

MAR. 1 - 1909 10

4-679.

1. Dept. letter E.  
Nov. 5-1909

Book A.

BOOK 2121

2121

# FIELD NOTES

OF THE SURVEY OF THE

2121

2121

East Standard Parallel North

Through Ranges Nos. 3, 4, 5, 6, 7, 8, 9, 10, 11,

13, 14, 15, 16, 17, 18, 19 and 20 W.

and Resurvey of East Standard Parallel North

through Ranges 3, 4, 5, 6 and 7 W.

2121

Of the Gila and Salt River Meridian,

Territory of Arizona

AS SURVEYED BY

John P. Hesse, United States Deputy

Contract No. 150, dated October 10,

commenced December 7<sup>th</sup>

completed January 27<sup>th</sup> 1909

2121

NAMES AND DUTIES OF ASSISTANTS.

Harry S. Ingalls Chairman

Wilfred B. Helm Chairman

Norman Oliver Chairman

Fred W. Rodolf Chairman

A. R. Saunders Plagman

INDEX DIAGRAM

BOOK 2121

First Standard Parallel North.

31 4	32 3	33 3	34 2	35 2	36 1
Range 3 West.					
31 7	32 7	33 6	34 6	35 5	36 5
Range 4 West					
31 11	32 11	33 10	34 10	35 9	36 9
Range 5 West					
31 15	32 15	33 14	34 14	35 13	36 13
Range 6 West.					
31 19	32 19	33 18	34 17	35 17	36 17
Range 7 West.					
31 23	32 23	33 22	34 22	35 21	36 21
Range 8 West					
31 27	32 27	33 26	34 26	35 25	36 25
Range 9 West.					
31 31	32 31	33 30	34 30	35 29	36 29
Range 10 West					
31 35	32 35	33 34	34 34	35 33	36 33
Range 11 west					
31 40	32 39	33 38	34 38	35 37	36 37
Range 12 West.					
31 43	32 43	33 42	34 42	35 41	36 41
Range 13 West					
31 47	32 47	33 46	34 46	35 45	36 45
Range 14 West					
31 51	32 50	33 50	34 49	35 49	36 49
Range 15 West					
31 54	32 53	33 53	34 52	35 52	36 52
Range 16 West					
31 57	32 56	33 56	34 56	35 55	36 55
Range 17 West					
31 60	32 60	33 59	34 59	35 58	36 58
Range 18 West					
31 64	32 64	33 63	34 63	35 62	36 62
Range 19 West					
31	32 67	33 67	34 66	35 66	36 66
Range 20 west					

See also Index  
Description

BOOK 2121

INDEX DIAGRAM.

Township....., Range.....

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page.....



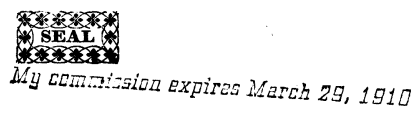
PRELIMINARY OATHS OF ASSISTANTS.

WE, Harry S. Ingalls, Wilfred B. Helm and Norman Oliver and Fred W. Rodolf  
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the  
chain upon even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that  
we will report the true 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 First Standard Parallel North through Rgs. 3 to 20 W. incl.

Harry S. Ingalls Chainman.  
Wilfred B. Helm Chainman.  
Norman Oliver "  
Fred W. Rodolf "

Subscribed and sworn to before me this 5th  
day of December, 1908

M. E. Lenevick  
Notary Public



WE, \_\_\_\_\_ 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

\_\_\_\_\_, Moundman.  
\_\_\_\_\_, Moundman.

Subscribed and sworn to before me this \_\_\_\_\_  
day of \_\_\_\_\_, 190 \_\_\_\_\_



WE, \_\_\_\_\_ 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

\_\_\_\_\_, Axman.  
\_\_\_\_\_, Axman.

Subscribed and sworn to before me this \_\_\_\_\_  
day of \_\_\_\_\_, 190 \_\_\_\_\_



I, A. R. Saunders, 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 the 1st Standard Parallel North through Rgs. 3 to 20 W. incl.

A. R. Saunders, Flagman.

Subscribed and sworn to before me this 7th  
day of December, 1908

John F. Hesse  
U.S. Deputy Surveyor



No notary available without great expense and loss of time

Resurvey of

First Standard Parallel North, through Range 3 West

Survey commenced December 7, 1908, and executed with a Young and Sons light mountain transit, No. 7532, with a solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined, tested on the true meridian at Phoenix, found correct, and approved by the Surveyor General for Arizona.

I examine the adjustments of the transit and find them correct; then, to test the solar apparatus, by comparing indications, resulting from solar observations made during a. m. and p. m. hours, with a meridian determined by observations on Polaris, I proceed as follows

At the Standard cor. of Tps. 5 N., Rgs. 2 and 3 West, latitude  $33^{\circ} 43' 27''$  N., longitude  $112^{\circ} 30' 55''$  W. I set off  $33^{\circ} 43' 30''$  N., on the lat. arc;  $22^{\circ} 37' 00''$  S., on the decl. arc; and at 3 p. m., 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 the cor.

December 7, 1908.

December 8; At 2 h. <sup>17</sup>~~11.5~~ m., a. m. by my watch, which has correct l. m. t., I observe Polaris at Western elongation, in accordance with the Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground 5 chs. N. of my station.

At 6 a. m., l. m. t., I lay off the azimuth of Polaris,  $1^{\circ} 25' 30''$  to the east, and mark the meridian thus determined, by cutting a small groove in the stone set December 7, on which the meridian coincides with the one determined by the solar.

At 8 a. m., l. m. t., I set off  $33^{\circ} 43' 30''$  N. on the lat. arc;  $22^{\circ} 40'$  S. on the decl. arc; and mark a point in the meridian thus determined with the solar, by a cross on the stone already set 5 chs. N. of my station; this mark coincides with the meridian established by the Polaris observation.

The solar apparatus, by a. m. and p. m., observation defines positions for meridians identical with the meridian established by the Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 8 h. 30 m., a. m., is N.  $14^{\circ} 56'$  W.; the angle thus determined gives the mag. decl.  $14^{\circ} 56'$  E.

Diligent search along the First Standard Parallel North failed to reveal any signs of existing cors. west of the cor. to Rgs. 2 and 3 West; therefore, from this cor., which is a mesquite post, marked and witnessed as described by the Surveyor General, I run

West on the S. bdy. of sec., 36'

9.00 Leave mesquite timber, bears N. and S.  
20.25 Dry wash, 15 lks. wide, course S. enter heavy timber  
31.73 Leave timber, bears N.W. and S.E.

Difference between measurements of 40.00 chs., by two sets of chainmen is 8 lks.; position of middle point

By 1st set, 40.04 chs.

By 2nd set, 39.96 chs.

40.00 Set Porphyry stone 18 x 8 x 8 ins., 1 1/2 ins. in the ground, for standard 1/4 sec. cor., marked SC 1/4 on N. face; dig pits 18 x 18 x 12 ins., E. and W. of stone 3 ft. dist.; and raise a mound of earth, 31 1/2 ft. base, 1 1/2 ft. high, N. of cor. No trace of old cor.

Resurvey of  
First Standard Parallel North through Range 3 West.

chains	
63.65	Wash 20 lks. wide, course S.E.
64.10	Old road bears N.W. and S.E. Difference between measurements of 80.00 chs. by two sets of chainmen, is 6 lks.; position of middle point
80.00	By 1st set, 79.97 chs. By 2nd set, 80.03 chs.; the mean of which is Set a Porphyry stone 18 x 10 x 8 ins., 12 ins. in the ground, for standard cor. of secs. 35 and 36, marked SC on the N., with 1 groove on the E. and 5 grooves on the W. face; 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 cor. No trace of old cor. Land, level. Soil, sandy loam and gravel; 3rd rate. Timber, mesquite, Ironwood, paleverde, greasewood, and cactus Land covered with dense underbrush, 80.00 chs.
31.35	West on S. bdy. of sec. 35. Over level ground, through dense greasewood brush Road bears N.W. and S.E. Difference between measurements of 40.00 chs. by two sets of chainmen, 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 a malpais stone 18 x 12 x 12 ins., 12 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on 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 cor. No trace of old cor.
49.55	Trail bears N. W. and S. E.
60.20	Wash 30 lks wide bears S.E.
78.00	Read bears N.W. and S.E. Difference between measurements of 80.00 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 18x.10 x 10 ins., 12 ins. in the ground, for standard cor. of secs. 34 and 35, marked SC on N., with 4 groves on the W. and 2 groves on the E. face; 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 cor. NO trace of old cor. Land, level. Soil, sandy loam and gravel; 3rd rate. Timber, scattering mesquite. Underbrush, mesquite, cactus and greasewood. Land covered with dense underbrush 80.00 chs.
40.00	West on S. bdy. of sec. 34. Over level land through dense greasewood brush, Difference between measurements of 40.00 chs., by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is Set a granite stone 20 x 10 x 6 ins., 15 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; dig pits 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist. and raise mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor. No trace of old cor.
44.00	Wash 8 lks. wide bears S.
46.20	Wash 15 lks. wide bears S.
55.25	Wash 40 lks wide bears S.
63.25	Old road bears N.W. and S.E.

## Resurvey of

## First Standard Parallel North through Range 3 West

chains

80.00 Difference between measurements of 80.00 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  
Set a malpais stone 18 x 14 x 12 ins., 12 ins. in the ground, for standard cor. of secs. 33 and 34, marked SC on N., with 3 groves on E. and 3 groves on W. face; 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 cor.  
No trace of old cor.  
Land, level.  
Soil, sandy loam and gravel; 2nd and 3rd. rate.  
Timber, mesquite, ironwood and paloverde.  
Underbrush, greasewood.  
Land covered with heavy timber and dense underbrush, 80.00 chs.  
December 8; at this cor. I set off 22° 44' 50" the decl. arc and observe the sun on the meridian at noon; the resulting latitude is 38° 43' 30" N.

40.00 West on S. bdy. of sec. 33.  
Over level land and through dense greasewood brush.  
Difference between 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  
Set a malpais stone 18 x 12 x 5 ins., 12 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  on 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 cor. No trace of old cor.  
80.00 Difference between 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  
Set a malpais stone 18 x 12 x 10 ins., 12 ins. in the ground, for standard cor. of secs. 33 and 32, marked SC on N., with 4 groves on the E. and 2 groves on W. face; 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 cor.; from the cor.  
A Paloverde, 12 ins. diam., bears N. 64, 1/2 ° E., 271 lks dist., marked SC T 5 N R 3 W S 33 BT  
No trace of the old cor.  
Land, level.  
Soil, sandy loam; 3rd rate.  
Timber, scattering mesquite and paloverde.  
Underbrush, greasewood and cactus.  
Land covered with dense underbrush, 80.00 chs.

40.00 West on S. bdy. of sec. 32.  
Over level land, through dense greasewood brush.  
Difference between 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  
Set a limestone 18 x 8 x 8 ins., 12 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  on N. face; dig pits 18 x 18 x 12 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 cor.  
No trace of old cor.  
46.20 Old road bears N.E. and S.W.

Resurvey of  
First Standard Parallel North through Ranges 3 and 4 West

chains  
80.00  
Difference between 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  
Set a malpais stone 18x10x10 ins., 12 ins. in the ground for standard cor. of secs. 31 and 32, marked SC on W., with 5 groves on E. and 1 grove on W. face; dig pits 24x18x12 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 cor.; from cor.  
A Paloverde, 5 ins. diam., bears N 50, 3/4° E., 128 lks. dist., marked  
SC T 5 N R 3 W S 32 BT  
A Paloverde 9 ins. diam., bears N 41° W., 197 lks. dist., marked,  
SC T 5 N R 3 W S 31 BT  
No trace of old cor.  
Land, level.  
Soil, sandy loam and gravel; 2nd and 3rd rate.  
Timber, scattering mesquite and paloverde.  
Underbrush, greasewood, mesquite, and cactus.  
Land covered with dense underbrush, 80.00 chs.

40.00  
West on S. bdy. of sec. 31.  
Over level land and through dense greasewood brush.  
Difference between 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  
Set a granite stone 18x8x6 ins., 12 ins. in the ground, for standard 1/2 sec. cor., marked SC 1/2 on N. face; dig pits 18x18x12 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 cor.  
NO trace of old cor.  
Difference between measurements of 80.00 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 granite stone 20x10x10 ins., 15 ins. in the ground for standard cor. Tps. 5 N., Rgs. 3 and 4 W., marked SC on N.; with 6 groves on N., E., and W. faces; dig pits, 30x24x12 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 cor.  
No trace of old cor.  
Land, level.  
Soil, sandy loam, gravelly; 2nd and 3rd rate.  
Timber, scattering mesquite and paloverde.  
Underbrush, mesquite, greasewood, and cactus.  
Land covered with dense underbrush, 80.00 chs.  
-----oOo-----

Through Rg. 3 this line runs over level land, through scattering mesquite and paloverde timber and dense greasewood underbrush. The soil is sandy loam and gravelly, 2nd and 3rd rate. There is no water along this line.  
Diligent search failed to disclose any evidence of the old cors. through this Rg.  
Tp. 4 N. R. 3 W. is level in the N. and central parts while the white Tanj mountains are in the southern portion of the Tp.  
There are no settlers along this line.  
December 8, 1908.

December 8, 1908 8 a.m., l.m.t., 1 set off 33° 43, 1/2' N.  
on the

## Resurvey of

## First Standard Parallel North through Range 4 West.

chains

- December 9,; at 8 a.m., l.m.t., I set off  $33^{\circ} 43, 1/2'$  on the lat. arc;  $22^{\circ} 46'$  S. on the decl. arc; and determine a meridian with the solar at the cor. of Tps 5 N. Rs 3 and 4. Thence I run,  
West on the S. bdy. of sec. 36.  
Over level land and through dense greasewood brush. Difference between measurements of 40.00 chs by two sets of chainmen is 6 lks.; position of middle point  
By 1st set, 40.03 chs.  
By 2nd set, 39.97 chs., the mean of which is  
40.00 Set a granit stone  $16 \times 10 \times 10$  ins., 11 ins. in the ground, for standard  $1/4$  sec. cor., marked SC  $1/4$  on the N. face; dig pits  $18 \times 18 \times 12$  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 cor.; from cor.  
A mesquite, 7 ins. diam., bears N  $26, 1/4^{\circ}$  E., 112 lks. dist., marked  
SC  $1/4$  S 36 BT. No trace of old cor.  
Difference between 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 a malpais stone  $20 \times 6 \times 6$  ins., 15 ins., in the ground, for standard cor. of secs. 35 and 36, marked SC on N., with 5 grooves on the W. and 2 grooves on the E. face; dig pits  $24 \times 18 \times 12$  ins., crosswise of each line, E. and W., 3 ft. and N. of stone 7 ft. dist.; and raise a mound of earth 4 ft. base and 2 ft. high, N. of cor.; from the cor.  
A mesquite, 4 ins. diam., bears N  $11, 1/4^{\circ}$  E., 99 lks. dist., marked  
SC T 5 N R 4 W S 36 BT  
No trace of old cor.  
Land, level.  
Soil, sandy and gravelly; 3rd rate.  
Timber, few mesquite.  
Underbrush; greasewood and cactus.  
Land covered with dense underbrush, 80.00 chs.
- 
- West on S. bdy. of sec. 35.  
Over level land and through dense greasewood brush. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point  
By 1st set, 40.04 chs.  
By 2nd set, 39.96 chs.; the mean of which is  
40.00 Set a porphyry stone  $20 \times 8 \times 6$  ins., 15 ins., in the ground, for standard  $1/4$  sec. cor., marked SC  $1/4$  on N. face; dig pits  $18 \times 18 \times 12$  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 cor. from the cor.  
A catclaw, 6 ins. diam., bears N  $83^{\circ} 30'$  W., 117 lks. dist., marked  
SC  $1/4$  S 3 5 BT  
No trace of old cor.  
42.60 Wash 8 lks wide, bears S.  
78.00 Over gently rolling land.  
Difference between 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 a malpais stone  $20 \times 6 \times 6$  ins., 15 ins., in the ground, for standard cor. of secs. 34 and 35, marked SC on N., with 2 grooves on the E. and 4 grooves on the W. face; dig pits  $24 \times 18 \times 12$  ins., crosswise of 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 cor.; from the cor.  
A paloverde, 5 ins. diam., bears N  $35^{\circ}$  E., 188 lks. dist., marked  
SC T 5 N R 4 W S 35 BT  
A pale verde 6 ins. diam., bears N  $22^{\circ}$  W., 192 lks. dist. marked



Resurvey of  
First Standard Parallel North through Range 4 West

chains	<p>SC T 5 N R 4 W S 34 BT            No trace of old cor.            Land, level and gently rolling.            Soil, gravelly and stony; 3rd and 4th rate.            Timber, scattering mesquite and paloverde.            Underbrush, greasewood.            Land covered with dense underbrush, 80.00 chs.</p>
	<p>West on S bdy. of sec. 34.            Over rolling land and through dense greasewood brush.</p>
4.90	<p>Wash 10 lks. wide, bears N.W.            Difference between 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</p>
40.00	<p>Set a mesquite post, 3 ft. long, 3 ins. sq., with marked stone, 24 ins. in the ground, for standard <math>\frac{1}{4}</math> sec. cor., marked SC <math>\frac{1}{4}</math> S 34, on N. face; 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.            No trace of old cor.</p>
44.50	<p>Wash, 20 lks. wide, bears S.            Difference between 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</p>
80.00	<p>Set a mesquite post, 3 ft. long, 4 ins. sq., with marked stone, 24 ins. in the ground, for standard cor. of secs. 33 and 34, marked            SC T 5 N R 4 W on N.,            S 34 on E. and            S 33 on W. face, with 3 grooves on E., and 3 grooves W. face; 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.            No trace of old cor.            Land, level and rolling.            Soil, sandy, gravelly and stony; 3rd and 4th rate.            Timber, scattering paloverde.            Underbrush, greasewood, mesquite and cactus.            Land covered with dense underbrush, 80.00 chs.</p>
	<p>West on S. bdy. of sec. 33.            Over rolling land and through dense greasewood brush.</p>
9.10	<p>Enter wash, bearing N.W.</p>
11.50	<p>Leave wash, 15 lks. wide course SW.            Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point            By 1st set, 40.04 chs.            By 2nd set, 39.96 chs.; the mean of which is</p>
40.00	<p>Set a quartzite stone, 21x6x6 ins., 15 ins. in the ground, for standard <math>\frac{1}{4}</math> sec. cor., marked SC <math>\frac{1}{4}</math> on N. face; dig pits 18x18x12 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 cor.            No trace of old cor.</p>
42.90	<p>Enter Hassayampa Bottom; bears N. and S.</p>
80.00	<p>This point falls on ground subject to overflow, so I continue W.            Difference between measurements of 87.00 chs. by two sets of chainmen is 10 lks.; position of middle point            By 1st set, 87.05 chs.            By 2nd set, 86.95 chs.; the mean of which is</p>
87.00	<p>Set a mesquite post, 3 ft. long, 4 ins. sq., with marked stone deposit, 24 ins. in the ground, for W.C. to standard cor. secs. 32 and 33, marked</p>

Resurvey of  
First Standard Parallel North through Range 4 West.

