

2196

BOOK 2196

4-679.

Book E.

Accepted, Letter E. 9/7/10.

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MAY 7 - 1910

FIELD NOTES

OF THE SURVEY OF THE

2196

2196

*Subdivision lines of Township 21
North, Range 18 West*

2196

*Of the Gila & Salt River Base & Meridian,
in the Territory of Arizona*

AS SURVEYED BY

Fred W. Podoff, United States Deputy Surveyor,

Under his Contract No. *155*, dated *March 10*, 190*9*

Survey commenced *February 4*, 190*0*

Survey completed *February 16*, 190*0*

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BOOK 2196

NAMES AND DUTIES OF ASSISTANTS.

W. P. Kerns.

Chairman

Bert Lyon

Chairman

Ralph R. Ellis

Mournerman

R. N. Stark

Arman

P. M. Parker

Arman

George Newell

Flagman

INDEX DIAGRAM.

Township 21 North, Range 18 West

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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 lines of Township 21 North, Range 18 West

A. P. Kerns, Chainman.

Bert Lyon, Chainman.

Subscribed and sworn to before me this 10
day of December, 1909
My commission expires March 29, 1914



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

the Subdivision lines of Township 21 North, Range 18 West

Ralph R. Ellis, Moundman.

_____, Moundman.

Subscribed and sworn to before me this 10
day of December, 1909
My commission expires March 29, 1914



W. J. Ferrieh
Notary Public

WE, R. N. Stark and T. 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 subdivision lines of Townships 21 North, Range 18 West.

R. N. Stark, Axman.

T. M. Parker, Axman.

Subscribed and sworn to before me this 10
day of December, 1909
My commission expires March 29, 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 subdivisions of Township 21 North Range 18 West.

George Newell, Flagman.

Subscribed and sworn to before me this 10
day of December, 1909
My commission expires March 29, 1914



W. J. Ferrieh
Notary Public

chains.

Survey commenced February 4, 1910, 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 and reading to single minutes of arc, which is also the least count of the verniers of the lat. and decl. 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 a.m., and p.m. observations, with a meridian established by polaris observation I proceed as follows;—

At the standard cor. of secs. 35 and 36, which is a stone, arked and witnessed as described by the Surveyor General, $35^{\circ}09'36''$ N. latitude; longitude $114^{\circ}07'12''$ W.; I set off $16^{\circ}13'S.$ on the decl. arc; $35^{\circ}09'12''$ N. on the lat. arc and at 4h 00m., P.M., l.m.t., determine a meridian with the solar and mark a point thereof by a cross on a rock firmly set in the ground, 5chs. N. of the cor.

At 10 h 26m., p.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, 5chs. N. of my station.

February, 4, 1910

February 5; At 7h.30m., A.M., l.m.t., I lay off the azimuth of polaris, $1^{\circ}26'$ to the E., and mark a point in the meridian thus determined by a small cross on the rock set February 4, on which the meridian coincides with the meridian established by solar observations.

At 8h.00m., a.m., l.m.t., I set off $16^{\circ}01'S.$ on the decl. arc; $35^{\circ}09'12''$ N. on the lat. arc and determine a meridian with the solar, marking a point thereof by a groove on the stone, already set 5chs. N. of my station, which meridian coincides with the meridian established by polaris observations; therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic decl. of the true meridian at 8h.00m., a.m., l.m.t., is $N. 15^{\circ}08' W.$; the angle thus determined gives the mag. decl. as $15^{\circ}08' E.$

Thence I run

N 0 01' W. bet. secs. 35 and 36.

slowly descend thru dense underbrush.

27.40

Wash, 20 lks. wide, course W.

33.40

Wash, 20 lks. wide, course W.

40.00

Set a malpais stone, 18X10X10 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, 3ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

54.25

Wash, 50 lks. wide, course W.

56.95

Wash, 15 lks. wide, course SW.

76.00

Along road,

78.00

Leave road, bears S. and NE.

80.00

Set a malpais stone, 20X8X6 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, 2ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

Land, level.

Soil, gravelly; 2nd rate.

No timber

Underbrush, greasewood, sage and cacti.

Land covered with dense underbrush, 80.00 chs.

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Subdivision of Tp.21 N., R.18 West.

chains.

Thence I run
 East on random line bet. secs. 25 and 36.
 40.00 Set temp. $\frac{1}{4}$ sec. cor.
 79.90 Intersect the E. bdy. of Tp. 13 lks. S. of the cor. of secs. 25, 30, 31 and 36.
 Thence I run
 S $89^{\circ}54'$ W. on true line bet. secs. 25 and 36.
 Descend over loose malpais rocks exceptionally difficult to walk over, thru dense underbrush.
 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 ft. high, W. of cor. Pits impracticable.
 68.85 Wash, 20 lks. wide, course SW. Over loose rocks very difficult to walk over.
 70.53 Telephone line, bears N. and S.
 71.00 Wash, 40 lks. wide, course S. Over loose rocks very difficult to walk over.
 71.37 Utah and Arizona Ry. track, bears N. and S.
 73.50 Wash, 35 lks. wide, course SW. Asc. steep slope over loose rocks.
 76.00 Top of ridge, bears N. and S. Desc. steep slope over loose rocks.
 79.42 Road, bears N. and S.
 79.90 The cor. of sec. s 25, 26, 35 and 36.
 Land, mountainous.
 Soil, rocky; 4th rate.
 No timber.
 Underbrush, greasewood, and cacti.
 Mountainous land covered with loose rocks very difficult to walk over and dense underbrush, exceptionally difficult to survey, 79.90 chs.
 At this cor. I set off $15^{\circ}59'$ S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is $35^{\circ}10\frac{1}{2}'$ N.

Thence I run
 N. $0^{\circ}02'$ W. bet. secs. 25 and 26.
 Over level land covered loose rocks and dense underbrush.
 12.80 Road, bears N. and S.
 17.85 Center of Ry track, beard NW. and SE.
 19.55 Telephone, line, bears NW. and SE.
 30.45 Wash, 30 lks. wide, course SW. Over loose rocks.
 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; and raise a mound of stone, 2 ft. base, 1 ft. high, W. of cor. Pits impracticable.
 69.70 Wash, 40 lks. wide, course SW. Over loose rocks.
 80.00 Set a malpais 18x8x8 ins., 12 ins. in the ground, for cor. of secs. 23, 24, 25 and 26, marked with 2 notches on S. and 1 notch on E. edge; and raise a mound of stone, 2 ft. base 1 ft. high, W. of cor. Pits impracticable.
 Land, level.
 Soil, rocky; 3rd rate.
 No timber.
 Underbrush, greasewood, sage and cacti.
 Land covered with loose rocks and dense underbrush, 80.00 chs.

Thence I run
 N $89^{\circ}54'$ E. on random line bet. secs. 24 and 25.
 40.00 Set temp. $\frac{1}{4}$ sec. cor.
 80.16 Intersect the E. bdy. of Tp. 13 lks. S. of the cor. of secs 19, 24, 25 and 30.
 Thence I run
 S $89^{\circ}48'$ W. on true line bet. secs. 24 and 25.
 Descending over loose rocks very difficult to walk over thru dense underbrush,
 29.50 Wash, 30 lks. wide, course SW. Over loose rocks very difficult to walk over.
 39.17 Wash, 30 lks. wide, course SW. Over loose rocks very

Subdivision of Tp. 21 N., Rg. 18 West.

