

Book "C"

1819-

BOOK 1819

FIELD NOTES

OF THE SURVEY OF THE

Subdivision Lines

of
Township No. 14 North,
Range No. 4 East

1819

- 1819 -

Of the Gila and Salt River Meridian,

in the Territory of Arizona

AS SURVEYED BY

Edgar C. Districh, United States Deputy Surveyor,

Under his Contract No. 123, dated September 15, 189 1904,

Survey commenced January 2, 189 1905.

Survey completed January 20, 189 1905.

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BOOK 1819

NAMES AND DUTIES OF ASSISTANTS.

John M. Dreyer

Chairman

Frank Drotlich

Chairman

Charles Piquet

Mundman

William M. Ware

Arman

Prof. Crosby

Arman

Prof. E. Miller

Flagman

BOOK 1819
INDEX DIAGRAM.

Township 14 N, Range 4 E

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BOOK 1819
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WE, Julm M. Trayer and Frank Dietrich
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of the Subdivision Lines of S. 17 N., R. 4 E.

Julm M. Trayer, Chainman.
Frank Dietrich, Chainman.

Subscribed and sworn to before me this 2nd
day of January, 1899 1905 }



Edgar C. Dietrich
U.S. Deputy Surveyor

I, Charles Payne and

do solemnly swear that we will well and truly perform the duties of moundman 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 S. 17 N., R. 4 E.

Charles Payne, Moundman.
Moundman.

Subscribed and sworn to before me this 2nd
day of January, 1899 1905 }



Edgar C. Dietrich
U.S. Deputy Surveyor

WE, William M. Ward and Oral Owenby

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 S. 17 N., R. 4 E.

Wm M. Ward, Axman.
Oral Owenby, Axman.

Subscribed and sworn to before me this 2nd
day of January, 1899 1905 }



Edgar C. Dietrich
U.S. Deputy Surveyor

I, Fred E. Miller, 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 Subdivision Lines of S. 17 N., R. 4 E.

Fred E. Miller, Flagman.

Subscribed and sworn to before me this 2nd
day of January, 1899 1905 }



Edgar C. Dietrich
U.S. Deputy Surveyor
No notary

6 brass

Survey commenced January 2, 1905, and executed with a
 Survey W. Quinn and Co. light mountain transit, No. 4607,
 with solar attachment. The horizontal limb is provided
 with two double verniers placed opposite to each other,
 reading to single minutes of arc, which is also the
 least part of the ^{radius of the} latitude and declination arcs.
 The ~~latitude~~ arc reads $5'$ in excess being an index error.
 The instrument was examined, tested on the true
 meridian at Phoenix, found correct, and was approved
 by the surveyor general for Arizona, December 22, 1904.
 I examined the adjustments of the transit, and corrected
 the level and collimation errors; then, to test the solar
 apparatus, by comparing its indications, resulting from
 solar observations made during a. m. and p. m. hours, with
 a meridian determined by observations on Polaris, I proceed as
 follows:

At the standard cor. of ones 35 and 36, on the S. side of the
 Sp., as heretofore described, latitude $34^{\circ} 46' 20''$ N, longitude
 $111^{\circ} 55' 20''$ W. I set off $34^{\circ} 46'$ N, on the lat. arc, $22' 52''$ E
 on the decl. arc, and, at $3^h 45^m$ p. m. l. m. t., determine
 with the solar meridian, and mark a point thereof
 on a stone firmly set in the ground, 5 chs. N. of the cor.

January 3: At $12^h 32^m$ a. m., by my watch, which is correct with l. m. t.,
 I observed Polaris at western elongation, in accordance with
 Manual of Instructions, and marked a point in the line
 thus determined on a ~~line~~ ^{stone} driven in the ground, 5 chs.
 N. of my station. January 2, 1906.

January 3: At $8:30$ a. m., l. m. t., I lay off the azimuth of Polaris,
 $72^{\circ} 20'$ at the west, and mark the meridian thus determined
 by setting a small ground in the stone set January 2, at
 which the meridian falls 0.2 ins. west of the mark de-
 termined by the solar.

At $8^h 45^m$ a. m., l. m. t., I set off $34^{\circ} 46'$ on the lat. arc,
 $22' 52''$ E on the decl. arc, and mark a point in the mer-
 idian determined with the solar, by a cross on the stone
 already set 5 chs. N. of my station. This mark falls 0.3
 ins. east of the meridian established by the Polaris observation.
 The solar apparatus by p. m. and a. m. observations, de-
 fines positions for meridians respectively 90° and
 180° west of the meridian established by the Polaris
 observations, therefore I conclude that the adjustments of
 the instrument are correct.

6 hrs
The magnetic bearing of the true meridian at 5:55 a. m., is
N. 19° 55' W., the angle thus determined gives the mag. decl. 14° 52' E.
Shower & run

N. 0° 01' W., bet. sec. 35 and 36.

Over mountainous land, ascending along N. slope of ridge
through scattering cedar timber.

40.00 Set a sandstone, 18 x 12 x 8 ins., 12 ins. in the ground, for
sec. cor. marked $\frac{1}{4}$ on N. face, and rim of mound of stone,
2 ft. base, 1 1/2 ft. high, N. of cor. Its impracticable.

45.00 Top of ridge, bears N. W. and S. E.; rather gently rolling land.

80.00 Set a sandstone, 18 x 8 x 6 ins., 12 ins. in the ground, for cor.
of sec. 25, 26, 35 and 36, marked with a notch on S. and
E. edges, from which

A cedar, 12 ins. diam, bears N. 51° E., 239 lbs. dist., marked
S 17 N R 4 E S 25 B S.

A cedar, 8 ins. diam, bears S 62 1/2° E., 83 lbs. dist., marked
S 17 N R 4 E S 26 B S.

A cedar, 36 ins. diam, bears S 17 1/2° W., 243 lbs. dist., marked
S 17 N R 4 E S 35 B S.

A cedar, 28 ins. diam, bears N. 17 3/4° W., 369 lbs. dist., marked
S 17 N R 4 E S 26 B S.

Land, mountainous and gently rolling.
Soil, sandy, gravelly and stony; 3rd and 4th rate.
Timber, scattering cedar.
Mountainous land, 45.00 chs.

40.00 East, on a random line bet. sec. 25 and 36.

79.95 Set a rock, 1/4 sec. cor.
Intersect E. bay of S. 6 lbs. N. of cor. of sec. 25, 30, 31 and 36,
which is a malpais stone, set in a mound of stone, marked
and witnessed as described by the surveyor general.
Shower & run

N. 89° 57' W., on a true line bet. sec. 25 and 36.

Over mountainous land, ascending.

6.00 Top of S. slope of ridge, descend through scattering cedar.
22.00 Foot, bears N. and S. Thence on gently rolling land.

39.99 Set a sandstone, 18 x 10 x 4 ins., 12 ins. in the ground, for
1/4 sec. cor. marked $\frac{1}{4}$ on N. face, dig pits, 12 x 12 x 12 ins., E.
and W. of stone, 3 ft. dist. and raise a mound of earth,
3 1/2 ft. base, 1 1/2 ft. high, N. of cor.

64.00 Road bears N. W. and S. W.

79.95 Set out of sec. 25, 26, 35 and 36

Chains

Land, gently rolling and mountainous.
Soil, sandy, gravelly and stony; 2nd and 4th rates.
Timber, scattering cedar, undergrowth, paleo chisto.
Mountains level, 22.06 chs.
January 3. At this ev. I set off 32° 49' S. on the decl. arc,
and at 12^h 5^m l. m. t. observed the sun on the meridian. The
resulting lat. is 34° 48' or within ±2' of the proper lat.

N. 0° 01' N., bet. sres. 25 and 26.
Over gently rolling land, through scattering cedar timber.
23.10 Road bars N.W. and S. W.
24.00 Dry wash, 15 lbs. wide, course S. W.
41.00 Set a malpais stone, 18 x 8 x 5 ins., 12 ins. in the ground, for
OK 1/4 sres. ev. marked 1/4 on N. face, from which
A cedar, 18 ins. diam., bears S. 69 1/2° W., 22 lbs. dist., marked
1/4 S 26 B S. no other trees within limit, and raise a mound of
stone 2 ft. base, 1 1/2 ft. high, N. of ev. It is imperceptible.
8000 Set a malpais stone, 18 x 8 x 6 ins., 12 ins. in the ground,
OK for ev. of sres. 23, 24, 25 and 26, marked with 2 notches on
S. and 1 notch on E. edge, from which
A juniper, 7 ins. diam., bears S. 4 1/2° E., 269 lbs. dist., marked
S 17 N R 4 E S 26 B S.
A juniper, 8 ins. diam., bears S. 17 1/2° W., 232 lbs. dist., marked
S 17 N R 4 E S 26 B S. no other trees; dig pits, 18 x 18 x 12 ins.
N.W. and N. W. of stone, 5 1/2 ft. dist., and raise a mound of
earth, 4 ft. base, 2 ft. high, N. of ev.
Land, gently rolling and level.
Soil, sandy and gravelly brown and stony; 2nd, 3rd and 4th rates.
Timber, scattering cedar and juniper.

S. 89° 57' E., on a random line bet. sres. 24 and 25.
41.00 Set temp. 1/4 sres. ev.
7997 Antares E. bay of Sp. 1 lb. N. of ev. of sres. 19, 24, 25 and 30, which
is a malpais stone, set in a mound of stone, marked and
witnessed as described by the surveyor general.
Shower & sun
N. 89° 57' N., on a true line bet. sres. 24 and 25.
Over mountainous land, ascending through heavy cedar timber.
Top of S. slope of ridge, heavy timber, being gradual descent,
Set a malpais stone, 18 x 8 x 6 ins., 12 ins. in the ground, for
1/4 sres. ev. marked 1/4 on N. face, from which
A cedar, 7 ins. diam., bears S. 11° W., 118 lbs. dist., marked

Indemnity of S. 17 N., R. 4 E.

6 hours
 ✓ 1 S. 25 B.S. in other than western limit; area raised in mound
 of stone, 2 ft base, 1 1/2 ft. high, N. of cor.
 6.2.25 Road, bears N.W. and S. N.
 7.9.97 In cor. of secs. 23, 24, 25 and 26.
 Land, mountains, gentle rolling and level.
 Soil, sandy and gravelly loam and stone; 2nd, 3rd and 4th rates.
 Timber, ^{cedar and} ~~oak~~ ^{gum} ~~elm~~, ^{undergrowth} ~~algrowth~~.
 Mountains, or mainly timbered land, 33.10. chs.
 January 3, 1905.

January 4. At 8:00 a.m. l.m.t., I set off 34.48' on the lat.
 arc, 22.41' S. on the decl. arc, and determine a meridian
 with the solar at the cor. of secs. 23, 24, 25 and 26.

Therms 3.00
 11.00 N. but secs. 23 and 24.
 Open level land.

- 9.00 Basis level under rolling land.
- 21.00 Enter heavy open timber, bears E. and N.
- 38.50 Dry wash, 15 lbs. wide, course S. N. as usual.
- 44.00 Set a malpais stone, 18 x 9 x 5 ins, 17 ins in the ground, for
 cor. of secs. 23, 24 and 25, N. face, from which
 A. v. cor., 19 ins diam., bears N. 82° E., 43 lbs. dist., marked
 S 24 B.S.
- A. v. cor., 16 ins diam., bears N. 162° N., 28 lbs. dist., marked
 S 25 B.S.
- 58.00 Edge of ridge, bears E. and N.; heavy timber; as usual.
- 65.00 Dry wash, 15 lbs. wide, course S. N. as usual.
- 80.00 Set a malpais stone, 20 x 10 x 3, 15 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, from which
 A. v. cor., 24 ins diam., bears N. 74 1/4° E., 110 lbs. dist., marked
 S 17 N R 4 E S 13 B.S.
- A. v. cor., 12 ins diam., bears S. 12 1/4° E., 150 lbs. dist., marked
 S 17 N R 4 E S 14 B.S.
- A. v. cor., 14 ins diam., bears S. 22° N., 190 lbs. dist., marked
 S 17 N R 4 E S 23 B.S.
- A. v. cor., 16 ins diam., bears N. 35° N., 224 lbs. dist., marked
 S 17 N R 4 E S 14 B.S.

Land, mountains, rolling and level.
 Soil, sandy loam, gravelly and stone; 2nd, 3rd and 4th rates.
 Timber, ~~oak~~ ^{cedar and} ~~elm~~, ^{undergrowth} ~~algrowth~~.

Chains
Mountainous or heavily timbered land, 59.00 chs.

S. 89° 57' E, on a random line bet sres. 13 and 24.

- 40.00 Set temp. 4 sec. cor.
 - 49.92 Enter at E. bdy. of Sp. 2 lks. N. of cor. of sres 13, 18, 19 and 24, which is a malpais stone, 18x14x10 ins., set in a mound of stone, from which
 - A cedar, 12 ins. diam, bears S. 63° E, 55 lks. dist, marked S 17 N R 5 E S 19 B S.
 - A cedar, 12 ins. diam, bears S. 42 3/4° W, 113 lks. dist, marked S 17 N R 4 E S 24 B S.
 - A cedar, 12 ins. diam, bears N. 17° W, 212 lks. dist, marked S 17 N R 4 E S 13 B S; and mound of stone N. of cor.
- This cor. does not tally with description given by the surveyor general.

