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Book B.

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BOOK 2193

# FIELD NOTES

OF THE SURVEY OF THE

2193

2193

*Subdivision Lines of Township  
19 North, Range 18 West.*

2193

*Of the Gila & Salt River Base & Meridian,*

*in the Territory of Arizona.*

AS SURVEYED BY

*Fred W. Rodolf*

*United States Deputy Surveyor,*

*Under his Contract No. 155, dated March 10, 1909*

*Survey commenced December 20, 1909*

*Survey completed January 12, 1910*

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BOOK 2193

NAMES AND DUTIES OF ASSISTANTS.

<i>A. P. Kerns.</i>	<i>Chairman</i>
<i>Bert Lyons.</i>	<i>Chairman</i>
<i>Ralph R. Ellis</i>	<i>Moundman</i>
<i>R. N. Stark</i>	<i>Arxman</i>
<i>P. M. Parker</i>	<i>Arxman</i>
<i>George Newell</i>	<i>Flagman.</i>

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BOOK 2193

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PRELIMINARY OATHS OF ASSISTANTS.

WE, A. P. Kerns and Bert Lyon  
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 Subdivision of Township 19 North Range 18 West.

A. P. Kerns, Chainman.  
Bert Lyon, Chainman.

Subscribed and sworn to before me this 10  
day of December, 1909



W. J. Ferrieh  
Notary Public

WE, Ralph R. Ellis 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 Subdivision of Township 19 North, Range 18 West.

Ralph R. Ellis, Moundman.  
\_\_\_\_\_, Moundman.

Subscribed and sworn to before me this 10  
day of December, 1909



W. J. Ferrieh  
Notary Public

WE, R. W. Stark and R. M. Parker  
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 the Sub-division of Twp. 19 North Rg. 18 West.

R. W. Stark, Axman.  
J. M. Parker, Axman.

Subscribed and sworn to before me this 10  
day of December, 1909

My commission expires March 23, 1914



W. J. Ferrieh  
Notary Public

I, George Newell, 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 Sub-division of Twp. 19 North Range 18 West.

George Newell, Flagman.

Subscribed and sworn to before me this 10  
day of December, 1909

My commission expires March 23, 1914



W. J. Ferrieh  
Notary Public

chains

Survey commenced December 28, 1909, and executed with a Young and sons light mountain transit No. 7532, with solar attachment. The horizontal limb is provided with double verniers placed opposite to each other and 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 its indications, resulting from solar observations made during a.m. and p.m. hours, with a meridian established by Polaris observations, I proceed as follows:-

At the cor. of secs. 35 and 36 recently established by me, latitude  $34^{\circ} 59' 10''$  N., longitude  $114^{\circ} 07' W.$ , I set off  $34^{\circ} 59' N.$  on the lat. arc;  $23^{\circ} 13' S.$  on the decl. arc and at 4h 00m., p.m., l.m.t., determine a meridian with the solar and mark a point thereof on a stone firmly set in the ground, 5 chs. N. of the cor.

December 28, 1909.

December 29; At 0h. 55<sup>20</sup> a.m., 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 7h. 30m. a.m., l.m.t., I lay off the azimuth of Polaris  $1^{\circ} 26'$  east, and mark the meridian thus determined by a small groove in the rock set December 28, on which the meridian coincides with the meridian established by solar observations.

At 8h 00m., a.m., l.m.t., I set off  $34^{\circ} 59' N.$  on the lat. arc;  $23^{\circ} 13' S.$  on the decl. arc and mark a point in the meridian determined by the solar by a notch in the stone already set 5 chs. N. of my station; this mark coincides with the meridian established by Polaris observation.

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

The magnetic bearing of the true meridian at 8h. 30mm a.m., l.m.t., is  $N 15^{\circ} 02' W.$ ; the angle thus determined gives the magnetic declination as  $15^{\circ} 02' E.$

Thence I run

$N 0^{\circ} 01' W.$  bet. secs. 35 and 36.

Over slightly rolling land covered with loose rocks thru dense underbrush.

14.75 Wash, 10 lks. wide, course SW. Over loose rocks.

19.00 Wash, 10 lks. wide, course SW. Over loose rocks.

28.90 Wash, 15 lks. wide, course SW. Over loose rocks.

40.00

Set a malpais stone, 18x6x6 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.

47.00 Wash, 250 lks. wide, course SW. Asc. over loose rocks.

68.00 Top. of ridge, bears NE. and SW. Desc. over loose rocks.

79.00 Wash, 10 lks. wide, course SW. Asc. over loose rocks.

80.00

Set a malpais stone, 20x10x6 ins., 15 ins. in the ground for cor. of secs. 25, 26, 35 and 36, marked with 1 notch on S, and E. edges.; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high W. of cor. Pits impracticable.

Land, rolling and mountainous.

Soil, stony, 3rd rate.

No timber.

Underbrush, greasewood, sage and caati.

Rolling and mountainous land covered with loose rocks

## Subdivision of Tp. 19 N., Rg. 18 West.

chains.	
	exceptionally dense underbrush, and on account of the scarcity of the water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.
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	Thence I run East on random line bet. secs. 25 and 36.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.08	Intersect E. bdy. of Tp. 7 lks. S. of the cor. of secs. 25, 30, 31 and 36, Thence I run S 89° 57' W. on true line bet. secs. 25 and 36. Slowly descending over loose rocks thru exceptionally dense underbrush.
28.00	Wash, 250 lks. wide, course SW. Over loose rocks.
40.04	Set a malpais stone, 18x6x6 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
80.08	The cor. of secs. 25, 26, 35 and 36. Land, rolling. Soil, rocky; 3rd rate. No timber, Underbrush, greasewood, sage and cacti. Rolling land covered with loose rocks and exceptionally dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.08 chs. At this cor. I set off 23° 13' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35° 00' N. ✓
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	Thence I run N 0° 01' W. bet. secs. 25 and 26. Over rolling land covered with loose rocks thru exceptionally dense underbrush.
17.25	Wash, 20 lks. wide, course SW. Over loose rocks.
23.50	Wash, 20 lks. wide, course SW. Over loose rocks.
40.00	Set a malpais stone, 28x10x8 ins., 21 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable
74.10	Wash, 200 lks. wide, course SW. Over loose rocks.
80.00	Set a malpais stone, 20x8x6 ins., 15 ins. in the ground, for cor. of secs. 23, 24, 25 and 26; marked with 2 notches on S. and 1 notch on the E. edge; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable. Land, rolling. Soil, rocky; 3rd rate. No timber. Underbrush, greasewood, sage and cacti. Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.
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	Thence I run N 89° 57' E. on random line bet. secs. 24 and 25.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.10	Intersect the E. bdy. of Tp. 1 lk. N. of the cor. of secs. 19, 24, 25 and 30. Thence I run S 89° 57' W. on true line bet. secs. 24 and 25, Slowly descend over loose rocks thru dense underbrush
3.40	Wash, 20 lks. wide, course SW. over loose rocks.
30.50	Wash, 20 lks. wide, course SW. Over loose rocks.
39.85	Wash, 5 lks. wide, course SW. Over loose rocks.
40.05	Set a malpais stone, 18x8x6 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; and raise a mound

## Subdivision of Tp.19 N., Rg.18 West.

Chains.

74.00 of stone, 2ft. base, 1½ ft. high, N. of cor.  
 80.10 The cor. of secs. 23, 24, 25 and 26.  
 Land, rolling.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood, sage and cacti.  
 Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.10 chs.  
 December 29, 1909;

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December 30: At 8h.00m. a.m., l.m.t., I set off 23° 07' S on the decl. arc; 35° 01' N. on the lat. arc and determine a meridian with the solar at the cor. of secs. 23, 24, 25 and 26.  
 Thence I run  
 N 0° 01' W. bet. sec. 23 and 24.  
 Over rolling land covered with loose rocks and dense underbrush.

10.00 Wash, 10 lks. wide, course SW. Over loose rocks.  
 40.00 Set a malpais stone, 24x12x10 ins., 18 ins. in the ground, for ¼ sec. cor., marked ¼ on W. face; and raise a mound of stone, 2ft. base, 1½ ft. high, W. of cor. Pits impracticable.

54.80 Wash, 50 lks. wide, course SW. Over loose rocks.  
 79.50 Wash, 10 lks. wide, course SW. Over loose rocks.  
 80.00 Set a malpais stone, 24x12x10 ins., 18 ins. in the ground, for cor. of secs. 13, 14, 23 and 24. marked with 3 notches on S. and 1 notch on E. edge; and raise a mound of stone, 2ft. base, 1½ ft. high, W. of cor. Pits impracticable.  
 Land, rolling.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood cacti and sage.  
 Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

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Thence I run  
 N 89° 57' E. on random line bet. secs. 13 and 24.

40.00 Set temp. ¼ sec. cor.  
 80.12 Intersect the E. bdy. of Tp. 9 lks. N. of the cor. of secs 13, 18, 19 and 24.  
 Thence I run.  
 N 89 59' W. on true line bet. secs. 13 and 24.  
 Slowly descend over loose rocks thru dense underbrush,

1.82 Wash, 20 lks. wide, course NW. Over loose rocks.  
 13.18 Same wash, course SW. Over loose rocks.  
 25.70 Wash, 50 lks. wide, course SW. Over loose rocks.  
 40.06 Set a malpais stone, 20x8x6 ins., 15 ins. in the ground, for ¼ sec. cor., marked ¼ on W. face; and raise a mound of stone, 2ft. base, 1½ ft. high, N. of cor. Pits impracticable.

48.00 Wash, 25 lks. wide, course SW. Over loose rocks.  
 80.12 The cor. of secs. 13, 14, 23 and 24.  
 Land, rolling.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood, sage and cacti.  
 Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.12 chs.  
 At this cor. I set off 23° 07' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35° 02' N.

Subdivision of Tp.19 N., Rg.18 West.

chains.

Thence I run  
 N 0° 01' W. bet. secs. 13 and 14.  
 Over slightly rolling land covered with loose rocks and dense underbrush.

