00 chs.

April 16th, 1905.

----- 0 -----  
 at 7h. 30m A.M.

April 17th, 1905- at the corner just previously set by me I set off 36° 13' N., on the lat. arc., and 10° 24' N., on the decl. arc and determine a meridian with the solar. Thence I run,  
 EAST, on a true line on the south boundary of Sec. 33.  
 Over rolling sand banks.  
 Through dense sage brush.  
 Difference between measurements of 40. chs., by two sets of chainmen is 10 lks., position of middle point  
 By 1st set, 39.95 chs.,  
 By 2nd set, 40.05 chs., the mean of which is  
 40.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor. marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone 3 ft. dist. and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of the corner.  
 Difference between measurements of 80. chs., by two sets of chainmen is 8 lks., position of middle point  
 By 1st set, 80.04 chs.,  
 By 2nd set, 79.96 chs., the mean of which is  
 80.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to sections 33 and 34, marked S C on the N. with 3 grooves on the E. and W. faces; dig pits, 24 x 18 x 12 ins., crosswise, on each line E. and W. 3 ft. dist., and N. of stone 7 ft., and raise a mound of earth 4 ft. base, 2 ft. high, N. of the Cor.  
 Land rolling.  
 Soil, sandy; 4th rate.  
 No timber; undergrowth; sage brush.  
 Dense undergrowth 80.00 chs.

----- 0 -----  
 EAST, on a true line on the south boundary of Sec. 34.  
 Over sand ridges.

27.00 Through dense sage brush.  
 Leave sand banks and sage brush; thence over sand-stone ledges and ridges.  
 Difference between measurements of 40. chs., by two set of chainmen is 14 lks., position of middle point  
 By 1st set, 39.93 chs.,  
 By 2nd set, 40.07 chs., the mean of which is  
 40.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard 1/4 sec. cor. to sec. 34, marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the cor.  
 Difference between measurements of 80. chs., by two sets of chainmen is 16 lks., position of middle point

(10)

## The Eighth Standard Parallel North; Through R. 11 E.

Continued

- Chs. By 1st set, 39.92 chs.,  
By 2nd set, 40.08 chs., the mean of which is
- 80.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to sections 34 and 35 marked with S C on the N. face and 4 grooves on the W. and 2 grooves on the E. faces; and raise a mound of stones, 2 ft. base, 1 1/2 ft. high, N. of the corner.  
Pits impract.  
Land mountainous and rolling.  
Soil, sandy and rocky; 3rd and 4th rate.  
No timber; undergrowth sage brush.  
Mountainous or land covered with dense undergrowth,  
80.00 chs.
- 0 -----
- EAST, on a true line on the south boundary of Sec. 35.  
Over rolling sand banks.  
Difference between measurements of 40. chs., by two sets of chainmen is 6 lks., position of middle point  
By 1st set, 39.97 chs.,  
By 2nd set, 40.03 chs., the mean of which is
- 40.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor. marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the corner.  
Difference between measurements of 80 chs., by two sets of chainmen is 8 lks., position of middle point  
By 1st set, 79.96 chs.,  
By 2nd set, 80.04 chs., the mean of which is
- 80.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to sections 35 and 36, marked S C with 5 grooves on the W. and 2 grooves on the E. faces; dig pits, 24 x 18 x 12 ins., crosswise, on each line, 4 ft. and N. of stone, 7 ft. dist., and raise a mound of earth 4 ft. base, 2 ft. high, N. of the corner.  
Land gently rolling.  
Soil, sandy; 4th rate.  
No timber.
- 0 -----
- EAST, on a true line on the south boundary of sec. 36.  
Over sandstone ridges.
- 28.00 Leave sandstone ridges; thence over rolling sand banks.  
Difference between measurements of 40. chs., by two sets of chainmen is 10 lks. position of middle point  
By 1st set, 39.95 chs.,  
By 2nd set, 40.05 chs., the mean of which is
- 40.00 Set a limestone, 18 x 5 x 6 ins., 12 ins., in the ground for standard 1/4 sec. cor. marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the cor.
- 80.00 Set a limestone, 20 x 8 x 5 ins., 15 ins., in the ground for the standard corner to Tp. 33 N., Rs. 11 and 12 E., marked  
S C T 33 N on the N.  
R 12 E on the E.,  
R. 11 on the W. faces; with 6 grooves on the N. E. and W. faces; dig pits, 30 x 24 x 12 ins., crosswise, on each line, E. and W. 4 ft., and N. of stone, 3 ft. dist. and raise a mound of earth 5 ft. base, 2 1/2 ft. high, N. of the Cor.  
Land mountainous and rolling.  
Soil sandy; rocky and 4th rate. No timber.  
Mountainous land 80.00 chs.  
Note- The difference between measurements of 80. chs. by two sets of chainmen to the sec. cor. pt. was 14 lks;  
By 1st set, 80.07 chs., By 2nd set, 39.93 chs.

