

Book "A"

BOOK 2766

Exteriors FIELD NOTES

OF THE SURVEY OF THE

WEST & SOUTH BDRS. OF FRAC. T. 4 $\frac{1}{2}$ N., R. 32 E.
 NORTH & WEST BDRS. OF T. 5 S., R. 29 E.
 E $\frac{1}{2}$ of NORTH BDY. OF T. 5 S., R. 28 E.
 EAST & NORTH BDRS. OF FRAC. T. 4 S., R. 28 E.
 NORTH & FRAC. EAST BDY OF T. 3 S., R. 30 E.
 SOUTH BDY. OF T. 1 S., R. 29 E.
 EAST & SOUTH BDRS. OF FRAC. T. 1 S., R. 28 E.
 FRAC. NORTH & EAST BDRS. OF T. 1 N., R. 28 E.
 NORTH BDY. OF FRAC. T. 8 S., R. 32 E.
 EAST & NORTH BDRS. OF T. 8 S., R. 28 E.
 SOUTH & WEST BDRS. OF T. 13 E., R. 27 E.
 FRAC. WEST BDY. OF T. 14 S., R. 28 E.
 WEST, NORTH & FRAC. SOUTH BDRS OF FRAC. T. 12 S., R. 32 E.
 and RETRACEMENT of
 PART OF THE NORTH & EAST BDRS. OF T. 13 S., R. 31 E.

Of the Gila and Salt River Base and Meridian,

In the State of ARIZONA.

EXECUTED BY

WILLIAM B. KIMMEL

in the capacity of U.S. Surveyor

under instructions dated, August 25, 1910, August 9, 1912, Sept. 19, 1912, February 18, 1913, April 4, 1913, and December 30, 1913, and June 9, 1914. In the capacity of U.S. Surveyor, under instructions dated 191

issued by the United States Surveyor General to govern surveys included in Group No. 26, which were approved by the Commissioner of the General Land Office Sept. 9, 1910, August 19, 1912, Sept. 27, 1912, February 28, 1913 April 14, 1914 and Jan. 9, 1914 pursuant to authority contained in the Acts of Congress dated June 23, 1913 and August 1, 1914

Survey commenced September 16, 1913

Survey completed November 2, 1914

INDEX DIAGRAM.

Township _____, Range _____

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
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31	32	33	34	35	36







INDEX DIAGRAM

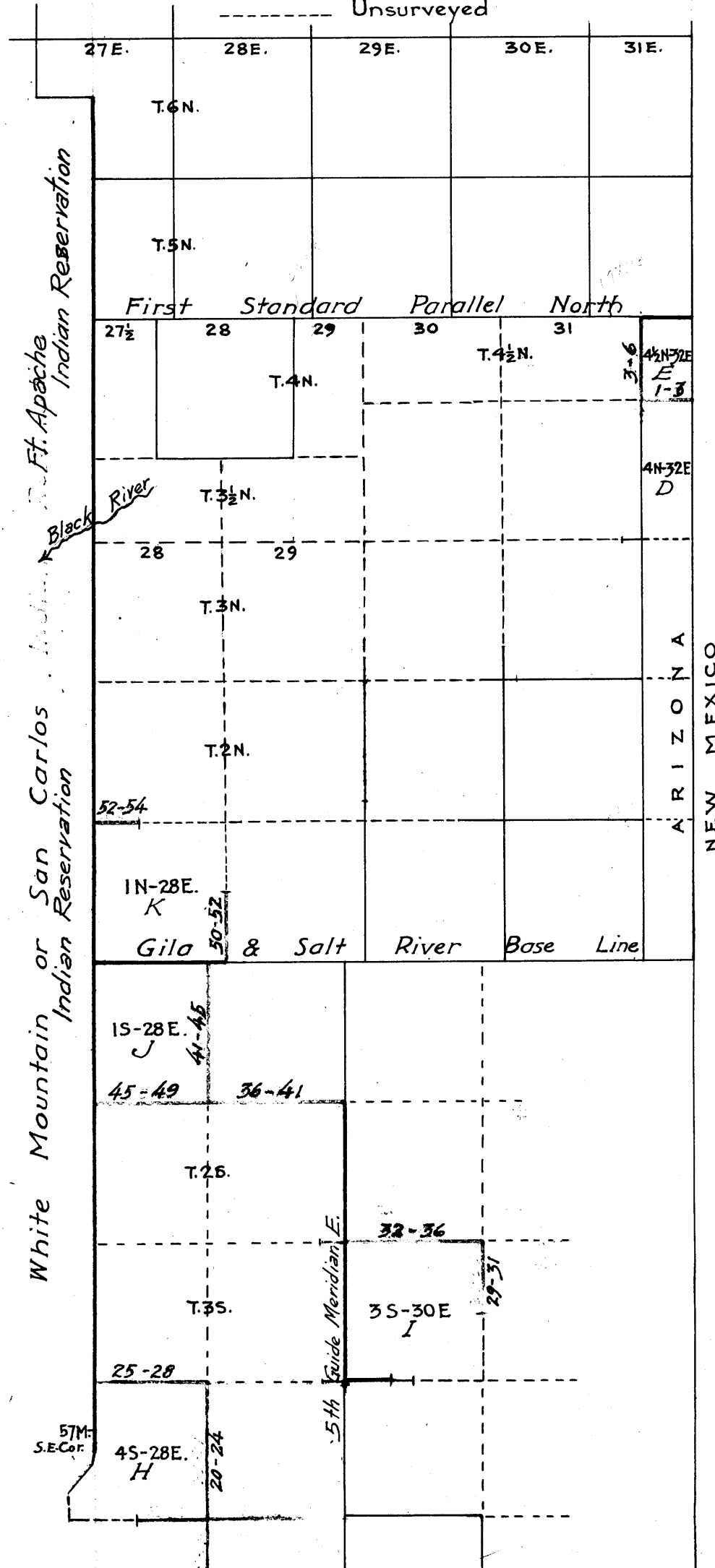
Book "A"
GROUP 26

BOOK 2766

41
1A

E Red letters indicate Subdivisional Books.

-  Notes in this Book (indexed) 2766
-  Notes in Book "B" 2767
-  Notes in Book "C" 2768
-  Notes in Sub. Books, this Group
-  Previous Surveys
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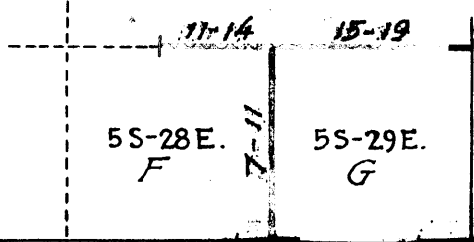


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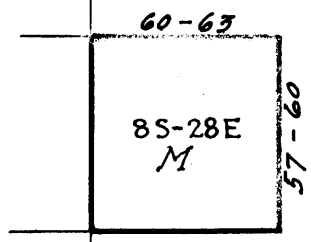
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BOOK 2766

(18)



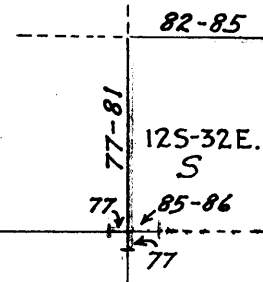
First Standard Parallel South



54-56

8S-32E. L

ARIZONA
NEW MEXICO



68-72 13S-27E. N

63-68

73-75

14S-28E. O

Camp Bowie
Mil. Res.
Abandoned

15S-29E. P

15S-30E. Q

Third Standard Parallel South

17S-32E. R

South bdy. of frac. Township 4 $\frac{1}{2}$ North, Range 32 East.

1.C

Chains.

Note: All surveys of this group made prior to Sept. 11, 1914, were executed with a Young and Sons' light mountain transit, No. 8541, with a Smith Solar Attachment, and full vertical circle. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs and vertical circle.

Measurements are determined with steel tape, triangulation and stadia. The measurements with tape are made on the slope, the vertical angles determined by transit or clinometer, and the slope measurements properly reduced to true horizontal distance. All stadia measurements are made with fixed stadia wires, with a ratio of 1:132; the focal constant of the instrument is 1.025 ft., or .016 chs.; the rod used is a Philadelphia level rod, graduated to feet, and equipped with two targets and a rod level.

The transit was approved conditional upon satisfactory field tests, by the Supervisor of Surveys, July 29, 1913.

All surveys made after Sept. 11, 1914, were executed with a Young and Sons' Light Mountain Transit, No. 8588, with a Smith Solar Attachment, and full vertical circle. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs and vertical circle. All stadia measurements are made with fixed stadia wires, with a ratio of 1:132; the focal constant of this instrument is 1.025 ft. or .016 chs.

This transit was approved, conditional upon satisfactory field tests by the Supervisor of Surveys, Sept. 8, 1914.

Survey commenced Sept. 16, 1913, and executed with a Young and Sons' light Mountain Transit No. 8541, described above. Knowing from recent and repeated tests of this instrument that it is in correct adjustment, I proceeded to the survey of the South boundary of frac. T. 4 $\frac{1}{2}$ N., R. 32 E.

At 2h. 0m. p.m., 1. m.t., I set off 2°38 $\frac{1}{2}$ ' N. on the decl. arc; and observe the sun on the true meridian at the cor. of T. 4 N., R. 31 E., and frac. T. 4 N., R. 32 E., and frac. Ts. 4 $\frac{1}{2}$ N., Rs. 31 and 32 E., recently established and reestablished by me, as described in Book "D;" the resulting lat. is 33° 44' N. The true latitude at this corner is 33° 43' 33" N., and the longitude is 109° 5' 4" W.

Thence I run,

East, bet. secs. 6 and 31.

Through heavy timber and dense undergrowth. Ascend SW. slope, 35 ft. to

3.25	Ridge, brs. SE. and NW. Descend NE. slope, 40 ft. to
6.00	Gulch, course NE. Ascend NW. slope, 90 ft. to
12.00	Spur ridge, brs. NW. Descend NE. slope, 80 ft. to
16.00	Canyon, course N. Ascend NW. slope, 60 ft. to
19.00	Ridge, brs. N. Descend NE. slope, 95 ft. to
28.00	Canyon, course N. Ascend NW. slope, 60 ft. to
29.00	Spur ridge, extends N. Descend NE. slope, 15 ft. to
31.00	Canyon, course NW. Ascend NW. slope, 90 ft. to
37.00	Ridge, brs. NE. and S. Descend SE. slope, 185 ft.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on Srim; $\frac{1}{4}$ S 31 in N., and $\frac{1}{4}$ S 6 in S-half; from which,
	A pine, 28 ins. in diam., brs. N. 25° E., 71 lks. dist., marked $\frac{1}{4}$ S 31 B T.
	A pine, 14 ins. in diam., brs. S. 65 $\frac{1}{2}$ ° W., 27 lks. dist., marked $\frac{1}{4}$ S 6 B T.

2. South bdy. of frac. Township 4 $\frac{1}{2}$ North, Range 32 East.

Chains.

46.00 Gulch, course NE. Ascend NW. slope.
 48.00 Thence along north slope.
 52.50 Descend NE. slope, to
 54.00 Canyon, course NE. Ascend NW. slope, 180 ft. to
 61.00 Spur ridge, brs. NE. Descend SE. slope, 300 ft. to
 74.00 Gulch, course NE. Thence along north slope, to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 5, 6, 31 and 32, marked on
 brass cap,
 1913 on S. rim,
 T 4 $\frac{1}{2}$ N on N.,
 T 4 N in S., and
 R 32 E in W. half;
 S 31 in NW.,
 S 32 in NE.,
 S 5 in SE., and
 S 6 in SW. quadrant; from which,
 A pine, 28 ins. in diam., brs. N. 38° E., 46 lks.
 lks. dist., marked T 4 $\frac{1}{2}$ N R 32 E S 32 B T.
 A pine, 18 ins. in diam., brs. S. 75° E., 35
 lks. dist., marked T 4 N R 32 S 5 B T.
 A pine, 16 ins. in diam., brs. S. 82 $\frac{1}{2}$ ° W., 113
 lks. dist., marked T 4 N R 32 E S 6 B T.
 An oak, 6 ins. in diam., brs. N. 80 $\frac{1}{2}$ ° W., 80 lks.
 dist., marked T 4 $\frac{1}{2}$ N R 32 E S 31 B T.

Land, rolling, hilly and mountainous.
 Soil, rocky, 4th rate.
 Timber, heavy pine and oak.
 Undergrowth, dense scrub oak and locust.
 Mountainous land, 56 chs.

East, bet. secs. 5 and 32.
 Through heavy timber and dense undergrowth. Ascend
 slight NW. slope, 15 ft. to

1.00 Spur ridge, brs. N.; descend NE. slope, 243 ft.
 18.30 Trail, brs. NE. and SW.
 31.00 Gulch, course NE. Ascend NW. slope, 25 ft. to
 35.00 Ridge, brs. NE. and SW. Descend SE. slope, 55 ft. to
 37.50 Gulch, course NE. Thence along slight north slope.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S. rim,
 $\frac{1}{4}$ S 32 in N. and
 S 5 in S. half; from which,
 A pine, 9 ins. in diam., brs. N. 66 $\frac{1}{4}$ ° E., 37
 lks. dist., marked $\frac{1}{4}$ S 32 B T.
 An oak, 6 ins. in diam., brs. S. 37 $\frac{3}{4}$ ° E., 79
 lks. dist., marked $\frac{1}{4}$ S 5 B T.

Milligan's new house brs. N. 45° E.
 Old house, brs. N. 48 $\frac{1}{2}$ ° E.
 Granary brs. N. 51 $\frac{1}{2}$ ° E.
 Barn, brs. N. 62 $\frac{1}{2}$ ° E.
 Hayshed brs. N. 67 $\frac{3}{4}$ ° E.
 Sawmill, brs. N. 24° E.

Sept. 16, 1913.
 Sept. 17, 1913: At 7h. a.m., l.m.t., I set off 33° 43 $\frac{1}{2}$ ' N.
 on the lat. arc; 2° 23 $\frac{1}{2}$ ' N. on the decl. arc; and deter-
 mine a meridian with the solar at this $\frac{1}{4}$ sec. cor.

51.75 Plank fence, brs. SE. and NW. Enter Milligan's field.
 Leave timber, brs. NW. and SE.
 58.85 Road brs. NW. and SE.
 64.00 Small ditch, course SE.
 Milligan's new sawmill, brs. N. 59 $\frac{3}{4}$ ° W.
 New House, brs. N. 52 $\frac{1}{2}$ ° W.
 Old house, brs. N. 54 $\frac{1}{2}$ ° W.
 Granary, brs. N. 57° W.
 Blacksmith shop, brs. N. 61° E.
 Carpenter's shop, brs. N. 61° W.
 Barn, brs. N. 69° W.

South boundary of frac. Township 4 1/2 North, Range 32 East. 3.

Chains.

Hay shed brs.N. 72 1/4°W.
 67.00 Enter dense willow undergrowth, in Blue River bottom.
 71.00 Pole fence, brs.NW. and SE. Enter pine timber.
 73.50 Road, brs.NW. to Alpine and SE. to Clifton.
 77.75 Blue River, 40 lks.wide, course SE.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 4, 5, 32 and 33, marked on brass cap,
 1913 on S.rim,
 T 4 1/2 N in N., T 4 N in S., and
 R 32 E in W.half;
 S 32 in NW.,
 S 33 in NE.,
 S 4 in SE., and
 S 5 in SW-quadrant; from which,
 A pine, 18 ins. in diam., brs.N. 41 1/2°E., 282 lks.dist., marked T 4 1/2 N R 32 E S 33 B T.
 A pine, 24 ins.in diam., brs.S. 19 1/2°E., 187 lks. dist., marked T 4 N R 32 E S 4 B T.
 A pine, 18 ins. in diam., brs.S. 4 1/2°W., 211 lks.dist., marked T 4 N R 32 E S 5 B T.
 A pine, 18 ins. in diam., brs.N. 39°W., 281 lks. dist., marked T 4 1/2 N R 32 E S 32 B T.

Land, rolling and hilly.
 Soil, rocky, 4th rate.
 Timber, heavy pine, oak and willow.
 Undergrowth, dense scrub oak, locust and willow.

3.06 East, bet. frac. secs. 4 and 33.
 Over level land, through scattering timber.
 Intersect the Arizona and New Mexico Line, at a point from which bdy. Post # 54, U. S. Forest Reserve, brs.S. 0°6' W., 211 lks.dist.
 The 226 mile cor., a stone marked and witnessed, as described by the Surveyor General, brs.S. 9.91 chs.dist.
 Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in the ground, for closing corner of frac. Ts. 4 and 4 1/2 N., R. 32 E., marked on brass cap,
 1913 on S.rim,
 C C E. of center,
 T 4 1/2 N S 33 in NW., and
 T 4 N S 4 in SW. quadrant;
 R 32 E in W.half; and
 N M in E.half; from which,
 A pine, 30 ins. in diam., brs.S. 25 1/2°W., 88 lks.dist., marked T 4 N R 32 E S 4 B T.
 A pine, 34 ins. in diam., brs.N. 29 1/2°W., 234 lks.dist., marked T 4 1/2 N R 32 E S 33 B T.

Land, level.
 Soil, rocky, 4th rate.
 Timber, pine.
 No undergrowth.

Sept. 17, 1913.

West bdy. of frac. Township 4 1/2 North, Range 32 East.

Survey commenced Sept. 20, 1913, and executed with Young and Sons' Light Mountain Transit No. 8541, hereinbefore described.

Note: This line was originally surveyed and accepted as a continuation of the west bdy. of frac. Tp. 4 N., R. 32 E., being in excess a distance of 272.97 chs., and as there are no accepted subdivisional lines tied to it, therefore, from the corner of T. 4 N., R. 31 E., frac. T. 4 N., R. 32 E., and frac. Ts. 4 1/2 N., Rs. 31 and 32 E.,

4. West bdy. of frac. Township 4 $\frac{1}{2}$ North, Range 32 East

Chains.

described in Book "D." I establish the excess distance as the west bdy. of frac. T. 4 $\frac{1}{2}$ N., R. 32 E., this portion of the accepted west bdy. of frac. T. 4 $\frac{1}{2}$ N., R. 32 E. thereby becoming an original survey of West bdy. of frac. T. 4 $\frac{1}{2}$ N., R. 32 E.

At Sh. 10m. a.m., l.m.t., I set off 33° 43 $\frac{1}{2}$ ' N. on the lat. arc; 1° 12' N. on the decl. arc; and determine a meridian with the solar at the cor. of T. 4 N., R. 31 E., frac. T. 4 N., R. 32 E. and frac. Ts. 4 $\frac{1}{2}$ N., Rs. 31 and 32 E.; lat. 33° 43' 33" N.; longitude, 109° 05' 04" W.

Thence I run,
N bet. secs. 31 and 36.
Through heavy timber and scattering undergrowth. Descend N. slope, 360 ft.

1.58 A pine, 22 ins. in diam., on line.
5.75 A fir, 20 ins. in diam., on line.
14.75 Canyon, course NE. Thence along broken east slope.
19.25 Canyon, course SE. Ascend SW. slope, 180 ft.
21.00 Rocky canyon, course SE. Continue ascent.
29.00 Ridge, brs. E and W. Descend N. slope, 380 ft., in small gulch,
39.00 Leave gulch; descend NE. slope.
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim,
 $\frac{1}{4}$ S 36 in W., and
S 31 in E. half; from which,
A pine, 16 ins. in diam., brs. N. 3 $\frac{1}{2}$ ° E., 66 lks. dist., marked $\frac{1}{4}$ S 31 B T.
A pine, 8 ins. in diam., brs. N. 63° W., 51 lks. dist., marked $\frac{1}{4}$ S 36 B T.

46.00 Descend NW. slope.
51.00 Canyon, course NE. Descend NE. slope, to
55.00 Enter river bottom.
57.10 Blue River, 25 lks. wide, course SE.
58.60 Road, brs. SE to Clifton, and NW. Ascend S. slope, 416 ft.
59.60 Old pole fence, brs. E and W.
64.00 Ascend SW. slope.
80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 25, 30, 31 and 36, marked on brass cap,
1913 on S. rim,
T 4 $\frac{1}{2}$ N in N. half;
R 31 E S 25 in NW.,
R 32 E S 30 in NE.,
S 31 in SE., and
S 36 in SW quadrant; from which,
A pine, 16 ins. in diam., brs. N. 58 $\frac{1}{4}$ ° E., 41 lks. dist., marked T 4 $\frac{1}{2}$ N R 32 E S 30 B T.
A pine, 6 ins. in diam., brs. S. 18 $\frac{1}{2}$ ° E., 77 lks. dist., marked T 4 $\frac{1}{2}$ N R 32 E S 31 B T.
A pine, 14 ins. in diam., brs. S. 85° W., 71 lks. dist., marked T 4 $\frac{1}{2}$ N R 31 E S 36 B T.
A pine, 6 ins. in diam., brs. N. 48° W., 74 lks. dist., marked T 4 $\frac{1}{2}$ N R 31 E S 25 B T.

Note: At this corner, I set off 1° 7 $\frac{1}{2}$ ' N. on the decl. arc; and observe the sun on the meridian at apparent noon; the resulting lat. is 33° 44 $\frac{1}{2}$ ' N.

Land, mountainous and hilly.
Soil, rocky, 4th rate, sandy gravel, 3rd rate in river bottom.
Timber, heavy pine, fir, willow and oak.
Undergrowth, scrub oak and locust.

North, bet. secs. 25 and 30.
Through heavy timber and scattering undergrowth. Descend N. slope, 300 ft. to
11.70 Canyon, course NW. Ascend.
14.00 Spur ridge, brs. SW. Descend NW. slope, to

West bdy. of frac. Township 4 1/2 North, Range 32 East. 5.

Chains.

16.00 Canyon, course SW. Ascend.

17.00 Rocky spur, brs.E. Ascend in narrow canyon, 310 ft.

23.50 Leave canyon; ascend slight SE. slope, to

34.50 Spur ridge, brs.SW. Descend NW. slope, 45 ft.

40.00 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec.cor., marked on brass cap, 1913 on S.rim, 1/4 S 25 in W., and S 30 in E.half; from which,
 A pine, 9 ins. in diam., brs.N.55°E., 2 lks. dist., marked 1/4 S 30 B T.
 A pine, 9 ins. in diam, brs.S.64 1/2°W., 12 lks. dist., marked 1/4 S 25 B T

41.00 Canyon, course SW. Ascend SE. slope, 115 ft.to

45.80 Spur ridge, brs.SW. Descend NW. slope, 75 ft.to

49.00 Ascend in canyon, from north, course SW. Ascend 185 ft.

58.00 Rock point 30 ft.high.

61.00 Spur ridge, brs.E. Descend NE. slope, 25 ft.to

64.50 Canyon, course SE. Ascend SW. slope, 315 ft.

71.75 Ledge rock, 6 ft.high, brs.NW.and SE.

73.80 Ridge, brs.SE. Ascend SE.slope to

76.00 Top of ascent; thence along east slope.

80.00 Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in the ground, for cor.of secs.19, 24, 25 and 30, marked on brass cap,
 1913 on S.rim,
 T 4 1/2 N on N.half;
 R 31 E S 24 in NW.,
 R 32 E S 19 in NE.,
 S 30 in SE., and
 S 25 in SW.quadrant; from which,
 A pine, 12 ins. in diam., brs.N.19°E., 73 lks.dist., marked T 4 1/2 N R 32 E S 19 B T.
 A pine, 20 ins. in diam., brs.S.64°E., 44 lks. dist., marked T 4 1/2 N R 32 E S 30 B T.
 A pine, 10 ins. in diam., brs. S.53 1/2°W., 20 lks dist., marked T 4 1/2 N R 31 E S 25 B T.
 A pine, 9 ins. in diam., brs.N.30 1/2°W., 75 lks. dist.marked T 4 1/2 N R 31 E S 24 B T.

Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, heavy cedar, fir and oak.
 Undergrowth, scattering scrub oak and locust.
 Mountainous land, 62 chs.

Sept.20, 1913.

Sept. 25, 1913: At 8h. 5m. a.m., l.m.t., I set off 33°45 1/2' N.on the lat.arc; 0°45'S. on the decl.arc; and determine a meridian with the solar at the cor.of secs.19, 24,25 and 30.

Thence I run,
 North, bet. secs.19 and 24.
 Through heavy timber and scattering undergrowth. Descend steep NE. slope, 225 ft.to

7.10 Canyon, course E. Ascend SE. slope, 50ft.to

9.00 Spur ridge, brs.E.Thence along east slope.

11.00 Descend NE. slope, 55 ft.to

13.00 Gulch, course E. Ascend SE. slope, 35 ft.to

14.85 Spur ridge, brs.E. Descend NE. slope, 75 ft.to

18.50 Ascend in canyon, course S.

20.50 Leave canyon; ascend SW. slope, 365 ft.to

31.25 Ridge, brs. SE. and NW. Thence along broken east slope.

36.00 Spur ridge, brs.E. Descend NE. slope, 80 ft.to

37.40 Gulch, course NE. Thence along east slope.

40.00 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec.cor., marked on brass cap, 1913 on S.rim,

6. West bdy. of frac. Township $4\frac{1}{2}$ North, Range 32 East.

Chains.

$\frac{1}{4}$ S 24 in W., and
 S 19 in E. half; from which,
 A pine, 36 ins. in diam., brs. N. $38\frac{1}{2}^{\circ}$ E., 53 lks.
 dist., marked $\frac{1}{4}$ S 19 B T.
 A pine, 18 ins. in diam., brs. N. 5° W., 21 lks.
 dist., marked $\frac{1}{4}$ S 24 B T.
 47.50 Canyon, course E. Ascend SE slope, 100 ft. to
 51.50 Spur ridge, brs. E. Descend NE. slope, 55 ft. to
 57.25 Canyon, course E. Ascend S. slope, 10 ft. to
 57.75 Spur ridge, brs. E. Descend NE. slope, 65 ft. to
 66.75 Turkey Creek, 60 lks. wide, course NE. Ascend SW. slope,
 170 ft.
 68.15 Trail, brs. NW. and SE.
 75.75 Pole corral, brs. W., 5 chs. dist.
 79.90 Rocky point, 12 ft. high, 8 ft. diam., on line.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 13, 18, 19 and 24, marked
 on brass cap,
 1913 on S. rim,
 T $4\frac{1}{2}$ N in N. half;
 R 31 E, S 13 in NW.,
 R 32 E, S 18 in NE.,
 S 19 in SE., and
 S 24 in SW. quadrant; from which,
 A pine, 20 ins. in diam., brs. N. $38\frac{1}{4}^{\circ}$ E., 47
 lks. dist., marked T $4\frac{1}{2}$ N R 32 E S 18 B T.
 A pine, 14 ins. in diam., brs. S. 72° E., 23 lks.
 dist., marked T $4\frac{1}{2}$ N R 32 E S 19 B T.
 A pine, 16 ins. in diam., brs. S. $52\frac{1}{2}^{\circ}$ W., 15 lks.
 dist., marked T $4\frac{1}{2}$ N R 31 E S 24 B T.
 A cedar, 6 ins. in diam., brs. N. $4\frac{3}{4}^{\circ}$ W., 31 lks.
 dist., marked T $4\frac{1}{2}$ N R 31 E S 13 B T.
 Land, rolling, hilly, and mountainous.
 Soil, rocky, 4th rate,
 Timber, heavy pine, oak and cedar.
 Undergrowth, scattering scrub oak.
 Mountainous land, 62 chs.

8.00 North, bet. frac. secs. 13 and 18.
 14.75 Along west slope, through heavy timber and scattering un-
 20.00 dergrowth.
 24.40 Ascend SW. slope, 125 ft. to
 25.50 Ridge, brs. NW. and SE. Ascend SE. slope, to
 30.01 Spur ridge, brs. SE. Descend NE. slope, 60 ft.
 Trail brs. SE. and NW,
 Canyon, course SE. Ascend SW. slope, 100 ft. to
 Intersect the First Standard Parallel North, 5 lks. east of
 the original closing cor. of T. 4 N. R. 31 E. & frac. T. 4 N. R. 32 E.
 which is a stone 14x3x8 ins. above ground, marked and
 witnessed as described by the Surveyor General. I
 destroy all evidence of this corner.
 The original standard $\frac{1}{4}$ sec. cor. of sec. 33, T. 5 N., R. 31 E.
 which is a granite stone set in a mound of stone, marked
 and witnessed as described by the Surveyor General,
 brs. E. 2.27 chs. dist.
 At point of intersection, I set an iron post, 3 ft. long, 3
 ins. in diam., 24 ins. in the ground, for closing
 cor. of frac. T. $4\frac{1}{2}$ N., Rs. 31 and 32 E., marked on brass
 cap,
 1913 on S. rim,
 C C S of center,
 T 5 N R 31 E S 33 in N. half;
 T $4\frac{1}{2}$ N in S. half;
 S 18, R 32 E in SE., and
 S 13 R 31 E in SW. quadrant; from which,
 A pine, 9 ins. in diam., brs. S. 20° E., 168 lks.
 dist., marked T $4\frac{1}{2}$ N R 32 E S 18 C C B T.
 A juniper, 16 ins. in diam., brs. S. $87\frac{1}{2}^{\circ}$ W., 52 lks.
 dist., marked T $4\frac{1}{2}$ N R 31 E S 13 C C B T.

West bdy. of frac. Township 4 $\frac{1}{2}$ North, Range 32 East. 7.

Chains.

Land, level, rolling, hilly and mountainous.
Soil, rocky, 4th rate.
Timber, heavy pine, fir and oak.
Undergrowth, dense scrub oak.
Mountainous land, 16 chs.

Sept. 25, 1913.

West boundary of Township 5 South, Range 29 East.

Survey commenced Nov. 20, 1913, and executed with Young and Sons' Light Mountain Transit, No. 8541, hereinbefore described.

At 8h. 32m. a.m., l.m.t., I set off 32° 56 $\frac{1}{2}$ ' N. on the lat. arc; 19° 38' S. on the decl. arc; and determine a meridian with the solar at the standard corner of Ts. 5 S., Rs. 28 and 29 E. on the 1st. Standard Parallel South; latitude, 32° 56' 33" N.; longitude, 109° 24' 32" W., recently reestablished by me, as described in Book "B."

Thence I run, North, bet. secs. 31 and 36.

1.75
3.75
4.83

Along west slope, through scattering timber. Descend NW. slope, 60 ft. into river bottom. Enter Gila River bottom, brs. NE. and SW. Left edge of water in Gila River, course W. From instrument at this point, I take stadia measurement to rod on line on right side of river. Rod reading, 2.758 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Level. The distance on line to rod is therefore, 2.758 x 2 plus .016 = 5.53 chs., which added to 4.83 chs. = 10.36 chs. rod point, from which I return on line by chain measurement, south 21 lks. to 10.36 chs. rod point, from which I return on line by chain measurement south 21 lks. to

10.15

Right edge of water, in Gila River. The width of water is therefore, 10.15 - 4.83 = 5.32 chs. A wagon road, brs. E. and W. on sand bar in middle of river. From right edge of water, I run, north continuing measurement from Tp. cor.

10.80
15.00
16.00
18.00
23.00
31.25
38.75
40.00

Foot of bluff, brs. E. and W. Ascend SE. slope, 200 ft. to Spur brs. SE.; descend. Wash, course SE.; ascend. Top of bluff; ascend S. slope, to Spur ridge, brs. SE. Descend NE. slope, 165 ft. to Canyon, course SE. Ascend SW. slope, 240 ft. to Spur ridge, brs. SE. Thence along east slope, to Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 36 in W., and S 31 in E. half; and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, west of corner. Pits impracticable.

48.00
51.30
54.75
64.00
65.00
79.50
80.00

Descend NE. slope. Along east slope, of draw, course E. Wash, 45 lks. wide, 5 ins. deep, course SE. Wash, 27 lks. wide, 3 ins. deep, course SE. Descend NE. slope, to Canyon, course SE. Ascend SW. slope, 145 ft. to Gulch, course SE. Ascend south slope to Set an iron post, 3 ft. long, 3 ins. in dia. m., 24 ins in the ground, for cor. of secs. 25, 30, 31 and 36, marked on brass cap, 1913 on S. rim, T 5 S in N. half; R 28 E S 25 in NW., R 29 E S 30 in NE., S 31 in SE., and

8. West boundary of Township 5 South, Range 29 East.

Chains.	
	<p>S 36 in SW quadrant; and raise a mound of stone, 2 ft. base, 1½ ft. high, west of corner. Pits impracticable. Land, rolling, hilly and mountainous. Soil, rocky, 4th rate. Undergrowth, mesquite, catclaw and palo verde. Timber, mesquite, cottonwood and willow river.</p> <hr/> <p>North, bet. secs. 25 and 30. Through dense undergrowth, Ascend south slope, 265 ft. to Spur ridge, brs. E. Thence along east slope, to 5.40 Draw, course SE. Ascend SW slope, to 9.40 Ridge, brs. NW. and SE. 13.62 Mexican cabin, brs. N. 77° 45' E. Mexican cabin brs. N 78° 55' E. Descend NE slope, 325 ft. to 26.00 Canyon, course E. Ascend rocky point, 40 ft. high. 27.00 Rocky point, 40 ft. high. Descend NE slope, 140 ft. 30.50 Along broken east slope. 34.00 Draw, course east; ascend to 35.00 Spur ridge, brs. E.; descend to 36.70 Draw, course E. Ascend. 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap, 1913 on S rim, ¼ S 25 in W., and S 30 in E. half; and raise a mound of stone, 2 ft. base, 1½ ft. high, W of corner. Pits impracticable. Note: At this corner, Nov. 20, 1913, I set off 19° 40½' S. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 32° 58' N. Ascend slight SE slope, to 59.00 Ridge, brs. E. and W. Descend NE slope, 150 ft. to 72.00 Wash, course E. Ascend SE slope, 66 ft. to 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 19, 24, 25 and 30, marked on brass cap, 1913 on S rim, T 5 S in N. half; R 28 E S 24 in NW., R 29 E S 19 in NE., S 30 in SE., and S 25 in SW. quadrant; and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of corner Pits impracticable. Land, mountainous and hilly. Soil, rocky, 4th rate. No timber. Undergrowth, dense mesquite, catclaw and palo verde.</p> <hr/> <p>North, bet. secs. 19 and 24. Along rocky broken E slope, through dense undergrowth. Ascend slight SE slope, 50 ft. to 6.00 Wash, course SE. Ascend. 12.00 Low ridge, brs. SE. Thence along east slope. 19.00 Mexican cabin brs. N. 76° 30' E. 22.35 Descend NE slope, 110 ft. to 26.00 Canyon, 2 chs. wide, 100 ft. deep, course E. 36.00 Ascend south slope. 38.00 Trail, brs. E. and W. 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap, 1913 on S rim, ¼ S 24 in W., and S 19 in E. half; and raise a mound of stone 2 ft. base, 1½ ft. high,</p>

Chains.