- WC SC T 5 N R 4 W on N.,  
S 33 on E., and  
S 32 on W. face, with 4 grooves on E., and 2 grooves  
on W. face; 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.  
No trace of old cor.  
Land, rolling and level.  
Soil, sandy and gravelly; 3rd rate.  
Timber, scattering mesquite and paloverde.  
Underbrush, greasewood, mesquite and cactus.  
Land covered with dense underbrush, 80.00 chs.
- 
- West on S. bdy. of sec. 32. from true point for Cor.  
Over level land and through dense greasewood brush
- 7.00 W.C. of secs. 32 and 33.  
10.50 Left bank of Hassayampa creek, dry, bears S.  
28.60 Right bank of Hassayampa creek, bears S.  
29.60 Leave bottom; ascend.  
33.15 Top spur mesa; bears S.; descend.  
34.65 Enter draw; bears S. -----  
37.10 Enter wash, course SE. and S.E.  
40.00 This point falls in wash so I continue W.  
42.70 Leave wash, bears N.W. and S.E.  
Difference between measurements of 43.00 chs. by  
two sets of chainmen is 6 lks.; position of middle point  
By 1st set, 43.03 chs.  
By 2nd set, 42.97 chs.; the mean of which is
- 43.00 Set a silica stone 21x8x5 ins., 15 ins. in the ground, for  
W.C. to standard  $\frac{1}{4}$  sec. cor., marked WC SC  $\frac{1}{4}$  on N. face;  
dig pits 18x18x12 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 cor. No trace of old cor.
- 47.90 Leave draw; asc. over broken ground.  
59.15 Top mesa bears N. and S.; over mesa,  
Difference between measurements of 80.00 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 malpais stone 21x8x6 ins., 16 ins. in the ground,  
for standard cor. of secs. 31 and 32, marked SC on N.;  
with 5 grooves on E. and 1 groove on W. face; and raise a  
mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits  
impracticable. No trace of old cor.  
Land, level and broken.  
Soil, sandy and gravelly; 4th rate.  
Timber, mesquite and paloverde.  
Underbrush, greasewood and mesquite.  
Land covered with dense underbrush, 80.00 chs. ✓  
December 9; At this cor. I set off 22° 50' S. on the  
decl. arc and observe the sun on the meridian at noon;  
The resulting latitude is 33° 43' 30" N.
- 
- West on S. bdy. of sec. 31.  
Over level land and through dense greasewood brush.  
Difference between measurements of 40.00 chs. by two  
sets of chainmen is 6 lks.; position of middle point  
By 1st. set, 40.03 chs.  
By 2nd. set, 39.97 chs.; the mean of which is
- 40.00 Set a mesquite post 3 ft. long, 3 ins. sq., with marked  
stone 24 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor.,  
marked SC  $\frac{1}{4}$  S 31 on N. face; 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.  
No trace of old cor.
- 67.50 Wash 30 lks. wide, bears S.  
75.15 Wash 30 lks. wide; bears S.



## First Standard Parallel North through Range 4 West

chains  
79.50

Wash 30 lks wide; bears S.

Difference between measurements of 80.00 chs. by two 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 mesquite post 3 ft. long, 4 ins. sq., with marked stone 24 ins. in the ground, for standard cor. of Tps 5 N. Rs. 5 and 4 W., marked,

S 0 T 5 N on N.,

R 4 W S 31 on E., and

R 5 W S 36 on W. face; with 6 grooves on N., E., and W. faces; 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, 1/2 ft. high, N. of cor. Land, level.

Soil, sandy and gravelly; 3rd rate.

Timber, scattering mesquite and paloverde.

Underbrush, greasewood.

Land covered with dense underbrush; 80.00 chs.

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Through Rg. 4 this line passes mostly over level land but is broken near the Hassayampa Bottom. There is a small amount of scattering timber but a great deal of greasewood undergrowth. The soil is sandy and gravelly being 3rd and 4th rate. At present there is no water in the Hassayampa creek.

Diligent search failed to disclose any signs of the old cors. through this Rg.

Tp. 5 N. Rg. 4 W. is hilly and broken in the N.W., the remainder is mostly level excepting the Hassayampa Bottom,

There are no settlers along this line.

## Resurvey of

First Standard Parallel North through Range 5 West.

chains	West on S. bdy. of sec. 36. Over level land and through dense greasewood brush
11.00	Wash 8 lks. wide; bears S.
5.35	Old road bears N.N.W. and S.S.E. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st. set, 40.03 chs. By 2nd, set, 39.97 chs.; the mean of which is
40.00	Set a mesquite post 3 ft. long, 3 ins. sq., with marked stone 24 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ S 36. on N. face; 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. No trace of old cor.
49.60	Trail bears N. and S.
55.40	Old road, bears N. and S.
56.70	Trail, bears N. and S. Difference between 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 a mesquite post, 3 ft. long, 4 ins. sq., with marked stone 24 ins. in the ground, for standard cor. of secs. 35 and 36, marked SC T 5 N R 5 W on N., S 36 on E., and S 35 on W. face, with 1 groove on E., and 5 grooves on W. face; 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. No trace of old cor. Land, level. Soil, sandy and gravelly; 3rd rate. Timber, scattering mesquite and palo verde. Underbrush, greasewood. Land covered with dense underbrush, 80.00 chs.
0.35	West on S. bdy. of sec. 35. Over level land and through dense greasewood brush Wash 10 lks wide, bears S. Difference between measurements of 40.00 chs by two sets of chainmen is 6 lks.; position of middle point By 1st. set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a mesquite post, 3 ft. long, 3 ins. sq., with marked stone 24 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ S 35 on N. face; 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. No trace of old cor.
51.25	Wash 10 lks. wide, bears S.
62.40	Wash 25 lks. wide bears S. Difference between measurements of 80.00 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 mesquite post, 3 ft. long, 4 ins. sq., with marked stone 24 ins. in the ground, for standard cor. of secs. 34 and 35, marked SC T 5 N R 5 W on N., S 35 on E. and S 34 on W. face; with 2 grooves on E. and 4 grooves on W. face; 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. No trace of old cor. Land, level. Soil, gravelly; 3rd rate. No timber. Underbrush, greasewood.

Resurvey of  
First Standard Parallel North through Range 5 West

chains	<p>Land covered with dense underbrush, 80.00 chs.</p> <hr/> <p>West on S. bdy. of sec. 34. Over level land through dense greasewood brush.</p> <p>16.90 Wash, 20 lks. wide, bears S. 17.80 Wash 40 lks wide; course S. 24.50 Wash 20 lks wide; course S. 26.45 Old road; bears N. and S. 34.45 Wash 30 lks wide; course S. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is</p> <p>40.00 chs Set a mesquite post 3 ft. long, 3 ins. sq., with marked stone 24 ins. in the ground, for standard <math>\frac{1}{4}</math> sec. cor., marked SC <math>\frac{1}{4}</math> S 34 on N. face; dig pits, 18x18x12 ins., E. and W. of post 3 ft. dist.; and raise a mound of earth, 3, 1/2 base, 1, 1/2 ft high, N. of cor. No trace of old cor.</p> <p>76.00 Wash 15 lks. wide; course S. 76.50 Wash 10 lks wide; course S. 78.30 Wash 15 lks wide; course S. Difference between measurements of 80.00 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</p> <p>80.00 Set a mesquite post, 3 ft. long, 4 ins. sq., with marked stone 24 ins. in the ground for standard cor of secs. 33 and 34, marked, SC T 5 N R 5 W on N., S 34 on E., and S 33 on W. face, with 3 grooves on E., and 3 grooves on W. face; 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. No trace of old cor. From, this cor. The Vulture Dome bears N 6° W. about 10 miles dist. The Vulture Mine bears N 26° 30' W. about 10 miles. Land, level. Soil, sandy and gravelly; 3rd rate. Timber, scattering mesquite and palo verde. Underbrush, greasewood. Land covered with dense underbrush, 80.00 chs.</p> <p style="text-align: right;">December 9, 1908.</p> <hr/> <p>December 10; At 8 a.m., l.m.t., I set off 33° 43' 30" N. on the lat. arc; 22° 57' 30" S. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 33 and 34, T 5 N R 5 W.; thence I run West on S. bdy. of sec. 33. Over level land, through dense greasewood brush.</p> <p>29.10 Wash 10 lks. wide, course, S. 31.05 Wash 15 lks. wide, course, S. 34.70 Wash 10 lks. wide, course S. S. E. Difference between measurements of 39.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 39.03 chs By 2nd set, 38.97 chs.; the mean of which is</p> <p>39.00 chs Set a mesquite post 3 ft. long, 3 ins. sq., with marked stone 24 ins. in the ground, for W.C.C. to standard <math>\frac{1}{4}</math> sec. cor., marked WC-SC <math>\frac{1}{4}</math> S 33 on N. face; 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. No trace of old cor.</p>
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Resurvey of  
First Standard Parallel North through Range 5 West.

Chains	
40.00	This point falls in a wash 30 lks.wide, course S.E.
57.70	Wash 10 lks.wide, course, S.
60.00	Wash 10 lks wide, course, S.
	Difference between measurements of 80.00 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 mesquite post, 3ft. long, 4ins. sq., with marked stone 24ins. in the ground for standard cor. of secs. 32 and 33, marked
	SC T 5 N R 5 W on N.,
	S 33 on E., and
	S 32 on W. face; with 4 grooves on E., and 2 grooves on W. face; dig pits, 24x18x12 ins., crosswise on each line E. and W., 3ft., and N. of post, 7 ft. dist.; and raise a mound of earth, 4ft. base, 2ft. high, N. of cor.
	No trace of old cor.
	Land, level.
	Soil, sandy and gravelly; 3rd rate.
	Timber, scattering mesquite and paloverde.
	Underbrush, greasewood.
	Land covered with dense underbrush, 80.00 chs.
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	west on S. bdy. of sec. 32.
	Over level land and through dense greasewood brush
0.20	Wash 10 lks.wide, course S.
2.70	Wash 30 lks wide, course S.
9.00	Old road, bears N. and S.
39.65	Wash 15 lks wide, course S.S.E.
	Difference between measurements of 40.00 chs by two sets of chainmen is 6 lks.; position of middle point
	By 1st set, 40.03 chs.
	By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a mesquite post, 3ft. long, 3ins. sq., with marked stone 24ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ S 32 on N. face; dig pits, 18x18x12 ins., E. and W. of post 3ft. dist.; and raise a mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor.
	No trace of old cor.
62.95	Wash 10 lks.wide, course S.
75.00	Old road, bears, N. and S.
	Difference between 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 a mesquite post, 3ft. long, 4ins. sq., with marked stone 24 ins. in the ground, for standard cor. of secs. 31 and 32, marked
	SC T 5 N R 5 W on N.,
	S 32 on E., and
	S 31 on W. face, with 5 grooves on E., and 1 groove on W. face; dig pits 24x18x12 ins crosswise on each line E. and W., 3ft., and N. of post, 7ft. dist.; and raise a mound of earth, 4ft. base, 2ft. high, N. of cor.
	No trace of old cor.
	Land, level.
	Soil, sandy and gravelly.
	Timber, scattering mesquite and paloverde.
	Underbrush, greasewood and mesquite.
	Land covered with dense underbrush, 80.00 chs.
	<hr/>
	west on S. bdy. of sec. 31.
	Over level land and through dense greasewood brush
6.35	Old road, bears N. and S.
23.90	Old road bears N.N.E. and S.S.W.
31.25	Wash 25 lks.wide, course S.E.

First Standard Parallel North through Range 5 West.

chains

40.00

54.35

71.45

77.20

80.00

Difference between 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

Set a mesquite post, 3ft. long, 3ins. sq., with marked stone 24ins. in the ground for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  S 31 on N. face; dig pits 18x18x12 ins., E. and W. of post, 3ft. dist.; and raise a mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor.

No trace of old cor.

Wash 10 lks. wide, course S.

Old road bears N.E. and S.W.

Wash; 25 lks wide, course S.

Difference between measurements of 80.00 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

Set a mesquite post 3ft. long, 4ins. sq., with marked stone 24 ins. in the ground, for standard cor. of Tps 5 N., Rs. 5 and 6 W., marked

SC T 5 N on N.,

R 5 W S 31 on E., and

R 6 W S 36 on W. face; with 6 grooves on N., E., and W. faces; dig pits, 30x24x12 ins., crosswise on each line, E. and W., 4ft., and N. of post, 8ft. dist.; raise a mound of earth, 5ft. base, 2, 1/2 ft. high, N. of cor.

No trace of old cor.

Land, level.

Soil, sandy and gravelly; 3rd rate.

Timber, scattering mesquite and paloverde.

Underbrush, greasewood and mesquite.

Land covered with dense underbrush, 80.00 chs.

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Through Rg. 5 this line passes over level land, the soil is sandy and gravelly; 3rd rate. There is a growth of scattering timber and dense underbrush. There is no grass or water through this Tp.

Diligent search failed to reveal any signs of the old cors. through this Rg.

Tp. 5 N. Rg. 5 W is hilly and broken in the N.W. part; the remainder is mostly level.

No settlers along this line.

Resurvey of  
first Standard Parallel North through Range 6 West.

chains		
6.15	<p>West on S. bdy. of sec. 36. Over level land through dense greasewood brush. Wash 25 lks. wide, course S.E.</p>	
40.00	<p>Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is</p>	
49.80 57.70	<p>Set a Tesota post, 3ft. long, 3 ins. sq., with marked stone 24 ins. in the ground, for standard <math>\frac{1}{4}</math> sec. cor., marked SC <math>\frac{1}{4}</math> S 36 on N. face; dig pits 18x18x12 ins., E. and W. of post, 3ft. dist.; and raise a mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor. No trace of old cor.</p>	
80.00	<p>Old road, bears N.E. and S.W. Wash 20 lks. wide, course S.E.</p>	
	<p>Difference between measurements of 80.00 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</p>	
	<p>Set a mesquite post, 3ft. long, 4 ins. sq., with marked stone 24 ins. in the ground for standard cor. of secs. 35 and 36, marked SC T 5 N R 6 W on N., S 36 on E., and S 35 on W. face; with 4 grooves on E., and 5 grooves on W. face; dig pits 24x18x12 ins. crosswise on each line, E. and W., 3ft., and N. of post, 7 ft. dist.; and raise a mound of earth 4ft. base, 2ft. high, N. of cor. No trace of old cor. Land, level. Soil, sandy and gravelly; 3rd rate. Timber, scattering mesquite and paloverde. Underbrush, greasewood. Land covered with dense underbrush, 80.00 chs</p>	
13.60	<p>West on S. bdy. of sec. 35. Over level land, through dense greasewood brush.</p>	
23.35	<p>Wash 10 lks. wide, course S.E.</p>	
33.40	<p>Wash 20 lks. wide, course, S.E. Old road, bears N.W. and S.E.</p>	
40.00	<p>Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is</p>	
80.00	<p>Set a mesquite post, 3ft. long, 3 ins. sq., with marked stone 24 ins. in the ground, for standard <math>\frac{1}{4}</math> sec. cor., marked SC <math>\frac{1}{4}</math> S 35 on N. face; dig pits 18x18x12 ins. s., E. and W. of post, 3ft. dist.; and raise a mound of earth 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor. No trace of old cor.</p>	
	<p>Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 80.05 chs. By 2nd set, 79.95 chs.; the mean of which is</p>	
	<p>Set a mesquite post, 3 ft. long, 4 ins. sq., with marked stone 24 ins. in the ground, for standard cor. of secs 34 and 35, marked SC T 5 N R 6 W on N., S 35 on E., and S 34 on W. face; with 2 grooves on E., and 4 grooves on W. face; dig pits 24x18x12 ins. crosswise on each line E. and W., 3ft., and N. of post, 7ft. dist.; and raise a mound of earth 4ft. base, 2ft. high, N. of cor. No trace of old cor.</p>	
	<p>Land, level. Soil, sandy and gravelly; 3rd rate. Timber, scattering mesquite and paloverde. Underbrush, greasewood and mesquite. Land covered with dense underbrush, 80.00 chs.</p>	

Resurvey of  
First Standard Parallel North through Range 6 West

chains	
	At this cor., I set off 22°55' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 33°43'30"N.
29.65	West on S. bdy. of sec. 34. Over level land, through dense greasewood brush Wash 50 lks. wide, course S.E. Difference between 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 a mesquite post, 3ft. long, 3ins. sq., with marked stone 24 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ S 34 on N. face; dig pits, 18x18x12 ins., E. and W. of post, 3ft. dist.; and raise a mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor. No trace of old cor.
48.30	Old road bears N.W. and S.E.
63.00	Old road bears N.W. and S.E. Difference between measurements of 80.00 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 mesquite post, 3ft. long, 4ins. sq., with marked stone 24ins in the ground, for standard cor. of secs. 33 and 34, marked SC T 5 N R 6 W on N., S 34 on E., and S 33 on W. face, with 3 grooves on E. and 3 grooves on W. face; dig pits 24x18x12 ins crosswise on each line E. and W., 3ft., and N. of post, 7ft. dist.; and raise a mound of earth, 4ft. base, 2ft. high, N. of cor. No trace of old cor. Land, level. Soil, sandy, gravelly and stony; 3rd and 4th rate. Timber, scattering mesquite and paloverde. Underbrush, greasewood and mesquite. Land covered with dense underbrush, 80.00 chs,
4.00	West on S. bdy. of sec. 33. Over nearly level land, descending through dense greasewood brush. Draw, 100 lks wide, course S.S.E.
15.60	Old road, bears N.E. and S.W. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a mesquite post, 3ft. long, 3ins. sq., with marked stone 24 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ S 33 on N. face; dig pits, 18x18x12 ins., E. and W. of post 3ft. dist.; and raise a mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor. No trace of old cor.
59.15	Draw 60 lks wide, course S.E.
69.40	Wash 10 lks. wide, course S. Difference between measurements of 80.00 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 mesquite post, 3ft long, 4ins. sq., with marked stone 24 ins. in thr ground, for standard cor. of secs. 32 and 33, marked SC T 5 N R 6 W on N., S 33 on E., and S 32 on W. face, with 4 grooves on E., and 2 grooves on W face; dig pits, 24x18x12 ins crosswise on each line E. and W., 3ft., and N. of post, 7ft. dist.; and raise a mound of earth 4ft base, 2ft. high, N. of cor.

## Resurvey of

First Standard Parallel North through Range 6 West.

chains

No trace of old cor.  
 Land, nearly level.  
 Soil, sandy, gravelly and stony; 3rd and 4th rate.  
 Timber, scattering mesquite and paloverde.  
 Underbrush, greasewood and mesquite.  
 Land covered with dense underbrush, 80.00 chs.

West on S. bdy. of sec. 32.

Over gently rolling land, through scattering paloverde and dense greasewood brush.

2.15 Wash 10 lks. wide, course, S.E.

27.00 Wash 90 lks wide course, S.

33.15 Wash 20 lks wide, course S.

40.00 walls in a wash 45 lks. wide, course S.

Difference between measurements of 41.00 chs by two sets of chainmen is 8 lks.; position of middle point

By 1st set, 41.04 chs.

By 2nd set, 40.96 chs.; the mean of which is

41.00 Set a mesquite post, 3ft. long, 3ins. sq., with marked stone

24 ins. in the ground for W.C. to standard  $\frac{1}{4}$  sec. cor., marked WC SC  $\frac{1}{4}$  S 32 on N. face; dig pits 18x18x12 ins., E. and W. of post, 3ft. dist.; and raise a mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor.

No trace of old cor.

Ascend.

46.80 Top of rocky knoll, bears, N. and S.; descend,

49.05 foot of descent. over rolling land.

Difference of measurements of 80.00 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 mesquite post 3ft. long, 4ins. sq., with marked stone

24 ins. in the ground for standard cor of secs. 31 and 32 marked

SC T 5 N R 6 W on N.,

S 32 on E., and

S 31 on W. face, with 5 grooves on E., and 1 groove on W. face; dig pits 24x18x12 ins. crosswise on each line, E. and W., 3ft., and N. of post, 7 ft. dist.; and raise a mound of earth, 4ft. base, 2ft. high, N. of cor.

No trace of old cor.

Land, level.

Soil, sandy, gravelly and stony; 4th rate.

Timber, scattering mesquite and paloverde.

Underbrush, greasewood and mesquite.

Land covered with dense underbrush, 80.00 chs.

West on S. bdy. of sec. 31.

Over level land, through dense greasewood brush

Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 40.03 chs.