(11)

## The Eighth Standard Parallel North, Through R. 12 E.

- Chs. From the Cor. to Tps. 33 N., Rs. 11 and 12 E., just previously established by me,  
I run,  
EAST, on a true line on the south boundary of Sec. 31.  
Over rolling sand.  
Through dense sage brush.  
Difference between measurements of 40.00 chs., by two sets of chainmen is 10 lks., position of middle point  
By 1st set, 40.05 chs.,  
By 2nd set, 39.95 chs., the mean of which is
- 40.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor. marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of the corner.  
Difference between measurements of 80. chs., by two sets of chainmen is 8 lks., position of middle point  
By 1st set, 79.96 chs.,  
By 2nd set, 80.04 chs., the mean of which is
- 80.00 Set a limestone, 20 x 7 x 5 ins., 15 ins., in the ground for standard corner to secs. 31 and 32, marked S C on the N., with 1 groove on the W., and 5 grooves on the E. faces; dig pits, 24 x 18 x 12 ins., crosswise, on each line, 3 ft. dist., and N. of stone 7 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of the corner.  
Land rolling.  
Soil sandy; 4th rate.  
No timber; undergrowth sage and canotillo.  
Dense undergrowth; 80.00 chs.
- 
- EAST, on a true line on the South boundary of Sec. 32.  
Over rolling land.  
Through dense sage brush.  
Difference between measurements of 40. chs., by two sets of chainmen is 8 lks., position of middle point  
By 1st set, 39.96 chs.,  
By 2nd set, 40.04 chs., the mean of which is
- 40.00 Set a limestone, 18 x 6 x 5 1/2 ins., 12 ins., in the ground for standard 1/4 sec. cor., marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of the cor.  
Difference between measurements of 80.00 chs., by two sets of chainmen is 6 lks., position of middle point  
By 1st set, 79.97 ch.,  
By 2nd set, 80.03 chs., the mean of which is
- 80.00 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to sec. 32 and 33, marked S C on the N., with 2 grooves on the W., and 4 grooves on the E. faces; dig pits, 24 x 18 x 12 ins., crosswise, on each line, 3 ft. dist., and N. of stone, 7 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of the corner.  
Land rolling.  
Soil, sandy; 4th rate.  
No timber; undergrowth sage brush.  
Dense undergrowth 80.00 chs.
- April 17th, 1905.
- o
- April 18th, 1905- At the corner just previously set and described by me I set off  $36^{\circ} 13' N.$ , on the lat arc,  $10^{\circ} 45' N.$ , on the decl. arc, and at 7 hours, 28 1/2 minutes, a. m., l. m. t., I determine a meridian with the solar. Thence I run,  
EAST, on a true line on the south boundary of Sec. 33.  
Over rolling land.  
Through dense sage brush.

(12)

The Eighth Standard Parallel North, Through R. 12 E.  
Continued.