16.45 Wash, 25 lks. wide, course SW.  
 40.00 Set a malpais stone, 20x8x6 ins., 15 ins. in the ground, for 1/4 sec. cor., marked 1/4 on W. face; dig pits, 18x18x12 ins., N. and S. of stone, 3 ft. dist., and raise a mound of earth 3 1/2 ft. base, 1 1/2 ft. high, W. of cor.

46.10 Wash, 20 lks. wide, course SW. Over loose rocks.  
 55.00 Wash, 20 lks. wide, course SW. Over loose rocks.  
 80.00 Set a malpais stone, 18x10x8 ins., 12 ins. in the ground, for cor. of secs. 11, 12, 13 and 14, marked with 4 notches on the S. and 1 notch on the E. edge; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.

Land, rolling.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood, sage and cacti.  
 Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

Thence I run  
 S 89° 59' E. on random line bet. secs. 12 and 13.  
 40.00 Set temp. 1/4 sec. cor.  
 80.10 Intersect the E. bdy. of Tp. 9 lks. S. of the cor. of secs. 7, 12 and 13 and 18.

Thence I run  
 S 89° 57' W. on true line bet. secs. 12 and 13.  
 Slowly descend over loose rocks thru dense underbrush

9.00 Wash, 20 lks. wide, course SW. Over loose rocks.  
 16.00 Wash, 20 lks. wide, course SW. Over loose rocks.  
 40.05 Set a malpais stone, 24x6x6 ins., 18 ins. in the ground, for 1/4 sec. cor., marked 1/4 on N. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable.  
 80.10 The cor. of secs. 11, 12, 13 and 14.

Land, rolling.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood, sage and cacti.  
 Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes exceptionally difficult to survey, 80.10 chs.

December, 30, 1909.

December 31: At 8h00m., a.m., l.m.t., I set off 26° 03' 5 on the decl. arc; 35° 02 1/2' W. on the lat. arc, and determine a meridian with the solar at the cor. of secs. 11, 12, 13, 14

Thence I run, N 0° 01' W. bet. secs. 11 and 12.  
 Over slightly rolling land covered with loose rocks thru dense underbrush.

7.25 Wash, 15 lks. wide, course SW. Over loose rocks.  
 17.00 Wash, 15 lks. wide, course SW. Over loose rocks.  
 27.28 Wash, 20 lks. wide, course SW. Over loose rocks.  
 30.50 Wash, 20 lks. wide, course SW. Over loose rocks.  
 35.50 Wash, 20 lks. wide, course SW. Over loose rocks.  
 40.00 Set a malpais stone, 18x12x6 ins., 12 ins. in the ground, for 1/4 sec. cor., marked 1/4 on W. face; dig pits 18x18x12 ins. N. and S. of stone, 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high W. of cor.

57.80 Wash, 15 lks. wide, course SW. Over loose rocks.  
 60.17 Wash, 15 lks. wide, course SW. Over loose rocks.  
 80.00 Set a malpais stone, 20x10x8 ins., 15 ins. in the ground, for cor. of secs. 1, 2, 11 and 12, marked with 5 notches on the S., and 1 notch on the E. edge.; dig pits, 18x18x12 ins., in each secs. 5 1/2 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, slightly rolling.  
 Soil, rocky; 3rd rate.



## Subdivision of Tp. 19 N., Rg. 18 West.

chains.

No timber.

Underbrush, greasewood, sage and cacti.

Land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

Thence I run N 89° 57' E. on random line bet. secs. 1 and 12.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.

80.04 Intersect the E. bdy. of Tp. 2 lks. S. of the cor. of secs 1, 6, 7 and 12.

Thence I run

S 89° 56' W. on true line bet. secs. 1 and 12.

Slowly descend over loose rocks thru dense underbrush

3.00 Dry wash 15 lks. wide, course SW.

13.00 Wash, 15 lks. wide, course SW. Over loose rocks.

27.20 Wash, 20 lks. wide, course SW. Over loose rocks.

40.02 Set a malpais stone, 18x6x6 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor. Pits impracticable

80.04 The cor. of secs. 1, 2, 11 and 12.

Land, slightly rolling.

Soil, rocky; 3rd rate.

No timber.

Underbrush, greasewood, sage, catclaw and cacti.

Land covered with loose rocks and dense underbrush and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.04 chs.

At this cor. I set off 23° 05' S. on the decl. arc; and observe the sun on the meridian; the resulting lat. is 35° 03 $\frac{1}{2}$ ' N.

Thence I run N. 0° 01' W. on random line bet. secs. 1 and 2.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.

80.20 Intersect the N. bdy. of Tp. 14 lks. W. of the cor. of secs 1, 2, 35 and 36.

Thence I run

S 0° 05' W. on true line bet. secs. 1 and 2.

Over nearly level land covered with loose rocks and dense underbrush.

2.85 Wash, 15 lks. wide, course SW. Over loose rocks.

6.00 Wash, 50 lks. wide, course SW. Over loose rocks.

16.50 Wash, 20 lks. wide, course SW. Over loose rocks.

24.55 Wash, 20 lks. wide, course SW. Over loose rocks.

28.75 Wash, 20 lks. wide, course SW. Over loose rocks.

40.28 Set a malpais stone, 18x8x8 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; and raise a mound of stone 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.

45.70 Wash, 15 lks. wide, course SW. Over loose rocks.

55.00 Bend, in wash, 35 lks. wide, comes from NW, course SW. Over loose rocks.

59.80 Same wash, 35 lks. wide, course SW. Over loose rocks.

70.75 Wash, 20 lks. wide, course SW. Over loose rocks.

73.00 Wash, 20 lks. wide, course SW. Over loose rocks.

80.28 The cor. of secs. 1, 2, 11 and 12.

Land, nearly level.

Soil, rocky; 3rd rate.

No timber.

Underbrush, greasewood, sage and cacti.

Land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.28 chs.

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Subdivision of Tp.19 N.,Rg.18 West.

chains. From the cor. of secs. 2, 3, 34 & 35 on the south bdy.  
 I run  
 N 0° 01' W. bet. secs. 34 and 35.  
 Over rolling and broken land covered with loose rocks  
 thru dense underbrush.

6.00 Wash, 500 lks. wide, course SW. Asc. over loose rocks.  
 13.00 Top of ridge, bears NE. and SW. Desc. over loose rocks.  
 21.60 Wash, 20 lks. wide, course SW. Asc. over loose rocks.  
 28.00 Top of ridge, bears NE. and SW. Desc. over loose rocks.  
 34.00 Wash, 20 lks. wide, course SW. Over loose rocks.  
 40.00 Set a malpais stone, 20x10x8 ins., 15 ins. in the ground, for  
 1/4 sec. cor., marked 1/4 on W. face; and raise a mound of  
 stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.  
 41.40 Wash, 10 lks. wide, course SE. Over loose rocks.  
 42.50 Same wash, course SW. Over loose rocks.  
 80.00 Set a malpais stone, 24x12x10 ins., 18 ins. in the ground,  
 for cor. of secs. 26, 27, 34 and 35, marked with 1 notch  
 on S. and 2 notches on the E. edge; and raise a mound  
 of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.  
 Land, rolling and broken.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood, sage and cacti.  
 Rolling and broken land covered with loose rocks and  
 dense underbrush, and on account of the scarcity of water  
 and other reasons more fully explained at the end of  
 these notes, exceptionally difficult to survey, 80.00 chs.  
 December 31, 1909.

January 1, 1910; At 8h.00m., a.m., l.m.t., I set off  
 22° 58 1/2' S. on the decl. arc; 35° 00' N. on the lat. arc and  
 determine a meridian with the solar at the cor. of secs.  
 26, 27, 34 and 35.

Thence I run  
 East on random line bet. secs. 26 and 35.

40.00 Set temp. 1/4 sec. cor.  
 79.96 Intersect the N. and S. line 7 lks. N. of the cor. of  
 secs. 25, 26, 35 and 36.  
 Thence I run  
 N 89° 57' W. on true line bet. secs. 26 and 35.  
 Descend over loose rocks thru dense underbrush.

14.00 Wash, 25 lks. wide, course SW. Over loose rocks.  
 24.45 Wash, 20 lks. wide, course SW. Over loose rocks.  
 35.10 Wash, 15 lks. wide, course SW. Over loose rocks.  
 39.98 Set a malpais stone, 18x6x6 ins., 12 ins. in the ground, for  
 1/4 sec. cor., marked 1/4 on N. face; and raise a mound of  
 stone, 2 ft. base 1 1/2 ft. high, N. of cor. Pits impracticable.  
 78.20 Wash, 25 lks. wide, course SW. Over loose rocks.  
 79.96 The cor. of secs. 26, 27, 34 and 35.  
 Land, mountainous.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood, sage and cacti.  
 Mountainous land covered with loose rocks and dense  
 underbrush, and on account of the scarcity of water and  
 other reasons more fully explained at the end of these  
 notes, exceptionally difficult to survey, 79.96 chs.

Thence I run  
 N 0° 01' W. bet. secs. 26 and 27.  
 Over slightly rolling land covered with loose rocks  
 thru dense underbrush.

14.00 Wash, 10 lks. wide, course SW. Over loose rocks.  
 40.00 Set a malpais stone 24x8x6 ins., 18 ins. in the ground, for  
 1/4 sec. cor., marked 1/4 on W. face; and raise a mound of  
 stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.  
 51.10 Wash, 25 lks. wide, course SW. Over loose rocks  
 62.30 Wash, 10 lks. wide, course SW. Over loose rocks.  
 80.00 Set a malpais stone 24x12x12 ins., 18 ins. in the ground,  
 for cor. of secs. 22, 23, 26 and 27, marked with 2 notches

## Subdivision of Tn. 19 N., Rg. 18 West.

chains.

on S. and E. edges; and raise a mound of stone, 2ft. base, 1½ ft. high, W. of cor. Pits impracticable.

Land, rolling.

Soil, rocky; 3rd rate.

No timber.

Underbrush, greasewood, sage and cacti.

Land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reason more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

At this cor. I set off 23° 00½' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35° 01' N.

Thence I run

S 89° 57' E. on random line bet. secs. 23 and 26.