Phaner & Run

- N. 89° 56' W, on a true line, bet. sres. 13 and 24.
- Over rolling land, through heavy cedar timber.
- 32.11 Bond, bears E. N. E. and W. S. W.
- 39.96 Set a sandstone, 20x10x4 ins., 15 ins. in the ground, for 1/4 sec. cor. marked 1/4 on N. face, from which
 - A cedar, 8 ins. diam, bears N. 49° E, 95 lks. dist, marked 1/4 S 13 B S.
 - A cedar, 14 ins. diam, bears S. 90° E, 22 lks. dist, marked 1/4 S 24 B S; and raise a mound of stone, 7 ft. base, 1 1/2 ft. high, N. of cor.
- 54.00 Begin ascent, bears N. and S.
- 60.00 Slope, extending S.; have heavy timber, ascend.
- 77.70 Dry wash, 15 lks. wide, course S. W.; ascend.
- 79.92 Top cor. of sres. 13, 14, 23 and 24.

Land rolling and mountainous.
Soil, gravelly and stony; 3rd and 4th rate.
Timber, cedar and scattering pine; undergrowth, scrub cholla.

Mountainous or heavily timbered land, 59.92 chs.
January 4. At this cor. S set off 22° 43' S. on the steel arc, and, at 12^h 4^m in P., observe the sun on the meridian; the resulting lat. is 34° 59.12 within 3' of the proper lat.

- N. 0° 01' W, bet. sres. 13 and 14.
- Over mountainous land, ascending through scattering cedar.
- 6.30 Dry wash, 15 lks. wide, course S. S. E.
- 19.00 Top of mountain, bears N. N. W. and S. S. E.; ascend.
- 28.15 Bond, bears E. and W.

6 hams
40.00 Set a sandstone, 18x7x6 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on W. face; from which
A cedar, 8 ins. diam., bears S. $47\frac{1}{2}^{\circ}$ E., 104 lbs. dist., marked $\frac{1}{4}$ S 13 B B.
A cedar, 24 ins. diam., bears S. $30\frac{1}{4}^{\circ}$ W., 124 lbs. dist., marked $\frac{1}{4}$ S 14 B B.
41.55 Small wash, 350 ft. below top of mountain, course E.; as comd.
44.00 Bridge bears E. and N. enter gently rolling land and heavy timber!
52.80 Summ road, bears N. N. E. and S. S. W.
58.00 Summ road, bears N. N. W. and S. S. E.
62.00 Dry wash, 10 lbs. wide, course E.; enter dense brush.
80.00 Set a sandstone, 20x8x4 ins., 15 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. from which
A pinon, 8 ins. diam., bears N. 81° E., 185 lbs. dist., marked
S 17 N R 4 E S 12 B B.
A cedar, 16 ins. diam., bears S. $32\frac{1}{2}^{\circ}$ E., 90 lbs. dist., marked
S 17 N R 4 E S 13 B B.
A cedar, 18 ins. diam., bears S. $59\frac{1}{4}^{\circ}$ W., 134 lbs. dist., marked
S 17 N R 4 E S 14 B B.
A cedar, 8 ins. diam., bears N. $51\frac{1}{2}^{\circ}$ W., 134 lbs. dist., marked
S 17 N R 4 E S 11 B B.
Land, mountains and gently rolling.
Soil, sandy, gravelly and stony, sand and 4th rats.
Timber, cedar and pinon; undergrowth, pale chisto.
Mountains, heavily timbered or land covered with dense
undergrowth, 80.00 lbs.

S. $89^{\circ} 56' E.$, on a random line bet. secs. 12 and 13.
110.00 Set temp. $\frac{1}{4}$ sec. cor.
119.95 Enter sec E. bdy. of Sp. 5 lbs. N. of cor. of secs. 7, 12, 13 and 18,
which is a cross (x) on a sandstone rock, 4x8x2 ft. above ground,
with mound of stone N. of point, from which
A cedar, 8 ins. diam., bears N. $81\frac{1}{2}^{\circ}$ E., 24 lbs. dist., marked
S 17 N R 5 E S 7 B B.
A cedar, 8 ins. diam., bears S. $28\frac{1}{4}^{\circ}$ E., 101 lbs. dist., marked
S 17 N R 5 E S 18 B B.
A juniper, 6 ins. diam., bears S. 89° N., 97 lbs. dist., marked
S 17 N R 4 E S 13 B B.
A cedar, 7 ins. diam., bears N. $7\frac{1}{2}^{\circ}$ W., 92 lbs. dist., marked
S 17 N R 4 E S 12 B B.
This cor. line set on ground with description given by the

6 hrs Survey general.
 Thayer Dunn
 N. 89° 54' W., on a true line bet. secs. 12 and 13.
 Over mountainous land, descending through scattering timber.
 5.00 Euleh, 40 lbs. wide, course S.; ascend.
 13.00 Top, bars N. and S.; enter heavy cedar timber.
 25.00 Descend, bars NW. and S. W.
 28.40 Euleh, 20 lbs. wide, course S.; ascend.
 32.00 Enter dense brush, bars N. and S.
 39.97½ Set a sandstone, 20x8x4 ins., 15 ins. in the ground, for ¼ sec. cor. marked ¼ on N. face, from which
 A juniper, 5 ins. diam., bears S. 20½° W., 62 lbs. dist., marked ¼ S 15 B S.
 A cedar, 12 ins. diam., bears N. 47½° W., 164 lbs. dist., marked ¼ S 12 B S.
 73.00 Ridge, bars N. and S., thence over rolling land.
 79.95 Set cor. of secs. 11, 12, 13 and 14.
 Land, mountainous and rolling.
 Timber, cedar and scattering pine and juniper; undergrowth, algaroba, brodiaea and pale chisto.
 Mountains, heavily timbered or land covered with dense undergrowth, 79.95 lbs.

January 4, 1905.

January 5: At 9:30^{am} a.m. l.m.t., I set off 34° 49' on the flat arc, 22° 31' S. on the arc, and determine a meridian with the star at the cor. of secs. 11, 12, 13 and 14.
 Thayer Dunn
 N. 0° 01' W., bet. secs. 11 and 12.
 Over mountainous land, ascending through heavy cedar timber and dense pale chisto brush.
 8.00 Top of rocky knoll, descend.
 18.00 Foot, bars E. and W.; enter rolling land.
 36.00 Leave heavy timber, bars E. and W.
 40.00 Set a sandstone, 18x8x4 ins., 12 ins. in the ground, for ¼ sec. cor. marked ¼ on N. face, from which
 A cedar 30 ins. diam., bears N. 53½° E., 290 lbs. dist., marked ¼ S 12 B S.
 A cedar, 18 ins. diam., bears N. 30½° W., 89 lbs. dist., marked ¼ S 11 B S.

Chains
56.80 Road, bears N. 4. and S. W.
60.30 Dry wash, in hrs. road, course E.
80.00 Set a sandstone, 15 x 12 x 4 ins., 12¹/₂ ins. in the ground, for
OK ev. of sves. 1, 2, 11 and 12, marked with 5 notches on S.
and 1 notch on E. edge, from which
A pinon, 6 ins. diam., bears N. 54° E., 189 lbs. dist., marked
S 17 N R 4 E S 1 B S.
A cedar, 7 ins. diam., bears S. 60¹/₂° E., 114 lbs. dist., marked
S 17 N R 4 E S 12 B S.
A cedar, 8 ins. diam., bears S. 14¹/₂° W., 88 lbs. dist., marked
S 17 N R 4 E S 11 B S.
A cedar, 12 ins. diam., bears N. 21¹/₂° W., 13 lbs. dist.; marked
S 17 N R 4 E S 2 B S.; and raised a mound of stone, 2 ft. base,
12 ft. high, N. of ev.
Land, rolling and mountainous:
Soil, gravelly, stony and rocky, red and 4th rate.
Timber, cedar and scattering pinon; undergrowth, Palo
Christo, algarrufa and brush.
Mountains, heavily timbered or land covered with dense
undergrowth, 80.00 lbs.

S. 89° 54' E, on a random line bet. sves. 1 and 12.
40.00 Set. 1/4 m. 1/4 ore. ev.
80.00 Enter at E. bay. of Sp. 10 lbs. N. of ev. of sves. 1, 6, 7 and 12,
OK which is a sandstone, 14 x 16 x 6 ins. above ground, from
which
A cedar, 10 ins. diam., bears N. 45¹/₂° E., 91 lbs. dist., marked
S 17 N R 5 E S 6 B S.
A cedar, 14 ins. diam., bears S. 40¹/₂° E., 29 lbs. dist., marked
S 17 N R 5 E S 7 B S.
A cedar, 10 ins. diam., bears S. 17¹/₂° W., 125 lbs. dist., marked
S 17 N R 4 E S 12 B S.
A cedar, 14 ins. diam., bears N. 35³/₄° W., 30 lbs. dist., marked
S 17 N R 4 E S 1 B S.
This ev. does not answer description given by the sur-
veyor general.
Cherry & pin
N. 59° 50' W., on a true line bet. sves. 1 and 12.
Over mountainous land, ascending through heavy cedar
timber and dense brush.
20.00 Top of ridge, bears N. and S.

6 hms
52.85 Dry wash, 20 lbs. wide, course S. E.; ascend.
57.20 Spur, bears E. and W.; thence over rolling land, through heavy cedar timber.
73.45 Dry wash, 20 lbs. wide, course S. E.; bears heavy timber.
79.03 In corner of secs. 1, 2, 11 and 12.
Land, rolling and mountainous.
Soil, sandy and gravelly; 3rd rate.
Timber, cedar and scattering pinon; undergrowth, tsootilla and algarroto.
Mountainous, heavily timbered or land covered with dense undergrowth, 79.03 chs.

January 5, 1905.

January 6. At 8^h 35^m a.m., l.m.t., I set off 34° 46' on the lat. arc; 22° 39' S. on the decl. arc, and determine a meridian with the solar at the standard cor. of secs. 34 and 35, on the S. bay. of the sp.; as heretofore described.

Thence S, then
N. 0° 01' W., bet. secs. 34 and 35.
Over mountainous land, along W. slope of ridge through heavy cedar timber and dense palo christo bush.
25.00 Bear heavy timber and dense bush, bear N. W. and S. E.
34.00 Spur, extending N.; descend, bear heavy timber.
40.00 Set a malpais stone, 18 x 10 x 4 ins., 12 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, N. of cor.
41.30 Road, bears N. W. and S. W.
51.00 Dry wash, 160 ft. below top of spur, 25 lbs. wide, course S. W.; ascend.
70.00 Top of ridge, bears N. W. and S. W. thence along W. slope through scattering cedar and dense palo christo bush.
80.00 Set a malpais stone, 20 x 10 x 7 ins., 15 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; from which
A cedar, 8 ins. diam., bears N. 8° E., 58 lbs. dist., marked S 17 N B 4 E S 26 B S.
A cedar, 10 ins. diam., bears S. 89 1/2° E., 42 lbs. dist., marked S 17 N B 4 E S 35 B S.
A cedar, 12 ins. diam., bears S. 40 1/2° W., 78 lbs. dist., marked S 17 N B 4 E S 34 B S.

- 6 chains
39.00 Set a sandstone, 20 x 16 x 14 ins., 12 ins. in the ground, for witness cov. to $\frac{1}{4}$ sec. cov. marked W $6\frac{1}{4}$ S $1\frac{1}{2}$ N. face, from which
- A rod, 6 ins. diam., bears N. $80\frac{1}{2}^{\circ}$ E., 70 lbs. dist., marked W $6\frac{1}{4}$ S $1\frac{1}{2}$ N.
- A rod, 5 ins. diam., bears S. $56\frac{1}{2}^{\circ}$ E., 33 lbs. dist., marked W $6\frac{1}{4}$ S $1\frac{1}{2}$ N.
- 40.00 Stalls in dry wash, 10 lbs. wide, curved S. E.; ascend.
- 45.00 Top of S. slope of ridge;
- 50.00 Descend.
- 53.00 Summit, bears N. and S.; ascend; road, bears N.E. and S.W.
- 56.00 Ridge, bears N.W. and S.W.; descend.
- 61.00 Dry wash, 10 lbs. wide, curved S.; ascend.
- 67.00 Ridge, bears N. and S.; descend.
- 77.00 Dry wash, 15 lbs. wide, curved S.; ascend.
- 80.00 Top cov. of secs. 1, 2, 11 and 12.

Land, mountainous.
Soil, gravelly and stony; 3rd. and 4th. rates.
Scattered cedar and scattering pines; undergrowth al-
garrata, tristitia and prae christo.
Mountainous, heavily timbered or land covered with dense
undergrowth, 80.00 lbs.

January 5: At this ev. I set off $23^{\circ} 36'$ S. on the
dial arc; and at $12^h 5^m$ l. m. t., observed the sun on
the meridian; the resulting lat. is $34^{\circ} 50'$ or within
of the former lat.

- N. 0° 01' N. on a random line bet. secs. 1 and 2.
- 40.00 Set trip. $\frac{1}{4}$ sec. cov.
- 79.03 Encounter N. body of Sp. 4 lbs. E. cov. of secs. 1, 2, 35 and
36, as heretofore described.
- Turner & run

S. 0° 03' E. on a true line bet. secs. 1 and 2.
Over rolling land, through scattering cedar timber and
dense al-garrata and tristitia undergrowth.