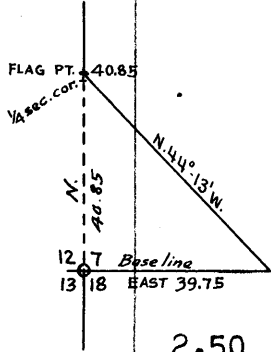
west of corner. Pits impracticable.
 59.13 Spur ridge, brs.E and W. Descend NE slope.
 70.00 Wash, course E.; ascend.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 13, 18, 19 and 24, marked on brass cap,
 1913 on S rim,
 T 5 S in N. half;
 R 28 E S 13 in NW.,
 R 29 E S 18 in NE.,
 S 19 in SE., and
 S 24 in SW quadrant;
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W of corner. Pits impracticable.
 No timber.
 Land, rolling, mountainous and hilly.
 Soil, rocky, 4th rate.
 Undergrowth, dense cacti, greasewood, catclaw and mesquite.
 Nov. 20, 1913.

 November 25, 1913: At 9h. 30m. a.m., l.m.t., I set off 32° 59' N. on the lat. arc; 20° 42 1/2' S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 13, 18, 19 and 24.

Thence I run,
 North, bet. secs. 13 and 18.
 Ascend broken south slope, 180 ft. to
 6.00 Ridge, brs. E and W. Descend NE slope, 800 ft. to canyon.
 7.00 Top of rocky ledge, 20 ft. high, brs. E and W.; ascend.
 14.00 Spur ridge, brs. NE.; descend.
 18.00 Gulch, course NE.; ascend.
 20.00 Spur ridge, brs. NE.; descend.
 33.00 Canyon, 81 lks. wide, course SE. Ascend broken S. slope, on spur ridge, 400 ft.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap,
 1913 on S rim,
 1/4 S 13 in W., and
 S 18 in E. half;
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of corner. Pits impracticable.
 Ascend SW slope, to
 48.25 Rocky ledge brs. NE. and SW. Ascend to
 48.30 Spur ridge, brs. E.; descend.
 49.45 Claro Dominquez' house brs. N. 52° E.
 Cabin brs. N. 81° E., about 50 chs. dist.
 Adobe house, brs. N. 38° E.
 Thence across steep broken rocky cliffs, east slope.
 78.52 Dominquez' house brs. S. 53° E.
 Adobe house, brs. S. 73 1/2° E.
 Descend steep NE slope, 50 ft. to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 7, 12, 13 and 18, marked on brass cap,
 1913 on S rim,
 T 5 S in N. half;
 R 28 E S 12 in NW.,
 R 29 E S 7 in NE.,
 S 18 in SE., and
 S 13 in SW quadrant;
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, west of cor. Pits impracticable.
 Land, mountainous.
 Soil, rocky, 4th rate.
 No timber.
 Undergrowth, scattering catclaw, mesquite and greasewood.
 Note: The sky was overcast at noon, making an observation for latitude impossible.
 Nov. 25, 1913.

10. West boundary of Township 5 South, Range 29 East.

Chains



2.50
12.00
27.00
40.00
41.00
50.00
61.75
80.00
83.72

Nov. 28, 1913: At 8h. 5m. a.m., l.m.t., I set off $33^{\circ}00'$ N. on the lat. arc; $21^{\circ}14'S.$ on the decl. arc; and determine a meridian with the solar at the cor. of secs. 7, 12, 13 and 18.

Thence I run, North, bet. secs. 7 and 12.

Note: As impassible cliffs and precipices prevent chaining over south half of this mile, I obtain dist. by triangulation as follows: From cor. of secs. 7, 12, 13 and 18, I measure a base line east, 39.75 chs. to a point from which a flag on line brs. N. $44^{\circ}13'W.$ The distance from sec. corner to flag is therefore, tang. $45^{\circ}47'$ x $39.75 = 40.85$ chs. The topography in this dist. is given at approximate distances as follows:

Gulch, course E.
Spur ridge, brs. E.
Gulch, course E.
From flag point at 40.85, I chain a return measurement on line, south, 85 lks. to
Where I set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S rim, $\frac{1}{4}$ S 12 in W., and S 7 in E. half; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.

Thence I run, North, continuing mile measurement. Across deep rocky box canyon, course E.

Spur ridge, brs. E. Descend steep N. slope, to
Gulch, course E. Ascend steep S. slope, to
Ridge, brs. E. and W.; descend N. slope.
Point for sec. cor. falls in bottom of canyon, course E.; therefore, continue N. 3.72 chs. to
The nearest point practicable for witness cor., where I set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for witness cor. to cor. of secs. 1, 6, 7 and 12, marked on brass cap, 1913 on S rim, W C S. of center, T 5 S in N. half; R 28 E S 1 in NW; R 29 E S 6 in NE; S 7 in SE., and S 12 in SW. quadrant; from which, A cottonwood, 32 ins. in diam., brs. S. $85^{\circ}E.$, 115 lks. dist., marked W C T 5 S R 29 E S 7 B T. No other trees within limits. Raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.

Land, mountainous.
Soil, rocky, 4th rate.
Timber, cottonwood in canyons.
Undergrowth, mesquite, catclaw, greasewood, and cacti.
Note: The sky was overcast at noon, making an observation for latitude impossible.

Nov. 28, 1913.

Nov. 29, 1913: At 8h. a.m., l.m.t., I set off $33^{\circ}1'$ N. on the lat. arc; $21^{\circ}24'S.$ on the decl. arc; and determine a meridian with the solar at the witness cor. to cor. of secs. 1, 6, 7 and 12.

From the true point for cor. of secs. 1, 6, 7 and 12, I run, North, bet. secs. 1 and 6.

Ascend steep south slope, 450 ft. to ridge.
Witness cor. to cor. of secs. 1, 6, 7 and 12.
Sandstone ridge, brs. E. and W.
Descend NE. slope, 660 ft. to Eagle Creek.
Foot of sandstone cliff.
Enter field.
Rock, 20x30x12 ft., on line.

3.72
15.00
24.00
25.00
25.25

West boundary of Township 5 South, Range 29 East. 11.

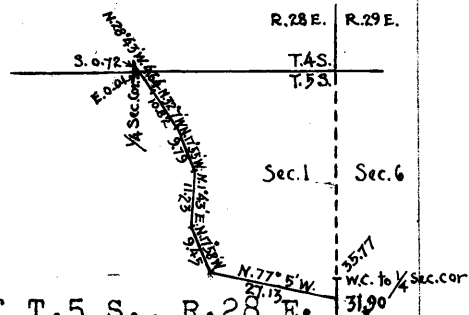
Chains.

30.00 Wire fence, brs. NW. and SE.
 30.22 Trail, brs. NW. and SE.
 31.02 Eagle Creek, 85 lks. wide, 8 ins. deep, course SE.
 32.77 Small irrigation ditch, course SE. Leave Creek bottom. Ascend south slope, 130 ft.
 35.77 Foot of sandstone cliff, 300 ft. high, As hthe true point for $\frac{1}{4}$ sec. cor. is inaccessible, and as this point is the nearest point practicable for witness cor. to $\frac{1}{4}$ sec. corner, marked on brass cap,
 1913 on S. rim,
 WC $\frac{1}{4}$ in N. half;
 S 6 in SE., and
 S 1 in SW. quadrant;
 and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, west of cor. Pits impracticable.
 It being impossible to continue farther north on this line, I return to

31.90 A point onna gravel bar in Eagle Creek. Gonzales' house, brs. S. 73° E., about 5 chs. dist. Thence I run, on traverse line, through sec. 1 of T. 5 S., R. 28 E., as follows:

N. $77^{\circ} 5'$ W.
 18.00 chs. Mexican house, brs. N. 13° E., 4 chs. dist.
 27.13 chs. From this point I run,
 N. $17^{\circ} 58'$ W., 9.45 chs.
 Thence I run,
 N. $1^{\circ} 43'$ E., 11.23 chs.
 Thence I run,
 N. $17^{\circ} 55'$ W., 9.79 chs.
 Thence I run,
 N. $32^{\circ} 7'$ W., 10.82 chs.
 Thence I run,
 N. $28^{\circ} 43'$ W., 4.64 chs.
 Thence I run,
 S. $0^{\circ} 72'$ chs. to a point on N. bdy. of T. 5 S., R. 28 E., 01 lk. west of point for $\frac{1}{4}$ sec. cor., bet. secs. 1 and 36. Therefore, I run,
 East, 0.01 chs. on N. bdy. of T. 5 S., R. 28 E., and
 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., for secs. 1 and 36, marked on brass cap,

Sec. 1, 0.72 chs.



1913 on S. rim,
 $\frac{1}{4}$ S 36 in N., and
 S 1 in S. half; from which,
 A cottonwood, 7 ins. in diam., brs. N. 13° W., 96 lks. dist., marked $\frac{1}{4}$ S 36 B T.
 A cottonwood, 8 ins. in diam., brs. S. $56\frac{1}{2}^{\circ}$ W., 68 lks. dist., marked $\frac{1}{4}$ S 1 B T.
 Land, mountainous.
 Soil, rocky, 4th rate, except along river.
 No timber, except along creek; cottonwood and willow there.
 Undergrowth, greasewood, catclaw and mesquite.
 Note: The sky was overcast at noon, making an observation for latitude impossible.

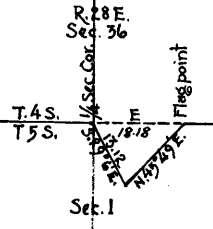
Nov. 29, 1913.

East half of North bdy. of Township 5 South, Range 28 E.

Survey commenced Nov. 29, 1913, and executed with Young and Sons' light mountain transit, No. 8541, hereinbefore described.
 Knowing from recent and repeated tests of my instrument on a meridian established by observations on Polaris at elongation, that it is in correct adjustment, I proceeded to the survey of the east half of North bdy.

12. East half of North bdy. of Township 5 South, Range 28 East.

Chains.



of T.5 S., R.28 E.
 At 9h. 3m. a.m., l.m.t., I set off $33^{\circ}2'N.$ on the lat. arc; $21^{\circ}25\frac{1}{2}'S.$ on the decl. arc, and determine a meridian with the solar at the $\frac{1}{4}$ sec. cor., bet. secs. 1 and 36, hereinbefore described.
 Thence I run,
 East, on a true line, bet. secs. 1 and 36, on east half mile.
 It being impossible to chain over cliffs to the east, therefore, I triangulate as follows: From the $\frac{1}{4}$ sec. cor., I measure a base line, $S.29^{\circ}6'E.$, 13.12 chs. to a point from which a flag on line on top of cliffs, brs. $N.45^{\circ}49'E.$ The dist. on line from $\frac{1}{4}$ sec. cor. to flag is therefore

$$\frac{\text{side } 74^{\circ}55' \times 13.12}{\text{side } 44^{\circ}11'} = 18.18 \text{ chs. flag point}$$

 The topography in this dist. is given at approximate distances as follows:
 .36 Irrigation ditch, course SE.
 1.47 West bank of Eagle Creek, 50 lks. wide, 10 ins. deep, course SW.
 1.60 Trail, brs. N. and S.
 2.31 Wire fence brs. NE. and SW. Enter field.
 4.25 Foot of cliffs, brs. NE. and SW. Leave field.
 Mexican house, brs. north about 3 chs. dist.
 Ascend steep sandstone cliffs.
 18.18 Flag point of above triangulation, on top of cliffs, 650 ft. above $\frac{1}{4}$ sec. cor. As line east of this point passes over a deep, rocky, broken box canyon, course south, over which chaining is impossible, I obtain measurement by stadia: Rod reading, 4.392 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Vertical angle plus $11^{\circ}40'$. The dist. to rod is therefore, $4.392 \times 2 \times .9591$ plus $.016 = 8.44$ chs., which added to 18.18 chs. =
 26.62 Rod point on east side of canyon; from which point I chain east, 17 lks. to
 26.79 On account of another deep canyon, course SW., rendering chaining impossible, I take stadia measurement to rod on line to the east. Rod reading 2.744 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Vertical angle plus $3^{\circ}15'$. The distance to rod is therefore, $2.744 \times 2 \times .9968$ plus $.016 = 5.49$ chs., which added to 26.79 chs. = 32.28 chs. rod point.
 31.50 (Approx.) trail, brs. N. and S.
 32.28 Rod point on spur ridge, brs. N. and S. Thence along S. slope.
 36.07 Spur ridge, brs. N. and S. Thence over broken SE. slope. Chaining impossible. Therefore, take stadia measurement from instrument at this point to rod on line to the east. Rod reading, 1.590 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Vertical angle plus $8^{\circ}36'$. The distance on line to rod is therefore $1.590 \times 2 \times .9776$ plus $.016 = 3.12$ chs., which added to 36.07 chs. =
 39.19 Rod point on rock.
 40.00 Point for Tp. cor. falls on solid ledge rock, where it cannot be established. Mark the exact point with a cross. Thence I run, north 72 lks. and, Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for witness cor. to cor. of T. 4. and 5 S., R. 29 E., T. 5 S., R. 28 E., and fra. T. 4 S., R. 28 E., marked on brass cap,

- 1913 on S. rim,
- W C S. of center,
- T 4 S in N.,
- R 29 E in E.,
- T 5 S in S. and
- R 28 E in W. half;
- S 36 in NW.,
- S 31 in NE.,
- S 6 in SE., and
- S 1 in SW. quadrant;

East half of North bdy. of Township 5 South, Range 28 E. 13.

Chains.

and raise a mound of stone, 2 ft. base, 1½ ft. high, W of cor. Pits impracticable.
 Land, mountainous.
 Soil, very rocky, 4th rate,
 No timber.
 Undergrowth, catclaw, mesquite and cacti.
 Nov. 29, 1913.

Dec. 6, 1913: At 2h. 10m. p.m., l.m.t., I set off 33° 2' N. on the lat. arc; 22° 29½' S. on the decl. arc; and determine a meridian with the solar at the ¼ sec. cor. bet. secs. 1 and 36, hereinbefore described.
 Thence I run,
 West, on a true line, on west half mile, bet. secs. 1 and 36.

- 1.20 Across creek bottom, through dense undergrowth. Foot of cliffs, bears NE. and SW. Ascend E. slope, 160 ft. to
- 6.35 Spur ridge, brs. NE.; descend.
- 6.68 East bank of canyon, across which I cannot chain; therefore, take stadia measurement to rod on line on W. bank. Rod reading, 3.820 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Vertical angle, plus 3° 20'. The dist. on line to rod is therefore, 3.820 x 2 x .9966 plus .016 = 7.63 chs., which added to 6.68 chs. =
- 14.31 Stadia rod point. Ascend SE slope, 30 ft. to
- 16.60 Spur, brs. S. Thence along south slope.
- 19.20 North bank of deep canyon, brs. S. 10 lks. dist. Ascend E. slope, 130 ft. to
- 24.60 Spur brs. SE. Thence along S. slope, to
- 27.60 Gulch, course S. Ascend SE. slope, 150 ft. to
- 31.60 Spur ridge, brs. S.; descend.
- 36.80 Gulch, course S.; ascend.
- 40.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 1, 2, 35 and 36, marked on brass cap,

- 1913 on S. rim,
- T 4 S in N.,
- T 5 S in S., and
- R 28 E in W. half;
- S 35 in NW.,
- S 36 in NE.,
- S 1 in SE., and
- S 2 in SW. quadrant;

and raise a mound of stone, 2 ft. base, 1½ ft. high, W of corner. Pits impracticable. From this corner Mexican cabin brs. S. 55° W.
 Land, mountainous.
 Soil, very rocky, 4th rate
 No timber.
 Undergrowth, catclaw, mesquite and cacti.

- 3.50 West, bet. secs. 2 and 35. Through dense undergrowth. Descend SW. slope, 50 ft. to
- 5.50 Gulch, course SE. Ascend east slope, 20 ft. to
- 8.50 Spur ridge, brs. S. Descend west slope, 50 ft. to
- 21.50 Gulch, course S. Ascend SE. slope, 250 ft. to Mexican cabin brs. S. 30° W.
- 27.50 Ridge, brs. NW. and SE. Continue over rolling S. slope. Foot of sandstone cliff, 60 ft. high, brs. N. and NW.
- 37.00 Gulch, course SE. Ascend east slope, 400 ft.
- 38.50 Top of cliff, 60 ft. high; ascend SE slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap, 1913 on S. rim, ¼ S 35 in N., and

14. East half of North bdy. of Township 5 South Range 28 East.

Chains.

- S 2 in S. half;
and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.
- 47.30 Rocky spur ridge, bears S. Descend SW. slope, 275 ft.
57.00 Top of ledge, 30 ft. high, brs. NW. and SE.
58.50 Gulch, course S. Ascend SE. slope, 100 ft. to
63.80 Spur ridge, bears S. Descend SW. slope, 55 ft. to
67.00 Ascend broken SE. slope, 40 ft. to
74.00 Descend broken SW. slope, 70 ft. to
80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 2, 3, 34 and 35, marked on brass cap,
1913 on S. rim,
T 4 S in N.,
T 5 S in S., and
R 28 E in W. half;
S 34 in NW.,
S 35 in NE.,
S 2 in SE., and
S 3 in SW. quadrant;
and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
- Land, mountainous. Soil, very rocky, 4th rate.
No timber.
Undergrowth, dense catclaw, mesquite, greasewood and cacti.
Dec. 6, 1913.
-
- Dec. 13, 1913: At 7h. 56m. a.m., l.m.t., I set off $33^{\circ}2'$ N. on the lat. arc; $23^{\circ}5\frac{1}{2}'$ S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 2, 3, 34 and 35, Thence I run,
West, on a true line, bet. secs. 3 and 34.
Along south slope, through scattering timber and dense undergrowth.
- 2.00 Descend SW. slope, 90 ft. to
11.75 Canyon, 1 chain wide, course SE. Ascend NE. slope, 250 ft. to
23.75 Spur ridge, brs. N. Descend NW. slope, 80 ft. to
31.10 Thence along N. slope, to
38.50 South bank of canyon, course E.
38.55 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for witness cor. to $\frac{1}{4}$ sec. cor., marked on brass cap,
1913 on S. rim,
W C $\frac{1}{4}$ in E. half;
S 34 in NW., and
S 3 in SW. quadrant;
and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
This post stands on the south bank of the canyon, 15 ft. above the bottom. Thence across canyon.
- 40.00 Point for $\frac{1}{4}$ sec. cor. falls in canyon; impossible to set post.
- 44.00 West bank of canyon. Ascend SE. slope, 750 ft.
47.50 Gulch, course SE. Ascend east slope.
66.00 Rocky point of spur ridge, brs. SE. Ascend SE. slope, to
80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 3, 4, 33 and 34, marked on brass cap,
1913 on S. rim,
T 4 S in N.,
T 5 S in S., and
R 28 E in W. half;
S 33 in NW.,
S 34 in NE.,
S 3 in SE., and
S 4 in SW. quadrant;
and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
- Land, rolling, hilly and mountainous.
Soil, rocky, 4th rate,
Timber, scattering cedar.

East half of North bdy. of Township 5 South, Range 28 East. 15.

Chains.

Undergrowth, dense scrub oak, mesquite, catclaw, and cacti. Mountainous land, 56 chs.

Dec. 13, 1913.

North boundary of Township 5 South, Range 29 East.

Survey commenced Dec. 2, 1913, and executed with Young and Sons' Light Mountain Transit No. 8541, hereinbefore described.

Knowing from recent and repeated tests of my instrument on a meridian established by observations on Polaris at elongation, that it is in correct adjustment, I proceed to the survey of the North bdy. of T. 5 S., R. 29 E.

At 8h. 2m. a.m., l.m.t., I set off 33° 2' N. on the lat. arc; 21° 53' S. on the decl. arc; and determine a meridian with the solar at the true point for cor. of Ts. 5 S., Rs. 28 and 29 E., T. 4 S., R. 29 E., and frac. T. 4 S., R. 28 E., hereinbefore described; latitude, 33° 01' 46" N.; long. 109° 24' 32" W.

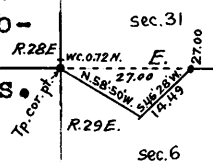
Thence I run,

East, on a true line, bet. secs. 6 and 31.

It being impossible to chain east on this mile from the corner point, I leave flag at corner point, and triangulate as follows: From a point on line on ridge bearing SW., I measure a base line S. 46° 28' W., 14.49 chs. to a point from which the flag on Tp. cor. point brs. N. 58° 50' W.; therefore, the dist. on line is obtained as follows:

Equation: $\frac{\sin 105^\circ 18' \times 14.49}{\sin 31^\circ 10'} = 27.00 \text{ chs.}$

- 27.00 Triangulation point on spur ridge, brs. SW. Descend E. slope, 200 ft. to
34.30 Canyon, course S. Ascend W. slope, 110 ft. to
37.90 Spur ridge, brs. S. Descend SE slope, 70 ft.
40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap, 1913 on S. rim, 1/4 S 31 in N., and S 6 in S. half; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable.
41.40 Canyon, course SW. Ascend NW. slope, 175 ft. to
51.00 Ridge, brs. NE and SW. Descend SE slope, 250 ft. to
67.50 Canyon, course S. Ascend NW. slope, 140 ft. to
80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins, in the ground, for cor. of secs. 5, 6, 31 and 32, marked on brass cap, 1913 on S. rim, T 4 S in N., T 5 S in S., and R 29 E in W. half; S 31 in NW., S 32 in NE., S 5 in SE., and S 6 in SW. quadrant; and raise a mound of stone, 2 ft base, 1 1/2 ft. high, W. of cor. Pits impracticable.
Land, mountainous.
Soil, very rocky, 4th rate.
No timber.
Undergrowth, dense mesquite, catclaw and cacti.
Dec. 2, 1913.



sec. 31
sec. 6

Dec. 8, 1913: At 8h. 55m. a.m., l.m.t., I set off 33° 2' N. on the lat. arc; 22° 41' S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 5,

16. North boundary of Township 5 South, Range 29 East.

Chains.	
	65 31 and 32. Thence I run, East; bet. secs. 5 and 32. Through scattering timber and undergrowth. Ascend west slope, 80 ft. to
3.50	Ridge, brs. N. and S. Descend east slope, 165 ft. to
12.00	Canyon, course S. Ascend west slope, 320 ft.
24.70	Ascend SW. slope, to
28.70	Ridge, brs. NW. and SE. Descend NE. slope, 200 ft. to
40.00	Point for $\frac{3}{4}$ sec. cor. falls in canyon, course SE. Ascend SW. slope of spur ridge, 65 ft.
40.40	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for witness cor. to $\frac{3}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, W $\frac{1}{4}$ in E. half; S 32 in NW., S 5 in SW. quadrant; and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.
45.50	Spur ridge, brs. S. Descend S. slope, 70 ft. to
50.00	Canyon, course S. Trail in canyon, brs. N. and S. Ascend broken west slope, 175 ft. to
59.00	Broken ridge, brs. N. and S. Descend E. slope, 135 ft. to
65.50	Gulch, course S. Ascend W. slope, 170 ft. to
75.00	Ridge, brs. N. and S. Trail on ridge, brs. N. and S. Descend E. slope, 70 ft. to
79.60	Gulch, course S. Ascend W. slope, 40 ft. to
80.00	Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 4, 5, 32 and 33, marked on brass cap, 1913 on S. rim, T 4 S in N., T 5 S in S., R 29 E in W. half; S 32 in NW., S 33 in NE., S 4 in SE., and S 5 in SW. quadrant; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.
	Land, mountainous and hilly. Soil, very rocky, 4th rate. Timber, scattering cedar. Undergrowth, catclaw, mesquite and cacti.

	East, bet. secs. 4 and 33. Through scattering timber and dense undergrowth. Ascend NW. slope, 150 ft. to
7.25	Ridge, brs. N. and S. Descend broken SE. slope, 190 ft. to
14.00	Ridge, brs. SE. Descend E. slope, to
23.50	Gulch, course SE. Ascend SW. slope, 80 ft. to
32.50	Ridge, brs. S. Descend E. slope, to
38.50	Gulch, course S. Ascend SW. slope, 40 ft.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 33 in N., and S 4 in S. half; and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.
	Note: At this corner, Dec. 8, 1913, I set off $22^{\circ}42\frac{1}{2}'$ S. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is $33^{\circ}2'N$.
41.00	Ridge, brs. N. and S. Descend SE. slope, 180 ft. to
51.00	Gulch, course S. Trail, in canyon, brs. N. and S. Ascend W. slope, 200 ft. to
58.00	Ridge, brs. N. and S. Descend E. slope, 90 ft. to

North boundary of Township 5 South, Range 29 East. 17.

Chains.

64.00 Canyon, course S. Ascend W. slope, 125 ft. to
 69.50 Ridge, brs. NE. and SW. Descend E. slope, 100 ft. to
 74.50 Ridge, brs. N. and S. Descend E. slope, to
 79.75 Head of gulch, course SE. Descend SE. slope, to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 3, 4, 33 and 34, marked on
 brass cap,

1913 on S. rim,
 T 4 S in N.,
 T 5 S in S., and
 R 29 E in W. half;
 S 33 in NW.,
 S 34 in NE.,
 S 3 in SE., and
 S 4 in SW. quadrant;

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W.
 of corner. Pits impracticable.

Land, mountainous and hilly.
 Soil, very rocky, 4th rate.
 Timber, very scattering cedar.
 Undergrowth, dense mesquite, catclaw, greasewood and
 cacti.

 East, bet. secs. 3 and 34.

Through scattering timber and dense undergrowth. Descend
 SE. slope, 150 ft. to
 12.50 Gulch, course NE. Ascend N. slope of ridge, 40 ft. to
 14.00 Descend NE. slope of ridge, 160 ft. to
 21.40 Canyon, course S. Trail in bottom of canyon, brs. NW. and
 SE. Ascend broken west slope, 200 ft. to

24.00 Spur ridge, brs. S. Descend.
 25.20 Gulch, course SW. Ascend W. slope, to
 38.50 Spur ridge, brs. SW. Ascend SW. slope, to
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for 1/4 sec. cor., marked on brass cap,
 1913 on S. rim,
 1/4 S 34 in N., and
 S 3 in S. half;

and raise a mound of stone 2 ft. base, 1 1/2 ft. high, N. of
 corner. Pits impracticable.

Dec. 8, 1913.

Jan. 31, 1914: At 8h. 3m. a.m., l.m.t., I set off 33° 2' N.
 on the lat. arc; 17° 27' S. on the decl. arc; and determine
 a meridian with the solar at this 1/4 sec. cor.

Along south slope, to
 41.65 Draw, course SW. Ascend W. slope, 165 ft. to
 46.65 Ridge, brs. N. and S. Ascend SW. slope, 273 ft. to
 51.65 Spur ridge, brs. S. Descend broken SE. slope, to
 79.00 Gulch, course NE. Thence along north slope, to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 2, 3, 34 and 35, marked on
 brass cap,

1913 on S. rim,
 T 4 S in N.,
 T 5 S in S.,
 R 29 E in W. half;
 S 34 in NW.,
 S 35 in NE.,
 S 2 in SE., and
 S 3 in SW. quadrant;

and raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of
 corner. Pits impracticable.

Land, mountainous and hilly.
 Soil, very rocky, 4th rate.
 Timber, scattering cedar.
 Undergrowth, dense greasewood, catclaw, mesquite and cacti.

Jan. 31, 1914.

18. North boundary of Township 5 South, Range 29 East.

Chains.

	Feb. 1, 1914: At 8h. 5m. a.m., l.m.t., I set off $33^{\circ}2'N.$ on the lat.arc; $17^{\circ}10\frac{1}{2}'S.$ on the decl.arc; and determine a meridian with the solar at the cor.of secs.2,3,34 and 35.
	Thence I run, East, on a true line, bet.secs.2 and 35. Along north slope, through dense undergrowth.
2.00	Descend NE. slope, 55 ft.to
9.50	Gulch, course SE. Ascend SW. slope, 30 ft.to
16.00	Spur ridge, brs.SE. Descend SE. slope, 85 ft.to
25.80	Gulch, course S.. Ascend SW. slope, 25 ft.to
29.00	Ridge, brs.NW. and SE. Descend SE. slope, 29 ft.to
35.75	Gulch, 2 chs.wide, course S. Ascend SW. slope, 20 ft.
40.00	Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the ground. for $\frac{1}{4}$ sec.cor., marked on brass cap, 1913 on S.rim, $\frac{1}{4}$ S 35 in N., and S 2 in S.half; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,N. of corner. Pits impracticable.
46.00	Gulch, course S. Ascend SW. slope, 20 ft.to
50.00	Ridge, brs.N.W. and SE. Descend SE. slope,85 ft.to
56.00	Morenci Canyon, 1 ch. wide, course S. Ascend SW. slope, 155 ft.to
65.20	Rocky ridge, brs.N.and S. Descend SE. slope, to
67.50	Head of gulch, course SW. Ascend to
68.25	Ridge, brs. NW. and SE. Descend E. slope, 130 ft.to
76.00	Gulch, course SE. Ascend SW. slope, 30 ft.to
78.00	Ridge, brs.NW. and SE. Descend slight E. slope.
78.90	Wagon road, brs.N.and S.
80.00	Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in the ground, for cor.of secs. 1,2,35 and 36, marked on brass cap, 1913 on S.rim, T 4 S in N., T 5 S in S., and R 29 E inW.half; S 35 in NW., S 36 in NE., S 1 inSE., and S 2 in SW. quadrant; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,W. of corner. Pits impracticable.
	Land, mountainous and hilly. Soil, very rocky, 4th rate. No timber. Undergrowth,dense greasewood, catclaw, mesquite and cacti. Note: At this corner, Feb.1, 1914, I set off $17^{\circ}9'S.$ on the decl.arc; and at apparent noon, I observe the sun on the meridian; the resulting lat.is $33^{\circ}2'N.$

	East, bet. secs.1 and 36. Through dense undergrowth; descend east slope to
1.00	Gulch, course SE. Ascend SW. slope, 68 ft.to
6.50	Ridge, brs.NE. and SW. Descend SE. slope, 25 ft.to
11.00	Gulch, course SW. Ascend W. slope, 195 ft.
20.12	Wire fence and telephone line, brs.NW. and SE.
22.00	Ridge, brs.N.and S. Descend SE. slope, 150 ft.to
38.00	Gulch, course S. Thence over level land.
40.00	Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec.cor., marked on brass cap, 1913 on S rim, $\frac{1}{4}$ S 36 in N., and S 1 in S.half; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,N. of cor. Pits impracticable. Ascend SW. slope, 175 ft.
43.85	M. S. R. R. brs.N. $2^{\circ}45'$ E., and S. $2^{\circ}45'$ W.
46.42	M.S.R.R.telegraph line, brs.N. $2^{\circ}45'$ E. and S. $2^{\circ}45'$ W.

North boundary of Township 5 South, Range 29 East. 19.

Chains.

48.00 Ridge, brs.N.and S. Wagon road, brs.N.and S. on ridge. Descend NE' slope, 60 ft.

52.25 Gulch, course SE. Ascend SW' slope,, 90 ft.to

61.00 Ridge, brs.NW. and SE. Descend east slope, 110 ft.to

68.25 Gulch, course S. Ascend SW' slope , 70 ft.to

74.59 Ridge, brs.NW' and SE. Wagon road, brs.NW' and SE. on ridge. Descend.SE slope, 295 ft.to

96.25 Power line, brs.NW and SE. Thence along spur ridge, brs.E'and W.

99.00 Deep box canyon, course S. Ascend SW' slope, 30 ft.to

103.00 Spur ridge, brs.S. Descend SE' slope, 75 ft.to

113.00 Draw, course SE. Descend slight east slope, to

115.44 Intersect the 5th. Guide Meridian East, at a point 7.40 chs. S. of the original corner of Ts.4 and 5 S.,Rs.29 and 30 E., which is a stone, 8x8x4 ins. set in a mound of stone, marked and witnessed as described by the Surveyor General. I obliterate the markings referring to Ts. 4 and 5 S., R. 29 E., and at point of intersection, I

Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for closing cor. of Ts.4 and 5 S., R' 29 E., marked on brass cap,

1913 on S.rim,
 C C W of center,
 R 29 E inW.half;
 T 4 S S 31 R 30 E T 5 S S 6 in E.half;
 T 4 S S 36 in NW., and
 T 5 S S 1 in SW.quadrant;

and raise a mound of sone, 2 ft.base, 1 1/2 ft. high, W. of corner. - Pits impracticable.

Land, mountainous and hilly.
 SOil, rocky, 4th rat.
 Timber, none.
 Undergrowth, dense greasewood, mesquite, catclaw and cacti.
 Feb. 1, 1914.

Boundaries of Township 5 South, Range 29 East.
 Latitudes, departures, and closing errors.

Line designated.	True course.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
South bdy. (1st.Std.Par. South)	S.89°55'W. South, West.	68.88 7.80 446.13		.10 7.80		68.88 446.13
West bdy..	North.	480.00	480.00			
North bdy..	East.	515.44			515.44	
East bdy., (5th.Guide Mer.East)	South,	472.60		472.60		
Convergency.					.50	
	Totals,		480.00	480.50 480.00	515.94 515.01	515.01
	Error in latitude,-----			0.50		
	Error in departure,-----				0.93	

20. East boundary of frac. Township 4 South, Range 28 East.

Chains.