40.00 Set temp. ¼ sec. cor.

79.96 Intersect the N. and S. line 2 lks. N. of the cor. of secs. 23, 24, 25 and 26.

Thence I run

N 89° 56' W. on true line bet. secs. 23 and 26.

Descend over rolling land covered with loose rocks thru dense underbrush.

20.00 Wash, 15 lks. wide, course SW. Over loose rocks.

39.98 Set a malpais stone, 18X6X6 ins., 12 ins. in the ground, for ¼ sec. cor., marked ¼ on N. face; and raise a mound of stone, 2ft. base, 1½ ft. high, N. of cor. Pits impracticable.

79.96 The cor. of secs. 22, 23, 26 and 27.

Land, rolling.

Soil, rocky; 3rd rate.

No timber.

Underbrush, greasewood, sage and cacti.

Rolling land covered with loose rocks and dense underbrush and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 79.96 chs.

Thence I run

N 0° 01' W. bet. secs. 22 and 23.

Over slightly rolling land covered with loose rocks thru dense underbrush.

21.50 Wash, 300 lks. wide, course SW. Over loose rocks.

40.00 Set a malpais stone, 18X6X6 ins., 12 ins. in the ground, for ¼ sec. cor., marked ¼ on W. face; and raise a mound of stone, 2ft. base, 1½ ft. high, W. of cor. Pits impracticable.

43.70 Wash, 200 lks. wide, course SW. Over loose rocks.

80.00 Set a malpais stone, 20X12X6 ins., 15 ins. in the ground, for cor. of secs. 14, 15, 22 and 23, marked with 2 notches on E. and 3 notches on S. edge; dig pits, 18x18x12 ins., in each sec. 5½ ft. dist.; and raise a mound of earth, 4ft base, 2ft. high, W. of cor.

Land, slightly rolling.

Soil, rocky; 3rd rate.

No timber.

Underbrush, greasewood, sage and cacti,

Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

January 1, 1910.

January 2; At 8h00m. a.m., l.m.t., I set off 22° 53½' S on the decl. arc; 35° 02' W. on the lat. arc and determine a meridian with the solar at the cor. of secs. 14, 15, 22 and 23.

Thence I run

S 89° 56' E. on random line bet. ses. 14 and 23.

40.00 Set temp. ¼ sec. cor.

79.96

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Subdivision of Tp. 19 N., Rg. 18 West.

chains.

79.94 Intersect the N. and S. line 5 lks. S. of the cor. of secs. 13, 14, 23 and 24.  
 Thence I run  
 N 89° 58' W. on true line bet. secs. 14 and 23.  
 Over slightly rolling land covered with loose rocks thru dense underbrush.  
 2.00 Wash, 10 lks. wide, course SW. Over loose rocks.  
 32.20 Wash, 25 lks. wide, course SW. Over loose rocks.  
 34.25 Same wash, course NW. Over loose rocks.  
 39.97 Set a malpais stone, 28X10X8 ins., 2 ins. in the ground, for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base, 1  $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.  
 47.00 Wash, 25 lks. wide, course SW. Over loose rocks.  
 53.00 Wash, 150 lks. wide, course SW. Over loose rocks.  
 79.94 The cor. of secs. 14, 15, 22 and 23.  
 Land, slightly rolling.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood, sage and cacti.  
 Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 79.94 chs.

Thence I run  
 N 0° 01' W. bet. secs. 14 and 15.  
 Over slightly rolling land thru exceptionally dense underbrush.

10.50 Wash, 25 lks. wide, course SW.  
 40.00 Set a malpais stone, 20X6X6 ins., 15 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; dig pits, 18X18X12 ins., N. and S. of stone, 3 ft. dist.; and raise a mound of earth 3  $\frac{1}{2}$  ft. base, 1  $\frac{1}{2}$  ft. high, W. of cor.  
 80.00 Set a malpais stone, 20X10X6 ins., 15 ins. in the ground for cor. of secs. 10, 11, 14 and 15, marked with 4 notches on S. and 2 notches on E. edge; dig pits, 18X18X12 ins., in each sec. 5  $\frac{1}{2}$  ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.  
 Land, slightly rolling.  
 Soil, gravelly; 2nd rate.  
 No timber.  
 Underbrush, greasewood, sage, catclaw and cacti.  
 Rolling land covered with exceptionally dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes exceptionally difficult to survey, 80.00 chs.  
 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 35° 02' N.

Thence I run  
 S 89° 58' E. on random line bet. secs. 11 and 14.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 79.88 Intersect the N. and S. line 3 lks. N. of the cor. of secs. 11, 12, 13 and 14.  
 Thence I run  
 N 89° 57' W. on true line bet. secs. 11 and 14.  
 Over slightly rolling land covered with loose rocks thru dense underbrush.  
 8.00 Wash, 20 lks. wide, course SW. Over loose rocks.  
 20.20 Wash, 20 lks. wide, course SW. Over loose rocks.  
 24.00 Wash, 20 lks. wide, course SW. Over loose rocks.  
 30.00 Bend in same wash, comes from NW. flows to the SW. Over loose rocks.  
 39.94 Set a malpais stone, 18X8X8 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; dig pits, 18X18X12 ins. E. and W. of stone, 3 ft. dist.; and raise a mound of earth 3  $\frac{1}{2}$  ft. base, 1  $\frac{1}{2}$  ft. high, N. of cor.  
 42.75 Wash, 25 lks. wide, course SW. Over loose rocks.

## Subdivision of Tp.19 N., Rg.18 West.

chains.

50.00 Wash, 25 lks. wide, course SW. Over loose rocks.  
 53.35 Wash, 25 lks. wide, course SW. Over loose rocks.  
 79.88 The cor. of secs. 10, 11, 14 and 15.  
 Land, slightly rolling.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood, sage and cacti.  
 Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 79, 88 chs.

Thence I run

N 0° 01' W. bet. secs. 10 and 11.

Over slightly rolling land thru exceptionally dense underbrush.

8.60 Wash, 20 lks. wide, course SW.  
 14.45 Wash, 20 lks. wide, course SW.  
 40.00 Set a malpais stone, 18X6X6 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; dig pits, 18X18X12 ins. N. and S. of stone, 3 ft. dist.; and raise a mound of earth,  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.  
 48.00 Wash, 10 lks. wide, course SW.  
 53.70 Wash, 20 lks. wide, course SW.  
 61.10 Wash, 20 lks. wide, course SW.  
 70.00 Wash, 15 lks. wide, course SW.  
 80.00 Set a malpais stone, 18X6X6 ins., 12 ins. in the ground, for cor. of secs. 2, 3, 10 and 11, marked with 5 notches on S. and 2 notches on E. edges; dig pits, 18X18X12 ins., in each sec.  $5\frac{1}{2}$  ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, slightly rolling.

Soil, rocky and gravelly; 2nd rate,

No timber.

Underbrush, greasewood, sage and cacti.

Rolling land covered with exceptionally dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

January, 2, 1910.

January 3; At 8h 00m., a.m., l.m.t., I set off 22° 48' S. on the decl. arc; 35° 03' W. on the lat. arc and determine a meridian with the solar at the cor. of secs. 2, 3, 10 and 11.

Thence I run.

S 89° 57' E. on random line bet. secs. 2 and 11.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.

79.82 Intersect the N. and S. line 4 lks. N. of the cor. of secs 1, 2, 11 and 12.

Thence I run

N 89° 55' W. on true line bet. secs. 2 and 11.

Slowly descend over loose rocks thru dense underbrush.

11.70 Wash, 20 lks. wide, course SW. Over loose rocks.

30.15 Wash, 20 lks. wide, course SW. Over loose rocks.

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

44.30 Wash, 40 lks. wide, course SW. Over loose rocks.

79.82 The cor. of secs. 2, 3, 10 and 11.

Land, rolling.

Soil, rocky; 3rd rate.

No timber.

Underbrush, greasewood, sage and cacti.

Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 79.82 chs.

Subdivision of Tp. 19 N., Rg. 18 West.

chains	Thence I run N 0° 01' W. on random line bet. secs. 2 and 3.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.40	Intersect the N. bdy. of Tp. 9 lks. E. of the cor. of secs. 2, 3, 34 and 35.
	Thence I run S 0° 05' E. on true line bet. secs. 2 and 3. Over slightly rolling land thru exceptionally dense underbrush.
1.15	Wash, 15 lks. wide, course SW.
5.00	Wash, 15 lks. wide, course SW.
7.00	Wash, 15 lks. wide, course SW.
24.40	Wash, 15 lks. wide, course SW.
30.00	Wash, 15 lks. wide, course SW.
40.40	Set a malpais stone, 18x8x6 ins., 12 ins., in the ground for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on W. face; dig pits, 18x18x12 ins. N and S. of stone, 3 ft. dist.; and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
45.15	Wash, 15 lks. wide, course SW.
50.00	Wash, 15 lks. wide, course SW.
53.00	Wash, 50 lks. wide, course SW.
63.90	Wash, 15 lks. wide, course SW.
77.20	Wash, 15 lks. wide, course SW.
80.40	The cor. of secs. 2, 3, 10 and 11. Land, slightly rolling. Soil, gravelly and stony; 2nd and 3rd rate. No timber. Underbrush, greasewood, sage and cacti. Rolling land covered with dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.40 chs. At this cor. I set off 22° 50' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35° 03 $\frac{1}{2}$ ' N.  From the cor. of secs. 3, 4, 33 & 34 on the south bdy. I run N 0° 02' W. bet. secs. 33 and 34. Over rolling and broken land covered with loose rocks and dense underbrush.
10.25	Wash, 10 lks. wide, course SW. Over loose rocks.
16.00	Wash, 15 lks. wide, course SW. Asc. over loose rocks.
26.00	Top of ridge, bears NE. and SW. Desc. over loose rocks.
27.50	Wash, 20 lks. wide, course SW. Asc. over loose rocks.
40.00	Set a malpais stone, 18x10x6 ins., 12 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
41.00	Top of ridge, bears NE. and SW. Desc. over loose rocks.
46.95	Wash, 15 lks. wide, course SW. Asc. steep slope over loose rocks.
64.00	Top of ridge, bears NE. and SW. Desc. steep slope covered with loose rocks.
79.00	Leave rocks. across wash bottom.
80.00	Set a malpais stone, 18x12x6 ins., 12 ins. in the ground for cor. of secs. 27, 28, 33 and 34, marked with 1 notch on S and 3 notches on E. edge; dig pits, 18x18x12 ins., in each sec. 5 $\frac{1}{2}$ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, rolling and mountainous. Soil, rocky; 3rd rate. No timber. Underbrush, greasewood, catclaw, sage and cacti. Rolling and mountainous land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

## Subdivision of Tp.19 N., Rg.18 West.

chains.