chains.	difficult to walk over.
40.08	Set a malpais stone, 18X8X8 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.
40.55	Wash, 40 lks. wide, course SW. Over loose rocks very difficult to walk over.
45.65	Wash, 30 lks. wide, course SW. Over loose rocks very difficult to walk over.
59.00	Wash, 15 lks. wide, course SW. Over loose rocks very difficult to walk over.
72.20,	Wash, 20 lks. wide, course SW. Over loose rocks very difficult to walk over.
80.16	The cor. of secs. 23, 24, 25 and 26. Land, mountainous. Soil, rocky; 3rd rate. No timber. Underbrush, greasewood, sage and dense cacti. Mountainous land covered with loose rocks very difficult to walk over and dense underbrush, exceptionally difficult to survey, 80.16 chs.
	February 5, 1910.
	Set off
	February 6: At 8h 00m., a.m., l.m.t., $15^{\circ}42\frac{1}{2}'S.$ on the decl. arc; $35^{\circ}11\frac{1}{2}'N.$ 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 $0^{\circ}01'W.$ bet. secs. 23 and 24. Over rolling land covered with loose rocks thru dense underbrush.
12.00	Wash, 20 lks. wide, course SW. Over loose rocks.
23.50	Wash, 30 lks. wide, course SW. over loose rocks.
40.00	Set a malpais stone, 24X12X6 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.
41.20	Wash, 20 lks. wide, course SW. Over loose rocks.
43.30	Wash, 10 lks. wide, course SW. Over loose rocks.
52.60	Wash, 15 lks. wide, course SW. Over loose rocks.
55.60	Wash, 25 lks. wide, course SW. Over loose rocks.
66.00	Wash, 10 lks. wide, course SW. Over loose rocks.
67.75	Old road, bears NE. and SW.
68.85	Wash, 15 lks. wide, course SW.
75.30	Wash, 15 lks. wide, course SW.
79.70	Wash, 15 lks. wide, course SW.
80.00	Set a malpais stone, 18X8X6 ins., 12 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; 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. Soil, rocky; 3rd rate. No timber. Underbrush, greasewood, sage and cacti. Land covered with loose rocks and dense underbrush, 80.00 chs.
	Thence I run N $89^{\circ}48'E.$ on random line bet. secs. 13 and 24.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.20	Intersect the E. bdy. of the Tp. 9 lks. N. of the cor. of secs. 13, 18, 19 and 24. Thence I run S $89^{\circ}52'W.$ on true line bet. secs. 13 and 24. Descend steep slope over loose rocks and boulders, thru dense underbrush.
11.40	Wash, 40 lks. wide, course S. Asc. over loose rocks.
21.55	Wash, 15 lks. wide, course S. Asc. steep slope over loose rocks.
25.00	Top of ridge, bears NE. and SW. Desc. steep slope over

Subdivision of Tp. 24 N., Rg. 18 West.

chains.

30.00 loose rocks.
Wash, 15 lks. wide, course S. Over loose rocks very difficult to walk over.

40.10 Set a malpais stone, 24X8X6 ins., 18 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

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

62.20 Old road, bears NE. and SW.

66.70 Wash, 15 lks. wide, course SW. Over loose rocks very difficult to walk over.

74.75 Wash, 20 lks. wide, course SW. Over loose rocks, very difficult to walk over.

78.20 Wash, 15 lks. wide, course SW. Over loose rocks very difficult to walk over.

80.20 The cor. of secs. 13, 14, 23 and 24.
Land, mountainous.
Soil, rocky; 4th rate.
No timber.
Underbrush, greasewood, sage and cacti.
Mountainous land covered with loose rocks very difficult to walk over and dense underbrush, exceptionally difficult to survey, 80.20 chs.
At this cor. I set off $15^{\circ}41'S.$ on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is $35^{\circ}12'N.$

Thence I run
N $0^{\circ}01'W.$ bet. secs. 13 and 14.
Over rolling land thru dense underbrush.

8.80 Wash, 20 lks. wide, course SW.

15.80 Wash, 75 lks. wide, course SW.

22.35 Wash, 50 lks. wide, course SW.

23.75 Same wash, course SE.

28.00 Same wash, 50 lks. wide, course SW.

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; 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.

43.75 Wash, 20 lks. wide, course SW.

46.30 Wash, 15 lks. wide, course SW.

52.55 Wash, 15 lks. wide, course SW.

60.65 Wash, 15 lks. wide, course SW.

75.90 Wash, 15 lks. wide, course SW.

80.00 Set a malpais stone, 24X18X8 ins., 18 ins. in the ground, for cor. of secs. 11, 12, 13 and 14, marked with 4 notches on S. and 1 notch on E. edge; dig pits, 18X18X12 ins., in each sec, 5 ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.
Land, rolling.
Soil, rocky; 3rd rate.
No timber.
Underbrush, greasewood, sage and cacti.
Land covered with dense underbrush, 80.00 chs.
February 6, 1910.

February 7; At 8h.00m., a.m., l.m.t., I set off $15^{\circ}24'S.$ on the decl. arc; $35^{\circ}13'N.$ on the lat. arc and determine a meridian with the solar at the cor. of secs. 11, 12, 13 and 14.
Thence I run
N $89^{\circ}52'E.$ on random line bet. secs. 12 and 13.

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

80.28 Intersect the E. bdy. of Tp. 9 lks. N. of the cor. of secs. 7, 12, 13 and 18.
Thence I run
S $89^{\circ}56'W.$ on true line bet. secs. 12 and 13.

Subdivision of Tp.21 N., Rg.18 West.

chains.

	Descend over loose rocks thru dense underbrush.
1.20	Wash, 10 lks. wide, course SW. Over loose rocks.
17.00	Wash, 15 lks. wide, course SW. Over loose rocks.
30.15	Wash, 15 lks. wide, course SW. Over loose rocks.
37.50	Wash, 15 lks. wide, course SW. Over loose rocks.
40.14	Set a malpais stone, 20X8X6 ins., 15 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.
40.80	Wash, 10 lks. wide, course SW. Over loose rocks.
44.00	Wash, 15 lks. wide, course SW. Over loose rocks.
46.00	Wash, 10 lks. wide, course SW. Over loose rocks.
52.80	Wash, 20 lks. wide, course SW. Over loose rocks.
71.40	Wash, 100 lks. wide, course SW.
75.85	Wash, 30 lks. wide, course S.
80.28	The cor. of secs. 11, 12, 13 and 14. Land, rolling. Soil rocky; 3rd rate. No timber. Underbrush, greasewood, catclaw, sage and cacti. Rolling land covered with loose rocks and dense underbrush, 80.28 chs.
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	Thence I run N $0^{\circ}01'$ W. bet. secs. 11 and 12. Over rolling land covered with an exceptionally dense growth of cacti, very difficult to chain thru.
10.15	Wash, 50 lks. wide, course SW.
18.38	Road, Kingman to Union Pass, bears E. and W.
29.15	Wash, 15 lks. wide, course SW.
36.20	Wash, 15 lks. wide, course SW.
40.00	Set a malpais stone, 18X8X6 ins., 22 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.
51.70	Wash, 30 lks. wide, course SW.
59.10	Wash, 10 lks. wide, course SW.
63.45	Wash, 40 lks. wide, course SW.
80.00	Set a malpais stone, 20X8X8 ins., 15 ins. in the ground. for cor. of secs. 1, 2, 11 and 12, marked with 5 notches on S. and 1 notch 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. Soil, rocky; 3rd rate. No timber. Underbrush, greasewood and cacti. Rolling land covered with exceptionally dense cacti very difficult to chain thru, exceptionally difficult to survey, 80.00 chs. At this cor. I set off $15^{\circ}20\frac{1}{2}'$ S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is $35^{\circ}14'$ N.
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	Thence I run N $89^{\circ}56'$ E. on random line bet. secs. 1 and 12.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.32	Intersect the E. bdy. of Tp. 9 lks. N. of the cor. of secs 1, 6, 7, and 12. Thence I run West on true line bet. secs. 1 and 12. Over rolling land thru dense underbrush.
6.80	Wash, 15 lks. wide, course SW.
10.01	Road, Kingman to Chloride, bears NW. and SE.
24.70	Wash, 15 lks. wide, course SW.
35.10	Wash, 30 lks. wide, course S.
39.10	Wash, 10 lks. wide, course S.
40.16	Set a malpais stone, 18X10X6 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

Subdivision of Tp.21 N.,Rg.18 West.