- 39.43 Set a sandstone, 18 x 12 x 4 ins., 12 ins. in the ground, for
 $\frac{1}{4}$ sec. cov. marked $\frac{1}{4}$ rd N. face. from which
- A rod, 7 ins., diam., bears N. 31° E., 168 lbs. dist., marked
 $\frac{1}{4}$ S 1 B S.
- A rod, 7 ins. diam., bears S. $72\frac{1}{2}^{\circ}$ W., 57 lbs. dist., marked
 $\frac{1}{4}$ S 2 B S.

Chains
 5.00 Scattering cedar and dense pale chaste bush.
 5.00 Barren dense bush, bars E. and W.; descend.
 17.00 Dry wash, 15 lbs. wide, course S. W.; enter gently rolling land.
 23.00 Enter dense algaroba bush, bars E. and W.
 40.00 Set a sandstone, 18 x 10 x 4 ins., 12 ins. in the ground, for
 1/4 sec. cor. marked 1/4 on W. face; from which
 A cedar, 14 ins. diam., bars S. 74 1/4° E., 84 lbs. dist., marked
 1/4 S. 26 1/2 S.
 A cedar, 10 ins. diam., bars S. 60° W., 75 lbs. dist., marked
 1/4 S. 27 1/2 S.; ascend.
 54.00 Dip, bars N. W. and S. W., and along N. slope of ridge.
 62.00 Barren scattering cedar and dense bush, bar N. W. and S. W.
 64.00 Begin descent.
 74.55 Small dry wash, course W.; ascend.
 80.00 Set a malpais stone, 20 x 8 x 6 ins., 15 ins. in the ground, for
 cor. of sres. 22, 23, 26 and 27, marked with 2 notches on S.
 and E. edges and raise a mound of stone, 2 ft. base,
 1 1/2 ft. high, N. of cor. not impracticable.
 Land, mountainous and gently rolling.
 Soil, gravelly loam and stony; 2nd, 3rd and 4th rates.
 Diverse, scattering cedar; undergrowth, algaroba, pale
 chaste and Arctostaphylos.
 Mountainous or land covered with dense undergrowth, 91.00 ch.

40.00 S. 89° 59' E., on a random line bet. sres. 23 and 26.
 Set emp. 1/4 sec. cor.
 79.95 Enter set N. and S. line 2 lbs. N. of cor. of sres. 23, 24, 25
 and 26.
 Survey from
 N. 89° 58' W., on a true line bet. sres. 23 and 26.
 Over gently rolling land.
 24.50 Dry wash, 20 lbs. wide, course S. W.
 34.80 Dry wash, 15 lbs. wide, course S.
 35.85 Pond, bars N. W. and S. W.
 39.97 1/2 Set a malpais stone, 18 x 8 x 4 ins., 12 ins. in the ground
 for 1/4 sec. cor. marked 1/4 on N. face; dig pits, 18 x 18 x 12 ins.,
 E. and W. of stone, 3 ft. dist., and raise a mound of earth,
 3 ft. base, 1 1/2 ft. high, N. of cor.
 58.00 Begin ascent bars N. W. and S. W.
 72.00 Top of S. slope of ridge; descend.
 79.95 Sur. cor. of sres. 22, 23, 26 and 27.

6 hours

Land, gently rolling and mountainous.
Soil, sandy and gravelly loam and stony; 2nd, 3rd and 4th rates.
Timber, a few cedar.
Mountainous land, 22.00 chs.

January 6, 1915.

January 7: At 8^h 45^m a.m., l.m.t., I set off 37° 45' on the lat. and 22° 21' S. on the decl. arc; and determined meridian with the solar at the cor. of sres. 22, 23, 26 and 27.

Turned S, and
N. 0° 01' W., bet. sres. 22 and 23.

Low mountainous land, ascending through scattering cedar timber.

9.00 Ridge, bears N. W. and S. E.; ascend.

25.00 Enter dense brush, bears E. and W.

38.00 Dry wash, 15 lbs. wide, course W., bear dense brush; ascend.

40.00 Set a malpais stone, 18 x 8 x 6 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on W. face, from which
OK A cedar, 18 ins. diam., bears N. 10 $\frac{1}{2}$ ° E., 20 or 21 lbs. dist., marked $\frac{1}{4}$ S 23° 13' S. in other tree within limit, and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor. Bits impracticable.

49.95 Road, bears N. W. and S. E.

62.00 Ridge, bears N. W. and S. E.; turned over gently rolling land.

80.00 Set a malpais stone, 18 x 8 x 8 ins., 12 ins. in the ground, for
OK cor. of sres. 14, 15, 22 and 23, marked with 3 notches on S. and 2 notches on E. edge, and raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor. Bits impracticable.

Land, mountainous and gently rolling.

Soil, gravelly loam, stony and rocky; 2nd, 3rd and 4th rates.

Timber, scattering cedar; undergrowth, algarroba and fresh chisto.

Mountainous or land covered with dense undergrowth;
62.00 chs.

S. 59° 50' E., on a random line bet. sres. 14 and 23.

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

7.00 Intersect N. and S. line at the cor. of sres. 13, 14, 23 and 24.

BOOK 1819

Chain

Stinner & run
 N. 89° 56' W., on a true line bet. sres. 14 and 23.
 Over mountainous land, ascending through scattering
 cedar and dense brush
 17.30 Top of S. slope of mountain, 200 ft. above sres. cor.; descend
 39.98 Set a malpais stone, 18 x 10 x 8 ins., 12 ins. in the ground,
 for $\frac{1}{4}$ sres. cor. marked $\frac{1}{4}$ on N. face, from which
 A cedar, 12 ins. diam., bears N. 63 $\frac{1}{4}$ E., 12 lbs. dist., marked
 $\frac{1}{4}$ S 14 B.S.
 A cedar, 8 ins. diam., bears S. 38 $\frac{1}{2}$ E., 64 lbs. dist., marked
 $\frac{1}{4}$ S 23 B.S.
 57.70 Dry wash, 30 lbs. wide, crossed S.; enter gently rolling land.
 69.00 Cross scattering cedar and dense brush, bears N. and S.
 77.00 Road, bears N.W. and S.E.
 79.96 Top cor. of sres. 14, 15, 22 and 23.
 Land, mountainous and gently rolling.
 Soil, gravelly loam and stony; 2nd, 3rd and 4th rates.
 Timber, scattering cedar, undergrowth, palo christo and
 algarrota.
 Mountainous or land covered with dense undergrowth,
 69.00 chs.
 January 7: At this cor. I set off, 22° 22' S., on the decl.
 arc; and, at 12^h 4^m l. m. t., observed the sun on the
 meridian; the resulting lat. is 29° 48' or within 4' of
 the former lat.

N. 0° 01' W., bet. sres. 14 and 15.
 Over gently rolling land.
 1.25 Road, bears E. and W.
 8.70 Road, bears N.E. and S.W.
 10.15 Bram ascent, bears E. and W., through heavy cedar.
 28.00 Cross heavy cedar timber, bears N.E. and S.W.
 38.60 Ridge, bears E. and W.; descend.
 40.00 Set a sandstone, 18 x 12 x 4 ins., 12 ins. in the ground, for
 $\frac{1}{4}$ sres. cor. marked $\frac{1}{4}$ on N. face, and raise a mound of
 stone, 2 ft. base, 12 ft. high, N. of cor. Bits impracticable
 41.80 Gulch, 20 lbs. wide, crossed S.W.; ascend.
 52.00 Spur, extending W.; descend.
 57.00 Dry wash, 10 lbs. wide, crossed S.W.; ascend.
 60.50 Spur, extending W.; descend.
 75.00 Deep gulch, 20 lbs. wide, crossed S.W.; ascend through
 dense palo christo brush.

Chains
20.00

Set a sandstone, 20 x 8 x 4 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, from which
A rod, 6 ins. diam., bears S. 85° E., 86 lbs. dist., marked S 17 N R 4 E S 14 B S.

A rod, 6 ins. diam., bears S. 75 1/4° W., 160 lbs. dist., marked S 17 N R 4 E S 15 B S., no other rods within limit; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Rts impracticable.

Ground, mountainous and gently rolling.

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

Timber, scattering, cedar, undergrowth, pale chisto, algarvita, and tschilla.

Mountainous, heavily timbered or land covered with dense undergrowth, 69.85 chs.

410.00 S. 89° 56' E., on a random line bet. secs. 11 and 14.
Set temp. 1/4 sec. cor.

79.99 Post set N. and S. line 2 lbs. S. of cor. of secs. 10, 12, 13 and 14.

Runed S run

89° 57' W., on a true line bet. secs. 11 and 14.

Over rolling land, through heavy cedar timber and dense pale chisto brush.

8.75 Road, bears N. W. and S. E.

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

39.99 1/2 Set a sandstone, 18 x 12 x 4 ins., 12 ins. in the ground, for 1/4 sec. cor. marked 1/4 qn' N. face, from which
A rod, 18 ins. diam., bears N. 25 1/4° E., 207 lbs. dist., marked 1/4 S 11 B S.

A rod, 30 ins. diam., bears S. 11 1/4° W., 122 lbs. dist., marked 1/4 S 14 B S.; from this cor. top of high round hill bears N. about 20 chs. dist.; ascend.

46.00 Bridge, bears N. and S.; ascend gradually.

64.00 Begin steep ascent.

68.75 Gulch, 20 lbs. wide, course S., low heavy timber; ascend.

79.99 3/4 cor. of secs. 10, 11, 14 and 15.

Ground, rolling and mountainous.

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

Timber, scattering cedar and fir; undergrowth, pale chisto, tschilla and algarvita.

Chains

Mountainous, heavily timbered or land covered with dense undergrowth, 79.99 chs.

January 7, 1905.

January 8: At 8^h 40^m a.m. l.m. t. I set off 34° 49' on the lat. arc, 22° 14' S. on the decl. arc, and determined a meridian with the solar at the cor. of arcs. 10, 11, 14 and 15.

Skewed Beryl

N. 0° 01' W., bet. arcs. 10 and 11. Par. 15° S.

Over mountainous land, ascending through heavy cedar timber and dense pale christa brush.

- 5.00 Spur, extending S. E.; ascend.
- 12.80 Dry wash, 10 lbs. wide, course N.; ascend.
- 15.00 Spur, extending N.; ascend.
- 16.40 Dry wash, 10 lbs. wide, course N.; ascend.
- 20.00 Bridge, bars N. W. and S. W.; enter rolling land.
- 41.00 Set a sandstone, 20 x 12 x 4 ins., 15 ins. in the ground, for 1/4 sec. cor. marked 1/4 on N. face; from which
 - A erdar, 5 ins. diam., bars N. 44 1/2° E., 99 lbs. dist., marked 1/4 S 11 B S.
 - A erdar, 8 ins. diam., bars S. 39° W., 121 lbs. dist., marked 1/4 S 10 B S. Par. 14° 35' E.
- 80.00 Set a sandstone, 18 x 10 x 5 ins., 12 ins. in the ground, for cor. of arcs. 2, 3, 10 and 11, marked with 5 notches on S. and 2 notches on E. edge; from which
 - A erdar, 16 ins. diam., bars N. 54 1/2° E., 22 lbs. dist., marked S 17 N R 4 E S 2 B S.
 - A erdar, 5 ins. diam., bars S. 57 1/4° E., 77 lbs. dist., marked S 17 N R 4 E S 11 B S.
 - A erdar, 15 ins. diam., bars S. 14° W., 45 lbs. dist., marked S 17 N R 4 E S 10 B S.
 - A erdar, 5 ins. diam., bars N. 24 1/4° W., 227 lbs. dist., marked S 17 N R 4 E S 3 B S.

Land, rolling and mountainous.

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

Timber, cedar; and growth, pale christa.

Mountainous, heavily timbered or land covered with dense undergrowth, 80.00 chs.

S. 89° 57' E., on a random line line bet. arcs. 2 and 11

6 hrs
40.00 Set trap. $\frac{1}{4}$ sec. cov.
80.04 Enter set N. and S. line $\frac{1}{4}$ hrs. N. of cor. of secs. 1, 2, 11
map 12.
Turner & run
N. $59^{\circ}55'$ W., on a line bet. secs. 2 and 11.
Over mountainous land, ascending through heavy cedar
timber and dense brush
28.00 Bridge, bars N. and S.; turner over rolling land, heavy timber.
40.02 Set a sandstone, $20 \times 10 \times 8$ ins., 15 ins. in the ground, for
 $\frac{1}{4}$ sec. cov. marked $\frac{1}{4}$ on N. face; from which
A cedar, 4 ins. diam., bears N. $26^{\circ}2'$ E., 327 lbs. dist., marked
 $\frac{1}{4}$ S. & B. S.; no other tree, and raise a mound of stone,
2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
Nov. 15th 8.
62.00 Enter heavy cedar, bars N. and S.
62.00 Enter draw, course N.
67.00 Leave draw.
80.04 Spr cor. of secs. 2, 3, 10 and 11.
Land, rolling, mountainous and level
Soil, generally and stony; 3rd and 4th rates
timber, cedar; undergrowth, pale chisto, algarata
and tricotilla.
Mountainous, heavily timbered or land covered with
dense undergrowth, 80.04 hrs.
January 8: Set this cor. & set off $22^{\circ} 14'$ S. on the
meridian; and, at 12^h 5^m l. m. t., observe the sun on the
meridian; the resulting lat. is $34^{\circ} 50'$.