- Survey commenced Dec. 9, 1913, and executed with Young and Sons' Light Mountain Transit, No. 8541, hereinbefore described.
- Knowing from recent and repeated tests of my instrument on a meridian established by observations on Polaris at elongation, that it is in correct adjustment, I proceed to the survey of the east bdy. of frac. T. 4 S., R. 28 E.
- At 8h. 53m. a.m., l.m.t., I set off $33^{\circ}2'$ N. on the lat. arc; $22^{\circ}47'$ S. on the decl. arc; and determine a meridian with the solar at the witness cor. to cor. of Ts. 4 and 5 S., R. 29 E., T. 5 S., R. 28 E., and frac. T. 4 S., R. 28 E., hereinbefore described.
- Thence I run, from true point, for Tp. cor., which is 72 lks. south of witness cor.
- North, bet. secs. 31 and 36.
- Descend NE. slope, through scattering timber and dense undergrowth.
- .72 Witness cor. to cor. of Ts. 4 and 5 S., R. 29 E., T. 5 S., R. 28 E. and frac. T. 4 S., R. 28 E.
- 1.44 Impossible to chain from here, as line passes over a rocky broken east slope, and a deep gulch, course SE. Gulch, is about 14.50 chs. north of Tp. corner point, and at foot of steep SW. slope of ridge, brs. NW. and SE. Set instrument on line on top of this ridge, and take stadia measurement to rod at 1.44 chain point. Rod reading, 11.265 ft. Ratio 1 ft. = 2 chs. Focal constant, 1.025 ft. Angle of depression = 4° . Dist. is therefore, $11.265 \times 2 \times .9951$ plus $.016 = 22.43$ chs., which added to 1.44 chs. =
- 23.87 Instrument point on ridge, brs. NW. and SE. Set rod ahead online, and take stadia measurement across deep broken rocky V-shaped canyon, course E. Rod reading, 6.845 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Vertical angle plus 2° . The dist. to rod is therefore $6.845 \times 2 \times .9988$ plus $.016 = 13.69$ chs., which added to 23.87 chs. =
- 37.56 Rod point on ridge, brs. NE. and SW. Descend NW. slope, 115 ft.
- 39.80 Trail, brs. NE. and SW.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
1913 on S. rim,
 $\frac{1}{4}$ S 36 in W., and
S 31 in E. half;
and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.
- 54.00 Gulch, course SW. Ascend SE. slope, 110 ft. to
- 60.00 Spur ridge, brs. SW. Thence along west slope.
- 70.00 Ridge, brs. E. and W. Descend N. slope, 250 ft.
- 79.50 Spur ridge, brs. NW. Descend NE. slope.
- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 25, 30, 31 and 36, marked on brass cap,
1913 on S. rim.
T 4 S on N. half;
R 28 E S 25 in NW.,
R 29 E S 30 in NE.,
S 31 in SE., and
S 36 in SW. quadrant; from which,
A pine, 7 ins. in diam., brs. $S 36^{\circ} E.$, 103 lks. dist., marked T 4 S R 29 E S 31 B T.
- No other trees in limits; raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, west of cor. Pits impracticable.
- Land, mountainous and hilly.
- Soil, very rocky, 4th rate.
- Timber, scattering cedar and pine.
- Undergrowth, dense catclaw, mesquite and cacti.
- Mountainous land, 52 chs.

East boundary of frac. Township 4 South, Range 28 East. 21.

Chains.

North, bet. secs. 25 and 30.
 Descend NE. slope, 95 ft. to
 4.75 Gulch, course NW. Ascend SW. slope, 40 ft. to
 8.70 Ridge, brs. W. Descend N. slope, 100 ft. to
 15.50 Gulch, course W. Ascend SW. slope, 60 ft. to
 19.40 Spur ridge, brs. W. Descend N. slope, 100 ft. to
 24.00 Gold Gulch, 2 chs. wide, course SW.
 Trail on north side, brs. NE. and SW. Ascend SE. slope,
 100 ft. to
 35.00 Spur ridge, brs. SE. Descend NE. slope, 40 ft.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S. rim,
 $\frac{1}{4}$ S 25 in W., and
 S 30 in E. half;
 and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W.
 of cor. Pits impracticable.
 40.10 Gulch, course SE. Ascend SW. slope, 150 ft. to
 52.00 Spur ridge, brs. SE. Thence along east slope, to
 60.00 Descend NE. slope, 25 ft. to
 61.75 Gulch, course SE. Ascend S. slope, 100 ft.
 66.53 Pumping Plant Telephone line, brs. NE. and SW.
 66.70 6-inch water pipe line, brs. NE. and SW.
 67.14 Wagon road brs. E. and W. on ridge, brs. NE. and SW.
 Descend NW. slope, 115 ft.
 69.50 Road, brs. NW. and SE.
 70.00 10-inch pipe line, brs. NE. and SW.
 70.50 10-inch pipe line, brs. NE. and SW.
 73.35 Gulch, course NW. Ascend SW. slope, 35 ft. to
 77.50 Spur ridge, brs. W. Descend N. slope, 50 ft. to
 79.80 Gulch, course NW. Ascend SW. slope, 10 ft. to
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 19, 24, 25 and 30, marked
 on brass cap,
 1913 on S. rim,
 T 4 S in N. half;
 R 28 E S 24 in NW.,
 R 29 E S 19 in NE.
 S 30 in SE., and
 S 25 in SW. quadrant;
 and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of
 corner. Pits impracticable.
 Note: At this corner Dec. 9, 1913, I set off $22^{\circ} 48\frac{1}{2}'$
 S. on the decl. arc; and at apparent noon, I observe
 the sun on the meridian; the resulting lat. is $33^{\circ} 3\frac{1}{2}'$
 N.
 Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, scattering cedar.
 Undergrowth, dense catclaw, mesquite and cacti.
 Mountainous land, 70 chs.

North, bet. secs. 19 and 24.
 Through scattering timber and dense undergrowth. Ascend SW.
 slope, 20 ft. to
 2.00 Spur ridge, brs. W. Descend NW. slope, 25 ft. to
 4.00 Gulch, course W. Ascend S. slope, 160 ft. to
 13.00 Spur ridge, brs. W. Descend NW. slope, 120 ft. to
 18.25 Canyon, course SW. Ascend SE. slope, 240 ft.
 26.00 Ascend in small gulch, course S.
 30.65 Ridge, brs. NE. and SW. Descend NW. slope, 60 ft.
 31.15 Prospect hole 5 ft. deep, on line.
 33.50 Gulch, course W. Ascend SW. slope, 40 ft. to
 36.00 Spur ridge, brs. W. Descend NW. slope, 100 ft. to
 38.25 Gulch, course W.; ascend.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,

22. East boundary of frac. Township 4 South, Range 28 East.

Chains,	
	1913 on S. rim, $\frac{1}{4}$ S 24 in W., and S 19 in E. half; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.
41.25	Descend NW. slope, to Canyon, course SW. Ascend steep rocky broken SE. slope, 325 ft. to
49.70	Gulch, course E. Ascend SW. slope, 50 ft. to
54.00	Ridge, brs. NE. and SW. Descend NW. slope, 50 ft. to
58.90	Head of deep canyon, course W. Ascend SW. slope, 120 ft. to
66.65	Narrow rocky ridge, brs. E. and W. Descend NW. slope, 250 ft. to corner.
74.00	Gulch, course NW.; ascend.
76.00	Spur ridge, brs. W.; descend NW. slope, to
80.00	Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 13, 18, 19 and 24, marked on brass cap, 1913 on S rim, T 4 S in N. half; R 28 E S 13 in NW., R 29 E S 18 in NE., S 19 in SE., and S 24 in SW. quadrant; from which, A cottonwood, 10 ins. in diam., brs. N. 1° E., 29 lks. dist., marked T 4 S R 29 E S 18 B T. A cottonwood, 8 ins. in diam., brs. N. 50° W., 48 lks. dist., marked T 4 S R 28 E S 13 B T. No other trees within limits. Raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable. Land, mountainous and hilly. Soil, rocky, 4th rate. Timber, scattering pine and cedar. Undergrowth, dense mesquite, catclaw and cacti. Mountainous land, 74 chs.
	Dec. 9, 1913.

	Dec. 22, 1913: North, bet. secs. 13 and 18. Through scattering timber and dense undergrowth. Descend NW. slope, to
0.50	Canyon, course SW. Ascend SE. slope, 400 ft. to
16.07	Rocky spur, brs. E. Set rod at this point, and take stadia measurement across a broken E. slope, from instrument placed on line on top of another spur, brs. E. Rod reading, 1.950 ft. Ratio, 1 ft. = 2 chs. Focal con- stant, 1.025 ft. Angle of depression - 2° 40'. The distance to instrument is therefore, $1.950 \times 2 \times .9978$ plus .016 = 3.91 chs., which added to 16.07 chs. =
19.98	Instrument point on rocky spur, brs. E. Thence I take stadia measurement across deep broken rocky canyon, course SE. to rod on line on top of spur, brs. W. Rod reading, 7.085 ft. Ratio, 1 ft. = 2 chs. Focal con- stant, 1.025 ft. Vertical angle, plus 2°. The dist. to rod is therefore, $7.085 \times 2 \times .9988$ plus .016 = 14.18 chs., which added to, 19.98 chs. =
34.16	Rod point on rocky spur, brs. W. Descend NW. slope, 60 ft.
37.00	Foundation of old rock house.
37.40	Gulch, course W. Ascend SW. slope, 125 ft.
38.30	Foundation of old rock house.
40.00	Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 13 in W., and S 18 in E. half; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.
43.75	Trail, brs. NW. and SE. on spur ridge, brs. W. Descend NW. slope, 25 ft. to

East boundary of frac. Township 4 South, Range 28 East. 23.

Chains.

47.25 Gulch, course SW. Ascend SE slope, 110 ft. to
 52.00 Ridge, brs. NE and SW.
 Gallows frame, brs. S. 61° W. about 34 chs. dist.
 Prospector's cabin, brs. N. 28° W., about 60 chs. dist.
 Descend NW slope, 60 ft. to
 55.00 Gulch, course W. Ascend SW slope, 65 ft. to
 63.00 Spur ridge, brs. W. Descend NW slope, 225 ft.
 64.10 Rocky ledge brs. NW and SE.
 71.00 Enter canyon, course SW.
 74.35 Leave canyon; ascend SE slope, 120 ft. to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 7, 12, 13 and 18, marked on
 brass cap,
 1913 on S. rim,
 T 4 S in N. half;
 R 28 E S 12 in NW.,
 R 29 E S 7 in NE.,
 S 18 in SE., and
 S 13 in SW. quadrant;
 and raise a mound of stone 2 ft. base, 1½ ft. high, west
 of corner. Pits impracticable.
 From this corner, a steel water tank at Gold Belt Mill,
 brs. S. 52½° W., about 50 chs. dist.
 Land, mountainous and hilly.
 Soil, very rocky, 4th rate.
 Timber, scattering cedar.
 Undergrowth, dense mesquite, scrub oak, catclaw and cacti.
 Mountainous land, 75 chs.

Dec. 22, 1913.

Dec. 24, 1913: At 8h. 7m., a.m., l.m.t., I set off 33° 5' N. on the lat. arc; 23° 22½' S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 7, 12, 13 and 18.

Thence I run,
 North, bet. secs. 7 and 12.
 17.50 Ascend SE slope, 600 ft. to
 18.50 Spur ridge, brs. SW. Thence along W. slope.
 22.50 Descend NW slope, 40 ft. to
 24.60 Gulch, course SW. Ascend S. slope, 150 ft. to
 32.20 Ridge, brs. E and W. Descend NW slope, 270 ft.
 39.80 Trail, brs. E and W.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for ¼ sec. cor., marked on brass cap,
 1913 on S rim,
 ¼ S 12 in W., and
 S 7 in E. half; from which,
 A pine, 8 ins. in diam., brs. S. 2° E., 48 lks.
 dist., marked ¼ S 7 B T.
 A pine, 67 ins. in diam., brs. S. 15° W., 97 lks.
 dist., marked ¼ S 12 B T.
 Mine dump brs. N. 53° E., about 7 chs. dist.
 43.50 Gulch, course NW.; ascend.
 44.25 Spur ridge, brs. W.; descend.
 46.25 Gulch, course SW. Ascend SW slope, 340 ft. to
 63.00 Ridge, brs. NE. and SW. Descend NW slope.
 71.00 Descend NE slope, 160 ft. to
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 1, 6, 7 and 12, marked on
 brass cap,
 1913 on S. rim,
 T 4 S in N. half;
 R 28 E S 1 in NW.,
 R 29 E S 6 in NE.,
 S 7 in SE., and
 S 12 in SW. quadrant; from which,

24 East bdy. of frac. Township 4 South, Range 28 East.

Chains.

A pine, 6 ins. in diam., brs. S. $84\frac{1}{2}^{\circ}$ W., 15 lks. dist., marked T 4 S R 28 E S 12 B T?

No other trees within limits; raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.

Dynamite Mine hoisting gallows brs. N. $80\frac{3}{4}^{\circ}$ E., about 10 chs. dist.

Note: At this cor., Dec. 24, 1913, I set off $23^{\circ} 25'$ S. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting alt. is $33^{\circ} 6'$ N.

Land, mountainous and hilly.
Soil, very rocky, 4th rate.
Timber, scattering cedar and pine.
Undergrowth, dense mesquite, catclaw, scrub oak and cacti.
Mountainous land, 72 chs.

North, bet. secs. 1 and 6.
Through scattering timber and dense undergrowth. Descend NE. slope, 200 ft.

- 5.08 Trail, brs. E. and W.
 - 6.00 Canyon, course NW. Ascend SW. slope, 140 ft. to
 - 12.00 Spur ridge, brs. W. Descend NE. slope, 140 ft. to
 - 16.50 Canyon, 1 ch. wide, course NW.
 - 17.40 Dump car track at mouth of tunnel on 700 ft. level.
Coronado Mine, Vicksburg claim, brs. E. 2 chs. dist.
Ascend SW. slope, 630 ft.
 - 30.00 Cliff, 40 ft. high, brs. NE. and SW.
 - 37.40 Ridge, brs. NE. and SW. Descend NW. slope, 200 ft. to gulch.
 - 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim,
 $\frac{1}{4}$ S 1 in W., and
S 6 in E. half; from which,
A pine, 5 ins. in diam., brs. N. 22° E., 49 lks. dist., marked $\frac{1}{4}$ S 6 B T.
A pine, 6 ins. in diam., brs. N. $72\frac{3}{4}^{\circ}$ W., 60 lks. dist., marked $\frac{1}{4}$ S 1 B T.
 - 47.60 Gulch, course W. Ascend SW. slope, 50 ft. to
 - 49.75 Spur ridge, brs. W. Descend NW. slope, 75 ft. to
 - 54.50 Gulch, course W. Ascend SE. slope, 430 ft. to
 - 72.00 Narrow ridge, brs. NE. and SW. Descend NW. slope, 40 ft. to.
 - 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of Ts. 3 and 4 S., R. 29 E., and frac. Ts. 3 and 4 S., R. 28 E., marked on brass cap, 1913 on S. rim,
T 3 S in N.,
R 29 E in E.,
T 4 S in S., and
R 28 E in W. half;
S 36 in NW.,
S 31 in NE.,
S 6 in SE., and
S 1 in SW. quadrant; from which,
A juniper, 6 ins. in diam., brs. S. $45\frac{1}{2}^{\circ}$ E., 15 lks. dist., marked T 4 S R 29 E S 6 B T.
An oak, 6 ins. in diam., brs. S. $52\frac{1}{2}^{\circ}$ W., 70 lks. dist., marked T 4 S R 28 E S 1 B T.
- No other trees within limits; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, south of corner. Pits impracticable.
- Land, mountainous and hilly.
Soil, very rocky, 4th rate.
Timber, scattering pine and juniper.
Undergrowth, dense mesquite, catclaw, scrub oak and cacti.
Mountainous land, 80.00 chs.

Dec. 24, 1913.

North bdy. of frac. Township 4 South, Range 28 East. 25.

Chains.

Survey commenced Dec. 26, 1913, and executed with Young and Sons' Light Mountain Transit, No. 8541, hereinbefore described.

Knowing from recent and repeated tests of my instrument on a meridian established by observations on Polaris at elongation, that it is in correct adjustment, I proceed to the survey of the North boundary of frac. Tp. 4 S., R. 28 E.

At 9h. 13m. a.m., l.m.t., I set off 33° 7' N. on the lat. arc; 23° 21' S. on the decl. arc; and determine a meridian with the solar at the cor. of Ts. 3 and 4 S., R. 29 E., and frac. Ts. 3 and 4 S., R. 28 E., hereinbefore described; latitude, 33° 06' 59" N.; long. 109° 24' 32" W.

Thence I run,

West, on a true line, bet. secs. 1 and 36.

Through scattering timber and dense undergrowth. Descend NW. slope, 325 ft. to

9.00 Horseshoe Canyon, course SW. Ascend broken east slope, 320 ft. to

19.60 Ridge, brs. N. and S. Descend W. slope, 100 ft. to

23.00 Canyon, course SW. Ascend broken SE. slope, 270 ft. to

34.75 Ridge, brs. N. and S. Descend SW. slope, 150 ft. to

39.50 Canyon, course SW. Ascend E. slope, 310 ft.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,

1913 on S. rim,

$\frac{1}{4}$ S 36 in N., and

S 1 in S. half;

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of corner. Pits impracticable.

Ascend SE. slope, to

51.00 Thence along south slope, to

54.00 Ridge, brs. NE. and SW. Descend SW. slope, 320 ft. to

67.00 Canyon, course SW. Ascend SE. slope, 65 ft. to

71.50 Thence along broken S. slope.

80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 1, 2, 35 and 36, marked on brass cap,

1913 on S. rim,

T 3 S in N.,

T 4 S in S., and

R 28 E in W. half;

S 35 in NW.,

S 36 in NE.,

S 1 in SE., and

S 2 in SW. quadrant;

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of corner. Pits impracticable.

Land, mountainous and hilly.

Soil, very rocky, 4th rate.

Timber, scattering pinon, cedar and oak.

Undergrowth, dense scrub oak, mesquite, catclaw and greasewood.

Mountainous land, 80.00 chs.

Note: The sky was overcast at noon, making an observation for latitude impossible.

Dec. 26, 1913.

Jan 5

Jan. 5, 1914: At 7h. 55m. a.m., l.m.t., I set off 33° 7' N. on the lat. arc; 22° 36 1/2' S. on the decl. arc; and determine a meridian with the solar, at the cor. of secs. 1, 2, 35 and 36.

Thence I run,

West, on a true line, bet. secs. 2 and 35.

Through scattering timber and dense undergrowth.

1.20 High, rocky point brs. S. Ascend SE. slope, 110 ft. to

26. North bdy. of frac. Township 4 South, Range 28 East.

Chains.

7.75
22.00
36.00
39.45

Rocky spur ridge, brs. SW. Descend NW. slope, 1000 ft. Ridge, brs. NE. and SW. Descend W. slope, to Canyon, course SW. Ascend SE. slope. Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for witness cor. to $\frac{1}{4}$ sec. cor., marked on brass cap,

1913 on S. rim,
W C $\frac{1}{4}$ in E. half;
S 35 in NW., and
S 2 in SW. quadrant;

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable. This witness cor. is set at foot of high cliffs, brs. NE. and S. 70° W., making it impossible to place mound north of corner. 4000 the true point for $\frac{1}{4}$ sec. cor. falls on face of cliffs.

It being impossible to chain or triangulate on line from here, I run traverse line in sec. 2, T. 4 S., R. 28 E., as follows:

S. $52^\circ 45'$ W., 1.84 chs.
Thence S. $81^\circ 30'$ W., 10.32 chs.

Thence S. 62° W., 9.98 chs.

Thence N. 75° W., 9.13 chs.

Thence N. $65^\circ 5'$ W., 11.98 chs., to a point 39 lks. east, and 8 lks. N. of the point for cor. of secs. 2, 3, 34 and 35; therefore, I run, west 0.39 chs., and south, 0.08 chs.; and at

80.00

Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 2, 3, 34 and 35, marked on brass cap,

1913 on S. rim,
T 3 S in N.,
T 4 S in S., and
R 28 E in W. half;
S 34 in NW.,
S 35 in NE.,
S 2 in SE., and
S 3 in SW. quadrant;

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.

Note: At this corner, Jan. 5, 1914, I set off $22^\circ 37\frac{1}{2}'$ S. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is $33^\circ 7'$ N.

Land, mountainous.
Soil, very rocky, 4th rate.
Timber, scattering pine and cedar.
Undergrowth, dense mesquite, catclaw, scrub oak, hackberry and cacti.
Mountainous land, 80.00 chs.

West, bet. secs. 3 and 34.
Through scattering timber and dense undergrowth. Descend SW. slope, 160 ft. to

3.50
9.50
14.00
21.50
29.25
34.00
40.00

Gulch, course SW. Thence along S. slope. Gulch, course S. Ascend SE. slope, 25 ft. to Ridge, brs. NE. and SW. Descend W. slope, 135 ft. to Canyon, course SW. Ascend SE. slope, 75 ft. to Thence along S. slope, to

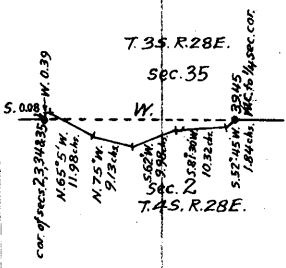
Descend SW. slope, 100 ft. to Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,

1913 on S. rim,
 $\frac{1}{4}$ S 34 in N., and
S 3 in S. half;

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.

Jan. 5, 1914.

Jan. 6, 1914:
Descend W. slope, 225 ft. to



North boundary of frac. Township 4 South, Range 28 East. 27.

Chains.

54.00 Gulch, course SW. Ascend SE. slope, 55 ft. to
 64.00 Ridge, brs. NE. and SW. Descend W. slope, 120 ft. to
 75.40 Gulch, course SW. Thence along S. slope.
 78.00 Gulch, course SW. Ascend SE. slope, 15 ft. to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 3, 4, 33 and 34, marked
 on brass cap,
 1913 on S. rim,
 T 3 S in N.,
 T 4 S in S., and
 R 28 E in W. half;
 S 33 in NW.,
 S 34 in NE.,
 S 3 in SE., and
 S 4 in SW quadrant;
 and raise a mound of stone 2 ft. base, 1 1/2 ft. high, west
 of corner. Pits impracticable.
 Land, mountainous and hilly.
 Soil, very rocky, 4th rate.
 Timber, scattering cedar.
 Undergrowth, dense mesquite, catclaw, scrub oak and cacti.
 Mountainous land, 60 chs.

Jan. 6, 1914.

Jan. 7, 1914: At 7h. 53m., a.m., l.m.t., I set off 33° 7' N.,
 on the lat. arc; 22° 22 1/2' S. on the decl. arc; and deter-
 mine a meridian with the solar at the cor. of secs. 3, 4,
 33 and 34.

Thence I run,
 West, on a true line, bet. secs. 4 and 33.
 Through scattering timber and dense undergrowth. Ascend
 SE. slope, to
 1.00 Spur ridge, brs. SW. Descend SW. slope, 60 ft. to
 3.85 Canyon, course S. Ascend NE. slope, 365 ft.
 14.00 Foot of bluff, 100 ft. high, brs. N. and S.
 16.40 Ridge, brs. N. and S. Descend SW. slope, to
 16.46 East edge of canyon, 400 ft. deep, at top of cliff, 200 ft.
 high. Impossible to chain from here. Leave a flag
 at this point, and triangulate distance across canyon,
 as follows: From a point on line on the west side
 of the canyon, I measure a base line, S. 13° 20' E., 7.44
 chs. to a point from which the flag, brs. N. 55° 40' E.
 The distance across is given by

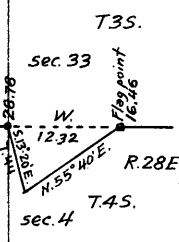
$$\frac{\sin 69^\circ \times 7.44}{\sin 34^\circ 20'} = 12.32 \text{ chs.}, \text{ which added}$$

 to 16.46 chs. =

28.78 Triangulation point on ridge, brs. N. and S.
 Descend SW. slope, 235 ft. into another canyon.
 39.45 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for witness cor. to 1/4 sec. cor., marked on
 brass cap,

1913 on S. rim,
 W C 1/4 in E. half;
 S 33 in NW., and
 S 4 in SW quadrant; from which,
 A cedar, 8 ins. in diam., brs. N. 66 1/4° W., 119
 lks. dist., marked W C 1/4 S 33 B T.
 A cottonwood, 22 ins. in diam., brs. S. 12 1/2° E.,
 208 lks. dist., marked W C 1/4 S 4 B T.

40.00 True point for 1/4 sec. cor. falls in canyon, course S. Ascend
 steep rocky, broken east slope, 600 ft.
 60.00 Foot of cliff, 60 ft. high, brs. NW. and SE.
 61.00 Rock ridge, brs. N. and S. Descend steep SW. slope, 385 ft.
 67.00 Spur ridge, brs. SW. Descend W. slope, on spur ridge.
 80.00 Gulch, course S. True point for sec. cor. Ascend.
 80.30 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins.
 in the ground, for witness cor. to cor. of secs. 4, 5, 32
 and 33, marked on brass cap,
 1913 on S. rim,



28. North boundary of frac. Township 4 South, Range 28 East.

Chains.

W C N of center,
 T 3 S in N.,
 T 4 S in S.,
 R 28 E in W. half;
 S 32 in NW.,
 S 33 in NE.,
 S 4 in SE., and
 S 5 in SW. quadrant;

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.

Note: At this corner, Jan. 7, 1914, I set off $22^{\circ} 23\frac{1}{2}' S$. on the decl. arc; and at apparent noon, observe the sun on the meridian; the resulting lat. is $33^{\circ} 7' N$.

Land, mountainous and hilly.

Soil, very rocky, 4th rate.

Timber, scattering cedar and pine.

Undergrowth, dense mesquite, catclaw, scrub oak, hackberry and cacti.

Mountainous land, 80.00 chs.

 West, on a true line, bet. frac. secs. 5 and 32, from true point for cor.

Through scattering timber and dense undergrowth. Ascend SE. slope, 280 ft. to ridge.

0.30 Witness cor. to cor. of secs. 4, 5, 32 and 33.

5.20 Rock ledge 20 ft. high, brs. NE. and SW.

10.00 Spur ridge, brs. S. Descend SW. slope, 570 ft.

12.20 Ledge, brs. NE. and SW. Descend W. slope, to

34.00 Gulch, course SW. Thence along N. bank of gulch, course W. Ascend.

39.00 Spur ridge, brs. SW. Descend W. slope.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,

1913 on S. rim,

$\frac{1}{4}$ S 32 in N., and

S 5 in S. half;

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.

41.00 Foot of bluff, brs. N. and S. Enter cultivated land belonging to Joe Jegge.

41.50 Irrigation ditch, 2 ft. wide, 1 ft. deep, course S.

42.66 Fence brs. N. and S.

42.82 Eagle Creek, 80 lks. wide, 1 ft. deep, course S.

44.00 Trail, brs. N. and S.

44.54 Intersect the east boundary of the White Mountain Indian Reservation, 25.56 chs. N. of the 55 mile cor., reestablished by me, as described in Book "C."

At the point of intersection, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for closing cor. of frac. Ts. 3 and 4 S., R. 28 E., marked on brass cap,

1913 on S. rim,

C C W of center,

R 28 E in E., and

W M I R in W. half;

T 3 S S 32 in NE., and

T 4 S S 5 in SE. quadrant; from which,

A cottonwood, 8 ins. in diam., brs. N. $5^{\circ} E$, 27 lks. dist., marked T 3 S R 28 E S 32 B T.

A cottonwood 8 ins. in diam., brs. S. 50 lks. dist., marked T 4 S R 28 E S 5 B T.

Land, mountainous and hilly.

Soil, 1st and 2nd rate in Creek bottom; remainder rocky, 4th rate.

Timber, scattering cedar and cottonwood.

Undergrowth, dense mesquite, catclaw, scrub oak, and cacti.

Mountainous land, 41 chs.

Jan. 7, 1914.

North half of East bdy. of Township 3 South, Range 30 East. 29.

Chains.

Survey commenced Feb. 26, 1914, and executed with Young and Sons' Light Mountain Transit, No. 8541, hereinbefore described.

Knowing from recent and repeated tests of my instrument on a meridian established by observations on Polaris that it is in correct adjustment, I proceed to the survey of the North half of the east bdy. of T. 3 S., R. 30 E.

From the cor. of secs. 13, 18, 19 and 24, on the east bdy. of T. 3 S., R. 30 E., established by me, as described in Book "I," I run,

North, bet. secs. 13 and 18.

Through scattering timber and dense undergrowth. Descend NE. slope, 365 ft. to

22.00 Canyon, course NW. Ascend SW. slope, 110 ft. to

30.50 Spur ridge, brs. NW. Descend N. slope, 225 ft. to

36.50 Gulch, course W. Ascend SW. slope, 210 ft. to ridge.

40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. for., marked on brass cap,

1913 on S rim,
 $\frac{1}{2}$ S 13 in W., and
 S 18 in E. half;

and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.

47.00 Ridge, brs. NW. and SE. Descend N. slope, 450 ft. to

62.50 Wash, course NE. Thence along east slope.

64.00 Spur ridge, brs. E. Descend NE slope.

68.75 Rim rock, brs. NW. and SE.

74.00 Wash, course E. Ascend SE. slope, 35 ft.

75.00 Rim rock, brs. NE. and SW.

80.00 Spur ridge, brs. NE. Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 7, 12, 13 and 18, marked on brass cap,

1913 on S rim,
 T 3 S in N. half;
 R 30 E S 12 in NW.,
 R 31 E S 7 in NE.,
 S 18 in SE., and
 S 13 in SW. quadrant; from which,
 A juniper, 6 ins. in diam., brs. S. $57\frac{1}{2}^{\circ}$ W., 157 lks. dist., marked T 3 S R 30 E S 13 B T.

No other trees within limits; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.

Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, scattering oak, cedar and juniper.
 Undergrowth, dense scrub oak, mesquite, catclaw, and cacti.
 Mountainous land, 76 chs.

Feb. 26, 1914.

Feb. 28, 1914: At 8h. 30m. a.m., l.m.t., I set off $8^{\circ}5'$ S. on the decl. arc; $33^{\circ}10\frac{1}{2}'$ N. on the lat. arc; and determine a meridian with the solar at the cor. of secs. 7, 12, 13 and 18.

Thence I run,

North, bet. secs. 7 and 12.

Through scattering timber and dense undergrowth. Descend N. slope, 720 ft.

3.75 Rim rock, brs. NW. and SE.

6.60 Rim rock, brs. NW. and SE.

10.00 Wash, course NE. Descend along NE. slope.

26.00 Descend broken N. slope, along west bank of canyon, course NNW.

28.00 Spur ridge, brs. E. Descend.

35.00 Enter canyon, course NW. Ascend.

36.70 Spur ridge, extends west to canyon.

30. North half of East bdy. of Township 3 South, Range 30 E.

Chains.

- 37.50 Leave canyon, course NE. Ascend SE. slope, 50 ft.
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 12 in W., and S 7 in E. half; from which,
A cedar, 14 ins. in diam., brs. N. 41° E., 23 lks. dist., marked $\frac{1}{4}$ S 7 B T.
A cedar limb, 12 ins. in diam., brs. S. 37° W., 17 lks. dist., marked $\frac{1}{4}$ S 12 B T.
- 46.00 Spur ridge, extends E. to canyon. Descend NE. slope.
47.26 Instrument point for stadia measurement across same canyon, course NW. Rod reading (mean of three) 2.640 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Level. The distance on line to rod is therefore, 2.640×2 plus .016 = 5.30 chs., which added to 47.26 chs. =
- 52.56 Rod point on north side of canyon. Ascend SW. slope, 45 ft. to
- 56.50 Spur ridge, brs. NW. Set rod on line at this point, and take stadia measurement across box canyon from instrument on line on opposite side. Rod reading (mean of three) 6.260 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Angle of depression, - 8° 30'. The distance on line from rod to instrument is therefore $6.260 \times 2 \times .9782$ plus .016 = 12.26 chs., which added to 56.50 chs. =
- 68.76 Instrument point on bluff on north side of canyon, course W. Ascend SW. slope, 55 ft. to
- 73.00 Spur ridge, brs. W. Descend NW. slope, 35 ft. to
- 77.00 Thence along west slope, to
- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 1, 6, 7 and 12, marked on brass cap,
1913 on S. rim,
T 3 S in N. half;
R 30 E S 1 in NW.,
R 31 E S 6 in NE.,
S 7 in SE., and
S 12 in SW. quadrant;
and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.
- Land, mountainous and hilly.
Soil, rocky, 4th rate.
Timber, scattering cedar.
Undergrowth, dense scrub oak, mesquite, catclaw and cacti.
Mountainous land, 70 chs.
Note: The sky was overcast at noon, making an observation for latitude impossible.

North, bet. secs. 1 and 6.

- Through scattering timber and dense undergrowth. Ascend SW. slope, 20 ft. to
- 1.54 Spur ridge, brs. W. Set instrument on line at this point, and take stadia measurement over steep broken west slope. Rod reading (mean of three) 7.206 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Angle of depression, -18° 46'. The distance to rod is therefore, $7.206 \times 2 \times .8965$ plus .016 = 12.94 chs., which added to 1.54 chs. =
- 14.48 Rod point on spur ridge, brs. W. Take stadia measurement across box canyon, course W., from instrument on line on N. side to rod at this point. Rod reading (mean of three) 3.668 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Level. The distance to instrument is therefore, 3.668×2 plus .016 = 7.35 chs., which added to 14.48 chs. =
- 21.83 Instrument point on N. bank of canyon. Ascend SW. slope, 100 ft.

Chains.

38.50 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground for witness cor. to $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S. rim,
 W C $\frac{1}{4}$ in N. half;
 S 6 in SE., and
 S 1 in SW. quadrant;
 and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.

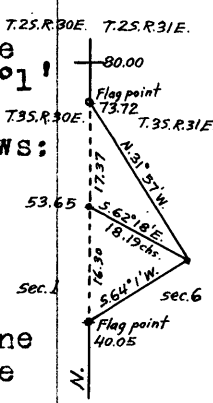
39.95 Foot of sandstone cliff, brs. NW. and SE.
 40.00 True point for $\frac{1}{4}$ sec. cor. falls on face of cliff.
 40.05 Top of bluff, on left side of San Francisco River, course NW. Water in river is about 2.50 chs. wide, and 14 ins. deep. Chaining being impossible, I leave flag at this point, and triangulate as follows:
 From a point on line in river bottom, I measure a base line S. $62^{\circ}18'E.$, 18.19 chs. to a point from which the flag on top of bluff on left side of river brs. S. $64^{\circ}01'W.$ The distance on line from flag to triangulation point in river bottom is therefore obtained as follows:

$$\frac{\sin 53^{\circ}41' \times 18.19}{\sin 64^{\circ}01'} = 16.30 \text{ chs.},$$
 which added to 40.05 chs. =

56.35 Triangulation point in river bottom. I now set flag on line on bluffs on right side of river, and make another triangulation, using the same measured base line as for above triangulation. From the SE. end of the base line, the flag brs. N. $31^{\circ}57'W.$ The distance from Triangulation point to flag is therefore obtained as follows:

$$\frac{\sin 30^{\circ}21' \times 18.19}{\sin 31^{\circ}57'} = 17.37 \text{ chs.},$$
 which added to 56.35 chs. = 73.72 chs.
 From triangulation point in river bottom, I chain measurement for topography, as far as practicable.