Chains.	3½ft. base, 1½ ft. high, N. of cor.
48.70	Wash, 50 lks. wide, course SW.
58.20	Wash, 15 lks. wide, course SW.
67.40	Wash, 20 lks. wide, course SW.
80.32	The cor. of secs. 1, 2, 11 and 12. Land, rolling. Soil, stony, 3rd rate. No timber. Underbrush, greasewood, catclaw, sage and cacti. Land covered with dense underbrush, 80.32 chs.
	Thence I run
	N 0°01' W. on random line bet. secs. 1 and 2.
40.00	Set temp. ¼ sec. cor.
80.18	Intersect the N. bdy. of Tp. 14 lks. W. of the cor. of secs. 1, 2, 35 and 36, reestablished by me. Thence I run S 0°05' W. on true line bet. secs. 1 and 2. Over rolling land covered with loose rocks thru dense underbrush.
35.45	Wash, 30 lks. wide, course SW. Over loose rocks.
10.31	Road to chloride, bears NW and SSE.
10.71	Wash, 15 lks. wide, course SW. Over loose rocks.
18.00	Wash, 25 lks. wide, course SW. Over loose rocks.
22.20	Wash, 20 lks. wide, course SW. Over loose rocks.
36.80	Wash, 15 lks. wide, course SW. Over loose rocks.
40.18	Set a malpais stone, 18X8X6 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.
41.70	Wash, 15 lks. wide, course SW. Over loose rocks.
69.55	Wash, 15 lks. wide, course SW. Over loose rocks.
80.18	The cor. of secs. 1, 2, 11 and 12. Land, rolling. Soil, rocky; 3rd rate. No timber. Underbrush, greasewood, sage and cacti. Land covered with loose rocks and dense underbrush, 80.18 chs.
	February 7, 1910.
	February 8; At 8h.00m., a.m., l.m.t., I set off 15°05' S on the decl. arc; 35°09½' N. on the lat. arc and determine a meridian with the solar at the standard cor. of secs. 34 and 35, which is a stone, marked and witnessed as described by the Surveyor General.
	Thence I run
	N 0°01' W. bet. secs. 34 and 35. Over level land.
17.45	Wash, 40 lks. wide, course SW. Thru dense underbrush
19.00	Wash, 40 lks. wide, course W.
40.00	Set a malpais stone, 18X10X6 ins., 12 ins. in the ground, for ¼ sec. cor., marked ¼ on W. face; 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.
48.20	Wash, 10 lks. wide, course W.
51.55	Wash, 15 lks. wide, course W.
80.00	Set a malpais stone, 18X8X6 ins., 12 ins. in the ground, for cor. of secs. 26, 27, 34 and 35, marked with 1 notch on S. and 2 notches on E. edge; and raise a mound of earth, 4ft. base, 2ft. high, W. of cor. Land, level. Soil, gravelly; 2nd rate. No timber. Underbrush, greasewood and cacti. Land covered with dense underbrush, 62.55 chs.
	Thence I run
	East on random line bet. secs. 26 and 35.
40.00	Set temp. ¼ sec. cor.

Subdivision of Td. 21 N., Rg. 18 West.

chains.	
80.18	Intersect the N. and S. line, 4 lks. S. of the cor. of secs 25, 26, 35 and 36. Thence I run S 89° 58' W. on true line bet. secs. 26 and 35. Over level land thru dense underbrush.
40.09	Set a malpais stone, 18X10X5 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.
42.25	Wash, 15 lks. wide, course S.
46.40	Wash, 15 lks. wide, course S.
80.18	The cor. of secs. 26, 27, 34 and 35. Land, level. Soil, sandy and gravelly; 2nd rate. No timber. Underbrush, greasewood, sage and cacti. Land covered with dense underbrush, 80.18 chs.
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	Thence I run N 0° 01' W. bet. secs. 26 and 27. Over level land thru dense underbrush,
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; 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.
53.30	Wash, 20 lks. wide, course W.
56.00	Wash, 10 lks. wide, course W.
80.00	Falls in a wash, 40 lks. wide, course SW. N 0° 01' W. 0.40 chs. from true point for cor. of secs. 22, 23, 26 and 27, I set a malpais 15X10X8 ins., 10 ins. in the ground, for witness cor. to cor. of secs. 22, 23, 26 and 27, marked WC on NE. face, with 2 notches on S. and E. edges; dig pits, 18X18X12 ins., NW., NE., SW., and SE. of stone, $5\frac{1}{2}$ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. S 89° 57' W. 50 lks., from true point for cor. I set a malpais stone, 18X10X6 ins., 12 ins. in the ground, for witness cor. to cor. of secs. 22, 23, 26 and 27, marked WC on NE. face, with 2 notches on S. and E. edges; and raise a mound of stone, 4 ft. base, 2 ft. high, W. of cor. Land, level. Soil, gravelly; 2nd rate. No timber. Underbrush, greasewood and cacti. Land covered with dense underbrush, 80.00 chs. At this cor. I set off 15° 03 $\frac{1}{2}$ ' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35° 11 $\frac{1}{2}$ ' N.
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	Thence I run N 89° 58' E. on random line bet. secs. 23 and 26.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.12	Intersect the N. and S. line, 2 lks. S. of the cor. of secs. 23, 24, 25 and 26. Thence I run S 89° 57' W. on true line bet. secs. 23 and 26. Slowly descend thru dense underbrush.
25.50	Telephone line bears N. and S.
26.12	Center of Ry. track, bears N. and S.
31.70	Road, bears N. and S.
40.06	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.
51.15	Wash, 10 lks. wide, course SW.
54.00	Wash, 20 lks. wide, course SW.
74.20	Wash, 15 lks. wide, course SW.
77.00	Same wash, course NW.
80.12	The true point for cor. of secs. 22, 23, 26 and 27. Land, level.

Subdivision of Tp. 21 N., Rg. 18 West.

chains.

Soil, sandy; 2nd rate.
 No timber.
 Underbrush, greasewood, sage and cacti.
 Land covered with dense underbrush, 80.12 chs.

Thence I run
 N 0°01'W. bet. secs. 22 and 23, from true cor. point.
 Over level land thru dense underbrush.

11.90
 35.00
 40.00

Wash, 30 lks. wide, course SW.
 S. end of a malpais ridge, bears E. 25.00 chs.
 Set a malpais stone, 18X7X6 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.

62.85
 65.00
 78.00
 80.00

Wash, 50 lks. wide, course SW.
 N. end of malpais ridge, bears E. 15 chs.
 Wash, 35 lks. wide, course SW.

Set a malpais stone, 18X7X7 ins., 12 ins. in the ground, for cor. of secs. 14, 15, 22 and 23, marked with 3 notches on S. and 2 notches on E. edge; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

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

Underbrush, greasewood, sage and cacti.
 Land covered with dense underbrush, 80.00 chs.
 February 8; 1910.

February 9: At 8h. 00m., a.m., l.m.t., I set off 14°46' S. on the declination, 55°12' N. on the lat. arc and determine a meridian with the solar at the cor. of secs. 14, 15, 22 and 23.

40.00
 80.10

Thence I run
 N 89°57'E. on random line bet. secs. 14 and 23.
 Set temp. $\frac{1}{4}$ sec. cor.
 Intersect the N. and S. line 13 lks. N. of the cor. of secs. 13, 15, 23 and 24.

2.55
 18.85
 30.15
 40.05

Thence I run
 N 89°57'W. on true line bet. secs. 14 and 23.
 Over rolling land thru dense underbrush.
 Wash, 10 lks. wide, course SW.
 Wash, 150 lks. wide, course SW.
 Wash, 15 lks. wide, course SW.
 Set a malpais stone, 18X12X10 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 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

45.45
 46.25
 47.04
 47.38
 54.00
 79.00
 80.10

Wash, 15 lks. wide, course SW.
 Telephone line, bears N. and S.
 Center of Ry track, bears N. and S.
 Road, bears N. and S.
 Wash, 40 lks. wide, course SW.
 Wash, 20 lks. wide, course SW.
 The cor. of secs. 14, 15, 22 and 23,

Land, rolling.
 Soil, gravelly; 2nd rate.
 No timber.
 Underbrush, greasewood, sage and cacti.
 Land covered with dense underbrush, 80.10 chs.

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

16.50
 40.00

Wash, 20 lks. wide, course SW.
 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.

Subdivision of Tp. 21 N., Rg. 18 West.