N. $0^{\circ}01'$ W., on a random line bet. secs. 2 and 3.
40.00 Set trap. $\frac{1}{4}$ sec. cov.
1/9.22 Enter set N. by of S. P. at cor. of secs. 2, 3, 3 $\frac{1}{4}$ and 35, as
previously described.
Turner & run
S. $0^{\circ}01'$ E., on a line bet. secs. 2 and 3.
Over mountainous land, ascending through scattering
cedar and dense algarata brush.
11.00 Spar, extending W.; descend.
27.50 Dry wash, 20 hrs. wide, course W.
38.30 Same wash, course S. E.
39.00 Set a sandstone, $18 \times 9 \times 5$ ins., 12 ins. in the ground, for
 $\frac{1}{4}$ sec. cov. marked $\frac{1}{4}$ on N. face; from which

Chains

A cedar, 20 ins. diam., bears ^{N 88 1/2 W 87} ~~N 81 1/2 E~~, 84 lbs. dist., marked $\frac{1}{4}$ S ~~2~~ B S.

A cedar, 10 ins. diam., bears S. 18 1/2 E, 154 lbs. dist., marked $\frac{1}{4}$ S ~~2~~ B S.

412.30 Same wash, 40 lbs. wide, course S. W.; ascend.

445.00 Spur, extending W.; descend.

448.00 Dry wash, 10 lbs. wide, course S. W.; ascend.

50.00 Spur, extending W.; descend.

58.00 Dry wash, 15 lbs. wide, course W.; ascend.

65.00 Spur, extending W.; descend through heavy cedar timber.

73.15 Enter draw, course W.

77.00 Leave draw; ascend.

79.22 Spur cor. of sres. 2, 3, 10 and 11.

Land, mountainous and gently rolling.
Soil, gravelly and stony, 3rd and 4th rate.
Timber, cedar, yondergrowth, algarveta and hestilla.
Mountainous, heavily timbered by land covered with dense undergrowth, 79.22 chs.
January 8, 1905.

Note - Continuous rain and snow since the afternoon of January 8 prevented work until January 12, 1905.

January 12: At 8^h 35^m a.m. l. m. t., I set off 34° 46' on the lat. arc; 21° 38' S. on the decl. arc; and determined a meridian with the solar at the standard cor. of sres. 33 and 34 on the S. bay of the Sp., as heretofore described.

Shaded Camp
N. 0° 02' W, bet. sres. 33 and 34.

Over mountainous land, descending through scattering cedar timber and dense spalo christo bush.

9.00 Leave scattering cedar and dense bush, bears E. and W.; enter level land.

12.50 Road, bears N. and S. W.

29.50 Dry wash, 30 lbs. wide, course S. E.

33.00 Cedar level and enter rolling land.

40.00 Set a malpais stone, 18 x 10 x 8 ins., 12 ins. in the ground, for $\frac{1}{4}$ sres. cor. marked $\frac{1}{4}$ on W. face, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

46.00 Enter scattering cedar and dense algarveta bush, bears E. and W.

61.70 Chams Dry wash, 10 lbs. wide, course S. E.; ascend.
 71.50 N. slope of ridge; descend.
 72.00 Dry wash, 10 lbs. wide, course S. W.; ascend.
 80.00 Set a malpais stone, 20 x 12 x 6 ins., 15 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, from which
 A erdar, 10 ins. diam., bears N. 48° E., 187 lbs. dist., marked S 17 N R 4 E S 27 B S.
 A erdar, 12 ins. diam., bears S. 20° E., 110 lbs. dist., marked S 17 N R 4 E S 34 B S.
 A erdar, 10 ins. diam., bears S. 16 $\frac{3}{4}$ ° W., 87 lbs. dist., marked S 17 N R 4 E S 33 B S.
 A erdar, 7 ins. diam., bears N. 12° W., 64 lbs. dist., marked S 17 N R 4 E S 28 B S.
 Land, mountainous, rolling and level.
 Soil, sandy, gravelly and stony; 3rd and 4th natl.
 Timber, scattering erdar; undergrowth, algarrota and palo christo.
 Mountainous, on land covered with dense undergrowth;
 43.00 lbs!

40.00 East, on a random line bet. secs. 27 and 34.
 Set temp. in sec. cor.
 79.95 Enter set N. and S. line 2 lbs. S. of cor. of secs. 26, 27, 34 and 35.
 Staked & run
 S. 89° 59' N., on a true line bet. secs. 27 and 34.
 Over mountainous land, ascending through scattering erdar.
 13.00 Foot, bears N. and S.; inter gently rolling land.
 23.70 Spring creek, 40 lbs. wide, course S.
 28.00 Broad scattering erdar, bears N. W. and S. E.
 39.97 $\frac{1}{2}$ Set a malpais stone, 18 x 12 x 4 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face, and raise a mound of sand, 2 ft. base, 12 ft. high, N. of cor.; begin gradual ascent.
 59.00 Ascend E. slope of ridge through scattering erdar and dense palo christo brush.
 72.111 Ridge, bears N. and S., descend.
 78.90 Gully, 10 lbs. wide, course S.; ascend.
 79.95 Set cor. of secs. 27, 28, 33 and 34.

20

Chains

Land, gently rolling and mountainous.
Soil, sandy and gravelly loam and stony; 2nd, 3rd
4th rates.

Timber, scattering cedar, undergrowth, pale chisto.
Mountains or land covered with dense undergrowth,
34.00 chs.

Summary 12: At this ev. S. set off 21° 38' S. on the def.
arc; and, at 12^h 5 m. b. m. t., observed the sun on the
meridian; the resulting lat. is 34° 47'.

N. 0° 02' W., bet. sres. 27 and 28.
Over mountainous land, ascending through scattering
cedar timber and dense pale chisto brush.

8.00 Top, bears N. and S. W.; thence along N. slope of ridge.

15.00 Cross dense brush; ascend, bears N. and S. W.

31.00 Small dry wash, cross N.; ascend.

40.00 Set a malpais stone, 15 x 8 x 11 ins., 12 ins. in the ground,
for $\frac{1}{4}$ sec. ev. marked $\frac{1}{4}$ on N. face; from which
A cedar, 12 ins. diam., bears S. 30 $\frac{1}{2}$ ° E., 108 lbs. dist., marked
 $\frac{1}{4}$ S 27 B S.

A cedar, 20 ins. diam., bears S. 52 $\frac{1}{4}$ ° W., 152 lbs. dist., marked
 $\frac{1}{4}$ S 28 B S.

68.00 Top of N. slope of ridge; ascend.

80.00 Set a malpais stone, 16 x 8 x 8 ins., 12 ins. in the ground,
for ev. of sres. 21, 22, 27 and 28, marked with 2 notches
on S. and 3 notches on E. edge; from which
A cedar, 7 ins. diam., bears N. 51° E., 222 lbs. dist., marked
S 17 N R 4 E S. 22 B S.

A cedar, 14 ins. diam., bears S. 70 $\frac{1}{4}$ ° E., 318 lbs. dist., marked
S 17 N R 4 E S 27 B S., no other trees, and raised a
mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of ev.

Land, mountainous.
Soil, gravelly and stony; 3rd and 4th rates.
Timber, scattering cedar; undergrowth, pale chisto
and algaroba.

Mountains or land covered with dense undergrowth,
80.00 chs.

N. 89° 59' E., on a random line bet. sres. 22 and 27.

40.00 Set temp. $\frac{1}{4}$ sec. ev.
79.92 Intersect N. and S. line 3 lbs. N. of ev. of sres. 22, 23, 26
and 27.

Chains

Shiner & run

W. 1/2 Sec. 21, on a true line bet. secs. 22 and 27.

Over mountainous land, descending through scattering cedar.

4.30 Spring creek, 40 lbs. wide, course S.; ascend.

13.50 Top of N. slope of ridge; descend.

21.40 Spring creek, 40 lbs. wide, course N.; ascend.

23.70 Top of rocky point; descend.

25.00 Spring creek, 40 lbs. wide, course S.; ascend.

39.96 Set a malpais stone, 18 x 10 x 8 ins., 1 1/2 ins. in the ground,

for 1/4 sec. cor. marked 1/4 on N. face; from which
A cedar, 30 ins. diam, bears S. 53 1/2° W., 234 lbs. dist., marked
1/4 S 27 1/2° S.

A cedar, 30 ins. diam, bears N. 60 1/2° W., 332 lbs. dist., marked
1/4 S 22 1/2° S.; and raise a mound of stone, 2 ft. base, 1 1/2
ft. high, N. of cor.

48.00 Top, bears N. and S.; enter gently rolling land.

63.00 Begin descent, bears N. and S.

79.92 Top cor. of secs. 21, 22, 27 and 28.

Land, mountainous and gently rolling.

Soil, gravelly, stony and rocky; cor. and 4th rate.

Timber, scattering cedar.

Mountainous land, 63.68 chs.

January 12, 1905.

January 13: At 8:30 a.m. l.m.t. Set off 34° 45' on the
lat. arc; 21° 38' S. on the decl. arc; and determine
meridian with the solar at the cor. of secs. 21, 22, 27
and 28.

Shiner & run

N. 0° 02' W., bet. secs. 21 and 22.

Over mountainous land, descending.

16.10 N. end center monument Bond Book No. 3 placed claim
bears 10 lbs. W.

28.60 Road, bears N. and S. W.; enter gently rolling land.

40.00 Set a malpais stone, 20 x 8 x 4 ins., 1 1/2 ins. in the ground,

for 1/4 sec. cor. marked 1/4 on W. face; dig pits, 18 x 18 x 1 1/2
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.

56.00 Enter scattering cedar and dense brush, bears N. W.
and S. E.

67.70 Round bars NW and SE.
 80.00 Set a malpais stone, 18x8x6 ins., 1/2 ins. in the ground, for
 cor. of secs. 15, 16, 21 and 22, marked
 17 N. on N.E., and
 4 E on S.E. face, with 3 notches on S. and E. edges; from
 which
 A cedar, 7 ins. diam., bears N. 56° E., 116 lbs. dist., marked
 S 17 N R 4 E S 15 B S
 A cedar, 8 ins. diam., bears S. 24 1/2° E., 127 lbs. dist., marked
 S 17 N R 4 E S 22 B S.
 A cedar, 7 ins. diam., bears S. 67° W., 137 lbs. dist., marked
 S 17 N R 4 E S 21 B S. no other tree within limit; dig
 pit, 18x18x12 ins., N.W. of cor., 5 1/2 ft. dist., and raise a
 mound of earth, 4 ft. base, 2 ft. high, W. of cor.
 Ground, mountainous and gently rolling.
 Soil, sandy and gravelly loam. 2nd and 3rd rates.
 Timber, scattering cedar, undergrowth, algarrota and
 Arctostaphylos.
 Mountainous or land covered with dense undergrowth,
 47.60 chs.

40.00 East, on a random line bet. secs. 15 and 22.
 Set 1/4 sec. cor.
 79.93 Perimeter N. and S. line 6 chs. N. of cor. of secs. 14, 15,
 22 and 23.
 Shores E. and W.
 N. 89° 57' W., on a true line bet. secs. 15 and 22.
 Over rolling land.
 33.00 Dry wash, 20 lbs. wide, course S.W. entered level land.
 39.96 1/2 Falls on ground subject to overflow from wash.
 41.00 Dry wash, 15 lbs. wide, course S.W.
 44.00 Set a malpais stone, 18x8x6 ins., 1/2 ins. in the ground,
 for interest cor. to 1/4 sec. cor. marked N 6 1/4 on N. face;
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N.
 of cor.
 52.00 Corral, bears 80 lbs. N.
 55.10 Log fence, bears N. and S.
 55.30 Stable on line.
 55.80 Windmill and water tank, bear 55 lbs. N.
 56.00 Jas. Pail's ranch house bears 3 chs. N.
 58.90 Wood fence, bears N. N. W. and S. S. E.; enter dense brush.

Chains
 60.60 Spring creek, 40 lbs. wide, course S., ascend over rolling
 land, through scattering cedar.
 79.93 Str. cor. of sres. 15, 16, 21 and 22.
 Land, rolling and level.
 Soil, sandy loam, gravelly and stony; 2nd, 3rd and 4th
 rates.
 Timber, scattering cedar, undergrowth, algarovita and
 frontal.
 Dense undergrowth, 21.03 chs.

N. 0°02' W., bet. sres. 15 and 16.
 Over rolling land, through scattering cedar timber.
 22.00 Enter cross pale chesto brush, bears N. and S. W.
 36.45 Road, bears E. and W.
 37.70 Dry wash, 10 lbs. wide, course E. S. E.
 40.00 Set a sandstone, 20 x 6 x 4 ins., 15 ins. in the ground, for
 1/4 sec. cor. marked 4 on N. face, dig pits, 13 x 13 x 12 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, N. of cor.
 57.00 Dig pits, bears N. and S.
 60.15 Dry wash, 10 lbs. wide, course E.
 68.00 Deep gulch, 30 lbs. wide, course S. E.; land dense brush.
 80.00 Set a sandstone, 20 x 6 x 4 ins., 15 ins. in the ground, for
 cor. of sres. 9, 10, 15 and 16, marked with 4 notches on S.
 and 3 notches on E. edge, from which
 A juniper, 8 ins. diam., bears S. 30 1/4° W., 371 lbs. dist., marked
 P 17 N. R 4 E S 16 B S, on other face, dig pits, 13 x 13 x 12 ins.,
 N. W., S. E. and N. W. of stone, 5 1/2 ft. dist., and raise a
 mound of earth, 4 ft. base, 2 ft. high, N. of cor.
 Land, rolling.
 Soil, sandy and gravelly loam and stony; 2nd, 3rd and
 4th rates.
 Timber, scattering cedar, undergrowth, algarovita and
 pale chesto.
 Dense undergrowth, 42.00 chs.
 January 13: At this cor. E set off 21° 28' S. on the level
 level land, at 12° 3' l. m. t., observe the sun on the
 meridian, the resulting lat. is 34° 48', or within 4'
 of the proper lat.