56.90 Wagon road brs. E. and W.
 58.00 Foot of bluffs, brs. NW. and SE. Discontinue chaining.
 73.72 Flag point on bluffs, 570 ft. above river, brs. E. and W. Ascend SW. slope, 100 ft. by chain measurement to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of Ts. 2 and 3 S., Rs. 30 and 31 E., marked on brass cap,
 1913 on S. rim,
 T 2 Sin N.,
 R 31 E in E.,
 T 3 S in S., and
 R 30 E in W. half;
 S 36 in NW.,
 S 31 in NE.,
 S 6 in SE., and
 S 1 in SW. quadrant; from which,
 A cedar, 6 ins. in diam., brs. S. $12^{\circ}E.$, 106 lks. dist., marked T 3 S R 31 E S 6 B T.
 A cedar, 7 ins. in diam., brs. N. $37\frac{1}{2}^{\circ}W.$, 78 lks. dist., marked T 2 S R 30 E S 36 B T.
 No other trees within limits. Raise a mound of stone 2 ft base, $1\frac{1}{2}$ ft. high, south of corner. Pits impracticable.
 Land, mountainous, hilly and rolling.
 Soil, rocky, 4th rate; 2nd rate in river bottom.
 Timber, scattering cedar.
 Undergrowth, mesquite, catclaw, scrub oak and cacti.
 Mountainous land, 60 chs.



Feb. 28, 1914.

32. North boundary of Township 3 South, Range 30 East.

Chains.

Survey commenced March 4, 1914, and executed with Young and Sons' Lightmountain Transit, No. 8541, hereinbefore described.

Knowing from recent and repeated tests of my instrument on a meridian established by observations on Polaris, at elongation, that it is in correct adjustment, I proceed to the survey of the north bdy. of T3 S., R.30 E.

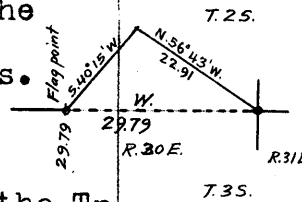
At 8h. 7m., a.m., l.m.t., I set off 33°12' N. on the lat. arc; 6°34' S. on the decl. arc; and determine a meridian with the solar at the cor. of Ts. 2 and 3 S., Rs. 30 and 31 E., established by me, as hereinbefore described; lat. 33° 12' 12" N.; long., 109° 13' 24" W.

Thence I run,

West, on a random line, bet. secs. 1 and 36.

Impossible to chain west on line from this cor. Set a flag at a point due W. on line, measure a base line from the above Tp. cor., N. 56° 43' W., 22.91 chs., from the NW. end of which the flag brs. S. 40° 15' W. The distance is given from the following:

$$\frac{\sin. 96^{\circ} 58'}{\sin. 49^{\circ} 45'} \times 22.91 = 29.79 \text{ chs.}$$



29.79
40.00

Flag point. Thence continue measurement by chain.

Set temp. 1/4 sec. cor.

Continue random line west, along the north bdy. of the Tp., setting temp. sec. and 1/4 sec. cors. at intervals of 40 chs., measuring the distances with 2 chain tape and clinometer. At 1.37 chs. west of the temp. cor. of secs. 4, 5, 32 and 33, it is impossible to chain across a deep V-shaped canyon, course SE. Therefore, take stadia measurement to rod on line on west side of canyon. Rod reading (mean of three) 5.081 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Vertical angle plus 17°. Distance obtained from 5.081 x 2 x .9145 plus .016 = 9.31 chs. Thence from rod point, continue random line west by chain measurement, and at 479.83 chs., intersect the 5th. Guide Meridian East, 7 lks. north of the cor. of Ts. 2 and 3 S., Rs. 29 and 30 E., reestablished by me, as described in Book "B."

Thence I run,

N. 89° 59' E., on a true line, bet. secs. 6 and 31.

Through scattering timber and dense undergrowth. Descend SE. slope, 215 ft. to

8.00
14.00
19.00
21.00
28.00
39.83

Gulch, course S. Ascend SW. slope, 55 ft. to

Spur ridge, brs. S. Descend SE. slope, 70 ft. to

Wash, course SW. Ascend SW. slope, 10 ft. to

Ridge, brs. NW. and SE. Descend NE. slope, 205 ft. to

Canyon, course SE. Ascend SW. slope, 110 ft.

Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap,

1913 on S. rim,

1/4 S 31 in N., and

S 6 in S. half; from which,

A pine, 10 ins. in diam., brs. N. 52 1/2° E., 185 lks. dist., marked 1/4 S 31 B T

A cedar, 5 ins. in diam., brs. S. 69 1/4° E., 23 lks. dist., marked 1/4 S 6 B T.

41.00
49.00
56.00
69.15
78.00
79.83

Spur ridge, brs. S. Descend SE. slope, 250 ft. to

Canyon, course SE. Ascend SW. slope, 185 ft. to

Spur ridge, brs. S. Descend SE. slope, 405 ft. to

Canyon, course S. Ascend SW. slope, 270 ft. to

Spur ridge, brs. S. Descend SE. slope, to

Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 5, 6, 31 and 32, marked on brass cap,

1913 on S. rim,

T 2 S in N.,

T 3 S in S., and

R 30 E in W. half;

S 31 in NW.,

S 32 in NE.,

S 5 in SE., and

S 6 in SW. quadrant; from which

Chains.

A pine, 6 ins. in diam., brs. S. 38° E., 182 lks. dist., marked T 3 S R 30 E S 5 B T.
 No other trees within limits. Raise a mound of stone 2 ft. base, 1½ ft. high, west of corner. Pits impracticable.
 Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, scattering cedar and pine.
 Undergrowth, dense scrub oak, mesquite, catclaw and cacti.
 Mountainous land 66 chs.
 March 4, 1914.

March 5, 1914: At 8h. 45m. a.m., l.m.t., I set off 33° 12' N. on the lat. arc; 6° 10½' S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 5, 6, 31 and 32.
 Thence I run,
 N. 89° 59' E., on a true line, bet. secs. 5 and 32.
 Through scattering timber and dense undergrowth. Descend SE. slope, 100 ft. to
 5.00 Gulch, course S. Ascend SW. slope, 70 ft. to
 7.50 Spur ridge, brs. S. Descend.
 9.00 Wash, course SW. Ascend broken west slope, 545 ft.
 19.00 Ascend slight SW. slope.
 27.75 Spur ridge, brs. SE. Descend SE. slope, 180 ft. to
 37.00 Thence along south slope.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for ¼ sec. cor., marked on brass cap, 1913 on S rim,
 ¼ S 32 in N., and
 S 5 in S. half; from which
 A cedar, 7 ins. in diam., brs. N. 15° W., 160 lks. dist., marked ¼ S 32 B T.
 A cedar, 6 ins. in diam., brs. S. 81¼° W., 79 lks. dist., marked ¼ S 5 B T.
 44.00 Wash, course S. Ascend SW. slope, 15 ft. to
 49.00 Ridge, brs. NW. and SE. Descend NE. slope, 445 ft.
 59.60 Wash, course NE. Thence along N. slope.
 64.00 Descend NE. slope.
 69.40 West bank of deep V-shaped canyon, with stream of clear water in bottom.
 78.65 East bank of canyon; spur ridge, brs. SE.; descend.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 4, 5, 32 and 33, marked on brass cap,
 1913 on S. rim,
 T 2 S in N.,
 T 3 S in S.,
 R 30 E in W. half;
 S 32 in NW.,
 S 33 in NE.,
 S 4 in SE., and
 S 5 in SW. quadrant; from which,
 A cedar, 10 ins. in diam., brs. S. 89¼° E., 141 lks. dist., marked T 3 S R 30 E S 4 B T.
 No other trees within limits. Raise a mound of stone, 2 ft. base, 1½ ft. high, west of corner. Pits impracticable.
 Note: At this cor., Mar. 5, 1914, I set off 6° 7½' S. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 33° 12½' N.
 Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, scattering cedar and pine.
 Undergrowth, scrub oak, mesquite, catclaw and cacti.
 Mountainous land, 66 chs.

34. North boundary of Township 3 South, Range 30 East.

Chains.	
	N. 89° 59' E., on a true line, bet. secs. 4 and 33. Ascend broken SW. slope, 105 ft. to spur ridge.
0.50	Wash, course S. Continue ascent.
2.00	Spur ridge, brs. S. Descend.
3.40	Wash, course S.; ascend.
10.00	Spur ridge, brs. S. Descend SE. slope, 120 ft. to
17.00	Gulch, course S. Ascend SW. slope, 225 ft. to
28.00	Ridge, brs. NW and SE. Descend NE. slope, 180 ft.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 33 in N., and S 4 in S. half; from which, A cedar, 8 ins. in diam., brs. N. 82° E., 196 lks. dist., marked $\frac{1}{4}$ S 33 B T. A cedar limb, 6 ins. in diam., brs. S. 10° E., 125 lks. dist., marked $\frac{1}{4}$ S 4 B T.
44.00	Thence along north slope, to
48.00	Ascend slight NW. slope, 30 ft. to
52.60	Rocky spur ridge, brs. NE. Descend east slope, 435 ft. to
64.00	Gulch, course SE. Ascend SW. slope, 150 ft. to
76.00	Ridge, brs. NW. and SE. Descend NE. slope, 40 ft. to
80.00	Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 3, 4, 33 and 34, marked on brass cap, 1913 on S. rim, T 2 S in N., T 3 S in S., and R 30 E in W. half; S 33 in NW., S 34 in NE., S 3 in SE., and S 4 in SW. quadrant; and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.
	Land, mountainous and hilly. Soil, rocky, 4th rat. Timber, scattering cedar and pine. Undergrowth, dense scrub oak, mesquite, catlaw and cacti. Mountainous land, 70 chs.

	N. 89° 59' E., on a true line, bet. secs. 3 and 34. Through scattering timber and dense undergrowth. Descend NE. slope, 225 ft. to
12.00	Gulch, course SE. Ascend SW. slope, 60 ft.
14.50	Wash, course S. Continue ascent.
23.00	Spur ridge, brs. SE. Descend E. slope, 140 ft.
26.00	Wash, course NE. Continue descent.
26.70	Spur ridge, brs. NE. Continue descent to
31.25	Gulch, course S. Ascend SW. slope, 140 ft.
32.65	Short spur ridge, brs. S. Continue ascent.
33.80	Gulch, course S. Continue ascent.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 34 in N., and S 3 in S. half; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.
42.00	Spur ridge, brs. S. Descend slight SE. slope, to
46.00	Wash, course SE. Ascend W. slope, 275 ft. to
52.00	Rim rock, brs. NE. and SW.
56.50	Ridge, brs. NW. and SE. Descend NE. slope, 225 ft. to
66.84	Wash, course NE. Ascend NW. slope, 30 ft. to
70.00	Spur ridge, brs. NE. Descend NE. slope, 175 ft. to
80.00	Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 2, 3, 34 and 35, marked on brass cap,

Chains.

1913 on S rim,
 T 2 S in N.,
 T 3 S in S., and
 R 30 E in W. half;
 S 34 in NW.,
 S 35 in NE.,
 S 2 in SE., and
 S 3 in SW. quadrant; from which,
 A cedar, 7 ins. in diam., brs. N. 0° 45' E., 41
 lks. dist., marked T 2 S R 30 E S 35 B T.
 A pine, 6 ins. in diam., brs. S. 52 1/4° E., 89 lks.
 dist., marked T 3 S R 30 E S 2 B T.
 A pine, 9 ins. in diam., brs. S. 8 1/2° W., 50 lks.
 dist., marked T 3 S R 30 E S 3 B T.
 A cedar, 6 ins. in diam., brs. N. 50 1/2° W., 43
 lks. dist., marked T 2 S R 30 E S 34 B T.

Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, scattering cedar and pine.
 Undergrowth, dense scrub oak, mesquite, catclaw and cacti.
 Mountainous land, 74 chs.

March 5, 1914.

March 7, 1914: At 7h. 55m. a.m., l.m.t., I set off 33° 12' N. on the lat. arc; 5° 24 1/2' S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 2, 3, 34 and 35.

Thence 1 run, N. 89° 59' E., on a true line, bet. secs. 2 and 35. Through scattering timber and dense undergrowth. Descend E. slope, 75 ft. to

- 6.00 Gulch, course SE. Ascend SW. slope, 160 ft.
- 7.60 Pidgeon Creek trail, brs. NE. and SW. Continue ascent to
- 15.00 Spur ridge, brs. SE. Descend E. slope, 165 ft. to
- 23.00 Gulch, course S. Ascend W. slope, 215 ft.
- 34.00 Wash, course SW. Continue ascent to
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap, 1913 in S. rim, 1/4 S 35 in N., and S 2 in S. half; from which,
 A cedar limb, 6 ins. in diam., brs. N. 75° W., 131 lks. dist., marked 1/4 S 35 B T.
 A cedar limb, 5 ins. in diam., brs. S. 13 1/4° W., 116 lks. dist., marked 1/4 S 2 B T.
- 46.00 Ascend NW. slope, 420 ft. to ridge.
- 52.50 Ledge brs. NE. and SW. Ascend steep NW. slope, to
- 76.00 Ridge, brs. NW. and SE. Descend SE. slope, 240 ft.
- 80.00 Descend east slope, to
- Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 1, 2, 35 and 36, marked on brass cap,

1913 on S rim,
 T 2 S in N.,
 T 3 S in S., and
 R 30 E in W. half;
 S 35 in NW.,
 S 36 in NE.,
 S 1 in SE., and
 S 2 in SW. quadrant;

and raise a mound of stone 2 ft. base, 1 1/2 ft. high, west of corner. Pits impracticable.

Note: At this cor., March 7, 1914, I set off 5° 21 1/2' S. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 33° 12' N.

Land, mountainous and hilly.
 Soil, rocky, 4th rate,

36. North boundary of Township 3 South, Range 30 East.

Chains.

Undergrowth, dense mesquite, catclaw, scrub oak and cacti.
 Timber, scattering cedar and pine.
 Mountainous land, 70 chs.

N. 89°59'E., on a true line, bet. secs. 1 and 36.
 Through scattering timber and undergrowth. Descend east slope, 155 ft. to
 12.00 Thence along south slope.
 18.00 Wash, course SW. Ascend slight SW. slope, 115 ft.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 36 in N., and S 1 in S. half; and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.
 50.21 Rocky ledge brs. N. and S. West edge of gulch, course S.
 80.00 The cor. of Ts. 2 and 3 S., Rs. 30 and 31 E., established by me, as hereinbefore described.
 Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, very scattering cedar.
 Undergrowth, scattering mesquite, catclaw, scrub oak and cacti.
 Mountainous land 40 chs.

March 7, 1914.

South boundary of Township 1 South, Range 29 East.

Survey commenced March 16, 1914, and executed with Young and Sons' light mountain transit, No. 8541, hereinbefore described.
 Knowing from recent and repeated tests of my instrument, on a meridian established by observations on Polaris at elongation, that it is in correct adjustment, I proceed to the survey of the south boundary of T. 1 S., R. 29 E. At 9h. 4m. a. m., l. m. t., I set off 33° 17' $\frac{1}{2}$ N. on the lat. arc; 1° 52' S. on the decl. arc; and determine a meridian with the solar at the cor. of Ts. 1 and 2 S., Rs. 29 and 30 E. on the 5th. Guide Meridian East; latitude, 33° 17' 25" N.; longitude, 109° 18' 20" W., reestablished by me as described in Book "B."/
 Thence I run,
 West, bet. secs. 1 and 36.
 Through scattering undergrowth and heavy timber. Ascend NE. slope, 50 ft. to
 10.00 Thence along N. slope, to
 18.00 Descend NW. slope, 60 ft. to
 25.00 Wash, course N. Ascend NE. slope, 80 ft. to
 36.00 Thence along broken N. slope.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 36 in N., and S 1 in S. half; from which,
 A juniper, 10 ins. in diam., brs. N. 31° E., 50 lks. dist., marked $\frac{1}{4}$ S 36 B T.
 An oak, 6 ins. in diam., brs. S. 43° $\frac{3}{4}$ W., 48 lks. dist., marked $\frac{1}{4}$ S 1 B T.
 40.50 Wash, course N.; ascend.
 45.00 Spur ridge, brs. N. Descend W. slope, 75 ft. to
 50.25 Wash, course N. Ascend NE. slope, 95 ft. to
 60.00 Thence along N. slope, to
 64.00 Thence over level land, to
 80.00

South boundary of Township 1 South, Range 29 East.

Chains.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 1, 2, 35 and 36, marked on brass cap,

1913 on S. rim,
 T 1 S in N.,
 T 2 S in S., and
 R 29 E in W. half;
 S 35 in NW.,
 S 36 in NE.,
 S 1 in SE., and
 S 2 in SW. quadrant; from which,
 A pine, 7 ins. in diam., brs. N. 9° E., 43 lks. dist., marked T 1 S R 29 E S 36 B T.
 A juniper, 10 ins. in diam., brs. S. 46½° E., 53 lks. dist., marked T 2 S R 29 E S 1 B T.
 A juniper, 10 ins. in diam., brs. S. 42° W., 7 lks. dist., marked T 2 S R 29 E S 2 B T.
 A pine, 6 ins. in diam., brs. N. 31½° W., 62 lks. dist., marked T 1 S R 29 E S 35 B T.

Land, level, rolling and hilly.
 Soil, rocky, 4th rate.
 Timber, heavy juniper, pine and oak.
 Undergrowth, scattering scrub oak and cacti.

West, bet. secs. 2 and 35.
 Over level land, through heavy timber and dense undergrowth.

6.00 Small wash, course NW.
 14.00 Descend west slope, 65 ft. to
 23.00 Draw, course SW. Thence along south slope.
 26.65 Wire fence brs. NE. and SW.
 30.00 Spur ridge, brs. S. Descend SW. slope, 130 ft.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap,
 1913 on S. rim,
 ¼ S 35 in N., and
 S 2 in S. half; from which,
 An oak, 10 ins. in diam., brs. S. 33° W., 37 lks. dist., marked ¼ S 2 B T.
 An oak, 6 ins. in diam., brs. N. 56° W., 60 lks. dist., marked ¼ S 35 B T.

Continue descent.
 43.75 Gulch, course SE. Ascend NE. slope, 150 ft. to
 57.00 Wash, course NE. Ascend E. slope, 110 ft. to
 64.00 Thence along ridge, brs. E. and W.
 70.00 Descend SW. slope, 20 ft. to
 75.00 Draw, course SW. Ascend SE. slope, 65 ft. to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 2, 3, 34 and 35, marked on brass cap,
 1913 on S. rim,
 T 1 S in N.,
 T 2 S in S., and
 R 29 E in W. half;
 S 34 in NW.,
 S 35 in NE.,
 S 2 in SE., and
 S 3 in SW. quadrant; from which,
 A pine, 6 ins. in diam., brs. N. 81½° E., 31 lks. dist., marked T 1 S R 29 E S 35 B T.
 An oak, 7 ins. in diam., brs. S. 12½° E., 127 lks. dist., marked T 2 S R 29 E S 2 B T.
 An oak, 8 ins. in diam., brs. S. 19° W., 89 lks. dist., marked T 2 S R 29 E S 3 B T.
 An oak, 6 ins. in diam., brs. N. 67½° W., 44 lks. dist., marked T 1 S R 29 E S 34 B T.

Note: At this corner, March 16, 1914, I set off 1° 50' S. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting latitude is 33°

38. South boundary of Township 1 South, Range 29 East.

Chains.

17 $\frac{1}{2}$ ' N.

Land, level, rolling, hilly and mountainous.
Soil, rocky, 4th rate.
Timber, heavy juniper, pine and oak.
Undergrowth, dense scrub oak and cacti.
Mountainous land, 24 chs.

West, bet. secs. 3 and 34.

Through heavy timber and dense undergrowth. Ascend SE. slope, 10 ft. to

- 2.00 Thence along south slope, to
6.00 Descend SW. slope, 100 ft. to
22.00 Wash, course S. Ascend SE. slope, 65 ft. to
29.25 Rock spur ridge, brs. S. Descend SW. slope, 185 ft. to
39.60 Draw, course S. Thence over rolling land.
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
1913 on S. rim,
 $\frac{1}{4}$ S 34 in N., and
S 3 in S. half; from which
An oak, 8 ins. in diam., brs. N. 13° E., 10 lks. dist., marked $\frac{1}{4}$ S 34 B T.
A juniper, 7 ins. in diam., brs. S. 22° W., 7 lks. dist., marked $\frac{3}{4}$ S 3 B T.
- 44.00 Low spur ridge, brs. S.; descend.
46.00 Cow Gulch, course SE. Ascend NE. slope, 170 ft.
59.80 Metcalf and Pine Flat Trail, brs. NE and SW.
60.00 Spur ridge, brs. N. Descend NW. slope, 65 ft.
64.00 Over broken basin; head of Cow Canyon.
78.00 Wash, course NE. Ascend E. slope, to
80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 3, 4, 33 and 34, marked on brass cap,
1913 on S. rim,
T 1 S in N.,
T 2 S in S., and
R 29 E in W. half;
S 33 in NW.,
S 34 in NE.
S 3 in SE., and
S 4 in SW. quadrant; from which,
A pine, 7 ins. in diam., brs. N. 58 $\frac{1}{2}$ ° E., 31 lks. dist., marked T 1 S R 29 E S 34 B T.
A pine, 6 ins. in diam., brs. S. 55 $\frac{1}{2}$ ° E., 35 lks. dist., marked T 2 S R 29 E S 3 B T.
A pine, 8 ins. in diam., brs. S. 4 $\frac{1}{4}$ ° W., 78 lks. dist., marked T 2 S R 29 E S 4 B T.
A pine, 6 ins. in diam., brs. N. 67 $\frac{3}{4}$ ° W., 80 lks. dist., marked T 1 S R 29 E S 33 B T.

Land, rolling, hilly and mountainous.
Soil, rocky, 4th rate.
Timber, heavy juniper, pine and oak.
Undergrowth, dense scrub oak and cacti.
Mountainous land, 26 chs.

West, bet. secs. 4 and 33.

Through scattering timber and dense undergrowth. Ascend east slope, 80 ft. to

- 12.00 Ridge, brs. N. and S. Blue River and Eagle Creek Divide; descend slight west slope, to
22.00 Descend in gulch, course W., 235 ft. to
29.50 Leave gulch; ascend NE. slope, 20 ft. to
32.00 Spur ridge, brs. N. Descend NW. slope, 105 ft. to
39.00 Gulch, course SW. Ascend SE. slope.

Chains,

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim,
 $\frac{1}{4}$ S 33 in N., and
 S 4 in S. half; from which,
 An oak, 10 ins. in diam., brs. N. 72° E., 50 lks. dist., marked $\frac{1}{4}$ S 33 B T.
 An oak, 6 ins. in diam., brs. S. 44° E., 24 lks. dist., marked $\frac{1}{4}$ S 4 B T.

Continue ascent.

42.00 Thence along south slope.

50.30 Rim rock, brs. NW. and SE. From instrument at this point, I take stadia measurement to rod set on line beyond broken rocky, brushy S. slope, over which chaining is impossible. Rod reading (mean of three), 6.876 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Angle of depression - $10^{\circ} 2'$. The distance to rod is therefore, $6.876 \times 2 \times 9.696$ plus $.016 = 13.35$ chs., which added to 50.30 chs. =

63.65 Rod point on short spur ridge, brs. S. Take stadia measurement to this point, from instrument on line on west side of deep box canyon, course NW., over which I cannot chain. Rod reading (mean of three), 6.219 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Angle of depression. - $8^{\circ} 40'$. The distance to instrument is therefore, $6.219 \times 2 \times .9773$ plus $.016 = 12.17$ chs., which added to 63.65 chs. =

75.82 Instrument point on rim rock, brs. NW and SE. Ascend NE. slope, 25 ft. to

80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 4, 5, 32 and 33, marked on brass cap,

1913 on S. rim,
 T 1 S in N.,
 T 2 S in S., and
 R 29 E in W. half;
 S 32 in NW.,
 S 33 in NE.,
 S 4 in SE., and
 S 5 in SW. quadrant; from which,

A juniper, 8 ins. in diam., brs. N. $62\frac{1}{2}^{\circ}$ E., 230 lks. dist., marked T 1 S R 29 E S 33 B T

A juniper, 6 ins. in diam., brs. S. $59\frac{1}{2}^{\circ}$ E., 142 lks. dist., marked T 2 S R 29 E S 4 B T.

No other trees within limits. Raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.

Land, rolling, hilly and mountainous.

Soil, rocky, 4th rate.

Timber, scattering juniper, pine and oak.

Undergrowth, dense scrub oak.

Mountainous land, 24 chs.

March 16, 1914.

March 17, 1914: At 7h. 56m., a.m., l.m.t., I set off $33^{\circ} 17\frac{1}{2}'$ N. on the lat. arc; $1^{\circ} 29\frac{1}{2}'$ S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 4, 5, 32 and 33.

Note: In order to test my stadia wire interval, I measure a base of 12.75 chs. over level land. A rod placed at the end of this line, gives as a mean of three readings, 6.367 ft., which shows that one foot on the rod gives a horizontal distance of 2 chs.

West, bet. secs. 5 and 32.

Along north slope, through heavy timber and scattering undergrowth.

16.60 Instrument point for stadia measurement across deep box canyon, course N. Rod reading (mean of three) 5.158 ft.

40. South boundary of Township 1 South, Range 29 East.

Chains.	
	Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Level. The distance to rod is therefore, 5.158 x 2 plus .016 = 10.33 chs., which added to 16.60 chs. =
26.93	Rod point on rim rock, brs. N. and S. on west side of canyon.
	Ascend NE. slope, 15 ft. to
32.00	Spur ridge, brs. N. Descend NW. slope, 95 ft. to
38.00	Gulch, course N. Ascend NE. slope, 120 ft.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 32 in N., and S 5 in S. half; from which, A juniper, 6 ins. in diam., brs. N. $58\frac{1}{2}^{\circ}$ W., 37 lks. dist., marked $\frac{1}{4}$ S 32 B T. A juniper, 8 ins. in diam., brs. S. 10° E., 134 lks. dist., marked $\frac{1}{4}$ S 5 B T.
	Continue ascent.
50.00	Low ridge, brs. N. and S. Descend SW. slope, 100 ft. to
72.50	Gulch, course NW. Ascend NE. slope, 35 ft. to
80.00	Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 5, 6, 31 and 32, marked on brass cap, 1913 on S. rim, T 1 S in N., T 2 S in S., and R 29 E in W. half; S 31 in NW., S 32 in NE., S 5 in SE., and S 6 in SW. quadrant; from which, A juniper, 20 ins. in diam., brs. N. $73\frac{1}{2}^{\circ}$ E., 128 lks. dist., marked T 1 S R 29 E S 32 B T. A juniper, 24 ins. in diam., brs. S. $73\frac{1}{2}^{\circ}$ E., 210 lks. dist., marked T 2 S R 29 E S 5 B T. A juniper, 30 ins. in diam., brs. S. $56\frac{1}{2}^{\circ}$ W., 165 lks. dist., marked T 2 S R 29 E S 6 B T. A juniper, 8 ins. in diam., brs. N. $7\frac{1}{4}^{\circ}$ W., 182 lks. dist., marked T 1 S R 29 E S 31 B T.
	Note: At this cor. March 17, 1914, I set off $1^{\circ}26'S$. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting latitude is $33^{\circ}17\frac{1}{2}'N$. Land, rolling, hilly and mountainous. Soil, rocky, 4th rate. Timber, heavy juniper, oak and cedar. Undergrowth, scattering scrub oak and cacti. Mountainous land, 24 chs.

	West, bet. secs. 6 and 31.
	Along broken north slope.
1.76	A juniper, 40 ins. in diam., on line.
2.00	Spur ridge, brs. NE. Descend.
5.00	Wash, course NE. Ascend SE. slope, 30 ft. to
14.00	Thence along ridge, brs. E. and W.
16.00	Descend NW. slope, 190 ft. to
27.50	Gulch, course N. Ascend E. slope, 130 ft. to
33.00	Ridge, brs. N. and S. Descend W. slope, 280 ft.
37.75	Wire fence brs. NE. and SW.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 31 in N., and S 6 in S. half; from which, An oak, 10 ins. in diam., brs. N. 69° E., 85 lks. dist., marked $\frac{1}{4}$ S 31 B T. A juniper, 10 ins. in diam., brs. S. 75° E., 86 lks. dist., marked $\frac{1}{4}$ S 6 B T.

BOOK 2786

South boundary of Township 1 South, Range 29 East. 741.

Chains.

Continue descent.
 N.O. Bar Ranch house, brs.S.51½°W.
 53.00 Wash, course S. Ascend SE. slope, 10 ft.
 55.00 Trail, brs.NE and SW.
 56.00 Spur ridge, brs.S. Descend SW. slope, 40 ft.to
 64.00 Wash, course S. Ascend SE. slope, 25 ft.to
 68.00 Thence along north slope.
 74.11 N. O. Bar ranch house, brs.S.17°E.
 75.50 Ridge, brs.NE and SW. Descend NW. slope, 45 ft.to
 80.00 Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in
 the ground, for cor.of Ts.1 and 2 S., R.29 E. and frac.
 Ts.1 and 2 S., R.28 E., marked on brass cap,
 1913 on S.rim,
 T 1 S in N.,
 R 29 E in E.,
 T 2 S in S., and
 R 28 E in W. half;
 S 36 in NW.,
 S 31 in NE.,
 S 6 in SE., and
 S 1 in SW.quadrant; from which,
 A juniper, 8 ins. in diam., brs.N.24°E., 42
 lks.dist., marked T 1 S R 29 E S 31 B T.
 An oak, 6 ins. in diam., brs.S.29°E., 15 lks.
 dist., marked T 2 S R 29 E S 6 B T.
 An oak, 6 ins. in diam., brs.S.26°W., 10 lks.
 dist., marked T 2 S R 28 E S 1 B T
 A juniper limb, 8 ins. in diam., brs.N.41°W.,
 17 lks.dist., marked T 1 S R 28 E S 31 B T
 Land, rolling, hilly and mountainous.
 Soil, rocky, 4th rate.
 Timber, heavy juniper, oak and pine.
 Undergrowth, scattering scrub oak and cacti.
 Mountainous land, 34 chs.

March 17, 1914.

East boundary of frac. Township 1 South, Range 28 East.

Survey commenced March 18, 1914, and executed with Young
 and Sons' Light Mountain Transit, No.8541, hereinbefore
 described.
 Knowing from recent and repeated tests of my instrument
 on a meridian established by observations on Polaris
 at elongation, that it is in correct adjustment, I
 proceed to the survey of the east bdy. of frac. Tp.1
 S., R.28 E.
 At 7h.58m. a.m., l.m.t., I set off 1° 5½'S. on the decl.
 arc; 33°17½'N. on the lat.arc; and determine a
 meridian with the solar at the cor.of Ts.1 and 2 S.,
 R.29 E., and frac. Ts. 1 and 2 S., R.28 E., herein-
 before described; latitude, 33° 17' 25"N.; long.109°
 24' 32" W.
 Thence I run,
 North, bet. secs.31 and 36.
 Through scattering timber and undergrowth. Descend NW.
 slope, 35 ft.to
 3.00 Gulch, course SW.; ascend SE. slope, 130 ft.to spur
 ridge.
 10.00 Thence along west slope.
 12.00 Ascend SW. slope.
 16.00 Spur ridge, brs.W. Descend NW. slope, 105 ft.to
 26.50 Wash, course W. Ascend SW slope, 40 ft.
 27.26 Wire fence, brs.NE and SW.
 36.00 Spur ridge W. Descend N. slope, 125 ft.to
 40.00 Set an iron post, 3 ft. ling, 1 in.in diam., 26 ins. in
 the ground, for ¼ sec.cor., marked on brass cap,
 1913 on S rim,

42. East boundary of frac. Township 1 South, Range 28 East.

Chains

- $\frac{1}{4}$ S 36 in W., and
 S 31 in E. half; from which,
 A juniper, 16 ins. in diam., brs. N. 41° W., 6 lks.
 dist., marked $\frac{1}{4}$ S 36 B T.
 A juniper, 10 ins. in diam., brs. N. $73\frac{1}{2}^{\circ}$ E., 81
 lks. dist., marked $\frac{1}{4}$ S 31 B T.
- 40.15 Trail, brs. E. and W.
 41.40 Enter Sheep Wash, 250 lks. wide, with small stream of water,
 course west, near the center,
 42.50 Trail, brs. E. and W. Ascend S. slope, 200 ft. to ridge.
 45.00 Ascend SW. slope.
 54.00 Spur ridge, brs. SW. Descend NW. slope, 75 ft. to
 62.00 Wash, course W. Ascend SW. slope, 40 ft. to
 67.60 Spur ridge, brs. W. Descend NW. slope, 20 ft. to
 71.50 Wash, course SW. Ascend SE. slope, 100 ft. to
 78.00 Spur ridge, brs. SE. Descend NE. slope, to
 79.65 Wash, course SE. Ascend S. slope to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 25, 30, 31 and 36, marked
 on brass cap,
 1913 on S rim,
 T 1 S in N. half;
 R 28 E S 25 in NW.,
 R 29 E S 30 in NE.,
 S 31 in SE., and
 S 36 in SW. quadrant; from which,
 A juniper, 10 ins. in diam., brs. S. $9\frac{1}{2}^{\circ}$ E., 168
 lks. dist., marked T 1 S R 29 E S 31 B T.
 A juniper, 12 ins. in diam., brs. S. 39° W., 93
 lks. dist., marked T 1 S R 28 E S 36 B T.
 A pine, 10 ins. in diam., brs. N. 27° W., 200
 lks. dist., marked T 1 S R 28 E S 25 B T.
- No other trees within limits. Raise a mound of stone, 2
 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracti-
 cable.
- Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, scattering juniper, pine and oak.
 Undergrowth, scattering scrub oak and cacti.
 Mountainous land, 46 chs.
-
- North, bet. secs. 25 and 30.
 Through scattering timber and undergrowth. Ascend S.
 slope, 345 ft. to mesa.
- 8.00 Ascend SE. slope.
 14.00 Ascend SW. slope.
 22.00 Thence over level mesa.
 29.10 Trail, brs. E. and W.
 30.00 Leave mesa. Descend N. slope, 255 ft. to gulch.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S. rim,
 $\frac{1}{4}$ S 25 in W., and
 S 30 in E. half; from which,
 A juniper, 20 ins. in diam., brs. N. 58° E., 81
 lks. dist., marked $\frac{1}{4}$ S 30 B T.
 A juniper, 18 ins. in diam., brs. N. 70° W., 24
 lks. dist., marked $\frac{1}{4}$ S 25 B T.
- 44.50 Gulch, course W. Ascend S. slope 245 ft. to
 57.60 Ridge, brs. NW. and SE. Descend NW. slope, 265 ft. to
 68.00 Canyon, course SW. Ascend S. slope, 185 ft. to cor.
 68.40 Trail, brs. NE. and SW.
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the
 ground, for cor. of secs. 19, 24, 25 and 30, marked on
 brass cap,
 1913 on S. rim,
 T 1 S in N. half;
 R 28 E S 24 in NW.,
 R 29 E S 19 in NE.,

East boundary of frac. Township 1 South, Range 28 East. 43.