Thence I run  
East on random line bet. secs. 27 and 34.  
40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
79.96 Intersect the N. and S. line 7 lks. E. of the cor. of secs.  
26, 27, 34 and 35.  
Thence I run  
N  $89^{\circ}57'W$ . on true line bet. secs. 27 and 34.  
Over slightly rolling land covered with loose rocks  
and dense underbrush.  
20.20 Wash, 15 lks. wide, course SW. Asc. over loose rocks.  
24.00 Top of ridge, bears NE. and SW. Desc. over loose rocks.  
39.98 Set a malpais stone, 18X8X6 ins., 12 ins. in the ground,  
for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; dig pits 18X18X12 ins.  
E. and W. of stone, 3 ft. dist.; and raise a mound of earth  
3  $\frac{1}{2}$  ft. base, 1  $\frac{1}{2}$  ft. high, N. of cor.  
41.00 Wash, 10 lks. wide, course SW. Over loose rocks.  
79.96 The cor. of secs. 27, 28, 33 and 34.  
Land, rolling and mountainous.  
Soil, rocky; 3rd rate.  
No timber.  
Underbrush, greasewood, sage, cacti.  
Rolling and mountainous land covered with loose rocks  
and dense underbrush, and on account of the scarcity of  
water and other reasons more fully explained at the  
end of these notes, exceptionally difficult to survey,  
79.96 chs.

January 3, 1910.

January 4; At 8h. 00m., a.m., l.m.t., I set off  $22^{\circ}42'S$ .  
on the deat. arc;  $35^{\circ}00'N$ . on the lat. arc and determine  
a meridian with the solar at the cor. of secs. 27, 28,  
33 and 34.

Thence I run  
N  $0^{\circ}02'W$ . bet. secs. 27 and 28.  
Over broken and rolling land covered with loose rocks  
thru dense underbrush.  
1.20 Wash, 40 lks. wide, course SW. Asc. over loose rocks.  
22.00 Over nearly level land covered with loose rocks.  
40.00 Set a malpais stone, 18X8X6 ins., 12 ins. in the ground,  
for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; and raise a mound  
of stone, 2 ft. base, 1  $\frac{1}{2}$  ft. high, W. of cor. Pits impracticable  
64.00 Wash, 10 lks. wide, course SW. Over loose rocks.  
80.00 Set a malpais stone, 18X8X6 ins., 12 ins. in the ground,  
for cor. of secs. 21, 22, 27 and 28, marked with 2 notches  
on the S. and 3 notches on E. edge; dig pits, 18X18X12 ins.  
in each sec. 5  $\frac{1}{2}$  ft. dist., and raise a mound of earth, 4 ft  
base, 2 ft. high, W. of cor.  
Land, rolling and nearly level.  
Soil, rocky; 3rd rate.  
No timber.  
Underbrush, greasewood, sage and cacti.  
Land covered with loose rocks and dense underbrush,  
and on account of the scarcity of the water and other  
reasons more fully explained at the end of these notes  
exceptionally difficult to survey, 80.00 chs.

Thence I run  
S  $89^{\circ}57'E$ . on random line bet. secs. 22 and 27.  
40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
79.92 Intersect the N. and S. line 2 lks. S. of the cor. of secs.  
22, 23, 26 and 27.  
Thence I run  
N  $89^{\circ}58'W$ . on true line bet. secs. 22 and 27.  
Desc. over slightly rolling land covered with loose  
rocks thru dense underbrush.  
22.00 Wash, 10 lks. wide, course SW. Over loose rocks.  
33.36 Wash, 30 lks. wide, course SW. Over loose rocks.  
39.96 Set a malpais stone, 18X8X6 ins., 12 ins. in the ground,  
for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; and raise a mound of  
stone, 2 ft. base, 1  $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable



Chains.	
43.00	Wash, 15 lks. wide, course S. Over loose rocks.
58.00	Wash, 40 lks. wide, course SW. Over loose rocks.
79.92	The cor. of secs. 21, 22, 27 and 28. Land, rolling. Soil, rocky; 3rd rate. No timber. Underbrush, greasewood, sage and cacti. Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 79.92 chs. At this cor. I set off 22°44'S. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is 35°01'N.
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	Thence I run N 0°02'W. bet. secs. 21 and 22. Over slightly rolling land covered with loose rocks thru dense underbrush.
14.20	Wash, 10 lks. wide, course SW. Over loose rocks.
18.90	Wash, 10 lks. wide, course SW. Over loose rocks.
40.00	Set a malpais stone, 24X8X8 ins., 18 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. face; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
43.00	Wash, 10 lks. wide, course SW. Over loose rocks.
64.00	Wash, 10 lks. wide, course SW. Over loose rocks.
80.00	Set a malpais stone, 15X8X8 ins., 10 ins. in the ground, for cor. of secs. 15, 16, 21 and 22, marked 19 N on NE, and 18 W on SE., face with 3 notches on S. and E. edges; dig pits, 18X18X12 ins., in each sec. 5 $\frac{1}{2}$ ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, slightly rolling. Soil, rocky; 3rd rate. No timber. Underbrush, greasewood, sage, and cacti. Land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.
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	Thence I run S 89°58'E. on random line bet. secs. 15 and 22.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
79.88	Intersect the N. and S. line 14 lks. S. of the cor. of sec 14, 15, 22 and 23. Thence I run S 89°56'W. on true line bet. secs. 15 and 22. Over slightly rolling land thru dense underbrush.
5.85	Wash, 20 lks. wide, course SW.
39.94	Set a malpais stone, 18X8X6 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; dig pits, 18X18X12 ins E. and W. of stone, 3 ft. dist., and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
54.15	Wash, 20 lks. wide, course SW.
67.90	Wash, 20 lks. wide, course SW.
79.88	The cor. of secs. 15, 16, 21 and 22. Land, slightly rolling. Soil, gravelly; 2nd rate. No timber. Underbrush, greasewood, sage and cacti. and catclaw. Land covered with loose rocks and dense underbrush and on account of the scarcity of water and other reason more fully explained at the end of these notes, exceptionally difficult to survey, 79.88 chs.

January 4, 1910.



## Subdivision of Tp.19 N.,Rg.18 West.

chains.

January 5; At 8h 00m., a.m., l.m.t., I set off  $22^{\circ} 36' S.$  on the decl. arc;  $35^{\circ} 02' N.$  on the lat. arc and determines a meridian with the solar at the cor. of secs. 15, 16, 21 and 22.

Thence I run

N  $0^{\circ} 02' W.$  bet. secs. 15 and 16.

Over level land thru exceptionally dense underbrush.

30.25

Wash, 10 lks. wide, course SW.

40.00

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

52.20

Wash, 10 lks. wide, course SW.

73.60

Wash, 10 lks. wide, course SW.

79.00

Wash, 10 lks. wide, course SW.

80.00

Set a malpais stone, 18X7X6 ins., 12 ins. in the ground, for cor. of secs. 9, 10, 15 and 16, marked with 4 notches on S. and 3 notches on E. edges; dig pits, 18X18X12 ins., in each sec.  $5\frac{1}{2}$  ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, level.

Soil, gravelly; 2nd rate.

No timber.

Underbrush, greasewood, sage and cacti.

Land covered with exceptionally dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

Thence I run

N  $89^{\circ} 56' E.$  on random line bet. secs. 10 and 15.

40.00

Set temp.  $\frac{1}{4}$  sec. cor.

79.92

Intersect the N. and S. line, 2 lks. S. of the cor. of secs. 10, 11, 14 and 15.

Thence I run

S  $89^{\circ} 55' W.$  on true line bet. secs. 10 and 15.

Over nearly level land thru exceptionally dense underbrush.

11.10

Wash, 10 lks. wide, course SW.

14.90

Wash, 15 lks. wide, course SW.

18.60

Wash, 10 lks. wide, course SW.

39.96

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

79.92

The cor. of secs. 9, 10, 15 and 16.

Land, nearly level.

Soil, gravelly; 3rd rate.

No timber.

Underbrush, greasewood, sage and cacti.

Land covered with exceptionally dense underbrush and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 79.92 chs.

At this cor. I set off  $22^{\circ} 37\frac{1}{2}' S.$  on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is  $35^{\circ} 02\frac{1}{2}' N.$

Thence I run

N  $0^{\circ} 02' W.$  bet. secs. 9 and 10

Over nearly level land thru exceptionally dense underbrush.

11.65

Wash, 20 lks. wide, course SW.

20.25

Wash, 20 lks. wide, course SW.

33.45

Wash, 20 lks. wide, course SW.

40.00

Set a malpais stone, 18X8X6 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; dig pits, 18X18X12 ins., N. and S. of stone, 3 ft. dist.; and raise amount of earth,  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.

## Subdivision of Tp 19 N , Rg 18 West

chains.

43.00 Wash, 20 lks. wide, course SW.

45.90 Wash, 20 lks. wide, course SW.

69.35 Wash, 20 lks. wide, course SW.

30.00 Set a malpais stone, 24X8X8 ins., 18 ins. in the ground, for cor. of secs. 3, 4, 9 and 10, marked with 5 notches on S and 3 notches on E. edge; dig pits, 18X18X12 ins., in each sec. 5 1/2 ft. dist.; and raise a mound of earth, 4 ft. base 2 ft. high, W. of cor.

Land, nearly level.

Soil, gravelly; 3rd rate.

No timber.

Underbrush, greasewood, sage and cacti.