89° 57' S. on a random line bet. sres. 10 and 15.
 40.00 Set temp. 1/4 sec. cor.

6hms
79.96 Enterret N. and S. line 4 hrs. N. of cor. of secs. 10, 11,
14 and 15.
Planned Burn
N. 89° 55' W., on a true line bet. secs. 10 and 15.
Over mountainous land, ascending through scattering
redwood and dense brush.

7.00 Ridge, bars N. and S.; descend.

26.00 Enter gulch, course W.

28.30 Broad gulch, course N.W.; ascend.

39.98 Set a sandstone, 18x8x6 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.

41.50 Top of N. slope of ridge; descend.

59.00 Begin steep descent over sandstone ledges.

62.50 Spring creek, 40 lbs. wide, course S.; ascend.

66.00 Top, bars N. and S.; thence along N. slope of ridge.

79.96 Top cor. of secs. 9, 10, 15 and 16.
Land, mountainous.
Soil, gravelly, stony and rocky; red and 4th rates.
Dense, scattering redwood; undergrowth, algarrota, palo
christo and totilla.
Mountainous, or land covered with dense undergrowth,
79.96 hrs.

N. 0° 02' W., bet. secs. 9 and 10.
Over rolling land, through scattering redwood timber.

4.00 Dry wash, 15 lbs. wide, course E.

20.00 Enter dense brush, bars E. and W.

32.00 Broad dense brush, bars N.W. and S.W.

38.00 Begin descent.

40.00 Set a sandstone, 18x8x6 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 impractic-
able.

42.30 Descend over ledges and boulders.

43.80 Spring creek, 40 lbs. wide, course S.E.; ascend.

44.90 Top of bank.

57.00 Ridge, bars N.W. and S.W.; descend.

60.60 Dry wash, 10 lbs. wide, course S.W.; ascend through dense
totilla.

69.00 Ridge, bars N.N.E. and S.S.W.; thence descend along W.

80.00 *Stamps*
 Set a sandstone, 20 x 8 x 6 ins., 15 ins. in the ground, for ev. of secs. 3, 4, 9 and 10, marked with 5 notches on S. and 3 notches on E. edge; from which
 A rod, 16 ins. diam., bears N. 46 1/2° E., 112 lbs. dist., marked S 17 N R 4 E S 3 B S.
 A rod, 36 ins. diam., bears S. 75° W., 310 lbs. dist., marked S 17 N R 4 E S 9 B S; on other ends, and raise a mound of sand, 2 ft. base, 1 1/2 ft. high, N. of ev. Pits impracticable.
 Land, mountains and rolling.
 Soil, gravelly and stony; 3rd and 4th rates.
 Timber, scattering cedar, undergrowth, trellis and algarota.
 Mountains or land covered with dense undergrowth,
 30.00 chs.

January, 13, 1915.

January 14: At 8:55^{am}, a.m., l.m.t., I set off 34° 50' on the lat. arc, 21° 18' S, on the decl. arc, and determine a meridian with the solar at the ev. of secs. 3, 4, 9 and 10.

Stamps, 8 mm
 S. 89° 55' E, on a random line bet. secs. 3 and 10.
 40.00 Set stamp. 1/4 sec. ev.
 50.00 Enter set N. and S. line 2 lbs. N. of ev. of secs. 2, 3, 10 and 14.

Stamps, 8 mm
 N. 89° 54' W., on a line bet. secs. 3 and 10.
 Very mountainous land, descending through heavy cedar timber.

32.00 Descend abruptly to
 34.25 Gulch, 200 ft. below sec. ev., 60 lbs. wide, course S. W., ascend.

40.00 *Stamps*
 Set a sandstone, 20 x 8 x 4 ins., 15 ins. in the ground, for 1/4 sec. ev. marked 1/4 on N. face; from which
 A rod, 8 ins. diam., bears N. 18° E., 230 lbs. dist., marked 1/4 S 3 B S.
 A rod, 20 ins. diam., bears S. 9 1/2° E., 157 lbs. dist., marked 1/4 S 10 B S.

48.00 Bridge, bears N. E. and S. W.; into dense brush, bears N. and S.; descend.

6^{1/2} hrs 56.50 Dry wash, 15 lbs wide, course S. W.; brush heavy timber; ascend.
 74.00 Ridge, bars N. N. E. and S. S. W.; descend.
 80.00 Str ev. of secs. 3, 4, 9 and 10.
 Land, mountainous.
 Soil, gravelly, stony and rocky; 3rd and 4th roots.
 Timber cedar; undergrowth, Psittilla and algarrota.
 Mountainous, heavily timbered or land covered with dense undergrowth, 80.00 chs.

40.00 N. 0° 02' W, on a random line bet. secs. 3 and 4.
 Set trap. 1/4 sec. cor.
 79.50 Intersect N. bdy. of Sp. 4 lbs. E. of cor. of secs. 3, 4, 33 and 34, as heretofore described.

Turner & run
 S. 0° 04' E., on a trap line bet. secs. 3 and 4.
 Over mountainous land, descending.
 12.00 Foot, bars N. W. and S. W.; rather gently rolling land.
 39.50 Set a sandstone, 18 x 12 x 8 ins., 12 ins. in the ground, for 1/4 sec. cor. marked 1/4 on N. face; dig pits, 18 x 18 x 12 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, N. of cor.

43.90 Begin descend.
 46.20 Gulch, 10 lbs. wide, course S. E.; ascend
 53.00 Ridge, bars N. and S. W.; descend through dense Psittilla.

71.10 Gulch, 10 lbs. wide, course S. W.; ascend.
 79.40 Str ev. of secs. 3, 4, 9 and 10.
 Land, mountainous and gently rolling.
 Soil, sandy and gravelly loam and stony; 2nd, 3rd and 4th roots.
 Timber, a few cedar; undergrowth, Psittilla and algarrota.
 Mountainous, 117 land covered with dense undergrowth, 47.70 chs.

From the ^{standard} cor. of secs. 32 and 33 on the S. bdy. of the Sp., as heretofore described, & run
 N. 0° 02' W. bet. secs. 32 and 33.
 Over gently rolling land.
 35.00 Enter scattering cedar timber and dense brush, bars

brains N. W. and S. E.
 40.00 Set a conglomerate stone, 18x11x8 ins., 12 ins. in the ground, for $\frac{1}{4}$ sec. cov. marked $\frac{1}{4}$ on W. face, from which
 A rod, 20 ins. diam., bears N. $42\frac{3}{4}$ E, 116 lbs. dist., marked $\frac{1}{4}$ S $3\frac{3}{4}$ B S.
 A gopher, 12 ins. diam., bears S. 14 W, 175 lbs. dist., marked $\frac{1}{4}$ S $3\frac{1}{2}$ B S.
 56.00 Descend, bears N. W. and S. E.
 63.50 Dry wash, 30 lbs. wide, course E, turned over nearly level land.
 71.40 Bend, bears N. and S. W.
 74.00 Same wash, 30 lbs. wide, course S. W.; ascend
 80.00 Set a malpais stone, 20x8x4 ins., 15 ins. in the ground for cov. of secs. 28, 29, 32 and 33, marked with 1 notch on S. and 4 notches on E. edge; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft high, W. of cov.
 Land, gently rolling and mountainous.
 Soil, sandy and generally loam and stony; 2nd, 3rd and 4th rate.
 Timber, scattering cedar, undergrowth, palo christo, algarrota and lentilla
 Mountains, or land covered with dense undergrowth,
 84.50 chs.

Summary 14, 1915.

X Summary 15: At 8^h 30^m a.m., l.m.t., set off 34° 47' on the lat. arc; 21° 09' S. on the decl. arc; and determine a meridian with the solar at the cov. of secs. 28, 29, 32 and 33.
 Shiner & run
 East, on a random line bet. secs. 28 and 33.
 40.00 Set camp $\frac{1}{4}$ sec. cov.
 79.91 Enter set N. and S. line at the cov. of secs. 27, 28, 33 and 34.
 Shiner & run
 West, on a run line bet. secs. 28 and 33.
 Over mountainous land, ascending through scattering cedar timber and dense palo christo brush.
 15.00 Ridge, bears N. and S.; ascend through dense brush
 26.00 bench, 15 lbs. wide, course S.; ascend.

6 chains
31.110
39.95^{1/2} Top, bars N. and S., thence along S. slope of ridge.
Set a malpais stone, 18x6x4 ins., 12 ins. in the ground,
for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face; from which
A well 12 ins. diam., bars S. $15\frac{1}{4}^{\circ}$ W. 79 lbs. dist., marked
 $\frac{1}{4}$ S 33 $^{\circ}$ B S, no other cor. within limit, and raise a mound
of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Bits impracticable.
44.60 Road of wash, course S.; ascend.
55.00 Ridge, bars N. W. and S. E.; descend.
58.00 Some scattering rocks, bars N. and S.
65.60 Road, bars N. and S., bare, dense brush.
66.111 Dry wash, 30 lbs. wide, course S. W.; ascend.
75.00 Top of S. slope of ridge.
79.91 S. cor. of secs. 28, 29, 32 and 33.
Land, mountainous.
Soil, gravelly and stony 3rd and 4th rate.
Timber, scattering, woods.
Mountainous land covered with dense undergrowth,
79.91 chs.

N. cor. N., bet. secs. 28 and 29.
Over mountainous land, ascending.
8.00 Ridge, bars N. W. and S. E.; thence along E. slope.
24.00 Begin descent.
40.00 Set a malpais stone, 20x10x4 ins., 15 lbs. in the ground,
for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. 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, N. of cor.
51.60 Dry wash, 20 lbs. wide, course S. E.; ascend.
62.00 Top of E. slope of spur, descend.
67.00 Dry wash, 30 lbs. wide, course S. E.; enter level land.
79.41 Set a calcareous stone, 20x12x4 ins., 15 ins. in the ground,
for witness cor. to cor. of secs. 20, 21, 28 and 29, marked
W 6, with 2 notches on S. and 4 notches on E. edge;
from which
A willow, 7 ins. diam., bars N. $13\frac{1}{2}^{\circ}$ E., 249 lbs. dist., marked
W 6 S 17 N R 4 E S 21 B S.
A willow, 6 ins. diam., bars N. 29 $^{\circ}$ W. 149 lbs. dist., marked
W 6 S 17 N R 4 E S 20 B S; no other cor., and raise a
mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
30.00 The point for sec. cor. falls in dry wash, 25 lbs. wide,
course S. S. W.

Chains

Land, mountainous and level.
Soil, sandy, gravelly and stony; 3rd and 4th rates.
Timber, a few cedar and willows; undergrowth, brush.
Mountainous land, 67.00 chs.

East, on a random line bet. secs. 21 and 28,
from cor. point in wash.
40.00 Set trap $\frac{1}{4}$ sec. cor.
79.90 Enter sec. N. and S. line 3 chs. S. of cor. of secs. 21, 22,
27 and 28.

Plowed & mnd
S. 89° 59' N., on a true line bet. secs. 21 and 28.
Over mountainous land, descending.
16.50 Dry wash, 10 chs. wide, course S. W.
17.15 Road, bears N.W. and S.W.; ascend.
20.00 Bridge, bears N. and S.; descend.
29.00 Small wash, course S.; ascend.
35.00 Ridge, bears N. and S.; thence over gently rolling land.
39.95 Set a calcareous stone, 18 x 8 x 8 ins., 12 ins. in the ground,
for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face; dig pits, 18 x 18 x 12
ins., E. and W. of stone, 3 ft. dist., and raise a mound
of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.

74.00 Descend.
76.00 Enter level land.
79.90 Set cor. point of secs. 20, 21, 28 and 29.
Land, mountainous, rolling and level.
Soil, sandy and gravelly, clean and stony; 2nd, 3rd and
4th rates.
No timber.
Mountainous land, 35.00 chs.

N. 0° 02' N., bet. secs. 20 and 21, from cor. point in wash.
Over level land.
80.00 Dry wash, 30 chs. wide, course S. S. W.
5.00 Same wash, 30 chs. wide, course S. S. E.
19.60 Level land and enter gently rolling land.
36.00 Road, bears N. E. and S. W.
41.00 Set a calcareous stone, 20 x 8 x 4 ins., 18 ins. in the ground,
for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face; dig pits, 18 x 18 x 12
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, N. of cor.
Enter dense brush, bears N. W. and S. E.