Chains.	
42.00	Wash 15 lks. wide, course SW.
56.75	Wash, 15 lks. wide, course SW.
60.45	Wash, 15 lks. wide, course SW.
70.85	Wash, 25 lks. wide, course SW.
76.75	Wash, 20 lks. wide, course SW.
80.00	Set a malpais stone, 15X10X10 ins., 10 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. 5½ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, rolling. Soil, sandy; 2nd rate. No timber. Underbrush, greasewood and cacti.
	Thence I run S 89°57'E. on random line bet. secs. 11 and 14.
40.00	Set temp. ¼ sec. cor.
80.12	Intersect the N. and S. line 18 lks. S. of the cor. of secs. 11, 12, 13 and 14. Thence I run S 89°55'W. on true line bet. secs. 11 and 14. Over rolling land thru dense underbrush.
5.90	Wash. 10 lks. wide, course SW.
14.00	Wash, 75 lks. wide, course SW,
17.70	Wash, 15 lks. wide, course SW.
20.55	Wash, 15 lks. wide, course SW.
23.85	Wash, 20 lks. wide, course SW.
35.75	Wash, 25 lks. wide, course SW.
40.06	Point for ¼ sec. cor. falls in wash, 25 lks. wide, course SW.
40.26	Set a malpais stone, 18X8X6 ins., 12 ins. in the ground, for witness cor. to ¼ sec. cor., marked WC 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.
66.10	Telephone line, bears N. and S.
66.89	Center of Ry track, bears N. and S.
67.90	Road, bears N. and S.
80.12	The cor. of secs. 10, 11, 14 and 15, Land, rolling. Soil, sandy; 2nd rate. No timber. Underbrush, greasewood, sage and cacti. Land covered with dense underbrush, 80.12 chs. At this cor. I set off 14°44' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35°13' N.
	Thence I run N 0°01'W. bet. secs. 10 and 11. Over rolling land thru dense underbrush,
22.00	Unōin station bears E.; on Ry.
24.00	Wash, 15 lks. wide, course SW.
25.58	Road, bears E. and W.
36.56	Wash, 50 lks. wide, course SW.
40.00	Set a malpais stone, 18X8X6 ins., 12 ins. in the ground, for ¼ sec. cor., marked ¼ on W. face; dig pits, 18X18X12 ins. N. and S. of cor., and raise a mound of earth, 3½ ft. base, 1½ ft. high, W. of cor.
68.45	Center of Utah and Arizona Ry, bears NNW. and SSE.
72.61	Telephone line, bears NNW. and SSE.
80.00	Set a granite stone, 20X8X6 ins., 15 ins. in the ground, for cor. of secs. 2, 3, 10 and 11, marked with 5 notches on S. and 2 notches on E. edge; dig pits, 18X18X12 ins., in each sec. 5½ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor. Land, rolling. Soil, sandy; 3rd rate. No timber. Underbrush, greasewood, sage and cacti. Land covered with dense underbrush, 80.00 chs.

Subdivision of Tp.21 N., Rg.18 West.

chains.

Thence I run
N 89°55'E. on random line bet.secs.2 and 11.
40.00 Set temp. $\frac{1}{4}$ sec.cor.
80.16 Intersect the N.and S. line 11 lks.N. of the cor. of sec
1,2,11 and 12.
Thence I run
West on true line bet.secs.2 and 11.
Over rolling land thru dense underbrush.
11.55 Wash,15 lks.wide,course SW.
36.70 Wash,10 lks.wide,course SW.
40.08 Set a malpais stone,18X10X12ins.,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,N. of cor.
51.05 Wash,40 lks.wide,course SW.
60.20 Wash,15 lks.wide,course SW.
67.90 Wash,40 lks.wide,course SW.
77.50 Wash,25 lks.wide,course SW.
80.16 The cor. of secs.2,3,10 and 11.
Land,rolling.
Soil,sandy; 2nd rate.
No timber.
Underbrush,greasewood,saga and cacti.
Rolling land covered with dense underbrush,80.16 chs.

Thence I run
N 0°01'W. on random line bet.secs.2 and 3.
40.00 Set temp. $\frac{1}{4}$ sec.cor.
80.10 Intersect the N.bdy.of Tp.18 lks.W. of the cor. of secs.
2,3,34 and 35.
Thence I run
S 0°07'W. on true line bet.secs.2 and 3.
Over rolling land thru exceptionally dense cacti
underbrush,very difficult to chain thru.
41.95 Wash,50 lks.wide,course SW.
32.30 Wash,25 lks.wide,course SW.
33.75 Wash,25 lks.wide,course SW.
40.10 Set a malpais stone,18X6X6ins.,12ins.in the ground,
for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face; dig pits,18X8X12ins.
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.
52.80 Wash,30 lks.wide,course SW.
80.10 The cor. of secs.02,3,10 and 11.
Land,rolling.
Soil,sandy; 2nd rate.
No timber.
Underbrush,greasewood and cacti.
Rolling land covered with exceptionally dense cacti
underbrush,very difficult to chain thru,exceptionally
difficult to survey,80.10 chs.

February 9,1910.

February 10; At 8h.00m.,a.m.,l.m.t.,I set off 14°27'
S. of the decl.arc; 35°09 $\frac{1}{2}$ 'N. on the lat.arc and deter-
mine a meridian with the solar at the standard cor. of
secs.33 and 34,which is a stone,marked and witnessed as
described by the Surveyor General.

Thence I run
N 0°02'W. bet.secs.33 and 34.
Over level land thru dense underbrush.
40.00 Set a malpais stone,15X12X8ins.,10ins.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.
60.00 Leave dense underbrush,bears E.and W.
80.00 Set a malpais stone,24X10X8ins.,18ins.in the ground,for
cor. of secs.27,28,33 and34,marked with 3 notches on E.
and 1 notch on S.edge; dig pits,18X18X12ins.in each sec.
3ft.dist.; and raise a mound of earth,4ft.base,2ft.
high,W. of cor.

Subdivision of Tp. 21 N., Rg. 18 West.

chains.	
	high, W. of cor. Land, level. Soil, sandy; 3rd rate, No timber. Underbrush, greasewood, sage and cacti. Land covered with dense underbrush, 60.00 chs.
	Thence I run East bet. secs. 27 and 34
40.00	Set temp. $\frac{1}{4}$ sec. cor.
79.96	Intersect N. and S. line 9 links S. of cor. secs. 26, 27, 34 and 35.
	Thence I run S. $89^{\circ}56'W.$ on true line bet. secs. 27 and 34. Over level grassy plain.
39.98	Set a malpais stone, 15X8X8 ins., 10 ins. in the ground for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on north 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.
50.45	Wash, 150 lks. wide, course SW.
79.96	The cor. of secs. 27, 28, 33 and 34. Land, level. Soil, sandy; 2nd rate. No timber or underbrush.
	Thence I run N $0^{\circ}02'W.$ bet. secs. 27 and 28. Over level land.
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; 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, 24X10X8 ins., 18 ins. in the ground, for cor. of secs. 21, 22, 27 and 28, marked with 2 notches 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, level. Soil, sandy; 2nd rate. No timber or underbrush.
	At this cor. I set off $14^{\circ}25'$ S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is $35^{\circ}11\frac{1}{2}'N.$
	Thence I run N $89^{\circ}56'E.$ on random line bet. secs. 22 and 27.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
79.90	Intersect the N. and S. line, 2 lks. W. of the cor. of secs. 22, 23, 26 and 27.
	Thence I run S $89^{\circ}57'W.$ on true line bet. secs. 22 and 27. Over level land thru dense underbrush.
0.50	Witness cor. to cor. of secs. 22, 23, 26 and 27 as previously described.
2.65	Wash, 15 lks. wide, course SW.
28.60	Wash, 30 lks. wide, course SW.
39.95	Set a malpais stone, 15X10X10 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.
56.80	Wash, 10 lks. wide, course SW.
64.00	Leave dense underbrush, bears N. and S.
79.90	The cor. of secs. 21, 22, 27 and 28. Land, level. Soil, sandy; 2nd rate. No timber. Underbrush, greasewood, and cacti. Land covered with dense underbrush, 64.00 chs.

chains.

Thence I run
 N 0°02'W. bet.secs.21 and 22.
 Over level land
 40.00 Set a malpais stone,18X10X8ins.,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.
 80.00 Set a malpais stone,18X10X10ins.,12ins.in the ground,for
 cor. of secs.15,16,21 and 22,marked 21 N on NE.,and
 18 W on SE.face,with 3 notches on S.and E.edges; dig
 pits,18X18X12ins.in each sec.5 $\frac{1}{2}$ ft.dist.; and raise a
 mound of earth,4ft.base,2ft.high,W. of cor.
 Land,level.
 Soil,sandy; 2nd rate.
 No timber or underbrush.

Thence I run
 N 89°57'W. on random line bet.secs.15 and 22.
 40.00 Set temp. $\frac{1}{4}$ sec.cor.
 80.00 Intersect the N.and S. line 11 lks.N. of the cor. of
 secs.14,15,22 and 23.

Thence I run
 N 89°58'W. on true line bet.secs.15 and 22.
 Over level land thru dense underbrush.
 7.70 Wash,10 lks.wide,course S.
 17.80 Wash,40 lks.wide,course S.
 21.05 Wash,10 lks.wide,course S.
 37.55 Wash,10 lks.wide,course S.
 40.00 Set a malpais stone,15X10X8ins.,10ins.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,N. of cor.
 56.00 Wash,30 lks.wide,course S.
 71.00 Leave dense underbrush,bears N.and S.
 80.00 The cor. of secs.18,15,21 and 22
 Land,level.
 Soil,sandy; 2nd rate.
 No timber.
 Underbrush,greasewood and cacti.
 Land covered with dense underbrush,71.00 chs.
 February 10,1910.