Land covered with exceptionally dense underbrush and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

Thence I run

N 89° 55' W. on random line bet. secs. 3 and 10.

40.00 Set temp. 1/4 sec. cor.

79.94 Intersect the N. and S. line, 4 lks. S. of the cor. of secs 2, 3, 10 and 11.

Thence I run

S 89° 53' W. on true line bet. secs. 3 and 10.

Slowly descend thru exceptionally dense underbrush.

2.50 Wash, 15 lks. wide, course SW.

12.90 Wash, 15 lks. wide, course SW.

18.35 Wash, 15 lks. wide, course SW.

24.15 Wash, 15 lks. wide, course SW.

39.97 Set a malpais stone, 18X6X6 ins., 12 ins. in the ground, for 1/4 sec. cor., marked 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.

49.00 Wash, 20 lks. wide, course SW.

62.00 Wash, 35 lks. wide, course SW.

79.94 The cor. of secs. 3, 4, 9 and 10.

Land, rolling.

Soil, gravelly; 3rd rate.

No timber.

Underbrush, greasewood, sage, and cacti.

Rolling land covered with exceptionally dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 79.94 chs.

January 5, 1910.

January 6; At 8h.00m., a.m., l.m.t., I set off 22° 29' S. on the decl. arc; 35° 03 1/2' N. on the lat. arc and determine a meridian with the solar at the cor. of secs. 3, 4, 9 and 10.

Thence I run

N 0° 02' W. of random line bet. secs. 3 and 4.

40.00 Set temp. 1/4 sec. cor.

80.69 Intersect the N. bdy. of Tp. 10 lks. E. of the cor. of secs. 3, 4, 33 and 34.

Thence I run

S 0° 06' E. on true line bet. secs. 3 and 4.

Over level land thru exceptionally dense underbrush.

25.70 Wash, 15 lks. wide, course SW.

27.35 Wash, 15 lks. wide, course SW.

30.70 Wash, 15 lks. wide, course SW.

40.69 Set a malpais stone, 18X8X6 ins., 12 ins. in the ground, for 1/4 sec. cor. marked 1/4 on W. face; dig pits, 18X18X12 ins., N. and S. of stone, 3 ft. dist.; and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, W. of cor.

47.10 Wash, 20 lks. wide, course SW.

67.20 Wash, 20 lks. wide, course SW.

73.50 Wash, 20 lks. wide, course SW.

80.69 The cor. of secs. 3, 4, 9 and 10.

## Subdivision of Tp.19 N.,Rg.18 West.

chains.

Land, level.

Soil, gravelly; 3rd rate.

No timber.

Underbrush, greasewood, sage and cacti, catclaw.

Land covered with exceptionally dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.69 chs.

From the cor. of secs. 4, 5, 32 & 33 on the south bay,

Run

N 0° 02' W. bet. secs. 32 and 33.

Over rolling land covered with loose rocks and dense underbrush.

- 1.15 Wash, 50 lks. wide, course SE. Asc. over loose rocks.  
 4.50 Top of ridge, bears NW. and SE. Desc. over loose rocks.  
 8.00 Wash, 10 lks. wide, course SE. Asc. over loose rocks.  
 13.00 Top of ridge, bears NW. and SE. Desc. over loose rocks.  
 18.75 Wash, 20 lks. wide, course SE. Asc. over loose rocks.  
 23.00 Top of ridge, bears NW. and SE. Desc. over loose rocks.  
 37.00 Wash, 60 lks. wide, course SE. Over loose rocks.  
 40.00 Set a malpais stone, 18X8X8 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; and raise a mound of stone, 2 ft. base, 1  $\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
 80.00 Set a malpais stone, 18X8X6 ins., 12 ins. in the ground, for cor. of secs. 28, 29, 32 and 33, marked with 1 notch on the S. and 4 notches on the E. edge.; and raise a mound of stone, 2 ft. base, 1  $\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.

Land, rolling.

Soil, rocky; 3rd and 4th rate.

No timber.

Underbrush, greasewood, catclaw and cacti.

Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

At this cor. I set off 22° 30' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35° 00' N.

Thence I run

East on random line bet. secs. 28 and 33.

- 40.00 Set temp.  $\frac{1}{4}$  sec. cor.

- 80.02 Intersect the N. and S. line 10 lks. N. of the cor. of secs 27, 28, 33 and 34.

Thence I run

N 89° 56' W. on true line bet. secs. 28 and 33.

Over broken land covered with loose rocks and dense underbrush.

- 1.65 Wash 40 lks. wide, course SW. Asc. over loose rocks.  
 20.00 Top of ridge, bears NE. and SW. Desc. over loose rocks.  
 38.00 Wash, 10 lks. wide, course SW. Asc. over loose rocks.  
 40.01 Set a malpais stone, 18X10X6 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base, 1  $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.  
 42.00 Top of ridge, bears NE. and SW. Desc. over loose rocks.  
 48.00 Wash, 10 lks. wide, course SW. Asc. over loose rocks.  
 50.00 Top of ridge, bears N. and S. Desc. steep slope over loose rocks into Sacramento wash.  
 64.00 Sacramento Wash, 200 lks. wide, course S. across wash bottom over loose rocks.  
 79.00 Asc. steep slope over loose rocks.  
 80.02 The cor. of secs. 28, 29, 32 and 33.

Land, rolling and broken.

Soil, rocky; 3rd and 4th rate.

No timber.

Underbrush, greasewood, catclaw and cacti,

Rolling and broken land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end

chains.

of these notes, exceptionally difficult to survey, 80.02 chs.

Thence I run  
N 0°02'W. bet.secs.28 and 29.

Over broken and rolling land covered with loose rocks and dense underbrush.

- 13.15 Wash, 15 lks. wide, course SE. Over loose rocks.
- 27.00 Wash, 150 lks. wide, course SSE. Over loose rocks.
- 40.00 Set a malpais stone, 18X8X6ins., 12ins. in the ground, for 1/4 sec. cor., marked 1/4 on W. face; and raise a mound of stone, 2ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.
- 54.50 Sacramento wash, 200 lks. wide, course SE. Over loose rocks.
- 80.00 Set a malpais stone, 20X10X8ins., 15ins. in the ground, for cor. of secs, 20, 21, 28 and 29, marked with 2 notches on S. and 4 notches on E. edges; and raise a mound of stone, 2ft. base, 1 1/2 ft. high, W. of cor. pits impracticable.  
Land, rolling and broken.  
Soil, rocky; 3rd and 4th rate.  
No timber.  
Underbrush, greasewood, catclaw and cacti.  
Rolling and broken land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.  
January 6, 1910.

January 7; At 8h.00m., a.m., l.m.t., I set off 22°22'S. on the decl. arc; 35°01'W. on the lat. arc and determine a meridian with the solar at the cor. of secs. 20, 21, 28 and 29.

Thence I run  
S 89°56'W. on random line bet. secs. 21 and 29.

- 40.00 Set temp. 1/4 sec. cor.
- 80.04 Intersect the N. and S. line. 23 lks. S. of the cor. of secs. 21, 22, 27 and 28.

Thence I run  
S 89°54'W. on true line bet. secs. 21 and 28.

- 9.35 Slowly descend over loose rocks thru dense underbrush.
- 15.60 Wash, 10 lks. wide, course SW. Over loose rocks.
- 38.80 Wash, 75 lks. wide, course SW. Over loose rocks.
- 40.02 Wash, 15 lks. wide, course SW. Over loose rocks.
- 41.50 Set a malpais stone, 20X12X8ins., 15ins. in the ground, for 1/4 sec. cor., marked 1/4 on N. face; and raise a mound of stone, 2ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable
- 45.00 Top of ridge, bears NW, and SW. Desc. over loose rocks.
- 50.00 Wash, 10 lks. wide, course SW. Asc. over loose rocks.
- 56.00 Top of ridge, bears NE. and SW. Desc. over loose rocks.
- 80.04 Wash, 10 lks. wide, course SW. Over loose rocks.

The cor. of secs. 20, 21 and 28 and 29.  
Land, rolling and mountainous.  
Soil, rocky; 3rd rate.  
No timber.  
Underbrush, greasewood, sage, catclaw, and cacti.  
Mountainous land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.04 chs.

Thence I run  
N 0°02'W. bet. secs. 20 and 21.

Over slightly rolling land covered with loose rocks and dense underbrush.

- 10.50 Wash, 15 lks. wide, course SW. Over loose rocks.
- 11.40 Wash, 15 lks. wide, course SW. Over loose rocks.
- 25.20 Wash, 10 lks. wide, course SW. Over loose rocks.
- 40.00 Set a malpais stone, 24X16X10ins., 18ins. in the ground for 1/4 sec. cor., marked 1/4 on W. face; dig pits, 18X18X12ins..