By 2nd set, 39.97 chs.; the mean of which is

40.00 Set a mesquite post, 3ft. long, 3ins. sq., with marked stone

24 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., marked

SC  $\frac{1}{4}$  S 31 on N. face; dig pits, 18x18x12 ins., E. and W.

of post 3ft. dist.; and raise a mound of earth, 3, 1/2 ft.

base 1, 1/2 ft. high, N. of cor.

No trace of old cor.

45.70 Wash 10 lks. wide, course S.

57.00 Over rolling land

74.05 Low ridge extends N. and S.

Difference between measurements of 80.00 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



## Resurvey of

First Standard Parallel North through Range 6 West.

chains  
80.00

Set a mesquite post 3ft. long, 4ins. sq., with marked stone 24 ins. in the ground, for standard cor. of Tps 5 N Rgs. 6 and 7 W., marked

SC T 5 N on N.,

R 6 W S 31 on E., and

R 7 W S 36 on W. face; with 6 grooves on N., E., and W. faces; dig pits, 30x24x12 ins., crosswise on each line, E. and W., 4ft., and N. of post, 8ft. dist.; and raise a mound of earth, 5ft. base, 2, 1/2 ft. high, N. of cor.

No trace of old cor.

Land, level and rolling.

Soil, sandy, gravelly and stony; 4th rate.

Timber, scattering mesquite and paloverde.

Underbrush, greasewood and mesquite.

Land covered with dense underbrush, 80.00 chs.

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Through R. 6 this line runs over level and rolling land; soil being sandy, gravelly and stony; 3rd and 4th rate. There is growth of scattering mesquite and paloverde timber with a dense undergrowth of greasewood and mesquite. There is no water along this line.

Diligent search failed to disclose any signs of old cors. through this Rg.

Tp. 5N R. 6 W. is level in the E. and rolling in the W.

Tp. 4N R. 6 W is level in the E., rolling in the W. and mountains in the S.W.

There are no settlers along this line.

December 10, 1908.

## Resurvey of

First Standard Parallel North through Range 7 West.

chains	December 11; At 8/a.m., 1.m.t., I set off $33^{\circ}43'30''$ N. on the lat. arc; $22^{\circ}57'$ S. on the decl arc, and determine a meridian with the solar at the cor. of Tps. 5 N Rs. 6 and 7 W.; thence I run West on S. bdy. of sec. 36. Over rolling land and through dense underbrush.
16.15	Wash 20 lks. wide, course N. 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.
40.00	By 2nd set, 39.95 chs.; the mean of which is Set a malpais stone $21 \times 12 \times 8$ ins., 15 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. No trace of old cor. Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st set, 80.06 chs.
80.00	By 2nd set, 79.94 chs.; the mean of which is Set a malpais stone $24 \times 12 \times 10$ ins., 18 ins. in the ground, for standard cor. of secs. 35 and 36; marked SC on N; with 1 groove on E. and 5 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. No trace of old cor. Land, rolling. Soil, sandy, gravelly and stony; 4th rate. Timber, scattering paleverde. Underbrush, greasewood, mesquite and cactus. Land covered with dense underbrush, 80.00 chs.
2.65	West on S. bdy. of sec. 35. Over rolling land and through dense greasewood underbrush. Wash 20 lks wide, course, N.E. 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.
40.00	By 2nd set, 39.95 chs.; the mean of which is Set a malpais stone $24 \times 8 \times 6$ ins., 18 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. No trace of old cor.
58.20	Old road bears N. E. and S. W.
65.10	Wash 15 lks wide, course, N.E.
70.00	Enter mountainous land; asc.
78.40	Top of ridge, bears N. and S.; des. Difference between measurements of 80.00 chs. by two sets of chainmen is 14 lks.; position of middle point By 1st set, 80.07 chs.
80.00	By 2nd set, 79.93 chs.; the mean of which is Set a malpais stone $21 \times 8 \times 6$ ins., 16 ins. in the ground, for standard cor. of secs. 34 and 35, marked SC on N., with 2 groove on E., and 4 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. No trace of old cor. Land, rolling and mountainous. Soil, sandy, gravelly and stony; 4th rate. Timber, scattering paleverde. Underbrush, greasewood and mesquite. Land mountainous and covered with dense underbrush, 80.00 chs.
10.00	West on S. bdy. of sec. 34. Des. over mountainous land and through dense brush. Foot of des.; over rolling land.
18.40	Wash 15 lks. wide, course, N.E. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.04 chs.

Resurvey of  
 First Standard Parallel North through Range 7 West.

chains 40.00	By 2nd set, 39.96 chs.; the mean of which is
49.10	Set a malpais stone, 18x8x8 ins., 12 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft. base, 1, 1/2 ft. high N. of cor. Pits impracticable. No trace of old cor.
63.90	Wash 15 lks. wide bears N.
75.70	Wash 15 lks wide, bears N.
	Wash 15 lks. wide, bears N.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point
	By 1st set, 80.05 chs.
80.00	By 2nd set, 79.95 chs.; the mean of which is
	Set a malpais stone, 21x10x10 ins., 16 ins. in the ground, for standard cor. of secs. 33 and 34, marked SC on N.; with 3 grooves on E., and 3 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. No trace of old cor.
	Land, rolling and mountainous
	Soil, sandy, gravelly and stony; 4th rate.
	Timber, scattering paleverde
	Underbrush, greasewood and mesquite.
	Land, mountainous and covered with dense underbrush 80.00 chs.
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	West on S. bdy. of sec. 33.
	Over rolling land and through dense underbrush.
3.25	Wash 20 lks. wide course, N.E.; asc.
17.00	Ridge, bears N.E. and S.W.; desc..
25.10	Wash 20 lks wide course, N.E.; asc.
36.60	Top of Ridge 300 ft. above wash, bears N.N.E. and S.S.W. desc.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point
	By 1st set, 40.04 chs.
40.00	By 2nd set, 39.96 chs.; the mean of which is
	The point for standard $\frac{1}{4}$ sec. cor. falls on porphyry rock in place, 20x18x6 ins above ground, on which
	Cut a (x) at the corner point, for standard $\frac{1}{4}$ sec. cor. marked SC $\frac{1}{4}$ ; on N. side of cross; and raise a mound of stone 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable
	No trace of old cor.
45.40	Wash, 200 ft. below ridge, 20 lks. wide, course N.; asc.
54.00	Top spur, extends N.; desc.
71.15	Wash, 25 lks. wide, course, N.; asc.
77.00	Top spur, extends N.; desc.
	Difference between measurements of 80.00 chs by two sets of chainmen is 14 lks.; position of middle point
	By 1st set, 80.07 chs.
80.00	By 2nd set, 79.93 chs.; the mean of which is
	Set a porphyry stone, 21x8x6 ins., 16 ins. in the ground, for standard cor. of secs. 32 and 33, marked SC on N.; with 4 grooves on E., and 2 grooves on the W. face; and raise a mound of stone 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. No trace of old cor.
	Land, mountainous.
	Soil, stony, 4th rate.
	Timber, scattering paleverde and mesquite.
	Underbrush, greasewood and mesquite.
	Land, mountainous and covered with dense underbrush, 80.00 chs.
	December 11: At this cor. I sett off 23° 00' 30" S. on the decl. arc and observe the sun on the meridian at noon, the resulting lat. is 38° 43' 30" N.
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	West on S. bdy. of sec. 32.
	Over mountainous land, descending; and through dense under brush.

## Resurvey of

First Standard Parallel North through Range 7 West.

chains	
6.65	Wash 20 lks wide course, N.
11.65	Wash 25 lks wide course, N.N.E.; asc.
25.40	Top of sharp ridge, bears N. and S.; desc.
39.60	Wash 30 lks wide, course, N.; and over rolling land. 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 quartzite stone 21x8x8 ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; <del>dig pits, 18x18x12 ins., E. and W. of stone, 3ft. dist.; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. No trace of old cor.</del>
42.15	Wash 40 lks. wide, course, N.
56.00	Leave brush; asc.
66.30	Top of ridge, 250ft. above wash, bears, N. and S. A high butte stands S. about 60.00 chs.; desc.
69.90	Wash 20 lks. wide, course, S.; asc. Difference between measurements of 80.00 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st set, 80.08 chs. By 2nd set, 79.92 chs.; the mean of which is
80.00	Set a mesquite post, 3ft. long, 4 ins. sq., with marked stone 24 ins. in the ground for standard cor. of secs. 31 and 32, marked SC T 5 N R 7 W on N., S 32 on E., and S 31 on W. face, with 5 grooves on E., and 1 groove on W. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. No trace of old cor. Land, mountainous and rolling. Soil, gravelly and stony; 4th rate. Timber, scattering palo verde. Underbrush, mesquite and palo verde. Land mountainous and covered with dense underbrush, 80.00 chs.
	west on S. bdy. of sec. 31. Over mountainous land and through scattering palo verde
2.00	Top of ridge, bears, N.E. and S.W.; desc. steep slope.
13.50	Wash 20 lks. wide, course N.; asc.
15.45	A frame house bears S. 170 lks. dist.
16.60	The mine of the U.S. Copper Co., bears S. 20.00 chs. dist. road from the mine to Wickenburg bears N. and S.
22.90	Top of ridge, bears N. and S.; desc.
26.30	Trail, bears N. and S.
39.15	Wash 40 lks. wide, course, N.; enter dense brush.; asc. Difference between measurements of 40.00 chs. by two sets of chainmen is 18 lks.; position of middle point By 1st set, 40.09 chs. By 2nd set, 39.91 chs.; the mean of which is
40.00	The point for standard $\frac{1}{4}$ sec. cor., falls on a quartzite stone in place, 24x18x6 ins. above the ground, on which I cut a (x) at the corner point, for standard $\frac{1}{4}$ sec. cor. marked SC $\frac{1}{4}$ on N. side of cross; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. No trace of old cor.
43.00	Top of spur, bears, N.N.E.; desc.
48.60	Wash 20 lks. wide, course, N.E.; asc.
61.30	Top of ridge bears N. and S.; desc.
71.25	Wash 10 lks wide course, N.; asc.
75.85	Top of ridge bears N. and S.; desc.
80.00	This point for cor. falls in a wash 20 lks. wide, course N. and asc. Difference between measurements of 80.30 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st set, 80.38 chs. By 2nd set, 80.22 chs.; the mean of which is
80.30	

Resurvey of

First Standard Parallel North through Range 7 West.

chains  
80.30

Set a malpais stone, 24x8x8 ins., 18 ins. in the ground, for W.C. to standard cor of Tps. 5 N., Rs. 7 and 8 W. marked WC SC on N.; with 6 grooves on N., E., and W. faces and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

No trace of old cor.

Land, mountainous.  
Soil, gravelly and stony.  
Timber, scattering paloverde.  
underbrush, greasewood and mesquite.  
Land mountainous and covered with dense underbrush, extremely difficult to survey, 80.00 chs.

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Through Range 7 this line runs over rolling and mountainous land, the soil being gravelly and rocky; 4th rate. The land is covered with a growth of scattering paloverde and a thick undergrowth of greasewood, and mesquite. There is no water along this line.

Tp. 4 N R 7 W is of a mountainous and broken character. Tp. 5 N R 7 W is mountainous in the S.W. and rolling in the N. and E. In sec. 30 there is a well belonging to the U.S. Cooper Co., but the supply of water is limited. This well is about 1 mile W. of the road going from the mine to Wickenburg.

December 11, 1908.

## first Standard Parallel North through Range 8 west.

chains

	December 12,; At 8 a.m., l.m.t., I set off $33^{\circ}43'30''$ N on the lat. arc; $23^{\circ}04'30''$ S on the decl. arc, and determine a meridian with the solar at the cor. of Tps. 5 N Rs. 7 and 8 W.; thence I run West on S. bdy. of sec. 36. <i>from true Cor. point.</i> Over mountainous land, ascending through dense brush.
0.30	witness cor. to standard cor. of Tps. 5 N Rs. 7 and 8 W.
2.50	Top of ridge bears N. and S.; desc.
9.60	wash 15 lks. wide, course, S.W.; and over rolling land.
14.15	Same wash 15 lks wide, course, N.
20.10	wash 40 lks wide course, N.
38.20	wash 20 lks wide, course, N. 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 malpais stone, $21 \times 10 \times 8$ ins., 16 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
45.50	Wash 40 lks. wide, course N.
46.30	Road, bears N. and S.
65.15	Wash 20 lks. wide, course, N. Difference between measurements of 80.00 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 quartzite stone $20 \times 10 \times 5$ ins., 15 ins. in the ground for standard cor. of secs. 35 and 36, marked SC on N.; with 1 groove on E., and 5 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, mountainous and rolling. Soil, gravelly and stony; 4th rate. Timber, scattering paloverde. Underbrush, mesquite and paloverde. Land mountainous, covered with dense underbrush and exceptional difficult to survey, 80.00 chs.
	West on S. bdy. of sec. 35. Over rolling land and through scattering paloverde timber and dense underbrush.
16.25	Wash 60 lks. wide, course, N. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a malpais stone, $24 \times 8 \times 6$ ins., 18 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
58.60	Wash 15 lks. wide, course, N. Difference between measurements of 80.00 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 malpais stone, $21 \times 8 \times 8$ ins., 16 ins. in the ground for standard cor. of secs. 34 and 35, marked SC on N.; with 2 grooves on E., and 4 grooves on W. face; and raise a mound of stone 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, rolling. Soil, gravelly and rocky; 4th rate. Timber scattering mesquite and paloverde. Underbrush, greasewood and mesquite. Land covered with dense underbrush, 80.00 chs.

## First Standard Parallel North through Range 8 West.

chains	
	West on S. bdy. of sec. 34. Over rolling land and through scattering paloverde and dense underbrush.
24.15	Wash 90 lks wide, course, N.; over bottom land. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a mesquite post, 3ft. long, 3ins. sq., with marked stone 24 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ S 34 on N. face; dig pits 18x18x12 ins., E. and W. of post, 3ft. dist.; and raise a mound of earth 3, $\frac{1}{2}$ ft. base, 1, $\frac{1}{2}$ ft. high, N. of cor. <span style="float: right;">1/2</span>
56.35	Wash, 60 lks. wide, course N.
72.30	Wash 15 lks. wide, course N.; leave dense brush; asc. Difference between measurements of 80.00 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	Top of ridge. Set a granite stone 24x10x6 ins., 18ins. in the ground for standard cor. of secs. 33 and 34, marked SC on N.; with 3 grooves on E. and 3 grooves on W. face; and raise a mound of stone 2ft. base, 1, $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. Land, rolling and mountainous. Soil, sandy, gravelly and stony; 4th rate. Timber, scattering paloverde and mesquite. Underbrush, greasewood and mesquite. Land covered with dense underbrush and mountainous, 80.00 chs. December 12; At this cor. I set off 23°05'S. on the decl. arc and observe the sun on the meridian at noon, the resulting lat. is 33°43'30"N.
	West on S. bdy. of sec. 33. Over mountainous land, and descending through scattering brush.
7.10	Wash, 10 lks. wide, course, N.; asc.
25.00	Top of spur, extends, S.E.; desc.
34.15	Wash, 20 lks. wide, course S.E.; asc. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is
40.00	The point for standard $\frac{1}{4}$ sec. cor., falls on a porphyry rock in place, 24x24x20 ins. above the ground, on which I cut a (x) at the corner point, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. side of cross; and raise a mound of stone 2ft. base, 1, $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
50.00	Top of S. slope of high peak; desc.
62.35	Wash 20 lks wide, course, S.E.; asc.
68.20	Top of ridge, bears N.E. and S.W.; desc.
70.00	Top of a high peak bears N. about 6 chs. dist.; asc.
74.60	Descend through dense paloverde brush.
79.90	Wash 15 lks. wide, course, N.; and over rolling land. Difference between measurements of 80.00 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st set, 80.00 chs. By 2nd set, 80.02 chs.; the mean of which is
80.00	Set a porphyry stone 21x10x6 ins., 16 ins. in the ground for standard cor. of secs. 32 and 33, marked SC on N.; with 4 grooves on the E. and 2 grooves on the W. face; and raise a mound of stone, 2ft. base, 1, $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. Land, mountainous and rolling. Soil, stony; 4th rate. Timber, scattering paloverde. Underbrush, greasewood and paloverde.

## First Standard Parallel North through Range 8 West.

chains	
	Land mountainous, and covered with dense underbrush, exceptional difficult to survey, 80.00 chs.
	West on S. bdy. of sec. 32.
	Over rolling land, through dense underbrush and scattering paloverde.
26.15	Wash 20 lks. wide, course, N.; asc.
31.00	Top of ridge, bears N. and S.; desc.
34.60	Wash, 15 lks. wide course, N.W.; over nearly level land.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point
	By 1st set, 40.03 chs.
	By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a malpais stone, 24x8x6 ins., 18 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base 1, 1/2 ft. high, N. of cor. Pits impracticable.
40.50	Wash 20 lks. wide course, N.
59.75	Wash 20 lks. wide, course, N.; asc.
66.20	Top of ridge, bears N. and S.; desc.
73.30	Wash 20 lks. wide, course, N.; leave dense brush.
75.80	Ascend steep slope.
	Difference between measurements of 80.00 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 porphyry stone, 21x10x5 ins., 16 ins. in the ground for standard cor. of secs. 31 and 32, marked SC on N. with 5 grooves on E. and 1 groove on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
	Land, rolling and mountainous.
	Soil, gravelly and stony; 4th rate.
	Timber, scattering paloverde.
	Underbrush, paloverde and mesquite.
	Land covered with dense underbrush or mountainous, 80.00 chs.
	West on S. bdy. of sec. 31.
	Over mountainous land ascending through a growth scattering paloverde and Ironwood.
4.50	Top of ridge, bears N. and S.; desc.
10.60	Wash, 20 lks. wide, course, S.; asc.
27.20	Top of sharp ridge, bears N. and S.; desc.
	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 porphyry stone 21x8x8 ins., 16 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
40.80	Wash 10 lks. wide, course S.W.; asc.
45.30	Top of spur, bears S.W.; desc.
47.90	Wash, 20 lks. wide course, S.; asc.
56.60	Top of ridge, bears N. and S.; desc.
61.50	Wash, 20 lks. wide course, S.W.; asc.
70.00	Top of ridge, bears N. and S.; desc.
	Difference between measurements of 80.00 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 malpais stone, 24x10x8 ins., 18 ins. in the ground for standard cor. of Tps. 5 N Rs. 8 and 9 W., marked SC on N.; with 6 grooves on N., E., and W. faces; and raise a mound of stone 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.



First Standard Parallel North through Range 8 West.  
chains

Land, mountainous.  
Soil, gravelly, and stony; 4th rate  
Timber, paloverde and ironwood.  
Underbrush, greasewood and mesquite.  
Mountainous land, 80.00 chs.

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Through Range 8 this line mountainous and rolling land, the soil being gravelly and stony; 4th rate, and covered with a scattering growth of paloverde, and, and an undergrowth of paloverde and mesquite. There is no water along this line.

Tp. 4 N R 8 W is mostly rolling but is broken and mountainous in the S.W.

Tp. 5 N R 8 W is rolling, broken and mountainous. There are no settlers along this line.

December 12, 1908.