Chs.	Difference between measurements of 80.00 chs., by two sets of chainmen is 10 <sup>1</sup> / <sub>2</sub> lks., position of middle point
40.00	<p>By 1st set, 39.95 chs., By 2nd set, 40.05 chs., the mean of which is</p> <p>Set a limestone, 18 x 6 x 5 ins., 12<sup>1</sup>/<sub>2</sub> ins., in the ground for 1/4 sec. cor. marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the corner.</p>
80.00	<p>Difference between measurements of 80. chs., by two sets of chainmen is 8<sup>1</sup>/<sub>2</sub> lks.; position of middle point, By 1st set, 80.04 chs., By 2nd set, 79.96 chs., the mean of which is</p> <p>Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for the standard corner to secs. 33 and 34, marked S C on the N., with 3 grooves on the E. and W. faces; dug pits, 24 x 18 x 12 ins., crosswise, on each line, E. and W., 3 ft. and N. of stone, 7 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of the corner.</p> <p>Land rolling. Soil, sandy; 4th rate. No timber; undergrowth sage brush. Dense undergrowth; 80.00 chs.</p>
28.36	<p style="text-align: center;">----- 0 -----</p> <p>EAST, on a true line on the south boundary of Sec. 34. Over rolling land; through dense sage brush. Road bears north-easterly and south-westerly. Difference between measurements of 40. chs., by two sets of chainmen is 8 lks., position of middle point</p>
40.00	<p>By 1st set, 40.04 chs., By 2nd set, 39.96 chs., the mean of which is</p> <p>Set a limestone, 18 x 6 x 5 1/2 ins., 12 ins., in the ground for standard 1/4 sec. cor., marked S C 1/4 on the N., face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, N. of the cor.</p>
42.00	<p>Leave dense sage brush, bears easterly and westerly; house bears about 25 chs. N. Difference between measurements of 80. chs., by two sets of chainmen is 4<sup>1</sup>/<sub>2</sub> lks., position of middle point, By 1st set, 79.98 chs., By 2nd set, 80.02 chs., the mean of which is</p>
80.00	<p>Set a limestone, 20 x 7 x 4 ins., 15 ins., in the ground for the standard corner to sections 34 and 35, marked S C on the N. with 4 grooves on the W. and 2 grooves on the E. faces; dug pits, 24 x 18 x 12 ins., E. and W. 3 ft. dist., crosswise on each line, and N. of stone, 7 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of the cor.</p> <p>Land gently rolling. Soil, sandy and rocky; 4th rate. No timber; undergrowth sage brush. Dense undergrowth; 42.00 chs.</p>
40.00	<p style="text-align: center;">----- 0 -----</p> <p>EAST, on a true line on the south boundary of Sec. 35. Over gently rolling land. Difference between measurements of 40. chs., by two sets of chainmen is 8<sup>1</sup>/<sub>2</sub> lks., position of middle point By 1st set, 40.04 chs., By 2nd set, 39.96 chs., the mean of which is</p> <p>Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground for standard 1/4 sec. cor. marked S C 1/4 on the N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist. and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of the cor.</p> <p>Difference between measurements of 80. chs., by two sets of chainmen is 6<sup>1</sup>/<sub>2</sub> lks., position of middle point</p>



( Concluded. )

(13)

## The Eighth Standard Parallel North, Through R. 12 E.

Chs.

80.00

By 1st set, 79.97 chs.,  
 By 2nd set, 80.03 chs., the mean of which is  
 Set a limestone, 18 x 6 x 5 ins., 12 ins., in the ground  
 for the standard corner to secs. 35 and 36, marked  
 S C on the N., with 1 groove on the E., and 5 grooves  
 on the W. faces; dig pits, 24 x 18 x 12 ins., crosswise,  
 on each line, E. and W., 3 ft. dist., and N. of stone  
 7 ft. and raise a mound of earth 4 ft. base, 2 ft. high,  
 N. of the cor.  
 Land gently rolling.  
 Soil, sandy; 4th rate.  
 No timber.

----- O -----  
 EAST, on a true line on the south boundary of Sec. 36.  
 Over gently rolling land.  
 Difference between measurements of 40. chs., by two  
 sets of chainmen is 10 lks., position of middle  
 point

40.00

By 1st set, 40.05 chs.,  
 By 2nd set, 39.95 chs., the mean of which is  
 Set a limestone 18 x 6 x 5 ins., 12 ins., in the ground  
 for standard 1/4 sec. cor. marked S C 1/4 on the N.  
 face; dig pits, 18 x 18 x 12 ins., E. and W. of stone,  
 3 ft. dist., and raise a mound of earth, 3 1/2 ft.  
 base, 1 1/2 ft. high, N. of the cor.  
 Difference between measurements of 80. chs., by two  
 sets of chainmen is 8 lks., position of middle point