Chains.

S 30 in SE., and
 S 25 in SW quadrant;
 and raise a mound of stone, 2 ft. base, 1½ ft. high,
 west of corner. Pits impracticable.
 Note: At this corner, Mar. 18, 1914, I set off 1°2' S.
 on the decl. arc; and at apparent noon, I observe the
 sun on the meridian; the resulting lat. is 33°19' N.
 Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, scattering juniper, oak and pine.
 Undergrowth, scattering scrub oak and cacti.
 Mountainous land, 70 chs.

North, bet. secs. 19 and 24.
 Through scattering timber and undergrowth. Ascend south
 slope, 130 ft. to
 15.00 Thence over level mesa.
 26.00 Leave mesa, Descend N. slope, 90 ft. to
 31.75 Draw, course W. Ascend S. slope, 95 ft. to ¼ sec. cor.
 39.80 Wagon road, brs. E. and W.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for ¼ sec. cor., marked on brass cap,
 1913 on S. rim,
 ¼ S 24 in W., and
 S 19 in E. half;
 and raise a mound of stone, 2 ft. base, 1½ ft. high, W.
 of corner. Pits imprac. Thence over level land, to
 46.00 Descend N. slope, 200 ft. to gulch.
 50.00 Descend NE. slope, to
 60.40 Gulch, course NW. Ascend SW. slope, 75 ft. to
 Trail in gulch, brs. NW. and SE.
 66.00 Spur ridge, brs. W. Descend NW. slope, 25 ft. to
 75.00 Wash, course SW. Ascend SE. slope, 15 ft. to
 78.00 Spur ridge, brs. E.; descend.
 78.50 Wash, course SE.; ascend.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 13, 18, 19 and 24, marked
 on brass cap,
 1913 on S. rim,
 T 1 S in N. half;
 R 28 E S 13 in NW.,
 R 29 E S 18 in NE.,
 S 19 in SE., and
 S 24 in SW. quadrant; from which,
 A juniper, 7 ins. in diam., brs. N. 17½° E., 32
 lks. dist., marked T 1 S R 29 E S 18 B T.
 An oak, 6 ins. in diam., brs. S. 27° E., 73 lks.
 dist., marked T 1 S R 29 E S 19 B T.
 An oak, 6 ins. in diam., brs. S. 39½° W., 58 lks.
 dist., marked T 1 S R 28 E S 24 B T.
 A pine, 8 ins. in diam., brs. N. 20° W., 39 lks.
 dist., marked T 1 S R 28 E S 13 B T.
 Land, level, rolling and hilly, and mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering juniper, pine and oak.
 Undergrowth, scattering scrub oak and cacti.
 Mountainous land, 36 chs.

North, bet. secs. 13 and 18.
 Through scattering timber and undergrowth. Descend slight
 SW. slope, to
 1.00 Wash, course SW. Ascend SE. slope, 190 ft. to
 18.00 Ridge, brs. NE. and SW. Descend NW. slope, 110 ft. to wash.
 27.50 Eagle Creek and Pine Flat Trail, brs. E. and W.
 35.00 Wash, course W. Ascend SW. slope, 15 ft. to
 38.00 Spur ridge, brs. W. Descend NW. slope, 40 ft. to wash

44. East boundary of frac. Township 1 S., Range 28 East.

Chains.

- 39.75 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for witness cor. to $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S. rim,
 W C $\frac{1}{4}$ in N. half;
 S 18 in SE., and
 S 13 in SW. quadrant; from which,
 A pine, 10 ins. in diam., brs. S. 86° E., 48
 lks. dist., marked W C $\frac{1}{4}$ S 18 B T.
 A juniper, 10 ins. in diam., brs. S. 37° W., 37
 lks. dist., marked W C $\frac{1}{4}$ S 13 B T.
- 39.90 South edge of wash, 1 chain wide, course west.
 Ascend SE slope, 295 ft. to cor.
- 40.00 True point for $\frac{1}{4}$ sec. cor. falls in wash.
- 62.00 Thence along east slope.
- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 7, 12, 13 and 18, marked on brass cap,
 1913 on S. rim,
 T 1 S in N. half;
 R 28 E S 12 in NW.,
 R 29 E S 7 in NE.,
 S 18 in SE., and
 S 13 in SW. quadrant; from which,
 An oak, 10 ins. in diam., brs. N. 26° E., 27 lks.
 dist., marked T 1 S R 29 E S 7 B T.
 An oak, 5 ins. in diam., brs. S. 20° E., 186 lks.
 dist., marked T 1 S R 29 E S 18 B T.
 A juniper, 14 ins. in diam., brs. S. $53\frac{1}{2}^{\circ}$ W., 156
 lks. dist., marked T 1 S R 28 E S 13 B T.
 A cedar, 5 ins. in diam., brs. N. 74° W., 75 lks.
 dist., marked T 1 S R 28 E S 12 B T.

Land, mountainous and hilly.

Soil, rocky, 4th ras.

Timber, scattering juniper and oak.

Undergrowth, scattering scrub oak and cacti.

Mountainous land, 44 chs.

March 18, 1914.

April 1, 1914: At the cor. of secs. 7, 12, 13 and 18, I set off $4^{\circ}26\frac{1}{2}'$ N. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is $33^{\circ}21'$ N.

Thence I run,

North, bet. secs. 7 and 12.

Along east slope, through scattering timber and undergrowth.

- 4.00 Descend NE slope, 30 ft. to
- 12.00 Draw, course SE. Ascend S. slope, 195 ft. to ridge.
- 24.00 Ascend SE. slope.
- 30.00 Spur ridge, brs. E. Descend NE. slope, 80 ft. to draw.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S. rim,
 $\frac{1}{4}$ S 12 in W., and
 S 7 in E. half; from which,
 A juniper, 12 ins. in diam., brs. N. 30° E., 230
 lks. dist., marked $\frac{1}{4}$ S 7 B T.
 A juniper, 14 ins. in diam., brs. N. $32\frac{1}{2}^{\circ}$ W., 174
 lks. dist., marked $\frac{1}{4}$ S 12 B T.
- 50.00 Draw, course E. Ascend SE. slope, 500 ft. to
- 74.55 Ridge, brs. E. and W. Descend N. slope, 160 ft. to
- 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 1, 6, 7 and 12, marked on brass cap,

1913 in S rim,
 T 1 S in N. half;
 R 28 E S 1 in NW.,
 R 29 E S 6 in NE.,
 S 7 in SE., and

East boundary of frac. Township 1 South, Range 28 East.

Chains.

S 12 in SW quadrant; from which,
 A juniper, 20 ins. in diam., brs. N. 41° E.,
 177 lks. dist., marked T 1 S R 29 E S 6 B T.
 A juniper, 24 ins. in diam., brs. N. 81° W., 121
 lks. dist., marked T 1 S R 28 E S 1 B T.
 No other trees within limits. Raise a mound of stone, 2
 ft. base, 1½ ft. high, west of corner. Pits impracti-
 cable.
 Land, rolling, hilly and mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering juniper, oak, cedar and pine.
 Undergrowth, scattering scrub oak.
 Mountainous land, 52 chs.

North, bet. secs. 1 and 6.
 Through scattering timber and dense undergrowth. Descend
 NW slope, 40 ft. to
 2.00 Gulch, course SW. Ascend SE slope, 325 ft. to
 18.00 Ridge, brs. E. and W. Descend N. slope, 130 ft. to
 23.00 Wash, course NW. Ascend SW slope, 135 ft. to
 35.00 Ridge, brs. NW and SE. Descend N. slope, 200 ft. to gulch.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for ¼ sec. cor., marked on brass cap,
 1913 on S. rim,
 ¼ S 1 in W., and
 S 6 in E. half; from which,
 A juniper, 20 ins. in diam., brs. S. 69° E., 160
 lks. dist., marked ¼ S 6 B T.
 A juniper, 40 ins. in diam., brs. S. 34½° W., 216
 lks. dist., marked ¼ S 1 B T
 41.75 Gulch, course NW. Ascend SW slope, 200 ft. to
 54.00 Spur ridge, brs. W. Descend N. slope, 250 ft. to
 69.56 Intersect the G. and S. R. Base Line, 1.66 chs. west of the
 U. S. F.S. bdy. Post No. 7, and the standard cor.
 of secs. 35 and 36, reestablished by me as described
 in Book "B."
 At the point of intersection, I set an iron post, 3 ft.
 long, 3 ins. in diam., 24 ins. in the ground, for
 closing cor. of T. 1 S., R. 29 E., and frac. T. 1 S.,
 R. 28 E., marked on brass cap,
 1913 on S. rim,
 C C S of center,
 T 1 N R 28 E, S 36, S 35 in N. half;
 T 1 S in S. half;
 S 6, R 29 E in SE., and
 S 1, R 28 E in SW quadrant; from which,
 An oak, 8 ins. in diam., brs. S. 11° E., 125 lks.
 dist., marked T 1 S R 29 E S 6 B T.
 A juniper, 8 ins. in diam., brs. S. 43½° W., 78
 lks. dist., marked T 1 S R 28 E S 1 B T.
 Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, scattering juniper, cedar, oak and pine.
 Undergrowth, dense scrub oak.
 Mountainous land, 69 chs.

April 1, 1914.

South boundary of frac. Township 1 South, Range 28 East.

Survey commenced March 20, 1914, and executed with Young
 and Sons' Light Mountain Transit No. 8541, hereinbefore
 described.
 Knowing from recent and repeated tests of my instrument,
 on a meridian established by observation on Polaris
 at elongation, that it is in correct adjustment, I pro-
 ceed to the survey of the south bdy. of frac. T. 1 S.
 R 28 E.

46. South boundary of frac. Township 1 South Range 28 East.

Chains.

At 7h.59m. a.m., l.m.t., I set off $33^{\circ} 17\frac{1}{2}'$ N. on the lat. arc; $0^{\circ} 18'$ S. on the decl. arc; and determine a meridian with the solar at the cor. of Ts. 1 and 2 S. R. 29 E., and frac. Ts. 1 and 2 S., R. 28 E. Latitude, $33^{\circ} 17' 25''$ N.; long. $109^{\circ} 24' 32''$ W., established by me, as described hereinbefore.

Thence I run,
 West, on a true line, bet. secs. 1 and 36.
 Through scattering timber and undergrowth. Descend NW. slope, 90 ft. to
 8.50 Wash, course SW. Ascend SE. slope, 10 ft. to
 11.00 Spur ridge, brs. S. Descend SW. slope, 55 ft. to
 14.00 Stream of clear water, 6 lks. wide, 4 ins. deep, course NW. Ascend NE. slope, 175 ft. to ridge.
 15.40 Trail, brs. NW. and SE.
 19.40 Wire fence brs. NE. and SW.
 29.00 Short narrow rock ridge, brs. NW. and SE. Descend W. slope, 200 ft. to wash.
 33.20 Trail, brs. NW. and SE.
 36.62 Wire fence brs. NW. and SE.
 37.00 Wash, course NW.; ascend.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S. rim;
 $\frac{1}{4}$ S 36 in N., and
 S 1 in S. half; from which,
 A juniper, 6 ins. in diam., brs. N. $29\frac{1}{4}^{\circ}$ E., 286 lks. dist., marked $\frac{1}{4}$ S 36 B T.
 A juniper, 8 ins. in diam., brs. S. $15\frac{1}{2}^{\circ}$ W., 195 lks. dist., marked $\frac{1}{4}$ S 1 B T.

Descend.
 46.80 Gulch, course NW. Ascend NE. slope, 55 ft. to
 51.25 Spur ridge, brs. N. Descend NW. slope, 50 ft. to
 53.75 Wash, course NE. Ascend E. slope, 100 ft. to
 62.00 Ridge, brs. N. and S. Descend W. slope, 70 ft. to
 70.00 Gulch, course N. Ascend E. slope, 175 ft. to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 1, 2, 35 and 36, marked on brass cap,
 1913 on S. rim,
 T 1 S in N.,
 T 2 S in S., and
 R 28 E in W. half;
 S 35 in NW.,
 S 36 in NE.,
 S 1 in SE., and
 S 2 in SW. quadrant; from which,
 An oak, 5 ins. in diam., brs. N. 82° E., 57 lks. dist., marked T 1 S R 28 E S 36 B T.
 An oak, 8 ins. in diam., brs. S. $39\frac{1}{2}^{\circ}$ E., 57 lks. dist., marked T 2 S R 28 E S 1 B T.
 An oak, 10 ins. in diam., brs. S. 50° W., 74 lks. dist., marked T 2 S R 28 E S 2 B T.
 An oak, 6 ins. in diam., brs. N. $65\frac{3}{4}^{\circ}$ W., 45 lks. dist., marked T 1 S R 28 E S 35 B T.

Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, scattering juniper, oak and pine.
 Undergrowth, scattering scrub oak and cacti.
 Mountainous land, 66 chs.

March 20, 1914.

March 23, 1914: At 8h. 5m. a.m., l.m.t., I set off $33^{\circ} 17\frac{1}{2}'$ N. on the lat. arc; $0^{\circ} 53'$ N. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 1, 2, 35 and 36.

South boundary of frac. Township 1 South, Range 28 East. 47.

Chains.

Thence I run,
 West, on true line, bet. secs. 2 and 35.
 Through scattering timber and undergrowth. Ascend E. slope,
 145 ft. to ridge.
 8.00 Thence along north slope.
 12.00 Leave timber, brs. NE. and SW. Thence ascend slight NE.
 slope.
 26.00 Ridge, brs. NW. and SE. Descend W. slope, 35 ft. to $\frac{1}{4}$ sec.
 cor.
 36.00 Enter timber, brs. NE. and SW.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S rim,
 $\frac{1}{4}$ S 35 in N., and
 S 2 in S. half; from which,
 An oak, 6 ins. in diam., brs. N. $12\frac{3}{4}^{\circ}$ E., 251 lks.
 dist., marked $\frac{1}{4}$ S 35 B T.
 A juniper, 10 ins. in diam., brs. S. $19\frac{3}{4}^{\circ}$ E., 302
 lks. dist., marked $\frac{1}{4}$ S 2 B T.
 Descend west slope, 185 ft. to
 59.70 Draw, course NW. Ascend NE. slope, 18 ft. to
 62.00 Spur ridge, brs. N. Descend NW. slope, 300 ft. to cor.
 68.30 Wire fence brs. NE. and SW.
 69.40 Rim rock, brs. NE. and SW.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 2, 3, 34 and 35, marked on
 brass cap,
 1913 on S rim,
 T 1 S in N.,
 T 2 S in S., and
 R 28 E in W. half;
 S 34 in NW.,
 S 35 in NE.,,
 S 2 in SE., and
 S 3 in SW. quadrant; from which,
 A cedar, 8 ins. in diam., brs. N. 4° E., 17 lks.
 dist., marked T 1 S R 28 E S 35 B T.
 A cedar, 12 ins. in diam., brs. S. $43\frac{3}{4}^{\circ}$ E., 111
 lks. dist., marked T 2 S R 28 E S 2 B T.
 An oak, 8 ins. in diam., brs. S. 49° W., 42 lks.
 dist., marked T 2 S R 28 E S 3 B T.
 A cedar, 8 ins. in diam., brs. N. 32° W., 34 lks.
 dist., marked T 1 S R 28 E S 34 B T.

Land, mountainous and hilly.
 Soil, rocky, 4th rate.
 Timber, scattering juniper and pine.
 Undergrowth, scattering scrub oak.
 Mountainous land, 50 chs.

March 23, 1914.

March 24, 1914: At 7h. a.m., 1.30 p.m., I set off $1^{\circ}16'N.$
 on the decl. arc; $33^{\circ}17'N.$ on the lat. arc; and deter-
 mine a meridian with the solar at the cor. of secs. 2, 3,
 34 and 35.

Thence I run,
 West, on a true line, bet. secs. 3 and 34.
 Through scattering timber and undergrowth. Descend
 slight west slope to
 4.00 Thence over level land.
 14.65 Sheep Wash, 290 lks. wide, course SW.
 17.85 Trail, brs. NE. and SW. Ascend SE. slope, 45 ft. to ridge.
 Leave timber, brs. NE. and SW.
 24.00 Spur ridge, brs. S. Descend slight SW. slope, to
 34.20 Wash, course S. Thence along south slope, to wash.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S rim,
 $\frac{1}{4}$ S 34 in N., and
 S 3 in S. half;

48. South boundary of frac. Township 1 South, Range 28 East.

Chains.	
	and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
43.00	Wash, course S. Enter scattering timber. Ascend slight east slope to
46.00	Spur ridge, brs.S. Descend slight west slope to
48.00	Wash, course S. Ascend slight east slope, to
56.00	Spur ridge, brs.S. Descend slight west slope, to
58.00	Wash, course S. Ascend slight east slope, to
61.00	Spur ridge, brs.S. Descend slight W. slope, to
63.50	Wash, course S. Ascend slight E. slope, to
68.00	Spur ridge, brs.S. Descend slight SW. slope, to
70.00	Wash, course S. Ascend SE. slope, 40 ft. to
76.00	Spur ridge, brs.S. Descend slight SW. slope to
79.50	Draw, course SW.; ascend.
80.00	Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 3, 4, 33 and 34, marked on brass cap, 1913 on S. rim, T 1 S in N., T 2 S in S., and R 28 E in W. half; S 33 in NW., S 34 in NE., S 3 in SE., and S 4 in SW. quadrants; from which, A cedar, 10 ins. in diam., brs. N. $64\frac{1}{4}^{\circ}$ E., 65 lks. dist., marked T 1 S R 28 E S 34 B T. A cedar, 28 ins. in diam., brs. S. 37° E., 107 lks. dist., marked T 2 S R 28 E S 3 B T. A cedar, 6 ins. in diam., brs. S. $72\frac{1}{4}^{\circ}$ W., 200 lks. dist., marked T 2 S R 28 E S 4 B T. An oak, 6 ins. in diam., brs. N. $43\frac{1}{2}^{\circ}$ W., 156 lks. dist., marked T 1 S R 28 E S 33 B T.
	Land, rolling and hilly. Soil, rocky, 4th rate, Timber, scattering cedar, oak and pine. Undergrowth, scattering scrub oak and cacti. March 24, 1914.

	March 25, 1914: At 7h. 5m. a.m., l.m.t., I set off $33^{\circ}17\frac{1}{2}'$ N. on the lat. arc; $1^{\circ}39'$ N. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 3, 4, 33 and 34. Thence I run, West, on a true line, bet. secs. 4 and 33. Along broken south slope, through scattering undergrowth.
1.00	Wash, course S.; ascend.
8.00	Spur ridge, brs.S.; descend.
18.90	Metcalf Trail, brs. NW and SE.
20.00	Wash, course S.; ascend.
24.00	Spur ridge, brs.S.; descend.
25.60	Old Metcalf Trail, brs. N. and S.
36.00	Wash, course S. Ascend SE. slope, 30 ft. to ridge.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for 4 sec. cor., marked on brass cap, 1913 on S. rim, $\frac{1}{4}$ S 33 in N., and S 4 in S. half; from which, A cedar limb, 5 ins. in diam., brs. N. $56\frac{3}{4}^{\circ}$ E., 182 lks. dist., marked $\frac{1}{4}$ S 33 B T. A cedar limb, 14 ins. in diam., brs. S. $69\frac{1}{2}^{\circ}$ E., 91 lks. dist., marked $\frac{1}{4}$ S 4 B T.
41.00	Spur ridge, brs.S.; descend.
44.00	Wash, course S. Ascend SE. slope, 80 ft. to ridge.
52.00	Leave timber and undergrowth, brs. N. and S.
54.00	Spur ridge, brs.S. Descend SW. slope, 75 ft. to

South bdy. of frac. Township 1 South, Range 28 East. 49.

Chains.

65.00 Wash, course SW. Ascend slight SE. slope, to
 67.00 Spur ridge, brs.S. Descend slight SW. slope, to
 71.00 Wash, course S. Ascend E slope, 105 ft.to
 80.00 Set an iron post on ridge; brs.N.and S. 3 ft.long, 3 ins.
 in diam., 24 ins. in the ground, for cor.of secs.4,5,
 32 and 33, marked on brass cap,
 1913 on S.rim,
 T 1 S in N.,
 T 2 S in S., and
 R 28 E in W.half;
 S 32 in NW:,
 S 33 in NE.,
 S 4 in SE., and
 S 5 in SW'quadrant;
 and raise a mound of stone 2 ft. base, 1½ ft. high,W
 of corner. Pits impracticable.
 Note: At this corner, March 25,1914,I set off 1°43½'N.
 on the decl.arc; and at apparent noon, I observe the
 sun on the meridian; the resulting latitude is 33°
 17½'N.
 Land, rolling, hilly and mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering cedar, oak and pine on first half mile.
 Undergrowth, scattering scrub oak.
 Mountainous land, 20 chs.

 West, on a true line, bet. frac. secs, 5 and 32.
 Descend SW. slope, 75 ft.to
 7.00 Gulch, course SW. Ascend SE. slope, 20 ft.to
 13.00 Ridge, brs.NE. and SW. Descend NW. slope, 100 ft.to
 22.00 Draw, course N. Ascend NE. slope, 55 ft.to to ridge.
 25.25 Trail, brs.NW and SE.
 28.00 Spur ridge, brs.NW. Descend SW. slope, 105 ft.to
 38.00 Draw, course NW. Ascend NE. slope, to ridge.
 Enter scattering timber, brs.N.and S.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for ¼ sec.cor.,marked on brass cap,
 1913 on S rim,
 ¼ S 32 in N., and
 S 5 in S.half; from which,
 A cedar, 5 ins. in diam., brs.N.79°W., 74 lks.
 dist., marked ¼ S 32 B T.
 An oak, 8 ins. in diam., brs.S.3°E., 105 lks.
 dist., marked ¼ S 5 B T.
 Cook's Ranch house brs.N.43°W., about 30 chs.dist.
 41.00 Short spur ridge, brs.N. Descend NW slope, 145 ft.to
 Eagle Creek.
 43.00 Top of bluff, brs.NE. and SW.
 44.50 Eagle Creek, 10 lks.wide, 2 ft. deep, course SW.
 Thence along Creek bottom.
 58.00 Eagle Creek, 30 lks.wide, 8 ins. deep, course NW.
 Ascend NE slope, 50 ft.to
 71.70 Rock point; discontinue chaining. Set rod at this point
 and take stadia measurement across head of box canyon,
 course S. Rod reading (mean of three) 1.680 ft. Ratio,
 1 ft.= 2 chs. Focal constant, 1.025 ft. Vertical
 angle plus 4° 20'. The distance on line to instrument
 is therefore 1.680 x 2 x .9943 plus .016 = 3.36 chs.,
 which added to. 71.70 chs. =
 75.06 Instrument point on rim rock, on west side of canyon. As-
 cend NE. slope by chain measurement to
 77,10 Intersect the east bdy. of the White Mountain Indian Res-
 ervation, 14.84 chs. south of the 42½ mile cor., rees-
 tablished by me, as described in Book "C."
 At the point of intersection, set an iron post, 3 ft.long,
 3 ins. in diam., 24 ins. in the ground, for closing
 cor. of frac. Ts.1 and 2 S uth, R.28 E., marked on brass
 cap,
 1913 on S.rim,

50. South boundary of frac. Township 1 South, Range 28 East.
Chains.

C C W of center,
W M I R in W., and
R 28 E in E. half;
T 1 S S 32 in NE., and
T 2 S S 5 in SE. quadrant; from which,
A cedar, 30 ins. in diam., brs/N. 86° E., 180
lks. dist., marked T 1 S R 28 E S 32 C C B T.
No other trees within limits. Raise a mound of stone 2
ft. base, 1½ ft. high, east of cor. Pits impracticable.
Land, mountainous and hilly.
Soil, rocky, 4th rate.
Timber, scattering oak, cedar and pinon.
Undergrowth, scattering willow and scrub oak.
Mountainous land, 64 chs.

March 25, 1914.

South half of East bdy. of Township 1 North, Range 28 E.

Survey commenced April 6, 1914, and executed with Young
and Sons' Light Mountain Transit, No. 8541, hereinbe-
fore described.

Knowing from recent and repeated tests of my instrument
on a meridian established by observation on Polaris
at elongation that it is in correct adjustment, I pro-
ceed to the survey of the south half of the east bdy.
of T. 1 N., R. 28 E.

At 8h. 55m. a.m., l.m.t., I set off 33° 22½' N. on the lat.
arc; 6° 19' N. on the decl. arc; and determine a meri-
dian with the solar at the standard cor. of Ts. 1 N.,
Rs. 28 and 29 E. on the G. & S. R. Base Line, in lat.
33° 22' 22" N.; longitude, 109° 23' 46" W. reestablished
by me, as described in Book "B."

Thence I run,

North, bet. secs. 31 and 36.

6.00	Through scattering timber. Descend N. slope, 160 ft. to
15.50	Gulch, course W. Ascend S. slope, 290 ft. to
25.00	Ridge, brs. E. and W. Descend N. slope, 200 ft. to
28.00	Gulch, course W. Ascend S. slope, 130 ft.
30.00	Ascend SW. slope.
39.00	Thence along west slope.
40.00	Draw, course SW. Ascend SE. slope, 115 ft. to ridge.
	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
	the ground, for ¼ sec. cor., marked on brass cap,
	1913 on S. rim,
	¼ S 36 in W., and
	S 31 in E. half; from which,
	A pine, 8 ins. in diam., brs. S. 42° E., 35 lks
	dist., marked ¼ S 31 B T.
	A juniper, 8 ins. in diam., brs. S. 45½° W., 69
	lks. dist., marked ¼ S 36 B T
48.00	Spur ridge, brs. SW. Descend N. slope, 130 ft. to
60.00	Gulch, course W. Ascend SE. slope, 270 ft. to
79.00	Ridge, brs. NE. and SW. Descend N. slope, to
80.00	Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
	the ground, for cor. of secs. 25, 30, 31 and 36, marked
	on brass cap,
	1913 on S. rim,
	T 1 N in N. half;
	S 25, R 28 E in NW.,
	R 29 E S 30 in NE.,
	S 31 in SE., and
	S 36 in SW. quadrant; from which,
	A juniper 8 ins. in diam., brs. N. 55½° E., 133
	lks. dist., marked T 1 N R 29 E S 30 B T.
	A pine, 8 ins. in diam., brs. S. 44½° E., 73
	lks. dist., marked T 1 N R 29 E S 31 B T.
	A juniper, 20 ins. in diam., brs. S. 31° W., 58
	lks. dist., marked T 1 N R 28 E S 36 B T.

South half of East bdy. of Township 1 North, Range 28 East. 51.

Chains.

- A pine, 12 ins. in diam., brs. N. $38\frac{1}{2}^{\circ}$ W., 204 lks. dist., marked T 1 N R 28 E S 25 B T.
 Land, rolling, hilly and mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering pine, oak, cedar and juniper.
 Undergrowth, dense scrub oak.
 Mountainous land, 56 chs.
-
- North, bet. secs. 25 and 30.
 Through scattering timber and dense undergrowth.
 Descend NW. slope, 90 ft. to
 6.00 Draw, course W. Ascend SW. slope, 20 ft. to
 14.00 Spur ridge, brs. W. Descend N. slope, 290 ft. to bottom
 of canyon.
 22.70 Trail, brs. E. and W.
 Corral brs. E. about 6 chs. dist.
 23.00 Stream of water, 4 lks. wide, 3 ins. deep, in bottom of
 canyon, course SW.
 Ascend steep S. slope, 530 ft. to ridge.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S. rim,
 $\frac{1}{4}$ S 25 in W., and
 S 30 in E. half; from which,
 A juniper, 8 ins. in diam., brs. S. 88° E., 36
 lks. dist., marked $\frac{1}{4}$ S 30 B T.
 A pine, 8 ins. in diam., brs. S. 32° W., 90 lks.
 dist., marked $\frac{1}{4}$ S 25 B T
 48.25 Ridge, brs. NE. and SW. Descend NW. slope, 335 ft. to bot-
 tom of canyon.
 Log house in canyon, brs. S. 27° E., about 26 chs. dist.
 60.00 Bottom of canyon, course SW. Ascend SE. slope, 315 ft.
 to cor.
 74.50 Thence along east slope.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 19, 24, 25 and 30, marked
 on brass cap,
 1913 on S. rim,
 T 1 N in N. half;
 R 28 E S 24 in NW.,
 R 29 E S 19 in NE.,
 S 30 in SE., and
 S 25 in SW. quadrant; from which,
 An oak, 6 ins. in diam., brs. N. $3\frac{1}{2}^{\circ}$ E., 70 lks.
 dist., marked T 1 N R 29 E S 19 B T.
 A juniper, 12 ins. in diam., brs. S. 2° E., 127
 lks. dist., marked T 1 N R 29 E S 30 B T.
 A pine, 8 ins. in diam., brs. S. $13\frac{1}{2}^{\circ}$ W., 158
 lks. dist., marked T 1 N R 28 E S 25 B T.
 An oak, 5 ins. in diam., brs. N. 3° W., 79 lks.
 dist., marked T 1 N R 28 E S 24 B T.
 Land, mountainous and hilly.
 Timber, scattering pine, juniper, oak and cedar.
 Undergrowth, dense scrub oak.
 Mountainous land, 70 chs.
 Note: The sky was overcast at noon, making an observa-
 tion for latitude impossible.
 April 6, 1914.
-
- April 9, 1914: At 7h. 56m. a.m., l.m.t., I set off 33°
 $24\frac{1}{2}'$ N. on the lat. arc; $7^{\circ}26'$ N. on the decl. arc; and
 determine a meridian with the solar at the cor. of secs.
 19, 24, 25 and 30,
 Thence I run,
 North, bet. secs. 19 and 24.

52. South half of East bdy. of Township 1 North Range 28 East.

Chains.

Through scattering timber and dense undergrowth. Ascend SE. slope, 405 ft. to
 18.00 Ridge, brs. NE. and SW. Descend steep N. slope, 620 ft. to
 33.00 Bottom of canyon, course W.
 Small stream of water in canyon. Ascend S. slope, 255 ft. to
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1913 on S. rim,
 $\frac{1}{4}$ S 24 on W., and
 S 19 in E. half; from which,
 A pine, 10 ins. in diam., brs. S. $49\frac{1}{2}^{\circ}$ E., 64 lks.
 dist., marked $\frac{1}{4}$ S 19 B T.
 A pine, 6 ins. in diam., brs. S. 8° W., 62 lks.
 dist., marked $\frac{1}{4}$ S 24 B T.
 Ascend SE. slope, 420 ft. to
 58.00 Ridge, brs. NE. and SW. Descend NW. slope, 240 ft. to
 65.00 Draw, course W. Ascend SW. slope, 35 ft. to
 70.00 Spur ridge, brs. W. Descend NW. slope, 225 ft. to
 77.50 Wash, course SW. Ascend S. slope, 50 ft. to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for cor. of secs. 13, 18, 19 and 24, marked
 on brass cap,
 1913 on S. rim,
 T 1 N in N. half;
 R 28 E, S 13 in NW.,
 R 29 E S 18 in NE.,
 S 19 in SE., and
 S 24 in SW. quadrant; from which,
 An oak, 8 ins. in diam., brs. N. 6° E., 100 lks.
 dist., marked T 1 N R 29 E S 18 B T.
 An oak, 14 ins. in diam., brs. N. 22° W., 57 lks.
 dist., marked T 1 N R 28 E S 13 B T.
 No other trees within limits. Raise a mound of stone 2 ft.
 base, $1\frac{1}{2}$ ft. high, W. of corner. Bits impracticable.
 Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering pine, oak, juniper and cedar.
 Undergrowth, dense scrub oak.
 Mountainous land, 80 chs.

April 9, 1914.

 Part of the North bdy. of Township 1 North, Range 28 East.

Survey commenced April 25, 1914, and executed with Young
 and Sons' Light Mountain Transit, No. 8541, hereinbefore
 described.

Knowing from recent and repeated tests of my instrument,
 on a meridian established by observations on Polaris
 at elongation, that it is in correct adjustment, I
 proceed to the survey of part of the North bdy. of T. 1
 N., R. 28 E.

At 2h. 10m. p.m., l.m.t., I set off $33^{\circ} 28'$ N. on the lat.
 arc; $13^{\circ} 8\frac{1}{2}'$ N. on the decl. arc; and determine a meri-
 dian with the solar at the cor. of secs. 4, 5, 32 and 33,
 established by me, as described in Book "K."

Thence I run,

West, on a true line, bet. secs. 5 and 32.

Through scattering timber and undergrowth. Ascend NE.
 slope, 40 ft. to

4.00 Ridge, brs. NW. and SE. Descend SW. slope, 595 ft. to wash.

23.40 Trail, brs. NW. and S.

40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,

1913 on S. rim,
 $\frac{1}{4}$ S 32 in N., and

S 5 in S. half; from which,

An oak, 10 ins. in diam., brs. N. $49\frac{1}{2}^{\circ}$ E., 11 lks.
 dist., marked $\frac{1}{4}$ S 32 B T.

Part of North bdy. of Township 1 North, Range 28 East. 53.

Chains.

A pine, 12 ins. in diam., brs. S. 15 1/4° E., 25 lks. dist., marked 1/4 S 5 B T.

April 25, 1914.

April 28, 1914.

At 3h. 5m.p.m., l.m.t., I set off 33° 28' N. on the lat. arc; 14° 5' N. on the decl. arc; and determine a meridian with the solar at this 1/4 sec. cor.

49.50 Descend SW. slope, 50 ft. to
 57.50 Wash, course NW. Ascend SE. slope, 90 ft. to Ridge, brs. NE. and SW. Descend NW. slope, 235 ft. to Eagle Creek.
 68.00 Descend west slope.
 74.00 Enter Eagle Creek bottom.
 74.25 Eagle Creek, 30 lks. wide, 1 to 14 ins. deep, course SW.
 78.55 Irrigation ditch, course S. Ascend E. slope, 40 ft. to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 5, 6, 31 and 32, marked on brass cap,

1913 on S. rim,
 T 2 N in N.,
 T 1 N in S., and
 R 28 E in W. half;
 S 31 in NW.,
 S 32 in NE.,
 S 5 in SE., and
 S 6 in SW. quadrant;

from which,
 A pine, 8 ins. in diam., brs. N. 64° E., 70 lks. dist., marked T 12 N R 28 E S 32 B T.
 A pine, 6 ins. in diam., brs. S. 37 1/2° E., 37 lks. dist., marked T 1 N R 28 E S 5 B T.
 A pine, 10 ins. in diam., brs. S. 66° W., 21 lks. dist., marked T 1 N R 28 E S 6 B T.
 A juniper, 8 ins. in diam., brs. N. 8 1/4° W., 49 lks. dist., marked T 2 N R 28 E S 31 B T.