## Subdivision of Tp.19 N., Rg.18 West.

Chains.	
	N. and S. of stone, 3ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, W. of cor.
46.30	Wash, 10 lks. wide, course SW. Over loose rocks.
49.00	Wash, 10 lks. wide, course SW. Over loose rocks.
80.00	Set a malpais stone, 15X10X8 ins., 10 ins. in the ground, for cor. of secs. 16, 17, 20 and 21, marked with 3 notches on S. and 4 notches on E. edge; dig pits, 18X18X12 ins., in each sec. 5½ ft. dist., and raise a mound of earth, 4 ft. base, 2ft. high, W. of cor. Land, rolling. Soil, rocky; 3rd rate. No timber. Underbrush, greasewood, catclaw and cacti. Rolling land covered with loose rocks and dense underbrush, and on account of the scarcity of water and of other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs. At this cor. I set off 22° 23½' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35° 02' N.
	Thence I run N 89° 54' E. on random line bet. secs. 16 and 21.
40.00	Set temp. ¼ sec. cor.
80.02	Intersect the N. and S. line 7 lks. N. of the cor of secs. 15, 16, 21 and 22. Thence I run S 89° 57' W. on true line bet. secs. 16 and 21. Over rolling land thru exceptionally dense underbrush.
1.40	Wash, 10 lks. wide, course SW.
9.80	Wash, 10 lks. wide, course SW.
32.00	Wash, 10 lks. wide, course SW.
40.01	Set a malpais stone, 15X8X8 ins., 10 ins. in the ground, for ¼ sec. cor. marked ¼ on N. face; dig pits, 18X8X12 ins., E. and W. of stone, 3ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, N. of cor.
80.02.	The cor. of secs. 16, 17, 20 and 21. Land, rolling. Soil, rocky, 3rd rate. No timber. Underbrush, greasewood, sage and cacti. Rolling land covered with exceptionally dense underbrush and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.02 chs.
	Thence I run N 0° 02' W. bet. secs. 16 and 17. Over level land thru exceptionally dense underbrush.
5.00	Wash, 15 lks. wide, course SW.
15.50	Wash, 15 lks. wide, course SW.
23.00	Wash, 10 lks. wide, course SW.
29.00	Wash, 30 lks. wide, course SW.
40.00	Set a malpais stone, 15X10X8 ins., 10 ins. in the ground, for ¼ sec. cor. dig pits, 18X18X12 ins., N. and S. of stone, 3ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, W. of cor.
63.65	Wash, 25 lks. wide, course W.
64.00	Enter Sacramento wash, course SW.
74.50	Leave Sacramento wash, course SW.
80.00	Set a malpais stone, 18X10X8 ins., 12 ins. in the ground, for cor. of secs. 8, 9, 16 and 17, marked with 4 notches on S. and E. edges. and dig pits, 18X18X12 ins., in each sec. 5½ ft. dist.; and raise a mound of earth, 4ft. base, 2ft. high, W. of cor. Land, level. Soil, gravelly, 2nd rate; No timber.

Subdivision of Tp. 19 N., R. 18 West.

chains.

Underbrush, greasewood, sage, catclaw and cacti.  
Land covered with exceptionally dense underbrush and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

January 7, 1910.

January 8; At 8h.00m., a.m., l.m.t., I set off 22° 14' S. on the decl. arc; 35° 02½' N. on the lat. arc and determine a meridian with the solar at the cor. of secs. 8, 9, 16 and 17.

Thence I run

N 89° 57' E. on random line bet. secs. 9 and 16.

40.00

Set temp. ¼ sec. cor. ½ lks

80.06

Intersect the N. and S. line N. of the cor. of secs. 9, 10, 15 and 16.

Thence I run

N 89° 58' W. on true line bet. secs. 9 and 16.

Slowly descend thru exceptionally dense underbrush.

9.10

Wash, 20 lks. wide, course SW.

18.70

Wash, 20 lks. wide, course SW.

33.90

Wash, 30 lks. wide, course SW.

40.03

Set a malpais stone, 24x16x10 ins., 18 ins. in the ground, for ¼ sec. cor., marked ¼ on N. face; dig pits, 18x18x12 ins. E. and W. of stone 3 ft. dist.; and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.

80.06

The cor. of secs. 8, 9, 16 and 17.

Land, rolling.

Soil, gravelly; 3rd rate.

No timber.

Underbrush, greasewood, sage and cacti.

Rolling land covered with exceptionally dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.06 chs.

Thence I run

N 0° 02' W. bet. secs. 8 and 9.

Over level land thru exceptionally dense underbrush.

15.80

Wash, 20 lks. wide, course SW.

17.40

Wash, 20 lks. wide, course SW.

28.60

Wash, 20 lks. wide, course SW.

40.00

Set a malpais stone, 18x8x8 ins., 12 ins. in the ground, for ¼ sec. cor. marked ¼ on W. face; dig pits, 18x18x12 ins. N. and S. of stone, 3 ft. dist.; and raise a mound of earth 3½ ft. base, 1½ ft. high, W. of cor.

47.10

Wash, 50 lks. wide, course SW.

80.00

Set a malpais stone, 18x10x6 ins., 12 ins. in the ground, for cor. of secs. 4, 5, 8 and 9, marked with 5 notches on S. and 4 notches on E. edge; and raise a mound of earth 3½ ft. base, 1½ ft. high, W. of the cor. Pits impracticable.

Land, level.

Soil, gravelly; 2nd rate.

No timber.

Underbrush, greasewood, catclaw, sage and cacti.

Land covered with exceptionally dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

At this cor. I set off 22° 15½' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35° 03½' N.

Thence I run

S 89° 58' E. on random line bet. secs. 4 and 9.

40.00

Set temp. ¼ sec. cor.

80.08

Intersect the N. and S. line 9 lks. N. of the cor. of secs.

## Subdivision of Tp.19 N.,Rg.18 West.

chains.	
	3,4,9 and 10. Thence I run N 89° 54' W. on true line bet.secs.4 and 9. Slowly descend thru exceptionally dense underbrush.
8.65	Wash,20 lks.wide,course SW.
12.80	Wash,20 lks.wide,course SW.
32.80	Wash,30 lks.wide,course S.
40.04	Set a malpais stone,18X8X6i s.,12ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on N.face;dig pits,18X18X12ins., E.and W. of stone,3ft.dist.;and raise a mound of earth, 3 $\frac{1}{2}$ ft.base,1 $\frac{1}{2}$ ft.high,W. of cor.
80.08	The cor. of secs.4,5,8 and 9. Land,rolling. Soil,rocky and gravelly,3rd rate. No timber. Underbrush,greasewood,cactlaw,sage and cacti. Rolling land covered with exceptionally dense under- brush,and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey,80.08 chs.
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	Thence I run N 0° 02' W. on random line bet.secs.4 and 5.
40.00	Set temp. $\frac{1}{4}$ sec.cor.
80.84	Intersect the N.bdy.of Tp.7 lks.W. of the cor. of secs. 4,5,32 and 33.
	Thence I run S 0° 01' W. on true line bet.secs.4 and 5. Over nearly level land covered with loose rocks and exceptionally dense underbrush.
13.35	Wash,30 lks.wide,course SW. Over loose rocks.
18.40	Wash,30 lks.wide,course SW. Over loose rocks.
40.55	Wash,10 lks.wide,course SW.
40.84	Set a malpais stone,18X6X6ins.,12ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W. face;dig pits,18X18X12ins., N.and S. of stone,3ft.dist.; and raise a mound of earth 3 $\frac{1}{2}$ ft.base,1 $\frac{1}{2}$ ft.high,W. of cor.
41.35	Wash,15 lks.wide,course SW. Over loose rocks.
51.45	Wash,25 lks.wide,course SW. Over loose rocks.
80.84.	The cor. of secs.4,5,8 and 9. Land,nearly level. Soil,rocky; 3rd rate. No timber. Underbrush,greasewood,sage and cacti. Land covered with loose rocks and exceptionally dense underbrush,and on account of the scarcity of water and other reasons more fully explained at the end of these notes,exceptionally difficult to survey,80.84chs. January 8,1910.
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	January 9; At 8h.00m.,a.m.,l.m.t..I set off 22° 06'S. on the decl.arc; 34° 59'N.on the lat.arc and determine a meridian with the solar at the cor.of secs.5,6,31 and 32,previously set by me.
	Thence I run N 0 03' W. bet.secs.31 and 32. Along E. slope of Black mountains over loose rocks thru dense underbrush.
4.50	Wash,10 lks.wide,course E. Over loose rocks.
16.20	Wash.15 lks.wide,course E. Over loose rocks.
21.20	Wash,15 lks.wide,course E. Over loose rocks.
27.00	Wash,40 lks.wide,course SE. Over loose rocks.
40.00	Set a malpais stone,20X12X10ins.,15ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face; and raise a mound of stone,3ft.base,1 $\frac{1}{2}$ ft.high,W. of cor. Pits impracticable.
42.25	Wash,10 lks.wide,course E. Over loose rocks



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Subdivision of Tp.19 N.RG.18 West.

chains.	
50.30	Wash, 10 lks. wide, course SE. Over loose rocks.
65.75	Wash, 10 lks. wide, course SE. Over loose rocks.
80.00	Set a malpais stone, 18X8X6 ins., 12 ins. in the ground, for cor. of secs. 29, 30, 31 and 32, marked with 1 notch on S. and 5 notches on E. edge; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable. Land, mountainous. Soil, rocky; 4th rate. No timber. Underbrush, greasewood, catclaw, sage and cacti. Mountainous land covered with loose rocks and dense underbrush and, on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.
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	Thence I run
	East on random line bet. secs. 29 and 32.
40.00	Set temp. 1/4 sec. cor.
80.10	Intersect the N. and S. line 9 lks. N. of the cor. of secs. 28, 29, 32 and 33. Thence I run N 89° 56' W. on true line bet. secs. 29 and 32. Ascend over loose malpais rocks thru dense underbrush.
10.00	Top of ridge, bears NW. and SE. Desc. over loose rocks.
17.65	Wash, 30 lks. wide, course SE. Asc. over loose rocks.
25.00	Top of ridge, bears NW. and SE. Desc. over loose rocks.
33.00	Wash, 15 lks. wide, course SE. Asc. over loose rocks.
40.05	Set a malpais stone, 18X12X8 ins., 12 ins. in the ground, for 1/4 sec. cor., marked 1/4 on N. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable.
53.00	Top of ridge, bears NW. and SE. Desc. over loose rocks.
61.80	Wash, 20 lks. wide, course SE. Asc. over loose rocks.
75.00	Top of ridge, bears NW. and SE. Desc. over loose rocks.
80.10	The cor. of secs. 29, 30, 31 and 32. Land, mountainous. Soil, rocky; 4th rate. No timber. Underbrush, greasewood, catclaw and sage. Mountainous land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.10 chs. At this cor. I set off 22° 07 1/2' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35° 00' N. ✓
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	Thence I run
	West on random line bet. secs. 30 and 31.
40.00	Set temp. 1/4 sec. cor.
78.97	Intersect the 5th Guide Meridian 2 lks. S. of the cor. of secs. 25, 30, 31 and 36, marked and witnessed as described by the Surveyor General. Thence I run S 89 59' E. on true line bet. secs. 30 and 31. Descending slope of Black Mountains over loose rocks and boulders thru dense underbrush.
38.97	Set a malpais stone, 20X12X10 ins., 15 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable.
78.97	The cor. of secs. 29, 30, 31 and 32. Land, mountainous. Soil, rocky; 4th rate. No timber. Underbrush, greasewood, catclaw and cacti. Mountainous land covered with loose rocks and boulder and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 78.97 ch



## Subdivision of Tp.19 N.,Rg.18 West.

chains.