Chains
59.00 Dry wash, 30 lbs. wide, course S. E.
63.00 Same dense brush, bars E. and W.
73.95 Same wash, course W. S. W.
77.00 Same wash, 30 lbs. wide, course S. S. E.
80.00 Set a sandstone, 18x10x4 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. side, from which
An oak, 7 ins. diam., bars S. 62° E., 326 lbs. dist., marked
S 17 N R 4 E S ~~21~~ 20 B S.
A pine, 8 ins. diam., bars S 42 3/4° W., 174 lbs. dist., marked
S 17 N R 4 E S ~~20~~ 21 B S., marked trees; dig pits, 18x18x12 ins.,
N.W. and N.E. of stone, 5 1/2 ft. dist., and raise a mound
of earth, 4 ft. base, 2 ft. high, W. of cor.
Land, gently rolling and level.
Soil, sandy and gravelly loam; 2nd and 3rd rate.
Timber, a few oak and pines; undergrowth, bristled.
Dense undergrowth, 9.00 chs.
January 15: At this cor. I set off 21097' S. on the
dial arc, and at 12h 4m l.m.t., observe the sun in the
meridian; the resulting lat. is 34° 49', or within 5' of the
proper lat.

40.00 M 89° 59' E, on a random line bet. secs. 16 and 21.
Set kump. 1/4 sec. cor.
49.85 Enter set N. and S. line at the 5th th of the
end of secs. 15, 16, 21
and 22.
Placed a run
N. 89° 59' W., on a true line bet. secs. 16 and 21.
Dry rolling land, through scattering cedar and dense
jacks, birch and algaroba brush.
31.00 Barred scattering cedar, bars N. and S.
39.92 1/2 Set a sandstone, 18x10x4 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.
41.50 Dry wash, 10 lbs. wide, course S.; ascend.
55.00 Ridge, bars N. and S.; ascend.
60.00 Same dense brush, bars N. and S.
70.00 Fapt., bars N. and S.; enter level land.
79.85 In cor. of secs. 16, 17, 20 and 21.
Land, rolling, mountainous and level.
Soil, gravelly loam; 2nd and 3rd rate.

6 hrs

Timber scattering around. undergrowth, algarovita, frutilla and palo christo.
 Mountains or land covered with dense undergrowth,
 70.00 hrs.

N. 0° 02' W. bet. sec. 16 and 17.

Over level land.

- 21.00 Begin ascent. bars N. W. and S. E.
- 30.00 Spur of spur, extending W.; descend.
- 34.85 Dry wash, 30 lbs. wide, course W.; ascend.
- 40.00 Get a calcareous stone, 20 x 8 x 4 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, W. of cor.
- 49.50 Spur, extending W.; descend.
- 52.40 Dry wash, 15 lbs. wide, course W.; ascend.
- 55.00 Old well, bars W., about 8 hrs. dist.
- 56.00 Spur, extending W.; descend.
- 61.20 Dry wash, 10 lbs. wide, course S. W.; ascend.
- 71.00 Bridge, bars W. and S. W.; descend.
- 77.00 Dry wash, 30 lbs. wide, course S. W.; ascend.
- 80.00 Get a sandstone, 20 x 10 x 10 ins., 15 ins. in the ground,
 for cor. of sec. 8, 9, 16 and 17, marked with 4 notches on
 S. and E. edges, and raise a mound of stone, 2 ft.
 base, 1 1/2 ft. high, W. of cor.

Land, mountains and level.
 Soil, sandy and gravelly loam and stony, 2nd, 3rd
 and 4th cuts.
 Timber, a few around.
 Mountains land, 59.00 hrs.

January 15, 1905.

January 16: Start 35⁰⁰ a.m., l. by t., set off 34° 49' on
 the lat. arc; 20° 56' S. in the arc, and de-
 termine a meridian with the solar at the cor. of sec.

8, 9, 16 and 17.

Plumer & run

40.00 S. 89° 59' E. on a random line bet. sec. 9 and 16.

79.91 Intersect N. and S. line 4 lbs. N. of cor. of sec. 9, 10, 15
 and 16

Plumer & run

71.89° 57' W. on a true line bet. sec. 9 and 16.

Chains Over mountainous land, ascending through scattering
 cedar
 10.00 Soil, bars for and for
 16.00 Bridge, bars N.W. and S.E.; descend.
 26.50 Gulch, 20 lbs. wide, course S.E.; ascend.
 37.00 Bridge, bars N.W. and S.W.; descend.
 39.95² Set a sandstone, 18x8x6 ins., 1 $\frac{1}{2}$ 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.
 49.71 Dry wash, 30 lbs. wide, course S.W.; ascend.
 52.00 Spur, extending S.; descend.
 54.00 Dry wash, 10 lbs. wide, course S.; ascend.
 56.00 Bridge, bars N.W. and S.W.; descend.
 61.90 Dry wash, 10 lbs. wide, course S.W.; ascend.
 69.00 Spur, extending S.W.; descend.
 78.00 Dry wash, 15 lbs. wide, course S.W.; ascend.
 79.91 Plr cor. of secs. 8, 9, 16 and 17.
 Land, mountainous.
 Soil, gravelly and stony; 3rd and 4th rates.
 Timber, scattering cedar, undergrowth, pale chestn and
 algaroba.
 Mountainous land, 79.91 chs.

N. 0° 02' W., bet. secs. 8 and 9. Cor. 15° E.
 Over mountainous land, descending.
 18.00 Dry wash, 10 lbs. wide, course N.; ascend.
 20.00 Spur, extending N.; descend.
 23.50 Dry wash, 10 lbs. wide, course N.; ascend.
 25.00 Spur, extending N.; descend.
 29.30 Dry wash, 10 lbs. wide, course N.; ascend.
 34.00 Spur, extending N.W.; descend.
 39.75 Dry wash, 15 lbs. wide, course N.; ascend.
 40.00 Set a sandstone, 20x6x4 ins., 15 ins. in the ground, for $\frac{1}{4}$
 sec. cor. marked $\frac{1}{4}$ on N. 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, N. of cor.
 45.00 Spur, extending N.; descend.
 50.50 Dry wash, 10 lbs. wide, course N.; ascend.
 59.20 Spur, extending S.W.; descend.
 63.25 Dry wash, 10 lbs. wide, course S.W.; ascend through
 scattering cedar.

Chams
75.00 Bridge, bars E. and W.; descend.
80.00 Set a sandstone, 20x10x8 ins., 15 ins. in the ground, for
OR ev. of sres. 4, 5, 8 and 9, marked with 5 notches on S.
and 4 notches on E. edge; from which
A rod, 18 ins. diam., bars S. 59° E., 111 lbs. dist., marked
S 17 N R 4 E S 13 S.
A rod, 8 ins. diam., bars N. 68° W., 158 lbs. dist., marked
S 17 N R 4 E S 13 S.; no other rods within limit and
raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of ev.
Pits impracticable.
Land, mountainous.
Soil, gravelly and stony; 3rd and 4th cuts.
Timber, scattering cedar; undergrowth, algarrota and
trotilla.
Mountainous land, 80.00 chs.
January 16. At this ev. I set off 20° 55' S. on the decl.
line; and, at 12^h 6^m 1^m t., observe the sun on the
meridian; the resulting lat. is 34° 51' or within 3'
of the proper lat.

S. 89° 57' E.; run a random line bet. sres. 4 and 9.
40.00 Set trap. 1/4 sec. ev.
79.97 Portavret N. and S. line 6 lbs. N. of ev. of sres. 3, 4,
9 and 10.
Shores of run
N. 89° 57' E., on a line bet. sres. 4 and 9.
Over mountainous land, descending.
4.60 Dry wash, 10 lbs. wide, course S. W., descend.
10.00 Bridge, bars N. and S.; descend.
26.70 Spring, 40 lbs. wide, course S.; ascend.
33.00 Doh, bars N. and S.; enter gently rolling land.
39.90 Set a sandstone, 20x7x4 ins., 15 ins. in the ground,
OR for 1/4 sec. ev. 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 ev.
55.00 Soil, bars N. and S.
71.00 Begin descent, bars N. and S.
79.97 Over ev. of sres. 4, 5, 8 and 9.
Land, mountainous and gently rolling
Timber, scattering cedar; undergrowth, algarrota.
Soil, gravelly; 3rd cut.
Mountainous land, 42.00 chs.

Chimney N. 0° 02' W., on a random line bet. sres. 4 and 5.
 40.00 Set stamp. $\frac{1}{4}$ sec. ev.
 49.61 Intersect N. bdy. of Sp. 2 lks. W. of ev. of sres. 4, 5, 32
 and 33, as heretofore described.
 Primer & run
~~N. 0° 03' W.~~ on a true line bet. sres. 4 and 5.
 Over mountainous land descending.
 13.20 Dry wash, 111 lks. wide, course S. W.; ascend.
 22.00 Slope of W. slope of ridge; thence over gently rolling
 land.
 39.61 Set a sandstone, 20 x 6 x 4 ins., 15 ins. in the ground,
 for $\frac{1}{4}$ sec. ev. marked $\frac{1}{4}$ on W. face; and found a
 mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of ev.
 26.00 Enter dry wash, course S.
 28.00 Leave wash, course S. S. W.
 49.21 Sp. ev. of sres. 4, 5, 8 and 9.
 Land, mountainous and gently rolling.
 Soil, gravelly and stony; few wood 4th bet.
 Timber, a few cedar; undergrowth, bristled and algaroba.
 Mountainous land, 22.00 lks.

January 16, 1905.

Note - Heavy rains since the morning of January 16 prevented work until January 18, 1905.

January 18: At 8^h 40^m a.m., l.v. A., I set off 34° 46' on the lat. arc, 20° 02' S., on the decl. arc, and determined meridian with the solar at the standard. ev. of sres. 31 and 32, on the S. bdy. of the Sp., as heretofore described.

Primer & run

N. 0° 03' W. bet. sres. 31 and 32.

Along E. slope of mountain, through heavy cedar timber.

40.00 Set calcareous stone, 24 x 16 x 10 ins., 18 ins. in the ground, for $\frac{1}{4}$ sec. ev. marked $\frac{1}{4}$ on W. face; from which
 A cedar, 20 ins. diam., bears N. 20 $\frac{1}{4}$ E, 28 lks. dist., marked $\frac{1}{4}$ S. 32 B S.

A cedar, 24 ins. diam., bears N. 62 $\frac{1}{4}$ W, 32 lks. dist., marked $\frac{1}{4}$ S. 31 B S.

2550 bench, 211 lks. wide, course S. E.

80.00 Set a calcareous stone, 24 x 16 x 8, 18 ins. in the ground, for ev. of sres. 29, 30, 31 and 32, marked with 1 notch on S.

4

Chains

2nd
Chains

and 5 notches on E. edge, from which
 A pinon, 8 ins. diam., bears N. $70\frac{1}{4}^{\circ}$ E, 60 lbs. dist., marked
 S 17 N R 4 E S 29 B S.
 A pinon, 8 ins. diam., bears S. 28° E, 98 lbs. dist., marked
 S 17 N R 4 E S 32 B S.
 A cedar, 24 ins. diam., bears S $58\frac{3}{4}^{\circ}$ W, 2 lbs. dist., marked
 S 17 N R 4 E S 37 B S.
 A cedar, 20 ins. diam., bears N. $35\frac{1}{2}^{\circ}$ W, 86 lbs. dist., marked
 S 17 N R 4 E S 30 B S.
 Land, mountainous.
 Soil, gravelly and stony; 3rd and 4th rate.
 Timber, cedar and pinon; undergrowth, pale chisto.
 Mountainous land, 8000 chs.

East, on a random line bet. secs. 29 and 32.
 40.00 Set trap. $\frac{1}{4}$ sec. cor.
 49.96 Enter set N. and S. line 4 lbs. N. of cor. of secs. 28, 29, 32
 and 33.
 Flared, 8 min
 N. $89^{\circ} 57'$ W, on a true line bet. secs. 29 and 32.
 Over mountainous land, descending
 6.50 Enter gulch, course S. E.
 9.30 Leave gulch, course E.; ascend.
 17.00 Spur, extending S.; descend.
 22.00 Same gulch, 15 lbs. wide, course S. E.; ascend.
 27.00 N. slope of ridge; descend.
 30.00 Foot, bears N. and S; thence over gradually rising
 ground.
 39.98 Set a malpais stone, 20 x 8 x 4 ins., 15 ins. in the ground,
 for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face; dig pits, 18 x 18 x 12
 ins., E. and W. of stone, 3 ft. dist., and raise a mound
 of earth $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
 55.00 Road bears N. W. and S. E.
 60.00 Enter dense brush, bears N. and S.
 72.00 Begin ascent of E. slope of mountain, through heavy
 cedar timber.
 79.96 Set cor. of secs. 29, 30, 31 and 32.
 Land, gently rolling and mountainous.
 Soil, sandy and gravelly loam and stony; 2nd, 3rd and
 4th rate.
 Timber, cedar, undergrowth, pale chisto and algarrota.
 Mountainous heavily timbered or land covered with cedar
 undergrowth, 50.00 chs.