First Standard Parallel North through Range 9 West

chains	
	December 13; At 8/a.m., l.m.t., I set off 33°43'30"N. on the lat. arc; 23°06'S. on the decl. arc and determine a meridian with the solar at the cor. of Tps. 5 N, Rs. 8 and 9 W., thence I run
	West on S. bdy. of sec. 36.
	Over mountainous land; descending.
1.35	Wash, 60 lks. wide, course, N.W., begin steep ascent.
16.50	Top of ridge, bears N. and S.; desc., enter dense brush.
30.30	Wash 60 lks wide, course, S.W.; over rolling and broken land
	Difference between measurements of 39.00 chs by two sets of chainmen is 12 lks.; position of middle point
	By 1st set, 39.06 chs.
	By 2nd set, 38.94 chs.; the mean of which is
39.00	Set a porphyry stone, 21x8x8 ins., 16 ins in the ground, for W.C. to standard 1/4 sec. cor., marked WC SC 1/4 on N. face and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
40.00	Point for cor. falls in a wash 60 lks. wide, course N.W.
55.25	Wash, 40 lks. wide, course, N.
69.90	Wash, 60 lks wide, course S.W.
	Difference between measurements of 80.00 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 porphyry stone 18x10x8 ins., 12 ins. in the ground for standard cor. of secs. 35 and 36, marked SC on N., with 1 groove on E., and 5 grooves on W. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
	Land, rolling, broken and mountainous.
	Soil, gravelly and stony; 4th rate.
	Timber, scattering mesquite and paloverde.
	Underbrush, mesquite and paloverde.
	Mountainous land or land covered with dense under brush
	80.00 chs.
	<hr/>
	West on S. bdy. of sec. 35.
	Over rolling land and through scattering paloverde
	Timber, and dense underbrush.
8.50	Wash 100 lks. wide, course, S.
19.75	Wash 20 lks. wide, course, S.W.
38.90	Wash 10 lks. wide, course, S.W.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point
	By 1st set, 40.04 chs.
	By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a malpais stone, 24x10x8 ins., 18 ins. in the ground for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone 2ft, baes, 1, 1/2 ft. high, N. of cor. Pits impracticable.
76.10	Along the S. side of a deep wash, course, W.
80.00	Point for cor. falls on steep bank of wash.
	Difference between measurements of 81.00 chs. by two sets of chainmen is 10 lks.; position of middle point
	By 1st set, 81.05 chs.
	By 2nd set, 80.95 chs.; the mean of which is
81.00	Set a quartzite stone 24x10x8 ins., 18 ins. in the ground for W.C. to standard cor. of secs. 34 and 35, marked WC SC on N., with 2 grooves on E., and 4 grooves on W. face; and raise a mound of stone, 2ft, base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
	Land, rolling.
	Soil, gravelly and stony.
	Timber, scattering, paloverde and ironwood.
	Underbrush, greasewood and mesquite.
	Land covered with dense underbrush, 80.00 chs.

## First Standard Parallel North through Range 9 West.

chains	West on S.bdy.of sec.34. <i>from true Cor. point.</i> Over rolling land through scattering paloverde and dense brush. Along S.side of wash.
0.70	Leave wash; course, S.W.
1.00	W.C. for cor. of secs. 34 and 35.
9.50	Wash 80 lks. wide, course, S.
24.30	Wash 20 lks. wide course, S.
32.55	Wash 30 lks. wide, course, S.
39.20	Begin steep ascent: Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is
40.00	On E. slope of rocky peak; Set a porphyry stone, 18x10x5 ins., 12 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
46.20	Top of rocky peak, about 170ft. above $\frac{1}{4}$ cor.
47.25	Descend.
55.90	Wash 15 lks. wide, course S.E.; asc:
61.65	Wash 30 lks. wide, course, S.E.
67.20	Ascent becomes steeper. Difference between measurements of 80.00 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 quartzite stone, 18x10x6 ins., 12 ins. in the ground for standard cor. of secs. 33 and 34, marked SC on N., with 3 groove on the E., and 3 grooves on the W. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, mountainous and rolling. Soil, gravelly and stony. Timber, scattering paloverde and ironwood. Underbrush, greasewood and mesquite. Mountainous land covered with dense underbrush, exceptional difficult to survey, 80.00 chs. December 13, At this cor. I set off 23° 09' 30" S. on the decl. arc, and observe the sun on the meridian at noon the resulting lat. is 33° 43' 30" N.
	West on S.bdy. of sec. 33. Over mountainous land ascending through dense underbrush.
5.40	Top of high ridge, bears N. and S.
6.60	Descend.
26.00	Wash 30 lks. wide, course, N.; asc. 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 porphyry stone 21x10x5 ins., 16 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
41.90	Top of ridge, bears N. and S.; desc. Difference between measurements of 80.00 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st set, 80.08 chs. By 2nd set, 79.92 chs.; the mean of which is
80.00	Set a porphyry stone 18x8x6 ins., 16 ins. in the ground, for standard cor. of secs. 32 and 33, marked SC on N., with 4 groove on E., and 2 grooves on W. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, mountainous. Soil, gravelly and rocky.; 4th rate. Timber, paloverde and ironwood. Underbrush, paloverde and mesquite and cactus. Land mountainous, covered with dense underbrush, exceptional difficult to survey, 80.00 chs.

## First Standard Parallel North through Range 9 West.

West on S. bdy. of sec. 32.  
 Over mountainous land descending through scattering paloverde and dense underbrush.  
 1.50 Foot descent, bears N. and S.; over rolling land.  
 7.60 Wash 200 lks. wide, course, S.W.  
 Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point  
 By 1st set, 40.04 chs.  
 By 2nd set, 39.96 chs.; the mean of which is  
 40.00 Set a porphyry stone, 18x12x6 ins., 12 ins. in the ground for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.  
 Difference between measurements of 80.00 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 porphyry stone, 18x8x6 ins., 12 ins. in the ground, for standard cor. of secs. 31 and 32, marked SC on N., with 5 grooves on E., and 1 groove on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.  
 Land, mountainous.  
 Soil, gravelly and stony; 4th rate.  
 Timber, scattering, paloverde and ironwood.  
 Underbrush, mesquite and greasewood.  
 Land mountainous and covered with dense underbrush, 80.00 chs.

East on S. bdy. of sec. 31.  
 Over rolling land and through scattering paloverde timber and dense brush.  
 1.50 Wash 20 lks. wide, course, S.W.  
 9.30 Wash 20 lks. wide, course, S.W.  
 15.50 Wash 20 lks. wide course, N.W.  
 38.65 Trail bears N.W. and S.E.  
 Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point  
 By 1st set, 40.04 chs.  
 By 2nd set, 39.96 chs.; the mean of which is  
 40.00 Set a porphyry stone 18x8x5 ins., 12 ins. in the ground for standard  $\frac{1}{4}$  sec. cor.; marked SC  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high N. of cor. Pits impracticable.  
 62.50 Enter basin bears N.E. and S.W.  
 67.30 Enter wash, course, W.  
 74.40 Leave wash, 25 lks. wide, course, N.W.  
 Difference between 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 a porphyry stone, 21x10x6 ins., 16 ins. in the ground for standard cor. of Tps. 5 N Rs. 10 and 9 W. marked SC on N., with 6 grooves on N., E., and W. faces; and raise a mound of stone 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.  
 Land, nearly level.  
 Soil, gravelly and stony; 4th rate.  
 Timber, scattering paloverde and ironwood.  
 Underbrush, mesquite and greasewood  
 Land covered with dense underbrush, 80.00 chs.

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 Through Range 9 this line runs over mountainous broken and nearly level land, soil being gravelly and stony; 4th rate, and covered with a scattering growth of ironwood and paloverde timber and an undergrowth of dense greasewood and mesquite brush. there is no water along this line.

First Standard Parallel North through Range 9 West.  
chains.

Through E. 5 N R 9 W the land is rolling in the N.  
and broken and mountainous in the S.  
T 4 N R 9 W is rolling and mountainous and broken  
There is no settlers along this line.

## First Standard Parallel North through Range 10 West.

chains	
	December 14; At 8 a.m., l.m.t., I set off $33^{\circ}43'30''$ N. on the lat. arc; $23^{\circ}09'30''$ S. on the decl. arc and determine a meridian with the solar as the cor. of Tps. 5 N Rs. 9 and 10 W.; thence I run West on S. bdy. of sec. 36.
	Over nearly level land and through scattering timber and dense greasewood brush.
5.90	Wash 60 lks. wide, course, S.W.
17.90	Wash 30 lks. wide course, S.W.
22.40	Wash, 20 lks. wide, course, S.W.
36.90	Enter deep wash, course S.
39.60	Leave wash, course S.
	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 porphyry stone $21 \times 10 \times 6$ ins., 16 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2ft. base, 1, $1/2$ ft. high, N. of cor. Pits impracticable.
47.20	Leave basin, bears N. and S.; asc.
63.60	Top of ridge bears N. and S.; desc. over rolling land. Difference between measurements of 80.00 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 porphyry stone $18 \times 8 \times 8$ ins., 12 ins. in the ground for standard cor. of secs. 35 and 36, marked SC on N., with 1 groove on E., and 5 grooves on W. face; and raise a mound of stone 2ft. base, 1, $1/8$ ft. high, N. of cor. Pits impracticable. Land, level and rolling. Soil, gravelly and stony; 4th rate Timber, scattering paloverde and ironwood. Underbrush, greasewood and mesquite. Land covered with dense underbrush, 80.00 chs.
	West on S. bdy. of sec. 35.
	Descending over rolling land and through scattering timber and dense brush.
14.50	Wash 20 lks. wide, course, S.W.; over nearly level land.
27.40	Wash, 30 lks. wide, course, S.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point. By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a malpais stone $24 \times 10 \times 8$ ins., 18 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2ft. base, 1, $1/2$ ft. high, N. of cor. Pits impracticable.
43.25	Wash, 30 lks. wide, course S.
62.20	Wash, 20 lks. wide, course, S.
68.25	Wash, 20 lks. wide, course, S.
72.80	Wash, 40 lks. wide course, S.
79.00	Ascend steeply. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 80.05 chs. By 2nd set, 79.95 chs.; the mean of which is
80.00	Set a porphyry stone $18 \times 10 \times 6$ ins., 12 ins. in the ground, for standard cor. of secs. 34 and 35, marked SC on N., with 2 groove on E. and 4 grooves on W. face; and raise a mound of stone, 2ft. base, 1, $1/2$ ft. high, N. of cor. Pits impracticable. Land, rolling, level and mountainous. Soil, gravelly and stony; 4th rate. Timber, scattering paloverde and ironwood. Underbrush, greasewood and mesquite. Land mountainous and covered with dense underbrush, 80.00 chs.

First Standard Parallel North through Range 10 West.

chains.	
	West on S.bdy. of sec.34.
6.40	Ascending over mountainous land through dense brush
14.00	Topshf escarpement, 65 ft. high, bears N. and S.; asc. brush
34.75	Top of rocky ridge bears N.E. and S.W.; desc. rough slope. Descend abruptly about 80ft.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point
	By 1st set, 40.046 chs.
	By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a malpais stone 18x12x10 ins., 12 ins. in the ground, for standard 1/4 sec cor., marked SC 1/4 on N. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
44.70	Wash 60 lks. wide course, S.; and over nearly level land.
47.50	Wash 40 lks. wide, course, S.E.
58.30	Wash, 40 lks. wide, course, S.E.
62.70	Road bears N.N.E. and S.S.W.
76.15	Wash 30 lks. wide, course, S.
78.75	Wash 20 lks. wide, course S.
	Difference between measurements of 80.00 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 quartzite stone 21x10x6 ins., 16 ins. in the ground, for standard cor. of secs. 33 and 34, marked SC on N, with 3 grooves on E., and 3 grooves on W. face; and raise a mound of stone, 2ft. base 1, 1/2 ft. high, N. of cor. Pits impracticable.
	Land, mountainous and level. Soil, sandy and gravelly and stony; 4th rate. Timber, scattering paloverde and ironwood. Underbrush, greasewood and mesquite. Land mountainous and covered with dense underbrush, 80.00 chs.
West on S.bdy. of sec.33.	
	Over nearly level land and through scattering timber and dense brush.
5.15	Wash, 20 lks. wide, course, S.
12.50	Wash, 20 lks. wide, course, S.
16.20	Wash, 20 lks. wide, course, S.E.
20.60	Wash 40 lks. wide, course, S.
	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 quartzite stone 18x12x10 ins., 12 ins. in the ground for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
42.40	Wash, 20 lks. wide, course S.
54.50	Wash 20 lks. wide course, S.W.
58.10	Wash 30 lks. wide course, S.
77.15	Wash 20 lks. wide, course, S.
79.10	Wash 40 lks. wide, course, S.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point
	By 1st set, 80.04 chs.
	By 1st set, 79.96 chs.; the mean of which is
80.00	Set a quartzite stone 18x8x6 ins., 12 ins. in the ground, for standard cor of secs 32 and 33, marked SC on N., with 4 grooves on E., and 2 grooves on W. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
	Land, level and gently rolling. Soil, sandy, gravelly and stony.; 4th rate. Timber, scattering paloverde and mesquite. Underbrush, greasewood and mesquite Land covered with dense underbrush, 80.00 chs.

## First Standard Parallel North through Range 10 West.

chains

December 14; At this cor. I set off  $23^{\circ}13'S$ . on the decl arc. and observe the sun on the meridian at noon; the resulting lat. is  $33^{\circ}43'30"N$ .

West on S. bdy. of sec. 32.

Over rolling land and through scattering timber and dense brush.

0.40 Wash 30 lks. wide course, S.  
13.50 Wash 30 lks. wide, course, S.  
16.10 Wash 30 lks. wide, course, S.S.E.  
21.40 Wash 40 lks. wide, course, S.E.  
27.30 Wash 30 lks. wide, course, S.E.  
39.45 Wash 20 lks. wide, course, S.

Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point  
By 1st set, 40.03 chs.

40.00 By 2nd set, 39.97 chs.; the mean of which is  
Set a syenite stone,  $24 \times 12 \times 10$  ins., 18 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base, 1,  $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.

48.30 Wash 30 lks. wide, course S.W.  
55.70 Wash 20 lks. wide, course S.  
68.45 Wash 200 lks. wide course S.  
78.60 Wash 20 lks. wide course S.

Difference between measurements of 80.00 chs by two sets of chainmen is 8 lks.; position of middle point  
By 1st set, 80.04 chs.

80.00 By 2nd set, 79.96 chs.; the mean of which is.  
Set a quartzite stone,  $18 \times 10 \times 6$  ins., 12 ins. in the ground, for standard sec. cor. of secs. 31 and 32, marked SC on N., with 5 grooves on E., and 1 groove on W. face; and raise a mound of stone, 2 ft. base, 1,  $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.

Land, rolling and level.

Soil, gravelly and stony; 4th rate.

Timber, scattering paloverde and ironwood.

Underbrush, greasewood, mesquite and paloverde.

Land covered with dense underbrush, 80.00 chs.

West on S. bdy. of sec. 31.

Over nearly level land through scattering timber and dense brush.

13.30 Wash 20 lks. wide course, S.; asc.  
17.50 Top of hill.; desc.  
21.30 Foot of hill, wash 40 lks. wide course, S.  
36.20 Wash 15 lks. wide course, S.

Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point  
By 1st set, 40.02 chs.

40.00 By 2nd set, 39.98 chs.; the mean of which is  
Set a porphyry stone,  $18 \times 8 \times 6$  ins., 12 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  on N. face; and raise a mound of stone 2 ft. base, 1,  $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.

48.90 Wash 40 lks. wide course, S.  
54.20 Wash 30 lks. wide course S.  
62.00 Begin steep asc. of E. slope of Yuma mountains.  
69.50 Top of spur extends S.; desc.  
74.00 Foot of spur bears N. and S.

Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point  
By 1st set, 80.03 chs.

80.00 By 2nd set, 79.97 chs.; the mean of which is  
Set a syenite stone  $21 \times 12 \times 10$  ins., 16 ins. in the ground for standard cor. of Tps. 5 N Rs. 10 and 11 W., marked SC on N.; with 6 grooves on N., E., and W. faces.; and raise



First Standard Parallel North through Range 10 West.

chains

a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor.  
pits impracticable.  
Land, nearly level and mountainous.  
Soil gravelly and stony; 4th rate.  
Timber, scattering paloverde and ironwood.  
Underbrush, greasewood paloverde and cactus.  
Land, mountainous and covered with dense underbrush,  
80.00 chs.

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Through Range 10 this line passes over level, rolling and mountainous land, the soil being gravelly and stony; 4th rate, and covered with a scattering growth of timber and an undangrowth of dense brush. There is no water along this line.

T 4 N R 10 W is mostly level, being broken and mountainous in the S.E. part.

T 5 N R 10 W is rolling and mountainous. There is a spring located in approximately sec. 15.

There are no settlers along this line.

December 14, 1908.

## First Standard Parallel North through Range 11 West.

chains	
	December 15; At 8 a.m., l.m.t., I set off $33^{\circ}43'30''$ on the lat. arc; $23^{\circ}13'$ S. on the decl. arc and determine a meridian with the solar at the cor. of Tps. 5 N R s. 10 and 11 W.; thence I run West on S. bdy. of sec. 36. Over gently rolling land and through scattering timber and dense brush.
7.30	Wash 30 lks. wide course S.S.E.
16.50	Wash 30 lks. wide course, S.S.E.; leave brush; asc. steep slope.
36.50	Top of spur extends S.; desc. steep slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point. By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a porphyry stone, $21 \times 8 \times 6$ ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2ft. base, 1, $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
48.85	Wash 30 lks. wide, course S.; asc. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point. By 1st set, 80.05 chs. By 2nd set, 79.95 chs.; the mean of which is
80.00	Set a schist stone, $18 \times 10 \times 8$ ins., 12 ins. in the ground, for standard cor. of secs. 35 and 36, marked SC on N., with 1 groove on E., and 5 grooves on W. face; and raise a mound of stone, 2ft. base, 1, $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. Land, mountainous and rolling. Soil, stony and rocky; 4th rate. Timber, scattering paloverde and mesquite. Underbrush, greasewood and mesquite. Land mountainous and covered with dense underbrush, 80.00 chs.
	West on S. bdy. of sec. 35. Ascending over mountainous land.
4.00	Top of high spur extends S.; desc. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point. By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a porphyry stone $13 \times 12 \times 8$ ins., 12 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2ft. base, 1, $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
43.50	Wash 40 lks. wide course S.; over rolling land through dense greasewood brush.
45.90	Wash 60 lks. wide, course, S.
58.55	Left bank of wash, course S.
65.20	Right bank of wash, course S. Difference between measurements of 80.00 chs. by two sets of chainmen is 16 lks.; position of middle point. By 1st set, 80.08 chs. By 2nd set, 79.92 chs.; the mean of which is
80.00	Set a malpais stone $21 \times 10 \times 8$ ins., 16 ins. in the ground, for standard cor. of secs. 34 and 35, marked SC on N., with 2 grooves on E., and 4 grooves on W. face; and raise a mound of stone 2ft. base, 1, $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable. Land, mountainous and rolling Soil, sandy gravelly and stony; 4th rate. Timber, scattering paloverde and ironwood. Underbrush, greasewood and cactus. Land mountainous and covered with dense underbrush, 80.00 chs.

First Standard Parallel North through Range 11 West.

chains	west on S. bdy. of sec. 34. Over nearly level land through dense brush.
34.00	Wash 40 lks. wide course S.W. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00 chs	Set a sycnite stone 21x10x10 ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. From cor. An Ironwood 6 ins. in diam., bears N 85° E., 45 lks. dist. marked SC $\frac{1}{4}$ S 34 BT An ironwood, 6 ins. in diam., bears N 65° W., 20 lks. dist., marked SC $\frac{1}{4}$ S. 34 BT
50.10	
59:10 79:40	Wash 60 lks. wide, course S.S.W. Wash 10 lks. wide, course S. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 80.05 chs. By 2nd set, 79.95 chs.; the mean of which is
80.00	Set a granite stone, 24x10x6 ins., 18 ins. in the ground, for standard cor. of secs. 33 and 34, marked SC on N., with 3 grooves on E., and 3 grooves on W. face.; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. From cor. A paloverde 8 ins. in diam., bears N 50° E., 109 lks. dist., marked T 5 N R 11 W S 34 BT Land, nearly level. Soil, sandy and gravelly and stony; 4th rate. Timber, scattering paloverde and ironwood. Underbrush, greasewood and cactus. Land covered with dense underbrush, 80.00 chs. December 15; At this cor. I set off 23° 16' S. on the decl. arc, and observe the sun on the meridian at noon the resulting lat. is 33° 43' 30" N.
13.10	West on S. bdy. of sec. 33. Over nearly level land through dense brush.
16.00	Wash 20 lks. wide, course S.
22.00	Wash 20 lks. wide course S.
36.50	Road bears N.E. and S.W. Wash 40 lks. wide course S. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a quartzite stone 21x8x8 ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
48.60	Wash 20 lks. wide course S.
53.15	Wash 60 lks. wide course S.
58.20	Wash 30 lks wide course S.
62.20	Wash 70 lks. wide course S. Difference between measurements of 80.00 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 quartzite stone 18x8x6 ins., 12 ins. in the ground, for standard cor. of secs. 32 and 33, marked SC on N., with 4 groove on E., and 2 grooves on W. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor.