Thence I run  
N 0°03'W. bet.secs.29 and 30.  
Along E. slope of Black Mountains over loose rocks  
and boulders, thru dense underbrush.  
9.70 Wash,30 lks.wide,course SE. Over loose rocks and boulder  
40.00 Set a malpais stone,18X8X6ins.,12ins.in the ground,  
for  $\frac{1}{4}$  sec.cor.,marked  $\frac{1}{4}$  on W. face; and raise a mound  
of stone,2ft.base,1 $\frac{1}{2}$  ft.high,W. of cor. Pits impracticabl  
47.00 Wash,15 lks.wide,course SE. Over loose rocks and boulder  
68.30 Wash,30 lks.wide,course SE. Over loose rocks and boulders  
80.00 Set a malpais stone,24X8X6ins.,18ins.in the ground,  
for cor. of secs.19,20,29 and 30,marked with 2 notches  
on S.and 5 notches on E. edge; and raise a mound of  
stone,2ft.base,1 $\frac{1}{2}$ ft.high,W. of cor. Pits impracticable.  
Land,mountainous.  
Soil,rocky; 4th rate.  
No timber.  
Underbrushmgreasewood,sage and cacti.  
Mountainous land covered with loose rocks and  
boulders and dense underbrush,and on account of the sc  
scarcity of water and other reasons more fully explained  
at the end of these notes,exceptionally difficult to  
survey,80.00 chs.

January 9,1910.

January 10; At 8h.00m.,a.m.l.m.t.,I set off 21°57 $\frac{1}{2}$ 'S.  
on the decl.arc; 35°01'N. on the lat.arc;and determine  
a meridian with the solar at the cor. of secs.19,20,29  
and 30.

Thence I run  
S 89°56'E. on random line bet.secs.20 and 29.  
40.00 Set temp. $\frac{1}{4}$  sec.cor.  
80.08 Intersect the N.and S. line 9 lks.S. of the cor. of secs.  
20,21,28 and 29.  
Thence I run  
West on true line bet.secs.20 and 29.  
Over broken and rolling land covered with loose rocks  
thru dense underbrush.  
3.50 Wash,10 lks.wide,course S. Over loose rocks.  
7.50 Wash,45 lks.wide,course S. Over loose rocks.  
14.50 Sacramento wash,200 lks.wide,course S. Over loose rocks.  
21.90 Wash,10 lks.wide,course SE. Over loose rocks.  
23.20 Wash,15 lks.wide,course SE. Asc.over loose rocks.  
40.04 Set a malpais stone,24X6X5ins.,18ins.in the ground,  
for  $\frac{1}{4}$  sec.cor.,marked  $\frac{1}{4}$  on N.face; and raise a mound of  
stone,2ft.base,1 $\frac{1}{2}$  ft.hih,W. of cor. Pits impracticable.  
42.00 Wash,10 lks.wide,course SE. Ascending over loose rocks.  
80.08 The cor. of secs.19,20,29 and 30.  
Land,rolling and mountainous.  
Soil,rocky; 4th rate.  
No timber.  
Underbrush,greasewood,catclaw and cacti.  
Mountainous land covered with loose rocks and dense  
underbrush,and on account of the scarcity of water and  
other reasons mor e fully explained at the end of these  
notes exceptionally difficult to survey,80.08 chs.

Thence I run  
N 89°59'W. on random line bet.secs.19 and 30.  
40.00 Set temp  $\frac{1}{4}$  sec.cor.  
79.02 Intersect the 5th Guide meridian 18 lks.S. of the cor.  
of secs.19,24,25 and 30,which is a s one,marked and  
witnessed as described by the Surveyor General.  
Thence I run  
S 89°51'E. on true line bet.secs.19 and 30.  
Descending over loo e rocks and boulders thru dense  
underbrush

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Subdivision of Tp.19 N.,Rg.18 West.

39.02 Set a malpais stone, 20X12X12ins., 15ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2ft. base, 1 $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable

39.60 Wash, 15 lks. wide, course SE. Over loose rocks

43.00 Wash, 10 lks. wide, course SE. Over loose rocks.

56.60 Wash, 15 lks. wide, course SE. Over loose rocks.

67.40 Wash, 20 lks. wide, course SE. Over loose rocks.

79.02 The cor. of secs. 19, 20, 29 and 30.  
 Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Underbrush, greasewood, sage and cacti.  
 Mountainous land covered with loose rocks and dense underbrush and on account of the scarcity of water and other reasons more fully explained at the end of these notes; exceptionally difficult to survey, 79.02 chs.  
 At this cor. I set off 22 58 $\frac{1}{2}$ ' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35 01' N.

Thence I run  
 N 0°03' W. bet. secs. 19 and 20.  
 Slowly Ascending over loose rocks thru dense underbrush.

28.40 Wash, 10 lks. wide, course SE. Over loose rocks.

40.00 Set a malpais stone, 20X8X6ins., 15ins., in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; and raise a mound of stone, 2ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.

80.00 Set a malpais stone, 20X10X8ins., 15ins. in the ground, for cor. of secs. 17, 18, 19 and 20, marked with 3 notches on S. and 5 notches on E. edge; and raise a mound of stone 2ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor. Pits impracticable.  
 Land, mountainous.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood, sage and cacti.  
 Mountainous land covered with loose rock and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

Thence I run  
 East on random line bet. secs. 17 and 20.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.

80.02 Intersect the N. and S. line at the cor. of secs. 16, 17 20 and 21.  
 Thence I run  
 West on true line bet. secs. 17 and 20.  
 Descending over loose rocks thru dense underbrush.

3.50 Wash, 15 lks. wide, course SW. Over loose rocks.

10.35 Wash, 20 lks. wide, course SW. Over loose rocks.

20.15 Across Sacramento wash, course S.

29.30 Leave Sacramento wash, course S. Asc. over loose rocks.

40.01 Set a malpais stone, 24X10X8ins., 18ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2ft. base, 1 $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.

80.02 The cor. of secs. 17, 18, 19 and 20.  
 Land, mountainous.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Underbrush, greasewood, sage, catclaw and cacti.  
 Mountainous land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.02 chs.  
 January, 10, 1910.

## Subdivision of Td. 19 N., Rg. 18 West.

chains.

January 11; At 8h.00m., a.m., l.m.t., I set off  $22^{\circ}48\frac{1}{2}'S.$  on the decl arc;  $35^{\circ}02'N.$  on the lat. arc and determine a meridian with the solar at the cor. of secs. 17, 18, 19 and 20.

Thence I run

N  $89^{\circ}51'W.$  on random line bet. secs. 18 and 19.

40.00

Set temp.  $\frac{1}{4}$  sec. cor.

79.06.

Intersect the 5th Guide Meridian 4 lks. S. of the cor. of secs. 13, 18, 19 and 24. which is a stone, marked and witnessed as described by the surveyor General.

Thence I run

S  $89^{\circ}49'W.$  on true line bet. secs. 18 and 19.

Descending over loose rocks and boulders thru dense underbrush.

39.06

Set a malpais stone,  $18 \times 12 \times 6$  ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor. Pits impracticable

79.06

The cor. of secs. 17, 18, 19 and 20.

Land, mountainous.

Soil, rocky; 4th. rate.

No timber.

Underbrush, greasewood, catclaw, sage and cacti.

Mountainous land covered with loose rock and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 79.02 chs.

Thence I run

N  $0^{\circ}03'W.$  bet. secs. 17 and 18.

Slowly descending over loose rocks thru dense underbrush. along east slope.

1.30

Wash, 15 lks. wide, course E. Over loose rocks.

4.45

Wash, 20 lks. wide, course E. Over loose rocks.

6.70

Wash, 20 lks. wide, course E. Over loose rocks.

12.00

Wash, 30 lks. wide, course E. Over loose rocks.

17.20

Wash, 20 lks. wide, course E. Over loose rocks.

29.75

Wash, 30 lks. wide, course E. Over loose rocks.

40.00

Set a malpais stone,  $20 \times 10 \times 8$  ins., 15 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Pits impracticable,

43.38

Wash, 15 lks. wide, course E. Over loose rocks.

54.70

Wash, 20 lks. wide, course E. Over loose rocks.

61.50

Wash, 20 lks. wide, course E. Over loose rocks.

66.40

Wash, 30 lks. wide, course SSE.

80.00

Set a malpais stone,  $18 \times 8 \times 6$  ins., 12 ins. in the ground, for cor. of secs. 7, 8, 17 and 18, marked with 4 notches on the S. and 5 notches on the E. edge; dig pits,  $18 \times 18 \times 12$  ins., in each secs.  $5\frac{1}{2}$  ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, mountainous.

Soil, rocky; 3rd rate.

No timber.

Underbrush, greasewood, sage, catclaw and cacti.

Mountainous land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

At this cor. I set off  $21^{\circ}49\frac{1}{2}'S.$  on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is  $35^{\circ}02\frac{1}{2}'N.$

Thence I run

East on random line bet. secs. 8 and 17.

40.00

Set temp.  $\frac{1}{4}$  sec. cor.

79.96

Intersect the N. and S. line 6 lks. N. of the cor. of secs. 8, 9, 16 and 17.

Thence I run

N  $89^{\circ}57'W.$  on true line bet. secs. 8 and 17.

Subdivision of Tp.19 N., Rg.18 West.

chains.

6.00 Wash, 70 lks. wide, course S.  
 39.98 Set a malpais stone, 18X10X6 ins., 12 ins. in the <sup>ground</sup> for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; dig pits, 18X18X12 ins., E. and W. of stone, 3 ft. dist.; and raise a mound of earth,  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.

67.80 Sacramento wash, 500 lks. wide, course S.  
 79.96 The cor. of secs. 7, 8, 17 and 18.

Land, level.  
 Soil, gravelly; 2nd rate.  
 No timber.