6 hours West, on a random line bet. sres. 30, and 31.
 41.00 Set temp. $\frac{1}{4}$ sec. cor.
 79.88 Enter at N. end of Sp. 4 lks. N. of cr. of sres. 25, 30, 31 and 36, as hereafter described.
 Show & run N. $89^{\circ}58'$ E., on a true line bet. sres. 30 and 31.
 Over mountainous land, descending.
 7.90 Gulch, 20 lks. wide, course S. W.; ascend through dense *Paulo christo* brush.
 21.00 Spur, bears N. and S. W.; inter gently rolling land.
 39.88 Set a calcareous stone, $20 \times 10 \times 4$ ins, 15 ins. in the ground, for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face; dig pits, $18 \times 18 \times 12$ ins. E. and W. of stone 3 ft. dist., and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, N. of cor.
 47.65 Round, bears N. and S.
 49.85 Begin ascent, bears N. and S.
 57.15 Gulch, 20 lks. wide, course N. W.; ascend through heavy cedar and pinoon timber.
 62.80 Spur, extending N.; descend.
 79.88 Show cor. of sres. 29, 30, 31 and 32.
 Ground, mountainous and gently rolling.
 Soil, gravelly and stony; 3rd and 4th, *Paulo christo* timber, cedar, and pinoon; undergrowth, *Paulo christo* and *algarruta*.
 Mountains, heavily timbered or land covered with dense undergrowth 49.88 chs.
 January 18. At this cor. I set off $20^{\circ}32'$ S., on the pred. arc; and at 12.30 a.m. observed the sun on the meridian; the resulting lat. is $34^{\circ}46'$ or within $\frac{1}{2}$ of the proper lat.

N. $0^{\circ}03'$ W., bet. sres. 29 and 30.
 Along E. slope of mountain, through heavy timber.
 8.50 Gulch, 40 lks. wide, course S. E.
 20.80 Gulch, 30 lks. wide, course S. E.
 40.00 Set a calcareous stone, $20 \times 8 \times 4$ ins, 15 ins. in the ground, for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face; from which a pinoon, 8 ins. diam., bears N. $30\frac{1}{2}^{\circ}$ E., 116 lks. dist., marked $\frac{1}{4}$ S 29 B S.
 A pinoon, 6 ins. diam., bears N. 79° W., 94 lks. dist., marked $\frac{1}{4}$ S 30 B S.

6 chains
 80.90
 80.00
 brush, 60 lbs. wide, course E.
 Set a calcareous stone, 20 x 10 x 4 ins., 15 ins. in the ground, for cor. of secs. 19, 20, 29 and 30, marked with 2 notches on S. and 5 notches on E. edge, from which
 A pinon, 6 ins. diam., bears N. 36 1/2° E., 96 lbs. dist., marked S 17 N R 4 E S 20 B S.
 A pinon, 14 ins. diam., bears S. 50 1/2° E., 95 lbs. dist., marked S 17 N R 4 E S 29 B S.
 A pinon, 6 ins. diam., bears S. 53° W., 99 lbs. dist., marked S 17 N R 4 E S 30 B S.
 A cedar, 12 ins. diam., bears N. 23° W., 89 lbs. dist., marked S 17 N R 4 E S 19 B S.
 Land, mountains.
 Soil, gravelly and stony, 2nd and 4th rglts.
 Timber, cedar and pinon; mangrove, pale chisto.
 Mountains or heavily timbered land, 80.00 lbs.

S. 89° 57' E., on a random line bet. secs. 20 and 29.
 40.00 Set temp. 1/4 sec. cor.
 49.92 Enter sec. N. and S. line 5 lbs. N. of cor. point of secs. 20, 21, 28 and 29.
 Thru brush
 N. 89° 55' W., on a true line bet. secs. 20 and 29, from cor. point in wash.
 .50 Over level land.
 .50 Dry wash, 30 lbs. wide, course S. S. W.
 5.00 34 in ascent through scattering cedar timber.
 15.00 Ridge, bears N. and S.; discerned.
 21.00 Level scattering cedar bears N. and S. W.
 31.00 Enter gently rolling land.
 39.96 Set a calcareous stone, 18 x 6 x 4 ins., 12 ins. in the ground, for 1/4 sec. cor. marked 1/4 on N. face; dig pits, 18 x 18 x 12 ins. E. and W. of stone, 3 ft. dist. and raise a mound of earth, 3 1/2 ft. base, 1/2 ft. high, N. of cor.
 53.00 Enter dense brush, bears N. and S.
 75.00 Road, bears N. and S., into heavy cedar timber and ascend.
 49.92 Thru cor. of secs. 19, 20, 29 and 30.
 Land, gently rolling, mountains and level.
 Soil, sandy and gravelly loam and stony; 2nd and 3rd rglts.

6 hours

Timber, cedar and pine; undergrowth, bristled and pale
chests.

Mountains, mainly timbered or land covered with dense
undergrowth, 51.92 chs.

January 18, 1905

January 19. At 8^h 30^m a.m. l.m.t. & set off 34° 48' on the
lat. arc; 20° 29' \downarrow S. on the decl. arc; and determine
a meridian with the solar at the ev. of sves. 19, 20, 29
and 30.

Placed & run

S. 89° 58' W., on a random line bet. sves. 19 and 30.

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

79.83 Intersect N. bay of ^{8 legs of} ~~S. path~~ ev. of sves. 19, 24, 25 and 30,
as heretofore described.

Placed & run

N. 89° 58' E., on a final line bet. sves. 19 and 30.

Over mountainous land, ascending through heavy timber
and dense brush.

15.00 Ridge, bears N. and S.; bears heavy timber and descend.

39.83 Set a calcareous stone, 20 x 12 x 8 ins., 15 ins. in the ground,
part $\frac{1}{4}$ sec. ev. marked $\frac{1}{4}$ on N. face, from which
A pinon, 14 ins. diam., bears S. 62° W., 130 lbs. dist., marked
 $\frac{1}{4}$ S 30° 13 S.

A cedar, 24 ins. diam., bears N. 42° W., 91 lbs. dist., marked
 $\frac{1}{4}$ S 19° 13 S.

63.00 Tent, bears N. and S.

65.50 Round, bears NW and S. W.

67.00 Dry wash, 30 lbs. wide, corner NW.

70.00 Ascend through heavy timber.

76.00 Spur, bears NW and S. W.; descend.

79.83 The ev. of sves. 19, 20, 29 and 30.

Land, mountainous and gently rolling.
Soil, gravelly and stony, 3rd and 4th roots.
Timber, cedar and pine; undergrowth, algarrota, bristled
and pale chests.

Mountains, mainly timbered or land covered with dense
undergrowth, 79.85 chs.

N. 0° 03' W., bet. sves. 19 and 20.

Over mountainous land, descending through heavy timber

Chains
 and above brush.
 5.60 Road, bears E. and W.
 7.00 Dry wash, 20 lbs. wide, course E.; ascend.
 12.00 Spur, extending E.; descend.
 16.40 Dry wash, 20 lbs. wide, course E.; ascend.
 22.00 Spur, extending E.; descend.
 40.00 Set a calcareous stone, 20 x 8 x 6 ins., 15 ins. in the ground, for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face, from which
 A rod, 5 ins. diam., bears N. $47\frac{1}{2}^{\circ}$ E., 120 lbs. dist., marked $\frac{1}{4}$ S 20 B S.
 A rod, 7 ins. diam., bears S. 80° W., 97 lbs. dist., marked $\frac{1}{4}$ S 19 B S.
 56.00 brush, 20 lbs. wide course S. E., thinned over gently rolling land.
 80.00 Set a calcareous stone, 18 x 12 x 6 ins., 12 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, from which
 A rod, 12 ins. diam., bears N. $61\frac{1}{4}^{\circ}$ E., 46 lbs. dist., marked S 17 N R 4 E S 17 B S.
 A rod, 14 ins. diam., bears S $33\frac{1}{4}^{\circ}$ E., 217 lbs. dist., marked S 17 N R 4 E S 20 B S.
 A rod, 24 ins. diam., bears S. $7\frac{3}{4}^{\circ}$ W., 129 lbs. dist., marked S 17 N R 4 E S 19 B S.
 A rod, 12 ins. diam., bears N. $27\frac{1}{2}^{\circ}$ W., 122 lbs. dist., marked S 17 N R 4 E S 18 B S.
 Land, mountains and gently rolling.
 Soil, sandy and gravelly here and stony; 2nd, 3rd and 4th rate.
 Timber, cedar and pine; undergrowth, pale chestnut mountains, largely timbered or land covered with dense undergrowth, 50.00 chs.

40.00 S. $89^{\circ}55'$ E., on a random line bet. secs. 17 and 20.
 Set imp. $\frac{1}{4}$ sec. cor.
 49.82 Enter set N. and S. line 8 lbs. N. of cor. of secs. 16, 17, 20 and 21.
 Planned E. from
 N. $89^{\circ}52'$ W., on a true line bet. secs. 17 and 20.
 Poor level land.
 4.30 Dry wash, 40 lbs. wide, course S. E.
 3.30 Begin ascent, bears N. and S., through dense forest.

Chains
21.50 Ridge, bears N. and S.; have dense forest and descend.
25.00 Dry wash, 10 lbs. wide, course S.; ascend gradually.
39.91 Set a calcareous stone, 18x10x8 ins., 12 ins. in the ground, for
at 1/4 sec. ev. marked 1/4 on N. face; from which
A cedar, 21 ins. diam., bears S. 20 1/4° W., 242 lbs. dist., marked
1/4 S 20 13 S.
A cedar, 12 ins. diam., bears N. 66° W., 260 lbs. dist., marked
1/4 S 17 13 S.
50.60 Dry wash, 15 lbs. wide, course S. E.
55.00 Begin steep ascent through dense brush.
64.00 Top, 200 ft. above 1/4 sec. ev., bears N. and S., have dense
brush; thence over gently rolling land through heavy cedar.
79.82 Set ev. of secs. 17, 18, 19 and 21.
Land, gently rolling, mountainous and level.
Soil, sandy and gravelly loam and stony; 2nd, 3rd and
4th cuts.
Timber, cedar, young growth, fasciata and pale cistus.
Mountainous, heavily timbered or land covered with dense
young growth, 43.50 chd.
January 19: At this ev. I set off 20° 19' S. on the decl.
ev.; and, at 12 1/2 m. l. m. t. observe the sun on the
meridian; the resulting lat. is 34° 48' or within 3'
of the proper lat.
S. 89° 53' N., on a random line bet. secs. 18 and 19.
40.00 Set camp 1/4 sec. ev.
79.75 Enter set N. bay of Sp. 3; lbs. N. of secs. 13, 18, 19 and 24,
as heretofore described.
Shower of rain
N. 89° 53' E., on a true line bet. secs. 18 and 19.
Over gently rolling land, through heavy cedar & timber.
5.60 Old road, bears N. W. and S. E.
25.00 Begin steep descent.
29.30 Enter draw, course S.; have heavy cedar & timber.
31.70 Dry wash, 10 lbs. wide, course S. W.
37.80 Dry wash, 10 lbs. wide, course S. E.
38.95 Old road, bears N. N. E. and S. S. W.
39.75 Set a calcareous stone, 18x12x4 ins., 12 ins. in the ground, for
at 1/4 sec. ev. 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 ev.

Chains.
40.50

Level drawn; ascernd.

45.00

Sp. bars N.E. and S.E.; enter gently rolling land and heavy timber.

79.75

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

Land, gently rolling, level and mountainous.

Soil, sandy and gravelly loam and stony; 2nd, 3rd and 4th rates.

Timber, cedar; undergrowth, paulo christo and algarrota.

Mountainous or heavily timbered land, 69.18 chs!

N. 0° 03' N. bet. secs. 17 and 18.

Over gently rolling land, through heavy cedar timber.

40.00

Set a sandstone, 20 x 12 x 4 ins., 15 ins. in the ground, for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face, from which

OK
 $\frac{1}{2}$

A cedar, 12 ins. diam., bears N. 77° E., 53 lbs. dist., marked $\frac{1}{4}$ S 17 B S.

A cedar, 10 ins. diam., bears N. 80° W., 65 lbs. dist., marked $\frac{1}{4}$ S 18 B S.; from this cor. high hill bears E. about 60 chs!

58.00

Ascernd, bears E. and W.

66.00

Bridge, bears E. and W.; ascernd.

80.00

Set a calcareous stone, 18 x 8 x 6 ins., 12 ins. in the ground, for cor. of secs. 7, 8, 17 and 18, marked with 4 notches on S. and 5 notches on E. edge, from which

OK
 $\frac{1}{2}$

A cedar, 16 ins. diam., bears N. 52 $\frac{3}{4}$ ° E., 51 lbs. dist., marked S 17 N R 4 E S 8 B S.

A cedar, 24 ins. diam., bears S. 73° E., 136 lbs. dist., marked S 17 N R 4 E S 17 B S.

A cedar, 14 ins. diam., bears S. 86° W., 44 lbs. dist., marked S 17 N R 4 E S 18 B S.

A cedar, 20 ins. diam., bears N. 5° W., 33 lbs. dist., marked S 17 N R 4 E S 7 B S.

Land, gently rolling and mountainous!

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

Timber, cedar.

Mountainous or heavily timbered land, 80.00 chs!

January 19, 1905.

January 20: At 8^h 45^m a.m. l.m.t. I set off 34° 49' on the lat. arc, 20° 05' S. on the decl. arc, and determine a meridian with the solar at the cor. of secs. 7, 8, 17 and 18.