## First Standard Parallel North through Range 11 West.

	<p>Pits impracticable. Land, nearly level, level. Soil, gravelly and stony,; 4th rate. Timber, scattering paloverde and ironwood . Underbrush, greasewood and cactus. Land covered with dense underbrush, 80.00 chs.</p>
	<p>West on S. bdy of sec 32. Over level land, through scattering timber and dense brush.</p>
24.30	Road bears N.E. and S.W.
27.90	Wash 15 lks. wide course S.
38.10	Wash 20 lks. wide course S. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a limestone 18x10x6 ins., 12 ins. in the ground, for Standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
53.30	Wash 40 lks. wide course S. Difference between measurements of 80.0 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 80.05 chs. By 2nd set, 79.95 chs.; the mean of which is
80.00	Set a lime stone 21x10 x6 ins., 16 ins. in the ground, for standard cor. of secs. 31 and 32, marked SC on N., with 5 grooves on E., and 1 groove on W. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. From cor. Paloverde 6 ins. in diam., bears N60°W., 33 lks dist., marked T 5 N R 11 W S 31 BT Land, level Soil, gravelly and stony. 4th rate. Timber, scattering paloverde and ironwood. Underbrush, greasewood paloverde and cactus . Land covered with dense underbrush, 80.00 chs.
	<p>West on S. bdy. of sec. 31. Over level land through scattering timber and dense brush.</p>
27.65	Wash 20 lks. wide, course S. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a granite stone 21x10x10 ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
62.45	Wash 10 lks. wide, course S.
68.15	Wash 20 lks. wide course, S.
69.10	Road bears N. and S. Difference between measurements of 80.00 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 lime stone, 18x8x6 ins., 12 ins. in the ground, for standard cor. of Tps. 5N Rs. 11 and 12 W., marked SC on N., with 6 grooves on N., E., and W. faces; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.  Land, level. Soil, gravelly and stony.; 4th rate. Timber, scattering paloverde and ironwood. Underbrush, greasewood and cactus. Land covered with dense underbrush, 80.00 chs.

## First Standard Parallel North through Range 11 West.

chains.

Through Range 11 this line runs over 2 miles of mountainous land in the N., crossing spurs of the Yuma mountains, the rest of the line is level. The soil being sandy, gravelly and rocky; 4th rate and covered with a scattering growth of paloverde and ironwood timber and a dense growth of greasewood, mesquite and cactus underbrush. There is no water along this line.

T 4 N R 11 W is a level desert and covered with a dense growth of underbrush.

T 5 N R 11 W is gently rolling and level in the S. part and broken and mountainous in the N., containing the Harqua Hala mountains.

There are no settlers along this line.

December 15, 1908.

## First Standard Parallel North through Range 12 West.

	December 16; At 8 a.m., l.m.t., I set off $33^{\circ}43'30''$ N on the lat. arc; $23^{\circ}15'30''$ S. on the decl. arc and determine a meridian with the solar at the cor. of Tps. 5 N Rs. 11 and 12 W.; thence I run
	West on S. bdy. of sec. 36. Over level land through dense brush.
20.15	Wash 30 lks. wide, course S.; over gently rolling land.
28.90	Wash 30 lks. wide, course S. Difference between 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 a limestone $18 \times 8 \times 6$ ins., 12 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
51.15	Wash 30 lks. wide, course S.
64.70	Wash 30 lks. wide, course S.
67.55	Road, bears N.W. and S.E.
68.60	Wash 35 lks. wide bears S.
70.05	Road, bears N.W. and S.E.
76.50	Wash 60 lks. wide course, S. Difference between measurements of 80.00 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, $21 \times 8 \times 6$ ins., 16 ins. in the ground, for standard cor. of secs. 35 and 36, marked SC on N., with 1 groove on E., and 5 grooves on W. face; and raise a mound of stone 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, level and rolling. Soil, gravelly, 4th rate Timber, scattering paloverde and ironwood. Underbrush, greasewood. Land covered with dense underbrush, 80.00 chs.
	oo
	West on S. bdy. of sec. 35. Over gently rolling land through dense underbrush.
25.25	Wash 30 lks. wide, course S.
33.40	Wash 50 lks. wide, course, S. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point. By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a syenite stone, $21 \times 8 \times 8$ ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
43.60	Wash 30 lks. wide course S.
52.80	Wash 30 lks. wide, course S.
66.20	Wash 30 lks. wide, course S.
70.10	Wash 20 lks. wide, course S.
78.45	Wash 20 lks. wide course S. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 80.05 chs. By 2nd set, 79.95 chs.; the mean of which is
80.00	Set a malpais stone, $21 \times 12 \times 10$ ins., 16 ins. in the ground for standard cor. of secs. 34 and 35, marked SC on N., with 2 grooves on E., and 4 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, rolling and nearly level. Soil, gravelly and stony; 4th rate. Timber, scattering paloverde and ironwood. Underbrush, greasewood and cactus. Land covered with dense underbrush, 80.00 chs.

## First Standard Parallel North through Range 12 West.

chains	West on S. bdy. of sec. 34. Over nearly level land through dense underbrush.
9.70	Road bears, N.E. and S.W.
13.10	Wash 30 lks. wide, course S.
30.50	Wash 30 lks. wide, course S.
38.40	Wash 30 lks. wide, course S. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs.
40.00	By 2nd set, 39.97 chs.; the mean of which is Set a malpais stone 21x10x6 ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
52.10	Wash 25 lks. wide, course S.
55.80	Road bears N.E. and S.W.
73.35	Wash 30 lks. wide, course S.
74.90	Road bears, N. and S.
76.95	Left bank of wash course S.
80.00	Point for cor. falls in wash. Difference between measurements of 80.85 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 80.88 chs.
80.85	By 2nd set, 80.82 chs.; the mean of which is Set a quartzite stone, 21x10x10 ins., 16 ins. in the ground for W.C. to standard cor. of secs. 33 and 34, marked WC SC on N., with 3 grooves on E., and 3 grooves on W. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land level. Soil, gravelly; 4th rate. Timber scattering paloverde and ironwood. Underbrush, greasewood. Land covered with dense underbrush, 80.00 chs. ✓ December 16; At this cor. I set off 23° 19' S. on the decl. arc and observe the sun on the meridian at noon the resulting lat. is 33° 43' 30" N. ✓
0.70	West on S. bdy. of sec. 33 from true cor. point. Over level land through dense underbrush.
0.85	Leave wash, course S.
6.00	W.C. to secs. 33 and 34.
10.00	Wash, 10 lks. wide, course S.
14.50	Wash, 15 lks. wide, course S.
18.70	Wash 20 lks. wide, course S.
21.00	Wash 10 lks. wide, course S.
27.70	Drain, 10 lks. wide, course S.; asc.
30.00	Drain, 10 lks. wide, course S.; desc. From this point. Top of ridge, bears N. and S.; Smokestack on pumping plant, bears N 57° 40' W. Reed's windmill bears, N 58° 27' W. Reed's house, bears N 63° 20' W. Chinaman's house, bears N 46° W.
32.20	Foot of hill; over level land.; E. side of blacksmith shop
32.25	W. side of blacksmith shop.
32.50	Excavation for bed rock dam, bears S. 100' lks. dist.
34.40	Drain 10 lks. wide, course S.
38.40	Road, bears N. and S. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.04 chs.
40.00	By 2nd set, 39.96 chs.; the mean of which is Set a sandstone 18x8x6 ins., 12 in. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face.; from which A mesquite, 5 ins. in diam., bears 3° 15' E., 182 lks. dist marked SC $\frac{1}{4}$ S 33 BT A paloverde, 6 ins. in diam., bears N 81° W., 67 lks. dist marked. SC $\frac{1}{4}$ S 33 BT



First Standard Parallel North through Range 12 West.

40.40	Drain, 5 lks. wide, course S.
40.75	Drain, 10 lks. wide, course S.
52.00	A point from which Smokestack on pumping plant bears N 2°15'E. Reed's windmill bears N 29°54'W Reeds house bears, N 37°45'W. Chinaman's house bears N 9°20' W.
61.40	Drain 10 lks. wide, course S.W.
63.00	Centennial wash, 75 lks. wide, course S.E. Difference between measurements of 80.00 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 granite stone, 18X8X6 ins., 12 ins. in the ground, for standard cor of secs. 32 and 33, marked SC on N., with 4 groove on E., and 2 grooves on W. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land level and rolling. Soil, sandy and gravelly; 4th rate. Timber, scattering paloverde and mesquite. Underbrush, greasewood and cactus. Land covered with dense underbrush, 80.00 chs.
West on S. bdy. of sec. 32.	
1.50	Over gradual rising ground through dense brush.
1.50	Ascent gets steeper.
10.00	Top of ridge, bears N. and S.; desc.
16.25	Foot of ridge, bears N. and S.; ascend. Difference between measurements of 39.65 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st set, 39.71 chs. By 2nd set, 39.59 chs.; the mean of which is
39.65	Set a schist stone, 21X6X6 ins., 16 ins. in the ground, for W.C. to standard 1/4 sec cor., marked WC SC 1/4 on N. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
40.00	Point falls in wash, 10 lks. wide, course N.
46.90	Wash 30 lks. wide, course N.E.; asc.
56.65	Top of ridge, bears N. and S.; desc.
64.15	Wash 30 lks. wide, course N.E.; asc.
64.70	Left bank of wash, course N.E.
68.65	Right bank of wash, course N.E.
78.55	Top of spur, extends N.; desc. Difference between measurements of 79.75 chs. by two sets of chainmen is 14 lks.; position of middle point By 1st set, 79.82 chs. By 2nd set, 79.68 chs.; the mean of which is
79.75	Set a quartzite stone, 19X8X6 ins. 12 ins. in the ground, for W.C. to standard cor. of secs. 31 and 32, marked WC SC on N., with 1 groove on W., and 5 grooves on E. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
80.00	Point for cor. falls in wash, 40 lks. wide, course N.E. Land, mountainous and rolling. Soil, sandy, gravelly and stony; 4th rate. Timber scattering paloverde and ironwood. Underbrush, greasewood. Land covered with dense underbrush, or mountainous, 80.00 chs.
West on S. bdy. of sec. 31 from true point for cor. Over mountainous land ascending through dense underbrush.	
6.25	Top of ridge, course N. and S.; desc.
8.50	Harrisburg schoolhouse bears N. 30.00 chs.
9.30	Pumping plant for Harqua Haha mine, bears N. 35.00 chs.

First Standard Parallel North through Range 12 West.

chains

9.90	Wash, 15 lks, wide, course N.; asc.
12.60	Top of ridge, bears N, and S.; desc.
14.80	Wash 10 lks. wide, course N.
26.60	Ascend.
32.50	Top of ridge, bears N. and S.; desc.
35.40	Wash, 15 lks. wide, course, N.; asc. Difference between measurements of 40.00 chs. by two sets of chainmen is 16 lks.; position of middle point. By 1st set, 40.08 chs. By 2nd set, 39.92 chs.; the mean of which is
40.00	Set a quartzite stone 18X10X6 ins., 12 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
40.25	Wash, 15 lks. wide, course N.
50.25	Top of ridge, bears N. and S.; desc.
56.10	Wash 20 lks, wide, course, N.; and over level land.
59.96	Pipe line from pumping station to Harqua Hala mine, bears N.E. and S.W.
61.10	Road from Harrisburg to Harqua Hala mine, bears N.E. and S.W.
66.30	Old road, bears N.E. and S.W.
74.80	Wash, 15 lks. wide, course N.
77.15	Wash, 15 lks. wide, course N. Difference between measurements of 80.00 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 quartzite stone, 18X10X8 ins., 12 ins. in the ground, for standard cor. of Tps. 5 N Rs. 12 and 13 W., marked SC on N., with 6 grooves on N., E., and W. faces; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, mountainous and rolling. Soil, gravelly and stony. 4th rate. Timber, scattering paloverde and ironwood Underbrush, greasewood, paloverde and cactus. Land mountainous or covered with dense underbrush, 80.00. chs.

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Through Range 12 this line runs over rolling, level and mountainous land, the soil being sandy, gravelly and rocky,; 4th rate, and covered with a scattering growth of paloverde and ironwood and a few mesquite with a dense undergrowth of greasewood, mesquite and cactus. There is no water along this line.

Tp 5 N R 12 W is nearly level in the N.W., W., and S., but is mountainous in the N.E.  
Tp 4 N R 12 W is mountainous in the N.W. and level desert in the rest; covered with a dense growth of underbrush.

First Standard Parallel North through Range 13 West.

chains	<p>December 17: At 8 a.m., l.m.t., I set off 33° 43' 30" W on the lat. arc; 23° 18' S on the decl. arc and determine a meridian with the solar at the cor. of Tps. 5 N Rs. 12 and 13 W.; thence I run</p> <p>West on S. bdy. of sec. 36.</p> <p>Over rolling land through dense brush.</p> <p>Wash 15 lks. wide course N.</p> <p>Wash 50 lks. wide course N.E.</p> <p>Wash 15 lks. wide course N.E.</p> <p>Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point</p> <p>By 1st set, 40.04 chs.</p> <p>By 2nd set, 39.96 chs.; the mean of which is</p> <p>Set a porphyry stone 18X6X6 ins., 12 ins. in the ground, for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.</p> <p>Road bears N.N.E. and S.S.W.</p> <p>Wash 50 lks. wide course N.E.</p> <p>Old road bears N. and S.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point</p> <p>By 1st set, 80.05 chs.</p> <p>By 2nd set, 79.95 chs.; the mean of which is</p> <p>Set a porphyry 21X8X6 ins., 16 ins. in the ground for standard cor. of secs. 35 and 36, marked SC on N., with 1 groove on E., and 5 grooves on W. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.</p> <p>Land, gently rolling.</p> <p>Soil, gravelly; 4th rate.</p> <p>Timber, scattering paloverde and ironwood.</p> <p>Underbrush, greasewood and cactus.</p> <p>Land covered with dense underbrush, 80.00 chs.</p>
7.15	
7.15	
25.00	
38.30	
40.00	
52.00	
69.80	
70.70	
80.00	
9.65	<p>West on S. bdy. of sec. 35.</p> <p>Over gently rolling land through dense brush.</p> <p>Wash 30 lks. wide course N.</p> <p>Over level land.</p> <p>Wash 30 lks. wide course N.</p> <p>Old road bears N. and S.</p> <p>Difference between measurements of 37.70 chs. by two sets of chainmen is 6 lks.; position of middle point</p> <p>By 1st set, 37.73 chs.</p> <p>By 2nd set, 37.67 chs.; the mean of which is</p> <p>Set a malpais stone 18X6X6 ins., 12 ins. in the ground, for W.C. to standard 1/4 sec. cor., marked WC SC 1/4 on N. face and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.</p> <p>Enter wash course N.E.</p> <p>point for cor. falls in wash.</p> <p>Leave wash, course N.E.</p> <p>Road bears N.E. and S.W.</p> <p>Ascend.</p> <p>Top of ridge bears N. and S.; desc.</p> <p>Wash 50 lks. wide, course N.; asc.</p> <p>Top of ridge, bears N.E. and S.W.; desc.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point</p> <p>By 1st set, 80.06 chs.</p> <p>By 2nd set, 79.94 chs.; the mean of which is</p> <p>Set a porphyry stone 18X6X6 ins., 12 ins. in the ground, for standard cor. of secs. 34 and 35, marked SC on N., with 2 grooves on E., and 4 grooves on W. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.</p> <p>Land, level, rolling and mountainous.</p> <p>Soil, gravelly and stony; 4th rate.</p> <p>Timber scattering paloverde and ironwood.</p> <p>Underbrush, greasewood and cactus.</p>
21.00	
33.40	
34.90	
37.70	
38.05	
40.00	
41.75	
46.40	
52.50	
61.50	
66.60	
78.20	
80.00	

First Standard Parallel North through Range 13 West.

chains	
	Land covered with dense underbrush and mountainous, 80.00 chs.
	West on S.bdy.of sec.34. Over mountainous land descending through dense brush.
4.75	Wash 15 lks.wide course N.; asc.
7.30	Ridge,bears N.and S.; desc.
10.80	Foot of ridge bears N.and S.;
16.50	Wash 18 lks.wide course N.N.E.; asc.
22.30	Ridge bears N.and S.; desc.
31.40	Foot of ridge.
34.60	Wash 20 lks.wide course N.
38.35	Road,bears N.and S. 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 diorite stone,21X10X6 ins.,16ins.in the ground, for standrad $\frac{1}{4}$ sec cor.,marked SC $\frac{1}{4}$ on N.face; and raise a mound of stone 2ft,base,1,1/2 ft.high,N.of cor. Pits impraticable.
44.50	Begin gradual ascent.
44.50	Leave dense underbrush and ascend steeply.
52.80	Ridge,bears N.and S.; desc.
60.10	Wash 20 lks.wide course N.; asc.
65.50	Ridge,bears N and S.; desc.
70.30	Wash 20 lks.wide course N.; over rolling land through dense underbrush.
79.45	Wash 70 lks.wide course N.N.E.
80.00	point for cor.falls in wash. Difference between measurements of 80.50 chs.by two sets of chainmen is 14 lks.; position of middle point By 1st set,80.57 chs. By 2nd set,80.43 chs.; the mean of which is
80.50	Set a porphyry stone 21X8X6 ins.,16ins.in the ground, for W.C.to standard cor.of secs:33 and 34,marked WC SC on N., with 3groove on E.,and 3grooves on W.face; and raise a mound of stone,2ft.base,1,1/2 ft.hggh,N.of cor. Pits impraticable. Land,mountainous. Soil,gravelly and stony; 4th rate. Timber,a few ironwood. Underbrush,greasewood,mesquite and cactus Land mountainous or covered with dense underbrush, 80.00 chs. At this cor.I set off 25°22'S.on the decl.arc and observe the sun on the meridian at noon the resulting lat.is 33°43'30" N. ✓
	West on S.bdy.of sec.33. from true cor, point. Ascending over mountainous land.
0.50	W.C.to cor.of secs.33 and 34.
4.50	Ridge bears N.and S.; desc.
8.10	Wash 20 lks.wide,course N.;enter dense greasewood brush.
11.20	Wash 30 lks.wide,course,N.; asc.
33.50	Ridge,bears N.and S.; desc.
40.00	Point for cor.falls in wash 60 lks.wide,course,N. Difference between measurements of 41.50 chs.by two sets of chainmen is 12 lks.; position of middle point By 1st set,41.56 chs. By 2nd set,41.44 chs.; the mean of which is
41.50	Set a porphyry stone 18X10X6 ins.,12ins.in the ground for W.C.to standard $\frac{1}{4}$ sec.cor.,marked WC SC $\frac{1}{4}$ on N.face; and raise a mound of stone 2ft.base,1,1/2 ft.high,N.of cor. Pits impraticable.
66.15	Wash 15 lks.wide course N.; over level land.
74.90	Wash 60 lks.wide,course,N. Difference between measurements of 80.00 chs.by two sets of chainmen is 10 lks.; position of middle point By 1st set,80.05 chs. By 2nd sets.79.95 chs.; the mean of which is
80.00	Set a malpais stone 21X8X8ins.,16ins.in the ground,for stan

First Standard Parallel North through Range 13 West.

chains	
	standard corof secs. 32 and 33, marked SC on N., with 2 grooves on W., and 4 grooves on E. face; and raise a mound of stone, 2ft. base, 1, 1/2 high, N. of cor. Pits impracticable. Land, mountainous, rolling and level. Soil, gravelly and stony. Timber, scattering paloverde and ironwood. Underbrush, greasewood, mesquite and cactus. Land mountainous or covered with dense underbrush, 80.00 chs.
	West on S. bdy. of sec. 32
	Over gently rolling land through dense underbrush.
2.55	Wash 60 lks. wide, course N.E.
37.10	Wash 30 lks. wide, course N.
38.25	Wash 20 lks. wide, course N.E.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point
	By 1st set, 40.03 chs.
	By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a quartzite stone 18X6X6 ins., 12 ins. in the ground, for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
53.55	Wash 3 lks. wide course N.
	Difference between measurements of 80.00 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 porphyry stone 21X8X6 ins., 16 ins. in the ground, for standard cor. of secs. 31 and 32, marked SC on N., with 5 grooves on E., and 1 groove on W. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, gently rolling and broken. Soil, sandy, gravelly and stony; 4th rate. Timber, scattering paloverde and ironwood. Underbrush, greasewood and cactus. Land covered with dense underbrush, 80.00 chs.
	West on S. bdy. of sec. 31.
	Over gently rolling land through dense underbrush.
2.65	Wash 40 lks. wide course, N.E.
22.80	Wash 30 lks wide course N.
38.30	Leave dense brush and begin steep ascent over rocky slope.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point
	By 1st set, 40.04 chs.
	By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a quartzite stone, 18X8X6 ins., 12 ins. in the ground for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
44.70	Top of N. of sharp rocky ridge, bears N, and S.; desc over steep rocky slope.
64.20	Foot of slope; over broken ground through dense brush.
	Difference between measurements of 80.00 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 quartzite stone 18X8X8 ins., 12 ins. in the ground, for standard cor. of Tps 5 N Rs. 13 and 14 W., marked SC on N., with 6 grooves on N., E., and W. faces; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, rolling, broken and mountainous. Soil, gravelly, stony and rocky. Timber, scattering paloverde and ironwood.