February 11; At 8h.00m.,a.m.,l.m.t.,I set off 14°07 $\frac{1}{2}$ '
 S. on th decl.arc; 35°12'W.on the lat.arc; and determine
 a meridian with the solar at the cor. of secs.15,16,
 21 and 22.

Thence I run
 W 0°02'W. bet.secs.15 and 16.
 Over level land.
 30.00 Thru dense underbrush,bears E.and W.
 35.25 Wash,50 lks.wide,course SW.
 40.00 Set a malpais stone,15X8X6ins.,10ins.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.
 41.85 Wash,15 lks.wide,course SW.
 80.00 Set a malpais stone,18X8X5ins.,12ins.in the ground,
 for cor. of secs.9,10,15 and 16,marked with 4 notches
 on the S.and 3 notches on the E.edge; dig pits,18X18X12
 ins.,in each sec.5 $\frac{1}{2}$ ft.dist.; and raise a mound of earth.
 4ft.base,2ft.high,W. of cor.
 Land,level.
 Soil,sandy; 2nd rate.
 No timber.
 Underbrush,greasewood,sage and cacti.
 Land covered with dense underbrush,50.00 chs.

Subdivision of Tp.21 N.,Pg.18 West.

chains.	
	Thence I run
	S 89°58'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 4 lks.S. of the cor. of secs 10,11,14 and 15,
	Thence I run
	West on true line bet.secs.10 and 15.
	Over rolling land covered with dense underbrush.
11.65	Wash,15 lks.wide,course S.
19.70	Wash,15 lks.wide,course S.
39.96	Set a malpais stone,18X10X6ins.,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,N. of cor.
67.20	Wash,40 lks.wide,course S.
69.25	Wash,15 lks.wide,course S.
79.92	The cor. of secs.9,10,15 and 16.
	Land,rolling.
	Soil,gravelly; 2nd rate.
	No timber.
	Underbrush,greasewood,sage and cacti.
	Rolling land covered with dense uherbrush,79.92 chs.
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	Thence I run
	N 0°02'W. bet.secs.9 and 10.
	Over rolling land thru dense underbrush.
16.00	Wash,10 lks.wide,course SW.
31.25	Road to Kingman,bears E.and W.
40.00	Set a malpais stone,24X8X8ins.,18ins.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.
64.00	Wash,15 lks.wide,course SW.
68.93	Wash,15 lks.wide,course SW.
80.00	Set a malpais stone,18X8X8ins.,12ins.in the ground, for cor. of secs.2,4,9 and 10,marked with 5 notches on S.and 3 notches on E.edge; dig pits,18X18X12ins.in each sec,5 $\frac{1}{2}$ ft.dist.; and raise a mound of earth,3 $\frac{1}{4}$ ft.base 2ft.high,W. of cor.
	Land,rolling.
	Soil,gravelly; 2nd rate.
	No timber.
	Underbrush,greasewood,sage and aacti.
	Rolling land covered with dense underbrush.
	At this cor. I set off 14°05 $\frac{1}{2}$ 'S. on the decl.arc and observe the su on the meridian at noon; the resulting lat.is 35°14'N.
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	East on random line bet.secs.3 and 10.
40.00	Set temp. $\frac{1}{4}$ sec.cor.
79.98	Intersect the N.and S. line 7 lks.W. of the cor. of secs 2,3,10 and 11.
	Thence I run
	N 89°57'W. on true line bet.secs.3 and 10.
	Over rolling land thru dense underbrush.
1.39	Telephone line,bears N.and S.
20.00	Wash,10 lks.wide,course S.
2.18	Center of Railroad track,bears N.and S.
22.25	Wash,45 lks.wide,course SW.
39.99	Set a malpais stone,18X6X5ins.,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,N. of cor.
40.50	Wash,30 lks.wide,course SW.
70.00	Wash,15 lks.wide,course SW.
79.98	The cor. of secs.3,4,9 and 10.
	Land,rolling.
	Soil,gravelly; 2nd rate.
	No timber.

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Subdivision of Tp.21 N.,Rg.18 West.

chains.

Underbrush,greasewood,sage and cacti.
Rolling land covered with dense underbrush,79.98chs.

Thence I run
N 0°02'W. on random line bet.secs.3 and 4.

40.00 Set temp. $\frac{1}{4}$ sec.cor.
80.05 Intersect the N.bdy.of Tp.4 lks.W. of the cor. of secs.
3,4,33 and 34,
Thence I run
South bet.secs.3 and 4.
Over rolling land thru an exceptionally dense
undergrowth of cacti,very difficult to chain thru.

18.75 Wash,15 lks.wide,course SW.
25.70 Wash,20 lks.wide,course SW.
40.05 Set a malpais stone,20X8X6ins.,15ins.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.

43.80 Wash,100 lks.wide,course SW.
80.05 The cor. of secs.3,4,9 and 10.
Land,rolling.
Soil,gravelly; 2nd rate.
No timber.
Underbrush,cacti.
Rolling land covered with a dense growth of cacti,
exceptionally difficult and slow to chain thru,excepti-
onally difficult to survey,80.05 chs.
February 11,1910.

February 12; At 8h.00m.,a.m.,l.m.t.,I set off 13°47'
N.on the decl arc; 35°09'N.on the lat.arc and deter-
mine a meridian with the solar at the standard cor. of
secs.32 and 33.,which is a stone,marked and witnessed
as described by the Surveyor General.

Thence I run
N 0°02'W. bet.secs.32 and 33.
Over level land thru exceptionally dense cacti under-
brush,very difficult to chain thru.

40.00 Set a malpais stone,15X10X8ins.,10ins.in the ground,
for ~~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.

59.50 Wash,10 lks.wide,course SW.
80.00 Set a malpais stone,18X8X8ins.,12ins.in the ground,
for cor. of secs.28,29,32 and 33.,marked with 1 notch
on S.and 4 notches on E.edge; dig pits,18X18X12ins.,in
each sec.5 $\frac{1}{2}$ ft.dist.; and raise a mound of earth.4ft.bas
2ft.high,W. of cor.
Land,level.
Soil,gravelly; 2nd rate.
No timber.
Underbrush,exceptionally dense cacti.
Land covered with exceptionally dense cacti underbrus
very difficult and slow to chain thru,exceptionally di-
fficult to survey,80.00 chs.

Thence I run
East on random line bet.secs.28 and 33.

40.00 Set temp. $\frac{1}{4}$ sec.cor.
80.14 Intersect the N.and S. line 6 lks.S. of the cor. of
secs.27,28,33 and 34.
Thence I run
S 89°57'W. on true line bet.secs. 28 and 33.
Over level land thru dense underbrush.

36.70 Wash,30 lks.wide,course SW.
39.55 Wash,40 lks.wide,course S.
40.07 Set a malpais stone,18X8X6ins.,12ins.in the ground,
for ~~sec.cor.~~ marked $\frac{1}{4}$ on N.face; dig pits,18X18X12ins

Subdivision of Tp.21 N., Rg.18 West.

chains.