Underbrush, greasewood, sage and cacti.  
 Land covered with exceptionally dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 79.96 chs.

Thence I run  
 West bet. secs. 7 and 18.

Ascend over land covered with loose rocks thru dense underbrush.

4.35 Wash, 30 lks. wide, course S. Asc. over loose rocks.  
 8.20 Wash, 20 lks. wide, course SE. Asc. over loose rocks.

40.00 Set malpais stone, 18X10X5 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.

79.19 Intersect the 5th Guide Meridian 84 lks. S. of the cor. of secs. 12, and 13, which is a stone marked and witnessed as described by the surveyor general. Set a malpais stone, 18X12X6 ins., 12 ins. in the ground, for closing cor. of secs. 7 and 18, marked CC on E.; with 4 grooves on S. and 2 grooves on N. face; and raise a mound of stone, 2 ft. base  $1\frac{1}{2}$  ft. high, E. of cor. Pits impracticable.

Land, mountainous.  
 Soil, rocky and stony; 4th rate.  
 No timber.

Underbrush, greasewood, catclaw, sage and cacti.  
 Mountainous land covered with loose rocks and dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 79.19 chs.

January 11, 1910.

January 12; At 8h. 00m., a.m., l.m.t., I set off  $21^{\circ}40'S$ . on the decl. arc;  $35^{\circ}02\frac{1}{2}'W$ . on the lat. arc, and determine a meridian with the solar at the cor. of secs. 7, 8, 17 and 18.

Thence I run  
 N 0 03' W. bet. secs. 7 and 8.

8.00 Wash, 15 lks. wide, course SE.  
 17.55 Wash, 15 lks. wide, course SE.  
 26.90 Wash, 15 lks. wide, course SE.  
 30.15 Wash, 15 lks. wide, course SE.  
 40.00 Set a malpais stone, 24X8X6 ins., 18 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on W. face; dig pits, 18X18X12 ins. N. and S. of stone, 3 ft. dist., and raise a mound of earth,  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.

60.00 Wash, 20 lks. wide, course SE.  
 74.10 Wash, 20 lks. wide, course SE.

80.00 Set a malpais stone, 18X8X6 ins., 12 ins. in the ground, for cor. of secs. 5, 6, 7 and 8, marked with 5 notches on S and E edges; dig pits, 18X18X12 ins., in each sec.  $5\frac{1}{2}$  ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, level.  
 Soil, gravelly; 3rd rate.  
 No timber.

Underbrush, greasewood, catclaw, sage and cacti.

chains.

Land covered with exceptionally dense underbrush and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.00 chs.

Thence I run  
S 89°57'E. on random line bet. secs. 5 and 8.  
40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
80.02 The cor. of secs. 4, 5, 8 and 9;  
Thence I run  
N 89°57'W. on true line bet. secs. 5 and 8.  
Over level land covered with loose rocks thru exceptionally dense underbrush  
17.50 Sacramento wash, 600 lks. wide, course S.  
40.01 Set a malpais stone, 18X8X6 ins., 12 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; dig pits, 18X18X12 ins. E. and W. of stone, 3 ft. dist.; and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.  
80.02 The cor. of secs. 5, 6, 7, and 8.  
Land, level.  
Soil, rocky and gravelly; 2nd and 3rd rate.  
No timber.  
Underbrush, greasewood, catclaw, sage and cacti.  
Land covered with loose rocks and exceptionally dense underbrush, and on account of the scarcity of water and other reasons more fully explained at the end of these notes, exceptionally difficult to survey, 80.02 chs.  
At this cor. I set off 21°40'S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35°03 $\frac{1}{2}$ 'N.

Thence I run  
West bet. secs. 6 and 7.  
Over level land thru exceptionally dense underbrush.  
15.90 Wash, 20 lks. wide, course SE.  
40.00 Set a malpais stone, 15X10X8 ins., 10 ins. in the ground, for  $\frac{1}{4}$  sec. cor., marked  $\frac{1}{4}$  on N. face; dig pits, 18X18X12 ins. E. and W. of stone, 3 ft. dist., and raise a mound of earth  $3\frac{1}{2}$  ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.  
43.15 Wash, 15 lks. wide, course SE.  
51.70 Wash, 15 lks. wide, course SE.  
53.70 Wash, 15 lks. wide, course SE.  
57.70 Power line, bears NE. and SW.  
64.45 Road, <sup>bears</sup> NE. and SW.  
67.00 Corral bears S. 30 chs.  
72.05 Road, Kingman to Goldroad, bears NE. and SW.  
72.10 Telephone line to Kingman, bears NE. and SW.  
79.24 Intersect the 5th Guide Meridian 93 lks. S. of the cor. of secs. 1 and 12, which is a stone, marked and witnessed as described by the surveyor General. Set a malpais stone, 20X12X6 ins., 15 ins. in the ground, for closing cor. of secs. 6 and 7, marked CC on E. with 5 grooves on S., and 1 groove on the N. face; and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, E. of cor. Pits impracticable.  
Land, level.  
Soil, gravelly; 3rd rate.  
No timber.  
Underbrush, graeswood, catclaw, sage and cacti.  
Land covered with exceptionally dense underbrush, and on account of the scarcity of water and other reason more fully explained at the end of these notes, exceptionally difficult to survey, 79.24 chs.

Thence I run  
N 0°03'W. on random line bet. secs. 5 and 6.  
40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
80.92 Intersect the N. boundary of Tp., 6 lks. E. of the cor. of secs 5, 6, 31 and 32.

chains.

- 30.92 Thence I run
- 31.12 S 0°06'E. on true line bet.secs.5 and 6.
- 31.90 Over level land thru exceptionally dense underbrush.
- 37.25 Road, to Kingman bears NE.and SW.
- 37.40 Telephone line, bears NE.and SW.
- 40.92 Wash, 70 lks. wide, course SW.
- 53.90 Power line, bears NE. and SW.
- 61.55 Wash, 30 lks. wide, course SW.
- 70.30 Set a malpais stone, 18X10X6 ins., 12 ins. in the ground, for 1/4 sec. cor., marked 1/4 on W. face; dig pits, 18X18X12 ins N. and S. of stone, 3 ft. dist., and raise a mound of earth, 3 1/2 ft. base. 1 1/2 ft. high, W. of cor.
- 72.05 Wash, 100 lks. wide, course SE.
- 80.92 Wash, 25 lks. wide, course SE.
- Same wash, course SW.
- Same wash, course SE.
- The cor. of secs. 5, 6, 7, and 8.
- Land, level.
- Soil, gravelly; 2nd rate.
- No timber.
- Underbrush, greasewood, catclaw, sage, and cacti.
- Land covered with exceptionally dense underbrush, and on account of the scarcity of water and other reason more fully explained at the end of these notes, exceptionally difficult to survey, 80.92 chs.

January 12, 1910.

This township is mountainous, rolling and level, and covered with loose malpais stone, and dense growth of greasewood, sage and cacti. underbrush. The soil, is mostly 3rd rate and would not be fit for cultivation.

There are no settlers.

There is no water with in this township, and in order to get water while surveying this Tp. it was necessary to go a distance of 15 miles. The length of this haul for water, 30 miles to a trip, necessitated the keeping of an extra wagon, team of horses and man, busy all of the time hauling water. As it was necessary to make a road from each camp, to the road on which the tank we obtained water from was located, and the fact that we had to keep 3 barrels of water on hand for the camp, camp team and line team, it was impossible to move camp around to suit the work, and I had to work the township from one camp, making long walks to and from work and materially cutting down the number of miles run in a day.

A large part of this Tp., although covered with loose rocks, did not have stones large enough to use for corners and, knowing that the most essential part of a survey is the establishment of corners which will not be easily destroyed, I employed an extra wagon, team and man, to haul rocks for corners, in preference to setting mound of earth, with deposit, and stake in pit, as they would have been obliterated. The average haul for rocks was 4 miles and kept the line wagon busy at all times.

The heavy snowfall had here in the early winter had rotted out the nutritious grass and I had to buy hay and haul it from Kingman for the extra teams made necessary by the scarcity of water and hauling rocks for substantial corners.

The fact that the ground, covered by this Tp. is part maximum and the other part nearly maximum, far worse than ordinary intermediate, and the extra expenses and troubles incurred in properly executing the survey of this Tp. have made this Township very exceptionally difficult to survey, and I ask to be allowed those rates.

*Fred W. Rodolf*  
U.S. Deputy Surveyor

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by Fred W. Rodolf, 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 \_\_\_\_\_

showing the respective capacities in which they acted:

- W. P. Kerns, Chairman.
- Bert Lyon, Chairman.
- Ralph R. Ellis, Moundman.
- A. M. Allen, Moundman.
- J. M. Parker, Axman.
- R. N. Stark, Axman.
- George Newell, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Fred W. Rodolf, United States Deputy Surveyor, in surveying all those parts or portions of the Subdivision lines of Township 19 North, Range 10 West

\_\_\_\_\_ of the T4 & Salt Pine Base & meridian, Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor

General for Arizona

- W. P. Kerns, Chairman.
- Bert Lyon, Chairman.
- Ralph R. Ellis, Moundman.
- A. M. Allen, Moundman.
- R. N. Stark, Axman.
- J. M. Parker, Axman.
- George Newell, Flagman.

Subscribed and sworn to before me this 7 day of March, 1910

[Signature]  
Notary Public





FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Fred W. Podolf, 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 10 day of March, 1909, 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 Subdivision of Township 19 North, Range 18 West

of the Gila & Salt River Base & 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.

Fred W. Podolf  
United States Deputy Surveyor.

Subscribed by said Fred W. Podolf, and sworn to before me }  
this 27 day of April, 1910

~~My commission expires March 23, 1914~~



W. J. Ferrieh  
Notary Public

Frank S. Ingalls  
U.S. Surveyor General for Arizona  
APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz. Aug 18, 1909.

The foregoing field notes of the survey of the Outdivided lines of T. 19 N. R. 18 W. of the Gila and Salt River Base and Meridian, Arizona

executed by Fred W. Podolf U.S. Deputy Surveyor under his contract No. 155, dated March 10, 1909, 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.