First Standard Parallel North through Range 13 West.

chains

Underbrush, greasewood, mesquite and cactus.  
Land covered with dense underbrush, <sup>or</sup> mountainous,  
80.00 chs. <sup>of mountainous,</sup>

-----oOo-----

Through Range 13 this line passes over gently rolling, broken and mountainous land; the soil being sandy, gravelly and rocky; 4th rate, and covered with a scattering growth of paloverde and ironwood timber, and a dense growth of greasewood, mesquite and cactus underbrush. There is no water along this line.

T 4 N R 13 W., is mountainous and broken. The Harqua Hala mine is located in this Tp.

For Tp 5 N R 13 W see notes of subdivision.

There are no settlers along this line.

December 17, 1908.

## First Standard Parallel North through Range 14 West.

chains

	<p>January 5; At 8 a.m., l.m.t., I set off <math>33^{\circ}43'30''</math> W. on the lat. arc; <math>22^{\circ}34'30''</math> S. on the decl. arc and determined a meridian with the solar at the cor of Tps. 5 N R 13 and 14 W.; thence I run</p> <p>west on S. bdy. of sec. 36</p> <p>Over mountainous land through dense brush.</p>
16.90	Wash, 50 lks. wide, course N.W.
17.75	Ascend high ridge, bears N.W. and S.E.
30.00	Top of high ridge, bears N.W. and S.E.; desc.
	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 granite stone $24 \times 16 \times 6$ ins., 18 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable,
42.20	Foot of high ridge, bears N.W. and S.E.; thence over level land.
68.15	Wash 15 lks. wide, course S.
	Difference between measurements of 80.00 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 silicate stone, $21 \times 8 \times 6$ ins., 16 ins. in the ground for standard cor. of secs. 35 and 36, marked SC on N., with 1 groove on E., and 5 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
	Land, mountainous and rocky..
	Soil, stony; 4th rate.
	Timber scattering paloverde and ironwood.
	Underbrush, greasewood
	Land mountainous and covered with dense underbrush, 80.00 chs.
	Rest on S. bdy. of sec. 35.
	Over level land through dense brush.
24.65	Wash, 60 lks. wide, course S.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point
	By 1st set, 40.04 chs.
	By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a silica stone, $22 \times 8 \times 6$ ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
45.10	Road from Ehrenburg to Prescott, bears NE and SW.
75.15	Wash, 15 lks. wide, course W.S.W.
80.00	Point for cor. falls in wash 15 lks. wide, course W.S.W.
	Difference between measurements of 80.35 chs. by two sets of chainmen is 10 lks.; position of middle point
	By 1st set, 80.40 chs.
	By 2nd set, 80.30 chs.; the mean of which is
80.35	Set a granite stone, $21 \times 8 \times 6$ ins., 16 ins. in the ground, for W.C. to standard cor. of secs. 34 and 35, marked WC SC on N., with 2 grooves on E., and 4 grooves on W. face; dig pits $24 \times 18 \times 12$ 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 cor.; from cor.
	An ironwood 6 ins. in diam., bears $N89^{\circ}50'W.$ , 165 lks. dist marked
	WC SC T 5 N R 14 W S 34 BT
	Land, nearly level.
	Soil, sandy and gravelly; 3rd rate.
	Timber, scattering paloverde and ironwood.
	Underbrush, greasewood.
	Land covered with dense underbrush, 80.00 chs.

West



First Standard Parallel North through Range 14 West.

chains

West on S. bdy. of sec. 34. from true point for cor.  
 Over nearly level land through dense brush.

0.35 W.C. to cor. of secs. 34 and 35.  
 7.50 Wash, 15 lks. wide, course N.W.  
 16.00 Wash, 10 lks. wide, course N.W.  
 40.00 Point for cor. falls in wash, 10 lks. wide, course N.W.  
 Difference between measurements of 40.70 chs. by two  
 sets of chainmen is .6 lks.; position of middle point  
 By 1st set, 40.73 chs.  
 By 2nd set, 40.67 chs.; the mean of which is  
 40.70 Set a granite stone, 18X8X6 ins., 12 ins. in the ground,  
 for W.C. to standard  $\frac{1}{4}$  sec. cor., marked WC SC  $\frac{1}{4}$  on N. face  
 dig pits, 18X18X12 ins., E., and W. of stone, 3ft. dist.;  
 and raise a mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high,  
 N. of cor.; from cor.  
 An ironwood, 10 ins. in diam., bears N66°30'W., 191 lks.  
 dist., marked  
 WC SC  $\frac{1}{4}$  S 34 BT  
 50.10 Wash, 15 lks. wide, course N.W.  
 65.10 Road from Prescott to Ehrenburg, bears N.W. and S.E.  
 Difference between measurements of 80.00 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 granite stone, 18X6X5 ins., 12 ins. in the ground,  
 for standard cor. of secs. 33 and 34, marked SC on N. with  
 3 grooves on E., and 3 grooves on W. face; dig pits, 24X  
 18X12 ins. crosswise on each line, E., and W., 3ft., and N. of  
 stone, 7ft. dist.; and raise a mound of earth, 4ft. base,  
 2ft. high, N. of cor.  
 Land, level.  
 Soil, sandy and gravelly; 3rd rate.  
 Timber, scattering palo verde and ironwood.  
 Underbrush, greasewood.  
 Land covered with dense underbrush, 80.00 chs.

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West on S. bdy. of sec. 33.  
 Over level land through dense brush.

7.25 Road to Wicksburg, bears N.W. and S.E.  
 27.10 Wash 10 lks. wide, course, S.W.  
 29.05 Wash, 10 lks. wide, course S.W.  
 35.15 Wash, 15 lks. wide, course S.W.  
 Difference between measurements of 40.00 chs. by two  
 sets of chainmen is 6 lks.; position of middle point  
 By 1st set, 40.03 chs.  
 By 2nd set, 39.97 chs.; the mean of which is  
 40.00 Set a granite stone, 18X6X6 ins., 12 ins. in the ground,  
 for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  on N. face; dig pits  
 18X18X12 ins., E., and W. of stone, 3ft. dist.; and raise  
 a mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor.  
 40.15 Wash, 20 lks. wide, course S.W.; over land subject to  
 overflow in the rainy season.  
 Difference between measurements of 80.00 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 granite stone, 16X12X6 ins., 11 ins. in the ground,  
 for standard cor. of secs. 32 and 33, marked SC on N.,  
 with 2 grooves on W., and 4 grooves on E. face; dig pits  
 24X18X12 ins., crosswise on each line, E., and W., 3ft.,  
 and N. of stone, 7ft. dist.; and raise a mound of earth  
 4ft. base, 2ft. high, N. of cor.  
 Land, level.  
 Soil, sandy and gravelly; 3rd rate.  
 Timber, scattering palo verde and ironwood.  
 Underbrush, greasewood.  
 Land covered with dense underbrush, 80.00 chs.  
 At this cor. I set off ~~33°43'30" S~~ on the decl. arc and  
 observe the sun on the meridian at noon, the resulting  
 lat. is 33°43'30" N.

First Standard Parallel North through Range 14 West.

chains	West on S.bdy.of sec.32. Over level land through dense brush.
36.80	Wash,15 lks.wide,course S.W.
38.00	Wash,15 lks.wide,course S.W. Difference between measuerments 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 a granite stone 18X6X6 ins.,12ins.in the ground, for standard 1/4 sec.cor.,marked SC 1/4 on N.face; dig pits 18X18X12 ins.,E.,and.W.of stone,3ft.dist; and raise a mound of earth,3,1/2 ft.base,1,1/2 ft.high,N. of cor. Difference between 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 a quartzite stone,18X10X5 ins.,12 ins.in the ground, for standard cor.of secs.31 and 32,marked SC on N.,with 5 grooves on E.,and 1 groove on the W.face; dig pits, 24X18X12 ins.,crosswise on each line,E.,and W.,3ft.,and N.of stone,7ft.dist.; and raise a mound of earth,4ft. base,2ft.high,N.of cor. Land,level. Soil,sandy and gravelly; 3rd rate; subject to overflow No timber. Underbrush,greasewood. Land covered with dense underbrush,80.00 chs.
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	West on S.bdy.of sec.31. Over level land through dense brush.
1.00	Road,Prescott to Ehrenburg,bears N.E.and S.W.
4.30	Wash 25 lks.wide,course S.W.
5.30	Wash 25 lks.wide,course S.W.
25.00	Road,bears N.E.and S.W. Difference between measurements of 40.00 chs.by two sets of chainmen is 6 lks.; position of middle point By 1st set,40.03 chs. By 2nd set,39.97 chs.; the mean of which is
40.00	Set a granite stone,18X6X6 ins.,12 ins.in the ground, for standard 1/4 sec.cor.,marked SC 1/4 on N.face; dig pits 18X18X12ins.,E.,and W.of stone,3ft.dist; and raise a mound of earth,3,1/2 ft.base,1,1/2 ft.high,N.of cor. From cor,the Railroad building in Vicksburg,bears N 15° E. Difference between measurements of 80.00 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 granite stone,20X6X6ins.,15 ins.in the ground,for standard cor.of Tps.5 N Rs.14 and 15 W.,marked 5°N SC on N., 14 W on E.,and 15 W on W.face,with 6 grooves on N.,E.,and W.faces; dig pits,30X24X12ins.,crosswise on each line,E.and W.4ft.,and N.of stone,8ft.dist.; and raise a mound of earth,5ft.base,2,1/2 ft.high,N.of cor. From cor. the railroad building in Vicksburg,bears N 30° 20' E. Land,level Soil,gravelly and stony; 3rd rate. No timber. Underbrush,greasewood and cactus. Land covered with dense underbrush,80.00 chs.
-----oOo-----	
	Through range 14 this line runs over mountainous land for the 1st mile then over level land and nearly level land for the rest of the Tp. There is a scattering growth of paloverde and ironwood for the first 4 miles then there is no timber,but there is a dense growth of underbrush through the entire Tp.

First Standard Parallel North through Range 14 West.

chains

The soil is sandy, gravelly and stony, mostly 3rd rate; and covered with a dense growth of greasewood and cactus underbrush. There is no water along this line. T 5 N R 14 W is mountainous in the S.E. part and level in the rest of the Tp. There are no settlers along this line.

## First Standard Parallel North through Range 15 West.

chains	West on S.bdy.of sec.36 Over level land through dense greasewood brush. Difference between 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 a granite stone 16X12X6 ins., 11 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; dig pits 18X18X12 ins., E., and W. of stone 3 ft. dist; and raise a mound of stone, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor. Road, bears S.W. and N.E. Road bears S.W. and N.E.
66.15	Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point
79.60	By 1st set, 80.04 chs. By 2nd set, 79.96 chs.; the mean of which is
80.00	Set a granite stone, 18X7X5 ins., 12 ins. in the ground, for standard cor. of secs. 35 and 36, marked SC on N., with 1 groove on E., and 5 grooves on W. face; dig pits 24X18X12 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 cor. Land, level. Soil, sandy and gravelly; 3rd rate. No timber. Underbrush, greasewood and cactus. Land covered with dense underbrush, 80.00 chs.
16.15	West on S.bdy. of sec. 35. Over level land through dense brush. Road, bears SW and N.E.
20.50	Telephone line, bears S.W. and N.E. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a granite stone, 18X6X5 ins., 12 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; dig pits 18X18X12 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 cor. Difference between measurements of 80.00 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 granite stone, 18X10X4 ins., 12 ins. in the ground, for standard cor. of secs. 34 and 35, marked SC on N., with 4 grooves on W., and 2 grooves on E. face; dig pits, 24X18X12 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 cor. Land, level Soil, sandy and gravelly; 3rd rate. No timber. Underbrush, greasewood and cactus. Land covered with dense underbrush, 80.00 chs.
40.00	West on S.bdy. of sec. 34. Over level land through dense brush. Difference between 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 Set a granite stone, 18X7X6 ins., 12 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; dig pits, 18X18X12 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 cor. Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point

63

First Standard Parallel North through Range 15 West.

chains	<p>By 1st set, 80.03 chs.        By 2nd set, 79.97 chs.; the mean of which is        80.00 chs. Set a granite stone, 18X7X4 ins., 12 ins. in the ground, for standard cor. of secs. 34 and 33, marked SC on N., with 3 grooves on E., and 3 grooves on W. face; dig pits, 24X18X12 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 cor.        Land, level.        Soil, sandy and gravelly; 3rd rate.        No timber.        Underbrush, greasewood.        Land covered with dense underbrush, 80.00 chs.        January 5, 1909.</p>
40.00	<p>January 6; At 8 a.m., 1 m.t., I set off 33° 43' 30" N. on the lat. arc; 22° 23' 30" S. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 33 and 34.; thence I run        West on S. bdy. of sec. 33.        Over level land through dense brush.        Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point        By 1st set, 40.03 chs.        By 2nd set, 39.97 chs.; the mean of which is        40.00 Set a granite stone, 18X8X4 ins., 12 ins. in the ground, for standard <math>\frac{1}{4}</math> sec. cor., marked SC <math>\frac{1}{4}</math> on N. face; dig pits 18X18X12 ins., E., and W. of stone, 3 ft. dist.; and raise a mound of stone, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor.        Difference between measurements of 80.00 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</p>
80.00	<p>80.00 Set a granite stone, 16X12X5 ins., 11 ins. in the ground, for standard cor. of secs. 32 and 33, marked SC on N., with 4 grooves on E., and 2 grooves on W. face; and dig pits, 24X18X12 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 cor.        Land, level.        Soil, sandy and gravelly; 3rd rate.        No timber.        Underbrush, greasewood.        Land covered with dense underbrush, 80.00 chs.</p>
40.00	<p>West on S. bdy. of sec. 32.        Over level land through dense brush.        Difference between 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 a granite stone, 18X6X5 ins., 12 ins. in the ground, for standard <math>\frac{1}{4}</math> sec. cor., marked SC <math>\frac{1}{4}</math> on N. face; dig pits, 18X18X12 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 cor.</p>
40.40	<p>40.40 Road from Desert Wells to Beuse; N.W. and S.E.        Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point        By 1st set, 80.04 chs.</p>
80.00	<p>By 2nd set, 79.96 chs.; the mean of which is        80.00 Set a granite stone, 16X8X5 ins., 11 ins. in the ground, for standard cor. of secs. 31 and 32, marked SC on N., with 5 grooves on E., and 1 groove on W. face; dig pits, 24X18X12 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 cor.        Land, level.        Soil, sandy and gravelly; 3rd rate.</p>

First Standard Parallel North through Range 15 West.

chains.

No timber.  
Underbrush, greasewood.  
Land covered with dense underbrush, 80.00 chs..

West on S. bdy. of sec. 31.

Over level land through dense brush.

Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 40.03 chs.

By 2nd set, 39.97 chs.; the mean of which is

40.00

Set a granite stone, 18X6X6 ins., 12 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  on N. face; dig pits 18X18X12 ins., E., and W. of stone, 3 ft. diam.; and raise a mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor.

Difference between measurements of 80.00 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 lava stone, 24X14X12 ins., 18 ins. in the ground, for standard cor. of Tps. 5 N Rs. 15 and 16 W., marked SC on N., with 6 grooves on N., E., and W. faces; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

Land, level.

Soil sandy and gravelly; 3rd rate

No timber.

Underbrush, greasewood.

Land covered with dense underbrush, 80.00 chs.

Through Range 15 this line runs over mostly level land; the soil being sandy, gravelly and stony; 3rd rate and covered with a dense undergrowth of greasewood and cactus. There is no water along this line.

Tp 5 N R 15 W is mostly level land.

first Standard Parallel through Range 16 West.

chains

West, on S. bdy. of sec. 36.

Over level land through dense greasewood brush.

Difference between 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 a lava stone, 22x10x10 ins., 16 ins. in the ground, for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

Difference between 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 a granite stone, 20x8x6 ins., 15 ins. in the ground, for standard cor. of secs. 35 and 36, marked SC on N., with 1 groove on E., and 5 grooves on W. face; dig pits, 24x18x12 ins., crosswise on each line, E., and W., 3 ft., and N. of stone, 7 ft. dist.; and raise a mound of earth, 3, 1/2 ft. base, 1, 1/2 ft. high, N. of cor.

Land, level.

Soil, sandy and gravelly; 3rd rate.

No timber.

Underbrush, greasewood and cactus.

Land covered with dense underbrush, 80.00 chs.

West on S. bdy. of sec. 35.

Over level land through dense brush.

Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 40.03 chs.

By 2nd set, 39.97 chs.; the mean of which is

40.00

Set a lava stone, 20x6x6 ins., 15 ins. in the ground, for standard 1/4 sec. cor., marked SC 1/4 on N. face; and 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. FROM COR.

AN IRONWOOD 4 IN. DIA. 1 1/2 LKS. DIST. MID. SC 1/4 335 BT

Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point

By 1st set, 80.05 chs.

By 2nd set, 79.95 chs.; the mean of which is

80.00

Set a porphyry stone, 24x12x10 ins., 18 ins. in the ground, for standard cor. of secs. 35 and 34, marked SC on N., with 2 grooves on E., and 4 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

Land, level.

Soil, sandy and gravelly; 3rd and 4th rate.

No timber.

Underbrush, greasewood.

Land covered with dense underbrush, 80.00 chs.

At this cor. I set off 22° 29' S. on the decl. arc, and observe the sun on the meridian at noon; the resulting lat. is 33° 43' 30" N.

West on S. bdy. of sec. 34.

Over level land through dense brush.

Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point

By 1st set, 40.04 chs.