Carnett's house, brs. N. 2° W. about 4 chs. dist.
 Land, rolling, hilly and mountainous.
 Soil, rocky, 4th rate on slopes; 2nd rate in Creek bottom.
 Timber, scattering pine, cedar, oak, cottonwood, and sycamore.
 Undergrowth, scattering scrub oak.
 Mountainous land, 58 chs.

 West, on a true line, bet. secs. 6 and 31.

0.50 Corral brs. N. 10 lks. dist.
 1.05 Center of corral.
 2.00 Trail, brs. N. and S.
 6.00 Ascend SE. slope, 120 ft.
 17.00 Thence along S. slope.
 20.00 Descend SW. slope, 50 ft. to
 25.00 Draw, course SW. Ascend SE. slope, 25 ft. to
 38.00 Spur ridge, brs. S. Descend SW. slope, 15 ft. to draw.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap,
 1913 on S. rim,
 1/4 S 31 in N., and
 S 6 in S. half; from which,
 A pine, 10 ins. in diam., brs. N. 67 1/2° E., 31 lks. dist., marked 1/4 S 31 B T.
 A pine, 12 ins. in diam., brs. S. 52 3/4° E., 154 lks. dist., marked 1/4 S 6 B T.
 41.50 Draw, course S. Ascend SE. slope, 30 ft. to
 46.00 Spur ridge, brs. S. Descend W. slope, 135 ft. to
 57.45 Middle Fork of Eagle Creek, 14 lks. wide, 1 to 4 ins. deep, course S.
 Ascend SE. slope, 135 ft. to cor.
 57.65 Trail, brs. NE. and SW.
 78.14 Intersect the east bdy. of the White Mountain Indian Reservation, 13.75 chs. N. of the 31st mile cor., re-established by me, as described in Book "C."

54. Part of the North bdy. of Township 1 North, Range 28 East.

Chains.

At the point of intersection, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for closing corner of Ts. 1 and 2 N., R. 28 E., marked on brass cap,
 1913 on S. rim,
 C C W. of center,
 W M I R in W. half;
 R 28 E in E. half;
 T 2 N S 31 in NE., and
 T 1 N S 6 in SE. quadrant; from which,
 A pine, 14 ins. in diam., brs. N. $22\frac{1}{2}^{\circ}$ E., 39 lks. dist., marked T 2 N R 28 E S 31 C C B T.
 A pine, 10 ins. in diam., brs. S. $81\frac{1}{2}^{\circ}$ E., 90 lks. dist., marked T 1 N R 28 E S 6 C C B T.

Land, rolling, hilly and mountainous.

Soil, rocky, 4th rate.

Timber, scattering pine, cedar and oak.

Undergrowth, scattering scrub oak.

Mountainous land, 22 chs.

April 28, 1914.

 North boundary of frac. Township 8 South, Range 32 East.

May 8, 1914: At 8h. a.m., l. m.t., I set off $32^{\circ} 46\frac{1}{2}'$ N. on the lat. arc; $16^{\circ} 59'$ N. on the decl. arc; and determine a true meridian with the solar at the cor. of Ts. 7 and 8 S., R. 31 E., and frac. Ts. 7 and 8 S., R. 32 E.; latitude, $32^{\circ} 46' 17''$ N. Long. $109^{\circ} 07' 05''$ W., which is a post greatly decayed, and the marks nearly obliterated. I destroy all traces of the old cor., and re-establish at the same place as follows:

Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of Ts. 7 and 8 S., R. 31 E., and frac. Ts. 7 and 8 S., R. 32 E., marked on brass cap,

1914 on S. rim,
 T 7 S in N.,
 R 32 E in E.,
 T 8 S in S., and
 R 31 E in W. half;
 S 36 in NW.,
 S 31 in NE.,
 S 6 in SE., and
 S 1 in SW quadrants;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, S. of corner. Pits impracticable.

Thence I run,

East, on a true line, bet. secs. 6 and 31.

Over low rolling hills, draining SW., through dense undergrowth.

40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,

1914 on S. rim,
 $\frac{1}{4}$ S 31 in N., and
 S 6 in S. half;

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.

79.50 Head of draw, course S.

80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the cor. of secs. 5, 6, 31 and 32, marked on brass cap,

1914 on S. rim,
 T 7 S in N.,
 T 8 S in S., and
 R 32 E in W. half;
 S 31 in NW.,
 S 32 in NE.,
 S 5 in SE., and
 S 6 in SW. quadrant;

and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.

North boundary of frac. Township 8 South, Range 32 East. 55.

Chains.

Land, hilly.
Soil, sandy loam, gumbo, gravelly, 2nd to 4th rate.
No timber.
Undergrowth, scattering, with patches of dense greasewood, mesquite and cacti.

East, on a true line, bet. secs. 5 and 32.
Over rolling hills, draining SW.; through dense undergrowth.

36.50 Wagon road, brs. NE: and SW.
37.50 Wash, 150 lks. wide, 2 ft. deep, course SW.
40.00 Set an iron post 3 ft. long, 1 in. in diam. 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
1914 on S. rim,
 $\frac{1}{4}$ S 32 on N., and
S 5 in S. half;
raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, north of corner. Pits impracticable.

60.00 Wash, 75 lks. wide, 3 ft. deep, course SW.
79.85 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for witness cor. to cor. of secs. 4, 5, 32 and 33, marked on brass cap,
1914 on S rim,
W C E of center;
T 7 S in N.,
T 8 S in S., and
R 32 E in W. half;
S 32 in NW.,
S 33 in NE.,
S 4 in SE., and
S 5 in SW. quadrant;
raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.

80.00 True point for cor. falls in bottom of draw, course SE.
Land, hilly.
Soil, sandy loam, gumbo, gravelly, 2nd to 4th rate.
No timber.
Undergrowth, dense greasewood, mesquite and cacti.

From true point for cor. of secs. 4, 5, 32 and 33, I run, East, on true line, bet. secs. 4 and 33.
Over rolling hills, draining south, through dense undergrowth.

6.50 Wash, 40 lks. wide, 2 ft. deep, course SW.
38.50 Wash, 20 lks. wide, 3 ft. deep, course S.
40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
1914 on S. rim,
 $\frac{1}{4}$ S 33 in N., and
S 4 in S. half;
raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.

Note: At this corner, May 8, 1914, I set off $17^{\circ} 01\frac{1}{2}'$ N. on the decl. arc, and at apparent noon, I observe the sun, on the meridian; the resulting lat. is $32^{\circ} 46\frac{1}{2}'$ N.

59.00 Wash, 300 lks. wide, 4 ft. deep, course SE.
69.00 Wash, 50 lks. wide, 2 ft. deep, course SW.
80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 3, 4, 33 and 34, marked on brass cap,
1914 on S. rim,
T 7 S in N.,
T 8 S in S., and
R 32 E in W. half;
S 33 in NW.,
S 34 in NE.,

56. North boundary of Trac. Township 8 South, Range 32 East.

Chains

S 3 in SE., and
 S 4 in SW quadrant;
 raise a mound of stone 2 ft. base, 1½ ft. high, W. of cor.
 Pits impracticable.
 Land, hilly.
 Soil, sandy loam, gumbo, gravelly, 2nd to 4th rate.
 No timber.
 Undergrowth, dense greasewood, mesquite, cacti and cat-claw.

 East, on a true line, bet. sec. 3 and 34.
 Over rolling hills, draining to the S. through dense undergrowth.

25.00

Draw, course S.

35.00

Gulch, course SW.

40.00

Set an irbn post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap, 1914 on S. rim,
 ¼ S 34 on N., and
 S 3 on S. half; from which,
 A cedar, 10 ins. in diam., brs. N. 89¼° E., 80 lks. dist., marked ¼ S 34 B T.

No other trees within limits. Raise a mound of stone, 2 ft. base, 1½ ft. high, north of corner. Pits impracticable.

52.50

Wash, 60 lks. wide, 3 ft. deep, course NW. Ascend NW. slope, 90 ft. to

64.00

Ridge, brs. NE. and SW. Descend E. slope, 50 ft. to

79.25

Draw, course SW. Ascend. May 8, 1914.

79.60

May 9, 1914 (After retracing Arizona-New Mexico bdy. at this point, as described in Book "L") intersect the boundary line bet. Arizona and New Mexico, 25.71 chs. S. 0° 1' E. of the 291 mile cor., a stone 11x5x12 ins., above ground marked,

291 on the N., and

N M on the E. face; other marks indistinct.

At point of intersection, set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for closing cor. of frac. Ts. 7 and 8 S., R. 32 E., marked on brass cap

1914 on S. rim,

C C E of center,

N M in E. hand

R 32 E in W. half;

T 7 S S 34 in NW., and

T 8 S S 3 in SW. quadrants;

raise a mound of stone 2 ft. base, 1½ ft. high, W. of cor.
 Pits impracticable.

Land, hilly.

Soil, sandy loam, gumbo, gravelly, 3rd and 4th rate.

Timber, scattering cedar.

Undergrowth, dense greasewood, mesquite, catclaw and cacti.

May 9, 1914/

North boundary of frac. Township 8 South, Range 32 East. 57.

Chains.						
Boundaries of frac. Township 8 S., R. 32 E.						

Latitudes, departures, and closing errors.						
Line designated.	True course.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
Subdivisional South bdy.,	West	79.70				79.70
	N. 0° 7' E.	80.00	80.00	.16		
	N. 89° 55' W.	80.14	.12			80.14
	N. 89° 53' W.	80.00	80.00	.01		80.07
	N. 89° 45' W.	79.85	.34			79.85
	N. 89° 1' E.	80.00	80.00		.02	
West bdy.,	North,	80.00	80.00			80.13
North bdy.,	East,	319.60			319.60	
East bdy., (Ariz-N.M. bdy.)	S. 0° 01' E.	55.57		55.57	.02	
	S. 0° 00 1/2' W.	161.87		161.87		.02
	S. 0° 03' E.	80.85		80.85	.07	
	S. 0° 01' W.	22.67		22.67		.04
Convergency,	South,	53.53			.13	
Totals,			320.46	321.10	320.00	319.91
				320.46	319.91	
Error in latitude,-----				0.64		
Error in departure,-----					0.09	

East boundary of Township 8 South, Range 28 East.

Knowing from my retracements of the W. and S. bdys. that this township will be subdivided from north to south, and east to west, I proceed as follows:

May 22, 1914: At 3h. p.m., l.m.t., I set off 32°41' N. on the lat. arc; 20°22' N. on the decl. arc; and determine a meridian with the solar at the original cor. of Ts. 8 and 9 S., Rs. 28 and 29 E.; lat. 32° 41' 04" N.; long. 109° 23' 21" W., which is a stone 12x8x10 ins. above ground, marked and witnessed as described in Book "M," in notes of retracement of S. bdy. of T. 8 S., R. 28 E.

Thence I run,
North, on random line, through T. 8 S., bet. Rs. 28 and 29 E.; at 5 miles, 70.00 chs., set temp. cor. for Ts. 7 and 8 S., Rs. 28 and 29 E.

May 22 and 23, 1914.
From the cor. of Ts. 7 and 8 S., Rs. 27 and 28 E., reestablished by me, as described in Book "M," I run, East, on a random line, through Range 28 East, bet. Ts. 7 and 8 S., and at 5 miles, 72.90 chs., intersect the N. and S. line, 29 lks. south of the temp. Tp. cor. described above.

At point of intersection, set an iron post, 3 ft. long, 3 ins. in diam., 20 ins. in the ground, on bedrock, supported by a mound of stone, for the cor. of Ts. 7 and 8 S., Rs. 28 and 29 E., marked on brass cap,
1914 on S. rim,
T 7 S in N.,
R 29 E in E.,
T 8 S in S., and
R 28 E in W. half;
S 36 in NW.,
S 31 in NE.,
S 6 in SE.; and
S 1 in SW. quadrant;
raise a mound of stone 2 ft. base, 1 1/2 ft. high, S. of cor.
Pits impracticable.

May 23 and 25, 1914.

58. East boundary of Township 8 South, Range 28 East.

Chains.

- May 26, 1914.
Beginning at the cor. of Ts. 7 and 8 S., Rs. 28 and 29 E., described above, I run,
South, on true line, bet. secs. 1 and 6.
Through dense undergrowth. Ascend NW. slope; 30 ft. to
4.00 Spur slopes west; descend SW. slope, 40 ft. to
8.00 Foot of spur, brs. NW. and SE.; continue over gently rolling land.
16.90 Duncan, Solomonville wagon road, brs. NW. and SE.
21.20 Wash, 30 lks. wide, 3 ft. deep, course NW.
40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1914 on S. rim, $\frac{1}{4}$ S 1 in W., and S 6 in E. half;
raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
75.20 Dim wagon road, brs. NW. and SE.
80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the cor. of secs. 1, 6, 7 and 12, marked on brass cap,
1914 on S. rim,
T 8 S in N. half;
R 28 E S 1 in NW.,
R 29 E S 6 in NE.
S 7 in SE., and
S 12 in SW. quadrant;
raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.
Land, gently rolling.
Soil, sandy loam, gumbo, gravelly, 1st to 4th rate.
No timber.
Undergrowth, dense greasewood and cacti.
-
- 40.00 South, on true line, bet. secs. 7 and 12.
Over gently rolling land, through dense undergrowth.
Set an iron post 3 ft. long, 1 in. in diam., 16 ins. in the ground, on hardpan, supported by a mound of stone for $\frac{1}{4}$ sec. cor., marked on brass cap,
1914 on S. rim,
 $\frac{1}{4}$ S 12 on W., and
S 7 in E. half;
raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.
58.50 Dim wagon road, brs. NE. and SW.
73.00 Wash, 300 lks. wide, 2 ft. deep, course W. Ascend N. slope, 75 ft. to
80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the cor. of secs. 7, 12, 13 and 18, marked on brass cap,
1914 on S rim,
T 8 S in N. half;
R 28 E S 12 in NW.,
R 29 E S 7 in NE.,
S 18 in SE., and
S 13 in SW. quadrant;
raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.
Land, gently rolling.
Soil, sandy loam, gumbo, gravelly, 2nd to 4th rate.
No timber.
Undergrowth, dense greasewood, cacti, mesquite, and cat-claw.
-

East boundary of Township 8 South, Range 28 East. 59.

Chains.

South, on true line, bet. secs. 13 and 18.
 Through dense undergrowth. Ascend north slope, 25 ft. to
 2.00 Ridge, brs. E. and W. Descend SW. slope, 90 ft. to
 36.00 Wash, 60 lks. wide, 2 ft. deep, course W.; continue over
 rolling land.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 13 on W., and
 S 18 on E. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of
 corner. Pits impracticable.
 71.20 Old wagon road, brs. E. and W.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for the cor. of secs. 13, 18, 19 and 24,
 marked on brass cap,
 1914 on S. rim,
 T 8 S in N. half;
 R 28 E S 13 in NW.,
 R 29 E S 18 in NE.,
 S 19 in SE., and
 S 24 in SW. quadrant;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of
 corner. Pits impracticable.
 Land, rolling.
 Soil, sandy loam, gumbo, gravelly, 2nd to 4th rate.
 No timber.
 Undergrowth, dense greasewood, mesquite, cacti, and cat-
 claw.

South, on true line, bet. secs. 19 and 24.
 Over rolling land, through dense undergrowth.
 7.00 Wash, 100 lks. wide, 2 ft. deep, course W.
 12.70 Low spur ridge, slopes west.
 19.50 Wash, 30 lks. wide, 1 ft. deep, course SW.
 34.00 Wash, 20 lks. wide, 2 ft. deep, course W.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 24 on W., and
 S 19 on E. half;
 raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W.
 of cor. Pits impracticable.
 59.40 Wash, 30 lks. wide, 2 ft. deep, course W.
 67.40 Wash, 30 lks. wide, 2 ft. deep, course W. Ascend N. slope,
 145 ft. to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 8 ins. in
 the ground on bedrock, supported by a mound of stone
 for the cor. of secs. 19, 24, 25 and 30, marked on brass
 cap,
 1914 on S. rim,
 T 8 S in N. half;
 R 28 E S 24 in NW.,
 R 29 E S 19 in NE.,
 S 30 in SE., and
 S 25 in SW. quadrant;
 and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of
 corner. Pits impracticable.
 Land, rolling and hilly.
 Soil, sandy loam, gumbo, gravelly, 3rd and 4th rate.
 No timber.
 Undergrowth, dense greasewood, mesquite, cacti and catclaw.

60. East boundary of Township 8 South, Range 28 East.

Chains.

South, on true line, bet. secs.25 and 30.
 Through dense undergrowth, Ascend N.slope, 55 ft.to
 10.00 Ridge, brs.E.and W. Descend S. slope, 240 ft.to
 22.00 Wash, 400 lks.wide, 12 ft.deep, course W. Ascend gradually
 N.slope, 110 ft.to sec.cor.
 33.35 Trail, brs.NW. and SE.
 40.00 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec.cor., marked on brass cap,
 1914 on S.rim,
 $\frac{1}{4}$ S 25 on W.half; and
 S 30 on E.half;
 and raise a mound of stone 2 ft.base, $1\frac{1}{2}$ ft. high,W.of
 corner. Pits impracticable.
 80.00 Set an iron post, 3 ft.Long, 3 ins. in diam., 10 ins. in
 the ground, on hardpan, supported by a mound of stone
 for the cor.of secs. 25,30, 31 and 36, marked on brass
 cap,
 1914 on S.rim,
 T 8 S on N.half;
 R 28 E S 25 on NW.,
 R 29 E S 30 on NE.,
 S 31 onSE., and
 S 36 on SW. quadrant;
 raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, west
 of corner. Pits impracticable.
 Land, rolling.
 Soil, rocky gumbo, 4th rate.
 No timber.
 Undergrowth, dense greasewood, mesquite cacti and catclaw.

 South on a true line, bet. secs.31 and 36.
 Through dense undergrowth. Ascend gradual N. slope,200 ft.
 to Tp.cor.
 20.70 Wash, 450 lks.wide, 3 ft.deep, course W.
 40.00 Set an iron post 3 ft.long, 1 in. in diam., 8 ins. in the
 ground, on bedrock, supported by a mound of stone,
 for $\frac{1}{4}$ sec.cor., marked on brass cap,
 1914 on S.rim,
 $\frac{1}{4}$ S 36 on W., and
 S 31 on E.half;
 raise a mound of stone 2 ft.base, $1\frac{1}{2}$ ft. high, W.of
 corner. Pits impracticable.
 55.50 Draw, course NW.
 69.00 Same draw, course NE.
 69.71 The original cor.of Ts. 8 and 9 S., Rs.28 and 29 E., which
 is a stone 12x8x10 ins/ above ground, marked and witness-
 ed as described in Book "M."
 Land, rolling.
 Soil, stony gumbo, 4th rate.
 No timber.
 Undergrowth, dense greasewood and cacti.

May 26, 1914.

 North bdy.of Township 8 South, Range 28 East.

May 26, 1914:
 Beginning at the cor.of Ts. 7 and 8 S., Rs.28 and 29 E.,
 established by me, as hereinbefore described, I run,
 West, on a true line, bet secs.1 and 36.
 Through dense undergrowth. Descend NW. slope,20 ft.to
 2.00 Foot of hill,brs.NE. and SW.; continue over gently rolling
 land.
 40.00 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec.cor., marked on brass cap,

North boundary of Township 8 South, Range 28 East 61.

Chains.

1914 on S.rim,
 $\frac{1}{4}$ S 36 on N., and
 S 1 on S.half;
 raise a mound of stone 2 ft.base, $1\frac{1}{2}$ ft. high, north of
 corner. Pits impracticable.

66.80 Wagon road, brs.NE. and SW.
 70.10 Duncan-Solomonsville wagon road, brs.NW. and SE.
 80.00 Set an iron post 3 ft.long, 3 ins. in diam., 24 ins. in
 the ground, for the cor.of secs. 1,2, 35 and 36, marked
 on brass cap,
 1914 on S.rim,
 T 7 S in N.,
 T 8 S in S., and
 R 28 E in W.half;
 S 35 in NW.,
 S 36 in NE.,
 S 1 in SE., and
 S 2 in SW.quadrant;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of
 corner. Pits impracticable.

Land, gently rolling.
 Soil, sandy loam, gumbo, gravelly, 2nd and 3rd rate.
 Undergrowth, dense greasewood, cacti and mesquite.
 May 26, 1914.

May 25, 1914:
 West, on a true line, bet. secs. 2 and 35.
 Over gently rolling land, through dense undergrowth.

40.00 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec.cor., marked on brass cap,
 1914 on S.rim,
 $\frac{1}{4}$ S 35 on N., and
 S 2 on S.half;
 raise a mound of stone 2 ft.base, $1\frac{1}{2}$ ft. high, N.of cor.
 Pits impracticable.

80.00 Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in
 the ground, for the cor.of secs.2,3,34 and 35, marked
 on brass cap,
 1914 on S.rim,
 T 7 S in N.,
 T 8 S in S., and
 R 28 E in W.half;
 S 34 in NW.,
 S 35 in NE.,
 S 2 in SE., and
 S 3 in SW. quadrant;
 raise a mound of stone 2 ft. base. $1\frac{1}{2}$ ft. high, W.of
 corner. Pits impracticable.

Land, gently rolling.
 Soil, sandy loam and gumbo, 2nd rate.
 No timber.
 Undergrowth, dense cacti, mesquite and catclaw.

West, on a true line, bet. secs. 3 and 34.
 Over gently rolling land, through dense undergrowth.

40.00 Set an iron post 3 ft.long, 1 in. in diam., 26 ins. in the
 ground, for $\frac{1}{4}$ sec.cor., marked on brass cap,
 1914 on S.rim,
 $\frac{1}{4}$ S 34 in N., and
 S 3 in S.half;
 raise a mound of stone 2 ft.base, $1\frac{1}{2}$ ft. high, N.of cor.
 Pits impracticable.

80.00 Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in
 the ground, for the cor.of secs.3,4,33 and 34, marked
 on brass cap,
 1914 on S.rim,

62. North boundary of Township 8 South, Range 28 East.

Chains.

T 7 S in N.,
 T 8 S in S., and
 R 28 E in W.half;
 S 33 in NW.,
 S 34 in NE.,
 S 3 in SE., and
 S 4 in SW.quadrant;

raise a mound of stone 2 ft.base, $1\frac{1}{2}$ ft. high, W.of cor.
 Pits impracticable.

Land, gently rolling.

Soil, sandy loam and gumbo, 2nd rate,

No timber.

Undergrowth, dense cacti, mesquite and catclaw.

40.00

West, on true line, bet. secs.4 and 33.

Over gently rolling land, through scattering undergrowth.

Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec.cor., marked on brass cap,

1914 on S.rim,
 $\frac{1}{4}$ S 33 on N., and
 S 4 on S.half;

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N.of
 corner. Pits impracticable.

80.00

Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in
 the ground, for the cor.of secs. 4,5, 32 and 33, marked
 on brass cap,

1914 on S.rim,
 T 7 S in N.,
 T 8 S in S., and
 R 28 E in W.half;
 S 32 in NW.,
 S 33 in NE.,
 S 4 in SE., and
 S 5 in SW. quadrant;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of
 corner. Pits impracticable.

Land, gently rolling.

Soil, sandy loam and gumbo, 2nd rate.

No timber.

Undergrowth, scattering with patches of dense acacti and
 mesquite.

21.75

40.00

West, on a true line, bet. secs.5 and 32.

Over gently rolling land, through scattering undergrowth.

Old wagon road, brs.N and S.

Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec.cor., marked on brass cap,

1914 on S.rim,
 $\frac{1}{4}$ S 32 on N., and
 S 5 on S.half;

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N of
 corner. Pits impracticable.

71.50

80.00

Wash, 30 lks.wide, 4 ft. deep, course NW.

Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in
 the ground, for the cor.of secs. 5,6,31 and 32, marked
 on brass cap,

1914 on S.rim,
 T 7 S on N.,
 T 8 S on S., and
 R 28 E on W.half;
 S 31 in NW.,
 S 32 in NE.,
 S 5 in SE., and
 S 6 in SW. quadrant;

North boundary of Township 8 South, Range 28 East. 63.

Chains.

raise a mound of stone 2 ft. base, 1½ ft. high, W. of corner. Pits impracticable.
 Land, gently rolling.
 Soil, sandy loam and gumbo, 2nd rate.
 No timber.
 Undergrowth, scattering with patches of dense greasewood, cacti and mesquite.

40.00

West, on a true line, bet. secs. 6 and 31.
 Over gently rolling land, through scattering undergrowth.
 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap,
 1914 on S. rim,
 ¼ S 31 on N., and
 S 6 on S. half;

72.90

raise a mound of stone 2 ft. base, 1½ ft. high, north of corner. Pits impracticable.
 The cor. of Ts. 7 and 8 S., Rs. 27 and 28 E., reestablished by me, as described in Book "M."
 Land, gently rolling.
 Soil, sandy loam and gumbo, 2nd rate.
 No timber.
 Undergrowth, scattering, with patches of dense greasewood cacti, and mesquite.

May 25, 1914.

South boundary of Township 13 South, Range 27 East.

Survey commenced June 15, 1914, and executed with a Young and Son's Light Mountain Transit, No. 8541, hereinbefore described.

From the original corner of Ts. 13 and 14 S., Rs. 27 and 28 E. Lat. 32° 14' 51" N. Long. 109° 31' 46" W., which is a cedar post 4 ins. sq., 3 ft. protruding from a mound of stone, marked and witnessed as described by the Surveyor General, I run,

West, on a random line on the south bdy. of Tp. 13 S., R. 27 E., setting temp. ¼ sec. and sec. cors. at intervals of 40.00 chs.; and at 475.32 chs. intersect the E. bdy. of T. 14 S., R. 26 E., 30 lks. north of the witness cor. to the corner of Ts. 13 and 14 S., Rs. 26 and 27 E., which is a granite stone, 8 x 12 x 12 ins., protruding from a mound of stone, marked and witnessed as described by the Surveyor General. This witness cor. to Tp. cor. being set on SW. edge of canyon, course N., 5.00 chs. south of true corner point, and finding it practicable to establish the Tp. corner in its proper place; therefore I run,

North, bet. secs. 1 and 6.
 Through dense undergrowth and scattering timber. Descend broken rocky N. slope, 225 ft. to

5.00

Set an iron post 3 ft. long, 3 ins. in diam., 18 ins. in the ground, on bedrock, supported by a mound of stone for the cor. of Ts. 13 and 14 S., Rs. 26 and 27 E., marked on brass cap,
 1914 on S. rim,
 T 13 S in N.,
 R 27 E in E.,
 T 14 S in S., and
 R 26 E in W. half;
 S 36 in NW.,
 S 31 in NE.,
 S 6 in SE., and
 S 1 in SW. quadrant; from which,

641 South boundary of Township 13⁵ South, Range 27 East.

Chains.

An oak, 16 ins. in diam., brs. S. 75° E., 50 lks. dist., marked T 14 S R 27 E S 6 B T.
No other trees within limits. Raise a mound of stone 2 ft. base, 1½ ft. high, south of corner. Pits impracticable.

June 15, 16 and 17, 1914.

June 18, 1914: At 10h. a.m., l.m.t., I set off 32° 15' N. on the lat. arc; 23° 25' N. on the decl. arc; and determine a meridian with the solar at the cor. of Ts. 13 and 14 S., Rs. 26 and 27 E., described above.

Thence I run,

East, on a true line, bet. secs. 6 and 31.

Along steep rocky, broken north slope, through dense undergrowth and scattering timber.

8.00 Gulch, course NW. Ascend SW. slope.

27.75 Ridge, brs. NW. and SE., 450 ft. above township corner. Descend NE. slope, 255 ft.

40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap,

1914 on S. rim,

¼ S 31 in N., and

S 6 in S. half; from which,

An oak, 16 ins. in diam., brs. N. 84° E., 135 lks. dist., marked ¼ S 31 B T.

An oak, 18 ins. in diam., brs. S. 40° W., 65 lks. dist., marked ¼ S 6 B T.

45.00 Gulch, course NW. Ascend NW. slope, 100 ft.

50.00 Rocky spur ridge, slopes N.; descend NE. slope, 35 ft.

Webster's cabin brs. S. about 6 chs. dist.

51.75 Draw, course N. Ascend NW. slope, 105 ft.

55.00 Pack trail, brs. NE. and SW.

58.00 Spur ridge, slopes north; descend E. slope, 185 ft. to

63.40 Gulch, N. Ascend W. slope, 380 ft. to

76.00 Ridge, brs. N. and S. Descend east slope, 130 ft.

80.00 At foot of rocky cliff, 15 ft. high, bearing N. and S., I set an iron post 3 ft. long, 3 ins. in diam., 15 ins. in the ground, on bedrock, supported by a mound of stone, for the corner of secs. 5, 6, 31 and 32, marked on brass cap,

1914 on S. rim,

T 13 S in N.,

T 14 S in S., and

R 27 E in W. half;

S 31 in NW.,

S 32 in NE.

S 5 in SE., and

S 6 in SW. quadrant; from which,

An oak, 10 ins. in diam., brs. S. 1° E., 134 lks. dist., marked T 14 S R 27 E S 5 B T.

No other trees within limits; raise a mound of stone 2 ft. base, 1½ ft. high, 5 ft. NE. of corner. Impracticable to build mound on the west. Pits impracticable.

Land, mountainous.

Soil, rocky, 4th rate

Timber, scattering oak and juniper.

Undergrowth, dense scrub oak and cacti.

East, on a true line, bet. secs. 5 and 32.

Through scattering timber and dense undergrowth. Descend east slope to

5.25 Rocky gulch, course NE.; continue descent.

14.00 Gulch, course NE.; continue descent.

26.00 Gulch, course NW., 600 ft. below sec. cor.; ascend NW. slope, 220 ft. to

Survey of the South bdy. of Township 13 South, Range 27 East. 65.

Chains.

- 36.00 Spur, slopes N.; descend NE. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 - 1914 on S. rim,
 - $\frac{1}{4}$ S 32 in N., and
 - S 5 in S. half; from which,
 - An oak, 12 ins. in diam., brs. N. $82\frac{1}{2}^\circ$ E., 128 lks. dist., marked $\frac{1}{4}$ S 32 B T.
 - An oak, 12 ins. in diam., brs. S. $69\frac{1}{4}^\circ$ E., 88 lks. dist., marked $\frac{1}{4}$ S 5 B T.
- 50.00 Draw, course N.; ascend.
- 51.00 Low spur slopes N.; descend.
- 53.00 Gulch, course N., 280 ft. below 36 chain point; ascend NW. slope, 260 ft. to
- 69.50 Ridge, divide bet. Gold Gulch and Buckeye Canyons, brs. N. and S.; descend E. slope, 105 ft. to
- 70.75 Old wagon road, brs. NW. and SE.
- 76.00 Draw, course NE.; ascend NW. slope, 35 ft. to
- 80.00 Spur, slopes N. Set an iron post, 3 ft. long, 3 ins. in diam., 10 ins. in the ground, on bedrock, supported by a mound of stone, for the cor. of secs. 4, 5, 32 and 33, marked on brass cap,
 - 1914 on S. rim,
 - T 13 S in N.,
 - T 14 S on S., and
 - R 27 E in W. half;
 - S 32 in NW.,
 - S 33 in NE.,
 - S 4 in SE., and
 - S 5 in SW. quadrant; from which,
 - An oak, 10 ins. in diam., brs. N. $41\frac{1}{2}^\circ$ E., 40 lks. dist., marked T 13 S R 27 E S 33 B T.
 - An oak, 10 ins. in diam., brs. S. $4\frac{1}{2}^\circ$ E., 102 lks. dist., marked T 14 S R 27 E S 4 B T.
 - A juniper, 10 ins. in diam., brs. S. $37\frac{3}{4}^\circ$ W., 177 lks. dist., marked T 14 S R 27 E S 5 B T.
 - An oak, 12 ins. in diam., brs. N. 75° W., 79 lks. dist., marked T 13 S R 27 E S 32 B T.

Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering oak and juniper.
 Undergrowth, west half mile dense; east half mile, scattering scrub oak and cacti.

June 18, 1914.

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June 19, 1914: At 8h. a.m., 1.m.t., I set off $32^\circ 15' N.$ on the lat. arc; $23^\circ 26' N.$ on the decl. arc; and determine a meridian with the solar at the cor. of secs. 4, 5, 32 and 33.

Thence I run,
 East, on a true line, bet. secs. 4 and 33.
 Descend east slope. Through scattering timber and undergrowth. Descend east slope, 155 ft.

- 9.00 Draw, course NE.; continue descent.
- 16.50 Draw, course N. Ascend NW. slope, 160 ft. to
- 28.00 Spur slopes N.; descend NE. slope.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., 8 ins. in the ground, on bedrock, supported by a mound of stone for $\frac{1}{4}$ sec. cor., marked on brass cap,
 - 1914 on S. rim,
 - $\frac{1}{4}$ S 33 in N., and
 - S 4 in S. half; from which,
 - An oak, 10 ins. in diam., brs. S. $62\frac{1}{4}^\circ$ W., 304 lks. dist., marked $\frac{1}{4}$ S 4 B T.
 - An oak, 5 ins. in diam., brs. N. 40° W., 57 lks. dist., marked $\frac{1}{4}$ S 33 B T.

- 41.00 Descend east slope.
- 52.00 Gulch, course N. 405 ft. below 28 ch. point; ascend west slope, 105 ft. to
- 54.50 Rocky spur, slopes NW.; descend NE. slope, 55 ft. to

66. South bdy. of Township 13 South, Range 27 East.

Chains.

61.00 Draw, course N.; continue along north slope.
 67.00 Spur slopes NE.; descend SE. slope, 130 ft. to
 74.00 Gulch, course NE. Ascend NW. slope, 105 ft. to cor.
 77.65 Trail, brs. N. and S.
 79.90 Set an iron post 3 ft. long, 3 ins. in diam., 15 ins. in
 the ground, on bedrock, supported by a mound of stone,
 for W C to the corner of secs. 3, 4, 33 and 34, marked
 on brass cap,

1914 on S. rim,
 W C E. of center,
 T 13 S in N.,
 T 14 S in S., and
 R 27 E in W. half;
 S 33 in NW.,
 S 34 in NE.,
 S 3 in SE., and
 S 4 in SW. quadrant; from which,

An oak, 16 ins. in diam., brs. N. $44\frac{1}{2}^{\circ}$ E., 97
 lks. dist., marked W C T 13 S R 27 E S 34 B T.
 An oak, 18 ins. in diam., brs. S. 38° E., 87 lks.
 dist., marked W C T 14 S R 27 E S 3 B T.
 An oak, 10 ins. in diam., brs. S. $6\frac{1}{2}^{\circ}$ W., 57 lks.
 dist., marked W C T 14 S R 27 E S 4 B T.
 An oak, 14 ins. in diam., brs. N. $50\frac{1}{2}^{\circ}$ W., 48 lks.
 dist., marked W C T 13 S R 27 E S 33 B T.