Chains

- Shaver & Finn
S. 89° 52' E, on a random line bet. secs. 8 and 17.
40.00 Set 4 mph. $\frac{1}{4}$ sec. cor.
79.92 Enter sec. 11. and S. line 4 lbs. ~~X~~ of cor. of secs. 8, 9, 16 and 17.
- Shaver & Finn
N. 89° 50' W, on a true line bet. secs. 8 and 17.
Over mountainous land, descending.
12.00 Gulch, 60 lbs. wide, course S.; ascend through dense brush.
16.00 Ridge, bars N. and S.; descend.
33.00 Descend steeply through scattering cedar.
38.00 Enter draw, course S.
39.96 Set a sandstone, 20 x 12 x 4 ins., 15 ins. in the ground, foot
of sec. cor. marked $\frac{1}{4}$ on N. face, from which
A cedar, 8 ins. diam., bears S. 32½° E, 134 lbs. dist., marked
 $\frac{1}{4}$ S 17 B S.
A cedar, 16 ins. diam., bears N. 31½° W, 72 lbs. dist., marked
 $\frac{1}{4}$ S 8 B S.
44.00 Dry wash, 30 lbs. wide, course S.; ascend.
50.00 Lower dense brush, bars N. and S.
57.00 Spur, extending NW.; descend.
62.00 Dry wash, 60 lbs. wide, course S.; ascend.
65.00 Enter heavy cedar timber, bars N. and S.
74.00 Spur, extending NW.; descend.
79.92 Sp. cor. of secs. 7, 8, 17 and 18.
Land, mountainous and level.
Soil, sandy and gravelly loam and stony; 2nd, 3rd and 4th rates.
Timber, cedar, undergrowth, koctilla and algarrota.
Mountainous, hardly timbered or land covered with dense undergrowth, 79.92 chs.
-
- S. 89° 54' W, on a random line bet. secs. 7 and 18.
40.00 Set 4 mph. $\frac{1}{4}$ sec. cor.
79.29 Enter sec. 11. body of Sp. 2 lbs. S. of cor. of secs. 7, 12, 13 and 18, as herebefore described.
Shaver & Finn
N. 89° 55' E, on a true line bet. secs. 7 and 18.
Over gradually descending ground.
40.00 Enter heavy cedar timber, bars NW. and S. W.
39.69 Set a calcareous stone, 21 x 8 x 4 ins., 15 ins. in the ground,

68.50 for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face, dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist, and raise a mound of earth, 3 $\frac{1}{2}$ ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.

74.40 Dry wash, 20 lbs. wide, course N.; ascend.

79.55 Spur, extending N.; descend.

79.69 Dry wash 10 lbs. wide, course N.; ascend.

79.69 Spur cor of secs. 7, 8, 17 and 18.

Land, gently rolling and mountainous.

Soil, gravelly loam and stony; 2nd, 3rd and 4th rates.

Timber, cedar, pinon and pine.

Mountainous, or heavily timbered land, 79.69 chs.

N. 0° 03' W., bet. secs. 7 and 8.

Over mountainous land ascending through heavy timber.

.25 Dry wash, 10 lbs. wide, course W.

2.00 Spur, extending W.; ascend.

6.00 Low heavy timber, bears W. and S.W.

8.70 Dry wash, 10 lbs. wide, course E.; ascend.

14.00 Ridge, bears E. and W.; ascend through dense brush

19.25 Dry wash, 15 lbs. wide, course S.E.; ascend.

26.70 Ridge, bears N. and S.W.; enter gently rolling land.

40.00 Set a sandstone, 20 x 8 x 6 ins., 15 ins. in the ground, for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N. face, dig pits, 18 x 18 x 12 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, N. of cor.

73.00 Low dense brush, bears E. and W.

80.00 Set a sandstone, 20 x 8 x 4 ins., 15 ins. in the ground, for cor. of secs. 5, 6, 7 and 8, marked with 5 notches on E. and E. ridges; dig pits, 18 x 18 x 12 ins. in each sec., 5 $\frac{1}{2}$ ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of cor.

Land, mountainous and gently rolling.

Soil, gravelly; 3rd rate.

Timber, cedar, undergrowth, bosilla and algarrota.

Mountainous, heavily timbered or land covered with grass undergrowth, 73.00 chs.

January 21: At this cor. Post off 20° 07' S. on the decl. line; and, at 12^h 6^m l.m.t., observe the sun on the meridian; the resulting lat. is 34° 49' or within 1' of the proper lat.

44

Chains - S. 89° 50' E., on a random line bet. secs. 5 and 8.
 411.00 Set trap. 1/4 sec. ev.
 79.95 Entrance N. and S. line 6 hrs. N. of ev. of secs. 4, 5, 8 and 9.
 Thruer & run
 N. 89° 47' W., on a true line bet. secs. 5 and 8.
 Over mountainous land, descending through scattering cedar.
 4.50 Dry wash, 40 hrs. wide, course S.; ascend.
 10.50 Ridge, bars N. and S.; descend.
 30.00 Bar scattering cedar, bars N. and S.
 36.40 Dry wash, 15 hrs. wide, course S. W.; ascend.
 39.97 1/2 Set a wall rock stone, 18 x 10 x 8 ins., 12 ins. in the ground, for 1/4 sec. ev. marked 1/4 on N. face; dig pits, 12 x 18 x 12 ins., E. and W. of stone, 3 ft. dist, and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of ev.
 51.00 Ridge, bars N. and S.; descend
 68.00 Dry wash, 20 hrs. wide, course S.; thruer over gently rolling land.
 79.95 Bar ev. of secs. 5, 6, 7 and 8.
 Land, mountainous and gently rolling.
 Soil, gravelly and stony; 2nd and 3rd rate.
 Timber, scattering cedar.
 Mountainous land, 68.00 hrs.

S. 89° 55' W., on a random line bet. secs. 6 and 7.
 40.00 Set trap. 1/4 sec. ev.
 79.60 Entrance N. bdy. of Sp. 3 hrs. N. of ev. of secs. 1, 6, 7 and 12, as heretofore described.
 Thruer & run
 N. 89° 54' E., on a true line bet. secs. 6 and 7.
 Over gradually descending ground, through scattering cedar.
 39.60 Set a calcareous stone, 18 x 8 x 6 ins., 12 ins. in the ground, for 1/4 sec. ev. marked 1/4 on N. face; dig pits, 18 x 18 x 12 ins., E. and W. of stone, 3 ft. dist, and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of ev.
 60.00 Dry wash, 20 hrs. wide, course S. W.
 79.60 Bar ev. of secs. 5, 6, 7 and 8.
 Land, gently rolling.
 Soil, gravelly; 2nd and 3rd rate.

chains

Timber, scattering cedar.

40.00 N. 0° 03' W., on a random line bet. secs. 5 and 6.
Set temp. $\frac{1}{4}$ sec. cor.

49.80 Enter sec. N. bay of Sp. 5 lvs. E. of cor. of secs. 5, 6, 31
and 32, as here to fore described.

Shiner, 8 mm

S. 0° 03' E., on a true line bet. secs. 5 and 6.

Over growthy rolling land through dense brush.

25.00 Dry wash, 20 lbs. high, compass S. E.

39.80 Set a sandstone, 18x11x8 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, 12 ft. high, N. of cor.

47.00 Dry wash, 40 lbs. high, compass S. W.

6.00 Open dense brush bars, N.E. and S. W.

79.80 The cor. of secs. 5, 6, 7 and 8.

Land, growthy rolling.

Soil, sandy and generally loam and stony; 2nd, 3rd
and 4th rate.

Timber, a few cedars, undergrowth, algarrota and
rosquilla.

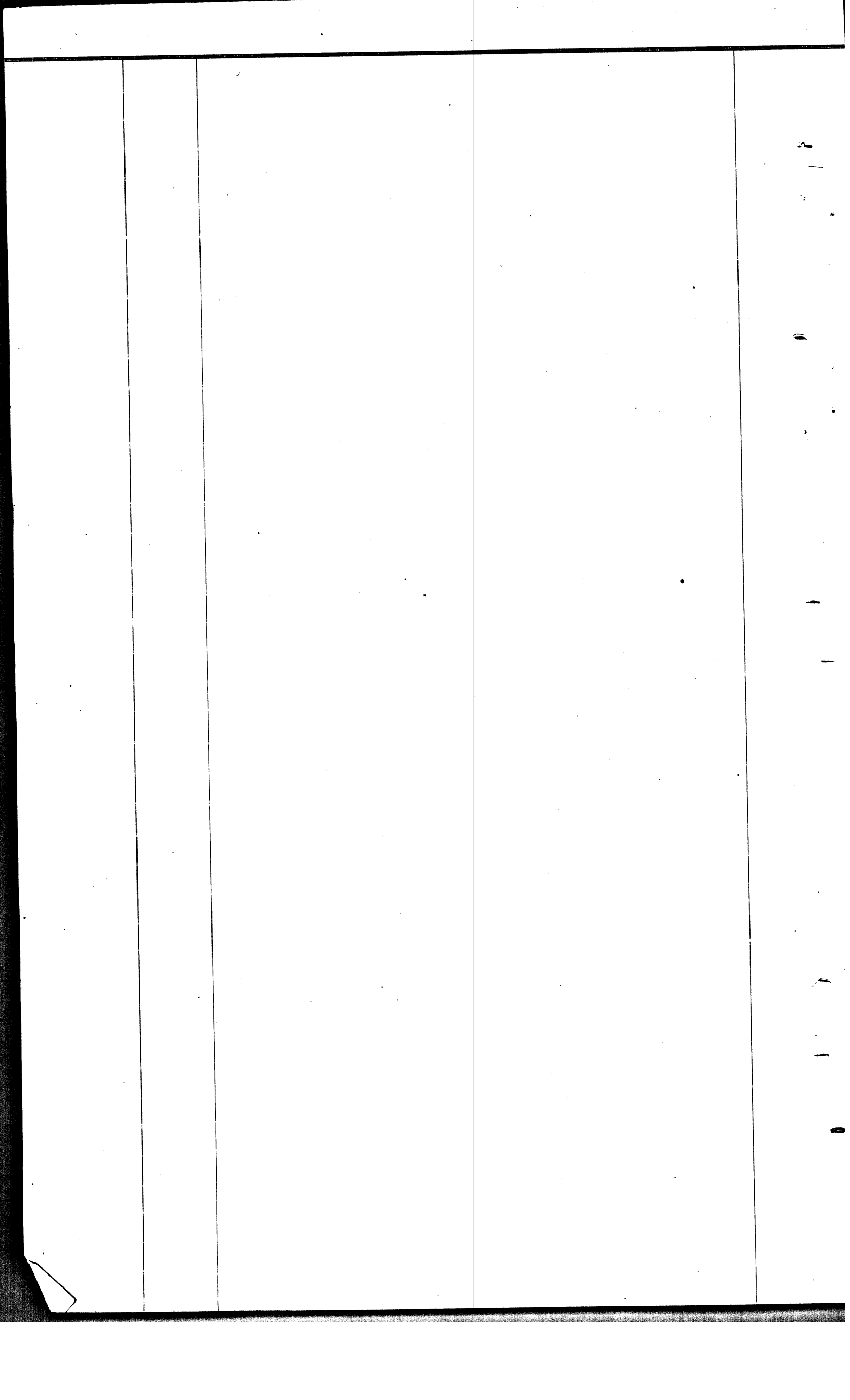
Dense undergrowth, 6.00 chs.

Note: All cor. established on the subdivision lines of
this Sp., by Deputy Herbert B. Maxson, have been
destroyed by me. January 20, 1905.

General Description.

This Sp. is mountainous and rolling. The soil is
mostly gravelly and stony, 3rd and 4th rate. The
gravelly portions of the Sp. is covered with good grass.
Cedar and juniper timber is found in the eastern and
western parts of the Sp. There is no permanent running
water in the Sp. James Dail's stock ranch is located
in the S. part of Sec. 15.

Edgar E. Dietrich
Deputy Surveyor.



LIST OF NAMES.

A list of the names of the individuals employed by Edgar C Dietrich, 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 S. 14 N., R. 14 E.

showing the respective capacities in which they acted:

John M. Trayer, Chairman.

Frank Dietrich, Chairman.

Charles Payne, Moundman.

William M. Ware, Moundman. *James*

Dora Owenby, Axman.

, Axman.

Fred E. Miller, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Edgar C Dietrich

, United States Deputy Surveyor, in surveying all those parts or portions of the Subdivision Lines of S. 14 N., R. 14 E.

of the Gila Salt River meridian, Territory of Arizona, which are represented

in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor

General for Arizona

John M. Trayer ✓, Chairman.

Frank Dietrich ✓, Chairman.

Charles Payne ✓, Moundman.

, Moundman.

William M. Ware ✓, Axman.

Dora Owenby ✓, Axman.

Fred E. Miller ✓, Flagman.

, Flagman.

Subscribed and sworn to before me this 21st day of January, 189 1905



Edgar C Dietrich
U. S. Deputy Surveyor

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

47 BOOK 1819

I, Edgar C. Dietrich, 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 15 day of September, 1905, 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 S. 17 N., R. 4 E.

of the Gila and Salt River meridian, in the Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

Edgar C. Dietrich
United States Deputy Surveyor.

Subscribed by said Edgar C. Dietrich, and sworn to before me }
this eleventh day of July, 1905, 189

Frank S. Ingalls



~~No notary public available~~

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

The foregoing field notes of the survey of Phoenix, Arizona July 25th, 1905
of the Gila and Salt River Base and Meridian, Territory of
Arizona

executed by Edgar C. Dietrich U.S. Deputy Surveyor
under his contract No. 123, dated September 15th 1904, 190, 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.