By 2nd set, 39.96 chs.; the mean of which is

40.00

Set a porphyry stone, 21x8x6 ins., 16 ins. in the ground, for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

Difference between 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



## First standard Parallel North through Range 16 West.

chains.  
80.00

Set a lava stone, 24x16x12 ins., 18 ins. in the ground, for standard cor. of secs. 33 and 34, marked SC on N., with 3 grooves on E., and 3 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. FROM COR. AN IRONWOOD 4 INS. DIAM. BRS. N18°W. 382 LKS. DIST. MKD. SGT 5N. R16W. S33 BT. Land, level. Soil, sandy, gravelly and rocky; 3rd and 4th rate. No timber Underbrush, greasewood. Land covered with dense underbrush, 80.00 chs.

West on S. bdy. of sec. 33.

Over level land through dense brush.

Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs.

By 2nd set, 39.97 chs.; the mean of which is

40.00

Set a granite stone, 16x10x5 ins., 11 ins. in the ground, for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. pits impracticable.

Difference between measurements of 80.00 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 lava stone, 22x12x12 ins., 16 ins. in the ground, for standard cor. of secs. 32 and 33, marked SC on N., with 2 grooves on E., and 2 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. FROM COR. A PALOVERDE 10 INS. DIAM. BRS. N80°E. 126 LKS. DIST. MKD. SGT 5N. R16W. S33 BT. Land, level.

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

No timber.

Underbrush, greasewood and mesquite.

Land covered with dense underbrush, 80.00 chs.

West on S. bdy. of sec. 32.

Over level land through dense brush.

11.65

Wash, 15 lks. wide, course, N.

Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point

By 1st set, 40.04 chs.

By 2nd set, 39.96 chs.; the mean of which is

40.00

Set a porphyry stone, 22x8x8 ins., 16 ins. in the ground, for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. from cor.

An ironwood, 12 ins. in diam., bears N <sup>26</sup>/<sub>27</sub>° W., 123 lks. dist. marked

SC 1/4 S 32 BT. AN IRONWOOD 8 INS. DIA. BRS. N45°W. 11 LKS. DIST. MKD. SGT 5N. R16W. S32 BT. No others available.

48.75

Wash, 30 lks. wide, course N.

Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point

By 1st set, 80.05 chs.

By 2nd set, 79.95 chs.; the mean of which is

80.00

Set a silica stone, 22x8x6 ins., 16 ins. in the ground, for standard cor. of secs. 31 and 32, marked SC on N., with 5 grooves on E., and 4 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. FROM COR. Pits impracticable. AT PALOVERDE 6 INS. DIA. BRS. N30°E. 386 LKS. DIST. MKD. SGT 5N. R16W. S32 BT. Land, level. AN IRONWOOD 4 INS. DIAM. BRS. N75°W. 188 LKS. DIST. MKD. SGT 5N. R16W. S31 BT.

Soil, sandy, gravelly and rocky; 3rd and 4th rate.

No timber,

Underbrush, greasewood.

Land covered with dense underbrush, 80.00 chs.

First Standard Parallel through Range 16 West.

chains

West, on S. bdy. of sec. 31.  
 Over level land through dense brush.

9.10 Wash 15 lks. wide, course S.E.  
 13.50 Foot of hill; asc.  
 34.25 Top of hill; desc.  
 37.50 Wash, 40 lks. wide, course S.E.; foot of hill; over level land.  
 40.00 Point for cor. falls in wash.  
 Difference between measurements of 41.00 chs. by two sets of chainmen is 6 lks.; position of middle point  
 By 1st set, 41.03 chs.  
 By 2nd set, 40.97 chs.; the mean of which is

41.00 Set a silica stone, 22x8x5 ins. 16 ins. in the ground, for witness cor. to standard 1/4 sec. cor., marked WC SC 1/4 on N. face; and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. FROM COR. A MESQUITE 14 INS. DIA. BRS. N 38° E. 77 LKS. DIST. MKD. WC SC 531 BT

42.20 Wash 40 lks. wide, course E.S.E. A PALOVERDE 12 INS. DIA. BRS. N 70° W. 107 LKS. DIST. " " "

80.00 Point for cor. falls in wash, 100 lks. wide, course E.S.E.  
 Difference between measurements of 80.80 chs. by two sets of chainmen is 10 lks.; position of middle point  
 By 1st set, 80.85 chs.  
 By 2nd set, 79.95 chs.; the mean of which, is ~~80.40~~

AT A POINT 70 LKS. NORTH  
 Set a silica stone, 24x18x12 ins., 18 ins. in the ground, for witness cor. to cor. of Tps. 5 N Rs. 16 and 17 W., marked WC SC on N. with 6 grooves on N., E., and W. faces and raise a mound of stone, 2ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. FROM COR. AN IRONWOOD 12 INS. DIA. BRS. N 54° W. 27 LKS. DIST. MKD. WC SC 15 N R. 17 W. S. 34 BT.

Land, level.  
 Soil, gravelly and rocky; 3rd and 4th rate.  
 No timber.  
 Underbrush, greasewood.  
 Land covered with dense underbrush, 80.00 chs.

-----oOo-----

Through Range 16 this line passes over level land the soil being sandy, gravelly and rocky; 3rd and 4th rate, and covered with an undergrowth of dense greasewood mesquite and cactus.; there is no timber. There is no water along this line.  
 T 5 N 16 W is mostly level. The soil is sandy and gravelly.

January 6 1909.

## First Standard Parallel North through Range 17 West.

chains	
	January 18; At 8/a.m., l.m.t., I set off $33^{\circ}43'30''N$ on the lat.arc; $20^{\circ}32'S$ on the decl.arc; and determine a meridian with the solar at the cor <sup>point</sup> of Tps. 5N R 16 and 17 W.; thence I run
14.60	West on S.bdy.of sec 36, from true point for cor, Over nearly level land through dense brush. Wash, 40 lks.wide, course N. Difference between measurements of 40.00 chs.by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a porphyry stone, 21X8X6ins., 16ins.in the ground, for standard $\frac{1}{4}$ sec.cor., marked SC $\frac{1}{4}$ on N.face; and raise a mound of stone, 2ft.base, 1, 1/2 ft.high, N.of cor. Pits impracticable.
41.70	Ascend hill
44.20	Top of hill, bears N.W. and S.E.
48.25	Foot of hill.; over rolling land.
48.80	Wash, 15 lks.wide, course S.
57.50	Enter mountainous land. Difference between measurements of 80.00 chs.by two sets of chainmen is 10 lks.; position of middle point By 1st set, 80.05 chs. By 2nd set, 79.95 chs.; the mean of which is
80.00	Set a porphyry stone, 22X8X6ins., 16ins.in the ground, for standard cor.of secs.35 and 36, marked SC on N., with 1 groove on E., and 5 grooves on W.face; and raise a mound of stone, 2ft.base, 1, 1/2 ft.high, N.of cor. Pits impracticable. Land, mountainous, rolling and level. Soil, gravelly and rocky; 3rd and 4th rate. No timber. Underbrush, ironwood, paloverde, greasewood and cactus. Land mountainous or covered with dense underbrush, 80.00 chs.
	West on S.bdy.of sec.35. Over the Plomosa mountains.
9.15	Wash, 30 lks.wide, course E.S.E.
10.30	Enter basin. Difference between measurements of 40.00 chs.by two sets of chainman 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 porphyry stone, 21X8X8ins., 16ins.in the ground, for standard $\frac{1}{4}$ sec.cor., marked SC $\frac{1}{4}$ on N.face; and raise a mound of stone; 2ft.base, 1, 1/2 ft.high, N.of cor. Pits impracticable.
59.80	Leave basin; asc.hill Difference between measurements of 80.00 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 granite stone, 22X8X8ins., 16ins.in the ground, for standard cor.of secs.34 and 35, marked SC on N., with 2 grooves on E., and 4 grooves on W.face; and raise a mound of stone, 2ft.base, 1, 1/2 ft.high, N.of cor. Pits impracticable. Land, mountainous. Soil, gravelly and rocky.; 4th rate. No timber Underbrush, greasewood, ironwood, paloverde and cactus. Land mountainous and covered with dense un derbrush, 80.00 chs.

## First Standard Parallel North through Range 17 West.

chains

	West on S. bdy. of sec. 34. Over mountainous land, through dense brush.
20.10	Wash, 10 lks. wide, course S.E. Difference between measurements of 40.00 chs. by two sets of chainmen is 14 lks.; position of middle point By 1st set, 40.07 chs. By 2nd set, 39.93 chs.; the mean of which is
40.00	Set a porphyry stone, 22X8X8 ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Difference between measurements of 80.00 chs. by two sets of chainmen is 16 lks.; position of middle point. By 1st set, 80.08 chs. By 2nd set, 79.92 chs.; the mean of which is
80.00	Set a silica stone, 22X8X6 ins., 16 ins. in the ground, for standard cor. of secs. 33 and 34, marked SC on N., with 3 grooves on E., and 3 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, mountainous. Soil, gravelly and rocky; 3rd and 4th rate. No timber, Underbrush, greasewood, paloverde and ironwood. Mountainous land, 80.00 chs. At this cor. L set off 20° 32' S. on the decl arc, and observe the sun on the meridian at noon the resulting lat. is 33° 43' 30" N.
	West on S. bdy. of sec. 33. Over mountainous land.
0.25	Wash, 20 lks. wide, course S.
38.90	Wash, 20 lks. wide, course S. Difference between measurements of 40.00 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st set, 40.08 chs. By 2nd set, 39.92 chs.; the mean of which is
40.00	Set a porphyry stone, 22X8X6 ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
49.10	Wash, 30 lks. wide, course S.E.
60.15	Wash, 40 lks. wide, course E.S.E. Difference between measurements of 80.00 chs. by two sets of chainmen is 18 lks.; position of middle point By 1st set, 80.09 chs. By 2nd set, 79.91 chs.; the mean of which is
80.00	Set a porphyry stone, 24X8X6 ins., 18 ins. in the ground, for standard cor. of secs. 32 and 33, marked SC on N., with 4 grooves on E., and 2 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, mountainous. Soil, gravelly and rocky, 3rd and 4th rate. No timber. Underbrush, paloverde, ironwood and greasewood. Mountainous Land, 80.00 chs.
	West on S. bdy. of sec. 32. Over mountainous land.
25.50	Wash, 10 lks. wide, course N. Difference between measurements of 40.00 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st set, 40.06 chs. By 2nd set, 39.94 chs.; the mean of which is
40.00	Set a porphyry stone, 21X8X8 ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face, and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

## First Standard Parallel North through Range 17 West

chains	
76.10	Wash, 15 lks. wide, course, N. Difference between measurements of 80.00 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st set, 80.08 lks. By 2nd set, 79.92 chs.; the mean of which is
80.00	Set a porphyry stone, 24X8X6 ins., 18 ins. in the ground, for standard cor. of secs. 31 and 32, marked SC on N., with 5 grooves on E., and 1 groove on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, mountainous. Soil, gravelly and rocky; 3rd and 4th rate. No timber. Underbrush, greasewood, paloverde and ironwood and cactus Mountainous land, 80.00 chs.
	-----oOo-----
8.25	West on S. bdy. of sec. 31. Over very mountainous and rugged land, almost in accessible. ascending. Wash, 30 lks. wide, course N. Difference between measurements of 40.00 chs. by two sets of chainmen is 20 lks.; position of middle point By 1st set, 40.10 chs. By 2nd set, 39.90 chs.; the mean of which is
40.00	Set a lava rock, 24X8X8 ins., 18 ins. in the ground, for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
49.50	This cor. is on the N. slope of a very rough and rocky hill foot of Haystack Butte.
79.60	Top of Haystack Butte. Difference between measurements of 80.00 chs. by two sets of chainmen is 18 lks.; position of middle point By 1st set, 80.09 chs. By 2nd set, 79.92 chs.; the mean of which is
80.00	Set a porphyry stone, 40X14X14 ins., 30 ins. in the ground, for standard cor. of Tps 5 N Rs. 17 and 18 W., marked SC on N., with 6 grooves on N., E., and W. faces; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, mountainous. Soil, stony and rocky. 4th rate. No timber. Underbrush, greasewood, paloverde, ironwood and cactus. Mountainous land, 80.00 chs.

Through Range 17 this line runs over nearly level land for the 1st mile then it passes over mountainous land. There is no timber but there is an undergrowth of greasewood, ironwood, paloverde and cactus. The soil is sandy, gravelly and stony and rocky, being 3rd and 4th rate. There is no water along this line.

T 5 N R 17 W is mountainous and broken in the S.W. and W. and is nearly level in the N. and E.

There are no settlers along this line.

January 1881, 1882.

First Standard Parallel through Range 18 West.

chains

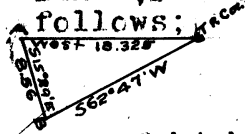
January 19th,; At 8 a.m., l.m.t., I set off 33° 43'30"N. on the lat.arc; 20°19'30" S.on the decl arc; and determine a meridian with the solar at the cor.of Tps. 5 N Rs.17 and 18 W.; thence I run West on S.bdy.of sec.36.

Over extremely rugged and precipitous mountains. On account of the extreme rugged and precipitous character of the mountains it is impossible to continue chaining, with any accuracy along this line; there fore I proceed as follows:-

Set a flag (A) on line on top of a high ridge.W.

Set a flag (B) S 62°47' W.from cor.on top of the same high ridge that flag A is on.

I then go to flag A and from flag A, flag B, bears S15°29'E., 8.56 chs.dist.; then using this as my base line, I compute the distance from the cor.to flag A as follows;



$$\frac{\sin 78^{\circ}16'}{\sin 27^{\circ}13'} \times \text{base}, \text{ or } \frac{0.979105 \times 8.56}{0.457357} =$$

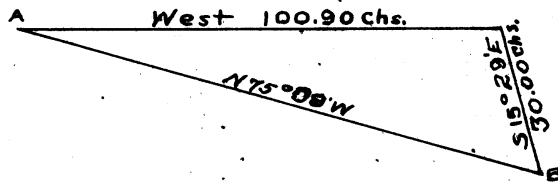
18.325 Top of high ridge.

On account of the extreme rugged and precipitous character of the mountains it is impossible to continue chaining, with any accuracy, along this line; therefore I proceed as follows:-

Set a flag (A) W.on line on top of high ridge..

Set a flag (B) S15°29'E., 30.00 distant and use this for my base line; From flag B, flag A, bears N75°08' W

I then compute the distance to flag A as follows:



$$\frac{\sin 59^{\circ}39'}{\sin 14^{\circ}52'} \times \text{base}, \text{ or } \frac{0.86295 \times 30.00}{0.25657} = 100.90 \text{ chs.};$$

119.225 120.000 18.325 plus 100.90 makes

Top of high ridge.

The point for standard 1/4 sec.cor., falls on a solid face of granite, on which

I cut a (X) at the cor.point, for standard 1/4 sec. cor., marked SC 1/4 on N.side of cross; and raise a mound of stone, 2ft.base, 1, 1/2 ft.high, N.of cor. Pits impraticable.

On account of the extreme rugged and precipitous character of the mountains it is impossible to chain back to the standard cor.of secs.35 and 36, or to the standard 1/4 sec.cor.on the S.bdy.of sec.36,; therefore I continue West on the S.bdy.of sec.35.

Difference between measurements of 160.00 chs.by two sets of chainmen is 18 lks.; position of middle point By 1st set, 160.09 chs.

By 2nd set, 159.91 chs.; the mean of which is

The point for standard sec.cor.falls on a granite rock in place, 36X36X2 ins.above the ground, on which

I cut a (X) at the cor.point, for standard cor.of secs.34 and 35, marked SC on N.of cross, with 2 grooves E, and 4 grooves W.of.cross; and raise a mound of stone, 2ft.base, 1, 1/2 ft.high, N.of cor. Pits impraticable.

Land, mountainous.

Soil, rocky; 4th rate.

No timber.

No underbrush.

Mountainous land, 160.00 chs.

## First Standard Parallel North through Range 18 West.

chains

January 19; At this cor. I set off  $20^{\circ}19'30''$  S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is  $33^{\circ}43'30''$  N.

West on S. bdy of sec. 34.

Descending through dense brush.

8.30 West, of slope; over level land.

15.10 Wash, 30 lks. wide, course N.W.

18.90 Wash, 15 lks. wide, course N.W.

Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point

By 1st set, 40.04 chs.

By 2nd set, 39.96 chs.; the mean of which is

40.00 Set a porphyry stone,  $22 \times 10 \times 8$  ins., 16 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., marked SC on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

44.80 Wash, 20 lks. wide, course N.W.

50.45 Wash, 60 lks. wide, course N.W.

62.30 Wash, 10 lks. wide, course N.W.

70.05 Wash, 30 lks. wide, course N.W.

Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point

By 1st set, 80.05 chs.

By 2nd set, 79.95 chs.; the mean of which is

80.00 Set a porphyry stone,  $22 \times 10 \times 8$  ins., 16 ins. in the ground, for standard cor. of secs. 33 and 34, marked SC on N., with 3 grooves on E., and 3 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

Land, level

Soil, sandy and gravelly; 3rd rate.

Timber, scattering ironwood and paloverde.

Underbrush, greasewood, ironwood, paloverde and cactus.

Land covered with dense underbrush, 80.00 chs.

West on S. bdy. of sec. 33.

Over nearly level land, through dense brush.

0.20 Wash 15 lks. wide, course N.W.

Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 40.03 chs.

By 2nd set, 39.97 chs.; the mean of which is

40.00 Set a silicate stone,  $22 \times 8 \times 8$  ins., 16 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

45.10 Wash, 40 lks. wide, course N.W.

49.60 Wash, 10 lks. wide, course N.W.

62.65 Wash, 20 lks. wide, course N.W.

Difference between measurements of 80.00 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 porphyry stone,  $22 \times 8 \times 8$  ins., 16 ins. in the ground, for standard cor. of secs. 32 and 33, marked SC on N., with 4 grooves on E., and 2 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

Land, nearly level.

Soil, sandy and gravelly; 3rd rate.

Timber, scattering paloverde and ironwood.

Underbrush, paloverde, greasewood, ironwood and cactus.

Land covered with dense underbrush, 80.00 chs.

January 19, 1909.



First Standard Parallel North through Range 18 West.

chains

January 20th, 1909; At 8 a.m., l.m.t., T set off 33° 43' 30" N. on the lat. arc; 20° 06' S. on the decl. arc and determine a meridian with the solar at the cor. of secs 32 and 33; thence T run

West on S. bdy. of sec. 32.

Over nearly level land through dense brush.

- 9.20 Wash, 10 lks. wide, course N.W.
- 14.35 Wash, 30 lks. wide, course N.W.
- 23.10 Wash 30 lks. wide, course N.W.
- 37.35 Road, bears N.E. and S.W.
- 38.80 Wash, 20 lks. wide, course N.E.

Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 40.03 chs.

By 2nd set, 39.97 chs.; the mean of which is

- 40.00 Set a granite stone, 22x8x8 ins., 16 ins. in the ground, for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. ; from cor.

A paloverde, 5 ins. in diam., bears N13° E., 125 lks. dist. marked

SC 1/4 S 32 BT

A paloverde, 5 ins. in diam., bears N10° 30' W., 170 lks. dist marked

SC 1/4 S 32 BT

- 47.50 Wash, 15 lks. wide, course N.W.
- 62.55 Wash, 15 lks. wide, course N.W.
- 69.50 Wash, 10 lks. wide, course N.W.
- 79.50 Wash 10 lks. wide, course N.W.

Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point

By 1st set, 80.05 chs.

By 2nd set, 79.95 chs.; the mean of which is

- 80.00 Set a malpais stone, 22x8x6 ins., 16 ins. in the ground, for standard cor. of secs. 31 and 32, marked SC on N.; with 5 grooves on E., and 1 groove on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. from cor.

A paloverde, 5 ins. in diam., bears N 48° 45' E., 83 lks. dist., marked

T 5 N R 18 W S 32 BT

A ironwood, 6 ins. in diam., bears N14° W., 174 lks. dist. marked

T 5 N R 18 W S 31 BT

Land, nearly level.

Soil, sandy and gravelly; 3rd rate.

Timber, scattering paloverde and ironwood.