Note: At this cor., June 19, 1914, I set off $23^{\circ}26'$ N. on
 decl. arc; and at apparent noon, observe the sun on
 the meridian; the resulting lat. is $32^{\circ}15'$ N.

80.00 Point for sec. cor. falls on sloping granite rock, slopes
 NW.

Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering oak and juniper.
 Undergrowth, scattering scrub oak and cacti. June 19, 1914.

June 20, 1914: At 7h. 40m. a.m., l.m.t., I set off $32^{\circ}15'$ N. on
 the lat. arc; $23^{\circ}27'$ N. on the decl. arc; and determine a mer-
 idian with the solar at the cor. of secs. 2, 3, 34 and 35.
 Thence I run,
 East on a true line bet. secs. 3 & 34, from true point for cor.
 Through scattering timber and undergrowth. Ascend NW.
 slope, to

1.75 Spur slopes N.; descend E. slope, 180 ft. to
 9.00 Buckeye Canyon, course N.; ascend NW. slope, 390 ft.
 14.00 Old tram road brs. N. and S.
 18.80 Old incline road bed, brs. N. and S.; old cabin brs. 50 lks. S.
 Old mill brs. N., about 12.00 chs. dist.
 20.65 Old wagon road, brs. NE and SW.
 24.00 Spur slopes N.; descend NE. slope, 235 ft. to
 34.00 Gulch, course N.; ascend NW. slope, 25 ft. to
 37.00 Spur slopes NW.; descend E. slope, 25 ft. to
 38.00 Draw, course NW. Ascend W. slope, 360 ft.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,

1914 on S. rim,
 $\frac{1}{4}$ S 34 in N., and
 S 3 in S. half; from which

A cedar, 8 ins. in diam., brs. N. $41\frac{1}{2}^{\circ}$ E., 73 lks.
 dist., marked $\frac{1}{4}$ S 34 B T.
 An oak, 30 ins. in diam., brs. south 4 lks. dist.,
 marked $\frac{1}{4}$ S 3 B T.

42.00 Draw, course NW.; continue ascent of west slope.
 56.00 Ridge, brs. N. and S.; descend E. slope, 515 ft. to
 75.00 Canyon, course N.; ascend W. slope, 100 ft. to
 80.00 Draw, course NW., unsafe place for cor.
 Set witness cor. 45 lks. E. as described in notes of follow-
 ing mile.

Land, mountainous.
 Soil, rocky, 4th rate,
 Timber, scattering oak, juniper and cedar.
 Undergrowth, scattering scrub oak and cacti.
 June 19, 1914.

South boundary of Township 13 South, Range 27 East. 67.

Chains.

- June 20, 1914: At 7h. 40m., a.m., l.m.t., I set off $32^{\circ} 15'$ N. on the lat. arc; $23^{\circ} 27'$ N. on the decl. arc; and determine a meridian with the solar at the true point for the cor. of secs. 2, 3, 34 and 35.
- Thence I run,
East, on a true line, bet. secs. 2 and 35.
Through scattering timber and undergrowth. Ascend west slope, 360 ft.
- .45 Set an iron post 3 ft. long, 3 ins. in diam., 20 ins. in the ground, on bedrock, supported by a mound of stone for witness cor. to cor. of secs. 2, 3, 34 and 35, marked on brass cap,
1914 on S. rim,
W C W of center,
T 13 S in N.,
T 14 S in S., and
R 27 E in W. half;
S 34 in NW.,
S 35 in NE.,
S 2 in SE., and
S 3 in SW. quadrant; from which,
An oak, 12 ins. in diam., brs. N. $62\frac{1}{2}^{\circ}$ E., 46 lks. dist., marked W C T 13 S R 27 E S 35 B T.
An oak, 6 ins. in diam., brs. S 31° E., 99 lks. dist., marked W C T 14 S R 27 E S 2 B T.
An oak, 8 ins. in diam., brs. S $36\frac{1}{2}^{\circ}$ W., 97 lks. dist., marked W C T 14 S R 27 E S 3 B T.
An oak, 12 ins. in diam., brs. N. $16\frac{1}{2}^{\circ}$ W., 145 lks. dist., marked W C T 13 S R 27 E S 34 B T.
- 14.50 Spur slopes NW.; descend NE. slope, 120 ft. to
21.75 Draw, course N.; ascend NW. slope, 750 ft.
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground, on bedrock, supported by a mound of stone for $\frac{1}{4}$ sec. cor., marked on brass cap,
1914 on S. rim,
 $\frac{1}{4}$ S 35 on N., and
S 2 on S. half; from which,
An oak, 14 ins. in diam., brs. N. $32\frac{1}{2}^{\circ}$ E., 64 lks. dist., marked $\frac{1}{4}$ S 35 B T.
A juniper, 28 ins. in diam., brs. S $61\frac{3}{4}^{\circ}$ W., 41 lks. dist., marked $\frac{1}{4}$ S 2 B T.
- 46.00 Head of draw, course NW.; continue ascent.
64.00 Ridge, brs. N. and S.; descend NE. slope, 375 ft. to
80.00 Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the cor. of secs. 1, 2, 35 and 36, marked on brass cap,
1914 on S. rim,
T 13 S in N.,
T 14 S in S., and
R 27 E in W. half;
S 35 in NW.,
S 36 in NE.,
S 1 in SE., and
S 2 in SW. quadrant; from which,
An oak, 14 ins. in diam., brs. S 80° E., 107 lks. dist., marked T 14 S R 27 E S 1 B T.
- No other trees within limits. Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.
- Note: At this corner, June 20, 1914, I set off $23^{\circ} 27'$ N. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting latitude is $32^{\circ} 15'$ N.
- Land, mountainous.
Soil, rocky, 4th rate.
Timber, scattering oak and juniper.
Undergrowth, scattering on west 15 chs. dense scrub oak, hackberry and cacti on east 65 chs.

68. South boundary of Township 13 South, Range 27 East.

Chains.

East, on a true line, bet. secs. 1 and 36.
 Through scattering timber and dense undergrowth. Descend
 NE. slope, 225 ft.

1.00 Draw, course N. Continue descent.
 15.00 Gulch, course S. 70° E.; ascend SW. slope, 20 ft. to
 20.00 Spur slopes SE.; descend E. slope, 190 ft. to
 30.50 Gulch, course N. Ascend west slope, 40 ft. to
 32.60 Spur slopes N. Descend E. slope, 75 ft. to
 36.00 Draw, course N. Ascend NW. slope, 175 ft. to
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 36 on N., and
 S 1 on S. half; from which,
 An oak, 5 ins. in diam., brs. N. 67° W., 52 lks.
 dist., marked $\frac{1}{4}$ S 36 B T.
 An oak, 20 ins. in diam., brs. S. 36 $\frac{1}{2}$ ° W., 95 lks.
 dist., marked $\frac{1}{4}$ S 1 B T.

46.00 Spur slopes N.; descend NE. slope, 60 ft. to
 51.00 Head of draw, course N.; ascend NW. slope, 20 ft. to
 54.50 Spur slopes N.; descend NE. slope, 125 ft. to
 62.00 Draw, course N.; ascend NW. slope, 190 ft. to
 70.00 Spur slopes NE.; descend E. slope, 25 ft. to
 75.32 Intersect the west bdy. of Tp. 13 S., R. 28 E., N. 0° 54' W.,
 470 lks. dist. from the SW. cor., which is a cedar
 post, 4 ins. sq., 3 ft. protruding from a mound of stone,
 originally marked and witnessed for four townships, but
 changed by me to refer to T. 13 S., R. 28 E., as de-
 scribed in Book "N."

At point of intersection, I set an iron post, 3 ft. long,
 3 ins. in diam., 24 ins. in the ground, for the closing
 corner of Ts. 13 and 14 S., R. 27 E., marked on brass
 cap,
 1914 on S. rim, and as shown below

T 13 S	
S 36	S 31 R 28 E
C C	

S 1 R 27 E | S 6 T 14 S B T

raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high, west
 of cor. No trees within limits. Pits impracticable.

Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering oak and juniper.
 Undergrowth, dense scrub oak, catclaw and cacti.
 June 20, 1914.

West boundary of Township 13 South, Range 27 East.

July 2, 1914: Cloudy all day. From the cor. of Ts. 13 and
 14 S., Rs. 26 and 27 E. Lat. 32° 14' 51" N. Long. 109°
 37' 54" W. established by me, as hereinbefore described.,
 I run,
 North, bet. secs. 31 and 36.
 Through scattering timber and undergrowth. Descend steep
 rocky, broken N. slope, 240 ft. to

7.00 Polecat Canyon, course NW. Ascend SW. slope 85 ft. to
 15.00 Spur, slopes W. Descend NW. slope, 50 ft. to
 18.00 Draw, course W. Ascend SW. slope, 50 ft. to
 22.00 Spur slopes W. Descend NW. slope, 55 ft. to
 23.75 Draw, course W. Ascend SW. slope, 20 ft. to
 25.75 Spur slopes W. Descend NW. slope, 80 ft. to
 30.00 Draw, course W. Continue along rolling W. slope.
 39.00 Spur slopes W. Descend NW. slope, 50 ft.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in
 the ground, on bedrock, supported by a mound of stone,
 for $\frac{1}{4}$ sec. cor., marked on brass cap,

West boundary of Township 13 South, Range 27 East. 69.

Chains.

1914 on S rim,
 $\frac{1}{4}$ S 36 on W., and
 S 31 on E-half; from which,
 An oak, 10 ins. in diam., brs. S. 18° E., 28 lks.
 dist., marked $\frac{1}{4}$ S 31 B T.
 An oak 10 ins. in diam., brs. N. 10° W., 73 lks.
 dist., marked $\frac{1}{4}$ S 36 B T.

42.00 Draw, course W. Ascend SW. slope, 30 ft. to
 44.00 Spur slopes W. Descend NE. slope, 240 ft. to
 58.00 Draw, course W. Ascend SW. slope, 80 ft. to
 66.00 Spur slopes W. Descend NW. slope, 210 ft. to
 78.65 Gulch, course W. Ascend.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins.
 in the ground, for the cor. of secs. 25, 30, 31 and 36.
 marked on brass cap,
 1914 on S. rim,
 T 13 S in N. half;
 R 26 E S 25 in NW,
 R 27 E S 30 in NE,
 S 31 in SE., and
 S 36 in SW. quadrant; from which,
 An oak, 14 ins. in diam., brs. N. 40° E., 30
 lks. dist., marked T 13 S R 27 E S 30 B T.
 An oak, 10 ins. in diam., brs. S. 53 $\frac{1}{2}$ ° E., 47
 lks. dist., marked T 13 S R 27 E S 31 B T.
 An oak, 12 ins. in diam., brs. S. 67° W., 129 lks.
 dist., marked T 13 S R 26 E S 36 B T.
 An oak, 16 ins. in diam., brs. N. 81° W., 196 lks.
 dist., marked T 13 S R 26 E S 25 B T.

Land, mountainous.
 Soil, rocky, 4th rate.
 Timber, scattering oak, cedar and juniper.
 Undergrowth, dense scrub oak, catclaw and cacti.
 July 2 and 4, 1914.

July 4, 1914:
 North, bet. secs. 25 and 30.
 Through scattering timber and dense undergrowth.

1.65 Wagon road brs. NW and SE.
 2.00 Ascend SW slope.
 11.00 Draw, course W. Continue ascent.
 15.00 Spur slopes W., 100 ft. above cor.
 A. O. Carr's house brs. S. 60° W., about 12 chs. dist. Con-
 tinue along rolling west slope.
 28.15 Draw, course W. Prospect hole brs. E. about 5 chs. dist.
 Ascend.
 40.00 Set an iron ^{post} 3 ft. long, 1 in. in diam., 8 ins. in the
 ground, on bedrock, supported by a mound of stone,
 for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 25 on W., and
 S 30 on E-half; from which,
 An oak, 7 ins. in diam., brs. N. 86° E., 16 lks.
 dist., marked $\frac{1}{4}$ S 30 B T.
 An oak, 4 ins. in diam., brs. N. 80° W., 6 lks.
 dist., marked $\frac{1}{4}$ S 25 B T.

44.00 H. C. Huntzinger's house, brs. N. 57° W.
 Spur slopes W.; descend NW. slope, 250 ft. to
 54.00 Foot of mountain brs. E. and SW.; continue over rolling
 land.
 65.00 H. C. Huntzinger's house, brs. S. 45° W.
 77.15 Wash, 25 lks. wide, 4 ft. deep, course NW. Ascend.
 79.05 Wire fence, brs. NW and SE.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for the cor. of secs. 19, 24, 25 and 30,
 marked on brass cap,
 1914 on S rim,
 T 13 S in N. half;

76. West boundary of Township 13 South, Range 27 East.

Chains.

R 26 E S 24 in NW.,
 R 27 E S 19 in NE.,
 S 30 in SE., and
 S 25 in SW. quadrant; from which,
 A walnut, 24 ins. in diam., brs. S. $61\frac{1}{2}^\circ$ W., 190
 lks. dist., marked T 13 S R 26 E S 25 B T.
 A walnut, 12 ins. in diam., brs. N. 77° W., 185
 lks. dist., marked T 13 S R 26 E S 24 B T.

No other trees within limits; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.

Land, mountainous and rolling.

Soil, rocky, sandy loam and gumbo, gravelly, 1st to 4th rate.

Timber, scattering, juniper, cedar, sycamore and walnut. Undergrowth, dense catclaw, scrub oak and cacti.

North, bet. secs. 19 and 24.

Over rolling land, through dense undergrowth.

4.10

Wagon^{road} brs. NW and SE.

6.00

Ascend SW. slope, 60 ft. to

14.00

Spur slopes west; descend NW. slope, 30 ft. to

22.00

Draw, course W.; ascend S. slope, 50 ft. to

30.00

Spur slopes W.; descend NW. slope, 100 ft. to

37.00

Foot of mountain, brs. NE and SW. Continue over rolling land, drains W.

40.00

Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 24 on W., and
 S 19 on E. half;

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.

July 4, 1914.

July 3, 1914: At 6h. 50m. a.m., l.m.t., I set off $32^\circ 17'$
 N. on the lat. arc; $23^\circ 2'$ N. on the decl. arc; and de-
 termine a meridian with the solar at this $\frac{1}{4}$ sec. cor.

56.50

Wash, 20 lks. wide, 5 ft. deep, course W.

60.20

Wash, 20 lks. wide, 5 ft. deep, course W.

63.00

Gold Gulch Wash, 200 lks. wide, 18 ins. deep, course NE.

70.00

Wagon road, brs. NE. and SW.

80.00

Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for the cor. of secs. 13, 18, 19 and 24, marked
 on brass cap,

1914 on S. rim,
 T 13 S in N. half;
 R 26 E S 13 in NW.,
 R 27 E S 18 in NE.,
 S 19 in SE., and
 S 24 in SW. quadrant; from which,

An ash, 8 ins. in diam., brs. N. $57\frac{1}{2}^\circ$ E., 74 lks.
 dist., marked T 13 S R 27 E S 18 B T.

A walnut, 12 ins. in diam., brs. S. $72\frac{1}{4}^\circ$ E., 218
 lks. dist., marked T 13 S R 27 E S 19 B T.

No other trees within limits; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.

Land, rolling and mountainous.

Soil, rocky, gravelly, sandy loam and gumbo, 1st to 4th rate.

Timber, scattering ash, walnut, hackberry and sycamore along Gold Gulch Wash.

Undergrowth, dense mesquite, hackberry and catclaw.

West boundary of Township 13 South, Range 27 East, 71.

Chains.

North, bet. secs.13 and 18.
 Over gently rolling land, through dense undergrowth.
 3.50 Wagon road, brs.NE. and SW.
 40.00 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec.cor., marked on brass cap,
 1914 on S.rim,
 $\frac{1}{4}$ S 13 in W., and
 S 18 on E.half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W.of
 corner. Pits impracticable.
 41.00 Old wagon road, brs.NE. and SW.
 80.00 Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in
 the ground, for the cor.of secs. 7,12,13 and 18, marked
 on brass cap,
 1914 on S.rim,
 T 13 S in N. half;
 R 26 E S 12 in NW.,
 R 27 E S 7 in NE.,
 S 18 in SE., and
 S 13 in SW.quadrant;
 raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,W.
 of cor. Pits impracticable.
 Land, rolling.
 Soil, sandy loam and gumbo, gravelly, 1st and 2nd rate.
 No timber.
 Undergrowth, dense catclaw and mesquite.

North, bet. secs.7 and 12.
 Over rolling land, through scattering undergrowth.
 27.50 Wash, 20 lks.wide, 2 ft. deep, course NE.; ascend 60 ft.
 40.00 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec.cor., marked on brass cap,
 1914 on S.rim,
 $\frac{1}{4}$ S 12 on W., and
 S 7 on E.half;
 raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, west
 of corner. Pits impracticable.
 53.00 Gravelly ridge, brs. NE. and SW. Descend.
 71.50 Wash, 40 lks.wide, 1 ft. deep, course NE.; ascend.
 80.00 Set an iron post, 3 ft.long, 3 ins. in diam., 24 ins. in
 the ground, for the cor.of secs.1,6,7 and 12, marked
 on brass cap,
 1914 on S. rim,
 T 13 S in N.half;
 R 26 E S 1 in NW.,
 R 27 E S 6 in NE.,
 S 7 in SE., and
 S 12 in SW.quadrant;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high,W.of cor.
 Pits impracticable.
 Note: At this cor., July 3, 1914: I set off $23^{\circ} 00' N.$ on
 the decl.arc; and at apparent noon, observe the sun on
 the meridian; the resulting lat.is $32^{\circ} 19' N.$
 Land, rolling.
 Soil, sandy loam and gumbo, gravelly, 1st to 3rd rate.
 No timber.
 Undergrowth, scattering medquite and catclaw.

North, bet. secs.1 and 6.
 Over rolling land, through scattering undergrowth.
 11.00 Wagon road, brs.NE. and SW.
 19.00 Wash, 30 lks.wide, 2 ft.deep, course NE.
 28.00 Wash, 60 lks.wide, 1 ft. deep, course NE.
 40.00 Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in
 the ground, for $\frac{1}{4}$ sec.cor., marked on brass cap,
 1914 on S.rim,

72. West boundary of Township 13 South, Range 27 East.

Chains.

$\frac{1}{4}$ S 1 on W., and
 S 6 on E. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of
 corner. Pits impracticable.
 50.40 Old wagon road, brs. NW. and SE.
 77.68 Intersect the N. bdy. of the Tp., S. $89^{\circ} 57'$ E., 645 lks.
 dist., from the cor. of Ts. 12 S. Rs. 26 and 27 E.,
 which is a stone 12x10x10 ins. above ground, originally
 marked and witnessed for four townships, but changed
 by me to refer to Ts. 12 S., Rs. 26 and 27 E., as described
 in Book "N."
 At point of intersection, set an iron post 3 ft. long, 3 ins.
 in diam., 24 ins. in the ground, for the closing cor.
 of Ts. 13 S. Rs. 26 and 27 E., marked on brass cap,
 '1914 on S. rim, and as shown below:

T 12 S	
S 36	S 31
R 26 E	R 27 E
C C	
R 26 E	R 27 E
S 1	S 6
T 13 S	

 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, S of
 corner. Pits impracticable.
 Land, rolling.
 Soil, sandy loam and gumbo, gravelly, 1st to 3rd rate.
 No timber.
 Undergrowth, scattering mesquite and catclaw.
 July 3, 1914.

~~Completion of Survey of the West bdy. of Township 14 S. R. 20 E.~~

~~July 27, 1914: At 10h. 30m. a.m., l.m.t., I set off $32^{\circ} 11'$
 N. on the lat. arc; $19^{\circ} 19'$ N. on the decl. arc; and deter-
 mine a meridian with the solar at the cor. of secs. 24
 and 25, T14 S., R. 27 E. reestablished by me, as de-
 scribed in Book "O."~~

~~Thence I run,
 North, on east bdy. of sec. 24, T. 14 S., R. 27 E.
 Along rolling west slope, through scattering timber and
 undergrowth.~~

15.75 Rocky spur, slopes NW.; descend NE. slope, 700 ft.
 35.00 Draw, course NE. Continue descent.
 37.60 Draw, course NE. Continue descent.
 40.00 Gulch, course NW. True point for $\frac{1}{4}$ sec. cor. to sec. 24. Un-
 safe place to set post; ascend SW. slope, 20 ft. to
 40.50 Spur slopes NW. Set an iron post 3 ft. long, 1 in. in diam.,
 26 ins. in the ground, for witness cor. to $\frac{1}{4}$ sec. to sec.
 24, marked on brass cap,
 1914 on S. rim,
 W C S of center,
 $\frac{1}{4}$ S 24 on W., and
 S 19 on E. half; from which,
 An oak, 16 ins. in diam., brs. S 24° E., 38 lks.
 dist., marked $\frac{1}{4}$ S 19 E T.
 An oak, 7 ins. in diam., brs. S 12° W., 29 lks.
 dist., marked $\frac{1}{4}$ S 24 E T.
 Descend 20 ft. to
 41.90 Gulch, course west; ascend west slope, 150 ft. to
 60.00 Top of ascent.
 Note: At this point, July 27, 1914, I set off $19^{\circ} 18'$ N. on
 the decl. arc; and at apparent noon, observe the sun
 on the meridian; the resulting lat. is $32^{\circ} 12'$ N.
 Descend NW. slope, 325 ft.; enter dense undergrowth, brs.
 E. and W.
 71.50 Draw, course NW. Continue descent.

Completion of Survey of W. bdy. of Township 14 S., R. 28 E. 73

Chains.

July 27, 1914: At 10h. 30m. a.m., l.m.t., I set off 32°11' N. on the lat. arc; 19°19' N. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 24 and 25, T 14 S., R. 27 E., reestablished by me, as described in Book "0."

Thence I run, North, on east bdy. of sec. 24, T 14 S., R. 27 E. Over rolling west slope, through scattering timber and undergrowth.

- 15.75 Rocky spur, slopes NW.; descend NE. slope, 700 ft.
- 35.00 Draw, course NE. Continue descent.
- 37.60 Draw, course NE. Continue descent.
- 40.00 Gulch, course NW. True point for 1/4 sec. cor. to sec. 24. Unsafe place to set post; ascend SW. slope, 20 ft. to
- 40.50 Spur slopes NW. Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for witness cor. to the 1/4 sec. cor. to sec. 24, marked on brass cap,
 - 1914 on S. rim,
 - W C S of center,
 - 1/4 S 24 in W., and
 - S 19 in E. half; from which,
 - An oak, 16 ins. in diam., brs. S 24° E., 38 lks. dist. marked WC 1/4 S 19 B T.
 - An oak, 7 ins. in diam., brs. S 12° W., 29 lks. dist. marked WC S 24 B T.

Descend 20 ft. to

- 41.90 Gulch, course W. Ascend W. slope, 150 ft. to
 - 60.00 Top of ascent.
- Note: At this point, July 27, 1914, I set off 19° 18' N. on the decl. arc; and at apparent noon, observe the sun on the meridian; the resulting lat. is 32° 12' N.
- Descend NW. slope, 325 ft.; enter dense undergrowth, brs. E. and W.

- 71.50 Draw, course NW. Continue descent.
- 77.50 Gulch, course SW.; ascend SW. slope, 25 ft. to
- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 20 ins. in the ground, on bedrock, supported by a mound of stone, for the cor. of secs. 13 and 24, T 14 S R 27 E, marked on brass cap,
 - 1914 on S. rim,
 - T 14 S in N., and
 - S 18 S 19 R 28 E on E. half;
 - S 13 in NW., and
 - S 24 R 27 E in SW. quadrant; from which,
 - A juniper, 10 ins. in diam., brs. N. 6 1/2° W., 30 lks. dist., marked T 14 S R 27 E S 13 B T.
 - An oak, 7 ins. in diam., brs. S 35 1/4° W., 68 lks. dist., marked T 14 S R 27 E S 24 B T.

Land, mountainous. Soil, rocky, lime and granite formation, 4th rat. Timber, scattering oak, juniper and cedar. Undergrowth, south 60 chs. scattering; north 20 chs., dense scrub oak and catclaw.

North, on east bdy. of sec. 13, T. 14 S., R. 27 E. Ascend SW. slope, through scattering timber and dense undergrowth.

- 4.25 Draw, course SW.
- 10.00 Draw, course SW.; ascend S. slope, enter scattering undergrowth, brs. NE and SW.
- 16.75 Spur slopes west, 160 ft. above sec. cor.; descend north slope, 20 ft. to
- 18.75 Gulch, course W. Ascend S. slope, 230 ft. to
- 27.75 Spur, slopes SW. Descend W. slope, 50 ft. to
- 30.25 Draw, course W. Ascend SW slope, 60 ft. to
- 36.00 Spur slopes W. Descend NW. slope, 275 ft.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 22 ins. in the ground, on bedrock, supported by a mound of stone for the 1/4 sec. cor. to sec. 13, marked on brass cap,

74. Completion of survey of W. bdy. of Township 14 S., R. 28 E.

Chains.

1914 on S. rim,
 $\frac{1}{4}$ S 13 in W., and
 S 18 in E. half; from which,
 An oak, 12 ins. in diam., brs. N. $72\frac{1}{2}^\circ$ E., 167
 lks. dist., marked $\frac{1}{4}$ S 18 B T
 A juniper, 36 ins. in diam., brs. S. 57° W., 49
 lks. dist., marked $\frac{1}{4}$ S 13 B T. Continue desc.

44.50 Gulch, course NW. Ascend SW. slope, 50 ft. to
 54.00 Spur slopes SW. Descend N. slope.
 59.50 Draw, course NW. Descend W. slope.
 69.25 Gulch, course NW., 350 ft. below spur; ascend W. slope, 60
 ft. to
 73.50 Top of ascent; descend NW. slope, 140 ft. to
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for the cor. of secs. 12 and 13, T. 14 S., R.
 27 E., marked on brass cap,
 1914 on S. rim,
 T 14 S in N., and
 S 7, S 18 R 28 E in E. half;
 S 12 in NW., and
 S 13 R 27 E in SW quadrant; from which,
 An oak, 10 ins. in diam., brs. N. 51° W., 122
 lks. dist., marked T 14 S R 27 E S 12 B T.
 An oak, 16 ins. in diam., brs. S. 83° W., 65
 lks. dist., marked T 14 S R 27 E S 13 B T.

Land, mountainous.
 Soil, rocky, granite formation, 4th rat.
 Timber, scattering oak, juniper and cedar.
 Undergrowth, south 10 chs. dense; north 70 chs. scattering
 with patches of dense scrub oak, catclaw and mesqu.
 July 27, 1914.

July 28, 1914: At 8h. 20m. a.m., l.m.t., I set off 32°
 $13'$ N. on the lat. arc; $19^\circ 6\frac{1}{2}'$ N. on the decl. arc; and
 determine a meridian with the solar at the cor. of secs.
 12 and 13, T. 14 S., R. 27 E., described above.
 Thence I run,
 North, on E. bdy. of sec. 12, T. 14 S., R. 27 E.
 Descend N. slope, through scattering timber and undergrowth.

35.50 Gulch, course NW. Descend west slope.
 13.60 Draw, course NW. Continue descent.
 28.30 Foot of descent brs NE. and SW. 340 ft. below sec. cor.;
 continue over rocky land, slopes E.
 28.55 Wash, 45 lks. wide, 4 ft. deep, course NE.
 33.65 Wagon road, brs. NE. and SW.
 35.45 Wash, 30 lks. wide, 4 ft. deep, course NE.; ascend.
 35.75 Foot of ridge, brs. NE. and SW.; ascend east slope.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 22 ins. in
 the ground, on bedrock, supported by a mound of stone,
 for $\frac{1}{4}$ sec. cor. to sec. 12, marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 12 on W., and
 S 7 on E. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of
 corner. Pits impracticable.

50.00 Top of ascent, 160 ft. above 35.45 ch. point; descend
 NE. slope, 70 ft. to
 56.25 Gulch, course SE.; ascend south slope.
 65.00 Ascend W. slope.
 71.00 Ascend S. slope.
 80.00 460 ft. above gulch; set an iron post 3 ft. long, 3 ins.
 in diam., 10 ins. in the ground, on bedrock, supported
 by a mound of stone, for the cor. of secs. 1 and 12,
 T. 14 S., R. 27 E., marked on brass cap,
 1914 on S. rim,
 T 14 S in N., and
 S 6 S 7 R 28 E in E. half;
 S 1 in NW., and
 S 12 R 27 E in SW quadrant;

Completion of Survey of W.bdy. of Township 14 South, R. 28 E. 75

Chains.

raise a mound of stone 2 ft base, 1 1/2 ft. high, W. of cor. Pits impracticable. Land, mountainous. Soil, rocky, granite formation, 4th rate. Timber, scattering oak, juniper and cedar. Undergrowth, scattering with patches of dense scrub oak, catclaw and mesquite.

North, on east bdy. of sec. 1, T. 14 S., R. 27 E. Ascend south slope, through scattering timber and undergrowth.

- 1.00 Ascend W. slope.
12.75 Top of point on ridge, brs. NW. and SE., 135 ft. above sec. cor.; descend N. slope, 90 ft. to
22.00 Draw, course E.; ascend S. slope, 25 ft. to
25.00 Spur slopes E.; descend N. slope, 30 ft. to
27.75 Draw, course E. Ascend E. slope.
35.60 Draw, course SE.; ascend S. slope.
36.00 Spur slopes E., 30 ft. above 27.75 ch. point; descend NE. slope, 40 ft.
40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec. cor., to sec. 1, marked on brass cap,

1914 on S. rim, 1/4 S 1 in W., and S 6 on E. half; from which,

A juniper, 10 ins. in diam., brs. N. 58° E., 66 lks. dist., marked 1/4 S 6 B T.

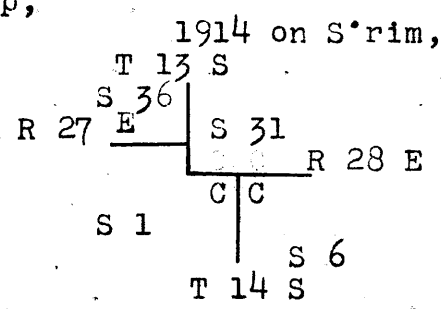
No other trees within limits; raise a mound of stone 2 ft. base, 1 1/2 ft. high, west of cor. Pits impracticable.

Note: At this cor. July 28, 1914, I set off 19° 4' N. on the decl. arc; and at apparent noon, observe the sun on the meridian; the resulting lat. is 32° 14 1/2' N.

- 40.25 Draw, course E. Ascend SE. slope.
43.00 Ascend E. slope.
48.00 Spur slopes E., 60 ft. above draw; descend NE. slope, 30 ft. to
51.00 Draw, course E. Ascend E. slope, 30 ft. to
53.00 Spur ridge, slopes E.; descend NE. slope, 100 ft. to
63.00 Draw, course NE. Ascend SE. slope, 60 ft. to
65.50 Spur, slopes E.; descend NE. slope, 50 ft. to
68.00 Draw, course SE. Ascend S. slope, 135 ft. to
73.50 Spur slopes E. Descend E. slope, 75 ft. to
75.50 Head of gulch, course NE.; ascend E. slope, 100 ft. to
77:39 Intersect the south bdy. of T. 13 S., R. 28 E., N. 89° 57' E., 444 lks. from the SW. cor. of T. 13 S., R. 28 E.,

which is a cedar post 4 ins sq., 2 ft. protruding from a mound of stone, originally marked and witnessed for four Tps., but changed by me to refer to T. 13 S., R. 28 E. only, as described in Book "N."

At point of intersection, set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the closing corner of T. 14 S., Rs. 27 and 28 E., marked on brass cap,



raise a mound of stone 2 ft. base, 1 1/2 ft. high, S. of cor. Pits impracticable.

Land, mountainous. Soil, rocky granite formation, 4th rate.

76. Completion of Survey of N. bdy. of T. 14 S., R. 28 E.

Chains.

Timber, scattering oak, juniper and cedar.
Undergrowth, scattering, with patches of dense scrub oak, catclaw and mesquite.

July 28, 1914.

Boundaries of Township 14 South, Range 28 East, (outside C B M R A.)

Latitudes, departures and closing errors.

Line designated.	True course.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
S bdy. of Tp.	S. 89° 58' W.	100.38		.06		100.38
	N. 89° 58' W.	40.00	.02			40.00
	N. 89° 57' W.	40.03	.03			40.03
	N. 89° 56' W.	39.73	.05			39.73
W. bdy. of Tp.	N. 0° 2' E.	37.32	37.32		.02	
	N. 0° 10' E.	78.40	78.40		.23	
	North.	357.39	357.39			
N. bdy. of Tp.	N. 89° 57' E.	34.33	.03		34.33	
	S. 89° 58' E.	120.02		.07	120.02	
	N. 89° 56' E.	200.28	.23		200.28	
	N. 89° 58' E.	40.14	.02		40.14	
	East,	40.12			40.12	
	S. 89° 56' E.	40.13		.05	40.13	
E. bdy. of Tp.	S. 65° 29' E.	2.68		1.11	2.44	
	South.	353.49		353.49		
N. bdy. CBMRA	West.	258.53				258.53
W. bdy. CBMRA	S. 0° 4' W.	39.00		39.00		.04
	S. 0° 14' E.	79.36		79.36	.32	
Convergency.					.40	
Totals,			473.49	473.14	478.43	478.71
			-473.14			478.43
Error in latitude,			0.35			
Error in departure,						0.28

Retracement of part of N. & E. bdrs. of T. 13 S., R. 31 E.

Oct. 19, 1914: Being unable to find the original cor. to Ts. 12 and 13 S., R. 31 E., and frac. Ts. 12 and 13 S., R. 32 E., I retrace Subdivisional lines, bet. secs. 1 and 2, 1 and 12, 2 and 11, and 2 and 3 of T. 13 S., R. 31 E., the east half of the N. bdy., and the N. 1/2 of the E bdy., of T. 13 S., R. 31 E. (Oct. 19, 20, 21, 22 and 23) before finally locating the original 1/4 sec. cors. on the E. and N. bdy. of sec. 1, T. 13 S., R. 31 E. I reestablish the lost cor. to Ts. 12 and 13 S., R. 31 E., and frac. Ts. 12 and 13 S., R. 32 E., as follows: Oct. 23, 1914.