80.00

By 1st set, 80.04 chs.,  
 By 2nd set, 79.96 chs., the mean of which is  
 Set a limestone, 20 x 7 x 5 ins., 15 ins., in the  
 ground for the standard cor. to Tps. 33 N., Rs. 12  
 and 13 E., marked  
 S C T 33 N on the N.,  
 R 13 E on the E.,  
 R 12 E on the W. faces; with 6 grooves on the N.  
 E. and W. faces; dig pits, 30 x 24 x 12 ins., crosswise,  
 on each line, E. and W. 4 ft. and N of stone 8 ft.  
 dist. and raise a mound of earth, 5 ft. base, 2 1/2  
 ft. high, N. of the Cor.  
 Land rolling.  
 Soil sandy and rocky; 4th rate.  
 No timber.

x  
 April 18th, 1905.

----- O -----  
 General Description.

Through Rs. 9 and 10 E., this line runs across  
 sandstone cliffs and over deep rocky canons, which sand-  
 ridges and sandstone ledges are traversed through Rs.  
 11 and 12. There are scattering cedars in R.s 9 and 10.  
 There is no water on the line except a spring  
 branch in R. 9 E. The soil is mostly sand and sand  
 stone and there is very little grass.

NOTE- In the survey of this standard neither  
 the tangent or secant method was employed for the  
 reason that the line was projected from true meridians deter.  
 at intervals of from 15 to 20 chs., along the line of  
 survey.

*Philip Conzen*  
 U. S. Deputy Surveyor

April 18, 1905.

x At this Cor. at noon I set off 10° 48' N. on the  
 decl. arc, and observe the sun on the meridian, the  
 resulting lat. being 36° 13' N.

LIST OF NAMES.

A list of the names of the individuals employed by

*Philip Cantzen*

United States Deputy Surveyor, to assist in running, measuring, and

marking the lines and corners described in the foregoing field notes of the survey of

*the 8<sup>th</sup> Standard Parallel N, Rs. 9-10-11-12 E*

showing the respective capacities in which they acted:

*William S. Kengla*, Chainman.

*Fred Tagles*, Chainman.

*George A. Hawley*, Chain Moundman.

*J. J. Kerriek*, Chain Moundman.

*Arthur Pogue*, Moundman Axman.

*Manuel Salazar*, Axman.

*James B. Boley*, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted

*Philip Cantzen*

United States Deputy Surveyor, in surveying all

those parts or portions of the

*8<sup>th</sup> Standard Parallel N, Rs. 9-10-11-12 E*

of the *Gila* <sup>and</sup>

*Salt River* meridian, *Territory of Arizona*, which are represented

in the foregoing field notes as having been surveyed 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 surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor

General for

*Arizona*

*W. S. Kengla*, Chainman.

*Fred Tagles*, Chainman.

*George A. Hawley*, Chain Moundman.

*J. J. Kerriek*, Chain Moundman.

*Arthur Pogue*, Moundman Axman.

*Manuel Salazar*, Axman.

*James B. Boley*, Flagman.

Subscribed and sworn to before me this

*10<sup>th</sup>*

day of

*June*

18*95*

*H. G. Power*



FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

BOOK 1860

I, Philip Coutzen, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank S. Ingalls, United States Surveyor General for Arizona, bearing date of the 12th day of December, 1904, 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 8th Standard Parallel N., Rs 8-9-10-11 and 12 E

of the Gila and Salt River meridian, in the Territory of Arizona, which 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 perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written 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 original 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.

Philip Coutzen
United States Deputy Surveyor.

Subscribed by said Philip Coutzen and sworn to before me
this 16th day of June, 1905

Frank S. Ingalls

U. S. Surveyor General
for Arizona.



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, A. T. July 26th 1905

The foregoing field notes of the survey of the Eight Standard Parallel North thro Ranges 8, 9, 10, 11 and 12 East, of the Gila and Salt River Base and Meridian, in the Territory of Arizona

executed by Philip Coutzen U. S. deputy surveyor under his contract No. 124, dated December 12th 1904, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank S. Ingalls
United States Surveyor General.

I certify that the foregoing transcript of the field notes of the above described surveys in, has been correctly copied from the original notes on file in this office.

United States Surveyor General.