- 55.00 Brand W. of stone, 3ft. dist. and raise a mound of earth,
 3½ ft. base, 1½ ft. high, N. of cor.
 70.00 Leave dense underbrush, bears N. and S.
 80.14 Enter dense underbrush, bears N. and S.
 The cor. of secs. 28, 29, 32 and 33.
 Land, level.
 Soil, gravelly; 2nd rate.
 No timber.
 Underbrush, greasewood and cacti.
 Land covered with dense underbrush, 65.14 chs.
-
- 40.00 Thence I run
 N 0°02'W, bet. secs. 28 and 29.
 Over level land thru dense underbrush.
 Set a malpais stone, 15X8X6 ins., 10 ins. in the ground,
 for ¼ sec. cor., marked ¼ on W. face; 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.
 80.00 Set a malpais stone, 18X10X10 ins., 12 ins. in the ground,
 for cor. of secs. 20, 21, 28 and 29, mark d with 2 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, 4ft.
 base, 2ft. high, W. of cor.
 Land, level.
 Soil, gravelly; 2nd rate.
 No timber.
 Underbrush, greasewood, sage and cacti.
 Land covered with dense underbrush, 80.00 chs.
 At this cor. I set off 13°45½'S. on the decl. arc and
 observe the sun on the meridian at noon; the resulting
 lat. is 35°11½'N.
-
- 40.00 Thence I run
 W 89°57'W. on random line bet. secs. 21 and 28.
 Set temp. ¼ sec. cor.
 80.10 Intersect the N. and S. line 2 lks. N. of the cor. of secs
 21, 22, 27 and 28.
 Thence I run
 S 89°58'W. on true line bet. secs. 21 and 28.
 Over level land thru dense underbrush.
 40.05 Set a granite stone, 18X8X8 ins., 12 ins. in the ground,
 for ¼ sec. cor., marked ¼ on N. face; dig pits, 18X18X12 ins.
 E. and W. of stone, 3ft. dist.; and raise a mound of earth,
 3½ ft. base, 1½ ft. high, N. of cor.
 51.50 Wash, 60 lks. wide, course S.
 80.10 The cor. of secs. 20, 21, 28 and 29.
 Land, level.
 Soil, gravelly; 2nd rate.
 No timber.
 Underbrush, greasewood, sage and cacti.
 Land covered with dense underbrush, 80.10 chs.
-
- 40.00 Thence I run
 N 0°02'W. bet. secs. 20 and 21;
 Over level land thru dense underbrush.
 Set a granite stone, 15X10X10 ins., 10 ins. in the ground
 for ¼ sec. cor., marked ¼ on W. face; 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.
 68.00 Wash, 20 lks. wide, course SE.
 73.00 Wash, 40 lks. wide, course SE.
 80.00 Set a granite stone, 18X8X8 ins., 12 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,
 4ft. base, 2ft. high, W. of cor.
 Land, level.
 Soil, gravelly; 2nd rate

Subdivision of Tp.21 N., Rg.18 West.

chains.	<p>No timber. Underbrush,greasewood,sage and cacti. Land covered with dense underbrush,80.00 chs.</p> <hr/> <p>Thence I run N 89°58'E. on random line bet.secs.16 and 21. Set temp. $\frac{1}{4}$ sec.cor. 40.00 Intersect the N.and S. line,9 lks.N. of the cor. of secs 80.08 15,16,21 and 22. Thence I run N 89°58'W. on true line bet.secs.16 and 21. Over level land. 2.00 Thru dense underbrush,bears N,and S. 8.60 Wash,35 lks.wide,course S. 36.65 Wash,10 lks.wide,course SW. 40.04 Set a malpais stone,15X10X5ins.,10ins.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,N. of cor. 49.10 Wash,15 lks.wide,course S. 60.00 Wash,20 lks.wide,course S. 63.70 Wash,10 lks.wide,course S. 80.08 The cor. of secs.16,17,20 and 21. Land,level. Soil,gravelly; 2nd rate. No timber. Underbrush,greasewood,sage and cacti. Land covered with dense underbrush,78.08 chs. February 12,1910.</p> <hr/> <p>February 13; At 8h.00m.,a.m.,l.m.t.,I set off 13°27$\frac{1}{2}$' S. on the decl.arc; 35°12'N./on the lat.arc and determin a meridian with the solar at the cor. of secs.16,17,20 and 21. Thence I run N 0°02'W. bet.secs.16 and 17. Over rolling land thru exceptionally dense cacti underbrush,very difficult to chain thru. 8.50 Enter and along wash,crossing and recrossing same,40 lks wide,course SW. 36.00 Leave wash,comes from NE. 39.20 Wash,150 lks.wide,course SW. 40.00 Point for $\frac{1}{4}$ sec.cor.falls in wash. 40.50 Set a malpais stone,18X14X14ins.,12ins in the ground, for witness cor.to $\frac{1}{4}$ sec.cor.,marked WC $\frac{1}{4}$ 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. 65.00 Wash,20 lks.wide,course SW. 80.00 Set a malpais stone,20X10X10ins.,15ins.in the ground, for cor. of secs.8,9,16 and 17.,marked with 4 notches on S.and E.edges; dig pits,18X18X12ins.,in each sec., 5$\frac{1}{2}$ ft.dist.; and raise a mound of earth,4ft.base,2ft. high,W. of cor. Land,rolling. Soil,gravelly; 2nd rate. No timber. Underbrush,exceptionally dense cacti. Rolling land covered with exceptionally dense cacti underbrush,very difficult and slow to chain thru,excep- tionally difficult to survey,80.00 chs.</p> <hr/> <p>Thence I run S 89°58'E. on random line bet.secs.9 and 16. 40.00 Set temp. $\frac{1}{4}$ sec.cor. 80.16 Intersect the N.and S. line,at the cor. of secs.9,10, 15 and 16. Thence I run N 89°58'W. on true line bet.secs.9 and 16.</p>
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Subdivision of Td. 21 N., Rg. 18 West.

chains.	
	Over rolling land thru dense underbrush.
7.60	Wash, 15 lks. wide; course SW.
17.30	Wash, 20 lks. wide; course SW.
31.70	Wash, 35 lks. wide; course SW.
32.75	Wash, 40 lks. wide; course SW.
40.08	Set a granite stone, 15X8X6 ins., 10 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. 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.
41.95	Wash, 10 lks. wide; course SW.
58.50	Wash, 15 lks. wide; course SW.
64.00	Wash, 10 lks. wide; course SW.
73.75	Wash, 35 lks. wide; course SW.
80.16	The cor. of secs. 8, 9, 16 and 17. Land, rolling. Soil, gravelly; 2nd rate. No timber. Underbrush, greasewood and cacti. Rolling land covered with dense underbrush, 80.16 chs. At this cor. I set off $13^{\circ}25\frac{1}{2}'S.$ on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is $35^{\circ}13'N.$
	Thence I run N $0^{\circ}02'W.$ bet. secs. 8 and 9: Over rolling land thru dense underbrush.
36,72	Road, bears E. and W.
40.00	Set a quartzite 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.
80.00	Set a granite stone, 24X10X8 ins., 18 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; 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. Soil, gravelly; 2nd rate. No timber. Underbrush, greasewood, sage and cacti. Rolling land covered with dense underbrush, 80.00 chs.
	Thence I run S $89^{\circ}58'E.$ on random line bet. secs. 4 and 9.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.12	Intersect the N. and S. line at the cor. of secs. 3, 4, 9 and 10. Thence I run N $89^{\circ}58'W.$ on true line bet. secs. 4 and 9. Over rolling land thru exceptionally dense cacti underbrush, very difficult to chain thru.
40.06	Set a granite stone, 20X10X10 ins., 15 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. 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.
41.15	Wash, 15 lks. wide; course SW.
67.00	Wash, 50 lks. wide; course SW.
80.12	The cor. of secs. 4, 5, 8 and 9. Land, rolling. Soil, gravelly; 2nd rate. No timber. Underbrush, greasewood and cacti. Rolling land covered with exceptionally dense cacti underbrush, very difficult and slow to chain thru, exceptionally difficult to survey, 80.12 chs.

Thence I run
N $0^{\circ}02'W.$ bet. secs. 8 and 9.

Subdivision of Tp.21 N.,Rg.18 West.

chains.

40.00 Thence I run
N 0°02'W. on random line bet.secs.4 and 5.
80.08 Set temp. $\frac{1}{4}$ sec.cor.
Intersect the N.bdy.of Tp.7 lks.W. of the cor. of secs
4,5,32 and 33.

40.08 Thence I run
S 0°01'W. bet.secs.4 and 5.
Over rolling land covered with exceptionally dense
cacti underbrush,very difficult to chain thru.
Set a malpais stone,18X10X6ins.,12ins.in the ground,
for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.face; dig pits,18X13X12ins.
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.

80.08 The cor. of secs. 4,5,8 and 9.
Land,rolling.
Soil,gravelly; 2nd rate.
No timber.
Underbrush,dense cacti.
Rolling land covered with exceptionally dense cacti
underbrush,very difficult and slow to chain thru,except-
tionally difficult to survey,80.08 chs,
February 13,1910.

February 14; At 8h 00m.,a.m.,l.m.t.,I set off 13°07' $\frac{1}{2}$
S. on the decl.arc; 35°09' $\frac{1}{2}$ 'N. on the lat.arc and deter-
mine a meridian with the solar at the standard cor. of
secs.31 and 32,which is a stone,marked and witnessed as
described by the Surveyor General.

40.00 Thence I run
N 0°03'W. bet.secs.31 and 32.
Over rolling land covered with dense cacti underbrush
very difficult and slow to chain thru.

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 the stone,3ft.dist.; and raise a mound of
earth,3 $\frac{1}{2}$ ft.base,1 $\frac{1}{2}$ ft.high,W. of cor.