40.00

From the original 1/4 sec. cor. on the east bdy. of sec. 1, T. 13 S., R. 31 E., which is a stone 6x10x8 ins. above ground, firmly set, marked 1/4 on W. face, with a mound of stone west of cor. I run,
North, on a random line, bet. secs. 1 and 6.
No corner found; set temp. corner for Ts. 12 and 13 S., R. 31 E., and frac. Ts. 12 and 13 S., R. 32 E.
Thence I run,
West, on a random line on N. bdy. of Tp. 13 S., R. 31 E., bet. secs. 1 and 36.

Retracement of part of N. and E. bdrs. of Township 13 S., R. 31 E. 77.

Chains.

41.14 Fall 43 lks. north of the original $\frac{1}{4}$ sec. cor., which is a stone 8x9x7 ins. above ground, firmly set, marked $\frac{1}{4}$ on N. face, with a mound of stone north of cor.
 Thence I run,
 N. $89^{\circ} 24'$ E. on North boundary of Tp. 13 S., R. 31 E., onto true line on east half mile, bet. secs. 1 and 36.
 Over rolling land, through dense undergrowth.

16.50 Foot of mountain, brs. NW. and SE.; ascend SW. slope.
 24.20 Draw, course SW.
 37.20 Draw, course SW.
 37.90 Foot of cliff, a black fine grained igneous rock, 80 ft. high, brs. NW. and SE.
 39.50 Top of cliff; ascend west slope.
 40.00 400 ft. above foot of mountain, set an iron post 3 ft. long, 3 ins. in diam., on bed rock, supported by a mound of stone, for the reestablished corner of Ts. 12 and 13 S., R. 31 E. and frac. Ts. 12 and 13 S., R. 32 E., marked on brass cap,
 1914 on S. rim,
 T 12 S in N.,
 R 32 E in E.,
 T 13 S in S., and
 R 31 E in W. half;
 S 36 in NW.,
 S 31 in NE.,
 S 6 in SE., and
 S 1 in SW. quadrant;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, S. of cor.
 Pits impracticable.
 Thence I run,
 S. $1^{\circ} 38'$ E. on E. bdy. of T. 13 S., R. 31 E. on a true line, on north half mile, bet. secs. 1 and 6.
 Ascend west slope, through scattering undergrowth.

4.50 Top of ascent, 40 ft. above cor.; descend SW. slope.
 4.75 Top of cliff, brs. NW. and SE., 90 ft. high.
 5.10 Foot of cliff.
 18.40 Draw, course SW.
 23.00 Spur slopes SW., 320 ft. below 4.30 ch. point; continue over rolling land, slopes W.
 31.20 Wash, 10 lks. wide, 2 ft. deep, course W.
 40.00 The original $\frac{1}{4}$ sec. cor. bet. secs. 1 and 6, hereinbefore described.
 Land, rolling and mountainous.
 Soil, stony, 4th rate.
 No timber.
 Undergrowth, scattering, with patches of dense mesquit, catclaw and greasewood.

Oct. 23, 1914.

Survey of West bdy. of frac. Township 12 South, Range 32 East.

Survey commenced Oct. 23, 1914, and executed with a Young and Sons' Light Mountain Transit, No. 8588, hereinbefore described.
 At 10h. 30m. a.m., lat., I set off $32^{\circ} 20'$ N. on the lat. arc; $11^{\circ} 16\frac{1}{2}'$ S. on the decl. arc; and determine with the solar a meridian at the reestablished corner of Ts. 12 and 13 S., R. 31 E. and frac. Ts. 12 and 13 S., R. 32 E. at $32^{\circ} 20' 04''$ N.; long. $109^{\circ} 07' 05''$ W. described above.
 Thence I run,
 North, bet. secs. 31 and 36.
 Along steep west slope, through scattering undergrowth.

2.00 Ascend SW. slope,
 7.65 Spur slopes NW., 130 ft. above Tp. cor.; descend NW. slope.
 33.55 Spur slopes NW.; descend NE. slope.
 40.00 Set an iron post 3 ft. long 1 in. in diam., 14 ins. in the ground, on bedrock, supported by a mound of stone

78. West bdy. of frac. Township 12 South, Range 32 East.

Chains.

for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 36 on W., and
 S 31 in E. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.
 Pits impracticable.

44.00 Foot of mountain brs. W. and SE., 375 ft. below 7.65 chain
 point; continue over rolling land; enter dense under-
 growth, brs. NW. and SE.

45.75 Wash, 105 lks. wide, 2 ft. deep, course NW.

64.00 Wash, 15 lks. wide, 30 ins. deep, course NW.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in
 the ground, for the cor. of secs. 25, 30, 31 and 36, marked
 on brass cap,
 1914 on S. rim,
 T 12 S in N.,
 R 31 E in W., and
 R 32 E in E. half;
 S 25 in NW.,
 S 30 in NE.,
 S 31 in SE., and
 S 36 in SW. quadrant;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of
 corner. Pits impracticable.

Note: At this corner, Oct. 23, 1914; I set off $11^{\circ}19'S$.
 on the decl. arc; and at apparent noon, observe the sun
 on the meridian; the resulting lat. is $32^{\circ}21'N$.

Land, mountainous and rolling.
 Soil, rocky, igneous formation, 3rd and 4th rate,
 No timber.
 Undergrowth, south 44 chs., scattering; north 36 chs.
 dense mesquite, catclaw and greasewood.

North, bet. secs. 25 and 30.
 Over rolling land, through dense undergrowth.

.50 Wash, 6 lks. wide, 2 ft. deep, course SW.

3.60 Dim wagon road, brs. NE. and SW.

13.50 Wash, 40 lks. wide, 2 ft. deep, course SW.

22.00 Enter scattering undergrowth, brs. NE. and SW.; ascend
 SE. slope, 60 ft. to

26.00 Spur slopes SW. Continue along rolling west slope; ascend-
 ing.

29.30 Draw, course west; continue ascent.

34.95 Draw, course SW. Continue ascent.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 14 ins. in
 the ground, on bedrock, supported by a mound of stone
 for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 25 on W.; and
 S 30 on E. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W of
 corner. Pits impracticable.

44.50 Head of draw, course SW., 75 ft. above 26 ch. point; ascend
 south slope.

51.15 Foot of cliff, a reddish igneous rock, 125 ft. high, brs.
 NW. and E.

53.80 Top of cliff.

58.80 Ridge, brs. E. and W., 250 ft. above 44.50 ch. point; descend
 NW. slope, to

64.00 Head of draw, course NE.; descend E. slope.

74.00 Spur slopes E.; descend NE. slope.

80.00 200 ft. below ridge; set an iron post 3 ft. long, 3 ins.
 in diam., 4 ins. in the ground, on bedrock, supported
 by a mound of stone for the cor. of secs. 19, 24, 25 and
 30, marked on brass cap,

West bdy. of frac. Township 12 South, Range 32 East. 79.

Chains,

1914 on S rim,
T 12 S in N.,
R 31 E in W., and
R 32 E in E. half;
S 24 in NW.,
S 19 in NE.,
S 30 in SE., and
S 25 in SW. quadrant;

raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.

Land, rolling and mountainous.

Soil, rocky igneous formation, 3rd and 4th rate, No timber.

Undergrowth, south 22 chs., dense. North 58 chs. scattering, with patches of dense mesquite, catclaw and greasewood.

North, bet. secs. 19 and 24.

Through scattering undergrowth. Descend NE. slope, 200 ft to

14.00
28.00
39.00
40.00

Gulch, course NW. Ascend SW. slope, 110 ft. to

Spur slopes west; descend NW. slope.

Spur slopes NW.; descend NE. slope.

Set an iron post 3 ft. long, 1 in. in diam., 14 ins. in the ground, on bedrock, marked on brass cap,

1914 on S rim,
1/4 S 24 on N., and
S 19 in E. half;

raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of cor. Pits impracticable.

52.00

Foot of mountain, brs. E. and W., 200 ft. below 28 ch. point; continue over rolling land; enter dense undergrowth, brs. E and W.

52.75

Wash, 110 lks. wide, 2 ft. deep, course W.

76.65

Wash, 35 lks. wide, 2 ft. deep, course SW.

80.00

Set an iron post, 3 ft. long, 3 ins. in diam., 14 ins. in the ground, on hardpan, supported by a mound of stone for the cor. of secs. 13, 18, 19 and 24, marked on brass cap,

1914 on S rim,
T 12 S in N.,
R 31 E in W., and
R 32 E in E. half;
S 13 in NW.,
S 18 in NE.,
S 19 in SE., and
S 24 in SW. quadrant;

raise a mound of stone 2 ft. base, 1 1/2 ft. high, west of corner. Pits impracticable.

Land, mountainous and rolling.

Soil, rocky, igneous formation, 3rd and 4th rate.

No timber.

Undergrowth, south 52 chs. dense; north 28 chs. scattering. mesquite, catclaw and greasewood.

Oct. 23, 1914.

Oct. 24, 1914: At 8h. a.m., l.m.t., I set off 32° 22 1/2' N. on the lat. arc; 11° 34 1/2' S. on the decl. arc; and determine with the solar a meridian at the cor. of secs. 13, 18, 19 and 24.

Thence I run,

North, bet. secs. 13 and 18.

Over rolling land, through dense undergrowth.

22.55

Wagon road, brs. NE. and SW.

38.60

Wash, 30 lks. wide, 2 ft. deep, course W.

40.00

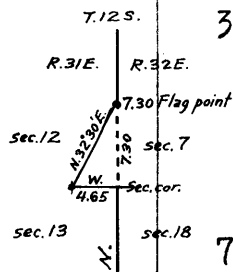
Set an iron post, 3 ft. long, 1 in. in diam., 20 ins. in the ground, on bedrock, supported by a mound of stone for 1/4 sec. cor., marked on brass cap,

80. West bdy. of frac. Township 12 South, Range 32 East.

Chains.

1914 on S. rim,
 1/4 S 13 on W., and
 S 18 in E. half;
 raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of
 corner. Pits impracticable.
 59.75 Wash, 40 lks. wide, 2 ft. deep, course NW.
 74.30 Wash, 20 lks. wide, 2 ft. deep, course SW.
 74.50 Foot of mountain, brs. E. and W.; ascend S. slope, 60 ft. to
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 15 ins. in
 the ground, on bedrock, supported by a mound of stone
 for the cor. of secs. 7, 12, 13 and 18, marked on brass
 cap,

1914 on S. rim,
 T 12 S in N.,
 R 31 E in W., and
 R 32 E in E. half;
 S 12 in NW.,
 S 7 in NE.,
 S 18 in SE., and
 S 13 in SW. quadrant;
 raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of
 corner. Pits impracticable.
 Land, rolling and mountainous.
 Soil, stony, igneous formation, 3rd and 4th rate.
 No timber.
 Undergrowth, dense mesquite, catclaw, and greasewood.



North, bet. secs. 7 and 12.
 Ascend S. slope, through scattering undergrowth.
 3.40 Foot of cliffs, 250 ft. high, brs. E. and W. Impossible to
 chain over; therefore, triangulate as follows:
 Set a flag on line on top of cliffs, and from the cor.
 of secs. 7, 12, 13 and 18, I lay off a base line, west
 4.65 chs. to a point from which the flag, brs. N. 32°
 30' E.; therefore, the distance from sec. cor. to flag
 = tang. 57° 30' x 4.65 = 7.30 chs.
 7.30 Flag point on hill above cliffs; thence chain measurement
 S. 50° lks. to
 6.80 Top of cliff; ascend S. slope; thence by chain, north, con-
 tinuing mile measurement.
 10.00 Ascend SW slope.
 14.00 Spur slopes west, 375 ft. above cor.; descend NW slope.
 14.81 Instrument point from which I take stadia measurement
 across head of cliffy gulch, course SW. about 100 ft.
 deep. Rod reading 3.370 ft., Ratio 1 ft. = 2.00 chs.
 Focal constant, 1.025 ft. Vertical angle plus 10° 10'.
 The distance to rod is therefore, 3.370 x 2 x .9688
 plus .016 = 6.54 chs., which added to 14.81 chs. =
 21.35 Rod point on rocky ridge, brs. E. and W., 75 ft. above 14
 chain point; descend rocky cliffy N. slope, 335 ft. to
 37.25 Foot of descent; thence over rolling west slope.
 40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in
 the ground, for 1/4 sec. cor., marked on brass cap,
 1914 on S. rim,
 1/4 S 12 on W., and
 S 7 on E. half;
 raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of
 corner. Pits impracticable.
 45.00 Draw, course SW. Ascend S. slope, 270 ft. to
 55.65 Rocky spur, slopes SE.; descend NE slope, 140 ft. to
 64.20 Head of draw; course SE.; ascend S. slope, 40 ft. to
 70.80 Ridge, brs. E. and W.; descend N. slope, 50 ft. to
 80.00 Set an iron post 3 ft. long, 3 ins. in diam., 18 ins.
 in the ground, on bedrock, supported by a mound of
 stone for the cor. of secs. 1, 6, 7 and 12, marked on
 brass cap,

1914 on S. rim,
 T 12 S in N.,
 R 31 E in W., and

West boundary of frac. Township 12 South, Range 32 East. 81.

Chains.

R 32 E in E. half;
 S 1 in NW.,
 S 6 in NE.,
 S 7 in SE.; and
 S 12 in SW. quadrant;

raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, west of corner. Pits impracticable.

Land, mountainous.

Soil, rocky, igneous formation, 3rd and 4th rate,

Timber, scattering oak and cedar.

Undergrowth, scattering, with patches of dense scrub oak, mesquite and catclaw.

Note: Raining at noon, rendering observation for latitude impossible.

October 24, 1914.

Oct. 26, 1914. At 8h. a.m., l.m.t., I set off $32^{\circ}24\frac{1}{2}'$ N. on the lat. arc; $12^{\circ}16'$ S. on the decl. arc; and determine with the solar a meridian at the cor. of secs. 1, 6, 7 and 12.

Thence I run,

North, bet. secs. 1 and 6.

Through scattering undergrowth. Descend N. slope, 20 ft. to

4.00 Draw, course SW. Ascend S. slope, 135 ft. to

11.45 Spur slopes west; descend NW. slope, 100 ft. to

20.00 Foot of descent; continue over rolling land, slopes W.

30.10 Draw, course SW.

40.00 Set an iron post, 3 ft. long, lin. in diam., 4 ins. in the ground, on hardpan, supported by a mound of stone, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 1 on W., and
 S 6 on E. half;

raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.

54.50 Draw, course SW. Ascend SW. slope, 270 ft. to

69.30 Rocky ridge, brs. NW. and SE.; descend NE. slope, 200 ft. to

80.00 Set an iron post 3 ft. long, 3 ins. in diam., 15 ins. in the ground, on bedrock, supported by a mound of stone for the cor. of Ts. 11 and 12 S., R. 31 E. and frac. Ts. 11 and 12 S., R. 32 E., marked on brass cap,

1914 on S. rim,

T 11 S in N.,

R 32 E in E.,

T 12 S in S., and

R 31 E in W. half;

S 36 in NW.,

S 31 in NE.,

S 6 in SE., and

S 1 in SW. quadrant; from which,

An oak, 8 ins. in diam., brs. S. $68\frac{3}{4}^{\circ}$ E., 60 lks. dist., marked T 12 S R 32 E S 6 B T.

A cedar, 10 ins. in diam., brs. S. $17\frac{1}{4}^{\circ}$ W., 99 lks. dist., marked T 12 S R 31 E S 1 B T.

No other trees within limits. Raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, south of cor. Pits impracticable.

The magnetic decl. of the true meridian at 10h. a.m., l.m.t. at this cor. is $13^{\circ}35'$ E.

Land, rolling and mountainous.

Soil, rocky, igneous formation, 3rd and 4th rate.

Timber, scattering oak and cedar.

Undergrowth, scattering, with patches of dense scrub oak, mesquite and catclaw.

Oct. 26, 1914.

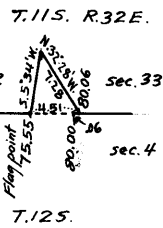
82 North boundary of frac. Township 12 South, Range 32 East.

Chains.	
	Oct. 26, 1914.
	From the cor. of Ts. 11 and 12 S., R. 31 E., and frac. Ts. 11 and 12 S., R. 32 E. Lat. $32^{\circ} 25' 17''$ N.; long. $109^{\circ} 07' 05''$ W., described above I run,
	East, on true line, bet. secs. 6 and 31.
	Along steep rocky north slope, through scattering timber and undergrowth. Ascend 70 ft. to
5.10	Rocky point slopes N. Descend NE. slope, 50 ft. to
9.00	Canyon, course NW.; ascend SW. slope, 20 ft. to
12.00	Top of ascent; descend SE. slope, 6 ft. to
14.00	Canyon, course SW.; ascend N. slope, 50 ft. to
21.09	Top of ascent; descend NE. slope, 15 ft. to
23.50	Canyon, course NW.; ascend rocky cliffy W. slope, impossible to chain over; therefore, I return on line to
21.09	Instrument point for stadia measurement over cliffs. Rod reading, 9.687 ft. Ratio 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Vertical angle plus $27^{\circ} 16'$; the distance to rod is therefore, $9.687 \times 2 \times .7901$ plus $.016 = 15.32$ chs., which added to 21.00 chs. =
36.41	Rod point; ascend W. slope.
36.45	Rocky spur, slopes SW., 520 ft. above 21.09 ch. point; continue along broken cliffy S. slope, Ascend 20 ft. to
37.51	Top of cliff, brs. NE. and SW.
38.00	Foot of cliffs, continue over broken S. slope.
39.85	Foot of cliffs, 40 ft. high, brs. NW. and SE. As point for $\frac{1}{4}$ sec. cor. is inaccessible, set an iron post, 3 ft. long, 1 in. in diam., 20 ins. in the ground, on bedrock, supported by a mound of stone for witness cor. to the $\frac{1}{4}$ sec. cor., marked on brass cap, 1914 on S. rim, W C E of center, $\frac{1}{4}$ S 31 on N., and S 6 on S. half; raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, 2 ft. S. of cor. Impracticable to build mound north on account of cliff; pits impracticable. Impossible to chain any farther on account of cliffs; therefore, return on line to
37.51	Instrument point for stadia measurement over cliffs. Rod reading, 5.954 ft. Ratio, 1 ft. = 2.00 chs. Focal constant, 1.025 ft. Vertical angle plus $8^{\circ} 8'$; the distance to rod is therefore, $5.954 \times 2 \times .9800$ plus $.016 = 11.68$ chs., which added to 37.51 chs. =
49.19	Rod point on top of cliffs; ascend SW. slope.
50.20	Ridge, brs. NW. and SE., 140 ft. above 37.51 ch. point; descend NE. slope, 350 ft. to
80.00	Set an iron post, 3 ft. long, 3 ins. in diam., 6 ins. in the ground, on bedrock, supported by a mound of stone, for the cor. of secs. 5, 6, 31 and 32, marked on brass cap, 1914 on S. rim, T 11 S in N., R 32 E in W., and T 12 S in S. half; S 31 in NW., S 32 in NE., S 5 in SE., and S 6 in SW. quadrant; raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of corner. Pits impracticable.
	Note; At this corner Oct. 26, 1914, I set off $12^{\circ} 20\frac{1}{2}'$ S. on the decl. arc; and at apparent noon, observe the sun on the meridian; the resulting lat. is $32^{\circ} 25'$ N.
	Land, mountainous.
	Soil, rocky, igneous formation, 4th rate.
	Timber, scattering oak and cedar.
	Undergrowth, scattering, with patches of dense scrub oak, mesquite and catclaw.

North bdy. of frac. Township 12 South. Range 32 East. 83.

Chains.

East, bet. secs. 5 and 32.
 Through scattering timber and undergrowth. Descend NE slope, 20 ft. to
 2.00 Foot of descent; continue along rolling north slope.
 8.25 Draw, course NW.
 9.40 Dim wagon road brs. NW. and SE.
 12.70 Draw, course NW.; ascend SW. slope, 250 ft. to
 29.00 Spur slopes S.; descend SE. slope, 50 ft. to
 31.60 Foot of descent; thence over rolling south slope.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 14 ins. in the ground, on bedrock, supported by a mound of stone, for $\frac{1}{4}$ sec. cor., marked on brass cap,
 1914 on S. rim,
 $\frac{1}{4}$ S 32 on N., and
 S 5 on S half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.
 41.25 Draw, course S. Ascend SW slope.
 68.24 Foot of lava cliff, 25 ft. high, brs. N. and S.
 68.50 Top of cliff; ascend NW. slope.
 70.00 Spur ridge, slopes NW.; ascend rocky cliffy N. slope.
 75.55 675 ft. above 41.25 chain point. Top of lava cliff, 210 ft. high, brs. N. and S. North end of this cliff is about 2 chs. north. As it is impossible to chain over this cliff, I leave flag at this point, and triangulate as follows:
 From a point on line east of flag, I measure a base line N. $32^{\circ} 28' W.$, 7.28 chs. to a point, whence the flag brs. S. $5^{\circ} 34' W.$; therefore, the distance on line = $\frac{\text{side } 38^{\circ} 2' \times 7.28}{\text{side } 84^{\circ} 26'}$ = 4.51 chs., which added to 75.55 chs. =
 80.06 Point for triangulation. Thence I return by chain measurement, west 6 lks. to
 80.00 320 ft. below flag on top of cliff, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for the corner of secs. 4, 5, 32 and 33, marked on brass cap,
 1914 on S. rim,
 T 11 S in N.,
 R 32 E in W., and
 T 12 S in S. half;
 S 32 in NW.
 S 33 in NE.,
 S 4 in SE., and
 S 5 in SW. quadrant; from which,
 A cedar, 10 ins. in diam., brs. S. $26\frac{1}{2}^{\circ} E.$, 177 lks. dist., marked T 12 S R 32 E S 4 B T.
 A cedar, 12 ins. in diam., brs. N. $69\frac{1}{2}^{\circ} W.$, 169 lks. dist., marked T 11 S R 32 E S 32 B T.
 No other trees within limits, Raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, west of cor. Pits impracticable.
 Land, mountainous.
 Soil, rocky lava formation, 4th rafe.
 Timber, scattering oak and cedar.
 Undergrowth, scattering, with patches of dense scrub oak, mesquite and catclaw.



Oct. 26, 1914.

Oct. 31, 1914.
 East, bet. secs. 4 and 33.
 Through scattering timber and undergrowth. Descend NE slope, 375 ft.
 10.75 Water tunnel brs. S. about 3 chs. dist.
 11.75 Draw, course NE. Ascend NW. slope, 50 ft. to
 16.10 Spur slopes NE.; descend NE. slope.

84. North bdy. of frac. Township 12 South, Range 32 East,

Chains.

- 17.00 Wire fence brs. NE. and SW.
 23.10 Draw, course NE. Continue descent.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1914 on S. rim, $\frac{1}{4}$ S 33 on N., and S 4 on S. half; from which,
 A cedar, 7 ins. in diam., brs. N. $87\frac{1}{2}^{\circ}$ E., 114 lks. dist., marked $\frac{1}{4}$ S 33 B T.
 A cedar, 6 ins. in diam., brs. S. $16\frac{1}{2}^{\circ}$ E., 114 lks. dist., marked $\frac{1}{4}$ S 4 B T.
 47.50 Draw, course SE., 435 ft. below spur; ascend SW. slope, 15 ft. to
 52.00 Top of ascent; descend SE. slope/
 70.50 Foot of mountain, brs. NE. and SW.; continue over rolling land. Wash, 20 lks. wide, 3 ft. deep, course NE.
 72.00 Wash, course NE., 15 lks. wide, 2 ft. deep.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the cor. of secs. 3, 4, 33 and 34, marked on brass cap,
 1914 on S. rim,
 T 11 S in N.,
 R 32 E in W., and
 T 12 S in S. half;
 S 33 in NW.,
 S 34 in NE.,
 S 3 in SE., and
 S 4 in SW. quadrant;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, west of cor. Pits impracticable.
 Land, rolling and mountainous.
 Soil, rocky, igneous formation, 3rd and 4th rate
 Timber, scattering oak and cedar.
 Undergrowth, scattering, with patches of dense scrub oak, mesquite and catclaw.
 Oct. 31, 1914.

Nov. 2, 1914:

- East, bet. secs. 3 and 34.
 40.00 Over rolling land, through scattering undergrowth.
 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1914 on S. rim, $\frac{1}{4}$ S 34 on N., and S 3 in S. half;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high N. of cor. Pits impracticable.
 Note: At this cor., Nov. 2, 1914, I set off $14^{\circ}39\frac{1}{2}'$ S. on the decl. arc; and at apparent noon, observe the sun on the meridian; the resulting lat. is $32^{\circ}25\frac{1}{2}'$ N.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for the cor. of secs. 2, 3, 34 and 35, marked on brass cap,
 1914 on S. rim,
 T 11 S in N.,
 R 32 E in W., and
 T 12 S in S. half;
 S 34 in NW.,
 S 35 in NE.,
 S 2 in SE., and
 S 3 in SW. quadrant;
 raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor. Pits impracticable.
 Land, gently rolling.
 Soil, sandy loam, gumbo, gravelly, 2nd and 3rd rate.
 No timber.
 Undergrowth, scattering with patches of dense mesquite and catclaw.

North boundary of frac. Township 12 South, Range 32 East.

Chains

East, bet. frac. secs. 2 and 35.
 Over rolling land, through scattering undergrowth.
 5.10 Wagon road, brs. NE. and SW.
 10.60 Wash, 20 lks. wide, 1 ft. deep, course NE.
 11.80 Corner of wire fence, about 150 lks. south; fence brs. SW. and SE.
 14.40 Wash, 35 lks. wide, 3 ft. deep, course NE.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap, 1914 on S. rim, $\frac{1}{4}$ S 35 on N., and S 2 on S. half; raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of corner. Pits impracticable.
 41.82 Intersect the east bdy. of Arizona, 8.57 chs. south of the 315 mile cor., which is a stone 14x14x12 ins. above ground, firmly set, marked 315 on N., N M on E., 32 W E on S., and Ariz. on W. face.
 At point of intersection, set an iron post, 3 ft. long, 3 in. in diam., 24 ins. in the ground, for closing cor. of frac. Ts. 11 and 12 S. R. 32 E., marked on brass cap, 1914 on S. rim, C C E of center, R 32 E in W., and N M in E. half; T 11 S S 35 in NW., and T 12 S S 2 in SW. quadrant; raise a mound of stone 3 ft. base, 2 ft. high, west of corner. Pits impracticable.
 Land, gently rolling.
 Soil, sandy loam, gumbo, gravelly, 2nd and 3rd rate.
 No timber.
 Undergrowth, scattering, with patches of dense mesquite, and catclaw.

Nov. 2, 1914.

 Part of the S. bdy. of frac. Township 12 South, Range 32 E.

Oct. 27, 1914: At 8h. 30m. a. m., l. m. t., I set off 32° 20' N. on the lat. arc; 12° 37 $\frac{1}{2}$ ' S. on the decl. arc; and determine a meridian with the solar at the cor. of Ts. 12 and 13 S., R. 31 E., and frac. Ts. 12 and 13 S., R. 32 E. reestablished by me, as hereinbefore described,
 Thence I run,
 East, on south bdy. of frac. Township 12 South, Range 32 East, bet. secs. 6 and 31.
 Through scattering timber and undergrowth.
 Ascend west slope, 75 ft. to

Part of the South bdy. of Frae. T. 12 S., R. 32 E.

Chains.

3.84 Spur ridge, slopes NW., descend NE. slope, 35 ft. to NW. corner.

10.00 Head of draw, course NW., ascend NW. slope, ascend NW. slope.

15.55 Spur, slopes NW., continue ascending NW. slope.

19.75 Foot of cliff, 25 ft. high, bears NW. and SE.

19.90 Top of cliff, continue ascending NW. slope.

26.10 Rocky point, slopes N., 325 ft. above 10 ch. point, descend broken rocky N. slope.

40.00 Set an iron post 3 ft. long, 1 in. in diam., 12 ins. in the ground, on bed rock, supported by a mound of stone, for $\frac{1}{4}$ sec. cor., marked on brass cap 1914 on S. rim $\frac{1}{4}$ S31 on N. and S6 on S. half; from which a cedar 18 ins. in diam., bears N. 32° E., 5 lks. dist., marked $\frac{1}{4}$ S 31 B T .
A cedar 14 ins. in diam., bears S. 27 $\frac{1}{2}$ ° E., 46 lks. dist., marked $\frac{1}{4}$ S 6 B T .

53.00 Draw, course N.

75.00 Gulch, course NW., 500 ft. below rocky point, ascend W. slope, 25 ft. to

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 3 ins. in ground, 24 ins. in the ground, for the cor. of secs. 5, 6, 31 and 32, marked on brass cap 1914 on S. rim
T12S in N.,
R32E in W. and
T13S in S. half;
S31 in NW.,
S32 in NE.,
S5 in SE. and
S6 in SW. quadrant; raise a mound of stone 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor., pits impracticable.
Land, mountainous.
Soil, rocky, igneous formation, 4th bate.
Timber, scattering oak and cedar.
Undergrowth, scattering with patches of dense scrub oak, mesquite and catclaw.

Oct. 27, 1914.

William B. Kimmel

U.S. Surveyor

Est

47/129

CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability, William B. Kimmel, U. S. Surveyor, during the periods and in the capacities stated opposite our several signatures, in surveying all those parts or portions of the W. & S. bdrs. of frac. T.4 N., R.32 E., N. & W. bdrs. of T.5 S., R.29 E., N. bdy. of T.5 S., R.28 E., E. & N. bdrs. of frac. T.4 S., R.28 E., N. & E. bdrs. of T.3 S., R.30 E., S. bdy. of T.1 S., R.29 E., E. & S. bdrs. of frac. T.1 S., R.28 E., N. & E. bdrs. of T.1 N., R.28 E., N. bdy. of frac. T.8 S., R.32 E., E. & N. bdrs. of T.8 S., R.28 E., S. & W. bdrs. of T.13 S., R.27 E., W. bdy. of T.14 S., R.28 E., W. N. & S. bdrs. of frac. T.12 S., R.32 E., and N. & E. bdrs. of T.13 S., R.31 E. of the G. & S. R. Base & Meridian in the State of Arizona, which are represented in the foregoing field notes as having been executed 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 executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
<i>O O Bray</i>	Sept. 9, 1913.	Nov. 19, 1913.	Axman.
<i>L. B. Mason</i>	Aug. 30, 1913.	Dec. 23, 1913.	Flagman.
<i>Geo. S. ...</i>	Dec. 22, 1913.	Jan. 10, 1914.	Flagman.
<i>O O Bray</i>	Dec. 24, 1913.	April 22, 1914.	Moundman.
<i>S. H. ...</i>	Aug. 27, 1913.	July 3, 1914.	Chainman.
<i>Abney ...</i>	Sept. 1, 1913.	Nov. 4, 1914.	Moundman, Chainman.
<i>L. E. ...</i>	Jan. 21, 1914.	June 13, 1914.	Flagman, Moundman.
<i>W. R. ...</i>	Sept. 2, 1914.	Oct. 17, 1914.	Axman, Flagman.
<i>A. L. ...</i>	July 7, 1914.	Nov. 4, 1914.	Moundman.
<i>S. H. ...</i>	July 7, 1914.	Oct. 17, 1914.	Flagman.
<i>J. J. ...</i>	May 5, 1914.	Nov. 4, 1914.	Flagman, Chainman.
<i>J. H. ...</i>	Oct. 18, 1914.	Nov. 4, 1914.	Flagman.

Subscribed and certified to before me on the dates of the final service as shown above.

William B. Kimmel
U. S. Surveyor.

130 68
BOOK 2766

MAR 4 1915

FINAL OATH OF UNITED STATES SURVEYOR.

I, William B. Kimmel, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for Arizona, for Group 26, dated, Aug. 25, 1910, Aug. 9, 1912, Sept. 19, 1912, Feb. 18, 1913, April 4, 1913 bearing date of the and Dec. 30, 1913, 1915, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the W. & S. bdrs. of frac. T. 4 1/2 N., R. 32 E., the N. & W. bdrs. of T. 5 S., R. 29 E., the N. bdy. of T. 5 S., R. 28 E., the E. & N. bdrs. of frac. T. 4 S., R. 28 E., the N. & E. bdrs. of T. 3 S., R. 30 E., the S. bdy. of T. 1 S., R. 29 E., the E. & S. bdrs. of frac. T. 1 S., R. 28 E., the N. & E. bdrs. of T. 1 N., R. 28 E., the N. bdy. of frac. T. 8 S., R. 32 E., the E. & N. bdrs. of T. 8 S., R. 28 E., the S. & W. bdrs. of T. 13 S., R. 27 E., the W. bdy. of T. 14 S., R. 28 E., the W., N. & S. bdrs. of frac. T. 12 S., R. 32 E. and N. & E. bdrs. of T. 13 S., R. 31 E. of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed 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 U. S. Surveyor General for Arizona for Group 26 and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

William B. Kimmel
U. S. Surveyor.

Subscribed by said William B. Kimmel, and sworn to before me }
this 4th day of March, 1915



Frank Ingalls
SURVEYOR GENERAL OF ARIZONA

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,
Phoenix, Ariz., June 19, 1915

The foregoing field notes of the survey of the W. & S. bdrs. of frac. T. 4 1/2 N., R. 32 E., the N. & W. bdrs. of T. 5 S., R. 29 E., the E. 1/2 of N. bdy. of T. 5 S., R. 28 E., the E. & N. bdrs. of frac. T. 4 S., R. 28 E., the N. & frac. E. bdy. of T. 3 S., R. 30 E., the S. bdy. of T. 1 S., R. 29 E., the E. & S. bdrs. of frac. T. 1 S., R. 28 E., the frac. N. & E. bdrs. of T. 1 N., R. 28 E., the N. bdy. of frac. T. 8 S., R. 32 E., the E. & N. bdrs. of T. 8 S., R. 28 E., the S. & W. bdrs. of T. 13 S., R. 27 E., the frac. W. bdy. of T. 14 S., R. 28 E., the W., N. & frac. S. bdrs. of frac. T. 12 S., R. 32 E., and retracement of part of the N. & E. bdrs. of T. 13 S., R. 31 E. of the G. & S. R. Base & Meridian, in the State of Arizona

executed by WILLIAM B. KIMMEL, U. S. Surveyor
under his special instructions dated Aug. 25, 1910, Aug. 9, 1912, Sept. 19, 1912, Feb. 18, 1913, April 4, 1913 and Dec. 30, 1913, having been
critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank Ingalls
Surveyor General
OF ARIZONA

~~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.~~