Underbrush, greasewood and cactus.

Land covered with dense underbrush, 80.00 chs.

West on S. bdy. of sec. 31.

Over nearly level land through dense brush

- 7.15 Wash, 10 lks. wide, course N.W.
- 19.00 Wash 15 lks. wide, course N.W.

Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point

By 1st set, 40.04 chs.

By 2nd set, 39.96 chs.; the mean of which is

- 40.00 The point for standard 1/4 sec. cor. falls on malpais rock in place, 14x12x10 ins. above the ground, on which I cut a (X) at the cor. point, for standard 1/4 sec. cor., marked SC 1/4 on N. side of cross; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. from cor.

A paloverde, 4 ins. in diam., bears N40° W., 6 lks. dist., marked SC 1/4 S 31 BT

- 43.00 Wash, 50 lks. wide, course N.W.
- 52.10 Wash, 40 lks. wide, course N.W.
- 63.75 Wash, 40 lks. wide, course N.W.

## First Standard Parallel North through Range 18 West.

Chains

80.00

Difference between 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

Set a malpais stone, 22x8x6 ins. 16 ins. in the ground, for standard cor. of Tps. 5 N Ra. 18, and 19 W., marked 5 N on N, 18W on E., and 19 W on W. face; with 6 grooves on N., E., and W. faces; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high N. of cor. Pits impracticable. From cor.

A paloverde, 4 ins. in diam., bears N41°15'E., 129 lks. dist., marked

T 5 N R 18 W S 31 RT

A paloverde, 6 ins. in diam., bears N7°30'W., 290 lks. dist., marked

T 5 N R 19 W S 36 RT

Land, level

Soil, sandy and gravelly; 3rd rate.

Timber, scattering paloverde and ironwood.

Underbrush, greasewood and cactus.

Land covered with dense underbrush, 80.00 chs.

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Through Range 18 this line passes over mountainous level and nearly level land; the soil being sandy, gravelly, stony and rocky; 3rd and 4th rate, and covered with a scattering growth of paloverde and ironwood timber, with a dense undergrowth of greasewood, ironwood, paloverde and cactus. There is no water along this line.

Tp 5 N R 18 W is mountainous in the E., and level in the W.,

There are no settlers along this line.

First Standard Parallel North through Range 19 West.

chains		
	West on S.bdy.of sec.36. Over nearly level land through dense brush.	
13.20	Wash,15 lks.wide,course N.W.	
14.80	Wash,15 lks.wide,course N.W.	
	Difference between measurements of 40.00 chs.by two sets of chainmen is 6 lks.; position of middle point	
	By 1st set,40.03 chs.	
	By 2nd set,39.97 chs.; the mean of which is	
40.00	Set a malpais stone,21X8X6ins.,16ins.in the ground,for standard $\frac{1}{4}$ sec.cor.,marked SC $\frac{1}{4}$ on N.face; and raise a mound of stone,2ft.base,1,1/2 ft.high,N.of cor.	
	Pits impracticable. From cor.	
	A paloverde,6ins.in diam.,bears N29°30'W.,305 lks. dist.,marked	
	SC $\frac{1}{4}$ S 36 BT	
54.00	Wash,20 lks.wide,course N.W.	
63.85	Wash,20 lks.wide,course N.W.	
68.40	Wash,20 lks.wide,course N.W.	
	Difference between measurements of 80.00 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 malpais stone,21X10X6ins.,16ins.in the ground,for standard cor.of secs.35 and 36,marked SC on N.,with 1 groove on E.,and 5 grooves on W.face; and raise a mound of stone,2ft.base,1,1/2 ft.high,N.of cor.	
	Pits impracticable.	
	Land,level.	
	Soil,sandy and gravelly; 3rd rate.	
	Timber,scattering paloverde and ironwood.	
	Underbrush,greasewood,cactus and paloverde.	
	Land covered with dense underbrush,80.00 chs.	
-----		
	West on S.bdy.of sec.35.	
	Over nearly level land through dense brush.	
13.15	Wash.20 lks.wide,course N.	
21.36	Road,bears N.E.and S.W.; enter wash and along in wash	
24.00	Leave wash,course N.W.	
29.00	Enter wash and along in wash.	
31.00	Leave wash,course N.W.	
39.45	Wash,20 lks.wide,course N.	
	Difference between measurements of 40.00 chs.by two sets of chainmen is 6 lks.; position of middle point	
	By 1st set,40.03 chs.	
	By 2nd set,39.97 chs.; the mean of which is	
40.00	Set a malpais stone,24X10X8ins.,18ins.in the ground,for standard $\frac{1}{4}$ sec.cor.,marked SC $\frac{1}{4}$ on N.face; and raise a mound of stone,2ft.base,1,1/2 ft.N.of cor.	
	Pits impracticable. From cor.	
	A paloverde,8ins.in diam.,bears N62°E.,83 lks.dist.,marked	
	SC $\frac{1}{4}$ S 35 BT	
	A catclaw,4ins.in diam.,bears N40°30'W.,141 lks.dist.,marked	
	SC $\frac{1}{4}$ S 35 BT	
45.10	Wash,20 lks.wide,course N.	
76.35	Wash,30 lks.wide,course W.N.W.	
	Difference between measurements of 80.00 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 granite stone,22X12X8 ins.,16ins.in the ground,for standard cor.of secs.34 and 35,marked SC on N.,with 2 grooves on E.,and 4 grooves on W.face; and raise a mound of stone,2ft.base,1,1/2 ft.high,N.of cor.	
	Pits impracticable. From cor.	
	An iron wood,14 ins.in diam.,bears N49°45'E.,197 lks. dist.,marked	
	T 5 N R 19 W S 35 BT	

## BOOK 2121

First Standard Parallel North through Range 19 West.

chains	<p>A paloverde, 16 ins. in diam., bears N 33° W., 113 lks. dist., marked  T 5 N R 19 W S 34 BT  Land, nearly level.  Soil, sandy and gravelly; 3rd rate,  Timber, scattering paloverde and ironwood.  Underbrush, greasewood, paloverde and cactus.  Land covered with dense underbrush, 80.00 chs.  At this cor. I set off 20° 06' 30" S. on the decl. arc., and observed the sun on the meridian at noon. the resulting lat. is 33° 43' 30" N ✓</p>
2.45	<p>West on S. bdy. of sec. 34  Over nearly level land through dense brush.  Wash, 30 lks. wide, course W. N. W.  Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point  By 1st set, 40.03 chs.  By 2nd set, 39.97 chs.; the mean of which is</p>
40.00	<p>Set a malpais stone, 22X8X6 ins., 16 ins. in the ground, for standard <math>\frac{1}{4}</math> sec. cor., marked SC <math>\frac{1}{4}</math> on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor.  Pits impracticable. From cor.  An ironwood, 12 ins. in diam., bears North., 131 lks. dist marked  SC <math>\frac{1}{4}</math> S 34 BT  An ironwood, 7 ins. in diam., bears N 41° 15' W., 250 lks. dist., marked  SC <math>\frac{1}{4}</math> S 34 BT</p>
68.15	<p>Wash, 15 lks. wide, course W. N. W.  Difference between measurements of 80.00 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</p>
80.00	<p>Set a malpais stone, 22X8X8 ins., 16 ins. in the ground, for standard cor. of secs. 33 and 34, marked SC on N., with 3 grooves on E., and 3 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor.  Pits impracticable.  Land, nearly level.  Soil, sandy and gravelly ; 3rd rate.  Timber, scattering paloverde and ironwood.  Underbrush, greasewood and cactus.  Land covered with dense underbrush, 80.00 chs.</p>
4.30	<p>West on S. bdy. of sec. 33.  Over nearly level land through dense brush.  Road, bears N. and S.</p>
14.85	<p>Road, bears N. and S,</p>
28.20	<p>Enter basin.  Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point,  By 1st set, 40.04 chs.  By 2nd set, 39.96 chs.; the mean of which is</p>
40.00	<p>Set a malpais stone, 22X10X10 ins., 16 ins. in the ground, for standard <math>\frac{1}{4}</math> sec. cor., marked SC <math>\frac{1}{4}</math> on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor.  Pits impracticable. From cor.  A paloverde, 18 ins. in diam., bears N 33° 45' W., 13 lks. dist., marked  SC <math>\frac{1}{4}</math> S 33 BT</p>
42.10	<p>Wash, 60 lks. wide, course N. W.</p>
53.45	<p>Wash, 60 lks. wide, course N. W.</p>
65.25	<p>Tyson wash, 300 lks. wide, course N. W.</p>
70.80	<p>Leave basin; enter rolling land.</p>
76.50	<p>Wash. 20 lks. wide, course N. E.  Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point</p>

First Standard Parallel North through Range 19 West.

chains.

80.00 By 1st set, 80.03 chs.  
 By 2nd set, 79.97 chs.; the mean of which is  
 Set a malpais stone, 22 X 8 X 6 ins., 16 ins. in the ground, for standard cor. of secs. 32 and 33, marked S Con N., with 4 grooves on E., and 2 grooves on W. face; and 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 cor.  
 Land, level and rolling.  
 Soil, sandy and gravelly; 3rd rate.  
 Timber scattering paloverde and ironwood.  
 Underbrush, greasewood, mesquite and paloverde.  
 Land covered with dense underbrush, 80.00 chs.

10.10 West on S. bdy. of sec. 32.  
 Over rolling land through dense brush.  
 Wash, 10 lks. wide, course N.W.  
 15.30 Road from Quartzite to Valenzuela mine, bears N.W. and S.E.  
 18.70 Wash, 20 lks. wide, course N.E.  
 33.10 Wash, 20 lks. wide, course N.E.  
 35.15 Wash, 40 lks. wide, course N.E.

Difference between 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 a malpais stone, 22 X 8 X 6 ins., 16 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor.  
 Pits impracticable.

69.90 Wash, 15 lks. wide, course N.  
 78.20 Wash, 15 lks. wide, course N.

Difference between 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 a granite stone, 22 X 8 X 6 ins., 16 ins. in the ground, for standard cor. of secs. 31 and 32, marked SC on N., with 5 grooves on E., and 1 groove on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.  
 Land, rolling and nearly level.  
 Soil, sandy and gravelly; 3rd and 4th rate.  
 Timber, scattering paloverde and mesquite.  
 Underbrush, greasewood, mesquite and cactus.  
 Land covered with dense underbrush, 80.00 chs.

January 20th, 1909.

January 21st, 1909; At 8 a.m., l.m.t., I set off 33° 43' 30" N. on the lat. arc, and 19° 53' 30" S. on the decl. arc; and determine a meridian with the solar at the cor. of secs., 31 and 32; thence I run

West on S. bdy. of sec. 31.  
 Over rolling land through dense brush.  
 8.30 Wash, 20 lks. wide, course N.  
 19.10 Wash, 20 lks. wide, course N.E.  
 Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point  
 By 1st set, 40.03 chs.

By 2nd set, 39.97 chs.; the mean of which is  
 40.00 set a granite stone, 21 X 10 X 8 ins., 16 ins. in the ground, for standard  $\frac{1}{4}$  sec. cor., marked SC  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor.  
 Pits impracticable.

48.90 Wash, 20 lks. wide, course N.  
 69.15 Wash, 40 lks. wide, course N.  
 Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks. position of middle point

First Standard Paralle North through Range 19 West.

chains

80.00

By 1st set, 80.04 chs.

By 2nd set, 79.96 chs.; the mean of which is

Set a granite stone, 22X8X8 ins., 16 ins. in the ground, for standard cor., of Tps. 5 N Rs. 19 and 20 West, marked 5 N on N., 19 W on E., and 20 W on W., with 6 grooves on N., E., and W., faces; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.

Land, rolling.

Soil, gravelly; 4th rate.

Timber, scattering paloverde and ironwood.

Underbrush, greasewood and cactus.

Land covered with dense underbrush, 80.00 chs.

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Through Range 19 West this line passes over level and rolling land, the soil being sandy and gravelly; 3rd and 4th rate; and covered with a scattering growth of paloverde and ironwood timber and a dense undergrowth of greasewood, mesquite, paloverde and cactus. There is no water along this line.

Tp 5 N R 19 W is level, the soil being sandy; 3rd rate

## First Standard Parallel North through Range 20 West.

chains	West on S.bdy.of sec.36. Over level land through dense brush.
9.15	Wash, 10 lks.wide, course N. Difference between measurements of 40.00 chs.by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 whs. By 2nd set, 39.97 chs.the mean of which, is
40.00	Set a granite stone, 21x8x8ins., 16ins.in the ground, for standard $\frac{1}{4}$ sec.cor., marked SC $\frac{1}{4}$ on N.face; and raise a mound of stone, 2ft.base, 1, 1/2 ft.high, N.of cor. Pits impracticable. From cor. A paloverde, 7ins.in diam., bears N 8°W., 24 lks., dist. marked SC $\frac{1}{4}$ S-36 BT
49.10	Wash, 35 lks.wide, course N.W.; Enter mountainous land; leave dense brush. Difference between measurements of 80.00 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 granite stone, 22 X10x8ins., 16ins.in the ground, for standard cor.of secs.35 and 36, marked SC on N., with 1 groove on E., and 5 grooves on W., face; and raise a mound of stone, 2ft.base, 1, 1/2 ft.high, N.of cor. Pits impracticable. Land, level and mountainous. Soil, rocky; 4th rate. Timber, scattering paloverde. Underbrush, greasewood and cactus. Land mountainous or covered with dense underbrush, 80.00 chs.
	West on S.bdy.of sec.35. Over mountainous land.
36.45	Wash, 25 lks.wide, course N. Difference between measurements of 40.00 chs.by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a granite stone, 22x8x6ins., 16 ins.in the ground, for standard $\frac{1}{4}$ sec.cor., marked SC $\frac{1}{4}$ on N.face; and raise a mound of stone, 2ft.base, 1, 1/2 ft.high, N.of cor. Pits impracticable.
58.20	Wash, 20 lks.aide, course N. Difference between measurements of 80.00 chs.by two sets of chainmen is 10 lks.; position of middle point By 1st set, 80.05 chs. By 2nd set, 79.95 chs.; the mean of which is
80.00	Set a granite stone, 26x12x12ins., 19ins.in the ground, for standard cor.of secs.34 and 35, marked SC on N., with 2 grooves on E., and 4 grooves on W.face; and raise a mound of stone, 2ft.base, 1, 1/2 ft.high, N.of cor. Pits impracticable. Land mountainous. Soil, rocky; 4th rate. No timber or underbrush. Mountainous land, 80.00 chs. At this cor.I set off 19°53'30"S.on the decl.arc and observe the sun on the meridian at noon; the r resulting lat.is 33°43'30"N.
	West on S.bdy.of sec.34. Over mountainous land. 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



## First Standard Parallel North through Range 20 West.

chains	
40.00	Set a granite stone, 26X14X12 ins., 19 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Difference between measurements of 80.00 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	Point for standard sec. cor. falls on a granite stone in place, 32X26X12 ins. above the ground, on which I cut a (X) at the cor. point for cor. of secs. 33 and 34, marked SC on N. side of cross, with 3 grooves on E., and 3 grooves on W. side on cross; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, mountainous. Soil, rocky; 4th rate. No timber or underbrush. Mountainous land, 80.00 chs.
	West on S. bdy. of sec. 33. Over mountainous land.
35.30	Wash, 15 lks. wide, course N.W. 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 granite stone, 22X12X10 ins., 16 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable.
49.00	Leave mountainous land, enter rolling hills, covered with dense brush.
64.15	Wash, 600 lks. wide, course N.W. Difference between measurements of 80.00 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 granite stone, 24X14X12 ins., 18 ins. in the ground, for standard cor. of secs. 32 and 33, marked SC on N., with 4 grooves on E., and 2 grooves on W. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. Land, mountainous and rolling. soil, rocky; 4th rate. No timber. Underbrush, greasewood and cactus. Land mountainous or covered with dense underbrush, 80.00 chs.
	West on S. bdy. of sec. 32. Over rolling land through dense brush.
24.20	Wash, 15 lks. wide, course NW. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs., By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a granite stone, 24X10X12 ins., 18 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1, 1/2 ft. high, N. of cor. Pits impracticable. As this point is very close to the East bdy. of the Colorado Indian Reservation will come I stop my line here and proceed to run the E. bdy. of the C.R.I.R. January 21st, 1909. January 27th; At 9 a.m., l.m.t., I set off 35° 43-1/2' N. on the lat. arc, 18° 29' S. on the decl. arc and determine a true meridian with the solar at the standard $\frac{1}{4}$ cor. on

## First Standard Parallel North through Range 20 West

chains

S. bdy. of sec. 32 at which point I quit on January 21st.  
Thence continuing the line run to this  $\frac{1}{4}$  cor. on  
January 21st, 1909

I run

West on S. bdy. of secs. 32.

44.27

Intersect the E. bdy. of the Colorado River Indian Res.,  
at a point, N  $3^{\circ}00'$  E. and 2.06 chs. dist., of the 9th. mile  
cor. and set a granite stone, 22x10x8 ins., <sup>2.8 ft. S. W.</sup> in the  
ground for closing cor., marked CC 20 W on E. A. S. C. 5 N on  
N. face, with 6 grooves on N. face; and raise a mound of  
stone, 2 ft. base, 1, 1/2 ft. high, E of cor.

Land, mountainous and rolling.

Soil, rocky; 4th rate.

No timber.

Underbrush, greasewood and cacti.

Land mountainous and covered with dense underbrush,

44.27 chs.

January 27th, 1909.

Through this Tp., the line runs over land mostly  
mountainous, and covered with a growth of greasewood and  
cacti underbrush.

Tp. 4 N R 20 W., is mostly rugged and mountainous.

Tp. 5 N., R 20 W., is mostly rugged and mountainous.

In surveying this Standard through from Range 3 W.,  
to Range 20 W., inclusive, I destroy all cors. establishd  
by Deputy Santee under Contract No 146.

*John P. Hesse*  
U.S. Deputy Surveyor.

No authority for red ink corrections  
see Deputy's letter Aug. 20/09. and 7/1/09

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

869

LIST OF NAMES. BOOK 2121

A list of the names of the individuals employed by John P. Hesse

....., 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 1st Standard Parallel North through Rgs. 3 to 20 W. incl.

showing the respective capacities in which they acted:

Harry S. Ingalls ..... , Chairman.

Wilfred B. Helm ..... , Chairman.

Norman Oliver ..... , ~~Chairman~~ Moundman.

Fred W. Rodolf ..... , ~~Chairman~~ Moundman.

..... , Axman.

..... , Axman.

A. R. Saunders ..... , Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted John P. Hesse

....., United States Deputy Surveyor, in surveying all those parts or portions of the 1st Standard Parallel North through Rgs. 3 to 20 W. Incl.

..... of the Gila and 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.

Harry S. Ingalls ..... , Chairman.

Wilfred B. Helm ..... , Chairman.

..... , Moundman.

Fred W. Rodolf ..... , ~~Chairman~~ Moundman.

Norman Oliver ..... , ~~Chairman~~ Axman.

..... , Axman.

A. R. Saunders ..... , Flagman.

Subscribed and sworn to before me this 27th

day of January, 1909



John P. Hesse  
U. S. Deputy Surveyor

No notary available without great expense and loss of time

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, John F. Hesse, 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 10th day of October, 1908, 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 First Standard Parallel North through Ranges 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20 West

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.

John F. Hesse  
United States Deputy Surveyor.

Subscribed by said John F. Hesse, and sworn to before me }  
this first day of March, 1909, 1909

Frank S. Ingalls  
U. S. SURVEYOR GENERAL



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz Aug 25, 1909

The foregoing field notes of the survey of the First Standard Parallel North through Ranges 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20 West and Ranges 3, 4, 5, 6, and 7 West of the Gila and Salt River Base and Meridian, Arizona

executed by John F. Hesse, U.S. Deputy Surveyor under his contract No. 150, dated October 10, 1908, 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.