80.00 Set a malpais stone,20X10X10ins.,15ins.in the ground,
for cor. of secs.29,30,31 and 32,marked with 1 notch on
S.and 5 notches on E.edge; dig pits,18X18X12ins.,in
each sec.5 $\frac{1}{2}$ ft.dist.; and raise a mound of earth,4ft.
bas ,2ft.high,W. of cor.

Land,rolling.
Soil,gravelly; 2nd rate.
No timber.
Underbrush,dense cacti
Rolling land covered with dense cacti underbrushvery
difficult and slow to chain thru,exceptionally difficult
to survey,80.00 chs.

40.00 Thence I run
East on random line bet.secs.29 and 32.
80.06 Set temp. $\frac{1}{4}$ sec.cor.
Intersect the N.and S. line 7 lks.S. of the cor. of
secs.28,29,32 and 33.

1.20 Thence I run
S 89°57'W. on true line bet.secs.29 and 32.
11.10 Over rolling land thru dense underbrush.
Wash,10 lks.wide,course S.

40.03 Wash,35 lks.wide,course S.
Set a malpais stone,18X10X6ins.,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,N. of cor.

80.06 The cor. of secs.29,30,31 and 32.
Land,rolling.
Soil,gravelly; 2nd rate.
No timber.
Underbrush,greasewood,sage and cacti.
Rolling land covered with dense underbrush,80.06 chs.

Subdivision of Tp.21 N.,Pg.18 West.

chains.	
40.00 79.96	<p>Thence I run West on random line bet.secs.30 and 31. Set temp.$\frac{1}{4}$ sec.cor. Intersect the W.bdy.of Tp.18 lks.N. of the cor. of secs. 25,30,31 and 36.</p>
13.50 39.96	<p>Thence I run N 89°52'E. on true line bet.secs.30 and 31. Over rolling land thru dense underbrush. Wash,250 lks.wide,course S. (Sacramento).</p>
79.96	<p>Set a malpais stone,18X10X5ins.,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,N. of cor. The cor. of secs.29,30,31,and 32.</p>
	<p>Land,rolling. Soil,gravelly; 2nd rate. No timber. Underbrush,greasewood,sage and cacti. Rolling land covered with dense underbrush,79.96 chs. At this cor. I set off 13°05$\frac{1}{2}$'S. on the decl.arc; and observe the sun on the meridian at noon; the resulting lat.is 35°10$\frac{1}{2}$'N.</p>
40.00 80.00	<p>Thence I run N 0°03'W. bet.secs.29 and 30. Over rolling land thru exceptionally dense cacti underbrush,very difficult to chain thru.</p>
	<p>Set a malpais stone,18X8X8ins.,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.</p>
	<p>Set a malpais stone,15X10X8ins.,10ins.in the ground, for cor. of secs.19,20,29 and 30,marked with 2 notches on S.and 5 notches on E.edge; dig pits,10X18X12ins.,in each sec.5$\frac{1}{2}$ ft.dist.; and raise a mound of earth,4ft. base,2ft.high,W. of cor.</p>
	<p>Land,rolling. Soil,gravelly; 2nd rate. No timber. Underbrush,dense cacti. Rolling land covered with exceptionally dense cacti underbrush,very difficult and slow to chain thru, exceptionally difficult to survey,80.00 chs.</p>
40.00 80.08	<p>Thence I run N 89°57'E. on random line bet.secs.20 and 29. Set temp.$\frac{1}{4}$ sec.cor. Intersect the W.and S. line 7 lks.S. of the cor. of secs.20,21,28 and 29.</p>
40.04 53.00	<p>Thence I run S 89°54'W. on true line bet.secs.20 and 29. Over rolling land thru exceptionally dense cacti underbrush,very difficult to chain thru.</p>
80.08	<p>Set a malpais stone,18X10X6ins.,12ins.in the ground, for $\frac{1}{4}$ sec.cor.,marked $\frac{1}{4}$ on W.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,N. of cor. Wash,30 lks.wide,course S. The cor. of secs.19,20,29 and 30.</p>
	<p>Land,rolling. Soil,gravelly; 2nd rate. No timber. Underbrush,dense cacti. Rolling land covered with exceptionally dense cacti underbrush,very difficult and slow to chain thru,except- tionally difficult to survey,80.08 chs.</p>
	<p>Thence I run S 89°52'W. on random line bet.secs.19 and 30.</p>

Subdivision of Tp.21 N., Rg.18 West.

chains.	
40.00	Set temp. $\frac{1}{4}$ sec. cor.
79.82	Intersect the W. bdy. of Tp. 7 lks. S. of the cor. of secs. 19, 24, 25 and 30. Thence I run N $89^{\circ}55'E$. on true line bet. secs. 19 and 30. Over rolling land covered with exceptionally dense cacti underbrush, very difficult to chain thru.
19.00	Leave dense cacti underbrush, bears N. and S.
32.00	Thru exceptionally dense cacti underbrush, very difficult to chain thru.
39.82	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.
79.82	The cor. of secs. 19, 20, 29 and 30. Land, rolling. Soil, gravelly; 2nd rate. No timber. Underbrush, dense cacti. Rolling land covered with exceptionally dense cacti very difficult and slow to chain thru, exceptionally difficult to survey, 66.82 chs.
	February 14, 1910.
	February 15; At 8h.00m., a.m., l.m.t. I set off $12^{\circ}47'S$. on the decl. arc; $35^{\circ}11\frac{1}{2}'W$. on the lat. arc and determine a meridian with the solar at the cor. of secs. 19, 20, 29 and 30. Thence I run W $0^{\circ}03'W$. bet. secs. 19 and 20. Over rolling land thru exceptionally dense cacti underbrush, very difficult to chain thru.
40.00	Set a granite 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.
75.25	Wash, 20 lks. wide, course SE.
80.00	Set a granite stone, 15X12X10 ins., 10 ins. in the ground, for cor. of secs. 17, 18, 19 and 20, marked with 3 notches on S. and 5 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. Soil, gravelly; 2nd rate. No timber. Underbrush, dense cacti. Rolling land covered with exceptionally dense cacti underbrush, very difficult and slow to chain thru, exceptionally difficult to survey, 80.00 chs.
	Thence I run N $89^{\circ}54'E$. on random line bet. secs. 17 and 20.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.06	Intersect the N. and S. line 11 lks. N. of the cor. of secs. 16, 17, 20 and 21. Thence I run S $89^{\circ}59'W$ on true line bet. secs. 17 and 20. Over rolling land thru dense underbrush.
2.60	Wash, 50 lks. wide, course SE.
40.03	Set a granite stone, 15X8X6 ins., 10 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W. 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.
67.45	Wash, 100 lks. wide, course S.
80.06	The cor. of secs. 17, 18, 19 and 20. Land, rolling. Soil, gravelly; 2nd rate. No timber. Underbrush, greasewood, sage and cacti. Rolling land covered with dense underbrush, 80.06 chs.

Subdivision of Tp.21 N.,Rg.18 West.

chains.	Thence I run
40.00	S 89°55'W on random line bet.secs.18 and 19.
79.72	Set temp. $\frac{1}{4}$ sec.cor. Intersect the W.bdy.of Tp.7 lks.N. of the cor. of secs. 13,18,19 and 24.
	Thence I run
	N 89°52'E. on true line bet.secs. 18 and 19.
2.80	Over rolling land thru dense underbrush.
19.00	Wash,20 lks.wide,course SE.
26.20	Wash,10 lks.wide,course SE.
39.72	Wash,150 lks.wide,course S.
	Set a granite stone,15X10X8ins.,10ins.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,N. of cor.
79.72	The cor. of secs.17,18,19 and 20. Land,rolling. Soil,gravelly; 2nd rate. No timber. Underbrush,greasewood,sage and cacti. Rolling land covered with dense underbrush. At this cor.I set off 12°45'S. on the decl.arc and observe the sun on the meridian at noon; the resulting lat.is 35°12'N.
	Thence I run
	W 0°03'W. bet.secs.17 and 18.
	Over rolling land thru exceptionally dense cacti underbrush,very difficult to chain thru.
40.00	Set a granite stone,15X8X6ins.,10ins.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.
80.00	Set a malpais stone,18X10X6ins.,12ins.in the ground, for cor. of secs.7,8,17 and 18,marked with 4 notches on S.and 5 notches on E.edges; dig pits,18X18X12ins., in each sec.5 $\frac{1}{2}$ ft.dist.; and raise a mound of earth, 4ft.base,2ft.high,W. of cor. Land,rolling. Soil,gravelly; 2nd rate. No timber. Underbrush,dense cacti Rolling land covered with exceptionally dense cacti underbrush,very difficult and slow to chain thru, exceptionally difficult to survey,thru,80.00 chs.
	Thence I run
	N 89°59'E. on random line bet.secs.8 and 17.
40.00	Set temp. $\frac{1}{4}$ sec.cor.
80.04	Intersect the N.and S. line 4 lks.S. of the cor. of secs.8,9,16 and 17.
	Thence I run
	S 89°57'W. on true line bet.secs.8 and 17.
	Over rolling ^{land} and thru exceptionally dense cacti underbrush very difficult to chain thru.
40.02	Set a granite stone,15X8X6ins.,10ins.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,N. of cor.
46.60	Wash,20 lks.wide,course S.
54.40	Wash,20 lks.wide,course S.
71.60	Wash,10 lks.wide,course S.
80.04	The cor. of secs.7,8,17 and 18. Land,rolling. Soil,gravelly; 2nd rate. No timber. Underbrush,dense cacti. Rolling land covered with exceptionally dense cacti

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Subdivision of Tp. 21 N., Rg. 18 West.

chains.

underbrush, very difficult and slow to chain thru, exceptionally difficult to survey, 80.04 chs.

40.00
39.70

Thence I run
S 89° 52' W. on random line bet. secs. 7 and 18.
Set temp. $\frac{1}{4}$ sec. cor.
Intersect the W. bdy. of Tp. 11 lks. S. of the cor. of secs 7, 12, 13 and 18.

7.80
10.75
29.65
33.80
39.70

Thence I run
N 89° 57' E. on true line bet. secs. 7 and 18.
Over rolling land thru exceptionally dense cacti underbrush, very difficult to chain thru.
Wash, 20 lks. wide, course SW.
Wash, 20 lks. wide, course SW.
Wash, 20 lks. wide, course SW.
Wash, 75 lks. wide, course S.

79.70

Set a malpais stone, 15X8X6 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.
The cor. of secs. 7, 8, 17 and 18.
Land, rolling.
Soil, gravelly; 2nd rate.
No timber.
Underbrush, dense cacti.
Rolling land covered with exceptionally dense cacti underbrush, very difficult and slow to chain thru, exceptionally difficult to survey, 79.70 chs.
February 15, 1910.

February 16; At 8h. 00m., a.m., l.m.t., I set off 12° 27' S. on the decl arc; 35° 13' N. on the lat. arc and determine a meridian with the solar at the cor. of secs. 7, 8, 17 and 18.

40.00
42.50
80.00

Thence I run
N 0° 03' W. bet. secs. 7 and 8.
Over rolling land thru exceptionally dense cacti underbrush, very difficult to chain thru.
Set a malpais stone, 18X8X8 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.
Road, bears E. and W.
Set a malpais stone, 24X12X6 ins., 18 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, rolling.
Soil, gravelly; 2nd rate.
No timber.
Underbrush, dense cacti.
Rolling land covered with exceptionally dense cacti underbrush, very difficult and slow to chain thru, exceptionally difficult to survey, 80.00 chs.

40.00
30.02

Thence I run
N 89° 57' E. on random line bet. secs. 8 and 5.
Set temp. $\frac{1}{4}$ sec. cor.
Intersect the N. and S. line at the cor. of secs. 4, 5, 8 and 9.

35.20
40.01

Thence I run
S 89° 57' W. on true line bet. secs. 5 and 8.
Over rolling land thru exceptionally dense cacti underbrush, very difficult to chain thru.
Wash, 60 lks. wide, course SW.
Set a malpais stone, 15X12X10 ins., 10 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on N. face; dig pits, 18X18X12 ins.

Subdivision of Tp.21 N.,Rg.18 West.

chains.

58.30	E. and W. of stone, 3ft. dist.; and raise a mound of earth 3½ ft. base, 1½ ft. high, N. of cor.
80.02	Wash, 20 lks. wide, course SW. The cor. of secs. 5, 6, 7 and 8. Land, rolling. Soil, gravelly; 2nd rate. No timber. Underbrush, dense cacti. Rolling land covered with exceptionally dense cacti underbrush, very difficult and slow to chain thru, exceptionally difficult to survey, 80.02 chs.
40.00	Thence I run S 89° 57' W. on random line bet. secs. 6 and 7.
79.58	Set temp. ¼ sec. cor. Intersect the W. bdy. of Tp. 2 lks. S. of the cor. of secs 1, 6, 7 and 12. Thence I run N 89° 58' E. on true line bet. secs. 6 and 7. Over rolling land thru exceptionally dense cacti underbrush, very difficult to chain thru.
13.75	Wash, 15 lks. wide, course SE.
31.20	Wash, 60 lks. wide, course S.
39.58	Set a malpais stone, 20X6X6 ins., 15 ins. in the ground, for ¼ sec. cor., marked ¼ on N. face; dig pits, 18X18X12 ins..
44.00	E. and W. of stone, 3ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, N. of cor.
49.00	Wash, 15 lks. wide, course SE.
54.00	Wash, 20 lks. wide, course SE.
79.58	Wash, 150 lks. wide, course S. The cor. of secs. 5, 6, 7 and 8. Land, rolling. Soil, gravelly; 2nd rate. No timber. Underbrush, dense cacti. Rolling land covered with exceptionally dense cacti underbrush, very difficult and slow to chain thru, exceptionally difficult to survey, 79.58 chs. At this cor. I set off 12° 24' S. on the decl. arc and observe the sun on the meridian at noon; the resulting lat. is 35° 14' N.
40.00	Thence I run N 0° 03' W. on random line bet. secs. 5 and 6.
80.04	Set temp. ¼ sec. cor. Intersect the N. bdy. of Tp. 7 lks. W. of the cor. of secs. 5, 6, 31 and 32. Thence I run South on true line bet. secs. 5 and 6. Over rolling land thru exceptionally dense cacti underbrush, very difficult to chain thru.
2.60	Wash, 10 lks. wide, course SW.
13.90	Wash, 40 lks. wide, course SW.
17.50	Wash, 40 lks. wide, course SW.
22.40	Wash, 70 lks. wide, course SW.
40.04	Set a granite stone, 18X10X6 ins., 12 ins. in the ground, for ¼ sec. cor.; marked ¼ on W. face; dig pits, 18X18X12 ins.
80.04	N. and S. of stone, 3ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, W. of cor. The cor. of secs. 5, 6, 7 and 8. Land, rolling. Soil, gravelly; 2nd rate. No timber. Underbrush, dense cacti. Rolling land covered with exceptionally dense cacti underbrush, very difficult and slow to chain thru, exceptionally difficult to survey, 80.04 chs.

February 16, 1910.

GENERAL DESCRIPTION

This Tp. is mostly rolling land and covered with a d
dense growth of underbrush.
There are no settlers.
There is no water in this Tp.
The extreme Eastern edge of this Tp is mineral land.

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

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

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LIST OF NAMES.

A list of the names of the individuals employed by Fred W. Rodoff
 _____, 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
subdivision lines of Township 21 North Range 18 West.
 showing the respective capacities in which they acted:

- A. P. Kerns _____, Chainman.
- Bert Lyon _____, Chainman.
- Ralph R. Ellis _____, Moundman.
- _____ Moundman.
- R. N. Stark _____, Arman.
- D. M. Parker _____, Arman.
- George Newell _____, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Fred W. Rodoff
 _____, United States Deputy Surveyor, in surveying all
 those parts or portions of the subdivision lines of Township 21 North
Range 18 West

_____ of the Gila & Salt
River 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
- A. P. Kerns _____, Chainman.
 - Bert Lyon _____, Chainman.
 - Ralph R. Ellis _____, Moundman.
 - _____ Moundman.
 - R. N. Stark _____, Arman.
 - D. M. Parker _____, Arman.
 - George Newell _____, Flagman.

Subscribed and sworn to before me this 7
 day of March, 1900



W. J. Ferrel
 Notary Public

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BOOK 2196

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Fred W. Rodolf, 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 lines of Township 21 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. Rodolf
United States Deputy Surveyor.

Subscribed by said Fred W. Rodolf, and sworn to before me }
this 7th day of May, 1900

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



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz Aug 18, 1901

The foregoing field notes of the survey of the subdivisional lines of Twp 21 N. R. 18 W. of the Gila and Salt River Base and Meridian, Arizona,

executed by Fred W. Rodolf, 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.